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2017 Health Care Survey of DoD Beneficiaries:

Adult Technical Manual

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Final

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Chapter

1

Introduction

The 2017 Adult Health Care Survey of Department of Defense Beneficiaries (HCSDB) is the primary tool with which the Defense Health Agency (DHA) of the Assistant Secretary of Defense (Health Affairs) monitors the opinions and experiences of military health system (MHS) beneficiaries. Specifically, the HCSDB is designed to answer the following questions:

- How *satisfied* are DoD beneficiaries with their health care and their health plan?
- How does overall satisfaction with military treatment facilities (MTFs) compare with satisfaction with civilian treatment facilities (CTFs)?
- Does *access* to military and civilian facilities meet TRICARE standards?
- Is beneficiaries' use of preventive health care services in line with national goals, such as those outlined in *Healthy People 2020*?
- Has beneficiaries' use of MHS services changed over time?
- What aspects of MHS care contribute most to beneficiary satisfaction with their health care experiences? With which aspects are beneficiaries least satisfied?
- What are the demographic characteristics of MHS beneficiaries?

The HCSDB was conducted annually from 1995 to 2000, after which time the survey was administered quarterly. The current HCSDB is a quarterly internet and mail survey of a representative sample of MHS beneficiaries. It is sponsored by the DHA in the Office of the Assistant Secretary of Defense (Health Affairs) [OASD (HA)] under authority of the National Defense Authorization Act for Fiscal Year 1993 (P.L. 102-484). Altarum Institute prepares the sampling frame, which consists of variables specified by Mathematica for each MHS beneficiary in the Defense Enrollment Eligibility Reporting System (DEERS) database on a specified reference date. DEERS includes everyone who is eligible for a MHS benefit (i.e., everyone in the Uniformed Services — Army, Air Force, Navy, Marine Corps, Coast Guard, the Commissioned Corps of the Public Health Service, National Oceanic and Atmospheric Administration, Guard/Reserve personnel who are activated for more than 30 days – and other special categories of people who qualify for benefits). DEERS includes those on active duty, those retired from military careers, immediate family members of people in the previous two categories, and surviving family members of people in these categories.

In the first three quarters of FY 2017, Mathematica Policy Research (Mathematica, Washington, D.C.) identified a representative sample of approximately 100,000 adult beneficiaries. In addition to the three quarterly samples, there was also a new survey based on the Healthcare Effectiveness Data and Information Set (HEDIS) questionnaire of 60,183 beneficiaries that was fielded around the same time as Quarter II. Altarum administers the web survey each quarter. Ipsos, the survey contractor, administers the paper survey each quarter. Mathematica analyzes the survey data, reports on the results and prepares a quarterly public use file, as well as a Codebook and Users' Guide to describe the quarterly dataset. Mathematica also prepares an annual public use dataset and relevant documentation each year.

This manual is designed to serve as a reference for analysts in OASD (HA) as they interpret the survey findings and prepare briefings. This manual provides detailed documentation on the following:

naming conventions for variables, editing procedures, selection of records, computation of response rates, recoding of variables, computation of weights, variance estimation, and construction of tables and charts for the reports. This manual also enables an analyst to follow, and if desired, to replicate the step-by-step processing of the raw survey data to produce the final database.

A. OVERVIEW OF THE HCSDB

1. Sample Design

The 2017 adult sample is comprised of 100,000 adult beneficiaries selected each quarter via stratified random sample. Stratification is based on three variables: analytical group, geographic area, and enrollment/beneficiary type. The *analytical group* stratification is determined in cooperation with DHA staff, and is important to data users and policymakers. The criteria for the analytical group stratification is the following: (1) beneficiaries younger than 65, enrolled with a military primary care manager (PCM), or active duty beneficiaries; (2) beneficiaries younger than 65, who use Managed Care Support Contractors; (3) beneficiaries younger than 65, who use TRICARE Standard/Extra; (4) beneficiaries enrolled in TRICARE Reserve Select; (5) beneficiaries age 65 or older.

The *geographic area* stratification includes military treatment facilities (MTFs) in which DHA is interested, TNEC regions for those enrolled in other MTFs, and TNEC regions for all other beneficiaries.

The *enrollment/beneficiary type* includes (1) active duty; (2) active duty family members enrolled in Prime with a civilian PCM; (3) active duty family members enrolled in Prime with a military PCM; (4) active duty family members not enrolled in Prime; (5) retirees and their family members younger than 65 enrolled in Prime with a civilian PCM; (6) retirees and their family members younger than 65 enrolled in Prime with a military PCM; (7) retirees and their family members younger than 65 not enrolled in Prime; (8) retirees and their family members age 65 and older; and (9) beneficiaries enrolled in TRICARE Reserve Select.

The sample selection process involves five steps: (1) construction of the sampling frame and definition of sampling strata; (2) allocation of the sample to strata to satisfy the study's precision goals; (3) selection of the survey sample using a permanent random number sample selection algorithm; (4) creation of the sampling weights, which reflect the probability of selection; and (5) verification of results to ensure that sampling was implemented as specified. Please see Mathematica's "Health Care Survey of DoD Beneficiaries: 2017 Adult Sampling Report" (2016) for details on sample design.

The steps for the sample selection process for HEDIS are similar to the HCSDB, with a few exceptions. The HEDIS sample includes only Prime enrollees younger than 65 who are enrolled at one of the largest 50 facilities in the frame, and we sampled a constant number of beneficiaries per facility.

To determine facility size, we counted the number eligible beneficiaries (Prime enrollees under age 65) that were enrolled at a facility, and beneficiaries enrolled at child facilities within 40 miles of a parent facility were attributed to the corresponding parent facility. We allocated our sample of approximately 60,000 equally across facilities, selecting about 1,200 beneficiaries from each of the 50 largest facilities.

We eliminated overlap of the HEDIS sample with the HCSDB sample by implementing the HCSDB permanent random number sample selection algorithm, but selecting HEDIS sample members only from a range of permanent random numbers that is not sampled for HCSDB. Sampling weights for the HEDIS sample were created using the same methodology as HCSDB.

2. 2017 Adult HCSDDB

The HCSDDB questionnaire was converted from an annual to a quarterly survey in 2000, and is fielded each quarter to a representative sample of MHS beneficiaries. Beginning with 2006, reporting and documentation of the HCSDDB has been performed on a fiscal year basis, whereas in previous years, it was based on calendar years. In FY 2017, surveys were fielded in three quarters instead of four, describing a period from October 2016 to May 2017. Thus, this document, the “2017 Health Survey of DoD Beneficiaries: Adult Technical Manual”, describes Quarters I-III of fiscal year 2017 and the HEDIS survey. Throughout this document, Quarter I, 2017 refers to Quarter I of fiscal year 2017. The adult questionnaires for Quarters I-III and HEDIS are reproduced in Appendix A. The 2017 survey consists of an unchanging core questionnaire with different quarterly supplements.

The core adult questionnaire includes the following topics:

- Use of health care
- Use of preventive health care
- Type of health plan covering the beneficiary
- Satisfaction with health plan
- Satisfaction with health care
- Access to health care
- Demographic characteristics

Beginning in 2002, the survey naming convention was changed. Prior to 2000, the year in the survey’s name reflected the year that respondents were asked to think about when answering the questions. For example, although the 2000 HCSDDB was fielded in 2001, it asked beneficiaries to think about the prior 12 months (mostly 2000) as the reference period for their answer. Under the new naming convention, the survey title refers to the year the questionnaires are fielded, so last year’s survey was the 2016 HCSDDB and this year’s survey is the 2017 HCSDDB. Because of the name change, there is no “2001” survey, even though the questionnaire was administered continuously in each quarter of 2001.

3. Survey Response – Quarters I-III and HEDIS

In each of the three quarters in 2017 in which the survey was fielded, Ipsos sent survey invitation letters to a random sample of approximately 100,000 adult MHS beneficiaries. The letters instructed sampled beneficiaries to complete the survey on a website hosted by Altarum. During the survey field period in all three quarters of the 2017 HCSDDB, Mathematica selected a sample of nonrespondents, and Ipsos mailed surveys to this group. All other beneficiaries were asked to complete the survey on a website. By the end of the fielding period in Quarter I, 9.2 percent of the sample members completed the survey. In Quarter II, 12.4 percent of the sample members completed surveys. In Quarter III, 11.7 percent of the sample members completed surveys, and in HEDIS, 18.1 percent of the sample members completed surveys. Information pertaining to how Mathematica calculated these response rates is presented in Chapter 3.

It should be noted that the above cited response rates do not reflect late arriving responses from the surveys fielded in the first two quarters. The response rates are based on the number of completed surveys returned to the survey vendor at the end of the fielding period. The annual combined dataset, however, includes the surveys returned after the end of the fielding period. Therefore, the revised annual response rates were 9.2 percent for Quarter I, 12.5 percent for Quarter II, and 12.3 percent for the combined annual dataset.

4. Database Development

Mathematica cleans the data, selects records for inclusion in the final database, and constructs variables to be used in reports. To ensure that the survey data is representative of the DEERS population, Mathematica develops weights to take account of the initial sampling, the sampled individuals who chose not to respond to the survey, and post-stratification if the beneficiary's key information is updated.

5. Reports

Mathematica analyzes the data and produces several reports explaining findings on topics including satisfaction, access to care, health care use, and use of preventive services. These reports will be available on the TRICARE website at <http://www.TRICARE.mil>:

- 2017 TRICARE Beneficiary Reports and TRICARE Purchased Care Beneficiary Reports
- 2017 TRICARE Consumer Watch and TRICARE Purchased Care Consumer Watch
- Health Care Survey of DoD Beneficiaries: Annual Report

B. ORGANIZATION OF THIS MANUAL

Chapter 2 explains how the database was developed. It covers naming conventions, cleaning procedures, record selection criteria, descriptions of all variable types, definitions of each constructed variable, and weighting procedures. Chapter 3 describes how the database was analyzed. This includes rules for calculating response rates, the development of table and chart specifications for the Health Care Survey of DoD Beneficiaries (The HCSDB Annual Report, TRICARE Beneficiary Reports and TRICARE Consumer Watch), an explanation of the dependent variables and independent variables used in regression analyses, and the methodology for estimating the variance of estimates. The manual concludes with a series of technical appendices:

- Appendix A: Annotated questionnaires – Quarters I-III and HEDIS
- Appendix B: Coding Scheme and Coding Tables – Quarters I-III and HEDIS
- Appendix C: Mapping the Military Treatment Facility (MTF) to the Catchment Area
- Appendix D: Response Rate Tables – Quarters I-III and HEDIS and Combined Annual
- Appendix E: Technical Description of the 2017 TRICARE Beneficiary Reports
- Appendix F: SAS Code for File Development – Quarters I-III
- Appendix G: SAS Code for Statistical and Web Specifications for the 2017 TRICARE Beneficiary Reports and Purchased Care Beneficiary Reports
- Appendix H: SAS Code for 2017 HEDIS Sampling and Weighting
- Appendix I: SAS Code for 2017 TRICARE Consumer Watch – Quarters I-III and Combined Annual
- Appendix J: SAS Code for 2017 TRICARE Purchased Care Consumer Watch – Quarters I-III

Chapter
2

Database

This chapter explains the process of developing a final database free of inconsistencies and ready for analysis from the raw survey data. We discuss the design of the database; cleaning, editing, and implementation of the Coding Scheme; record selection; and variable construction.

A. DATABASE DESIGN

The 2017 Adult HCSDB consists of variables from various sources. When Ipsos delivers the file to Mathematica after fielding the sample, the following types of variables are present:

- DEERS information on beneficiary group, social security number (SSN), sex, age, etc.
- Sampling variables used to place beneficiaries in appropriate strata
- Core and supplemental questionnaire responses
- Ipsos' information from fielding the sample, such as scan date and flags developed during the fielding to assist us in determining eligibility

Mathematica removes all identifying information such as SSN to protect the confidentiality of the respondents. Mathematica then adds the following types of variables to the database:

- Coding Scheme flags - The coding scheme program checks for consistencies in responses and skip patterns. If there are inconsistencies found or skip patterns that do not match the directions specified in the questionnaire then responses will be recoded to match the coding scheme specifications. Coding scheme flags are created to crosswalk original responses to possible recodes in order to understand how skip logic is being filled out.
- Constructed variables for analysis
- Weights

In addition, Mathematica updates and cleans the questionnaire responses using the Coding Scheme tables found in Appendix B. The final public-use database each quarter will contain only the recoded responses, to prevent usage of an uncleaned response for analysis. We structured the final database so that all variables from a particular source are grouped by position. Table 2.1 lists all variables with the exception of the replicate weights in the Quarters I-III, 2017 database by source. For specific information on variable location within the database, refer to the "2017 Adult Health Care Survey of DoD Beneficiaries: Adult Codebook and User's Guide."

1. Data Sources

a. DEERS

Altarum provided the sampling frame to Mathematica prior to the selection of the sample. DEERS information such as sex, date of birth, and service are retained in the database; this data is current as of the time of sample selection.

b. Sampling Variables

Mathematica developed variables during the sample selection procedure that were instrumental in placing beneficiaries in appropriate strata. Many of the variables are retained in the database.

c. Questionnaire Responses

These variables represent the cleaned values for all responses to the questionnaire. The original values scanned in by Ipsos are cleaned and recoded, as necessary, to ensure that responses are consistent throughout the questionnaire. The Coding Scheme tables found in Appendix B are the basis for insuring data quality.

d. Survey Fielding Variables

In the process of fielding the survey, Ipsos created a number of variables that we retain in the database. Some of these variables, for example, information that came in by phone, assist us in determining eligibility.

e. Coding Scheme Flags

Each table of the Coding Scheme (see Appendix B) has a flag associated with it that indicates the pattern of original responses and any recoding that was done. For example, the table for Note 5 has a flag N5.

f. Constructed Variables

Mathematica constructed additional variables that were used in the TRICARE Beneficiary Reports, TRICARE Consumer Watch, and the "Health Care Survey of DoD Beneficiaries: Annual Report." Often these variables were regroupings of questionnaire responses or the creation of a binary variable to indicate whether or not a TRICARE standard was met. Complete information on each constructed variable is found in section 2.D.

g. Weights

Mathematica developed weights for each record in the final database. Weights are required for the following reasons:

- To compensate for variable probabilities of selection
- To adjust for differential response rates
- To improve the precision of survey-based estimates through post-stratification, a method for adjusting the sampling weights such that the joint distribution of a set of post-stratifying variables matches the known population joint distribution.

Weighting procedures are discussed in section 2.E.

TABLE 2.1

VARIABLES IN THE 2017 ADULT HCSDB DATA FILE – QUARTERS I-III AND HEDIS

SAMPLE VARIABLES	VARIABLE LABEL
MPRID	- Unique MPR identifier
SVCSMPL	- Branch of service sampling variable
SEXSMPL	- Sex sampling variable
STRATUM	- Sampling stratum
STRATUMH	- Stratum
ENBGSMPL	- Enrollment by beneficiary category
MPCSMPL	- Military personnel category
NHFF	- Stratum sample size
QUARTER	- Survey quarter
D_HEALTH	- Health service region
TNEXREG	- TRICARE next generation of contracts region grouping
SERVAFF	- Service affiliation

DEERS VARIABLES	VARIABLE LABEL
RACEETHN	- Race/Ethnic code
PNSEXCD	- Person gender
RDAGEQY	- Age at time of sample preparation-Capped (18 and below, 86 and above)
RFLDAGE	- Age at start of fielding period-Capped (18 and below, 86 and above)
PCM	- Primary manager code (civilian or military)
ACV	- Alternate care value
DBENCAT	- Beneficiary category
DSPONSVC	- Derived sponsor branch of service
PATCAT	- Aggregated beneficiary category
PNTYPCD	- Person type code

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
H17001	- Are you the person listed on the cover letter
H17002A	- Health plan(s) covered: TRICARE Prime
H17002C	- Health plan(s) covered: TRICARE Ext/Stnd
H17002F	- Health plan(s) covered: Medicare
H17002G	- Health plan(s) covered: Federal Employees Health Benefit Program (FEHBP)
H17002H	- Health plan(s) covered: Medicaid
H17002I	- Health plan(s) covered: civilian HMO
H17002J	- Health plan(s) covered: other civilian
H17002K	- Health plan(s) covered: Uniformed Services Family Health Plan (USFHP)
H17002L	- Health plan(s) covered: not sure
H17002M	- Health plan(s) covered: Veterans
H17002N	- Health plan(s) covered: TRICARE Plus
H17002O	- Health plan(s) covered: TRICARE For Life
H17002P	- Health plan(s) covered: TRICARE Supplemental Insurance
H17002Q	- Health plan(s) covered: TRICARE Reserve Select
H17002R	- Health plan(s) covered: other Non-US government health insurance
H17002S	- Health plan(s) covered: TRICARE Retired Reserve
H17002T	- Health plan(s) covered: TRICARE Young Adult
H17002U	- Health plan(s) covered: Continued Health Care Benefit Program (CHCBP)
H17002V	- Health plan(s) covered: TRICARE Young Adult Ex or Standard
H17003	- Which health plan did you use most in the past 12 months?

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QUESTIONNAIRE RESPONSES	VARIABLE LABEL
H17004	- Months or years in a row with health plan
H17005	- In last year: facility used most for health care
H17006	- In last year: have illness/injury/condition that needed care right away
H17007	- In last year: how often got care as soon as you believed you need it
H17008	- In last year: wait between trying to get care and actually seeing a provider for an illness or injury
H17009	- In last year: made appointments for non-urgent health care
H17010	- In last year: how often got appointments for non-urgent health care as soon as you wanted
H17011	- In last year: days between making an appointment for regular or routine care and actually seeing a provider
H17012	- In last year: times went to an emergency room for own care
H17013	- In last year: times went to a doctors office or clinic for yourself (not counting times went to an emergency room)
H17014	- In last year: how often talk to doctor or other health care provider about illness prevention
H17015	- In last year: doctor or other health care provider talked about more than 1 choice for treatment
H17016	- In last year: doctor talked about pros/cons of each treatment/health care choice
H17017	- In last year: doctor/health care provider asked which treatment option you thought was best for you when there was more than one choice of treatment
H17018	- Rating of all health care in last year
H17019	- Have one person you think of as your personal doctor
H17020	- In last year: number of times visited personal doctor for care for self
H17021	- In last year: how often personal doctor listened carefully to you
H17022	- In last year: how often personal doctor explained things in a way that was easy to understand
H17023	- In last year: how often your personal doctor showed respect for what you have to say
H17024	- In last year: how often your personal doctor spent enough time with you
H17025	- In last year: got care from doctor or other health provider other than personal doctor
H17026	- In last year: how often personal doctor seemed informed and up-to-date about care received from other doctors
H17027	- Rating of your personal doctor
H17028	- In last year: tried to make appointment to see a specialist
H17029	- In last year: how often it was easy to get appointments with specialists
H17030	- In last year: how many specialists seen
H17031	- Rating of specialist seen most often in last year
H17032	- In last year: tried to get care, tests, or treatment through health plan
H17033	- In last year: how often easy to get care, tests, or treatment you thought you needed through health plan
H17034	- In last year: looked for information in written material or on the Internet about how health plan works
H17035	- In last year: how often written material/Internet provide information you needed about how your plan works
H17036	- In last year: looked for information from health plan on cost of health care service or equipment
H17037	- In last year: how often able to find out from health plan cost of health care service or equipment
H17038	- In last year: looked for information from health plan on cost of prescription medications
H17039	- In last year: how often able to find out cost of prescription medications
H17040	- In last year: tried to get information or help from health plan's customer service
H17041	- In last year: how often did customer service give needed information or help

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
H17042	- In last year: how often did customer service treat with courtesy and respect
H17043	- In last year: health plan gave forms to fill out
H17044	- In last year: how often forms from health plan were easy to fill out
H17045	- In last year: sent in any claims to your health plan
H17046	- In last year: how often health plan handled claims quickly
H17047	- In last year: how often health plan handled claims correctly
H17048	- Rating of all experience with health plan
H17049	- Blood pressure: when last reading
H17050	- Blood pressure: know if blood pressure is too high or not
H17051	- When did you last have a flu shot
H17052	- Smoked at least 100 cigarettes in life
H17053	- Smoke or use tobacco everyday, some days, or not at all
H17054	- Last year: how often advised by doctor to quit smoking or use tobacco
H17055	- Last year: how often medication was recommended or discussed by doctor to assist with quitting smoking or using tobacco
H17056	- Last year: how often doctor recommended or discussed methods and strategies to assist quitting smoking or using tobacco
H17057A	- Do you smoke or use: cigarettes
H17057B	- Do you smoke or use: dip, chewing tobacco, snuff, or snus
H17057C	- Do you smoke or use: cigars
H17057D	- Do you smoke or use: pipes, bidis, or kreteks
H17058	- Are you male or female
H17059B	- Female: last have a Pap smear test
H17060	- Female: are you under age 40
H17061	- Female: last time breasts checked by mammography
H17062	- Female: been pregnant in last year or pregnant now
H17063	- Female: in what trimester is your pregnancy
H17064	- Female: trimester first received prenatal care
H17065	- In general how would you rate your overall health
H17066	- Limited in any way in any activities because of any impairment or health problem
H17067	- In last year: seen doctor or other health provider 3 or more times for same condition or problem
H17068	- Condition lasted for at least 3 months
H17069	- Need to take medicine prescribed by a doctor
H17070	- Medicine to treat condition that has lasted for at least 3 months
H17071F	- Feet portion of height without shoes
H17071I	- Inches portion of height without shoes
H17072	- Weight without shoes in pounds
H17073	- Are you Spanish, Hispanic, or Latino
H17073A	- No, not Spanish, Hispanic, or Latino
H17073B	- Yes, Mexican, Mexican American, Chicano
H17073C	- Yes, Puerto Rican
H17073D	- Yes, Cuban
H17073E	- Yes, other Spanish, Hispanic, or Latino
H17074	- Currently covered by Medicare
H17075	- Currently covered by Medicare part A
H17076	- Currently covered by Medicare part B
H17077	- Enrolled in a Medicare Advantage plan
H17078	- Currently covered Medicare supplemental
H17079	- Enrolled in Medicare Part D
SREDA	- Highest grade completed
SRRACEA	- Race: White

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
SRRACEB	- Race: Black or African American
SRRACEC	- Race: American Indian or Alaska native
SRRACED	- Race: Asian
SRRACEE	- Race: Native Hawaiian/other Pacific Islander
SRAGE	- What is your age now?
S17009	- Had the same personal doctor or nurse before joining this health plan
S17010	- Since joined health plan, how much of a problem, if any, was it to get a personal doctor or nurse you are happy with?
S17011	- Agree/disagree: able to see provider when needed
S17014	- How satisfied with health care during last visit
S17B01	- Self rating of overall mental/emotional health
S17B02	- Last year: needed treatment/counseling for personal/family problem
S17B03	- Last year: problem getting needed treatment/counseling
S17B04	- Last year: rating of treatment/counseling received
S17BI01	- In last 6 mos, did you need care right away in an urgent care center, ER, or doctor's office?
S17BI02A	- In last 6 mos, when you needed care right away, did you go to an urgent care center?
S17BI02B	- In last 6 mos, when you needed care right away, did you go to a hospital ER?
S17BI02C	- In last 6 mos, when you needed care right away, did you go to a doctor's office?
S17BI02D	- In last 6 mos, when you needed care right away, did you go someplace else?
S17BI02E	- In last 6 mos, I didn't need care right away for an illness, injury, or condition
S17BI03	- Urgent care center: Location is more convenient than my normal place of care
S17BI04	- Urgent care center: Urgent care was low cost or no cost to me
S17BI05	- Urgent care center: Urgent care was faster than making an appt with my primary care provider
S17BI06	- Urgent care center: I could just walk in for care without an appt
S17BI07	- Urgent care center: I trust the urgent care center provider(s)
S17BI08	- Urgent care center: The urgent care center would process my TRICARE claim without problems
S17BI09	- Urgent care center: Would have used appt with regular provider if had been available
S17BI10	- Urgent care center: I wanted to avoid the wait at a hospital ER
S17BI11	- Urgent care center: The location is more convenient than the hospital ER
S17BI12	- Urgent care center: My condition was not a medical emergency requiring a hospital ER
S17BI13	- Urgent care center: Normal place of care was not open
S17BI14	- Urgent care center: I thought it would take less time than at my usual place of care
S17BI15	- Urgent care center: did you or someone else call a nurse advice line before going to urgent care
S17BI16	- Did the nurse advise you to seek urgent care?
S17BI17	- Urgent care center: did the health care providers advise you to seek care in a hospital ER?
S17BI18	- Did you seek care at a hospital ER?
S17BI19	- On most recent visit to urgent care center, what was the main reason you went?
S17BI20	- What number would you use to rate your care during this urgent care center visit?
S17BF1	- Have you heard of e-cigarettes before today
S17BF2	- Have you ever used an e-cigarette
S17BF3	- How many times in your life have you used an e-cigarette
S17BF4	- How often do you use e-cigarettes
S17BF5	- Did you use flavored e-cigarettes in the past 30 days
S17BF6	- Did you completely switch to e-cigarettes in the past 12 months
S17BC01A	- Past 12 mth: did you try making appt at MTF? Yes, by calling
S17BC01B	- Past 12 mth: did you try making appt at MTF? Yes, online

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
S17BC01C	- Past 12 mth: did you try making appt at MTF? Yes, in person
S17BC01D	- Past 12 mth: did you try making appt at MTF? No
S17BC02A	- Why make appt at MTF? New illness, condition, or injury
S17BC02B	- Why make appt at MTF? I was referred for specialist care
S17BC02C	- Why make appt at MTF? Routine wellness
S17BC02D	- Why make appt at MTF? Follow-up on illness, condition, or injury
S17BC03A	- True when you tried to make appt at MTF: no appts available
S17BC03B	- True when you tried to make appt at MTF: appt too far in future
S17BC03C	- True when you tried to make appt at MTF: no convenient times
S17BC03D	- True when you tried to make appt at MTF: appt time not convenient
S17BC03E	- True when you tried to make appt at MTF: always able to make appt
S17BC04A	- Why not try to make appt at MTF? Didn't need health care
S17BC04B	- Why not try to make appt at MTF? Wouldn't have been able to get appt when needed
S17BC04C	- Why not try to make appt at MTF? Wouldn't have gotten appt at good time
S17BC04D	- Why not try to make appt at MTF? Did not have needed referral for specialist
S17BC04E	- Why not try to make appt at MTF? Inconvenient MTF location
S17BC04F	- Why not try to make appt at MTF? Only use civilian providers
S17BC04G	- Why not try to make appt at MTF? Prefer civilian providers
S17BC05A	- Past 12 mth: did you try making appt at civ provider? Yes, by calling
S17BC05B	- Past 12 mth: did you try making appt at civ provider? Yes, online
S17BC05C	- Past 12 mth: did you try making appt at civ provider? Yes, in person
S17BC05D	- Past 12 mth: did you try making appt at civ provider? No
S17BC06A	- Why make appt at MTF? New illness, condition, or injury
S17BC06B	- Why make appt at MTF? I was referred for specialist care
S17BC06C	- Why make appt at MTF? Routine wellness
S17BC06D	- Why make appt at MTF? Follow-up on illness, condition, or injury
S17BC07A	- True when you tried to make appt at civ provider: no appts available
S17BC07B	- True when you tried to make appt at civ provider: appt too far in future
S17BC07C	- True when you tried to make appt at civ provider: no convenient times
S17BC07D	- True when you tried to make appt at civ provider: appt time not convenient
S17BC07E	- True when you tried to make appt at civ provider: always able to make appt
S17BC08A	- Why not try to make appt at civ provider? Didn't need health care
S17BC08B	- Why not try to make appt at civ provider? Get all health care from MTF
S17BC08C	- Why not try to make appt at civ provider? Wouldn't have been able to get appt when needed
S17BC08D	- Why not try to make appt at civ provider? Wouldn't have gotten appt at good time
S17BC08E	- Why not try to make appt at civ provider? Did not have needed referral for specialist
S17BC08F	- Why not try to make appt at civ provider? Inconvenient location
S17BC09	- Were you asked to call back at a future date when appts might be available at an MTF
S17BC10	- Were you asked to call back at a future date when appts might be available at a civilian facility
S17BG01	- How many days was physical health not good in past 30 days
S17BG02	- How many days was mental health not good in past 30 days
S17BG03	- How many days did poor health stop usual activities in past 30 days
S17BE01A	- Has a doctor told you that you have conditions: heart attack
S17BE01B	- Has a doctor told you that you have conditions: angina or coronary heart disease
S17BE01C	- Has a doctor told you that you have conditions: stroke
S17BE01D	- Has a doctor told you that you have conditions: diabetes or high blood sugar
S17BE01E	- Has a doctor told you that you have conditions: high cholesterol
S17BE01F	- Has a doctor told you that you have conditions: asthma, COPD, emphysema
S17BE01G	- Has a doctor told you that you have conditions: cancer

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QUESTIONNAIRE RESPONSES	VARIABLE LABEL
S17BE01H	- Has a doctor told you that you have conditions: osteoporosis
S17BE01I	- Has a doctor told you that you have conditions: depression, anxiety
S17BE01J	- Has a doctor told you that you have conditions: autoimmune disease
S17BE01K	- Has a doctor told you that you have conditions: none of these
S17BJ01	- How often over the last two weeks have you felt anxious, nervous, or on edge
S17BJ02	- How often over the last two weeks have you felt unable to stop or control worrying
S17BJ03	- How often over the last two weeks have you felt little interest or pleasure in doing things
S17BJ04	- How often over the last two weeks have you felt down, depressed, or hopeless
S17BN01	- Record shows you are in TRICARE Prime. Is that right?
S17BN01F	- [HEDIS only] Our records show that you are now in TRICARE Prime. Is that right?
S17BN02	- What is the name of your health plan?
S17BK01	- Past 12 mth: did you talk about starting or stopping a prescription medicine with dr?
S17BK02	- Past 12 mth: talk about the reasons you might want to take a medicine?
S17BK03	- Past 12 mth: talk about the reasons you might not want to take a medicine?
S17BK04	- When starting/stopping a prescription med, did dr ask what you thought was best for you?
S17BL01	- Do you take aspirin daily or every other day?
S17BL02	- Do you have a health problem or take medication that makes taking aspirin unsafe for you?
S17BL03	- Has dr ever discussed the risks/benefits of aspirin to prevent heart attack/stroke?
S17BL04A	- Have following condition: High cholesterol
S17BL04B	- Have following condition: High blood pressure
S17BL04C	- Have following condition: Parent/Sibling heart attack before age 60
S17BL05A	- Has dr ever told you that you have: Heart attack
S17BL05B	- Has dr ever told you that you have: Angina/coronary heart disease
S17BL05C	- Has dr ever told you that you have: Stroke
S17BL05D	- Has dr ever told you that you have: Diabetes or high blood sugar
S17BM01	- Did someone help you complete this survey?
S17BM02A	- How did person help you? Read questions to me
S17BM02B	- How did person help you? Wrote down answers I gave
S17BM02C	- How did person help you? Answered questions for me
S17BM02D	- How did person help you? Translated questions into my language
S17BM02E	- How did person help you? Helped in some other way
S17BM05	- Past 12 mth: did you need to visit Dr. office/clinic after regular office hrs?
S17BM06	- Past 12 mth: how often able to get care from Dr. office/clinic after regular office hrs?
S17BM07	- Past 12 mth: did you need care during evenings, weekends, or holidays?
S17BM08	- Past 12 mth: how often able to get care from Dr. office/clinic during evenings/weekends/holidays?
S17BO01	- When did you 1st have a flu shot
S17BP01	- Past 12 mth: how often talk to doctor about illness prvntn
X17003	- Which health plan did you use for all or most of your healthcare in the last 12 months?

SURVEY FIELDING VARIABLES	VARIABLE LABEL
INHCSDB	- 1 if in HCSDB sample, 0 if HEDIS
INHEDIS	- 1 if in HEDIS sample, 0 if HCSDB
ONTIME	- Responded within 8 weeks of mail-out
FLAG_FIN	- Final disposition
DUPFLAG	- Multiple response indicator
FNSTATUS	- Final status

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SURVEY FIELDING VARIABLES	VARIABLE LABEL
KEYCOUNT	- Number of key questions answered
WEB	- Web survey indicator
EMAILRES	- Email response
SURVTYPE	- Web or mail survey

CODING SCHEME FLAGS AND COUNTS	VARIABLE LABEL
N1	- Coding Scheme Note 1
N2	- Coding Scheme Note 2
N3	- Coding Scheme Note 3
N3_BC1	- Coding Scheme Note 3_BC1
N3_BC2	- Coding Scheme Note 3_BC2
N3_BC3	- Coding Scheme Note 3_BC3
N3_BC4	- Coding Scheme Note 3_BC4
N3_BC5	- Coding Scheme Note 3_BC5
N3_BC6	- Coding Scheme Note 3_BC6
N3_BC7	- Coding Scheme Note 3_BC7
N3_BC8	- Coding Scheme Note 3_BC8
N4	- Coding Scheme Note 4
N4H	- Coding Scheme Note 4H
N5	- Coding Scheme Note 5
N5_BI1	- Coding Scheme Note 5_BI1
N5_BI2	- Coding Scheme Note 5_BI2
N5_BI3	- Coding Scheme Note 5_BI3
N5_BI4	- Coding Scheme Note 5_BI3
N5H	- Coding Scheme Note 5H
N6	- Coding Scheme Note 6
N6H	- Coding Scheme Note 6H
N7	- Coding Scheme Note 7
N7H	- Coding Scheme Note 7H
N8	- Coding Scheme Note 8
N8_01	- Coding Scheme Note 8_01
N9	- Coding Scheme Note 9
N9H	- Coding Scheme Note 9H
N10	- Coding Scheme Note 10
N10_B1	- Coding Scheme Note 10_B1
N10H	- Coding Scheme Note 10H
N11	- Coding Scheme Note 11
N12	- Coding Scheme Note 12
N12H	- Coding Scheme Note 12H
N13	- Coding Scheme Note 13
N13H	- Coding Scheme Note 13H
N14	- Coding Scheme Note 14
N14H	- Coding Scheme Note 14H
N15	- Coding Scheme Note 15
N15H	- Coding Scheme Note 15H
N16	- Coding Scheme Note 16
N16H	- Coding Scheme Note 16H
N17	- Coding Scheme Note 17
N17H	- Coding Scheme Note 17H
N18	- Coding Scheme Note 18

CODING SCHEME FLAGS AND COUNTS	VARIABLE LABEL
N18_BF1	- Coding Scheme Note 18_BF1
N18_BF2	- Coding Scheme Note 18_BF2
N18H	- Coding Scheme Note 18H
N19A	- Coding Scheme Note 19A
N19B	- Coding Scheme Note 19B
N19H	- Coding Scheme Note 19H
N20	- Coding Scheme Note 20
N21	- Coding Scheme Note 21
N21_BG1	- Coding Scheme Note 21_BG1
N21_BG2	- Coding Scheme Note 21_BG2
N21_BG3	- Coding Scheme Note 21_BG3
N22	- Coding Scheme Note 22
N23	- Coding Scheme Note 23
N23_BE	- Coding Scheme Note 23_BE
N23_HT	- Coding Scheme Note 23_HT
N23_WT	- Coding Scheme Note 23_WT
N24	- Coding Scheme Note 24
N24H	- Coding Scheme Note 24H
N25	- Coding Scheme Note 25
N25H	- Coding Scheme Note 25H
N26H	- Coding Scheme Note 26H
MISS_1	- Count of: violates skip pattern
MISS_4	- Count of: incomplete grid error
MISS_5	- Count of: scalable response of don't know
MISS_6	- Count of: not applicable - valid skip
MISS_7	- Count of: out-of-range error
MISS_9	- Count of: no response - invalid skip
MISS_TOT	- Total number of missing responses

CONSTRUCTED VARIABLES	VARIABLE LABEL
JSFLAG	- Joint Service Flag
XENRLLMT	- Enrollment in TRICARE prime
XENR_PCM	- Enrollment by PCM type
XINS_COV	- Insurance coverage
XBENCAT	- Beneficiary category
XENR_RSV	- Enrollment by PCM type - reservist
XINS_RSV	- Insurance coverage - reservist
XREGION	- Region
XTNEXREG	- TRICARE next generation of contracts region grouping
XCATCH	- XCATCH - Catchment area (reporting)
USA	- CONUS/OCONUS indicator
XOCONUS	- Overseas Europe/Pacific/Latin indicator
OUTCATCH	- Out of catchment area indicator
XSEXA	- Male or female (recode)
XBMI	- Body mass index
XBMICAT	- Body mass index category
XBNFGRP	- Constructed beneficiary group
XSERVAFF	- Service affiliation
KMILOPQY	- Outpatient visits to military facility
KCIVOPQY	- Outpatient visits to civilian facility

CONSTRUCTED VARIABLES	VARIABLE LABEL
KCIVINS	- Beneficiary covered by civilian insurance
HP_PRNTL	- Pregnant in last year received care in 1st trimester
HP_MAMOG	- Women age 40 and over: mammography in past 2 years
HP_MAM50	- Women age 50 and over: mammography in past 2 years
HP_PAP	- All women: pap smear in last 3 years
HP_BP	- Blood pressure check in last 2 years and know results
HP_FLU	- Age 65 and older: flu shot in last 12 months
HP_FLU_H	- Age 65 and older: flu shot in last 12 months
HP_OBESE	- Obese or morbidly obese
HP_SMOKE	- Advised to quit smoking in last 12 months
HP_SMKH3	- Smoker under HEDIS definition (modified)
HP_CESH3	- Had smoking cessation counseling - HEDIS (modified)
FLTYPE	- Experimental cover letter group
DOM_INTL	- Domestic or international address
LTR_TYPE	- Letter group for this participant
RMDR_FLG	- Reminder letter for this participant
QAIRE	- Paper survey or letter only

POST-STRATIFICATION VARIABLES	VARIABLE LABEL
POSTCELL	- Poststratification cell for new weights

WEIGHTS	VARIABLE LABEL
BWT	- Basic sampling weight
FWRWT	- Final quarterly weight
CFWT	- Combined Annual Final Weight

2. Variable Naming Conventions

To preserve continuity with survey data from previous years, Mathematica followed the same variable naming conventions for the core questions used for all years of the survey data. Variable naming conventions for the 2017 Adult HCSDDB core and supplemental questions, shown in Table 2.2 correspond to those of previous years. The suffix “_O” will be used to distinguish the original version of the variable from the recoded version. The public use files for the adult survey will contain only recoded variables.

Variables created from most core survey questions begin with the character “H.” The next two characters are the third and fourth digits of the survey year. A small number of self-reported demographic variables begin with the characters “SR.”

TABLE 2.2

NAMING CONVENTIONS FOR 2017 HCSDB VARIABLES – QUARTERS I-III AND HEDIS
(VARIABLES REPRESENTING SURVEY QUESTIONS)

1 st Character: Survey Type	2 nd – 3 rd Characters: Survey Year	4 th – 6 th Characters: Question #	Additional Characters: Additional Information
<p>H= Health Beneficiaries (18 and older, Adult Questionnaire)</p> <p>-----</p> <p>S = Supplemental Question</p>	<p>17</p>	<p>001 to 079</p> <p>-----</p> <p>Quarter I</p> <p>009-011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>B01-B04 – Supplemental questions about overall mental or emotional health.</p> <p>Quarter II</p> <p>009-011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>B01-B04 – Supplemental questions about overall mental or emotional health.</p> <p>BF1-BF6 – Supplemental questions about electronic cigarettes</p> <p>Quarter III</p> <p>009-011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>B01-B04 – Supplemental questions about overall mental or emotional health.</p> <p>BF4 – Supplemental question about electronic cigarettes</p> <p>HEDIS</p> <p>011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>B01 – Supplemental question about overall mental or emotional health.</p>	<p>A to V are used to label responses associated with a multiple response question</p>

1 st Character: Survey Type	2 nd – 3 rd Characters: Survey Year	4 th – 7 th Characters: Question #	Additional Characters: Additional Information
S = Supplemental Question	17	<p>Quarter I</p> <p>BI01-BI20 – Supplemental questions about urgent care.</p> <p>Quarter II</p> <p>BC01-BC10 – Supplemental questions about appointments at MTFs and with civilian providers.</p> <p>Quarter III</p> <p>BE01 – Supplemental questions about health conditions</p> <p>BG01-BG03 – Supplemental questions about physical and mental health.</p> <p>BJ01-BJ04 – Supplemental questions about depression</p> <p>HEDIS</p> <p>BN01-BN02 – Supplemental questions about TRICARE Prime</p> <p>BO01 – Supplemental question about flu shot</p> <p>BP01 – Supplemental question about illness prevention</p> <p>BK01-BK04 – Supplemental questions about prescription medication</p> <p>BL01-BL05 – Supplemental questions about aspirin use and chronic conditions</p> <p>BM01-BM08 – Supplemental questions about assistance completing the survey and visits to doctor's office/clinics</p>	A to K are used to label responses associated with a multiple response question

1 st Characters: Variable Group	Additional Characters: Additional Information
SR=Self-reported demographic data	Descriptive text, e.g., SREDA (Highest grade completed)
N=Coding scheme notes	Number referring to Note, e.g., N2
X=Constructed independent variable	Descriptive text, e.g., XREGION
R=Constructed restricted use variables	Descriptive text, e.g., RDAGEQY (Age at time of data collection-capped-grouped those 18 and below, 86 and above)
HP=Constructed <i>Healthy People 2020</i> variable	Descriptive text, e.g., HP_BP (had blood pressure screening in past two years and know the results)
K=Constructed dependent variables	Descriptive text, e.g., KMILOPQY (total number of outpatient visits to military facility)
FW= Weighting variables	Descriptive text, e.g., FWRWT for the overall final quarterly weight, Number referring to replicate weights, e.g., FWRWT10
CFW=Combined annual weighting variables	Descriptive text, e.g., CFWT for the final annual weight; Number referring to replicate weights, e.g., CFWT10

Each quarter, the questionnaire includes a battery of questions on specific health care topics concerning services offered to MHS beneficiaries. Supplemental questions contain the same number of alphanumeric characters as the core questions; each variable begins with an “S” to distinguish it as a supplemental question.

3. Missing Value Conventions

The 2017 conventions for missing variables are the same as the 2016 conventions. All missing value conventions used in the 2017 HCSDB are shown in Table 2.3

TABLE 2.3

CODING OF MISSING DATA AND “NOT APPLICABLE” RESPONSES

ASCII or Raw Source Data Numeric	Edited and Cleaned SAS Data Numeric	Description
-9	.	No response
-7	.O	Out of range error
-6	.N	Not applicable or valid skip
-5	.D	Scalable response of “Don’t know” or “Not sure”
-4	.I	Incomplete grid error
-1	.C	Question should have been skipped, not answered
	.B	No survey received

B. CLEANING AND EDITING

Data cleaning and editing procedures ensure that the data are free of inconsistencies and errors. Standard edit checks include the following:

- Checks for multiple surveys returned for any one person
- Range checks for appropriate values within a single question
- Logic checks for consistent responses throughout the questionnaire

We computed frequencies and cross tabulations of values at various stages in the process to verify the accuracy of the data. Data editing and cleaning proceeded in the following way:

1. Additional Ipsos Editing and Coding

In preparing the database for Mathematica, Ipsos used variable names and response values provided by Mathematica in the annotated questionnaires (see Appendix A). Ipsos delivered to Mathematica a database in SAS format. In this database, any questions with no response were encoded with a SAS missing value code of ‘.’.

2. Removal of Sensitive or Confidential Information

The file that Mathematica received from Ipsos contained sensitive information such as Social Security Number (SSN). Any confidential information was immediately removed from the file. Each beneficiary had already been given a generic ID (MPRID) substitute during sample selection, and the MPRID was retained as a means to uniquely identify each individual.

3. Initial Frequencies

Mathematica computed frequencies for all fields in the original data file. These tabulations served as a reference for the file in its original form and allowed comparison to final frequencies from previous years, helping to pinpoint problem areas that needed cleaning and editing. Mathematica examined these frequencies and cross-tabulations, using the results to adapt and modify the cleaning and editing specifications as necessary.

4. Data Cleaning and Recoding of Variables

Mathematica’s plan for data quality is found in the 2017 Adult Coding Scheme for Quarters I-III and HEDIS. It contains detailed instructions for all editing procedures used to correct data inconsistencies and errors. The Coding Scheme tables for Quarters I-III and HEDIS are found in Appendix B. These tables outline in detail the approach for recoding self-reported fields, range checks, logic checks, and skip pattern checks to insure that responses are consistent throughout the questionnaire. The Coding Scheme tables specify all possible original responses and any recoding, also indicating if backward coding or forward coding was used. Every skip pattern is assigned a note number shown in the annotated questionnaire (Appendix A). This note number defines the flag (for example, the Note 5 flag is N5) that is set to indicate the pattern of the original responses and any recoding. Thus, if the value of N5 is 2, the reader can look at line 2 in the Note 5 table for the original and recoded response values.

The SAS programs implementing the Coding Scheme for each quarter are found in Appendix F.

a. Check Self-Reported Fields

Several survey questions seek information that can be verified with DEERS data and/or sampling variables. Nevertheless, in recoding these self-reported fields (such as sex and TRICARE enrollment) we used the questionnaire responses; however, if responses were missing, we used the DEERS data. For example, if the question on the sex of the beneficiary was not answered, the recoded variable for self-reported sex was not considered missing but was given the DEERS value for sex. If there was any disagreement between questionnaire responses and DEERS data, the questionnaire response generally took precedence.

In many tables and charts in the reports, the DEERS information was used for active duty status and TRICARE enrollment.

b. Skip Pattern Checks

At several points in the survey, the respondent should skip certain questions that are not applicable. If the response pattern is inconsistent with the skip pattern, each response in the series was checked to determine which was most accurate, given the answers to other questions. Questions that were appropriately skipped were set to the SAS missing value of '.N'. Inconsistent responses, such as answering questions that should be skipped or not answering questions that should be answered, were examined for patterns that could be resolved. Frequently, responses to subsequent questions provide the information needed to infer the response to a question that was left blank. The 2017 Adult Coding Scheme for Quarters I-III and HEDIS (see Appendix B) specifically addresses every skip pattern and shows the recoded values for variables within each pattern; we back coded and/or forward coded to ensure that all responses are consistent within a sequence.

c. Missing Values

Ipsos initially encoded any question with a missing response to a SAS missing value code of '.'. After verifying skip patterns, Mathematica recoded some of these responses to reflect valid skips (SAS missing value code of '.N'). The complete list of codes for types of missing values, such as incomplete grids or questions that should not have been answered, is shown in Table 2.3.

Occasionally, missing questionnaire responses can be inferred by examining other responses. For example, if a respondent fails to answer H17025 about getting care from a doctor or other health provider besides his/her personal doctor, but goes on to answer how often he/her personal doctor seemed informed and up-to-date about the care received from these doctors or providers, then we assume that the answer to H17025 should have been "yes." Using this technique, we recoded some missing questionnaire responses to legitimate responses.

d. Logic Checks

Most logic problems are due to inconsistent skip patterns, for example, when a male answers a question intended for females only. These types of internal inconsistencies were resolved in the same manner as skip pattern inconsistencies — by looking at the answers to all related questions. For instance, several questions related to smoking were examined as a group to determine the most appropriate response pattern so that any inconsistent response could be reconciled to the other responses in the group.

5. Quality Assurance

Mathematica created an edit flag for each Coding Scheme table that indicates what edits, if any, were made during the cleaning and editing process. This process was also used in previous years; variables such as N5 (see Appendix B) indicate exactly what pattern of the Coding Scheme was followed for a particular set of responses. These edit flags have a unique value for each set of original

and recoded values, allowing us to match original values and recoded values for any particular sequence.

In order to validate the editing and cleaning process, Mathematica prepared cross-tabulations between the original variables and the recoded variables with the corresponding edit flag. This revealed any discrepancies that needed to be addressed. In addition, we compared unweighted frequencies of each variable with the frequencies from the original file to verify that each variable was accurately recoded. Mathematica reviewed these tabulations for each variable in the survey. If necessary, the earlier edit procedures were modified and the Coding Scheme program rerun. Additionally, all programs and program output files were code reviewed by Mathematica. The resulting file was clean and ready for analysis.

C. RECORD SELECTION

To select final records, we first defined a code that classifies each sampled beneficiary as to his/her final response status. To determine this response status, we used postal delivery information provided by Ipsos for each sampled beneficiary. This information is contained in the FLAG_FIN variable which is described in Table 2.4

TABLE 2.4

FLAG_FIN VARIABLE FOR 2017 HCSDB

Value	Questionnaire Return Disposition	Reason/Explanation Given	Eligibility
1	Returned survey	Completed and returned	Eligible
2	Returned ineligible	Returned with at least one question marked and information that the beneficiary was ineligible	Ineligible
3	Returned blank	Information sent that beneficiary is temporarily ill or incapacitated	Eligible
4	Returned blank	Information sent that beneficiary is deceased	Ineligible
5	Returned blank	Information sent that beneficiary is incarcerated or permanently incapacitated	Ineligible
6	Returned blank	Information sent that beneficiary left military, or divorced after date of initial sample pull, or retired	Eligible
7	Returned blank	Information sent that beneficiary was not eligible on date of initial sample pull	Ineligible
8	Returned blank	Blank form accompanied by reason for not participating	Eligible
9	Returned blank	No reason given	Unknown
10	No return	Temporarily ill or incapacitated.	Eligible
11	No return	Active refuser.	Eligible
12	No return	Deceased.	Ineligible
13	No return	Incarcerated or permanently incapacitated.	Ineligible
14	No return	Left military or divorced after date of initial sample pull, or retired.	Eligible
15	No return	Not eligible on date of initial sample pull.	Ineligible
16	No return	Other eligible.	Eligible
17	No return	No reason	Unknown
18	Postal Non-Deliverables (PND)	No address remaining	Unknown
19	PND	Address remaining at the close of field	Unknown
20	Original Non-Locatable	No address at start of mailing	Unknown
21	No return or returned blank	Written documentation declining participation, no reason given	Eligible
22	No return or returned blank	Hospitalized but no indication if temporary or permanent	Unknown
23	Returned blank	Deployed	Eligible
24	No return	Deployed	Eligible
25	Deceased	Updating process identified beneficiary as deceased	Ineligible
26	Ineligible	Updating process identified beneficiary as not eligible for Military Health System plan	Ineligible

Using the above variables in Table 2.4, we classified all sampled beneficiaries into four groups:

- **Group 1:** Eligible, Questionnaire Returned. Beneficiaries who were eligible for the survey and returned a questionnaire with at least one question answered (FLAG_FIN = 1)
- **Group 2:** Eligible, Questionnaire Not Returned (or returned blank). Beneficiaries who did not complete a questionnaire but who were determined to be eligible for military health care by the reference date, that is, not deceased, not incarcerated, not permanently hospitalized (FLAG_FIN = 3, 6, 8, 10, 11, 14, 16, 21, 23, 24)

- **Group 3:** Ineligible Beneficiaries who were ineligible because of death, institutionalization, or no longer being in the MHS as of the reference date (FLAG_FIN = 2, 4, 5, 7, 12, 13, 15, 25, 26)
- **Group 4:** Eligibility Unknown. Beneficiaries who did not complete a questionnaire and for whom survey eligibility could not be determined (FLAG_FIN = 9, 17, 18, 19, 20, 22)

Group 1 was then divided into two subgroups according to the number of survey items completed (or legitimately skipped), out of 20 key questions:

- G1-1. Complete questionnaire returned – at least 50% (more than 9) of the key questions completed
- G1-2. Incomplete questionnaire returned – completed fewer than 50% of the key questions

The 20 key questions for HCSDB were adapted from the complete questionnaire rule developed by Agency for Healthcare Research and Quality (AHRQ) for Consumer Assessment of Healthcare Providers and Systems (CAHPS) V5 surveys. The key survey variables are: H17003, H17005, H17006, H17009, H17013, H17018, H17019, H17027, H17028, H17031, H17033, H17040, H17043, H17048, H17051, H17052, H17065, H17073, SREDA, and the race indicator variables (SRRACEA-SRRACEE).

The key survey variables for HEDIS are: S17BN01, H17006, H17008, H17009, H17011, H17013, H17018, H17019, H17027, H17028, H17031, H17033, H17040, H17043, H17048, H17051, H17053, H17065, H17073, SREDA, and the race indicator variables (SRRACEA-SRRACEF). If there were multiple survey returns for the same beneficiary for the HEDIS survey, and both returns had the same number of key questions completed, the tie was broken using the number of responses to all survey questions.

Group 3 was also divided into two subgroups according to how ineligible beneficiaries were identified:

- G3-1. Returned ineligible (FLAG_FIN = 2, 4, 5, 7, 12, 13, 15)
- G3-2. Ineligible at time of Altarum address update (FLAG_FIN = 25, 26)

G3-1 consists of ineligible beneficiaries who responded to the survey request, but told us they were ineligible. G3-2 consists of beneficiaries identified as ineligible during the updating process.

Furthermore, we also subdivided Group 4 into the following:

- G4-1 for locatable-blank return/no reason or no return/no reason (FLAG_FIN = 9, 17, 22)
- G4-2 for nonlocatable-postal nondeliverable/no address, postal nondeliverable/had address, or original nonlocatable (FLAG_FIN = 18, 19, 20).

With these groups defined, we can calculate the location rate (see Section 3.A).

Additionally, when combining HEDIS and HCSDB beneficiaries, we determined the HCSDB stratum that a HEDIS beneficiary would belong to, if the beneficiary had been selected as part of the HCSDB sample. In 19 HCSDB strata, this resulted in fewer than 10 completed HEDIS surveys. Rather than incorporate this small number of HEDIS responses, we decided to use only completed HCSDB surveys in these strata. These HEDIS beneficiaries who completed the survey but were dropped from analysis are given the FNSTATUS of 99.

We classified all sampled beneficiaries using the following values for the final response/eligible status (FNSTATUS):

- 11 for G1-1
- 12 for G1-2

- 20 for Group 2
- 31 for G3-1
- 32 for G3-2
- 41 for G4-1
- 42 for G4-2
- 99 for HEDIS completes dropped from analysis due to small sample size in a stratum as defined by HCSDB

Only beneficiaries with FNSTATUS = 11 were retained in the final database. All other records were dropped. In Quarters I-III and HEDIS, we retained 44,218 respondents.

D. CONSTRUCTED VARIABLES

One of the most important aspects of database development is the formation of constructed variables and scale variables to support analysis. Constructed variables are formed when no single question in the survey defines the construct of interest. Table 2.1 lists all constructed variables for 2017. Each constructed variable is discussed in this section and the relevant piece of SAS code is shown. All SAS programs can be found in Appendix F.

1. Demographic Variables

a. Region (XREGION)

Catchment area codes are used to classify beneficiaries into lead agent's regions (CACSMPL is not retained in public use file to maintain confidentiality). These regions correspond to the administrative organization of TRICARE before reorganization in 2004. The XREGION variable partitions all catchment areas into non-overlapping regions and allows for reporting of catchment-level estimates in the catchment reports. The regions are defined as follows:

- 1 = Northeast
- 2 = Mid-Atlantic
- 3 = Southeast
- 4 = Gulfsouth
- 5 = Heartland
- 6 = Southwest
- 7, 8 = Central
- 9 = Southern California
- 10 = Golden Gate
- 11 = Northwest
- 12 = Hawaii
- 13 = Europe
- 14 = Western Pacific Command (Asia)
- 15 = TRICARE Latin America
- 16 = Alaska
- . = Unassigned (CACSMPL = 9999)

For the purposes of our analysis, Region 7 and Region 8 were combined.

```

/* XREGION –HEALTH CARE REGIONS */
IF CACSMPL IN (0035, 0036, 0037, 0066, 0067,
              0068, 0069, 0081, 0086, 0100,
              0123, 0306, 0310, 0321, 0326,
              0330, 0385, 0413, 6201, 6223) THEN XREGION= 1;
ELSE IF CACSMPL IN (0089, 0090, 0091, 0092, 0120,
                  0121, 0122, 0124, 0335, 0378, 0387, 0432,
                  0433, 0508, 7143, 7286, 7294) THEN XREGION= 2;
ELSE IF CACSMPL IN (0039, 0041, 0045, 0046, 0047,
                  0048, 0049, 0050, 0051, 0101,
                  0103, 0104, 0105, 0337, 0356,
                  0405, 0422, 0511, 5191 ) THEN XREGION= 3;
ELSE IF CACSMPL IN (0001, 0002, 0003, 0004, 0038,
                  0042, 0043, 0073, 0074, 0107,
                  0297, 7139 ) THEN XREGION= 4;
ELSE IF CACSMPL IN (0055, 0056, 0060, 0061, 0095,
                  5195, 9905 ) THEN XREGION= 5;
ELSE IF CACSMPL IN (0013, 0062, 0064, 0096, 0097,
                  0098, 0109, 0110, 0112, 0113,
                  0114, 0117, 0118, 0338, 0363,
                  0364, 0365, 0366, 1350, 1587, 1592, 7236, 9906 ) THEN XREGION= 6;
ELSE IF CACSMPL IN (0008, 0009, 0010, 0079, 0083,
                  0084, 0085, 0108, 9907 ) THEN XREGION= 7;
ELSE IF CACSMPL IN (0031, 0032, 0033, 0053, 0057,
                  0058, 0059, 0075, 0076, 0077,
                  0078, 0093, 0094, 0106, 0119,
                  0129, 0252, 7200, 7293, 9908 ) THEN XREGION= 8;
ELSE IF CACSMPL IN (0018, 0019, 0024, 0026, 0029, 0030,
                  0131, 0213, 0231, 0248, 0407, 5205,
                  6215, 9909 ) THEN XREGION= 9;
ELSE IF CACSMPL IN (0014, 0015, 0028, 0235, 0250,
                  9910 ) THEN XREGION=10;
ELSE IF CACSMPL IN (0125, 0126, 0127, 0128, 0395, 1646,
                  9911 ) THEN XREGION=11;
ELSE IF CACSMPL IN (0052, 0280, 0287, 0534, 7043, 9912 ) THEN XREGION=12;
ELSE IF CACSMPL IN (0606, 0607, 0609, 0617, 0618,
                  0623, 0624, 0629, 0633, 0635,
                  0653, 0805, 0806, 0808, 0814,
                  8931, 8982, 9913 ) THEN XREGION=13;
ELSE IF CACSMPL IN (0610, 0612, 0620, 0621, 0622,
                  0637, 0638, 0639, 0640, 0802,
                  0804, 0853, 0862, 9914 ) THEN XREGION=14;
ELSE IF CACSMPL IN (0449, 0613, 0615, 0616, 9915 ) THEN XREGION=15;
ELSE IF CACSMPL IN (0005, 0006, 0203, 9916 ) THEN XREGION=16;
ELSE IF CACSMPL = 9999 THEN XREGION= .;

IF CACSMPL IN (9901,9902,9903,9904) THEN DO;
  IF D_HEALTH NOT IN ('00','17','18','19') THEN DO;
    XREGION=INPUT(D_HEALTH,8.)+0;
  END;
ELSE DO;
  IF DCATCH IN ('0037', '0067', '0123', '0781', '0907',
              '0908', '0920', '0921', '0922', '0930',
              '0931', '0933', '0939', '0940', '0946',
              '0995')

```

```
THEN XREGION=1;
ELSE IF DCATCH IN ('0124', '0934', '0996')
  THEN XREGION=2;
ELSE IF DCATCH IN ('0039', '0048', '0105', '0911', '0941',
  '0987')
  THEN XREGION=3;
ELSE IF DCATCH IN ('0003', '0787', '0901', '0925', '0943',
  '0988', '0989')
  THEN XREGION=4;
ELSE IF DCATCH IN ('0055', '0056', '0061', '0782', '0783',
  '0789', '0914', '0915', '0918', '0923',
  '0936', '0950')
  THEN XREGION=5;
ELSE IF DCATCH IN ('0113', '0904', '0937', '0990', '0993')
  THEN XREGION=6;
ELSE IF DCATCH IN ('0785', '0929', '0932')
  THEN XREGION=7;
ELSE IF DCATCH IN ('0078', '0784', '0788', '0906', '0917',
  '0924', '0927', '0928', '0935', '0942',
  '0945', '0951', '0974')
  THEN XREGION=8;
ELSE IF DCATCH IN ('0029', '0786', '0986')
  THEN XREGION=9;
ELSE IF DCATCH IN ('0014', '0985')
  THEN XREGION=10;
ELSE IF DCATCH IN ('0125', '0938', '0948', '0973')
  THEN XREGION=11;
ELSE IF DCATCH IN ('0912')
  THEN XREGION=12;
ELSE IF DCATCH IN ('0957', '0958', '0960', '0964', '0966',
  '0967', '0976', '0977', '0979',
  '0982')
  THEN XREGION=13;
ELSE IF DCATCH IN ('0006', '0052', '0640', '0961', '0963',
  '0965', '0978', '0983')
  THEN XREGION=14;
ELSE IF DCATCH IN ('0075', '0120', '0615', '0622', '0953',
  '0970', '0971', '0972', '0975')
  THEN XREGION=15;
ELSE IF DCATCH IN ('0902')
  THEN XREGION=16;
END;
END;

IF D_PAR = '0902' THEN XREGION=16;
IF XREGION = 0 THEN XREGION = .;
```

b. United States (USA)

XREGION is used to classify beneficiaries as residing either in the United States or overseas.

1 = USA (including Alaska and Hawaii)
0 = Overseas


```
IF XREGION IN (1,2,3,4,5,6,7,8,9,10,11,12,16) THEN USA=1;
ELSE IF XREGION IN (13,14,15) THEN USA=0;
ELSE IF XREGION = . THEN USA=.;
```

c. Overseas (XOCONUS)

XREGION is used to classify overseas beneficiaries by region, as follows:

- 1 = Europe
- 2 = Western Pacific
- 3 = Latin America
- . = In USA/Missing Region

```
IF XREGION=13 THEN XOCONUS=1;
ELSE IF XREGION=14 THEN XOCONUS=2;
ELSE IF XREGION=15 THEN XOCONUS=3;
```

d. TRICARE Next Generation of Contracts Region (XTNEXREG)

XREGION is used to create XTNEXREG, the TRICARE Next Generation of Contracts Region grouping, as follows:

- 1 = North
- 2 = South
- 3 = West
- 4 = Overseas

```
IF XREGION IN (1,2,5) THEN XTNEXREG=1;
ELSE IF XREGION IN (3,4,6) THEN XTNEXREG=2;
ELSE IF XREGION IN (7,8,9,10,11,12,16) THEN XTNEXREG=3;
ELSE IF XREGION IN (13,14,15) THEN XTNEXREG=4;
ELSE IF XREGION = . THEN DO;
  IF TNEXTREG = 'N' THEN XTNEXREG=1;
  ELSE IF TNEXTREG = 'S' THEN XTNEXREG=2;
  ELSE IF TNEXTREG = 'W' THEN XTNEXREG=3;
  ELSE IF TNEXTREG = 'O' THEN XTNEXREG=4;
  ELSE XTNEXREG=.;
END;
```

e. Out of Catchment Area (OUTCATCH)

CACSMPL is used to classify beneficiaries as residing either in or outside a catchment area.

- 1 = Out of catchment area
- 0 = In catchment area

```
/* OUTCATCH – OUT OF CATCHMENT AREA */
IF 9900 < CACSMPL < 9999 THEN OUTCATCH=1; /* Out of catchment area */
ELSE IF CACSMPL = 9999 THEN OUTCATCH=.;
ELSE OUTCATCH=0; /* Catchment area */
```

f. Joint Service Flag (JSFLAG)

JSFLAG is used to classify facilities as being Joint Service or not Joint Service.

- 1 = Joint Service
- 0 = Not Joint Service

```

/* Create Joint Service flag */
IF PUT(CACSMPL, JOINTSRV.)='1' THEN JSFLAG=1;
ELSE JSFLAG=0;

```

g. Catchment (XCATCH)

XCATCH is a numeric indicator of MTF catchment area for annual beneficiary reports. The catchment is defined as follows:

```

LENGTH XCATCH 8;
com_geo = geocell;
if pcm = 'MTF' then do;
  %INCLUDE "../Sampling/assigncom_geo.inc";
  else if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' ) or
    ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
    ('7166' <= enrid <= '7195') or ( '6700' <= enrid <= '6881' ) or enrid = '0000' or
    ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919') or
    ('3031' <= enrid <= '3057') or
    enrid in ('0002', '0041', '0044', '0082', '0111', '0213', '0235', '0585', '5208', '0250',
      '0449', '0626', '0012') or
    ('0190' <= enrid <='0199') then com_geo = geocell;
  else com_geo = d_par;
end;
else if patcat='ACTDTY' then com_geo=d_par;

if d_fac='NONCAT' or d_fac='TGRO' or d_fac="TPR" then do;
  if d_health in ('01','02','05','17') then com_geo = '9901';
  else if d_health in ('03','04','06','18') then com_geo = '9902';
  else if d_health in ('07','08','09','10','11','12','19') then com_geo = '9903';
  else if d_health in ('00','13','14','15') then com_geo = '9904';
end;
*****
***d_fac="TPR" and d_health = '17', '18', '19' were added above for Q4, 2004, ***;
***since we got the new regions 17(North T_NEX),18(South T_NEX),19(West T_NEX).***;
*****

*** If the facility is unknown then set com_geo indicates unknown facility ***;
*** '0999' added 03/15 to account for id 6992;
if com_geo in ('9900', '0999', '0998', ' ') then com_geo = '9904';

*****
***Made the following 9 Navy sites stand alone in q1,2005: ***;
***'0026','0068','0231','0378','0387','0405','0407','0508','6215'***;
*****

if geocell in ('0026','0068','0231','0378','0387','0405','0407','0508','6215','0366') then
com_geo=geocell;

xcatch = INPUT(com_geo,8.);
label xcatch = "XCATCH - Catchment Area (Reporting)";

```

h. Sex of Beneficiary (XSEXA)

XSEXA is constructed using self-reported sex, sex identified on the DEERS database (SEX), and answers to sex-specific questions.

1 = Male
2 = Female

/** Note 19a - gender H&YR.058, SEX, H&YR.059B--H&YR.064,
XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
if there is discrepancy between SRSEX and SEX */

/* set imputed FEMALE and MALE based on gender specific questions */

ARRAY fmaleval H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
;

cntfemale=0;
DO OVER fmaleval; /* mammogram/pap smear/PREGNANT*/
IF fmaleval>0 THEN cntfemale=cntfemale+1;
END;

IF cntfemale>0 THEN FEMALE=1;
ELSE FEMALE = 0;

IF H&YR.058=. THEN DO;
IF (SEX='F' AND FEMALE) THEN DO;
N19a=1;
XSEXA=2;
END;
ELSE IF (SEX='F' AND FEMALE=0) THEN DO;
N19a=2;
XSEXA=2;
END;
ELSE IF (SEX='M' AND FEMALE) THEN DO;
N19a=3;
XSEXA=1;
END;
ELSE IF (SEX='M' AND FEMALE=0) THEN DO;
N19a=4;
XSEXA=1;
END;
ELSE IF ((SEX IN ('Z','') AND FEMALE)) THEN DO;
N19a=5;
XSEXA=2;
END;
ELSE IF (SEX='Z' AND FEMALE=0) THEN DO;
N19a=6;
XSEXA=.;
END;
ELSE IF (SEX=' ' AND FEMALE=0) THEN DO;
N19a=7;
XSEXA=.;

```

END;
END;
ELSE IF (H&YR.058=1) THEN DO;
  IF FMALE=0 THEN DO;
    N19a=8;
    XSEXA=1;
  END;
ELSE IF FMALE THEN DO;
  IF SEX='F' THEN DO;
    N19a=9;
    XSEXA=2;
  END;
ELSE DO;
  N19a=10;
  XSEXA=1;
END;
END;
END;
END;
ELSE IF (H&YR.058=2) THEN DO;
  IF FMALE THEN DO;
    N19a=11;
    XSEXA=2;
  END;
ELSE IF FMALE=0 THEN DO;
  IF SEX='M' THEN DO;
    N19a=12;
    XSEXA=1;
  END;
ELSE DO;
  N19a=13;
  XSEXA=2;
END;
END;
END;
END;

```

i. Beneficiary Group (XBNFGRP)

We redefined beneficiary groups to exclude any active duty personnel and any active duty family members who were age 65 or older at the time of survey administration. The variable XBNFGRP reconstructs beneficiary groups into the following values:

- 1 = Active Duty, under 65
- 2 = Family members of active duty, under 65
- 3 = Retirees, survivors, and family members, under 65
- 4 = Retirees, survivors, and family members, 65 or over
- . = Unknown/other

/ XBNFGRP-Beneficiary Group that excludes those 65 and over-Active Duty
and Family Members of Active Duty */*

```

IF ENBGSMPL ^= "b" THEN DO;
IF INPUT(FIELDAGE,8.) >= 65 AND INPUT(ENBGSMPL,8.) IN (1, 2, 3, 4) THEN XBNFGRP = .;
  ELSE IF INPUT(ENBGSMPL,8.) = 1 THEN XBNFGRP = 1;      /* Active Duty <65 */
  ELSE IF INPUT(ENBGSMPL,8.) IN (2, 3, 4) THEN XBNFGRP = 2; /* Family of Active <65 */
  ELSE IF INPUT(ENBGSMPL,8.) IN (5, 6, 7) THEN XBNFGRP = 3; /* Ret/Surv/Fam <65 */
  ELSE IF INPUT(ENBGSMPL,8.) IN (8, 9, 10) THEN XBNFGRP = 4; /* Ret/Surv/Fam 65+ */
  ELSE IF INPUT(ENBGSMPL,8.) IN (11) THEN XBNFGRP = .;
END;

```

j. Service Affiliation (XSERVAFF)

We redefined service affiliation to collapse coast guard, administrative, support contractor, Uniformed Services Treatment Facility (USTF), noncatchment, other, not available, missing/unknown service affiliations into a single other category. The variable XSERVAFF reconstructs service affiliation into the following values:

- 1 = Army
- 2 = Air Force
- 3 = Navy
- 4 = Other
- 5 = Joint Service

```
IF SERVAFF='A' THEN XSERVAFF=1; *Army;
IF SERVAFF='F' THEN XSERVAFF=2; *Air Force;
IF SERVAFF='N' THEN XSERVAFF=3; *Navy;
```

```
/**Coast Guard, Administrative, Support Contractor, USTF, Noncatchment,
Other, Not available, Missing/unknown will collapsed to other per Eric Shone ***/
```

```
IF SERVAFF IN ('C' 'J' 'M' 'T' 'S' 'O' 'X' ' ') THEN XSERVAFF=4; *Other;
IF SERVAFF = 'P' THEN XSERVAFF=5; *AMK 2/27/14 ADDED JOINT SERVICE;
```

2. TRICARE Prime Enrollment and Insurance Coverage**a. TRICARE Prime Enrollment Status (XENRLLMT)**

For reporting purposes, a person is considered enrolled in TRICARE Prime if they are under 65 and the poststratification enrollment type (ENBGSMPL), based on DEERS information, indicates that they were enrolled at the time of data collection. Because it is important to view the experiences of active duty personnel separately from other enrollees, there is a separate category for active duty (under 65), who are automatically enrolled in Prime. The five categories for TRICARE Prime enrollment are as follows:

- 1 = Active duty, under 65
- 2 = Other enrollees, under 65
- 3 = Not enrolled in TRICARE Prime, under 65
- 4 = Not enrolled in TRICARE Prime, 65 or over
- 5 = Enrolled in TRICARE Prime, 65 or over
- . = Unknown

```
/* XENRLLMT--ENROLLMENT STATUS */
IF ENBGSMPL ^= "b" THEN DO;
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 1 THEN XENRLLMT = 1;          /* Active duty (<65) */
  ELSE IF INPUT(ENBGSMPL,8.) IN (2, 3, 5, 6) THEN XENRLLMT = 2; /* Non-active duty
enrolled (<65)*/
  ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7, 11) THEN XENRLLMT = 3; /* Not Enrolled (<65)*/
END;
ELSE IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 10 THEN XENRLLMT = 4;        /* Not Enrolled (65+)*/
  ELSE IF INPUT(ENBGSMPL,8.) IN (8,9) THEN XENRLLMT = 5; /* Enrolled (65+) */
END;
```

b. TRICARE Prime Enrollment Status by Primary Care Manager (XENR_PCM)

Similar to the previous variable XENRLLMT, this variable separates the enrollees other than the active duty category into those with a military primary care manager (PCM) and those with a civilian PCM. Active duty personnel are automatically enrolled and always have a military PCM. XENR_PCM has seven possible values:

- 1 = Active duty, under 65, military PCM
- 2 = Other enrollees, under 65, military PCM
- 3 = Other enrollees, under 65, civilian PCM
- 4 = Not enrolled in TRICARE Prime, under 65
- 5 = Not enrolled in TRICARE Prime, 65 or over
- 6 = Enrolled in TRICARE Prime, 65 or over, military PCM
- 7 = Enrolled in TRICARE Prime, 65 or over, civilian PCM
- . = Unknown

/* XENR_PCM—ENROLLMENT BY PCM TYPE */

```
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 1 THEN XENR_PCM = 1;          /* Active duty (<65) */
  ELSE IF INPUT(ENBGSMPL,8.) IN (3, 6) THEN XENR_PCM = 2; /* Enrolled (<65) - mil PCM */
  ELSE IF INPUT(ENBGSMPL,8.) IN (2, 5) THEN XENR_PCM = 3; /* Enrolled (<65) - civ PCM */
  ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7,11) THEN XENR_PCM = 4; /* Not Enrolled (<65) */
END;
ELSE IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 10 THEN XENR_PCM = 5;        /* Not Enrolled (65+) */
  IF INPUT(ENBGSMPL,8.) = 9 THEN XENR_PCM = 6;        /* Enrolled (65+)-mil PCM */
  IF INPUT(ENBGSMPL,8.) = 8 THEN XENR_PCM = 7;        /* Enrolled (65+)-civ PCM */
END;
END;
```

c. Most-Used Health Plan (XINS_COV)

The respondent's most-used health plan is derived from variable H17003 (unless the respondent is active duty, in which case they are automatically enrolled in Prime) and the respondent's age, with categories as follows:

- 1 = Active duty, under 65
- 2 = Other TRICARE Prime enrollees, under 65
- 3 = TRICARE Standard/Extra (Civilian Health and Medical Program of the Uniformed Services: CHAMPUS)
- 4 = Medicare Part A and/or Part B
- 5 = Other civilian health insurance or civilian HMO
- 6 = Prime, 65 or over
- 7 = TRICARE Plus and Medicare
- 8 = Veterans Administration (VA)
- 9 = TRICARE Reserve Select
- 10 = TRICARE Retired Reserve
- 11 = TRICARE Young Adult
- 12 = Continued Health Care Benefit Program (CHCBP)
- 13 = TRICARE Young Adult Prime
- 14 = TRICARE Young Adult Standard/Extra
- . = Unknown

/* XINS_COV--INSURANCE COVERAGE */

```
IF XENRLLMT = 1 THEN XINS_COV =1;          /* Prime <65-Active Duty */
```

```

ELSE IF 17 <= INPUT(FIELDAGE,8.) < 65 AND H&YR.003 IN (1) THEN XINS_COV = 2; /* Prime
<65-Non-active Duty */
ELSE IF H&YR.003 = 3 THEN XINS_COV = 3; /* Standard/Extra */
ELSE IF H&YR.003 = 11 THEN XINS_COV = 7; /* Plus and Medicare */
ELSE IF H&YR.003 = 4 THEN XINS_COV = 4; /* Medicare*/
ELSE IF H&YR.003 IN (5,6, 7, 8, 9, 13) THEN XINS_COV = 5; Other civilian health insurance*/
ELSE IF H&YR.003 = 10 THEN XINS_COV = 8; /* Veterans Administration (VA) */
ELSE IF H&YR.003 = 12 THEN XINS_COV = 9; /* TRICARE Reserve Select */
ELSE IF H&YR.003 = 14 THEN XINS_COV = 10; /* TRICARE Retired Reserve - MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
AND H&YR.003 = 15 THEN XINS_COV = 13; /* TRICARE Young Adult Prime
- AMK 2/10/14 new categor since now specific for prime */
ELSE IF H&YR.003 = 16 THEN XINS_COV = 12; /* CHCBP - MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
AND H&YR.003 = 17 THEN XINS_COV = 14; /* TRICARE Young Adult
Standard/Extra - AMK 02/06/14 */

ELSE IF (INPUT(FIELDAGE,8.)>= 65 AND XENRLLMT = 5 and H&YR.003 = 1) THEN XINS_COV
= 6; /* Prime, >= 65 */
ELSE IF H&YR.075=1 AND H&YR.076=1 AND H&YR.003 NE .N THEN XINS_COV = 4;
/* NEW Q2 Medicare/Medicaid */

```

d. Insurance Coverage Distinguishing Reservists From Active Duty (XINS_RSV)

This variable is similar to XINS_COV but separates reservists from other active duty.
XINS_RSV has these possible values:

- 1 = Prime <65-Active Duty (Non reservists)
 - 2 = Prime <65-Non-active Duty
 - 3 = Standard/Extra
 - 4 = Medicare/Medicaid
 - 5 = Other civilian health insurance
 - 6 = Prime, >= 65
 - 7 = Plus and Medicare
 - 8 = Veterans Administration (VA)
 - 9 = TRICARE Reserve Select
 - 10 = Prime <65-Active Duty (Reservists)
 - 11 = TRICARE Retired Reserve
 - 12 = TRICARE Young Adult
 - 13 = CHCBP
 - 14 = TRICARE Young Adult Prime
 - 15 = TRICARE Young Adult Standard/Extra
- . = Unknown

```

/* XINS_RSV--INSURANCE COVERAGE DISTINGUISHING RESERVISTS FROM ACTIVE
DUTY*/
IF XENRLLMT = 1 THEN DO;
IF XBENCAT IN (1) THEN XINS_RSV =1; /* Prime <65-Active Duty (Non
reservists) */
ELSE IF XBENCAT IN (3,5) THEN XINS_RSV=10; /* Prime <65-Active Duty
(Reservists) */
END;
ELSE IF 17 <= INPUT(FIELDAGE,8.) < 65 AND H&YR.003 IN (1) THEN XINS_RSV = 2; /* Prime
<65-Non-active Duty */
ELSE IF H&YR.003 =3 THEN XINS_RSV = 3; /* Standard/Extra */

```

```

ELSE IF H&YR.003 = 11 THEN XINS_RSV = 7;           /* Plus and Medicare */
ELSE IF H&YR.003 = 4 THEN XINS_RSV = 4;           /* Medicare*/
ELSE IF H&YR.003 IN (5,6, 7, 8, 9, 13) THEN XINS_RSV = 5; /* Other civilian health
insurance*/
ELSE IF H&YR.003 = 10 THEN XINS_RSV = 8;           /* Veterans Administration (VA) */
ELSE IF H&YR.003 = 12 THEN XINS_RSV = 9;           /* TRICARE Reserve Select */
ELSE IF H&YR.003 = 14 THEN XINS_RSV = 11;          /* TRICARE Retired Reserve -
MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
  AND H&YR.003 = 15 THEN XINS_RSV = 14;           /* TRICARE Young Adult Prime
- MER 06/21/11 */
ELSE IF H&YR.003 = 16 THEN XINS_RSV = 13;          /* CHCBP - MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
  AND H&YR.003 = 17 THEN XINS_RSV = 15;          /* TRICARE Young Adult
Standard/Extra- AMK 02/06/14 */
ELSE IF (INPUT(FIELDAGE,8.)>= 65 AND XENRLLMT = 5 and H&YR.003 = 1) THEN XINS_RSV
= 6; /* Prime, >= 65 */
ELSE IF H&YR.075=1 AND H&YR.076=1 AND H&YR.003 NE .N THEN XINS_RSV = 4;
/* Medicare/Medicaid */

```

e. Enrollment Distinguishing Reservists From Active Duty (XENR_RSV)

This variable is similar to XENR_PCM but separates reservists from other active duty. XINS_RSV has 8 possible values:

- 1 = Active duty (<65) Non reservists
- 2 = Enrolled (<65) - mil PCM
- 3 = Enrolled (<65) - civ PCM
- 4 = Not Enrolled (<65)
- 5 = Not Enrolled (65+)
- 6 = Enrolled (65+)-mil PCM
- 7 = Enrolled (65+)-civ PCM
- 8 = Active duty (<65) Reservists
- . = Unknown

```

/* XENR_RSV--ENROLLMENT DISTINGUISHING RESERVISTS FROM ACTIVE DUTY */
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 1 THEN DO;
    IF XBENCAT IN (1) THEN XENR_RSV = 1;           /* Active duty (<65) Non reservists */
    ELSE IF XBENCAT IN (3,5) THEN XENR_RSV = 8;     /* Active duty (<65) Reservists */
  END;
  ELSE IF INPUT(ENBGSMPL,8.) IN (3, 6) THEN XENR_RSV = 2; /* Enrolled (<65) - mil PCM */
  ELSE IF INPUT(ENBGSMPL,8.) IN (2, 5) THEN XENR_RSV = 3; /* Enrolled (<65) - civ PCM */
  ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7,11) THEN XENR_RSV = 4; /* Not Enrolled (<65) */
END;
ELSE IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
  IF INPUT(ENBGSMPL,8.) = 10 THEN XENR_RSV = 5;     /* Not Enrolled (65+) */
  IF INPUT(ENBGSMPL,8.) = 9 THEN XENR_RSV = 6;      /* Enrolled (65+)-mil PCM */
  IF INPUT(ENBGSMPL,8.) = 8 THEN XENR_RSV = 7;      /* Enrolled (65+)-civ PCM */
END;

```

f. Beneficiary Category (XBENCAT)

This variable was created because of the increasing presence of inactive reservists and their dependents in the data. XBENCAT has eight possible values:

- 1 = Active Duty

2 = Dependent of Active Duty
 3 = Active Reservist
 4 = Dependent of Active Reservist
 5 = Inactive Reservist
 6 = Dependent of Inactive Reservist
 7 = Retired or dependent<65
 8 = Retired or dependent>65
 . = Missing/Other

/* TRICARE Reserve Select and the increasing presence of inactive reservists and their dependents in our data.

In order to accommodate them, we will need to create additional variables. */

```
IF DBENCAT='ACT' THEN XBENCAT=1;    *Active duty;
ELSE IF DBENCAT='DA' THEN XBENCAT=2; *Active Duty family member;
ELSE IF DBENCAT='GRD' THEN XBENCAT=3; *Active reservist;
ELSE IF DBENCAT='DGR' THEN XBENCAT=4; *Dependent of Reservist;
ELSE IF DBENCAT='IGR' THEN XBENCAT=5; *Inactive Reservist";
ELSE IF DBENCAT='IDG' THEN XBENCAT=6; *Dependent of Inactive Guard";
ELSE IF DBENCAT IN ('RET','DR','DS') THEN DO;
    IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN XBENCAT=7; *Retired or Dependent of Retiree <65;
    ELSE IF INPUT(FIELDAGE,8.) >= 65 THEN XBENCAT=8; *Retired or Dependent of Retiree
    >=65;
END;
```

f. Types of Coverage (KCIVINS)

A binary variable was created to indicate the type of insurance that respondents use:

- Is the respondent covered by private civilian insurance (KCIVINS)

This variables has the following values:

1 = Yes
 2 = No
 . = Unknown

```
IF H&YR.002G=1 OR H&YR.002I=1 OR H&YR.002J=1 THEN KCIVINS=1;    /* YES */
ELSE KCIVINS=2;    /* NO */
```

3. Preventive Care

(HP_PRNTL, HP_MAMOG, HP_MAM50, HP_PAP, HP_BP, HP_FLU, HP_SMOKE, HP_SMKH3, HP_CESH3, HP_OBESE, XBMI, XBMICAT)

Preventive care analyses compare the percentage of respondents who received services within the recommended time period to the TRICARE standard federal Healthy People 2020 goal. We constructed new binary variables from the responses to indicate whether the respondent received the preventive care service within the recommended time period. See Table 2.5 for the list of the variables developed for analysis of preventive care. With the exception of XBMI and XBMICAT, the new preventive care variables have the following values:

1 = Received service within the recommended time period
 2 = Did not receive service within the recommended time period
 . = Missing information

TABLE 2.5
PREVENTIVE CARE STANDARDS

Preventive Care Delivered	Relevant Question	Variable Name	Outcome Measure with Recommended Time Period (Numerator)	Population Involved (Denominator)	Standard
Blood Pressure Check	H17049 & H17050	HP_BP	Number with care in the past 24 months and know the results	Adults	95% within past 2 years
Flu Shot Flu Shot - HEDIS	H17051 S17B001	HP_FLU HP_FLU_H	Number with care in the past 12 months	Adults age 65 and older	90% in past year, age 65 and over
Pap Smear	H17059B	HP_PAP	Number with care in the past 36 months	Adult females	93% in the past 36 months
Mammography	H17061	HP_MAMOG	Number with care in the past 24 months	Females age 40 and over	81% in the past 24 months
Mammography	H17061	HP_MAM50	Number with care in the past 24 months	Females age 50 and over	81% in the past 24 months
Smoker	H17054	HP_SMOKE	Number that smoked in the past 12 months	Adults	12% in the last 12 months
Smoker	H17052 & H17053	HP_SMKH3	Number that smoked in the past 12 months	Adults	12% in the last 12 months
Smoking Cessation	H17053 & H17054	HP_CESH3	Number that smoked in the past 12 months and received smoking cessation counseling	All current adult smokers and those who quit smoking within the past year	None
Prenatal Care	H17062, H17063, H17064	HP_PRNTL	Number with care in the first trimester	Currently pregnant adult females and all adult females who were pregnant in the past 12 months, excluding those less than 3 months pregnant who haven't received care	78% had care in first trimester
Non-Obese Weight	H17071F, H17071 & H17072	HP_OBESE	Number of people who are not obese	Adults	69% are not obese

/* HP_PRNTL--IF PREGNANT LAST YEAR, RECEIVED PRENATAL CARE IN 1ST TRIMESTER */

```
IF H&YR.062 IN (1,2) THEN DO; /* Pregnant in last 12 months */
  IF H&YR.064 = 4 THEN HP_PRNTL = 1; /* Yes */
  ELSE IF (H&YR.063 = 1 AND H&YR.064 = 1) THEN HP_PRNTL = .; /* <3 months pregnant now */
  ELSE IF H&YR.064 IN (1,2,3) THEN HP_PRNTL = 2; /* No */
END;
ELSE IF H&YR.062 IN (.C,.N) THEN HP_PRNTL = .N; /* Male */
```

/* HP_MAMOG--FOR WOMEN AGE 40 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS */

```
IF XSEXA = 2 AND INPUT(FIELDAGE,8.) >= 40 THEN DO;
  IF H&YR.061 IN (5, 4) THEN HP_MAMOG = 1; /* Yes */
  ELSE IF H&YR.061 IN (1, 2, 3) THEN HP_MAMOG = 2; /* No */
END;
```

/* HP_MAM50--FOR WOMEN AGE 50 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS */

```
IF XSEXA = 2 AND INPUT(FIELDAGE,8.) >= 50 THEN DO;
  IF H&YR.061 IN (5, 4) THEN HP_MAM50 = 1; /* Yes */
  ELSE IF H&YR.061 IN (1, 2, 3) THEN HP_MAM50 = 2; /* No */
```

```

END;

/* HP_PAP--FOR ALL WOMEN, HAD PAP SMEAR IN LAST 3 YEARS */
IF XSEXA = 2 THEN DO;
  IF H&YR.059B IN (4, 5, 6) THEN HP_PAP = 1;      /* Yes */
  ELSE IF H&YR.059B IN (1, 2, 3) THEN HP_PAP = 2; /* No */
END;

/* HP_BP--HAD BLOOD PRESSURE SCREENING IN LAST 2 YEARS AND KNOW RESULT */
IF H&YR.049 IN (2,3) AND H&YR.050 IN (1,2) THEN HP_BP = 1; /* Yes */
  ELSE IF H&YR.049 = 1 THEN HP_BP = 2;      /* No */
  ELSE IF H&YR.049 < 0 OR H&YR.050 < 0 THEN HP_BP = .; /* Unknown */
  ELSE HP_BP = 2;      /* No */

/* HP_FLU--FOR PERSON AGE 65 OR OVER, HAD FLU SHOT IN LAST 12 MONTHS */
IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
  IF H&YR.051 = 4 THEN HP_FLU = 1;      /* Yes */
  ELSE IF H&YR.051 IN (1, 2, 3) THEN HP_FLU = 2; /* No */
END;

/* HP_FLU_H--FOR PERSON AGE 65 OR OVER, HAD FLU SHOT SINCE JULY 1 2016 */
/****REVISE FOR SURVEY****/
IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
  IF S&YR.BO01 = 1 THEN HP_FLU_H = 1;      /* Yes */
  ELSE IF S&YR.BO01 = 2 THEN HP_FLU_H = 2; /* No */
END;

/* HP_SMOKE--ADVISED TO QUIT SMOKING IN PAST 12 MONTHS */
IF H&YR.054 IN (2, 3, 4) THEN HP_SMOKE = 1; /* Yes */
  ELSE IF H&YR.054 = 1 THEN HP_SMOKE = 2; /* No */

/* Add code for smoking and smoking cessation counseling according to the HEDIS */
IF H&YR.052 IN (1,2) THEN DO;
  IF H&YR.052=1 AND (H&YR.053=3 OR H&YR.053=4) AND H&YR.057A=1 THEN
  HP_SMKH3=1; /* Yes */
  ELSE IF H&YR.052=2 OR H&YR.053=2 OR H&YR.057A NE 1 THEN HP_SMKH3=2; /* No */
*/
END;

IF (H&YR.053=3 OR H&YR.053=4) AND H&YR.054>0 THEN DO;
  IF H&YR.054>1 THEN HP_CESH3=1; /* Yes */
  ELSE HP_CESH3=2; /* No */
END;

*****
* Calculate XBMI- Body Mass Index and XBMICAT- Body Mass Index Category
* BMI=Weight(in pounds)*703 divide by Height(in inch)*Height(in inch)
*****
,

IF H&YR.071F IN (.A.,O.,I.,B) THEN TSRHGTF=.; ELSE TSRHGTF=H&YR.071F;
IF H&YR.071I IN (.A.,O.,I.,B) THEN TSRHGTI=.; ELSE TSRHGTI=H&YR.071I;
IF H&YR.072 IN (.A.,O.,I.,B) THEN TSRWGT =.; ELSE TSRWGT =H&YR.072;

IF TSRHGTF IN (.) OR
  TSRWGT IN (.) THEN XBMI=.;
ELSE DO;

```

```

XBMI = ROUND((TSRWGT*703)/
              (SUM(TSRHGTF*12,TSRHGTI)*SUM(TSRHGTF*12,TSRHGTI)), .1);
END;

```

```

IF XBMI < 12 OR XBMI > 70 THEN XBMI=.;

```

```

DROP TSRHGTF TSRHGTI TSRWGT;

```

```

/* Same category as Healthy People 2010 where there is no sex distinction */

```

```

IF XBMI = . THEN XBMICAT=.;
ELSE IF XBMI < 18.5 THEN XBMICAT=1; *Underweight;
ELSE IF XBMI < 25 THEN XBMICAT=2; *Normal Weight;
ELSE IF XBMI < 30 THEN XBMICAT=3; *Overweight;
ELSE IF XBMI < 40 THEN XBMICAT=4; *Obese;
ELSE XBMICAT=5; *Morbidly Obese;

```

```

IF XBMICAT=. THEN HP_OBESE=.;
ELSE IF XBMICAT IN (4,5) THEN HP_OBESE=1; *OBESE ;
ELSE HP_OBESE=2;

```

5. Utilization

a. Outpatient Utilization (KMILOPQY, KCIVOPQY)

KMILOPQY reflects the total number of outpatient visits, derived from. For those receiving care at military facilities, we adjust KMILOPQY to reflect zero visits for those with no care or those who get their care from civilian facilities. KCIVOPQY is the comparable variable for those who receive care at civilian facilities.

```

/* KMILOPQY--OUTPATIENT VISITS TO MILITARY FACILITY
   KCIVOPQY--OUTPATIENT VISITS TO CIVILIAN FACILITY */
IF H&YR.005 = 1 THEN DO;
  KMILOPQY=H&YR.013;
  KCIVOPQY=1;
END;
ELSE IF H&YR.005 IN (2, 3, 4) THEN DO;
  KCIVOPQY=H&YR.013;
  KMILOPQY=1;
END;
ELSE IF H&YR.005 = 5 THEN DO;
  KMILOPQY=1;
  KCIVOPQY=1;
END;

```

E. WEIGHTING PROCEDURES

Quarterly and annual tabulations and analyses of the 2017 HCSDB must account for the survey's complex sample design and adjust for possible bias due to nonresponse. As part of sample selection, Mathematica constructed sampling weights (BWT) that reflect the differential selection probabilities used when sampling beneficiaries across strata. With the level of nonresponse present in the HCSDB and the likelihood that respondents and nonrespondents will differ in terms of their responses to survey questions, the issue of nonresponse bias is potentially a serious one. Prior to 2005, we compensated for potential nonresponse bias by adjusting for nonresponse independently within weighting classes, defined by the stratification variables — enrollment status, beneficiary group, and geographic area. In other words, it was assumed that both response likelihood and

characteristics related to survey outcome variables were homogeneous within these weighting classes.

However, because the HCSDB sample is selected from the DEERS, a great deal is known about both respondents and nonrespondents. Consequently, a large number of variables are available for the nonresponse weighting adjustments. As described above, in surveys prior to 2005, the only auxiliary variables used in developing the nonresponse weighting adjustments were the stratification variables, which represented a small subset of the available variables. Beginning with the 2005 HCSDB, we developed a new weighting adjustment procedure to incorporate more information about respondents and nonrespondents. The first stage in this process identified variables from the frame that were most related to whether or not a beneficiary responded to the survey. After initial screening of variables, the Chi-squared Automatic Interaction Detection (CHAID) (Biggs et al. 1991) technique was used for this purpose. Secondly, we incorporated the chosen auxiliary variables into a weighting class adjustment procedure using a response propensity model.

1. Constructing the Sampling Weight

In the 2017 HCSDB, stratified sampling was used to select the sample of beneficiaries that would receive the questionnaire. Sampling was independently executed within strata defined by combinations of three domains: enrollment status groups; beneficiary groups; and geographic areas. The sample was selected with differential probability of selection across strata. Sample sizes were driven by predetermined precision requirements. For further details of the 2017 adult sample design, see Mathematica’s “Health Care Survey of DoD Beneficiaries: 2017 Adult Sampling Report (2016).”

Our first step in constructing sampling weights was to ensure that they reflected the unequal sampling rates across strata. These sampling weights can be viewed as the number of population elements each sampled beneficiary represents. The sampling weight was defined as the inverse of the beneficiary’s selection probability:

$$W_s(h, i) = \frac{N_h}{n_h}$$

where:

$W_s(h, i)$ is the sampling weight for the i^{th} sampled beneficiary in stratum h ,

N_h is the total number of beneficiaries in stratum h , and

n_h is the number of sampled beneficiaries in stratum h .

The sum of the sampling weights over selected beneficiaries i , from stratum h equals the total population size of stratum h or N_h .

2. Adjustment for Total Nonresponse

Survey estimates obtained from respondents only can be biased with respect to describing characteristics of the total population (Lessler and Kalsbeek 1992). The choice of an appropriate method for adjusting for potential nonresponse bias depends on the response mechanism that underlies the study population. We adjusted for nonresponse independently within weighting classes, with the assumption that both response and characteristics directly or indirectly related to survey variables are homogeneous within these classes. Two types of nonresponse were associated with the 2017 HCSDB:

- Unit or total nonresponse occurred when a sampled beneficiary did not respond to the survey questionnaire (e.g., refusals, no questionnaire returned, blank questionnaire returned, bad address).
- Item nonresponse occurred when a question that should have been answered was not answered (e.g., refusal to answer, no response).

Because item response rates in previous surveys were high, statistical imputation, a technique used to compensate for item nonresponse, was not used in the 2017 HCSDB. To account for unit or total nonresponse, we implemented a weighting class adjustment procedure where the weighting classes are formed from a response propensity model (see Section 4 below).

3. Weighting Class Adjustments for Non-Response

The 2017 HCSDB weighting was implemented by using a method instituted in 2005. This method partitions the sample into groups, called weighting classes, using the propensity scores from the propensity model. Weights of respondents are then adjusted within each class so that they sum to the weight total for nonrespondents and respondents from that class. Implicit in the weighting class adjustment is the assumption that, had the nonrespondents responded, their responses would have been distributed in the same way as the responses of the other respondents in their weighting class.

Nonresponse adjustment factors for the 2017 HCSDB were calculated in two steps. First, we adjusted the sampling weights to account for sampled beneficiaries for whom eligibility status could not be determined. Sampled beneficiaries were then grouped as follows according to their response status d :

- $d = 1$ Eligible — complete questionnaire returned (FNSTATUS = 11)
- $d = 2$ Eligible — incomplete or no questionnaire returned (FNSTATUS = 12 or 20)
- $d = 3$ Ineligible — deceased, incarcerated or permanently incapacitated beneficiary (FNSTATUS = 31)
- $d = 4$ Eligibility unknown — no questionnaire or eligibility data (FNSTATUS = 41 or 42)
- $d = 5$ Ineligible — ineligible at time of Altarum address update (FNSTATUS = 32)

Within weighting class c , the weights of the $d = 4$ nonrespondents with unknown eligibility were redistributed to the cases for which eligibility was known ($d = 1, 2, 3$), using an adjustment factor $A_{wc1}(c, d)$ that was defined to be zero for $d = 4$, one for $d = 5$, and defined as:

$$A_{wc1}(c, d) = \frac{\sum_{i \in S(c)} W_s(c, i)}{\sum_{i \in S(c)} I_1(i)W_s(c, i) + \sum_{i \in S(c)} I_2(i)W_s(c, i) + \sum_{i \in S(c)} I_3(i)W_s(c, i)} \text{ for } d = 1, 2, 3$$

where:

$A_{wc1}(c, d)$ is the eligibility-status adjustment factor for weighting class c and response status code d ,

$I_d(i)$ is the indicator function that has a value of 1 if sampled unit i has a response status code of d and value of 0 otherwise,

$S(c)$ is the set of sample members belonging to weighting class c , and

$W_s(c,i)$ is the sampling weight (BWT) for the i^{th} sample beneficiary from weighting class c before adjustment.

The adjustment $A_{wc1}(c,d)$ was then applied to the sampling weights to obtain the eligibility-status adjusted weight. Beneficiaries in weighting class c with response status code of d were assigned the eligibility-status adjusted weight:

$$W_{wc1}(c,d,i) = A_{wc1}(c,d) W_s(c,i) \text{ for } d = 1, 2, 3, 4, 5$$

The next step in weighting was to adjust for incomplete or missing questionnaires from beneficiaries known to be eligible. For this adjustment, the weighting class method is again used. Within weighting class c the sample was again partitioned into groups according to the beneficiary's response status code d . Within weighting class c , the weights of the $d = 2$ nonresponding eligibles were redistributed to the responding eligibles $d = 1$, using an adjustment factor $A_{wc2}(c,d)$ that was defined to be zero for $d = 2, 4$. For Group 1 ($d = 1$), the questionnaire-completion adjustment or $A_{wc2}(c, 1)$ factor for class c was computed as:

$$A_{wc2}(c,1) = \frac{\sum_{i \in S(c)} I_1(i)W_{wc1}(c,i) + \sum_{i \in S(c)} I_2(i)W_{wc1}(c,i)}{\sum_{i \in S(c)} I_1(i)W_{wc1}(c,i)}$$

By definition, all $d = 3$ and $d = 5$ ineligible beneficiaries "respond," so the $d = 3$ and $d = 5$ adjustment factor (based on response propensity) is 1, or $A_{wc2}(c,3) = A_{wc2}(c,5) = 1$. The questionnaire-completion adjusted weight was calculated as the product of the questionnaire-completion adjustment $A_{wc2}(c,d)$ and the previous eligibility-status adjusted weight $W_{wc1}(c,d,i)$, or:

$$W_{wc2}(c,d,i) = A_2(c,d)W_{wc1}(c,d,i)$$

As a result of this step, all nonrespondents ($d = 2, 4$) had questionnaire-completion adjusted weights of zero, while the weight for ineligible cases ($d = 3, 5$) remained unchanged, or $W_{wc2}(c,3,i) = W_{wc1}(c,3,i)$ and $W_{wc2}(c,5,i) = W_{wc1}(c,5,i)$.

4. Response Propensity Model for Non-Response

It is common practice to use weighting adjustments to compensate for unit nonresponse in sample surveys. There are numerous methods developed to make these adjustments (Kalton and Maligalig 1991; Holt and Smith 1979; Oh and Scheuren 1983; Little and Vartivarian 2003; Vartivarian and Little 2003). Moreover, a number of studies have evaluated multiple weighting methods to adjust for nonresponse. Carlson and Williams (2001) found nearly identical results with respect to the design effects and the weighted estimates for two weighting approaches: 1) weighting classes using the design features (strata and sampling units), and 2) propensity models containing numerous variables identified as predictors of response. They conjectured that the propensity model approach might perform better for estimates in key geographic subdomains because there would be many fewer weighting cells than for the national estimates. Rizzo et al. (1994) investigated several alternative methods for panel nonresponse in the Survey of Income and Program Participation (SIPP), including nonresponse adjustment cells, logistic regression, CHAID methods, and generalized raking methods. They found a number of variables related to panel nonresponse that are not employed in the standard SIPP nonresponse adjustment cells methodology. These variables were used in the alternative weighting methods and were found to result in similar weights regardless of method.

Therefore, Rizzo et al. conclude that the choice of model variables is more important than the weighting methodology.

a. Predictors of Response Propensity

The first step in developing nonresponse adjustments is deciding which of the large number of variables available from the HCSDb sample frame would be best to use in the adjustment procedures. We do this by evaluating each variable and its relationship to response. Segmentation analysis using the CHAID software was used to allow for a model-building process that focuses on segments showing different response propensities.¹ This analysis avoids the problem of examining “all possible interactions” that is typical of regression modeling. The unweighted segmentation algorithm split the sample into subgroups based on response rates. The splitting process continued until either no other predictors were found or the segment size fell below a minimum size of 50. For ease of interpretation, we also limited the splitting process to three levels. We ran the CHAID analysis twice, once to predict eligibility determination and again to predict survey completion among eligible beneficiaries

b. Response Propensity Weighting Classes

The nonresponse adjustments involved developing weighting classes using sample design characteristics and the response propensity model developed in the modeling stage. The usual HCSDb approach computes the response weight adjustment cells based on fully observed variables from the sample frame. However, in order to avoid empty or sparsely populated cells, we limited our classification to the stratification variables, catchment area, enrollment, and beneficiary group, and collapsed these cells as necessary.

The alternative approach we used to reduce the number of cells was to stratify based on response propensity. The method used a model of the relationship between a set of beneficiary characteristics and a response outcome. We used logistic regression to model this relationship because the response outcome is dichotomous: beneficiaries either respond or they do not. If the characteristics in the model predict response well and if the characteristics are correlated with the substantive variables of the survey, then the model-based adjustment factors applied to the sampling weights greatly reduce the potential for nonresponse bias. Like the previous weighting class adjustment method, we make two separate weighting adjustments to attempt to compensate for nonresponse: an eligibility determination adjustment and a completion adjustment.

The overall probability of having a known eligibility status is estimated with a logistic regression model. The probability that sample beneficiary i has a known eligibility status is:

$$\begin{aligned}\hat{\lambda}_i &= P[E_i = 1 | X_i, \hat{\beta}] \\ &= [1 + \exp(-X_i \hat{\beta})]^{-1}\end{aligned}$$

where

¹ Using as a criterion the significance of a chi-squared test, CHAID evaluates all of the values of a potential predictor variable. It merges values that are judged to be statistically homogeneous (similar) with respect to response and maintains all other values that are heterogeneous (dissimilar). It then selects the best predictor variable to form the first branch in the decision tree, such that each node is made of a group of homogeneous values of response. This process continues recursively until the tree is fully grown.

$$E_i = \begin{cases} 1 & \text{if sample beneficiary } i \text{ has eligibility status determined} \\ 0 & \text{otherwise} \end{cases}$$

and X_i is a vector of HCSDB response predictors (main effects and interaction terms) and $\hat{\beta}$ are the estimated regression coefficients.

To determine the best set of response predictors, we fit models using unweighted stepwise, backward, and forward logistic regression procedures in SAS. We developed automated models separately for Continental U.S. (CONUS) and Outside of Continental U.S. (OCONUS) and included as response predictors an indicator variable for each TNEC region. Besides TNEC region, an indicator of whether a beneficiary is in a catchment area or not was added to the model. In the full model, we included as response predictors all nine variables (TNEC region, age, beneficiary group, PCM, personnel category (enlisted, warranted officer, or officer), military rank, sex, branch of service, and an indicator for being in a catchment area) and interactions identified by the CHAID analysis. We re-ran the three sets of resulting unweighted models using weights and the sample design characteristics in SUDAAN. We estimated the coefficients using a weighted logistic regression procedure in SUDAAN, which incorporates the stratified design in estimating standard errors for the coefficients. We selected the model with the best Hosmer and Lemeshow (H-L) goodness-of-fit test from both SAS and SUDAAN since all models have similar concordance-discordance rates.

For each eligibility determination model, we ordered the list of response propensity scores and then divided them into groups of equal size. Ten weighting classes were formed from the deciles of the propensity score for CONUS. For OCONUS, we formed five classes using the quintiles of the propensity scores.

For the completion adjustment stage, we formed the weighting classes using the results from the CHAID trees; the number of weighting classes was determined by the number of the terminal nodes in the CHAID trees. Because we observed little variation in the questionnaire-completion adjustment stage, statistical modeling was unnecessary, and instead the weighting classes were formed directly from the CHAID trees.

In addition, we poststratified the nonresponse-adjusted weights to the frame totals to obtain specific domain weighted totals equal to population totals. The poststrata were defined by stratification variables — TNEC region, catchment area, and enrollment status, and were collapsed to form poststrata of sufficient size. Due to the possibly insufficient sample size constraint within each TNEC region, we stratified by catchment area only for those enrolled with military primary care manager. The poststratification adjustment factor for the h^{th} poststratum is defined as:

$$A_h^{PS} = \frac{N_h}{\sum_{i \in h} W_i^C}$$

where W_i^C is the nonresponse-adjusted weights, and N_h is the total number of beneficiaries in the DEERS frame associated with the h^{th} poststratum for the i^{th} beneficiary. We calculated the poststratified adjusted weight for the i^{th} beneficiary sampled from the h^{th} poststratum by the following:

$$W_{hi}^{PS} = A_h^{PS} \times W_i^C$$

Therefore, when summed over all respondents in poststratum h , the poststratified weights total N_h .

Lastly, we evaluated the weights and trimmed extreme weights to reduce excessive effect of extreme weights to variance inflation. Whenever some weights were trimmed, we redid the post-stratification of the weights to produce the final survey weights.

5. Combining HEDIS and HCSDB Quarter II Weights

In addition to calculating weights for the HCSDB quarterly samples, the same process was applied to the HEDIS sample. After calculating weights separately for HEDIS and HCSDB quarter II, we combined these two sets of weights, since the sample frame for both surveys was the same DEERS extract. For strata that were only found in the HCSDB frame (meaning that the stratum as defined during HCSDB sampling did not include any beneficiaries eligible for the HEDIS survey), we retained the HCSDB quarter II weight as is typical.

For strata with completed surveys (FNSTATUS=11) from both HCSDB quarter II and HEDIS, we created a composite weight that gives increased importance to the weight as calculated for the sample (HCSDB quarter II or HEDIS) with the larger number of completes and smaller design effect in that stratum. Specifically, we calculated a factor lambda as

$$\lambda = \frac{n_{HCSDB}}{def f_{HCSDB}} / \left(\frac{n_{HCSDB}}{def f_{HCSDB}} + \frac{n_{HEDIS}}{def f_{HEDIS}} \right)$$

where n_{HCSDB} is the sample size in a given stratum from the HCSDB survey, $def f_{HCSDB}$ is the design effect in the stratum as calculated using the HCSDB survey results, n_{HEDIS} is the sample size in the stratum from the HEDIS survey, and $def f_{HEDIS}$ is the design effect in the stratum as calculated using the HEDIS survey results.

We then combined the HCSDB and HEDIS weights using the calculated λ as

$$combined\ weight = \lambda * weight_{HCSDB} + (1 - \lambda) * weight_{HEDIS}$$

where $weight_{HCSDB}$ is the weight as calculated based only on the HCSDB survey responses and $weight_{HEDIS}$ is the weight as calculated based only on the HEDIS survey responses. After this process of combining HEDIS and HCSDB Q2 weights, the combined results were poststratified as described above and were used as a single quarter, referred to henceforth as HCSDB quarter II.

6. Calculation of Combined Annual Weights

As a final step, we combined the three consecutive quarterly data files. Because there were a total of 231 late respondents who were not included in the Quarters I–II, 2017 files, the first two quarters were re-weighted before they were merged into the combined annual dataset. The new Quarters I–II datasets contain the responses of respondents who “trickled” in past the deadline for the survey. After reweighting the Quarters I–II datasets, the Quarters I–II datasets and the Quarter III dataset were merged to form a combined annual dataset with data for all three quarters.

Since the combined annual dataset sample sizes are sufficiently large to provide statistically reliable estimates, users will be able to calculate survey estimates for subdomains, such as catchment areas (XCATCH). Construction of an appropriate annual weight will allow users to treat the combined data as coming from a single survey. Quarterly weights are still included so that users may continue to calculate quarterly estimates and retain the ability to combine any sequential three quarters into a combined data set.

Combined estimates can be calculated from the three independent samples by averaging the estimates for the three quarters. This method for combining the three quarters of data and calculating combined estimates assumes that the variance in estimates from one quarter to the next is merely due to sampling variation. These combined estimates will, in fact, be more precise than the quarterly estimates because they average out the variation across quarters (for a further discussion, see Friedman, et al. 2002).

We calculated the final survey weight for each quarter (Q1, Q2, and Q3) within the combined dataset. To retain the sum of the weights from the combined data as the population count, we average the

population over the three quarters, by rescaling each quarterly survey weight (denoted as WQ1, WQ2, and WQ3) as follows in order to develop a combined annual weight:

$$(1) \quad WCOM = q_i \times WQ_i$$

where q_i is between 0 and 1 with the constraint $q_1 + q_2 + q_3 = 1$. The choice of the appropriate value for each of the q_i 's can be based on various assumptions. We decided that each quarterly contribution to the annual weight should be equal, and therefore assigned the value of each q_i as follows:

$$q_1 = 0.33; q_2 = 0.33; q_3 = 0.33$$

Then, the weight for the combined annual data in (1) will be $WCOM$.

The final data file retains the quarterly sampling stratum variables and quarterly weight as calculated using the response propensity (FWRWT) and the combined weights (CFWT). The file also contains an indicator variable for the quarters. From this combined dataset, one can calculate both combined data and revised quarterly estimates.

7. Calculation of Quarterly Jackknife Replicate Weights

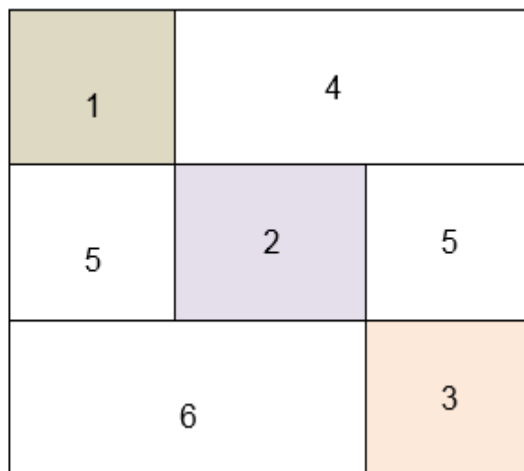
Calculation of variance estimates in the HCSDB requires a design-based variance estimation technique that is available in most statistical software packages for analysis from a complex survey data, such as WesVarPC® (Brick et al. 1996), SUDAAN®, SAS/STAT® version 8 or higher, and STATA®. The Taylor series linearization technique requires sample design information, including the sampling weight and stratification information. As an alternative, a replication technique such as the Jackknife method can be used to calculate variance estimates. In the HCSDB, a series of jackknife replicate weights are calculated and attached to each beneficiary record in the database. In jackknife replication, deleting selected cases from the full sample generates the prescribed number of replicates.

To construct the HCSDB replicate weights, the entire file of sampled beneficiaries is first sorted by sampling strata. Next, 60 mutually exclusive and exhaustive systematic subsamples of the full sample are identified in the sorted file. A jackknife replicate is then obtained by dropping one subsample from the full sample. As each subsample is dropped in turn, 60 sets of jackknife replicates are produced. The weighting process after the modeling is applied to the full sample is then applied separately to each of the jackknife replicates to produce a set of replicate weights for each record. We did not model the propensity scores for each replicate. Instead the weighting cells from the propensity scores from the full sample weight were adopted in the replicate weights construction. Then, a series of jackknife replicate weights (FWRWT1-FWRWT60) was attached to the final data in order to construct jackknife replication variance estimates. These replicate weights should be used to estimate variances of quarterly estimates.

8. Calculation of Annual Jackknife Replicates

Since 60 quarterly replicate weights were available in each quarter, a total of 180 annual replicate weights (CFWT1 – CFWT180) were constructed across the three quarters.

Figure 1: Construction of Annual replicate weights based on the quarterly replicate weights



- 1 – Q1 Replicate Weights
- 2 – Q2 Replicate Weights
- 3 – Q3 Replicate Weights
- 4 – Q1 Final weights
- 5 – Q2 Final weights
- 6 – Q3 Final weights

Each quarterly replicate weight was put into the data set as a form of block diagonal (1, 2, 3), and the quarterly final weights were put into the dataset for off-diagonal (4, 5, 6). This construction was based on the assumption that each quarterly sample was independent. The use of the quarterly final weights as the replicate weights for off-diagonal units in the dataset does not introduce variability into the variance. In fact, the replicate estimates from the off-diagonal are equal to the full sample estimate, because the replicate weights on the off-diagonal are the same as the quarterly final weight. Thus, the values of variance factor $(\hat{\theta}_{hi} - \hat{\theta})^2$, i.e., the differences between the estimates calculated from the replicate r and those calculated on the basis of full sample, are zero for replicates with off-diagonal units only.

The general formula for the jackknife variance estimator in SUDAAN (RTI 2002) can be expressed as:

$$v_{Jack}(\hat{\theta}) = \sum_h \frac{N_h - D_h}{D_h R_h} \sum_i (\hat{\theta}_{hi} - \hat{\theta})^2$$

where

- N_h is the number of PSUs or clusters within the stratum h ,
- D_h is the number of PSUs or clusters deleted in creating the replicate,
- R_h is the number of replicates selected,
- $\hat{\theta}_{hi}$ is the estimate of the parameter θ from the i -th replicate of the h -th stratum,
- $\hat{\theta}$ is the estimate based on the entire sample.

Analysis

This chapter explains how the HCSDB variables were processed during the analysis phase of the project. It covers the procedures for calculating response rates, developing dependent and independent variables for the analysis, and estimating the variance of the statistics. The “Health Care Survey of DoD Beneficiaries: Annual Report” is described briefly along with an outline of the steps involved in creating charts for the reports.

A. RESPONSE RATES

In this section, we present the procedures for response rate calculations along with a brief analysis of response rates for domains of interest. Response rate calculations for the 2017 HCSDB were consistent with methods used since 2006. The procedure is based on the guidelines established by the Council of American Survey Research Organizations (CASRO 1982) for defining a response rate.

1. Definition of Response Rates

In calculating response rates and related measures, we considered two different rates: *unweighted* and *weighted*. The unweighted version of the response rate represents the counted proportion of respondents among all sampled units, and the weighted version indicates the estimated proportion of respondents among all population units. When sampling rates across all strata are equal, these two approaches yield the same result. However, for the 2017 HCSDB, we used different sampling rates across strata, and thus it is useful to report both “unweighted” and “weighted” response rates. As presented in Chapter 2, all sampled beneficiaries were completely classified into the following four main (seven detailed) groups:

- Group 1 (G1-1): eligible and complete questionnaire returned;
- Group 1 (G1-2): eligible and incomplete questionnaire returned;
- Group 2: eligible and questionnaire not returned;
- Group 3 (G3-1): returned ineligible;
- Group 3 (G3-2): ineligible at time of Altarum address update;
- Group 4 (G4-1): eligibility unknown and locatable; and
- Group 4 (G4-2): eligibility unknown and unlocatable.

The unweighted counts reflect the number of sampled cases (n_i for Group i , where $i=1,2,3,4$), and the weighted counts reflect the estimated population size² (\hat{N}_i for Group i , where $i=1,2,3,4$) for the four main response categories.

These weighted and unweighted counts were also calculated for the subgroups G1-1, G1-2, G3-1, G4-1, and G4-2, where we denote the unweighted counts by $n_{1,1}$, $n_{1,2}$, $n_{3,1}$, $n_{4,1}$, and $n_{4,2}$, and the

² The weighted sum of sampled units can be regarded as an estimated population size. The base weight (BWT) was used in calculating weighted counts, where BWT is the inverse of selection probability.

weighted counts by $\hat{N}_{1,1}$, $\hat{N}_{1,2}$, $\hat{N}_{3,1}$, $\hat{N}_{4,1}$, and $\hat{N}_{4,2}$. With these values, we calculated response rates as follows.

Response rates can be partitioned into two measures: the location rate and the completion rate. To calculate the location rate, we first estimated the number of Group 4 “located” beneficiaries who were expected to be eligible for the survey:

(1)

$$l = \left(\frac{n_1 + n_2}{n_1 + n_2 + n_{3,1}} \right) n_{4,1} \quad \text{and} \quad l_w = \left(\frac{\hat{N}_1 + \hat{N}_2}{\hat{N}_1 + \hat{N}_2 + \hat{N}_{3,1}} \right) \hat{N}_{4,1}$$

where l and l_w are unweighted and weighted estimates of the number of “located” beneficiaries among Group 4. Then, the unweighted and weighted “location rates” are defined by:

(2)

$$LR = \frac{n_1 + n_2 + l}{n_1 + n_2 + n_4 \left(\frac{n_1 + n_2}{n_1 + n_2 + n_{3,1}} \right)} \quad \text{and} \quad LR_w = \frac{\hat{N}_1 + \hat{N}_2 + l_w}{\hat{N}_1 + \hat{N}_2 + \hat{N}_4 \left(\frac{\hat{N}_1 + \hat{N}_2}{\hat{N}_1 + \hat{N}_2 + \hat{N}_{3,1}} \right)}$$

And the corresponding unweighted and weighted “completion rates” are defined by:

(3)

$$CR = \frac{n_{1,1}}{n_1 + n_2 + l} \quad \text{and} \quad CR_w = \frac{\hat{N}_{1,1}}{\hat{N}_1 + \hat{N}_2 + l_w}$$

The final response rates in Equation (4) can be obtained by multiplying the location rate in Equation (2) by the completion rate in Equation (3).

(4)

$$FRR = LR \times CR \quad \text{and} \quad FRR_w = LR_w \times CR_w$$

In the definitions in Equations (1) through (4), the subscript “w” indicates that all calculations involve weighted counts. The method used to calculate response rates is consistent with the CASRO guidelines.

2. Reporting

We examined response rates to identify patterns across different domains or characteristics. Whereas analysts prefer weighted rates that reflect the estimated proportion of respondents among all population beneficiaries, operational staff are often interested in receiving unweighted measures. Accordingly, all tables include both unweighted and weighted values. In the following pages, we focus on discussing unweighted response rates for domains of interest.

Table 3.1 includes overall response rates for the 2017 HCSDb for Quarters I-III and HEDIS individually and combined. It also contains response rates by beneficiary groups, and by enrollment status:

- Overall: The overall unweighted response rate for the combined 2017 Adult HCSDb was 12.3 percent (which is found in Table 3.1 in the “Overall” row and COMBINED column). This rate is higher than the 9.6 percent response rate achieved in the combined 2016 Adult HCSDb.
- Beneficiary group and enrollment status: All response rates calculated by beneficiary group and enrollment status show similar patterns to the 2016 survey, with active duty beneficiaries and their family members having the lowest response rates and beneficiaries 65 years and older having the highest rates.³
- The response rates for the first two quarters include late respondents (respondents whose survey “trickled-in” after the deadline).

TABLE 3.1

RESPONSE RATES OVERALL AND BY ENROLLEE BENEFICIARY GROUP: QUARTERS I-III AND HEDIS, 2017

Category	Q1 2017 Unweighted Percent	Q1 2017 Weighted Percent	Q2 2017 Unweighted Percent	Q2 2017 Weighted Percent	Q3 2017 Unweighted Percent	Q3 2017 Weighted Percent	HEDIS Unweighted Percent	HEDIS Weighted Percent	Combined Unweighted Percent	Combined Weighted Percent
Overall	9.2	13.5	12.5	24.4	11.7	23.0	18.1	16.6	12.3	20.0
Active Duty	11.9	9.8	14.7	12.5	14.5	11.8	15.0	13.1	14.0	11.6
Active Duty family, Prime, civilian PCM	5.0	4.9	6.7	6.6	6.1	5.9	7.0	7.5	6.1	5.9
Active Duty family, Prime, military PCM	5.3	5.5	6.4	6.4	5.5	5.5	8.4	7.9	6.1	6.1
Active Duty family, non-enrollee	2.6	2.6	5.1	5.2	4.7	5.2	.	.	4.1	4.3
Retired,<65, civilian PCM	17.4	17.3	21.7	21.4	18.2	18.0	25.7	24.4	22.0	19.5
Retired,<65, military PCM	16.3	16.9	19.1	20.3	18.3	18.6	24.8	24.4	20.0	19.7
Retired,<65, non- enrollee	8.5	9.3	16.3	19.5	14.0	16.6	.	.	13.0	15.1
Retired,65+, enrollee	22.4	22.7	47.1	47.3	50.6	50.6	.	.	39.2	39.4
Retired,65+, non- enrollee	20.3	20.2	46.1	45.9	44.6	44.5	.	.	37.1	37.0
TRICARE Reserve Select	5.8	5.8	10.4	10.4	10.0	10.0	.	.	8.7	8.8

Appendix D (Response Rate Tables) contains tables showing unweighted and weighted response rates for all three quarters and the combined annual dataset. A summary of results based on unweighted response rates for selected domains follows:

- Regions: Combined response rates across regions range from 9.8 percent for Overseas to 13.0 percent for North (Table D.9).

³ However, response patterns vary considerably across beneficiary and enrollment groups. The relatively low level of response for active duty persons and their family members could be due to frequent relocations and our inability to receive new addresses in a timely manner.

- Sex: Combined response rate for women is 10.4 percent as compared to 14.7 percent for men. (Table D.3).
- OCONUS: Combined response rate for Latin America is 9.4 percent as compared to 10.8 percent for Europe. (Table D.2).
- Catchment areas: Combined response rates across catchment areas that were represented in all three quarters of the HCSDB range from 6.5 percent for NH Okinawa to 38.7 percent for Walter Reed AMC-Washington DC. (Table D.6).
- Beneficiary groups by sex: Women respond at a higher rate than men for both Active Duty and Active Duty family members, 17.2 percent versus 13.2 percent and 5.8 percent versus 3.5 percent, respectively. The opposite pattern emerges for retirees, survivors and family members 65 and older, 32.2 percent for women versus 43.2 percent for men. The response rates for retirees less than 65 are 19.6 for men vs 17.3 for women. (Table D.11).
- Beneficiary group by service affiliation (Army, Navy, Air Force, Marine Corps, Coast Guard, Other/Unknown): Among service affiliations, the smallest combined response rate comes from dependents of Active Duty in the Marine Corps with 4.7 percent and the largest from Retirees, Dependents of Retirees, and Survivors age 65 and over with other/unknown service affiliation with 68.0 percent. (Table D.12).

B. VARIANCE ESTIMATION

Due to the complex sample design, variance estimation for the 2017 HCSDB was not simple, and could most easily be achieved using one of two methods. The first – the Taylor series linearization via SUDAAN (Shah et al. 1996) or SAS/STAT version 8 or higher – is a direct variance estimation method that can be used to calculate the standard errors (the square root of the variance) of estimates. This method was used for the 2017 HCSDB analyses. For analysts who prefer a replication method of variance estimation, replicate weights for jackknife replication are provided in the public use file. This section details the two approaches to calculating variance estimates of the characteristics of interest associated with the 2017 HCSDB.

1. Taylor Series Linearization

Mathematica uses Taylor series linearization to produce standard errors for the estimates from the 2017 HCSDB. For most sample designs, including the 2017 HCSDB, design-based variance estimates for linear estimators of totals and means can be obtained via explicit formulas. However, estimators for nonlinear parameters, such as ratios, do not have exact expressions for the variance. The Taylor series linearization method can be used to approximate the variance of a nonlinear estimator with the variances of the linear terms from the Taylor series expansion for the estimator (Woodruff 1971). To calculate variance estimates based on the Taylor series linearization method given HCSDB's stratified sampling design, we needed to identify stratum as well as the final analysis weight for each data record. We have included these variables in the final database. For variance estimation, we used the general-purpose statistical software package SUDAAN to produce Taylor series variance estimates. SUDAAN is the most widely used of the publicly available software packages for the Taylor series linearization method. In SUDAAN, the user specifies the sample design and includes the stratum variables and the analysis weight for each record. Unlike WesVarPC, SUDAAN allows for unlimited strata, so stratification effects can be incorporated when calculating standard errors.

2. Jackknife Replication

Resampling methods are often used in estimating the variance for surveys with complex designs. In resampling, the sample is treated as if it were a population, and many smaller subsamples are drawn from the original sample (Lohr 1999, pages 298-308). These subsamples are then used to compute the variance. Replication methods have been recommended for surveys in which the sample design

is complex, nonresponse adjustments are needed, and statistics of interest are complicated. In such surveys, the usual design-based estimation formula is extremely difficult or impossible to develop (see, for example, Wolter 1985, pages 317-318). Jackknife replicate weights can be used to calculate the standard errors of estimates. An estimate of a characteristic of interest is calculated (with the same formula as the full sample estimate) using each set of replicate weights; these replicate estimates are used to derive the variance of the full sample statistic.

The jackknife variance of the full sample statistic of interest is estimated from the variability among the replicated estimates. When the replicate weights are produced according to the aforementioned procedure, jackknife replicate standard errors can be produced using custom publicly available statistical software. For instance, WesVarPC® (Brick et al. 1996) is a popular software package that calculates standard errors based on replication methods. It produces standard errors for functions of survey estimates, such as differences and ratios, as well as simple estimates such as means, proportions, and totals. Additional details about the jackknife replication approach can be found in Wolter (1985). Like other replication methods, the jackknife variance estimation can be easily implemented for any form of estimate without further algebraic manipulation.

C. SIGNIFICANCE TESTS

In certain charts in the Beneficiary Reports and the “Health Care Survey of DoD Beneficiaries: Annual Report”, statistical testing is performed to show which columns of the chart (values of the independent variable) are statistically different from the CAHPS benchmark. Footnotes and differently colored, bolded, or italicized fonts indicate if a region performed significantly better than the CAHPS benchmark (bold green font) or significantly worse than the CAHPS benchmark (italicized red font); no change in font indicates no statistically significant difference.

The null hypothesis for this significance test is that the mean for the column is essentially equal to the CONUS mean, and the alternative hypothesis is that the mean for the column is different from the CONUS mean. That is, we are testing:

$$H_0: \mu_1 = \mu_2 \quad \text{vs.} \quad H_a: \mu_1 \neq \mu_2$$

For instance, μ_1 might represent the characteristic of interest for the active duty group while μ_2 might represent the same characteristic for all CONUS regions. Another way to formulate that $\mu_1 = \mu_2$ is that $\mu_1 - \mu_2 = 0$.

With large sample sizes, the estimator $\overline{y_1} - \overline{y_2}$ approximately follows a normal distribution with mean zero and variance $\sigma_{\overline{y_1 - y_2}}^2$ under the null hypothesis. In testing the hypothesis, a test statistic T is thus calculated as:

$$T = \frac{\overline{y_1} - \overline{y_2}}{\hat{\sigma}_{\overline{y_1 - y_2}}}$$

With a type I error rate of $\alpha = 0.05$, the null hypothesis should be rejected if $|T| > 1.96$. The denominator of T (i.e., the standard error of $\overline{y_1} - \overline{y_2}$) can be calculated as the square root of

the variance estimator $\hat{\sigma}_{\overline{y_1 - y_2}}^2$, where:

$$\hat{\sigma}_{\overline{y_1 - y_2}}^2 = \text{var}(\overline{y_1}) + \text{var}(\overline{y_2}) - 2 \text{cov}(\overline{y_1}, \overline{y_2}).$$

If $\overline{y_1}$ and $\overline{y_2}$ are independent, then the covariance term equals zero and thus the variance estimator can be easily obtained as the sum of two individual variance estimators. However, there are some cases in which the condition of independence does not hold. For example, the active duty MTF group is not independent of the CONUS region because these two domains share active duty group within the CONUS regions. In this case, the covariance term should be incorporated into the variance formula. With suitable algebra and program modification, these covariance terms were calculated for all such cases. All detailed programs are included in Appendix G.

D. DEMOGRAPHIC ADJUSTMENTS

All scores in the TRICARE Beneficiary Reports are adjusted for patient characteristics affecting their scores. Scores can be adjusted for a wide range of socioeconomic and demographic variables.

The purpose of risk adjustment is to make comparisons of outcomes, either internally or to external benchmarks, after controlling for characteristics beyond the health care provider's control. Based on previous work with satisfaction scales derived from Consumer Assessment of Healthcare Providers and Systems (CAHPS) Health Plan Survey, we have observed that satisfaction increases with age and decreases with poor health across social classes and insurance types. The methodology is an adaptation of that found in CAHPS 2.0 Survey and Reporting Kit (DHHS, 1999). In addition to controlling for these factors, the methodology used for the 2017 HCSDB achieves the following:

- Permits risk-adjusted comparisons among regions and catchment areas within and across beneficiary and enrollment groups
- Permits testing the hypothesis that the difference in risk-adjusted scores between a region or catchment area and a benchmark is due to chance
- Is appropriate for CAHPS composites and global satisfaction ratings.

The model used for demographic adjustment is:

$$Y_{ijkl} = \beta_{1l}A_{1l} + \beta_{2l}A_{2l} + \dots + \beta_{5l}A_{5l} + \beta_{6l}P_l + \varepsilon_{ijkl},$$

where Y_{ijkl} is a dependent variable, β_{ql} 's are parameters to be estimated, A_{ql} 's are age dummy variables ($A_{ql} = 1$ if the beneficiary is in age group q , and 0 otherwise; $A_1 =$ age 18-24, $A_2 =$ age 25-34, $A_3 =$ age 35-44, $A_4 =$ age 45-54, $A_5 =$ age 55-64), P_l is health status. The subscripts i, j, k and l refer to the service/region, MTF, beneficiary, and beneficiary's enrollment group, respectively.

Given 24 region and service combinations and $J+1$ catchment areas, the specifications that we used for the error term were:

$$\varepsilon_{ijkl} = \delta_{0l} + \delta_{1l}R_{1l} + \delta_{2l}R_{2l} + \dots + \delta_{24l}R_{24l} + w_{ijkl}, \quad (1)$$

when catchment area values were not reported where R_i 's are service/region dummy variables ($R_i = 1$ if the beneficiary is in service/region i and beneficiary group l , and 0 otherwise), and

$$\varepsilon_{ijkl} = \gamma_{0l} + \gamma_{1l}H_{1l} + \gamma_{2l}H_{2l} + \dots + \gamma_{Jl}H_{Jl} + w_{ijkl}, \quad (2)$$

when catchment areas were reported where H_j 's are catchment area dummy variables ($H_j = 1$ if the beneficiary is in catchment area j and beneficiary group l , and 0 otherwise).

The methods for calculating demographically adjusted values and testing hypotheses of differences in demographically adjusted scores among geographic areas vary with the way ε_{ijkl} is defined. For specification (1), the adjusted mean of the dependent variable Y for region i can be obtained as:

$$\bar{y}_i = \hat{\delta}_0 + \hat{\delta}_i + \hat{\beta}_1 \hat{A}_1 + \hat{\beta}_2 \hat{A}_2 + \dots + \hat{\beta}_5 \hat{A}_5 + \hat{\beta}_6 \hat{P},$$

where $\hat{\beta}_i$'s are estimated model parameters, \hat{A}_i 's are weighted proportions of age group i among the total U.S. population, and \hat{P} is the weighted MHS mean of the variable P . For beneficiary group l , the adjusted regional value is:

$$\bar{y}_{il} = \hat{\delta}_{0l} + \hat{\delta}_{il} + \hat{\beta}_{1l} \hat{A}_1 + \hat{\beta}_{2l} \hat{A}_{2l} + \dots + \hat{\beta}_{5l} \hat{A}_{5l} + \hat{\beta}_{6l} \hat{P}_l,$$

where \hat{A}_{ql} 's are weighted proportions of age group q in the MHS.

For specification (2), an adjusted catchment area value can be calculated as:

$$\bar{y}_{ijl} = \hat{\gamma}_{0l} + \hat{\gamma}_{ijl} + \hat{\beta}_{1l} \hat{A}_{1l} + \hat{\beta}_{2l} \hat{A}_{2l} + \dots + \hat{\beta}_{5l} \hat{A}_{5l} + \hat{\beta}_{6l} \hat{P}_l,$$

while the regional value is calculated using specification 1.

Standard errors can then be estimated using SUDAAN as the standard error of residuals for catchment areas or regions. These standard errors can be used in hypothesis tests comparing adjusted values to other adjusted values or to external benchmarks. Composite values are calculated as averages of regional or catchment area adjusted values of questions making up the composites, in which each question is equally weighted.

Benchmarks can also be adjusted for age and health status, as can scores taken from survey responses. If the benchmark data set contains age and health status information, we fit a model of the form

$$y = \alpha + \beta_1 A_1 + \beta_2 A_2 + \dots + \beta_5 A_5 + \beta_6 P$$

where the A's are age groups and P is health status. Then the adjusted benchmark is

$$\hat{y}_l = \hat{\alpha} + \hat{\beta}_1 \bar{A}_{1l} + \hat{\beta}_2 \bar{A}_{2l} + \dots + \hat{\beta}_5 \bar{A}_{5l} + \hat{\beta}_6 \bar{P}_l$$

using the mean values of A and P for beneficiary group l .

The adjusted values for that beneficiary group can then be compared to a benchmark appropriate for their age distribution and health status.

In some cases, it may be desirable for a single benchmark to be presented for comparison with multiple beneficiary groups. We accomplish this by re-centering scores for beneficiary groups. In the Beneficiary Reports, described below, the benchmark presented is the all-users beneficiary group, but scores for many other beneficiary groups are also presented. Each score and benchmark is calculated for the appropriate beneficiary group. Then, a re-centering factor for each beneficiary group is calculated as the difference in adjusted benchmarks between a beneficiary group and the all-users group. For the all-users group, that re-centering factor is zero. The re-centering factor is added to the score for each region or catchment area for that beneficiary group. Thus, beneficiary

groups can also be compared controlling for age and health status and can be compared to the same benchmark.

E. CALCULATING SCORES

Beneficiary Reports (see below) include four types of scores: CAHPS composites, ratings, a preventive care composite, and a healthy behaviors composite. Beginning Q1 FY 2014, the HCSDB survey transitioned from CAHPS version 4.0 to version 5.0. Additionally, new benchmark data from the National Committee for Quality Assurance (NCQA) for FY 2015, were used in calculating benchmarks for FY 2017.

Composites and Ratings

The preventive care composite is calculated as $P_i = \sum w_i r_i$, where w is the proportion of the eligible population for whom the preventive care measure is relevant, and r is the proportion of that eligible group receiving preventive care.

CAHPS composites are calculated as:

$$S_i = (1/n_i) \sum (q_j/k_j),$$

where n_i is the number of questions in the composite i , q_j is the number giving a favorable response to question j in the composite i , and k_j is the number responding to that question j . CAHPS ratings are calculated as

$$S_i = q_i/k_i,$$

where q_i is the number giving a favorable response and k_i is the (weighted) number responding to rating i . All scores are adjusted for age and health status (see above).

F. TESTS FOR TREND

In the Beneficiary Reports (see below), we use linear regression to estimate a quarterly rate of change and test if it is statistically significantly different from zero (no change). Our estimate for the rate of change, T , is

$$T = \frac{\sum_{t=1}^4 w_t (S_t - \bar{S})(t - \bar{t})}{\sum_{t=1}^4 w_t (t - \bar{t})^2},$$

where t is the quarter, S_t is the score and w_t is the total weight of quarter t 's observations. In order to test the hypothesis that trend is zero, we use the standard error for the trend coefficient

$$\sigma = \frac{\sqrt{\sum_{t=1}^4 w_t^2 \sigma_t^2}}{\sum_{t=1}^4 w_t}, \text{ and}$$

$$S = \sigma / \sqrt{\sum_{t=1}^4 w_t (t - \bar{t})^2 / \sum_{t=1}^4 w_t}$$

where σ_t is the standard error for quarter t. The hypothesis test is based on a t-test of the hypothesis that $T=0$, where n is the total number of observations for all 3 quarters $p=\text{Prob}(\text{abs}(T/S)>0,n)$.

G. DEPENDENT AND INDEPENDENT VARIABLES

Dependent (i.e., outcome) variables represent the variables to be analyzed to answer the research questions. For example, beneficiary satisfaction and access are dependent variables in this analysis. The research questions are listed in Chapter 1.

Independent (i.e., explanatory) variables are entered into regression models to help to explain differences in one or more of the outcome variables. They may also be correlated with one or more dependent variables. For example, a beneficiary's satisfaction with health care may be correlated with their age and/or TRICARE Prime enrollment status. Each table is designed to help determine whether a particular dependent variable is correlated with a particular independent variable.

In analyzing the relationship between dependent and independent variables, Mathematica produced charts and tables that are found in the reports described below. Generally, dependent variables form the rows of the tables and the vertical axes of the charts. Independent variables form the columns of the tables and the horizontal axes of the charts. Beginning with the HCSDB in a SAS format, Mathematica programmers utilized SAS procedures such as PROC FREQ and PROC MEANS and SAS-callable SUDAAN procedures such as PROC DESCRIPT and PROC CROSSTAB to generate the relevant statistics (e.g., percents, means, and standard errors). These statistical values were exported directly from SAS to Excel tables using a dynamic data exchange to populate the cells of the tables. Graphical displays were generated from table values wherever feasible.

H. REPORTS

This section lists the three types of reports produced and states the main purpose of each report: 2017 TRICARE Beneficiary Reports, the TRICARE Consumer Watch, and the "Health Care Survey of DoD Beneficiaries: Annual Report." The 2017 TRICARE Beneficiary Reports and the TRICARE Consumer Watch are presented on a quarterly basis (for 3 of 4 quarters) and display results from the most recent quarter. The "Health Care Survey of DoD Beneficiaries: Annual Report" is produced annually and describes findings from all three quarters of survey data. All of these reports are available on the TRICARE website and comply with the standards in Section 508 of the Federal Acquisition Regulation (FAR) to be usable by persons with disabilities.

1. 2017 TRICARE Beneficiary Reports

a. Purpose

The purpose of the Beneficiary Reports is to provide TRICARE Regional offices, services and MTF commanders with a comprehensive description of TRICARE beneficiaries' satisfaction with care, access to care, and use of preventive care, and to compare such with other regions and catchment areas, and with relevant national benchmarks. MHS scores are adjusted using demographic characteristics. Both quarterly and annual Beneficiary Reports are produced. The quarterly reports present results from the most recent quarter for each region, service and for USA MHS by beneficiary status and enrollment group, making it easy for the reader to compare findings across groups and quarters. The annual report is a cumulative report that combines results from three quarters and previous years and presents results by catchment area, region, and service.

b. Beneficiary Report Production

1. Content

The quarterly Beneficiary Report presents 11 scores for all beneficiary groups and all enrollment groups by region and USA MHS overall. Scores are presented in the following areas: getting needed care; getting care quickly; how well doctors communicate; customer service; claims processing; rating of the health plan, health care, personal doctor, and specialist; healthy behavior; and preventive care standards. The first 6 scores are CAHPS composites, which encompass responses to several related survey questions. The CAHPS composite questions are shown in Appendix E. The scores are presented against national benchmarks.

The four ratings of health care and health care providers are health plan, health care, personal doctor, and specialist. Each rating is based on a scale of 0 to 10, where 0 is the worst and 10 is the best. The scores are adjusted for patient age and health status and are presented relative to national benchmarks.

The DHA Standard Composite for preventive care is based on how beneficiaries compare preventive care services offered through the MHS with the Healthy People 2020 goals. Preventive care indicators include prenatal care, hypertension, mammography, and Pap smears.

Healthy behavior combines the non-smoking rate, the rate at which smokers are counseled to quit, and the percent non-obese.

2. Format

a. Programming Specifications

Data for the Beneficiary Reports are organized in a SAS data set, consisting of records indexed by region, service, catchment area, enrollment group, beneficiary category, and table column. A benchmark corresponding to the MHS population is also included in the SAS data set. Records contain scores and categorical variables showing the existence and directions of significant differences. The benchmark record contains national mean values, where available, for a comparable non-MHS population.

Data files serve as the basis for the electronic reports and quality assurance. The file for the quarterly Beneficiary Reports is updated each quarter and referenced by the report card application. In each quarter, a separate file is created. The quarterly and annual Beneficiary Reports data are uploaded to a SQL database, and ColdFusion queries extract the data that populates webpages corresponding to the cells in the tables of the reports described below. Appendix G contains the programs to generate the Beneficiary Reports.

b. Web Specifications

Quarterly Beneficiary Reports are published in an interactive tabular HTML format on TRICARE's website, allowing users to filter the reports to follow the performance of the MHS over time by enrollment status and beneficiary group. Each report consists of several pages of tables. The first set of tables presents the findings for a single quarter for all enrollment and beneficiary groups, by region and USA MHS. A second set of tables presents the findings for the current quarter and for the past quarters for each enrollment and beneficiary group, by region and USA MHS. Significant differences between the scores and the benchmark are indicated by color, bolding and italics, and footnotes. Scores significantly above the benchmark are green and bold. Scores significantly below the benchmark are red and italicized.

Like the quarterly report, the annual report is presented in HTML tabular format. One set of tables shows cumulative scores for the 2017 HCSDDB by region for all beneficiary groups and enrollment groups. Another set shows scores for the questions that make up the composite. A third set shows

composites or ratings from prior years. The fourth set of tables shows scores for the catchment areas that comprise the MHS regions.

Starting with FY 2014, users also have the option of generating weighted frequency tables of survey response data, by question or by question and analysis group, using drop down menus on the reporting website. Along with frequencies, we also report standard errors to indicate the precision of the survey estimates.

2. TRICARE Consumer Watch

a. Purpose

Like the TRICARE Beneficiary Reports, the TRICARE Consumer Watch is targeted to TRICARE Regional offices, services, and MTF commanders. TRICARE Consumer Watch presents key results from the quarterly HCSDB in graphical format. The exhibits present TRICARE beneficiaries' experiences with their health care and health plan and utilization rates for preventive services. The TRICARE Consumer Watch is produced on a quarterly basis for all regions and three service affiliations. In the last quarter, the TRICARE Consumer Watch is produced for all catchment areas.

Two versions of the quarterly TRICARE Consumer Watch are produced: one for all Prime Enrollees, and one comparing beneficiaries who are enrolled to military facilities (direct care users) with those who rely on civilian care financed by TRICARE through Prime or Standard/Extra (purchased care users).

b. 2017 TRICARE Consumer Watch Production

1. Content

The Consumer Watch contains graphs of four ratings and six composite scores. These graphs are based on data from the Beneficiary Reports. Beneficiaries are asked to rate their experiences with their health care and health plan, and their personal provider on a scale of 0 to 10 where 0 is the worst and 10 is the best. Composite scores evaluate beneficiaries' experiences with the following: getting needed care, getting care quickly, how well doctors communicate, customer service, and claims processing. Using data from the National Committee for Quality Assurance (NCQA), ratings and composites are compared to experiences of individuals in civilian health plans. Ratings and composites are also compared to results from previous surveys.

Utilization of preventive care services are measured against the goals established by Healthy People 2020 as well as results from the prior years. Preventive care indicators include preventive cancer screenings, such as mammography and Pap smears, hypertension screening, and prenatal care. Preventive care also includes a non-smoking rate and the percentage of smokers counseled to quit.

2. Format

a. Programming Specifications

Data for the Consumer Watch are organized in a SAS data set consisting of records indexed by region, catchment area, enrollment group, and beneficiary category. Graphs of the rating and composite scores were produced using the same programs as for the TRICARE Beneficiary Reports. The data file for the Consumer Watch is updated each quarter. The programs to generate the Consumer Watch are in Appendix I and Appendix J.

b. Report Production Specifications

Though the Consumer Watch files reside on TRICARE's website, they are designed to be accessed primarily in print form. The reports are created in portable document format (PDF). The Consumer Watch is arranged on five pages; the key findings are presented as bar graphs. Preventive care

scores are presented in table format. The last 3 pages of the report are tables that display the numbers that represent the charts on the first two pages of the report. These tables were added as a supplement for 508 compliance.

3. "Health Care Survey of DoD Beneficiaries: Annual Report"

a. Purpose

The purpose of the "Health Care Survey of DoD Beneficiaries: Annual Report" is to provide OASD (HA) and in particular DHA with a comprehensive national summary of the HCSDB findings. The "Health Care Survey of DoD Beneficiaries: Annual Report" bar charts reflect survey data from all respondents in the domestic MHS and incorporates data from the adult HCSDB for 2017 and previous years.

b. Procedures for Report Production

1. Content

The content will reflect areas relevant for policy makers, to be determined. Possible topics include choices of health plan and sources of health care, access to care, and satisfaction with care.

2. Programming Specification

Programs for calculating the statistics appearing in the report are written in SAS-callable SUDAAN. Means and proportions and their standard errors are calculated using PROC DESCRIPT. Tests for linear trends are performed using PROC REGRESS or PROC RLOGIST. Values are compared with benchmarks from the National Committee for Quality Assurance (NCQA). The benchmarks are readjusted for age and health status using the methods described in Chapter 3, Section D above.

3. Report Production

Numbers and text are presented using publishing software following models developed by importing SUDAAN results into Excel as a text file. Results in the finished report are compared with their Excel models for accuracy. Methods used in the Annual Report are also described in the "Health Care Survey of DoD Beneficiary: Annual Report."

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APPENDIX A

ANNOTATED QUESTIONNAIRE – QUARTER I

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Military Health Care Survey:

Adult Questionnaire

October 2016

Privacy Advisory

Providing information in this Survey is voluntary. There is no penalty nor will your benefits be affected if you choose not to respond, although maximum participation is encouraged so that the data will be complete and representative.

The Survey was written so that answers should not require you to provide any personally identifiable information (PII), but please be assured that any PII provided will be treated as confidential. Your responses are collected via a secure system which does not collect any information that could be used to determine your identity.

Answering the questions is voluntary; you may stop the Survey at any time.

According to the Privacy Act of 1974 (5 U.S.C. §552a), the Department of Defense is required to inform you of the purposes and use of this survey. Please read it carefully.

Authority: 10 U.S.C. §1074 (Medical and Dental Care for Members and Certain Former Members, as amended by National Defense Authorization Act of 1993, Public Law 102-484, §706); 10 U.S.C. §1074f (Medical Tracking System for Members Deployed Overseas); 32 C.F.R. §199.17 (TRICARE Program); 45 C.F.R. Part 160 Subparts A and E of Part 164 (Health Insurance Portability and Accountability Act of 1996, Privacy Rule); DoD 6025.18-R (Department of Defense Health Information Privacy Regulation); DoD 6025.13-R (Military Health System Clinical Quality Assurance Program Regulation); 64 FR 22837 (DHA 08 – Health Affairs Survey Data Base, April 28, 1999); and, E.O. 9397 (as amended, November 20, 2008, for SSN collection).

Purpose: This survey helps health policy makers gauge beneficiary satisfaction with the current military health care system and provides valuable input from beneficiaries that will be used to improve the Military Health System.

Routine Uses: None.

Disclosure: Participation is voluntary. Failure to respond will not result in any penalty to the respondent; however maximum participation is encouraged so that data will be as complete and representative as possible.

SURVEY INSTRUCTIONS

Thank you for taking the time to participate in this online survey.

Please note, if the survey is idle for more than 5 minutes, you will be logged out automatically to protect your privacy. If that happens, simply wait 15 minutes and log back in. Please keep your password because you may need it later.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the buttons below to move backward and forward through the survey.

To begin, just click on the "Next" button below. This will take you right into the survey.

SURVEY STARTS HERE

As an eligible TRICARE beneficiary, please complete this survey even if you did not receive your health care from a military facility.

Please recognize that some specific questions about TRICARE benefits may not apply to you, depending on your entitlement and particular TRICARE program.

This survey is about the health care of the person whose name appears on the cover letter. The questionnaire should be completed by that person. If you are not the addressee, please give this survey to that person.

Question 1: Are you the person whose name appears on the cover letter?

Variable name: H17001

Editing notes: None

Response	Directions	Value	Percent
Yes	Go to Question 2	1	99.8%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.2%

Question 2: By which of the following health plans are you currently covered?**MARK ALL THAT APPLY****Variable names:** H17002A, H17002C, H17002F-H17002V**Editing notes:** None**Military Health Plans**

Response	Variable Name	Percent Marked
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H17002A	44.6%
TRICARE Extra or Standard (CHAMPUS)	H17002C	12.9%
TRICARE Plus	H17002N	0.8%
TRICARE for Life	H17002O	32.8%
TRICARE Supplemental Insurance	H17002P	0.5%
TRICARE Reserve Select	H17002Q	3.1%
TRICARE Retired Reserve	H17002S	1.7%
TRICARE Young Adult Prime	H17002T	0.3%
TRICARE Young Adult Extra or Standard	H17002V	0.7%
Uniformed Services Family Health Plan (USFHP)	H17002K	1.2%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H17002U	0.0%

Other Health Plans

Response	Variable Name	Percent Marked
Medicare	H17002F	32.1%
Federal Employees Health Benefit Program (FEHBP)	H17002G	2.5%
Medicaid	H17002H	0.6%
A civilian HMO (such as Kaiser)	H17002I	1.6%
Other civilian health insurance (such as Blue Cross)	H17002J	7.0%
The Veterans Administration (VA)	H17002M	7.8%
Government health insurance from a country other than the U.S.	H17002R	0.1%
Not sure	H17002L	5.6%

Question 3: Which health plan did you use for all or most of your healthcare in the last 12 months?

MARK ONLY ONE

Variable name: H17003

Editing notes: See Note 1

Response	Directions	Value	Percent
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	41.8%
TRICARE Extra or Standard (CHAMPUS)		3	9.0%
TRICARE Plus		11	27.6%
TRICARE Reserve Select		12	1.5%
TRICARE Retired Reserve		14	0.4%
TRICARE Young Adult Prime		15	1.1%
TRICARE Young Adult Extra or Standard		17	5.5%
Uniformed Services Family Health Plan (USFHP)		9	1.1%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	3.5%
Medicare (may include TRICARE for Life)		4	0.8%
Federal Employees Health Benefit Program (FEHBP)		5	3.0%
Medicaid		6	0.1%
A civilian HMO (such as Kaiser)		7	1.2%
Other civilian health insurance (such as Blue Cross)		8	0.3%
The Veterans Administration (VA)		10	0.1%
Government health insurance from a country other than the U.S.		13	0.5%
Not sure	Go to Question 5	-5	2.4%
Did not use any health plan in the last 12 months	Go to Question 5	-6	

For the remainder of this questionnaire, the term health plan refers to the plan you indicated in Question 3.

Question 4: How many months or years in a row have you been in this health plan?

Variable name: H17004

Editing notes: See Note 1

Response	Value	Percent
Less than 6 months	1	1.2%
At least 6 months but less than 12 months	2	4.2%
At least 12 months but less than 24 months	3	8.5%
At least 2 years but less than 5 years	4	19.6%
At least 5 years but less than 10 years	5	21.9%
10 or more years	6	44.7%

YOUR HEALTH CARE IN THE LAST 12 MONTHS

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

Question 5: In the last 12 months, where did you go most often for your health care?

MARK ONLY ONE

Variable name: H17005

Editing notes: None

Response	Value	Percent
A military facility – This includes: Military clinic Military hospital PRIMUS clinic NAVCARE clinic	1	34.6%
A civilian facility – This includes: Doctor’s office Clinic Hospital Civilian TRICARE contractor	2	57.3%
Uniformed Services Family Health Plan facility (USFHP)	3	0.6%
Veterans Affairs (VA) clinic or hospital	4	4.8%
I went to none of the listed types of facilities in the last 12 months	5	2.7%

Question 6: In the last 12 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor’s office?

Variable name: H17006

Editing notes: See Note 2

Response	Directions	Value	Percent
Yes		1	44.0%
No	Go to Question 9	2	56.0%

Question 7: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?

Variable name: H17007

Editing notes: See Note 2

Response	Value	Percent
Never	1	1.5%
Sometimes	2	8.4%
Usually	3	20.7%
Always	4	69.4%
I didn’t need care right away for an illness, injury or condition in the last 12 months	-6	

Question 8: In the last 12 months, when you needed care right away for an illness, injury, or condition, how long did you usually have to wait between trying to get care and actually seeing a provider?

Variable name: H17008

Editing notes: See Note 2

Response	Value	Percent
Same day	1	65.7%
1 day	2	13.6%
2 days	3	5.6%
3 days	4	3.4%
4-7 days	5	5.8%
8-14 days	6	3.1%
15 days or longer	7	2.8%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

Question 9: In the last 12 months, not counting the times you needed health care right away, did you make any appointments for your health care at a doctor's office or clinic?

Variable name: H17009

Editing notes: See Note 3

Response	Directions	Value	Percent
Yes		1	88.5%
No	Go to Question 12	2	11.5%

Question 10: In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?

Variable name: H17010

Editing notes: See Note 3

Response	Value	Percent
Never	1	2.9%
Sometimes	2	14.7%
Usually	3	26.6%
Always	4	55.7%
I had no appointments in the last 12 months	-6	

Question 11: In the last 12 months, not counting the times you needed health care right away, how many days did you usually have to wait between making an appointment and actually seeing a provider?

Variable name: H17011

Editing notes: See Note 3

Response	Value	Percent
Same day	1	8.4%
1 day	2	10.0%
2-3 days	3	21.7%
4-7 days	4	23.9%
8-14 days	5	18.9%
15-30 days	6	11.4%
31 days or longer	7	5.8%
I had no appointments in the last 12 months	-6	

Question 12: In the last 12 months, how many times did you go to an emergency room to get care for yourself?

Variable name: H17012

Editing notes: None

Response	Value	Percent
None	1	72.3%
1	2	18.3%
2	3	6.1%
3	4	2.4%
4	5	0.5%
5 to 9	6	0.4%
10 or more	7	0.0%

Question 13: In the last 12 months (not counting times you went to an emergency room), how many times did you go to a doctor's office or clinic to get health care for yourself?

Variable name: H17013

Editing notes: See Note 4

Response	Directions	Value	Percent
None	Go to Question 19	1	10.1%
1		2	9.8%
2		3	17.8%
3		4	15.7%
4		5	15.1%
5 to 9		6	21.3%
10 or more		7	10.1%

Question 14: In the last 12 months, how often did you and a doctor or other health provider talk about specific things you could do to prevent illness?

Variable name: H17014

Editing notes: See Note 4

Response	Value	Percent
Never	1	12.2%
Sometimes	2	25.3%
Usually	3	30.3%
Always	4	32.2%

Question 15: Choices for your treatment or health care can include choices about medicine, surgery, or other treatment. In the last 12 months, did a doctor or other health provider tell you there was more than one choice for your treatment or health care?

Variable name: H17015

Editing notes: See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	60.5%
No	Go to Question 18	2	39.5%

Question 16: In the last 12 months, did a doctor or other health provider talk with you about the pros and cons of each choice for your treatment or health care?

Variable name: H17016

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	70.9%
Somewhat yes	2	25.0%
Somewhat no	3	2.8%
Definitely no	4	1.2%

Question 17: In the last 12 months, when there was more than one choice for your treatment or health care, did a doctor or other health provider ask which choice you thought was best for you?

Variable name: H17017

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	61.1%
Somewhat yes	2	30.5%
Somewhat no	3	5.1%
Definitely no	4	3.3%

Question 18: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months?

Variable name: H17018

Editing notes: See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.3%
1	1	0.6%
2	2	0.7%
3	3	1.4%
4	4	1.9%
5	5	4.9%
6	6	3.4%
7	7	10.9%
8	8	20.8%
9	9	21.7%
10 – Best health care possible	10	33.3%
I had no visits in the last 12 months	-6	

YOUR URGENT HEALTH CARE IN THE LAST 6 MONTHS

Question 19: In the last 6 months, did you have an illness, injury, or condition that needed care right away in an urgent care center, emergency room, or doctor's office?

Variable name: S17BI01

Editing notes: See Note 5_BI1

Response	Directions	Value	Percent
Yes		1	31.7%
No	Go to Question 28	2	68.3%

Question 20: In the last 6 months, when you needed care right away, did you seek care in an urgent care center, a hospital emergency room (ER), a doctor's office, or someplace else?

Urgent care centers, (also called walk-in care, immediate care, and convenient care) are free-standing, walk-in healthcare facilities. They generally do not require appointments and have extended evening and weekend hours of service.

MARK ALL THAT APPLY

Variable names: S17BI02A-S17BI02E

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Directions	Variable Name	Percent Marked
Urgent care center		S17BI02A	37.3%
Hospital emergency room (ER)	Go to Question 28	S17BI02B	47.9%
Doctor's office	Go to Question 28	S17BI02C	30.4%
Someplace else	Go to Question 28	S17BI02D	3.8%
I didn't need care right away for an illness, injury, or condition in the last 6 months	Go to Question 28	S17BI02E	0.7%

Question 21: Thinking about your most recent visit to an urgent care center, what was the main reason why you went to urgent care?

Variable name: S17BI19

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
An accident or injury	1	22.1%
A new health problem	2	43.9%
An ongoing health condition or concern	3	17.3%
Routine care, such as a flu shot or health screening	4	2.5%
Some other reason	5	14.1%

Question 22: Thinking about your most recent visit to an urgent care center, tell us if you strongly agree, agree, disagree, or strongly disagree with each statement.

The location is more convenient than my normal place of care.

Variable name: S17BI03

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	34.3%
Agree	2	32.3%
Disagree	3	26.6%
Strongly disagree	4	6.9%

Urgent care was low cost or no cost to me.

Variable name: S17BI04

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	45.5%
Agree	2	37.4%
Disagree	3	12.3%
Strongly disagree	4	4.8%

Urgent care was faster than making an appointment with my primary care provider.

Variable name: S17BI05

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	51.2%
Agree	2	35.6%
Disagree	3	8.8%
Strongly disagree	4	4.5%

I could just walk in for care without an appointment.

Variable name: S17BI06

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	57.9%
Agree	2	33.1%
Disagree	3	4.3%
Strongly disagree	4	4.6%

I trust the urgent care center provider(s).

Variable name: S17BI07

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	35.0%
Agree	2	54.2%
Disagree	3	7.2%
Strongly disagree	4	3.6%

The urgent care center would process my TRICARE claim without problems.

Variable name: S17BI08

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	49.0%
Agree	2	39.2%
Disagree	3	6.5%
Strongly disagree	4	5.2%

If an appointment with my regular provider had been available, I would have used it instead of the urgent care clinic.

Variable name: S17BI09

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	49.4%
Agree	2	28.2%
Disagree	3	16.3%
Strongly disagree	4	6.1%

I wanted to avoid the wait at a hospital emergency room.

Variable name: S17BI10

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	43.5%
Agree	2	27.0%
Disagree	3	16.6%
Strongly disagree	4	12.9%

The location is more convenient than the hospital emergency room.

Variable name: S17BI11

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	41.5%
Agree	2	28.2%
Disagree	3	21.5%
Strongly disagree	4	8.8%

My condition was not a medical emergency requiring a hospital emergency room.

Variable name: S17BI12

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	54.6%
Agree	2	27.0%
Disagree	3	11.4%
Strongly disagree	4	6.9%

My normal place of care was not open.

Variable name: S17BI13

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	32.9%
Agree	2	26.5%
Disagree	3	25.1%
Strongly disagree	4	15.6%

I thought it would take less time to be seen and treated than at my usual place of care.

Variable name: S17BI14

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
Strongly agree	1	30.9%
Agree	2	30.4%
Disagree	3	24.2%
Strongly disagree	4	14.4%

Question 23: Thinking about your most recent visit to an urgent care center, did you or someone else call a nurse advice line before going to urgent care?

Variable name: S17BI15

Editing notes: See Notes 5_BI1, 5_BI2, and 5_BI3

Response	Directions	Value	Percent
Yes, I called a nurse line and spoke with a nurse		1	19.0%
Yes, I called a nurse line, but did not speak with a nurse	Go to Question 25	2	2.5%
No, I did not call my health plan's nurse advice line	Go to Question 25	3	52.6%
No, my health plan does not have a nurse advice line	Go to Question 25	4	15.0%
Don't know	Go to Question 25	-5	10.8%

Question 24: Did the nurse advise you to seek urgent care?

Variable name: S17BI16

Editing notes: See Notes 5_BI1, 5_BI2, and 5_BI3

Response	Value	Percent
Yes	1	90.3%
No	2	9.6%
Don't know	-5	0.2%

Question 25: Thinking about your most recent visit to an urgent care center, did the health care providers advise you to seek care in a hospital emergency room (ER)?

Variable name: S17BI17

Editing notes: See Notes 5_BI1, 5_BI2, and 5_BI4

Response	Directions	Value	Percent
Yes		1	10.5%
No	Go to Question 27	2	86.7%
Don't know	Go to Question 27	-5	2.8%

Question 26: Did you seek care at a hospital emergency room (ER)?

Variable name: S17BI18

Editing notes: See Notes 5_BI1, 5_BI2, and 5_BI4

Response	Value	Percent
Yes	1	66.4%
No	2	31.8%
Don't know	-5	1.8%

Question 27: Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care during this urgent care center visit?

Variable name: S17BI20

Editing notes: See Notes 5_BI1 and 5_BI2

Response	Value	Percent
0 – Worst care possible	0	1.3%
1	1	0.3%
2	2	0.9%
3	3	0.8%
4	4	1.7%
5	5	5.8%
6	6	5.1%
7	7	11.6%
8	8	22.6%
9	9	23.5%
10 – Best care possible	10	26.4%

YOUR PERSONAL DOCTOR

Question 28: A personal doctor is the one you would see if you need a checkup, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Variable name: H17019

Editing notes: See Note 6

Response	Directions	Value	Percent
Yes		1	81.3%
No	Go to Question 38	2	18.7%

Question 29: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?

Variable name: H17020

Editing notes: See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 34	0	6.9%
1		1	18.9%
2		2	26.0%
3		3	19.3%
4		4	14.2%
5 to 9		5	11.6%
10 or more		6	3.0%

Question 30: In the last 12 months, how often did your personal doctor listen carefully to you?

Variable name: H17021

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.9%
Sometimes	2	5.6%
Usually	3	16.7%
Always	4	76.8%
I had no visits in the last 12 months	-6	

Question 31: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?

Variable name: H17022

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.8%
Sometimes	2	3.7%
Usually	3	17.3%
Always	4	78.2%
I had no visits in the last 12 months	-6	

Question 32: In the last 12 months, how often did your personal doctor show respect for what you had to say?

Variable name: H17023

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.9%
Sometimes	2	4.5%
Usually	3	12.8%
Always	4	81.9%
I had no visits in the last 12 months	-6	

Question 33: In the last 12 months, how often did your personal doctor spend enough time with you?

Variable name: H17024

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	1.6%
Sometimes	2	6.2%
Usually	3	22.5%
Always	4	69.8%
I had no visits in the last 12 months	-6	

Question 34: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?

Variable name: H17025

Editing notes: See Notes 6, 7, and 8

Response	Directions	Value	Percent
Yes		1	73.6%
No	Go to Question 36	2	26.4%

Question 35: In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?

Variable name: H17026

Editing notes: See Notes 6, 7, and 8

Response	Value	Percent
Never	1	7.7%
Sometimes	2	12.5%
Usually	3	31.4%
Always	4	48.3%

Question 36: Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

Variable name: H17027

Editing notes: See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.6%
1	1	0.4%
2	2	0.7%
3	3	1.0%
4	4	0.8%
5	5	3.8%
6	6	3.2%
7	7	7.6%
8	8	15.3%
9	9	23.0%
10 – Best personal doctor possible	10	43.6%
I don't have a personal doctor	-6	

Question 37: Did you have the same personal doctor before you joined this health plan?

Variable name: S17009

Editing notes: See Notes 6 and 8_01

Response	Directions	Value	Percent
Yes	Go to Question 39	1	31.2%
No		2	68.8%

Question 38: Since you joined your health plan, how much of a problem, if any, was it to get a personal doctor you are happy with?

Variable name: S17010

Editing notes: See Note 8_01

Response	Value	Percent
A big problem	1	11.7%
A small problem	2	21.9%
Not a problem	3	66.4%

GETTING HEALTH CARE FROM A SPECIALIST

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

Question 39: Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 12 months, did you try to make any appointments to see a specialist?

Variable name: H17028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	63.9%
No	Go to Question 43	2	36.1%

Question 40: In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H17029

Editing notes: See Note 9

Response	Value	Percent
Never	1	4.6%
Sometimes	2	14.6%
Usually	3	27.5%
Always	4	53.3%
I didn't need a specialist in the last 12 months	-6	

Question 41: How many specialists have you seen in the last 12 months?

Variable name: H17030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 43	0	2.5%
1 specialist		1	38.4%
2		2	32.8%
3		3	17.2%
4		4	5.3%
5 or more specialists		5	3.7%

Question 42: We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10 where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate the specialist?

Variable name: H17031

Editing notes: See Notes 9 and 10

Response	Value	Percent
0 – Worst specialist possible	0	0.4%
1	1	0.2%
2	2	0.5%
3	3	0.8%
4	4	1.0%
5	5	2.7%
6	6	2.7%
7	7	6.8%
8	8	18.1%
9	9	24.1%
10 – Best specialist possible	10	42.8%
I didn't see a specialist in the last 12 months	-6	

Question 43: In general, how would you rate your overall mental or emotional health?

Variable name: S17B01

Editing notes: None

Response	Value	Percent
Excellent	1	41.9%
Very good	2	30.5%
Good	3	19.0%
Fair	4	6.9%
Poor	5	1.7%

Question 44: In the last 12 months, did you need any treatment or counseling for a personal or family problem?

Variable name: S17B02

Editing notes: See Note 10_B1

Response	Directions	Value	Percent
Yes		1	13.3%
No	Go to Question 47	2	86.7%

Question 45: In the last 12 months, how much of a problem, if any, was it to get the treatment or counseling you needed through your health plan?

Variable name: S17B03

Editing notes: See Note 10_B1

Response	Value	Percent
A big problem	1	14.6%
A small problem	2	18.8%
Not a problem	3	66.7%

Question 46: Using any number from 0 to 10 where 0 is the worst treatment or counseling possible and 10 is the best treatment or counseling possible, what number would you use to rate your treatment or counseling in the last 12 months?

Variable name: S17B04

Editing notes: See Note 10_B1

Response	Value	Percent
0 – Worst treatment or counseling possible	0	1.5%
1	1	0.8%
2	2	1.5%
3	3	1.1%
4	4	3.6%
5	5	6.6%
6	6	4.1%
7	7	12.9%
8	8	21.1%
9	9	20.2%
10 – Best treatment or counseling possible	10	26.7%
I had no treatment or counseling in the last 12 months	-6	

YOUR HEALTH PLAN

The next questions ask about your experience with your health plan. By your health plan, we mean the health plan you marked in Question 3.

Question 47: In the last 12 months, did you try to get any kind of care, tests, or treatment through your health plan?

Variable name: H17032

Editing notes: See Note 11

Response	Directions	Value	Percent
Yes		1	76.7%
No	Go to Question 49	2	23.3%

Question 48: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?

Variable name: H17033

Editing notes: See Note 11

Response	Value	Percent
Never	1	2.2%
Sometimes	2	8.8%
Usually	3	26.3%
Always	4	62.7%
I didn't need care, tests, or treatment through my health plan in the last 12 months	-6	

Question 49: In the last 12 months, did you look for any information in written materials or on the Internet about how your health plan works?

Variable name: H17034

Editing notes: See Note 12

Response	Directions	Value	Percent
Yes		1	30.7%
No	Go to Question 51	2	69.3%

Question 50: In the last 12 months, how often did the written material or the Internet provide the information you needed about how your plan works?

Variable name: H17035

Editing notes: See Note 12

Response	Value	Percent
Never	1	6.2%
Sometimes	2	29.9%
Usually	3	39.7%
Always	4	24.2%
I didn't look for information from my health plan in the last 12 months	-6	

Question 51: Sometimes people need services or equipment beyond what is provided in a regular or routine office visit, such as care from a specialist, physical therapy, a hearing aid, or oxygen. In the last 12 months, did you look for information from your health plan on how much you would have to pay for a health care service or equipment?

Variable name: H17036

Editing notes: See Note 13

Response	Directions	Value	Percent
Yes		1	16.1%
No	Go to Question 53	2	83.9%

Question 52: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment?

Variable name: H17037

Editing notes: See Note 13

Response	Value	Percent
Never	1	17.4%
Sometimes	2	24.3%
Usually	3	27.4%
Always	4	30.9%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	

Question 53: In some health plans, the amount you pay for a prescription medicine can be different for different medicines, or can be different for prescriptions filled by mail instead of at the pharmacy. In the last 12 months, did you look for information from your health plan on how much you would have to pay for specific prescription medicines?

Variable name: H17038

Editing notes: See Note 14

Response	Directions	Value	Percent
Yes		1	21.1%
No	Go to Question 55	2	78.9%

Question 54: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medications?

Variable name: H17039

Editing notes: See Note 14

Response	Value	Percent
Never	1	11.6%
Sometimes	2	20.6%
Usually	3	29.7%
Always	4	38.1%
I didn't need prescription medications from my health plan in the last 12 months	-6	

Question 55: In the last 12 months, did you try to get information or help from your health plan's customer service?

Variable name: H17040

Editing notes: See Note 15

Response	Directions	Value	Percent
Yes		1	25.7%
No	Go to Question 58	2	74.3%

Question 56: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?

Variable name: H17041

Editing notes: See Note 15

Response	Value	Percent
Never	1	6.2%
Sometimes	2	18.4%
Usually	3	28.9%
Always	4	46.4%
I didn't call my health plan's customer service in the last 12 months	-6	

Question 57: In the last 12 months, how often did your health plan's customer service staff treat you with courtesy and respect?

Variable name: H17042

Editing notes: See Note 15

Response	Value	Percent
Never	1	1.0%
Sometimes	2	7.5%
Usually	3	20.4%
Always	4	71.2%
I didn't call my health plan's customer service in the last 12 months	-6	

Question 58: In the last 12 months, did your health plan give you any forms to fill out?

Variable name: H17043

Editing notes: See Note 16

Response	Directions	Value	Percent
Yes		1	23.3%
No	Go to Question 60	2	76.7%

Question 59: In the last 12 months, how often were the forms from your health plan easy to fill out?

Variable name: H17044

Editing notes: See Note 16

Response	Value	Percent
Never	1	1.9%
Sometimes	2	12.1%
Usually	3	46.9%
Always	4	39.0%
I didn't have any experiences with paperwork for my health plan in the last 12 months	-6	

Question 60: Claims are sent to a health plan for payment. You may send in the claims yourself, or doctors, hospitals, or others may do this for you. In the last 12 months, did you or anyone else send in any claims to your health plan?

Variable name: H17045

Editing notes: See Note 17

Response	Directions	Value	Percent
Yes		1	52.1%
No	Go to Question 63	2	31.3%
Don't know	Go to Question 63	-5	16.7%

Question 61: In the last 12 months, how often did your health plan handle your claims quickly?

Variable name: H17046

Editing notes: See Note 17

Response	Value	Percent
Never	1	2.1%
Sometimes	2	6.4%
Usually	3	28.2%
Always	4	50.6%
Don't know	-5	12.8%
No claims were sent for me in the last 12 months	-6	

Question 62: In the last 12 months, how often did your health plan handle your claims correctly?

Variable name: H17047

Editing notes: See Note 17

Response	Value	Percent
Never	1	1.1%
Sometimes	2	5.0%
Usually	3	25.6%
Always	4	56.2%
Don't know	-5	12.1%
No claims were sent for me in the last 12 months	-6	

Question 63: Using any number from 0 to 10 where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?

Variable name: H17048

Editing notes: None

Response	Value	Percent
0 – Worst health plan possible	0	0.3%
1	1	0.5%
2	2	0.6%
3	3	1.2%
4	4	1.7%
5	5	5.6%
6	6	5.0%
7	7	11.8%
8	8	18.7%
9	9	20.4%
10 – Best health plan possible	10	34.2%

PREVENTIVE CARE

Preventive care is medical care you receive that is intended to maintain your good health or prevent a future medical problem. A physical or blood pressure screening are examples of preventive care.

Question 64: When did you last have a blood pressure reading?

Variable name: H17049

Editing notes: None

Response	Value	Percent
Less than 12 months ago	3	95.1%
1 to 2 years ago	2	3.5%
More than 2 years ago	1	1.4%

Question 65: Do you know if your blood pressure is too high?

Variable name: H17050

Editing notes: None

Response	Value	Percent
Yes, it is too high	1	17.4%
No, it is not too high	2	78.4%
Don't know	3	4.2%

Question 66: When did you last have a flu shot?

Variable name: H17051

Editing notes: None

Response	Value	Percent
Less than 12 months ago	4	68.5%
1 to 2 years ago	3	13.3%
More than 2 years ago	2	10.9%
Never had a flu shot	1	7.3%

Question 67: Have you ever smoked at least 100 cigarettes in your entire life?

Variable name: H17052

Editing notes: None

Response	Value	Percent
Yes	1	33.2%
No	2	65.2%
Don't know	-5	1.6%

Question 68: Do you now smoke cigarettes or use tobacco every day, some days or not at all?

Variable name: H17053

Editing notes: See Note 18

Response	Directions	Value	Percent
Every day		4	5.6%
Some days		3	4.2%
Not at all	Go to Question 73	2	89.8%
Don't know	Go to Question 73	-5	0.4%

Question 69: In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?

Variable name: H17054

Editing notes: See Note 18

Response	Value	Percent
Never	1	24.3%
Sometimes	2	20.0%
Usually	3	25.5%
Always	4	30.3%

Question 70: In the last 12 months, how often was medication recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Examples of medication are: nicotine gum, patch, nasal spray, inhaler, or prescription medication.

Variable name: H17055

Editing notes: See Note 18

Response	Value	Percent
Never	1	53.3%
Sometimes	2	19.3%
Usually	3	16.3%
Always	4	11.1%

Question 71: In the last 12 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication to assist you with quitting smoking or using tobacco? Examples of methods and strategies are: telephone helpline, individual or group counseling, or cessation program.

Variable name: H17056

Editing notes: See Note 18

Response	Value	Percent
Never	1	54.4%
Sometimes	2	22.4%
Usually	3	12.9%
Always	4	10.4%

Question 72: On the days you smoke or use tobacco products, what type of product do you smoke or use?

MARK ALL THAT APPLY

Variable names: H17057A-H17057D

Editing notes: See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H17057A	58.4%
Dip, chewing tobacco, snuff or snus	H17057B	22.2%
Cigars	H17057C	13.5%
Pipes, bidis, or kreteks (Pipes include hookahs. Bidis are small, brown, hand-rolled cigarettes from India and other Southeast Asian countries. Kreteks are clove cigarettes made in Indonesia that contain clove extract and tobacco.)	H17057D	7.6%

Question 73: Are you male or female?

Variable name: H17058

Editing notes: See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 80	1	48.9%
Female		2	51.1%

Question 74: When did you last have a Pap smear test?

Variable name: H17059B

Editing notes: See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	32.2%
1 to 2 years ago	5	26.6%
More than 2 but less than 3 years ago	4	10.7%
More than 3 but less than 5 years ago	3	7.8%
5 or more years ago	2	17.6%
Never had a pap smear test	1	5.0%

Question 75: Are you under age 40?

Variable name: H17060

Editing notes: See Notes 19A, 19B, and 20

Response	Directions	Value	Percent
Yes	Go to Question 77	1	31.1%
No		2	68.9%

Question 76: When was the last time your breasts were checked by mammography?**Variable name:** H17061**Editing notes:** See Notes 19A, 19B, and 20

Response	Value	Percent
Within the last 12 months	5	64.6%
1 to 2 years ago	4	19.6%
More than 2 but less than 5 years ago	3	6.9%
5 or more years ago	2	5.8%
Never had a mammogram	1	3.1%

Question 77: Have you been pregnant in the last 12 months or are you pregnant now?**Variable name:** H17062**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	1.9%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 79	2	4.6%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 80	3	93.4%

Question 78: In what trimester is your pregnancy?**Variable name:** H17063**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	Go to Question 80	1	17.9%
Second trimester (13 th through 27 th week)		2	48.8%
Third trimester (28 th week until delivery)		3	33.2%

Question 79: In which trimester did you first receive prenatal care?**Variable name:** H17064**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	4	88.6%
Second trimester (13 th through 27 th week)	3	8.0%
Third trimester (28 th week until delivery)	2	0.5%
Did not receive prenatal care	1	3.0%

ABOUT YOU

Question 80: In general, how would you rate your overall health?

Variable name: H17065

Editing notes: None

Response	Value	Percent
Excellent	5	17.5%
Very good	4	40.8%
Good	3	31.4%
Fair	2	9.3%
Poor	1	1.0%

Question 81: Are you limited in any way in any activities because of any impairment or health problem?

Variable name: H17066

Editing notes: None

Response	Value	Percent
Yes	1	35.8%
No	2	64.2%

Question 82: In the last 12 months, did you get health care 3 or more times for the same condition or problem?

Variable name: H17067

Editing notes: See Note 22

Response	Directions	Value	Percent
Yes		1	42.6%
No	Go to Question 84	2	57.4%

Question 83: Is this a condition or problem that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17068

Editing notes: See Note 22

Response	Value	Percent
Yes	1	88.4%
No	2	11.6%

Question 84: Do you now need or take medicine prescribed by a doctor? Do not include birth control.

Variable name: H17069

Editing notes: See Note 23

Response	Directions	Value	Percent
Yes		1	67.5%
No	Go to Question 86	2	32.5%

Question 85: Is this medicine to treat a condition that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17070

Editing notes: See Note 23

Response	Value	Percent
Yes	1	94.6%
No	2	5.4%

Question 86: How tall are you without your shoes on? Please give your answer in feet and inches.

Variable name: H17071F, H17071I

Editing notes: See Note 23_HT

Response	Example feet	Example inches	Percent of responses
Please give your answer in feet and inches. Please write one number in each box.	5	06	95.4%

Question 87: How much do you weigh without your shoes on? Please give your answer in pounds.

Variable name: H17072

Editing notes: See Note 23_WT

Response	Example pounds	Percent of responses
Please give your answer in pounds. Please write one number in each box.	152	94.3%

Question 88: What is the highest grade or level of school that you have completed?

Variable name: SREDA

Editing notes: None

Response	Value	Percent
8 th grade or less	1	0.4%
Some high school, but did not graduate	2	1.2%
High school graduate or GED	3	17.3%
Some college or 2-year degree	4	40.1%
4-year college graduate	5	18.2%
More than 4-year college degree	6	22.9%

Question 89: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)

MARK ALL THAT APPLY

Variable names: H17073A-H17073E, H17073

Editing notes: See Note 24

Response	Variable Name	H17073 Value	Percent Marked
No, not Spanish, Hispanic, or Latino	H17073A	1	87.2%
Yes, Mexican, Mexican American, Chicano	H17073B	2	4.1%
Yes, Puerto Rican	H17073C	3	1.9%
Yes, Cuban	H17073D	4	0.3%
Yes, other Spanish, Hispanic, or Latino	H17073E	5	3.4%

Question 90: What is your race?

MARK ALL THAT APPLY

Variable names: SRRACEA-SRRACEE

Editing notes: None

Response	Variable Name	Percent Marked
White	SRRACEA	78.2%
Black or African American	SRRACEB	11.6%
American Indian or Alaska Native	SRRACEC	2.4%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	6.5%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	0.8%

Question 91: What is your age now?

Variable name: SRAGE

Editing notes: None

Response	Value	Percent
18 to 24	1	11.4%
25 to 34	2	14.7%
35 to 44	3	10.2%
45 to 54	4	10.9%
55 to 64	5	21.9%
65 to 74	6	19.5%
75 or older	7	11.4%

Question 92: Are you currently covered by Medicare?

Variable name: H17074

Editing notes: See Note 25

Response	Directions	Value	Percent
Yes		1	34.5%
No	Go to Question 98	2	58.3%
Don't know	Go to Question 98	-5	7.2%

Question 93: Currently, are you covered by Medicare Part A? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part A helps pay for inpatient hospital care.

Variable name: H17075

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part A	1	94.5%
No, I am not covered by Medicare Part A	2	5.5%

Question 94: Currently, are you covered by Medicare Part B? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part B helps pay for doctor's services, outpatient hospital services, and certain other services.

Variable name: H17076

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part B	1	90.8%
No, I am not covered by Medicare Part B	2	9.2%

Question 95: Medicare Advantage is the name for Medicare Plus Choice plans. Are you enrolled in a Medicare Advantage Plan? This plan is also sometimes known as Medicare Part C.

Variable name: H17077

Editing notes: See Note 25

Response	Value	Percent
Yes	1	2.8%
No	2	84.7%
Don't know	-5	12.5%

Question 96: Currently, are you covered by Medicare supplemental insurance? Medicare supplemental insurance, also called Medigap or MediSup, is usually obtained from private insurance companies and covers some of the costs not paid for by Medicare.

Variable name: H17078

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare supplemental insurance	1	11.8%
No, I am not covered by Medicare supplemental insurance	2	88.2%

Question 97: Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?

Variable name: H17079

Editing notes: See Note 25

Response	Value	Percent
Yes	1	9.1%
No	2	82.0%
Don't know	-5	8.9%

Question 98: Using a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree”, how much do you agree with the following statement: In general, I am able to see my provider(s) when needed?

Variable name: S17011

Editing notes: None

Response	Value	Percent
Strongly disagree	1	5.6%
Disagree	2	4.6%
Neither agree nor disagree	3	9.3%
Agree	4	40.9%
Strongly agree	5	39.6%

Question 99: Using a scale of 1 to 5, with 1 being “completely dissatisfied” and 5 being “completely satisfied”, how satisfied are you, overall, with the health care you received during your last visit?

Variable name: S17014

Editing notes: None

Response	Value	Percent
Completely dissatisfied	1	2.8%
Somewhat dissatisfied	2	4.1%
Neither satisfied nor dissatisfied	3	6.4%
Somewhat satisfied	4	22.2%
Completely satisfied	5	64.5%

THANK YOU FOR TAKING THE TIME TO COMPLETE THE SURVEY!

Your generous contribution will greatly aid efforts to improve the health of our military community.

APPENDIX A

ANNOTATED QUESTIONNAIRE – QUARTER II

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Health Care Survey of DoD Beneficiaries

A world-wide survey of beneficiaries
eligible for health care coverage through
the military health system

January 2017

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**Military Health Care Survey:
Adult Questionnaire
January 2017**

Privacy Advisory

Providing information in this Survey is voluntary. There is no penalty nor will your benefits be affected if you choose not to respond, although maximum participation is encouraged so that the data will be complete and representative.

The Survey was written so that answers should not require you to provide any personally identifiable information (PII), but please be assured that any PII provided will be treated as confidential. Your responses are collected via a secure system which does not collect any information that could be used to determine your identity.

Answering the questions is voluntary; you may stop the Survey at any time.

According to the Privacy Act of 1974 (5 U.S.C. §552a), the Department of Defense is required to inform you of the purposes and use of this survey. Please read it carefully.

Authority: 10 U.S.C. §1074 (Medical and Dental Care for Members and Certain Former Members, as amended by National Defense Authorization Act of 1993, Public Law 102-484, §706); 10 U.S.C. §1074f (Medical Tracking System for Members Deployed Overseas); 32 C.F.R. §199.17 (TRICARE Program); 45 C.F.R. Part 160 Subparts A and E of Part 164 (Health Insurance Portability and Accountability Act of 1996, Privacy Rule); DoD 6025.18-R (Department of Defense Health Information Privacy Regulation); DoD 6025.13-R (Military Health System Clinical Quality Assurance Program Regulation); 64 FR 22837 (DHA 08 – Health Affairs Survey Data Base, April 28, 1999); and, E.O. 9397 (as amended, November 20, 2008, for SSN collection).

Purpose: This survey helps health policy makers gauge beneficiary satisfaction with the current military health care system and provides valuable input from beneficiaries that will be used to improve the Military Health System.

Routine Uses: None.

Disclosure: Participation is voluntary. Failure to respond will not result in any penalty to the respondent; however maximum participation is encouraged so that data will be as complete and representative as possible.

SURVEY INSTRUCTIONS

Thank you for taking the time to participate in this online survey.

Please note, if the survey is idle for more than 5 minutes, you will be logged out automatically to protect your privacy. If that happens, simply wait 15 minutes and log back in. Please keep your password because you may need it later.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the buttons below to move backward and forward through the survey.

To begin, just click on the "Next" button below. This will take you right into the survey.

SURVEY STARTS HERE

As an eligible TRICARE beneficiary, please complete this survey even if you did not receive your health care from a military facility.

Please recognize that some specific questions about TRICARE benefits may not apply to you, depending on your entitlement and particular TRICARE program.

This survey is about the health care of the person whose name appears on the cover letter. The questionnaire should be completed by that person. If you are not the addressee, please give this survey to that person.

Question 1: Are you the person whose name appears on the cover letter?

Variable name: H17001

Editing notes: None

Response	Directions	Value	Percent
Yes	Go to Question 2	1	99.8%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.2%

Question 2: By which of the following health plans are you currently covered?

MARK ALL THAT APPLY

Variable names: H17002A, H17002C, H17002F-H17002V

Editing notes: None

Military Health Plans

Response	Variable Name	Percent Marked
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H17002A	45.8%
TRICARE Extra or Standard (CHAMPUS)	H17002C	12.4%
TRICARE Plus	H17002N	0.9%
TRICARE for Life	H17002O	31.1%
TRICARE Supplemental Insurance	H17002P	0.7%
TRICARE Reserve Select	H17002Q	3.0%
TRICARE Retired Reserve	H17002S	1.9%
TRICARE Young Adult Prime	H17002T	0.5%
TRICARE Young Adult Extra or Standard	H17002V	0.6%
Uniformed Services Family Health Plan (USFHP)	H17002K	1.6%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H17002U	0.0%

Other Health Plans

Response	Variable Name	Percent Marked
Medicare	H17002F	31.6%
Federal Employees Health Benefit Program (FEHBP)	H17002G	2.5%
Medicaid	H17002H	1.0%
A civilian HMO (such as Kaiser)	H17002I	1.4%
Other civilian health insurance (such as Blue Cross)	H17002J	6.8%
The Veterans Administration (VA)	H17002M	9.0%
Government health insurance from a country other than the U.S.	H17002R	0.3%
Not sure	H17002L	5.2%

Question 3: Which health plan did you use for all or most of your healthcare in the last 12 months?**MARK ONLY ONE****Variable name:** H17003**Editing notes:** See Note 1

Response	Directions	Value	Percent
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	44.2%
TRICARE Extra or Standard (CHAMPUS)		3	9.2%
TRICARE Plus		11	0.7%
TRICARE Reserve Select		12	2.8%
TRICARE Retired Reserve		14	1.1%
TRICARE Young Adult Prime		15	0.3%
TRICARE Young Adult Extra or Standard		17	0.5%
Uniformed Services Family Health Plan (USFHP)		9	1.3%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	0.1%
Medicare (may include TRICARE for Life)		4	25.5%
Federal Employees Health Benefit Program (FEHBP)		5	1.8%
Medicaid		6	0.3%
A civilian HMO (such as Kaiser)		7	1.0%
Other civilian health insurance (such as Blue Cross)		8	5.1%
The Veterans Administration (VA)		10	3.6%
Government health insurance from a country other than the U.S.		13	0.2%
Not sure	Go to Question 5	-5	2.3%
Did not use any health plan in the last 12 months	Go to Question 5	-6	

For the remainder of this questionnaire, the term health plan refers to the plan you indicated in Question 3.

Question 4: How many months or years in a row have you been in this health plan?**Variable name:** H17004**Editing notes:** See Note 1

Response	Value	Percent
Less than 6 months	1	1.0%
At least 6 months but less than 12 months	2	4.0%
At least 12 months but less than 24 months	3	6.8%
At least 2 years but less than 5 years	4	19.2%
At least 5 years but less than 10 years	5	21.1%
10 or more years	6	47.9%

YOUR HEALTH CARE IN THE LAST 12 MONTHS

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

Question 5: In the last 12 months, where did you go most often for your health care?

MARK ONLY ONE

Variable name: H17005

Editing notes: None

Response	Value	Percent
A military facility – This includes: Military clinic Military hospital PRIMUS clinic NAVCARE clinic	1	34.5%
A civilian facility – This includes: Doctor’s office Clinic Hospital Civilian TRICARE contractor	2	56.2%
Uniformed Services Family Health Plan facility (USFHP)	3	0.9%
Veterans Affairs (VA) clinic or hospital	4	5.1%
I went to none of the listed types of facilities in the last 12 months	5	3.3%

Question 6: In the last 12 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor’s office?

Variable name: H17006

Editing notes: See Note 2

Response	Directions	Value	Percent
Yes		1	43.7%
No	Go to Question 9	2	56.3%

Question 7: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?

Variable name: H17007

Editing notes: See Note 2

Response	Value	Percent
Never	1	2.1%
Sometimes	2	11.0%
Usually	3	20.2%
Always	4	66.7%
I didn’t need care right away for an illness, injury or condition in the last 12 months	-6	

Question 8: In the last 12 months, when you needed care right away for an illness, injury, or condition, how long did you usually have to wait between trying to get care and actually seeing a provider?

Variable name: H17008

Editing notes: See Note 2

Response	Value	Percent
Same day	1	63.0%
1 day	2	14.1%
2 days	3	6.2%
3 days	4	3.5%
4-7 days	5	6.4%
8-14 days	6	3.2%
15 days or longer	7	3.5%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

Question 9: In the last 12 months, not counting the times you needed health care right away, did you make any appointments for your health care at a doctor's office or clinic?

Variable name: H17009

Editing notes: See Note 3

Response	Directions	Value	Percent
Yes		1	88.3%
No	Go to Question 12	2	11.7%

Question 10: In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?

Variable name: H17010

Editing notes: See Note 3

Response	Value	Percent
Never	1	3.0%
Sometimes	2	16.1%
Usually	3	27.6%
Always	4	53.3%
I had no appointments in the last 12 months	-6	

Question 11: In the last 12 months, not counting the times you needed health care right away, how many days did you usually have to wait between making an appointment and actually seeing a provider?

Variable name: H17011

Editing notes: See Note 3

Response	Value	Percent
Same day	1	8.5%
1 day	2	9.4%
2-3 days	3	22.8%
4-7 days	4	22.6%
8-14 days	5	18.7%
15-30 days	6	12.2%
31 days or longer	7	5.8%
I had no appointments in the last 12 months	-6	

Question 12: In the last 12 months, not counting the times you needed health care right away, did you try to make an appointment with a health care provider at a military treatment facility (MTF)?

MARK ALL THAT APPLY

Variable names: S17BC01A-S17BC01D

Editing notes: See Note 3_BC1 and Note 3_BC2

Response	Directions	Variable Name	Percent Marked
Yes, I called the MTF	Go to Question 14	S17BC01A	28.6%
Yes, I used TRICARE Online or secure messaging (i.e. "Relay Health")	Go to Question 14	S17BC01B	6.5%
Yes, I made an appointment in person by walking in	Go to Question 14	S17BC01C	6.8%
No, I did not try to make an appointment at an MTF		S17BC01D	62.4%

Question 13: What are the reasons why you did not try to make an appointment at an MTF?

MARK ALL THAT APPLY

Variable names: S17BC04A-S17BC04G

Editing notes: See Note 3_BC1, Note 3_BC2, and Note 3_BC4

Response	Directions	Variable Name	Percent Marked
I didn't need health care in the last 12 months	Go to Question 17	S17BC04A	11.5%
I would not have been able to get an appointment when I needed care	Go to Question 17	S17BC04B	7.2%
I would not have been able to schedule the appointment at a convenient time	Go to Question 17	S17BC04C	3.8%
I did not have the referral needed to make an appointment with a specialist at the MTF	Go to Question 17	S17BC04D	6.3%
The MTF location is inconvenient	Go to Question 17	S17BC04E	39.8%
I only use civilian providers	Go to Question 17	S17BC04F	32.0%
I prefer to receive health care from a civilian provider	Go to Question 17	S17BC04G	24.5%

Question 14: Why did you try to make the appointment(s) at an MTF?

MARK ALL THAT APPLY

Variable names: S17BC02A-S17BC02D

Editing notes: See Note 3_BC2

Response	Variable Name	Percent Marked
I needed primary care for a new illness, condition, or injury (e.g. family practice, general medicine, internal medicine, aerospace/flight/submarine medicine)	S17BC02A	51.4%
My primary care provider referred me for specialist care (e.g. specialty clinic, physical therapy, occupational therapy)	S17BC02B	26.2%
For a routine wellness visit (e.g. routine physical exam, routine eye exam, mammography, pap smear, prostate exam)	S17BC02C	44.2%
For follow-up care of an illness, condition, or injury (e.g. follow up visit for a previously diagnosed medical condition, prescription renewal, prenatal care)	S17BC02D	38.3%

Question 15: Which of the following were true about the time(s) you tried to make an appointment at an MTF in the last 12 months?

MARK ALL THAT APPLY

Variable names: S17BC03A-S17BC03E

Editing notes: See Note 3_BC2, Note 3_BC3, and Note 3_BC4

Response	Directions	Variable Name	Percent Marked
I did not make an appointment because no appointments were available		S17BC03A	6.1%
I did not make an appointment because the only appointments available were too far in the future		S17BC03B	4.8%
I did not make an appointment because no convenient appointment times were available		S17BC03C	2.4%
I made an appointment for a time that was not convenient for me	Go to Question 17	S17BC03D	23.3%
I was always able to make an appointment at a time that was convenient for me	Go to Question 17	S17BC03E	61.3%

Question 16: Were you asked to call back at a future date when appointments might be available?

Variable name: S17BC09

Editing notes: See Note 3_BC2 and Note 3_BC4

Response	Value	Percent
Yes	1	54.8%
No	2	45.2%

Question 17: In the last 12 months, not counting the times you needed health care right away, did you try to make an appointment with a civilian health care provider?

MARK ALL THAT APPLY

Variable names: S17BC05A-S17BC05D

Editing notes: See Note 3_BC5 and Note 3_BC6

Response	Directions	Variable Name	Percent Marked
Yes, by phone	Go to Question 19	S17BC05A	60.9%
Yes, online	Go to Question 19	S17BC05B	4.8%
Yes, in person by walking in	Go to Question 19	S17BC05C	8.6%
No, I did not try to make an appointment with a civilian health provider		S17BC05D	32.2%

Question 18: What are the reasons why you did not try to make an appointment with a civilian health care provider?

MARK ALL THAT APPLY

Variable names: S17BC08A-S17BC08F

Editing notes: See Note 3_BC5, Note 3_BC6, and Note 3_BC8

Response	Directions	Variable Name	Percent Marked
I didn't need health care in the last 12 months	Go to Question 22	S17BC08A	28.9%
I receive all my health care from an MTF	Go to Question 22	S17BC08B	53.5%
I would not have been able to get an appointment when I needed care	Go to Question 22	S17BC08C	2.3%
I would not have been able to schedule the appointment at a convenient time	Go to Question 22	S17BC08D	1.4%
I did not have the referral needed to make an appointment with a specialist	Go to Question 22	S17BC08E	15.3%
The location of the civilian health care provider is inconvenient	Go to Question 22	S17BC08F	4.1%

Question 19: Why did you try to make the appointment(s) with a civilian health care provider?

MARK ALL THAT APPLY

Variable names: S17BC06A-S17BC06D

Editing notes: See Note 3_BC6

Response	Variable Name	Percent Marked
I needed primary care for a new illness, condition, or injury (e.g. family practice, general medicine, internal medicine)	S17BC06A	37.5%
My primary care provider referred me for specialist care (e.g. specialty clinic, physical therapy, occupational therapy)	S17BC06B	36.0%
For a routine wellness visit (e.g. routine physical exam, routine eye exam, mammography, pap smear, prostate exam)	S17BC06C	50.7%
For follow-up care of an illness, condition, or injury (e.g. follow up visit for a previously diagnosed medical condition, prescription renewal, prenatal care)	S17BC06D	45.2%

Question 20: Which of the following were true about the time(s) you tried to make an appointment with a civilian health care provider in the last 12 months?

MARK ALL THAT APPLY

Variable names: S17BC07A-S17BC07E

Editing notes: See Note 3_BC6, Note 3_BC7 and Note 3_BC8

Response	Directions	Variable Name	Percent Marked
I did not make an appointment because no appointments were available		S17BC07A	1.2%
I did not make an appointment because the only appointments available were too far in the future		S17BC07B	1.5%
I did not make an appointment because no convenient appointment times were available		S17BC07C	0.9%
I made an appointment for a time that was not convenient for me	Go to Question 22	S17BC07D	8.6%
I was always able to make an appointment at a time that was convenient for me	Go to Question 22	S17BC07E	84.1%

Question 21: Were you asked to call back at a future date when appointments might be available?

Variable name: S17BC10

Editing notes: See Note 3_BC6 and Note 3_BC8

Response	Value	Percent
Yes	1	37.8%
No	2	62.2%

Question 22: In the last 12 months, how many times did you go to an emergency room to get care for yourself?

Variable name: H17012

Editing notes: None

Response	Value	Percent
None	1	70.8%
1	2	18.7%
2	3	6.3%
3	4	2.4%
4	5	0.9%
5 to 9	6	0.7%
10 or more	7	0.2%

Question 23: In the last 12 months (not counting times you went to an emergency room), how many times did you go to a doctor's office or clinic to get health care for yourself?

Variable name: H17013

Editing notes: See Note 4

Response	Directions	Value	Percent
None	Go to Question 30	1	12.4%
1		2	11.2%
2		3	16.3%
3		4	14.8%
4		5	14.2%
5 to 9		6	21.0%
10 or more		7	10.1%

Question 24: In the last 12 months, how often did you and a doctor or other health provider talk about specific things you could do to prevent illness?

Variable name: H17014

Editing notes: See Note 4

Response	Value	Percent
Never	1	11.8%
Sometimes	2	25.0%
Usually	3	29.8%
Always	4	33.4%

Question 25: Choices for your treatment or health care can include choices about medicine, surgery, or other treatment. In the last 12 months, did a doctor or other health provider tell you there was more than one choice for your treatment or health care?

Variable name: H17015

Editing notes: See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	59.4%
No	Go to Question 28	2	40.6%

Question 26: In the last 12 months, did a doctor or other health provider talk with you about the pros and cons of each choice for your treatment or health care?

Variable name: H17016

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	70.3%
Somewhat yes	2	24.7%
Somewhat no	3	3.7%
Definitely no	4	1.3%

Question 27: In the last 12 months, when there was more than one choice for your treatment or health care, did a doctor or other health provider ask which choice you thought was best for you?

Variable name: H17017

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	62.7%
Somewhat yes	2	27.4%
Somewhat no	3	5.8%
Definitely no	4	4.0%

Question 28: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months?

Variable name: H17018

Editing notes: See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.3%
1	1	0.3%
2	2	0.7%
3	3	1.7%
4	4	1.8%
5	5	4.6%
6	6	5.3%
7	7	11.8%
8	8	20.2%
9	9	20.2%
10 – Best health care possible	10	33.0%
I had no visits in the last 12 months	-6	

Question 29: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?

Variable name: H17033

Editing notes: See Note 4

Response	Value	Percent
Never	1	1.8%
Sometimes	2	12.7%
Usually	3	33.6%
Always	4	51.9%

YOUR PERSONAL DOCTOR

Question 30: A personal doctor is the one you would see if you need a checkup, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Variable name: H17019

Editing notes: See Note 6

Response	Directions	Value	Percent
Yes		1	79.0%
No	Go to Question 40	2	21.0%

Question 31: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?

Variable name: H17020

Editing notes: See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 36	0	8.4%
1		1	18.1%
2		2	24.3%
3		3	18.3%
4		4	14.4%
5 to 9		5	13.2%
10 or more		6	3.2%

Question 32: In the last 12 months, how often did your personal doctor listen carefully to you?

Variable name: H17021

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.8%
Sometimes	2	5.7%
Usually	3	17.8%
Always	4	75.7%
I had no visits in the last 12 months	-6	

Question 33: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?

Variable name: H17022

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.5%
Sometimes	2	4.3%
Usually	3	17.6%
Always	4	77.6%
I had no visits in the last 12 months	-6	

Question 34: In the last 12 months, how often did your personal doctor show respect for what you had to say?

Variable name: H17023

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	1.0%
Sometimes	2	4.2%
Usually	3	14.0%
Always	4	80.8%
I had no visits in the last 12 months	-6	

Question 35: In the last 12 months, how often did your personal doctor spend enough time with you?

Variable name: H17024

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	2.0%
Sometimes	2	5.8%
Usually	3	24.5%
Always	4	67.8%
I had no visits in the last 12 months	-6	

Question 36: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?

Variable name: H17025

Editing notes: See Notes 6, 7, and 8

Response	Directions	Value	Percent
Yes		1	78.4%
No	Go to Question 38	2	21.6%

Question 37: In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?

Variable name: H17026

Editing notes: See Notes 6, 7, and 8

Response	Value	Percent
Never	1	7.2%
Sometimes	2	13.3%
Usually	3	31.2%
Always	4	48.3%

Question 38: Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

Variable name: H17027

Editing notes: See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.6%
1	1	0.3%
2	2	1.0%
3	3	0.9%
4	4	1.4%
5	5	3.8%
6	6	2.8%
7	7	8.4%
8	8	16.1%
9	9	22.4%
10 – Best personal doctor possible	10	42.3%
I don't have a personal doctor	-6	

Question 39: Did you have the same personal doctor before you joined this health plan?

Variable name: S17009

Editing notes: See Notes 6 and 8_01

Response	Directions	Value	Percent
Yes	Go to Question 41	1	33.4%
No		2	66.6%

Question 40: Since you joined your health plan, how much of a problem, if any, was it to get a personal doctor you are happy with?

Variable name: S17010

Editing notes: See Note 8_01

Response	Value	Percent
A big problem	1	13.1%
A small problem	2	22.3%
Not a problem	3	64.6%

GETTING HEALTH CARE FROM A SPECIALIST

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

Question 41: Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 12 months, did you try to make any appointments to see a specialist?

Variable name: H17028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	64.2%
No	Go to Question 45	2	35.8%

Question 42: In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H17029

Editing notes: See Note 9

Response	Value	Percent
Never	1	5.3%
Sometimes	2	12.8%
Usually	3	28.0%
Always	4	53.8%
I didn't need a specialist in the last 12 months	-6	

Question 43: How many specialists have you seen in the last 12 months?

Variable name: H17030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 45	0	3.5%
1 specialist		1	38.6%
2		2	29.0%
3		3	16.9%
4		4	7.5%
5 or more specialists		5	4.5%

Question 44: We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10 where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate the specialist?

Variable name: H17031

Editing notes: See Notes 9 and 10

Response	Value	Percent
0 – Worst specialist possible	0	0.4%
1	1	0.4%
2	2	0.7%
3	3	0.8%
4	4	1.1%
5	5	2.3%
6	6	4.0%
7	7	8.3%
8	8	16.1%
9	9	23.2%
10 – Best specialist possible	10	42.7%
I didn't see a specialist in the last 12 months	-6	

Question 45: In general, how would you rate your overall mental or emotional health?

Variable name: S17B01

Editing notes: None

Response	Value	Percent
Excellent	1	39.4%
Very good	2	31.8%
Good	3	19.7%
Fair	4	7.5%
Poor	5	1.7%

Question 46: In the last 12 months, did you need any treatment or counseling for a personal or family problem?

Variable name: S17B02

Editing notes: See Note 10_B1

Response	Directions	Value	Percent
Yes		1	17.7%
No	Go to Question 49	2	82.3%

Question 47: In the last 12 months, how much of a problem, if any, was it to get the treatment or counseling you needed through your health plan?

Variable name: S17B03

Editing notes: See Note 10_B1

Response	Value	Percent
A big problem	1	9.4%
A small problem	2	15.8%
Not a problem	3	74.8%

Question 48: Using any number from 0 to 10 where 0 is the worst treatment or counseling possible and 10 is the best treatment or counseling possible, what number would you use to rate your treatment or counseling in the last 12 months?

Variable name: S17B04

Editing notes: See Note 10_B1

Response	Value	Percent
0 – Worst treatment or counseling possible	0	1.9%
1	1	0.7%
2	2	1.5%
3	3	2.0%
4	4	3.0%
5	5	7.7%
6	6	4.0%
7	7	11.5%
8	8	15.5%
9	9	21.9%
10 – Best treatment or counseling possible	10	30.2%
I had no treatment or counseling in the last 12 months	-6	

YOUR HEALTH PLAN

The next questions ask about your experience with your health plan. By your health plan, we mean the health plan you marked in Question 3.

Question 49: In the last 12 months, did you look for any information in written materials or on the Internet about how your health plan works?

Variable name: H17034

Editing notes: See Note 12

Response	Directions	Value	Percent
Yes		1	32.1%
No	Go to Question 51	2	67.9%

Question 50: In the last 12 months, how often did the written material or the Internet provide the information you needed about how your plan works?

Variable name: H17035

Editing notes: See Note 12

Response	Value	Percent
Never	1	6.4%
Sometimes	2	27.1%
Usually	3	43.0%
Always	4	23.5%
I didn't look for information from my health plan in the last 12 months	-6	

Question 51: Sometimes people need services or equipment beyond what is provided in a regular or routine office visit, such as care from a specialist, physical therapy, a hearing aid, or oxygen. In the last 12 months, did you look for information from your health plan on how much you would have to pay for a health care service or equipment?

Variable name: H17036

Editing notes: See Note 13

Response	Directions	Value	Percent
Yes		1	22.4%
No	Go to Question 53	2	77.6%

Question 52: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment?

Variable name: H17037

Editing notes: See Note 13

Response	Value	Percent
Never	1	25.7%
Sometimes	2	20.5%
Usually	3	26.8%
Always	4	27.0%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	

Question 53: In some health plans, the amount you pay for a prescription medicine can be different for different medicines, or can be different for prescriptions filled by mail instead of at the pharmacy. In the last 12 months, did you look for information from your health plan on how much you would have to pay for specific prescription medicines?

Variable name: H17038

Editing notes: See Note 14

Response	Directions	Value	Percent
Yes		1	22.9%
No	Go to Question 55	2	77.1%

Question 54: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medications?

Variable name: H17039

Editing notes: See Note 14

Response	Value	Percent
Never	1	19.7%
Sometimes	2	16.8%
Usually	3	28.4%
Always	4	35.1%
I didn't need prescription medications from my health plan in the last 12 months	-6	

Question 55: In the last 12 months, did you try to get information or help from your health plan's customer service?

Variable name: H17040

Editing notes: See Note 15

Response	Directions	Value	Percent
Yes		1	26.8%
No	Go to Question 58	2	73.2%

Question 56: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?

Variable name: H17041

Editing notes: See Note 15

Response	Value	Percent
Never	1	6.8%
Sometimes	2	19.3%
Usually	3	28.8%
Always	4	45.2%
I didn't call my health plan's customer service in the last 12 months	-6	

Question 57: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?

Variable name: H17042

Editing notes: See Note 15

Response	Value	Percent
Never	1	2.0%
Sometimes	2	7.7%
Usually	3	21.6%
Always	4	68.6%
I didn’t call my health plan’s customer service in the last 12 months	-6	

Question 58: In the last 12 months, did your health plan give you any forms to fill out?

Variable name: H17043

Editing notes: See Note 16

Response	Directions	Value	Percent
Yes		1	23.6%
No	Go to Question 60	2	76.4%

Question 59: In the last 12 months, how often were the forms from your health plan easy to fill out?

Variable name: H17044

Editing notes: See Note 16

Response	Value	Percent
Never	1	4.5%
Sometimes	2	13.0%
Usually	3	45.9%
Always	4	36.6%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

Question 60: Claims are sent to a health plan for payment. You may send in the claims yourself, or doctors, hospitals, or others may do this for you. In the last 12 months, did you or anyone else send in any claims to your health plan?

Variable name: H17045

Editing notes: See Note 17

Response	Directions	Value	Percent
Yes		1	48.1%
No	Go to Question 63	2	33.2%
Don’t know	Go to Question 63	-5	18.6%

Question 61: In the last 12 months, how often did your health plan handle your claims quickly?

Variable name: H17046

Editing notes: See Note 17

Response	Value	Percent
Never	1	2.8%
Sometimes	2	6.6%
Usually	3	28.8%
Always	4	47.4%
Don't know	-5	14.4%
No claims were sent for me in the last 12 months	-6	

Question 62: In the last 12 months, how often did your health plan handle your claims correctly?

Variable name: H17047

Editing notes: See Note 17

Response	Value	Percent
Never	1	1.5%
Sometimes	2	6.0%
Usually	3	25.3%
Always	4	54.2%
Don't know	-5	12.9%
No claims were sent for me in the last 12 months	-6	

Question 63: Using any number from 0 to 10 where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?

Variable name: H17048

Editing notes: None

Response	Value	Percent
0 – Worst health plan possible	0	0.6%
1	1	0.3%
2	2	0.9%
3	3	1.2%
4	4	1.5%
5	5	6.0%
6	6	5.7%
7	7	11.4%
8	8	19.0%
9	9	21.2%
10 – Best health plan possible	10	32.2%

PREVENTIVE CARE

Preventive care is medical care you receive that is intended to maintain your good health or prevent a future medical problem. A physical or blood pressure screening are examples of preventive care.

Question 64: When did you last have a blood pressure reading?

Variable name: H17049

Editing notes: None

Response	Value	Percent
Less than 12 months ago	3	94.1%
1 to 2 years ago	2	4.3%
More than 2 years ago	1	1.6%

Question 65: Do you know if your blood pressure is too high?

Variable name: H17050

Editing notes: None

Response	Value	Percent
Yes, it is too high	1	18.0%
No, it is not too high	2	77.1%
Don't know	3	5.0%

Question 66: When did you last have a flu shot?

Variable name: H17051

Editing notes: None

Response	Value	Percent
Less than 12 months ago	4	69.2%
1 to 2 years ago	3	10.6%
More than 2 years ago	2	11.7%
Never had a flu shot	1	8.5%

Question 67: Have you ever smoked at least 100 cigarettes in your entire life?

Variable name: H17052

Editing notes: None

Response	Value	Percent
Yes	1	35.8%
No	2	62.8%
Don't know	-5	1.4%

Question 68: Do you now smoke cigarettes or use tobacco every day, some days or not at all?

Variable name: H17053

Editing notes: See Note 18

Response	Directions	Value	Percent
Every day		4	6.7%
Some days		3	4.6%
Not at all	Go to Question 73	2	88.4%
Don't know	Go to Question 73	-5	0.3%

Question 69: In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?

Variable name: H17054

Editing notes: See Note 18

Response	Value	Percent
Never	1	22.3%
Sometimes	2	21.5%
Usually	3	25.7%
Always	4	30.5%

Question 70: In the last 12 months, how often was medication recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Examples of medication are: nicotine gum, patch, nasal spray, inhaler, or prescription medication.

Variable name: H17055

Editing notes: See Note 18

Response	Value	Percent
Never	1	48.2%
Sometimes	2	26.1%
Usually	3	12.6%
Always	4	13.1%

Question 71: In the last 12 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication to assist you with quitting smoking or using tobacco? Examples of methods and strategies are: telephone helpline, individual or group counseling, or cessation program.

Variable name: H17056

Editing notes: See Note 18

Response	Value	Percent
Never	1	51.6%
Sometimes	2	24.6%
Usually	3	12.6%
Always	4	11.1%

Question 72: On the days you smoke or use tobacco products, what type of product do you smoke or use?

MARK ALL THAT APPLY

Variable names: H17057A-H17057D

Editing notes: See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H17057A	64.7%
Dip, chewing tobacco, snuff or snus	H17057B	18.5%
Cigars	H17057C	9.6%
Pipes, bidis, or kreteks (Pipes include hookahs. Bidis are small, brown, hand-rolled cigarettes from India and other Southeast Asian countries. Kreteks are clove cigarettes made in Indonesia that contain clove extract and tobacco.)	H17057D	5.0%

Question 73: Electronic cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Before today, had you ever heard of electronic cigarettes or e-cigarettes?

Variable name: S17BF1

Editing notes: See Note 18_BF1

Response	Directions	Value	Percent
Yes		1	77.3%
No	Go to Question 79	2	22.1%
Don't know	Go to Question 79	-5	0.6%

Question 74: Have you ever used an electronic cigarette, even just one time in your entire life?

Variable name: S17BF2

Editing notes: See Note 18_BF1

Response	Directions	Value	Percent
Yes		1	13.9%
No	Go to Question 79	2	86.0%
Don't know	Go to Question 79	-5	0.1%

Question 75: How many times in total do you think you have used an electronic cigarette during your lifetime?

Variable name: S17BF3

Editing notes: See Note 18_BF1

Response	Value	Percent
1 - 10	1	42.8%
11 – 20	2	13.7%
21 – 50	3	10.3%
Over 50 times	4	29.9%
Don't know	-5	3.2%

Question 76: Do you now use electronic cigarettes every day, some days, or not at all?

Variable name: S17BF4

Editing notes: See Notes 18_BF1 and 18_BF2

Response	Directions	Value	Percent
Every day		1	11.0%
Some days		2	17.6%
Not at all	Go to Question 79	3	71.3%
Don't know	Go to Question 79	-5	0.0%

Question 77: Were any of the electronic cigarettes that you used in the past 30 days flavored to taste like menthol, mint, clove, spice, candy, fruit, chocolate, or other sweets?

Variable name: S17BF5

Editing notes: See Notes 18_BF1 and 18_BF2

Response	Value	Percent
Yes	1	83.2%
No	2	14.4%
Don't know	-5	2.4%
I didn't use any electronic cigarettes in the past 30 days	-6	

Question 78: At any time during the past 12 months, did you completely switch from smoking traditional cigarettes to using electronic or e-cigarettes?

Variable name: S17BF6

Editing notes: See Notes 18_BF1 and 18_BF2

Response	Value	Percent
Yes	1	47.2%
No	2	52.8%

Question 79: Are you male or female?

Variable name: H17058

Editing notes: See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 86	1	49.8%
Female		2	50.2%

Question 80: When did you last have a Pap smear test?

Variable name: H17059B

Editing notes: See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	36.1%
1 to 2 years ago	5	25.8%
More than 2 but less than 3 years ago	4	10.5%
More than 3 but less than 5 years ago	3	8.7%
5 or more years ago	2	15.0%
Never had a pap smear test	1	3.9%

Question 81: Are you under age 40?**Variable name:** H17060**Editing notes:** See Notes 19A, 19B, and 20

Response	Directions	Value	Percent
Yes	Go to Question 83	1	35.9%
No		2	64.1%

Question 82: When was the last time your breasts were checked by mammography?**Variable name:** H17061**Editing notes:** See Notes 19A, 19B, and 20

Response	Value	Percent
Within the last 12 months	5	62.6%
1 to 2 years ago	4	19.6%
More than 2 but less than 5 years ago	3	7.6%
5 or more years ago	2	5.0%
Never had a mammogram	1	5.2%

Question 83: Have you been pregnant in the last 12 months or are you pregnant now?**Variable name:** H17062**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	2.5%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 85	2	6.0%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 86	3	91.6%

Question 84: In what trimester is your pregnancy?**Variable name:** H17063**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	Go to Question 86	1	31.5%
Second trimester (13 th through 27 th week)		2	30.8%
Third trimester (28 th week until delivery)		3	37.7%

Question 85: In which trimester did you first receive prenatal care?**Variable name:** H17064**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	4	92.7%
Second trimester (13 th through 27 th week)	3	3.1%
Third trimester (28 th week until delivery)	2	1.0%
Did not receive prenatal care	1	3.1%

ABOUT YOU

Question 86: In general, how would you rate your overall health?

Variable name: H17065

Editing notes: None

Response	Value	Percent
Excellent	5	16.7%
Very good	4	38.8%
Good	3	32.0%
Fair	2	10.8%
Poor	1	1.7%

Question 87: Are you limited in any way in any activities because of any impairment or health problem?

Variable name: H17066

Editing notes: None

Response	Value	Percent
Yes	1	36.1%
No	2	63.9%

Question 88: In the last 12 months, did you get health care 3 or more times for the same condition or problem?

Variable name: H17067

Editing notes: See Note 22

Response	Directions	Value	Percent
Yes		1	45.6%
No	Go to Question 90	2	54.4%

Question 89: Is this a condition or problem that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17068

Editing notes: See Note 22

Response	Value	Percent
Yes	1	84.4%
No	2	15.6%

Question 90: Do you now need or take medicine prescribed by a doctor? Do not include birth control.

Variable name: H17069

Editing notes: See Note 23

Response	Directions	Value	Percent
Yes		1	67.2%
No	Go to Question 92	2	32.8%

Question 91: Is this medicine to treat a condition that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17070

Editing notes: See Note 23

Response	Value	Percent
Yes	1	93.5%
No	2	6.5%

Question 92: How tall are you without your shoes on? Please give your answer in feet and inches.

Variable name: H17071F, H17071I

Editing notes: See Note 23_HT

Response	Example feet	Example inches	Percent of responses
Please give your answer in feet and inches. Please write one number in each box.	5	06	94.7%

Question 93: How much do you weigh without your shoes on? Please give your answer in pounds.

Variable name: H17072

Editing notes: See Note 23_WT

Response	Example pounds	Percent of responses
Please give your answer in pounds. Please write one number in each box.	152	94.5%

Question 94: What is the highest grade or level of school that you have completed?

Variable name: SREDA

Editing notes: None

Response	Value	Percent
8 th grade or less	1	0.8%
Some high school, but did not graduate	2	1.5%
High school graduate or GED	3	19.3%
Some college or 2-year degree	4	40.0%
4-year college graduate	5	17.9%
More than 4-year college degree	6	20.4%

Question 95: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)

MARK ALL THAT APPLY

Variable names: H17073A-H17073E, H17073

Editing notes: See Note 24

Response	Variable Name	H17073 Value	Percent Marked
No, not Spanish, Hispanic, or Latino	H17073A	1	85.9%
Yes, Mexican, Mexican American, Chicano	H17073B	2	4.5%
Yes, Puerto Rican	H17073C	3	2.5%
Yes, Cuban	H17073D	4	0.3%
Yes, other Spanish, Hispanic, or Latino	H17073E	5	3.3%

Question 96: What is your race?

MARK ALL THAT APPLY

Variable names: SRRACEA-SRRACEE

Editing notes: None

Response	Variable Name	Percent Marked
White	SRRACEA	78.9%
Black or African American	SRRACEB	10.9%
American Indian or Alaska Native	SRRACEC	2.3%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	6.8%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	0.9%

Question 97: What is your age now?

Variable name: SRAGE

Editing notes: None

Response	Value	Percent
18 to 24	1	11.9%
25 to 34	2	16.2%
35 to 44	3	12.6%
45 to 54	4	9.7%
55 to 64	5	17.9%
65 to 74	6	17.8%
75 or older	7	13.9%

Question 98: Are you currently covered by Medicare?

Variable name: H17074

Editing notes: See Note 25

Response	Directions	Value	Percent
Yes		1	34.3%
No	Go to Question 104	2	58.1%
Don't know	Go to Question 104	-5	7.6%

Question 99: Currently, are you covered by Medicare Part A? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part A helps pay for inpatient hospital care.

Variable name: H17075

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part A	1	94.5%
No, I am not covered by Medicare Part A	2	5.5%

Question 100: Currently, are you covered by Medicare Part B? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part B helps pay for doctor’s services, outpatient hospital services, and certain other services.

Variable name: H17076

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part B	1	92.0%
No, I am not covered by Medicare Part B	2	8.0%

Question 101: Medicare Advantage is the name for Medicare Plus Choice plans. Are you enrolled in a Medicare Advantage Plan? This plan is also sometimes known as Medicare Part C.

Variable name: H17077

Editing notes: See Note 25

Response	Value	Percent
Yes	1	4.7%
No	2	80.0%
Don’ t know	-5	15.3%

Question 102: Currently, are you covered by Medicare supplemental insurance? Medicare supplemental insurance, also called Medigap or MediSup, is usually obtained from private insurance companies and covers some of the costs not paid for by Medicare.

Variable name: H17078

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare supplemental insurance	1	16.2%
No, I am not covered by Medicare supplemental insurance	2	83.8%

Question 103: Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?

Variable name: H17079

Editing notes: See Note 25

Response	Value	Percent
Yes	1	10.9%
No	2	78.0%
Don’ t know	-5	11.1%

Question 104: Using a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree”, how much do you agree with the following statement: In general, I am able to see my provider(s) when needed?

Variable name: S17011

Editing notes: None

Response	Value	Percent
Strongly disagree	1	5.2%
Disagree	2	3.9%
Neither agree nor disagree	3	9.8%
Agree	4	41.8%
Strongly agree	5	39.3%

Question 105: Using a scale of 1 to 5, with 1 being “completely dissatisfied” and 5 being “completely satisfied”, how satisfied are you, overall, with the health care you received during your last visit?

Variable name: S17014

Editing notes: None

Response	Value	Percent
Completely dissatisfied	1	3.9%
Somewhat dissatisfied	2	4.5%
Neither satisfied nor dissatisfied	3	6.2%
Somewhat satisfied	4	24.3%
Completely satisfied	5	61.1%

THANK YOU FOR TAKING THE TIME TO COMPLETE THE SURVEY!

Your generous contribution will greatly aid efforts to improve the health of our military community.

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APPENDIX A

ANNOTATED QUESTIONNAIRE – QUARTER III

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Health Care Survey of DoD Beneficiaries

A world-wide survey of beneficiaries
eligible for health care coverage through
the military health system

April 2017

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Military Health Care Survey:

Adult Questionnaire

April 2017

Privacy Advisory

Providing information in this Survey is voluntary. There is no penalty nor will your benefits be affected if you choose not to respond, although maximum participation is encouraged so that the data will be complete and representative.

The Survey was written so that answers should not require you to provide any personally identifiable information (PII), but please be assured that any PII provided will be treated as confidential. Your responses are collected via a secure system which does not collect any information that could be used to determine your identity.

Answering the questions is voluntary; you may stop the Survey at any time.

According to the Privacy Act of 1974 (5 U.S.C. §552a), the Department of Defense is required to inform you of the purposes and use of this survey. Please read it carefully.

Authority: 10 U.S.C. §1074 (Medical and Dental Care for Members and Certain Former Members, as amended by National Defense Authorization Act of 1993, Public Law 102-484, §706); 10 U.S.C. §1074f (Medical Tracking System for Members Deployed Overseas); 32 C.F.R. §199.17 (TRICARE Program); 45 C.F.R. Part 160 Subparts A and E of Part 164 (Health Insurance Portability and Accountability Act of 1996, Privacy Rule); DoD 6025.18-R (Department of Defense Health Information Privacy Regulation); DoD 6025.13-R (Military Health System Clinical Quality Assurance Program Regulation); 64 FR 22837 (DHA 08 – Health Affairs Survey Data Base, April 28, 1999); and, E.O. 9397 (as amended, November 20, 2008, for SSN collection).

Purpose: This survey helps health policy makers gauge beneficiary satisfaction with the current military health care system and provides valuable input from beneficiaries that will be used to improve the Military Health System.

Routine Uses: None.

Disclosure: Participation is voluntary. Failure to respond will not result in any penalty to the respondent; however maximum participation is encouraged so that data will be as complete and representative as possible.

SURVEY INSTRUCTIONS

Thank you for taking the time to participate in this online survey.

Please note, if the survey is idle for more than 5 minutes, you will be logged out automatically to protect your privacy. If that happens, simply wait 15 minutes and log back in. Please keep your password because you may need it later.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the buttons below to move backward and forward through the survey.

To begin, just click on the "Next" button below. This will take you right into the survey.

SURVEY STARTS HERE

As an eligible TRICARE beneficiary, please complete this survey even if you did not receive your health care from a military facility.

Please recognize that some specific questions about TRICARE benefits may not apply to you, depending on your entitlement and particular TRICARE program.

This survey is about the health care of the person whose name appears on the cover letter. The questionnaire should be completed by that person. If you are not the addressee, please give this survey to that person.

Question 1: Are you the person whose name appears on the cover letter?

Variable name: H17001

Editing notes: None

Response	Directions	Value	Percent
Yes	Go to Question 2	1	99.6%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.4%

Question 2: By which of the following health plans are you currently covered?**MARK ALL THAT APPLY****Variable names:** H17002A, H17002C, H17002F-H17002V**Editing notes:** None**Military Health Plans**

Response	Variable Name	Percent Marked
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H17002A	45.7%
TRICARE Extra or Standard (CHAMPUS)	H17002C	13.9%
TRICARE Plus	H17002N	0.7%
TRICARE for Life	H17002O	31.0%
TRICARE Supplemental Insurance	H17002P	0.4%
TRICARE Reserve Select	H17002Q	3.4%
TRICARE Retired Reserve	H17002S	1.4%
TRICARE Young Adult Prime	H17002T	0.2%
TRICARE Young Adult Extra or Standard	H17002V	0.5%
Uniformed Services Family Health Plan (USFHP)	H17002K	1.4%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H17002U	0.1%

Other Health Plans

Response	Variable Name	Percent Marked
Medicare	H17002F	31.4%
Federal Employees Health Benefit Program (FEHBP)	H17002G	2.1%
Medicaid	H17002H	1.1%
A civilian HMO (such as Kaiser)	H17002I	1.2%
Other civilian health insurance (such as Blue Cross)	H17002J	7.0%
The Veterans Administration (VA)	H17002M	9.6%
Government health insurance from a country other than the U.S.	H17002R	0.2%
Not sure	H17002L	5.3%

Question 3: Which health plan did you use for all or most of your healthcare in the last 12 months?

MARK ONLY ONE

Variable name: H17003

Editing notes: See Note 1

Response	Directions	Value	Percent
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	44.0%
TRICARE Extra or Standard (CHAMPUS)		3	9.8%
TRICARE Plus		11	0.7%
TRICARE Reserve Select		12	2.8%
TRICARE Retired Reserve		14	1.0%
TRICARE Young Adult Prime		15	0.1%
TRICARE Young Adult Extra or Standard		17	0.4%
Uniformed Services Family Health Plan (USFHP)		9	1.3%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	0.0%
Medicare (may include TRICARE for Life)		4	25.4%
Federal Employees Health Benefit Program (FEHBP)		5	1.4%
Medicaid		6	0.5%
A civilian HMO (such as Kaiser)		7	1.0%
Other civilian health insurance (such as Blue Cross)		8	4.6%
The Veterans Administration (VA)		10	4.1%
Government health insurance from a country other than the U.S.		13	0.1%
Not sure	Go to Question 5	-5	2.6%
Did not use any health plan in the last 12 months	Go to Question 5	-6	

For the remainder of this questionnaire, the term health plan refers to the plan you indicated in Question 3.

Question 4: How many months or years in a row have you been in this health plan?

Variable name: H17004

Editing notes: See Note 1

Response	Value	Percent
Less than 6 months	1	1.2%
At least 6 months but less than 12 months	2	4.5%
At least 12 months but less than 24 months	3	7.8%
At least 2 years but less than 5 years	4	18.3%
At least 5 years but less than 10 years	5	20.6%
10 or more years	6	47.7%

YOUR HEALTH CARE IN THE LAST 12 MONTHS

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

Question 5: In the last 12 months, where did you go most often for your health care?

MARK ONLY ONE

Variable name: H17005

Editing notes: None

Response	Value	Percent
A military facility – This includes: Military clinic Military hospital PRIMUS clinic NAVCARE clinic	1	36.3%
A civilian facility – This includes: Doctor’s office Clinic Hospital Civilian TRICARE contractor	2	54.7%
Uniformed Services Family Health Plan facility (USFHP)	3	0.8%
Veterans Affairs (VA) clinic or hospital	4	5.1%
I went to none of the listed types of facilities in the last 12 months	5	3.1%

Question 6: In the last 12 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor’s office?

Variable name: H17006

Editing notes: See Note 2

Response	Directions	Value	Percent
Yes		1	45.1%
No	Go to Question 9	2	54.9%

Question 7: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?

Variable name: H17007

Editing notes: See Note 2

Response	Value	Percent
Never	1	1.8%
Sometimes	2	9.6%
Usually	3	20.8%
Always	4	67.7%
I didn’t need care right away for an illness, injury or condition in the last 12 months	-6	

Question 8: In the last 12 months, when you needed care right away for an illness, injury, or condition, how long did you usually have to wait between trying to get care and actually seeing a provider?

Variable name: H17008

Editing notes: See Note 2

Response	Value	Percent
Same day	1	64.6%
1 day	2	13.0%
2 days	3	7.1%
3 days	4	3.5%
4-7 days	5	5.7%
8-14 days	6	3.2%
15 days or longer	7	2.9%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

Question 9: In the last 12 months, not counting the times you needed health care right away, did you make any appointments for your health care at a doctor's office or clinic?

Variable name: H17009

Editing notes: See Note 3

Response	Directions	Value	Percent
Yes		1	87.1%
No	Go to Question 12	2	12.9%

Question 10: In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?

Variable name: H17010

Editing notes: See Note 3

Response	Value	Percent
Never	1	3.0%
Sometimes	2	15.8%
Usually	3	27.6%
Always	4	53.6%
I had no appointments in the last 12 months	-6	

Question 11: In the last 12 months, not counting the times you needed health care right away, how many days did you usually have to wait between making an appointment and actually seeing a provider?

Variable name: H17011

Editing notes: See Note 3

Response	Value	Percent
Same day	1	9.1%
1 day	2	9.9%
2-3 days	3	23.2%
4-7 days	4	22.5%
8-14 days	5	17.7%
15-30 days	6	12.0%
31 days or longer	7	5.5%
I had no appointments in the last 12 months	-6	

Question 12: In the last 12 months, how many times did you go to an emergency room to get care for yourself?

Variable name: H17012

Editing notes: None

Response	Value	Percent
None	1	71.6%
1	2	18.0%
2	3	6.3%
3	4	2.4%
4	5	0.6%
5 to 9	6	0.7%
10 or more	7	0.3%

Question 13: In the last 12 months (not counting times you went to an emergency room), how many times did you go to a doctor's office or clinic to get health care for yourself?

Variable name: H17013

Editing notes: See Note 4

Response	Directions	Value	Percent
None	Go to Question 20	1	12.0%
1		2	11.5%
2		3	17.4%
3		4	16.1%
4		5	14.3%
5 to 9		6	19.0%
10 or more		7	9.7%

Question 14: In the last 12 months, how often did you and a doctor or other health provider talk about specific things you could do to prevent illness?

Variable name: H17014

Editing notes: See Note 4

Response	Value	Percent
Never	1	13.8%
Sometimes	2	25.3%
Usually	3	29.1%
Always	4	31.8%

Question 15: Choices for your treatment or health care can include choices about medicine, surgery, or other treatment. In the last 12 months, did a doctor or other health provider tell you there was more than one choice for your treatment or health care?

Variable name: H17015

Editing notes: See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	60.6%
No	Go to Question 18	2	39.4%

Question 16: In the last 12 months, did a doctor or other health provider talk with you about the pros and cons of each choice for your treatment or health care?

Variable name: H17016

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	67.8%
Somewhat yes	2	28.1%
Somewhat no	3	2.5%
Definitely no	4	1.6%

Question 17: In the last 12 months, when there was more than one choice for your treatment or health care, did a doctor or other health provider ask which choice you thought was best for you?

Variable name: H17017

Editing notes: See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	59.3%
Somewhat yes	2	31.0%
Somewhat no	3	5.8%
Definitely no	4	3.9%

Question 18: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months?

Variable name: H17018

Editing notes: See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.3%
1	1	0.4%
2	2	1.1%
3	3	1.1%
4	4	1.8%
5	5	5.3%
6	6	5.0%
7	7	11.1%
8	8	20.3%
9	9	21.3%
10 – Best health care possible	10	32.2%
I had no visits in the last 12 months	-6	

Question 19: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?

Variable name: H17033

Editing notes: See Note 4

Response	Value	Percent
Never	1	1.6%
Sometimes	2	12.0%
Usually	3	37.3%
Always	4	49.2%

YOUR PERSONAL DOCTOR

Question 20: A personal doctor is the one you would see if you need a checkup, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Variable name: H17019

Editing notes: See Note 6

Response	Directions	Value	Percent
Yes		1	79.1%
No	Go to Question 30	2	20.9%

Question 21: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?

Variable name: H17020

Editing notes: See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 26	0	7.3%
1		1	19.6%
2		2	25.8%
3		3	19.0%
4		4	13.5%
5 to 9		5	11.7%
10 or more		6	3.1%

Question 22: In the last 12 months, how often did your personal doctor listen carefully to you?

Variable name: H17021

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	1.2%
Sometimes	2	5.5%
Usually	3	17.2%
Always	4	76.1%
I had no visits in the last 12 months	-6	

Question 23: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?

Variable name: H17022

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	0.9%
Sometimes	2	3.9%
Usually	3	17.8%
Always	4	77.3%
I had no visits in the last 12 months	-6	

Question 24: In the last 12 months, how often did your personal doctor show respect for what you had to say?

Variable name: H17023

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	1.4%
Sometimes	2	3.7%
Usually	3	14.9%
Always	4	80.0%
I had no visits in the last 12 months	-6	

Question 25: In the last 12 months, how often did your personal doctor spend enough time with you?

Variable name: H17024

Editing notes: See Notes 6 and 7

Response	Value	Percent
Never	1	1.9%
Sometimes	2	7.1%
Usually	3	23.8%
Always	4	67.3%
I had no visits in the last 12 months	-6	

Question 26: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?

Variable name: H17025

Editing notes: See Notes 6, 7, and 8

Response	Directions	Value	Percent
Yes		1	77.0%
No	Go to Question 28	2	23.0%

Question 27: In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?

Variable name: H17026

Editing notes: See Notes 6, 7, and 8

Response	Value	Percent
Never	1	7.5%
Sometimes	2	13.2%
Usually	3	32.3%
Always	4	46.9%

Question 28: Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

Variable name: H17027

Editing notes: See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.5%
1	1	0.7%
2	2	0.7%
3	3	0.9%
4	4	1.2%
5	5	5.0%
6	6	3.3%
7	7	7.0%
8	8	15.4%
9	9	22.7%
10 – Best personal doctor possible	10	42.6%
I don't have a personal doctor	-6	

Question 29: Did you have the same personal doctor before you joined this health plan?

Variable name: S17009

Editing notes: See Notes 6 and 8_01

Response	Directions	Value	Percent
Yes	Go to Question 31	1	28.8%
No		2	71.2%

Question 30: Since you joined your health plan, how much of a problem, if any, was it to get a personal doctor you are happy with?

Variable name: S17010

Editing notes: See Note 8_01

Response	Value	Percent
A big problem	1	12.2%
A small problem	2	22.3%
Not a problem	3	65.5%

GETTING HEALTH CARE FROM A SPECIALIST

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

Question 31: Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 12 months, did you try to make any appointments to see a specialist?

Variable name: H17028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	63.8%
No	Go to Question 35	2	36.2%

Question 32: In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H17029

Editing notes: See Note 9

Response	Value	Percent
Never	1	5.3%
Sometimes	2	13.8%
Usually	3	29.4%
Always	4	51.5%
I didn't need a specialist in the last 12 months	-6	

Question 33: How many specialists have you seen in the last 12 months?

Variable name: H17030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 35	0	3.6%
1 specialist		1	38.2%
2		2	31.7%
3		3	16.5%
4		4	6.0%
5 or more specialists		5	4.1%

Question 34: We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10 where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate the specialist?

Variable name: H17031

Editing notes: See Notes 9 and 10

Response	Value	Percent
0 – Worst specialist possible	0	0.3%
1	1	0.4%
2	2	0.4%
3	3	0.8%
4	4	1.6%
5	5	3.6%
6	6	2.9%
7	7	7.7%
8	8	15.8%
9	9	24.9%
10 – Best specialist possible	10	41.6%
I didn't see a specialist in the last 12 months	-6	

Question 35: In general, how would you rate your overall mental or emotional health?

Variable name: S17B01

Editing notes: None

Response	Value	Percent
Excellent	1	38.8%
Very good	2	32.4%
Good	3	19.4%
Fair	4	7.5%
Poor	5	1.9%

Question 36: In the last 12 months, did you need any treatment or counseling for a personal or family problem?

Variable name: S17B02

Editing notes: See Note 10_B1

Response	Directions	Value	Percent
Yes		1	18.1%
No	Go to Question 39	2	81.9%

Question 37: In the last 12 months, how much of a problem, if any, was it to get the treatment or counseling you needed through your health plan?

Variable name: S17B03

Editing notes: See Note 10_B1

Response	Value	Percent
A big problem	1	11.1%
A small problem	2	16.7%
Not a problem	3	72.2%

Question 38: Using any number from 0 to 10 where 0 is the worst treatment or counseling possible and 10 is the best treatment or counseling possible, what number would you use to rate your treatment or counseling in the last 12 months?

Variable name: S17B04

Editing notes: See Note 10_B1

Response	Value	Percent
0 – Worst treatment or counseling possible	0	2.7%
1	1	1.8%
2	2	1.2%
3	3	3.5%
4	4	2.1%
5	5	7.1%
6	6	8.4%
7	7	8.6%
8	8	14.0%
9	9	20.2%
10 – Best treatment or counseling possible	10	30.4%
I had no treatment or counseling in the last 12 months	-6	

YOUR HEALTH PLAN

The next questions ask about your experience with your health plan. By your health plan, we mean the health plan you marked in Question 3.

Question 39: In the last 12 months, did you look for any information in written materials or on the Internet about how your health plan works?

Variable name: H17034

Editing notes: See Note 12

Response	Directions	Value	Percent
Yes		1	28.8%
No	Go to Question 41	2	71.2%

Question 40: In the last 12 months, how often did the written material or the Internet provide the information you needed about how your plan works?

Variable name: H17035

Editing notes: See Note 12

Response	Value	Percent
Never	1	6.6%
Sometimes	2	29.2%
Usually	3	43.7%
Always	4	20.6%
I didn't look for information from my health plan in the last 12 months	-6	

Question 41: Sometimes people need services or equipment beyond what is provided in a regular or routine office visit, such as care from a specialist, physical therapy, a hearing aid, or oxygen. In the last 12 months, did you look for information from your health plan on how much you would have to pay for a health care service or equipment?

Variable name: H17036

Editing notes: See Note 13

Response	Directions	Value	Percent
Yes		1	20.5%
No	Go to Question 43	2	79.5%

Question 42: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment?

Variable name: H17037

Editing notes: See Note 13

Response	Value	Percent
Never	1	25.1%
Sometimes	2	22.7%
Usually	3	26.7%
Always	4	25.5%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	

Question 43: In some health plans, the amount you pay for a prescription medicine can be different for different medicines, or can be different for prescriptions filled by mail instead of at the pharmacy. In the last 12 months, did you look for information from your health plan on how much you would have to pay for specific prescription medicines?

Variable name: H17038

Editing notes: See Note 14

Response	Directions	Value	Percent
Yes		1	22.4%
No	Go to Question 45	2	77.6%

Question 44: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medications?

Variable name: H17039

Editing notes: See Note 14

Response	Value	Percent
Never	1	21.7%
Sometimes	2	19.6%
Usually	3	26.8%
Always	4	31.9%
I didn't need prescription medications from my health plan in the last 12 months	-6	

Question 45: In the last 12 months, did you try to get information or help from your health plan's customer service?

Variable name: H17040

Editing notes: See Note 15

Response	Directions	Value	Percent
Yes		1	26.7%
No	Go to Question 48	2	73.3%

Question 46: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?

Variable name: H17041

Editing notes: See Note 15

Response	Value	Percent
Never	1	7.7%
Sometimes	2	18.1%
Usually	3	32.7%
Always	4	41.6%
I didn't call my health plan's customer service in the last 12 months	-6	

Question 47: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?

Variable name: H17042

Editing notes: See Note 15

Response	Value	Percent
Never	1	1.9%
Sometimes	2	5.7%
Usually	3	25.3%
Always	4	67.1%
I didn’t call my health plan’s customer service in the last 12 months	-6	

Question 48: In the last 12 months, did your health plan give you any forms to fill out?

Variable name: H17043

Editing notes: See Note 16

Response	Directions	Value	Percent
Yes		1	23.2%
No	Go to Question 50	2	76.8%

Question 49: In the last 12 months, how often were the forms from your health plan easy to fill out?

Variable name: H17044

Editing notes: See Note 16

Response	Value	Percent
Never	1	4.4%
Sometimes	2	11.2%
Usually	3	46.0%
Always	4	38.4%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

Question 50: Claims are sent to a health plan for payment. You may send in the claims yourself, or doctors, hospitals, or others may do this for you. In the last 12 months, did you or anyone else send in any claims to your health plan?

Variable name: H17045

Editing notes: See Note 17

Response	Directions	Value	Percent
Yes		1	49.5%
No	Go to Question 53	2	32.5%
Don’t know	Go to Question 53	-5	18.0%

Question 51: In the last 12 months, how often did your health plan handle your claims quickly?

Variable name: H17046

Editing notes: See Note 17

Response	Value	Percent
Never	1	2.7%
Sometimes	2	6.5%
Usually	3	31.6%
Always	4	46.2%
Don't know	-5	13.1%
No claims were sent for me in the last 12 months	-6	

Question 52: In the last 12 months, how often did your health plan handle your claims correctly?

Variable name: H17047

Editing notes: See Note 17

Response	Value	Percent
Never	1	1.9%
Sometimes	2	6.0%
Usually	3	25.1%
Always	4	55.1%
Don't know	-5	11.9%
No claims were sent for me in the last 12 months	-6	

Question 53: Using any number from 0 to 10 where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?

Variable name: H17048

Editing notes: None

Response	Value	Percent
0 – Worst health plan possible	0	0.3%
1	1	0.4%
2	2	0.4%
3	3	1.2%
4	4	1.5%
5	5	5.8%
6	6	5.4%
7	7	12.6%
8	8	17.7%
9	9	21.3%
10 – Best health plan possible	10	33.3%

PREVENTIVE CARE

Preventive care is medical care you receive that is intended to maintain your good health or prevent a future medical problem. A physical or blood pressure screening are examples of preventive care.

Question 54: When did you last have a blood pressure reading?

Variable name: H17049

Editing notes: None

Response	Value	Percent
Less than 12 months ago	3	93.7%
1 to 2 years ago	2	4.4%
More than 2 years ago	1	1.9%

Question 55: Do you know if your blood pressure is too high?

Variable name: H17050

Editing notes: None

Response	Value	Percent
Yes, it is too high	1	16.5%
No, it is not too high	2	77.9%
Don't know	3	5.7%

Question 56: When did you last have a flu shot?

Variable name: H17051

Editing notes: None

Response	Value	Percent
Less than 12 months ago	4	71.7%
1 to 2 years ago	3	9.7%
More than 2 years ago	2	10.6%
Never had a flu shot	1	8%

Question 57: Have you ever smoked at least 100 cigarettes in your entire life?

Variable name: H17052

Editing notes: None

Response	Value	Percent
Yes	1	34.5%
No	2	63.6%
Don't know	-5	1.9%

Question 58: Do you now smoke cigarettes or use tobacco every day, some days or not at all?

Variable name: H17053

Editing notes: See Note 18

Response	Directions	Value	Percent
Every day		4	6.7%
Some days		3	5.5%
Not at all	Go to Question 63	2	87.5%
Don't know	Go to Question 63	-5	0.4%

Question 59: In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?

Variable name: H17054

Editing notes: See Note 18

Response	Value	Percent
Never	1	22.7%
Sometimes	2	20.4%
Usually	3	23.4%
Always	4	33.5%

Question 60: In the last 12 months, how often was medication recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Examples of medication are: nicotine gum, patch, nasal spray, inhaler, or prescription medication.

Variable name: H17055

Editing notes: See Note 18

Response	Value	Percent
Never	1	49.3%
Sometimes	2	24.2%
Usually	3	14.1%
Always	4	12.5%

Question 61: In the last 12 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication to assist you with quitting smoking or using tobacco? Examples of methods and strategies are: telephone helpline, individual or group counseling, or cessation program.

Variable name: H17056

Editing notes: See Note 18

Response	Value	Percent
Never	1	53.2%
Sometimes	2	22.0%
Usually	3	14.6%
Always	4	10.2%

Question 62: On the days you smoke or use tobacco products, what type of product do you smoke or use?

MARK ALL THAT APPLY

Variable names: H17057A-H17057D

Editing notes: See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H17057A	64.7%
Dip, chewing tobacco, snuff or snus	H17057B	19.5%
Cigars	H17057C	13.0%
Pipes, bidis, or kreteks (Pipes include hookahs. Bidis are small, brown, hand-rolled cigarettes from India and other Southeast Asian countries. Kreteks are clove cigarettes made in Indonesia that contain clove extract and tobacco.)	H17057D	3.1%

Question 63: Do you now use electronic cigarettes every day, some days, or not at all?

Variable name: S17BF4

Editing notes: None

Response	Value	Percent
Every day	1	1.3%
Some days	2	1.9%
Not at all	3	96.6%
Don't know	-5	0.3%

Question 64: Are you male or female?

Variable name: H17058

Editing notes: See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 71	1	50.4%
Female		2	49.6%

Question 65: When did you last have a Pap smear test?

Variable name: H17059B

Editing notes: See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	34.0%
1 to 2 years ago	5	24.2%
More than 2 but less than 3 years ago	4	9.9%
More than 3 but less than 5 years ago	3	8.2%
5 or more years ago	2	18.7%
Never had a pap smear test	1	5.0%

Question 66: Are you under age 40?**Variable name:** H17060**Editing notes:** See Notes 19A, 19B, and 20

Response	Directions	Value	Percent
Yes	Go to Question 68	1	34.2%
No		2	65.8%

Question 67: When was the last time your breasts were checked by mammography?**Variable name:** H17061**Editing notes:** See Notes 19A, 19B, and 20

Response	Value	Percent
Within the last 12 months	5	60.0%
1 to 2 years ago	4	20.6%
More than 2 but less than 5 years ago	3	8.6%
5 or more years ago	2	6.7%
Never had a mammogram	1	4.1%

Question 68: Have you been pregnant in the last 12 months or are you pregnant now?**Variable name:** H17062**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	2.7%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 70	2	4.4%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 71	3	92.9%

Question 69: In what trimester is your pregnancy?**Variable name:** H17063**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	Go to Question 71	1	20.4%
Second trimester (13 th through 27 th week)		2	53.5%
Third trimester (28 th week until delivery)		3	26.2%

Question 70: In which trimester did you first receive prenatal care?**Variable name:** H17064**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 st day of last period)	4	90.9%
Second trimester (13 th through 27 th week)	3	6.8%
Third trimester (28 th week until delivery)	2	0.2%
Did not receive prenatal care	1	2.1%

ABOUT YOU

Question 71: Would you say that in general your health is excellent, very good, good, fair, or poor?

Variable name: H17065

Editing notes: None

Response	Value	Percent
Excellent	5	17.2%
Very good	4	38.1%
Good	3	31.7%
Fair	2	11.1%
Poor	1	1.9%

Question 72: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

Variable name: S17BG01

Editing notes: See Notes 21_BG1 and 21_BG3

Response	Value	Percent
Number of days	1-30	46.6%
None	0	53.4%

Question 73: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

Variable name: S17BG02

Editing notes: See Notes 21_BG2 and 21_BG3

Response	Value	Percent
Number of days	1-30	29.8%
None	0	70.2%

Question 74: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Variable name: S17BG03

Editing notes: See Notes 21_BG3

Response	Value	Percent
Number of days	1-30	29.8%
None	0	70.2%

Question 75: Are you limited in any way in any activities because of any impairment or health problem?

Variable name: H17066

Editing notes: None

Response	Value	Percent
Yes	1	33.1%
No	2	66.9%

Question 76: In the last 12 months, did you get health care 3 or more times for the same condition or problem?

Variable name: H17067

Editing notes: See Note 22

Response	Directions	Value	Percent
Yes		1	42.8%
No	Go to Question 78	2	57.2%

Question 77: Is this a condition or problem that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17068

Editing notes: See Note 22

Response	Value	Percent
Yes	1	81.4%
No	2	18.6%

Question 78: Do you now need or take medicine prescribed by a doctor? Do not include birth control.

Variable name: H17069

Editing notes: See Note 23

Response	Directions	Value	Percent
Yes		1	65.8%
No	Go to Question 80	2	34.2%

Question 79: Is this medicine to treat a condition that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17070

Editing notes: See Note 23

Response	Value	Percent
Yes	1	92.6%
No	2	7.4%

**Question 80: Has a doctor ever told you that you have or have had any of the following conditions?
MARK ALL THAT APPLY**

Variable names: S17BE01A-S17BE01K

Editing notes: See Note 23_BE

Response	Variable Name	Percent Marked
A heart attack	S17BE01A	4.4%
Angina or coronary heart disease	S17BE01B	5.0%
A stroke	S17BE01C	2.4%
Any kind of diabetes or high blood sugar	S17BE01D	14.3%
High cholesterol	S17BE01E	29.1%
Asthma, Chronic obstructive pulmonary disease (COPD), or Emphysema	S17BE01F	10.6%
Cancer	S17BE01G	9.5%
Osteoporosis	S17BE01H	5.3%
Depression or Anxiety	S17BE01I	17.3%
An autoimmune disease (e.g., Lupus, Celiac disease, Rheumatoid arthritis)	S17BE01J	6.2%
None of these	S17BE01K	41.7%

Question 81: Over the last 2 weeks, how often have you been bothered by the following problems?

Variable names: S17BJ01-S17BJ04

Editing notes: None

Response	Variable Name	Value Not at all	Value Several days	Value More than half the days	Value Nearly every day	Percent Not at all	Percent Several days	Percent More than half the days	Percent Nearly every day
Feeling nervous, anxious, or on edge	S17BJ01	1	2	3	4	71.7%	20.4%	4.6%	3.3%
Not being able to stop or control worrying	S17BJ02	1	2	3	4	78.0%	14.7%	4.6%	2.8%
Little interest or pleasure in doing things	S17BJ03	1	2	3	4	78.6%	14.3%	4.2%	2.9%
Feeling down, depressed, or hopeless	S17BJ04	1	2	3	4	80.1%	13.2%	4.2%	2.5%

Question 82: How tall are you without your shoes on? Please give your answer in feet and inches.

Variable name: H17071F, H17071I

Editing notes: See Note 23_HT

Response	Example feet	Example inches	Percent of responses
Please give your answer in feet and inches. Please write one number in each box.	5	06	94.6%

Question 83: How much do you weigh without your shoes on? Please give your answer in pounds.

Variable name: H17072

Editing notes: See Note 23_WT

Response	Example pounds	Percent of responses
Please give your answer in pounds. Please write one number in each box.	152	94.8%

Question 84: What is the highest grade or level of school that you have completed?

Variable name: SREDA

Editing notes: None

Response	Value	Percent
8 th grade or less	1	0.4%
Some high school, but did not graduate	2	1.9%
High school graduate or GED	3	19.6%
Some college or 2-year degree	4	38.6%
4-year college graduate	5	18.0%
More than 4-year college degree	6	21.5%

Question 85: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)

MARK ALL THAT APPLY

Variable names: H17073A-H17073E, H17073

Editing notes: See Note 24

Response	Variable Name	H17073 Value	Percent Marked
No, not Spanish, Hispanic, or Latino	H17073A	1	85.6%
Yes, Mexican, Mexican American, Chicano	H17073B	2	4.3%
Yes, Puerto Rican	H17073C	3	2.2%
Yes, Cuban	H17073D	4	0.4%
Yes, other Spanish, Hispanic, or Latino	H17073E	5	3.5%

Question 86: What is your race?**MARK ALL THAT APPLY****Variable names:** SRRACEA-SRRACEE**Editing notes:** None

Response	Variable Name	Percent Marked
White	SRRACEA	78.0%
Black or African American	SRRACEB	11.6%
American Indian or Alaska Native	SRRACEC	2.9%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	6.5%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	1.1%

Question 87: What is your age now?**Variable name:** SRAGE**Editing notes:** None

Response	Value	Percent
18 to 24	1	12.1%
25 to 34	2	15.7%
35 to 44	3	13.1%
45 to 54	4	9.8%
55 to 64	5	18.2%
65 to 74	6	16.0%
75 or older	7	15.1%

Question 88: Are you currently covered by Medicare?**Variable name:** H17074**Editing notes:** See Note 25

Response	Directions	Value	Percent
Yes		1	34.6%
No	Go to Question 94	2	57.1%
Don't know	Go to Question 94	-5	8.3%

Question 89: Currently, are you covered by Medicare Part A? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part A helps pay for inpatient hospital care.

Variable name: H17075**Editing notes:** See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part A	1	93.9%
No, I am not covered by Medicare Part A	2	6.1%

Question 90: Currently, are you covered by Medicare Part B? Medicare is the federal health insurance program for people aged 65 or older and for certain persons with disabilities. Medicare Part B helps pay for doctor’s services, outpatient hospital services, and certain other services.

Variable name: H17076

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part B	1	91.8%
No, I am not covered by Medicare Part B	2	8.2%

Question 91: Medicare Advantage is the name for Medicare Plus Choice plans. Are you enrolled in a Medicare Advantage Plan? This plan is also sometimes known as Medicare Part C.

Variable name: H17077

Editing notes: See Note 25

Response	Value	Percent
Yes	1	2.9%
No	2	80.5%
Don’ t know	-5	16.5%

Question 92: Currently, are you covered by Medicare supplemental insurance? Medicare supplemental insurance, also called Medigap or MediSup, is usually obtained from private insurance companies and covers some of the costs not paid for by Medicare.

Variable name: H17078

Editing notes: See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare supplemental insurance	1	15.2%
No, I am not covered by Medicare supplemental insurance	2	84.8%

Question 93: Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?

Variable name: H17079

Editing notes: See Note 25

Response	Value	Percent
Yes	1	11.4%
No	2	78.6%
Don’ t know	-5	10.0%

Question 94: Using a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree”, how much do you agree with the following statement: In general, I am able to see my provider(s) when needed?

Variable name: S17011

Editing notes: None

Response	Value	Percent
Strongly disagree	1	5.2%
Disagree	2	4.2%
Neither agree nor disagree	3	9.8%
Agree	4	41.9%
Strongly agree	5	38.9%

Question 95: Using a scale of 1 to 5, with 1 being “completely dissatisfied” and 5 being “completely satisfied”, how satisfied are you, overall, with the health care you received during your last visit?

Variable name: S17014

Editing notes: None

Response	Value	Percent
Completely dissatisfied	1	3.5%
Somewhat dissatisfied	2	3.8%
Neither satisfied nor dissatisfied	3	7.0%
Somewhat satisfied	4	24.8%
Completely satisfied	5	61.0%

THANK YOU FOR TAKING THE TIME TO COMPLETE THE SURVEY!

Your generous contribution will greatly aid efforts to improve the health of our military community.

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APPENDIX A

ANNOTATED QUESTIONNAIRE – HEDIS

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Health Care Survey of DoD Beneficiaries

A world-wide survey of beneficiaries
eligible for health care coverage through
the military health system

February 2017

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Military Health Care Survey:

HEDIS Questionnaire

February 2017

Privacy Advisory

Providing information in this Survey is voluntary. There is no penalty nor will your benefits be affected if you choose not to respond, although maximum participation is encouraged so that the data will be complete and representative.

The Survey was written so that answers should not require you to provide any personally identifiable information (PII), but please be assured that any PII provided will be treated as confidential. Your responses are collected via a secure system which does not collect any information that could be used to determine your identity.

Answering the questions is voluntary; you may stop the Survey at any time.

According to the Privacy Act of 1974 (5 U.S.C. §552a), the Department of Defense is required to inform you of the purposes and use of this survey. Please read it carefully.

Authority: 10 U.S.C. §1074 (Medical and Dental Care for Members and Certain Former Members, as amended by National Defense Authorization Act of 1993, Public Law 102-484, §706); 10 U.S.C. §1074f (Medical Tracking System for Members Deployed Overseas); 32 C.F.R. §199.17 (TRICARE Program); 45 C.F.R. Part 160 Subparts A and E of Part 164 (Health Insurance Portability and Accountability Act of 1996, Privacy Rule); DoD 6025.18-R (Department of Defense Health Information Privacy Regulation); DoD 6025.13-R (Military Health System Clinical Quality Assurance Program Regulation); 64 FR 22837 (DHA 08 – Health Affairs Survey Data Base, April 28, 1999); and, E.O. 9397 (as amended, November 20, 2008, for SSN collection).

Purpose: This survey helps health policy makers gauge beneficiary satisfaction with the current military health care system and provides valuable input from beneficiaries that will be used to improve the Military Health System.

Routine Uses: None.

Disclosure: Participation is voluntary. Failure to respond will not result in any penalty to the respondent; however maximum participation is encouraged so that data will be as complete and representative as possible.

SURVEY INSTRUCTIONS

Thank you for taking the time to participate in this online survey.

Please note, if the survey is idle for more than 5 minutes, you will be logged out automatically to protect your privacy. If that happens, simply wait 15 minutes and log back in. Please keep your password because you may need it later.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the buttons below to move backward and forward through the survey.

To begin, just click on the "Next" button below. This will take you right into the survey.

SURVEY STARTS HERE

As an eligible TRICARE beneficiary, please complete this survey even if you did not receive your health care from a military facility.

Please recognize that some specific questions about TRICARE benefits may not apply to you, depending on your entitlement and particular TRICARE program.

This survey is about the health care of the person whose name appears on the cover letter. The questionnaire should be completed by that person. If you are not the addressee, please give this survey to that person.

Question 1: Our records show that you are now in TRICARE Prime. Is that right?

Variable name: S17BN01

Editing notes: None

Response	Directions	Value	Percent
Yes	Go to Question 3	1	97.5%
No		2	2.5%

Question 2: What is the name of your health plan? (Please print)

Variable name: S17BN02

Editing notes: None

Response	Percent of responses
(printed name of health plan)	4.3%

YOUR HEALTH CARE IN THE LAST 12 MONTHS

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

Question 3: In the last 12 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?

Variable name: H17006

Editing notes: See Note 2

Response	Directions	Value	Percent
Yes		1	71.2%
No	Go to Question 5	2	28.8%

Question 4: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?

Variable name: H17007

Editing notes: See Note 2

Response	Value	Percent
Never	1	4.4%
Sometimes	2	17.2%
Usually	3	26.8%
Always	4	51.5%

Question 5: In the last 12 months, did you make any appointments for a check-up or routine care at a doctor's office or clinic?

Variable name: H17009

Editing notes: See Note 3

Response	Directions	Value	Percent
Yes		1	90.4%
No	Go to Question 7	2	9.6%

Question 6: In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?

Variable name: H17010

Editing notes: See Note 3

Response	Value	Percent
Never	1	4.0%
Sometimes	2	25.8%
Usually	3	31.4%
Always	4	38.8%

Question 7: In the last 12 months, not counting the times you went to an emergency room, how many times did you go to a doctor's office or clinic to get health care for yourself?

Variable name: H17013

Editing notes: See Note 4H

Response	Directions	Value	Percent
None	Go to Question 15	1	11.5%
1		2	12.9%
2		3	20.7%
3		4	16.9%
4		5	12.6%
5 to 9		6	18.0%
10 or more		7	7.4%

Question 8: In the last 12 months, did you and a doctor or other health provider talk about specific things you could do to prevent illness?

Variable name: S17BP01

Editing notes: See Note 4H

Response	Value	Percent
Yes	1	71.3%
No	2	28.7%

Question 9: In the last 12 months, did you and a doctor or other health provider talk about starting or stopping a prescription medicine?

Variable name: S17BK01

Editing notes: See Notes 4H and 5H

Response	Directions	Value	Percent
Yes		1	53.4%
No	Go to Question 13	2	46.6%

Question 10: Did you and a doctor or other health provider talk about the reasons you might want to take a medicine?

Variable name: S17BK02

Editing notes: See Notes 4H and 5H

Response	Value	Percent
Yes	1	94.2%
No	2	5.8%

Question 11: Did you and a doctor or other health provider talk about the reasons you might not want to take a medicine?

Variable name: S17BK03

Editing notes: See Notes 4H and 5H

Response	Value	Percent
Yes	1	73.1%
No	2	26.9%

Question 12: When you talked about starting or stopping a prescription medicine, did a doctor or other health provider ask you what you thought was best for you?

Variable name: S17BK04

Editing notes: See Notes 4H and 5H

Response	Value	Percent
Yes	1	75.0%
No	2	25.0%

Question 13: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months?

Variable name: H17018

Editing notes: See Note 4H

Response	Value	Percent
0 – Worst health care possible	0	0.7%
1	1	0.5%
2	2	1.8%
3	3	2.3%
4	4	2.9%
5	5	6.8%
6	6	6.9%
7	7	14.2%
8	8	23.2%
9	9	19.9%
10 – Best health care possible	10	20.9%

Question 14: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?

Variable name: H17033

Editing notes: See Note 4H

Response	Value	Percent
Never	1	3.5%
Sometimes	2	19.6%
Usually	3	39.4%
Always	4	37.6%

YOUR PERSONAL DOCTOR

Question 15: A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Variable name: H17019

Editing notes: See Note 6H

Response	Directions	Value	Percent
Yes		1	71.2%
No	Go to Question 24	2	28.8%

Question 16: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?

Variable name: H17020

Editing notes: See Notes 6H and 7H

Response	Directions	Value	Percent
None	Go to Question 23	0	12.3%
1		1	20.5%
2		2	24.2%
3		3	16.8%
4		4	12.1%
5 to 9		5	11.7%
10 or more		6	2.4%

Question 17: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?

Variable name: H17022

Editing notes: See Notes 6H and 7H

Response	Value	Percent
Never	1	1.6%
Sometimes	2	6.0%
Usually	3	24.1%
Always	4	68.2%

Question 18: In the last 12 months, how often did your personal doctor listen carefully to you?

Variable name: H17021

Editing notes: See Notes 6H and 7H

Response	Value	Percent
Never	1	2.5%
Sometimes	2	8.8%
Usually	3	22.1%
Always	4	66.5%

Question 19: In the last 12 months, how often did your personal doctor show respect for what you had to say?

Variable name: H17023

Editing notes: See Notes 6H and 7H

Response	Value	Percent
Never	1	2.2%
Sometimes	2	7.2%
Usually	3	16.8%
Always	4	73.8%

Question 20: In the last 12 months, how often did your personal doctor spend enough time with you?

Variable name: H17024

Editing notes: See Notes 6H and 7H

Response	Value	Percent
Never	1	3.1%
Sometimes	2	9.5%
Usually	3	26.8%
Always	4	60.5%

Question 21: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?

Variable name: H17025

Editing notes: See Notes 6H, 7H, and 8

Response	Directions	Value	Percent
Yes		1	74.3%
No	Go to Question 23	2	25.7%

Question 22: In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?

Variable name: H17026

Editing notes: See Notes 6H, 7H, and 8H

Response	Value	Percent
Never	1	10.0%
Sometimes	2	18.8%
Usually	3	32.3%
Always	4	38.9%

Question 23: Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

Variable name: H17027

Editing notes: See Note 6H

Response	Value	Percent
0 – Worst personal doctor possible	0	1.3%
1	1	1.0%
2	2	1.2%
3	3	1.1%
4	4	1.7%
5	5	6.8%
6	6	5.1%
7	7	9.4%
8	8	17.2%
9	9	22.6%
10 – Best personal doctor possible	10	32.7%

GETTING HEALTH CARE FROM A SPECIALIST

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

Question 24: Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 12 months, did you try to make any appointments to see a specialist?

Variable name: H17028

Editing notes: See Note 9H

Response	Directions	Value	Percent
Yes		1	55.3%
No	Go to Question 28	2	44.7%

Question 25: In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H17029

Editing notes: See Note 9H

Response	Value	Percent
Never	1	6.6%
Sometimes	2	18.8%
Usually	3	34.2%
Always	4	40.4%

Question 26: How many specialists have you seen in the last 12 months?

Variable name: H17030

Editing notes: See Notes 9H and 10H

Response	Directions	Value	Percent
None	Go to Question 28	0	2.3%
1 specialist		1	46.1%
2		2	30.5%
3		3	12.5%
4		4	5.3%
5 or more specialists		5	3.3%

Question 27: We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10 where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate the specialist?

Variable name: H17031

Editing notes: See Notes 9H and 10Ha

Response	Value	Percent
0 – Worst specialist possible	0	0.7%
1	1	0.8%
2	2	0.9%
3	3	1.8%
4	4	2.3%
5	5	4.1%
6	6	3.9%
7	7	9.7%
8	8	17.6%
9	9	25.5%
10 – Best specialist possible	10	33.0%

YOUR HEALTH PLAN

The next questions ask about your experience with your health plan.

Question 28: In the last 12 months, did you look for any information in written materials or on the Internet about how your health plan works?

Variable name: H17034

Editing notes: See Note 12H

Response	Directions	Value	Percent
Yes		1	30.1%
No	Go to Question 30	2	69.9%

Question 29: In the last 12 months, how often did the written materials or the Internet provide the information you needed about how your health plan works?

Variable name: H17035

Editing notes: See Note 12H

Response	Value	Percent
Never	1	6.9%
Sometimes	2	34.7%
Usually	3	40.9%
Always	4	17.5%

Question 30: Sometimes people need services or equipment beyond what is provided in a regular or routine office visit, such as care from a specialist, physical therapy, a hearing aid, or oxygen. In the last 12 months, did you look for information from your health plan on how much you would have to pay for a health care service or equipment?

Variable name: H17036

Editing notes: See Note 13H

Response	Directions	Value	Percent
Yes		1	17.1%
No	Go to Question 32	2	82.9%

Question 31: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment?

Variable name: H17037

Editing notes: See Note 13H

Response	Value	Percent
Never	1	23.9%
Sometimes	2	27.4%
Usually	3	27.4%
Always	4	21.2%

Question 32: In some health plans, the amount you pay for a prescription medicine can be different for different medicines, or can be different for prescriptions filled by mail instead of at the pharmacy. In the last 12 months, did you look for information from your health plan on how much you would have to pay for specific prescription medicines?

Variable name: H17038

Editing notes: See Note 14H

Response	Directions	Value	Percent
Yes		1	13.6%
No	Go to Question 34	2	86.4%

Question 33: In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medications?

Variable name: H17039

Editing notes: See Note 14H

Response	Value	Percent
Never	1	22.4%
Sometimes	2	24.0%
Usually	3	28.3%
Always	4	25.4%

Question 34: In the last 12 months, did you try to get information or help from your health plan's customer service?

Variable name: H17040

Editing notes: See Note 15H

Response	Directions	Value	Percent
Yes		1	24.9%
No	Go to Question 37	2	75.1%

Question 35: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?

Variable name: H17041

Editing notes: See Note 15H

Response	Value	Percent
Never	1	4.5%
Sometimes	2	17.0%
Usually	3	34.4%
Always	4	44.2%

Question 36: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?

Variable name: H17042

Editing notes: See Note 15H

Response	Value	Percent
Never	1	2.2%
Sometimes	2	7.4%
Usually	3	22.3%
Always	4	68.1%

Question 37: In the last 12 months, did your health plan give you any forms to fill out?

Variable name: H17043

Editing notes: See Note 16H

Response	Directions	Value	Percent
Yes		1	24.4%
No	Go to Question 39	2	75.6%

Question 38: In the last 12 months, how often were the forms from your health plan easy to fill out?

Variable name: H17044

Editing notes: See Note 16H

Response	Value	Percent
Never	1	4.1%
Sometimes	2	12.0%
Usually	3	43.8%
Always	4	40.0%

Question 39: Claims are sent to a health plan for payment. You may send in the claims yourself, or doctors, hospitals, or others may do this for you. In the last 12 months, did you or anyone else send in any claims to your health plan?

Variable name: H17045

Editing notes: See Note 17H

Response	Directions	Value	Percent
Yes		1	26.6%
No	Go to Question 42	2	45.1%
Don’t know	Go to Question 42	-5	28.3%

Question 40: In the last 12 months, how often did your health plan handle your claims quickly?

Variable name: H17046

Editing notes: See Note 17H

Response	Value	Percent
Never	1	4.7%
Sometimes	2	8.2%
Usually	3	25.3%
Always	4	44.7%
Don’t know	-5	17.1%

Question 41: In the last 12 months, how often did your health plan handle your claims correctly?

Variable name: H17047

Editing notes: See Note 17H

Response	Value	Percent
Never	1	3.2%
Sometimes	2	10.0%
Usually	3	23.2%
Always	4	47.1%
Don't know	-5	16.5%

Question 42: Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?

Variable name: H17048

Editing notes: None

Response	Value	Percent
0 – Worst health plan possible	0	1.1%
1	1	0.4%
2	2	0.7%
3	3	1.3%
4	4	1.7%
5	5	7.5%
6	6	6.2%
7	7	15.0%
8	8	20.6%
9	9	19.8%
10 – Best health plan possible	10	25.7%

ABOUT YOU

Question 43: In general, how would you rate your overall health?

Variable name: H17065

Editing notes: None

Response	Value	Percent
Excellent	5	16.6%
Very good	4	40.4%
Good	3	33.2%
Fair	2	8.3%
Poor	1	1.5%

Question 44: In general, how would you rate your overall mental or emotional health?

Variable name: S17B01

Editing notes: None

Response	Value	Percent
Excellent	1	31.8%
Very good	2	36.0%
Good	3	22.1%
Fair	4	8.4%
Poor	5	1.7%

Question 45: Have you had either a flu shot or flu spray in the nose since July 1, 2016?

Variable name: S17B001

Editing notes: None

Response	Value	Percent
Yes	1	66.5%
No	2	32.1%
Don't know	-5	1.4%

Question 46: Do you now smoke cigarettes or use tobacco every day, some days or not at all?

Variable name: H17053

Editing notes: See Note 18H

Response	Directions	Value	Percent
Every day		4	6.6%
Some days		3	5.3%
Not at all	Go to Question 50	2	85.3%
Don't know	Go to Question 50	-5	2.8%

Question 47: In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?

Variable name: H17054

Editing notes: See Note 18H

Response	Value	Percent
Never	1	20.3%
Sometimes	2	25.6%
Usually	3	22.6%
Always	4	31.4%

Question 48: In the last 12 months, how often was medication recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Examples of medication are: nicotine gum, patch, nasal spray, inhaler, or prescription medication.

Variable name: H17055

Editing notes: See Note 18H

Response	Value	Percent
Never	1	51.2%
Sometimes	2	21.1%
Usually	3	14.7%
Always	4	13.0%

Question 49: In the last 12 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication to assist you with quitting smoking or using tobacco? Examples of methods and strategies are: telephone helpline, individual or group counseling, or cessation program.

Variable name: H17056

Editing notes: See Note 18H

Response	Value	Percent
Never	1	49.7%
Sometimes	2	22.0%
Usually	3	15.6%
Always	4	12.7%

Question 50: Do you take aspirin daily or every other day?

Variable name: S17BL01

Editing notes: None

Response	Value	Percent
Yes	1	14.6%
No	2	85.2%
Don't know	-5	0.2%

Question 51: Do you have a health problem or take medication that makes taking aspirin unsafe for you?

Variable name: S17BL02

Editing notes: None

Response	Value	Percent
Yes	1	4.5%
No	2	90.1%
Don't know	-5	5.4%

Question 52: Has a doctor or health provider ever discussed with you the risks and benefits of aspirin to prevent heart attack or stroke?

Variable name: S17BL03

Editing notes: None

Response	Value	Percent
Yes	1	25.4%
No	2	74.6%

Question 53: Are you aware that you have any of the following conditions?

MARK ONE OR MORE

Variable names: S17BL04A-S17BL04C

Editing notes: None

Response	Variable Name	Percent Marked
High cholesterol	S17BL04A	19.5%
High blood pressure	S17BL04B	21.6%
Parent or sibling with heart attack before the age of 60	S17BL04C	12.2%

Question 54: Has a doctor ever told you that you have any of the following conditions?

MARK ONE OR MORE

Variable names: S17BL05A-S17BL05D

Editing notes: None

Response	Variable Name	Percent Marked
A heart attack	S17BL05A	1.2%
Angina or coronary heart disease	S17BL05B	1.5%
A stroke	S17BL05C	1.0%
Any kind of diabetes or high blood sugar	S17BL05D	10.5%

Question 55: In the last 12 months, did you get health care 3 or more times for the same condition or problem?

Variable name: H17067

Editing notes: See Note 22

Response	Directions	Value	Percent
Yes		1	35.8%
No	Go to Question 57	2	64.2%

Question 56: Is this a condition or problem that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17068

Editing notes: See Note 22

Response	Value	Percent
Yes	1	84.6%
No	2	15.4%

Question 57: Do you now need or take medicine prescribed by a doctor? Do not include birth control.

Variable name: H17069

Editing notes: See Note 23

Response	Directions	Value	Percent
Yes		1	54.4%
No	Go to Question 59	2	45.6%

Question 58: Is this medicine to treat a condition that has lasted for at least 3 months? Do not include pregnancy or menopause.

Variable name: H17070

Editing notes: See Note 23

Response	Value	Percent
Yes	1	89.7%
No	2	10.3%

Question 59: What is your age?

Variable name: SRAGE

Editing notes: None

Response	Value	Percent
18 to 24	1	15.2%
25 to 34	2	27.7%
35 to 44	3	21.5%
45 to 54	4	14.3%
55 to 64	5	20.6%
65 to 74	6	0.6%
75 or older	7	0.1%

Question 60: Are you male or female?

Variable name: H17058

Editing notes: See Note 19H

Response	Value	Percent
Male	1	51.0%
Female	2	49.0%

Question 61: What is the highest grade or level of school that you have completed?

Variable name: SREDA

Editing notes: None

Response	Value	Percent
8 th grade or less	1	0.1%
Some high school, but did not graduate	2	0.7%
High school graduate or GED	3	14.4%
Some college or 2-year degree	4	43.3%
4-year college graduate	5	21.1%
More than 4-year college degree	6	20.5%

Question 62: Are you of Hispanic or Latino origin or descent?

Variable names: H17073

Editing notes: None

Response	Value	Percent
Yes, Hispanic or Latino	1	13.7%
No, not Hispanic or Latino	2	86.3%

Question 63: What is your race?

MARK ONE OR MORE

Variable names: SRRACEA-SRRACEF

Editing notes: None

Response	Variable Name	Percent Marked
White	SRRACEA	67.9%
Black or African American	SRRACEB	15.7%
Asian	SRRACED	8.3%
Native Hawaiian or other Pacific Islander	SRRACEE	2.3%
American Indian or Alaska Native	SRRACEC	3.0%
Other	SRRACEF	7.8%

Question 64: Did someone help you complete this survey?

Variable name: S17BM01

Editing notes: See Note 24H

Response	Directions	Value	Percent
Yes		1	3.0%
No	Go to Question 66	2	97.0%

Question 65: How did that person help you?

MARK ONE OR MORE

Variable names: S17BM02A-S17BM02E

Editing notes: See Note 24H

Response	Variable Name	Percent Marked
Read the questions to me	S17BM02A	19.0%
Wrote down the answers I gave	S17BM02B	13.4%
Answered the questions for me	S17BM02C	27.8%
Translated the questions into my language	S17BM02D	2.9%
Helped in some other way	S17BM02E	23.9%

Now we would like to ask you a few more questions about your health care and health plan.

Question 66: On the days you smoke or use tobacco products, what type of product do you smoke or use?

MARK ONE OR MORE

Variable names: H17057A-H17057E

Editing notes: See Note 18H

Response	Variable Name	Percent Marked
I do not smoke or use tobacco products at all	H17057E	81.3%
Cigarettes	H17057A	8.4%
Dip, chewing tobacco, snuff or snus	H17057B	3.7%
Cigars	H17057C	3.0%
Pipes, bidis, or kreteks (Pipes include hookahs. Bidis are small, brown, hand-rolled cigarettes from India and other Southeast Asian countries. Kreteks are clove cigarettes made in Indonesia that contain clove extract and tobacco.)	H17057D	1.0%

Question 67: In the last 12 months, how many days did you usually have to wait for an appointment when you needed care right away?

Variable name: H17008

Editing notes: See Note 2

Response	Value	Percent
Same day	1	31.7%
1 day	2	19.1%
2-3 days	3	20.2%
4-7 days	4	13.4%
More than 7 days	5	15.6%
I did not need care right away in the last 12 months	-6	

Question 68: In the last 12 months, how many days did you usually have to wait for an appointment for a check-up or routine care?

Variable name: H17011

Editing notes: See Note 3

Response	Value	Percent
Same day	1	7.5%
1 day	2	7.3%
2-3 days	3	20.0%
4-7 days	4	25.3%
8-14 days	5	19.9%
15-30 days	6	14.6%
More than 30 days	7	5.3%
I did not need a check-up or routine care in the last 12 months	-6	

Question 69: In the last 12 months, did you need to visit a doctor's office or clinic after regular office hours?

Variable name: S17BM05

Editing notes: See Note 25H

Response	Directions	Value	Percent
Yes		1	20.5%
No	Go to Question 71	2	79.5%

Question 70: In the last 12 months, how often were you able to get the care you needed from a doctor's office or clinic after regular office hours?

Variable name: S17BM06

Editing notes: See Note 25H

Response	Value	Percent
Never	1	27.6%
Sometimes	2	14.5%
Usually	3	23.3%
Always	4	34.7%

Question 71: In the last 12 months, did you need care for yourself during evenings, weekends, or holidays?

Variable name: S17BM07

Editing notes: See Note 26H

Response	Directions	Value	Percent
Yes		1	25.8%
No	Go to Question 73	2	74.2%

Question 72: In the last 12 months, how often were you able to get the care you needed from a doctor's office or clinic during evenings, weekends, or holidays?

Variable name: S17BM08

Editing notes: See Note 26H

Response	Value	Percent
Never	1	35.6%
Sometimes	2	14.9%
Usually	3	17.8%
Always	4	31.7%

Question 73: Using a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree”, how much do you agree with the following statement: In general, I am able to see my provider(s) when needed?

Variable name: S17011

Editing notes: None

Response	Value	Percent
Strongly disagree	1	5.7%
Disagree	2	8.0%
Neither agree nor disagree	3	16.7%
Agree	4	44.6%
Strongly agree	5	25.0%

Question 74: Using a scale of 1 to 5, with 1 being “completely dissatisfied” and 5 being “completely satisfied”, how satisfied are you, overall, with the health care you received during your last visit?

Variable name: S17014

Editing notes: None

Response	Value	Percent
Completely dissatisfied	1	3.1%
Somewhat dissatisfied	2	4.6%
Neither satisfied nor dissatisfied	3	12.6%
Somewhat satisfied	4	36.2%
Completely satisfied	5	43.5%

THANK YOU FOR TAKING THE TIME TO COMPLETE THE SURVEY!

Your generous contribution will greatly aid efforts to improve the health of our military community.

APPENDIX B

CODING SCHEME AND CODING TABLES – QUARTER I

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QUARTER I

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB) CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS	ASCII/EBCDIC	Description
Numeric	Numeric	
.	-9	No response
.O	-7	Out of range error
.N	-6	Not applicable or valid skip
.D	-5	Scalable response of “don’t know” or “not sure”
.I	-4	Incomplete grid error
.C	-1	Question should have been skipped

Missing values ‘.’ and incomplete grids ‘.I’ are encoded prior to implementation of the Coding Scheme Notes (see below).

**Coding Table for Note 1:
H17003, H17004**

N1	H17003 is:	H17004 is:	H17003 is coded as:	H17004 is coded as:	*
1	1-17: Health plan	Marked or missing response	Stands as original value	Stands as original value	
2	-6: No usage in past 12 months or -5: not sure	Marked response	Stands as original value	.C: Question should be skipped	F
3	-6: No usage in past 12 months or -5: not sure	Missing response	Stands as original value	.N: Valid skip	F
4	Missing response	Marked or missing response	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 2:
H17006, H17007, H17008**

N2	H17006 is:	H17007-H17008 are:	H17006 is coded as:	H17007-H17008 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 2:
Responses to H17007-H17008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:
All of the following are true: H17007-H17008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:
H17007-H17008 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 2:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 3:
H17009, H17010, H17011**

N3	H17009 is:	H17010-H17011 are:	H17009 is coded as:	H17010-H17011 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 3:
Responses to H17010-H17011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:
All of the following are true: H17010-H17011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:
H17010-H17011 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 3:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 4:
H17013, H17014-H17018**

N4	H17013 is:	H17014-H17018 are:	H17013 is coded as:	H17014-H17018 are coded as:	*
1	1: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
2	2-7: Visits, or .: missing	“Blank or NA”	1: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2-7: Visits	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if –6; stand as original value otherwise	F
4	.: Missing	“All are blank”	Stands as original value	Stand as original value	
5	.: Missing	At least one is “marked”	Stands as original value	.: Missing if –6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 4:
Responses to H17014-H17018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:
All of the following are true: H17014-H17018 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 4:
Any pattern of marks outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 5:
H17015, H17016-H17017**

N5	H17015 is:	H17016 is:	H17017 is:	H17015 is coded as:	H17016 is coded as:	H17017 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
3	2: No or .: missing	1: Definitely yes 2: somewhat yes	Any value	1: Yes	Stands as original value	Stands as original value	B
4	2: No or .: missing	3: Somewhat no, 4: definitely no, or .: missing	1: Definitely yes 2: somewhat yes	1: Yes	Stands as original value	Stands as original value	B
5	2: No	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 5_BI1:
S17BI01-S17BI20**

N5_BI1	S17BI01 is:	S17BI02-S17BI20 are:	S17BI01 is coded as:	S17BI02-S17BI20 are coded as:	*
1	1: Yes	S17BI02E is not marked, the rest are any value	Stands as original value	Stands as original value	F
2	1: Yes or .: missing	S17BI02E is marked	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	
3	2: No	“Blank or NA” or “all are blank”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	2: No	At least one is “marked”	1: Yes	Stands as original value	F
5	.: Missing	At least one is “marked”	1: Yes	Stand as original value otherwise	
6	.: Missing	“All are blank”	Stands as original value	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 5_BI1:
Responses to S17BI02-S17BI20 are all missing.

Definition of “blank or NA” in Coding Table for Note 5_BI1:
All of the following are true: S17BI02-S17BI20 are a combination of not applicable (-6), missing, or S17BI02E=1.

Definition of “marked” in Coding Table for Note 5_BI1:
Any pattern of marks outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 5_BI2:
S17BI02-S17BI20**

N5_ BI2	S17BI02A is:	S17BI02B-S17BI02D are:	S17BI02E is:	S17BI03-S17BI20 are:	S17BI02A is coded as:	S17BI02E is coded as:	S17BI03-S17BI20 are coded as:	*
1	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	
2	Marked	Any value	Any value	At least one is "marked"	Stands as original value	Unmarked	Stands as original value	F
3	Marked	At least one is "marked"	Any value	"All are blank" or "blank or don't know"	Unmarked	Unmarked	Stands as original value	F
4	Marked	"All are blank"	Any value	"All are blank" or "blank or don't know"	Unmarked	Stands as original value	Stands as original value	F
5	Unmarked or .: missing	Any value	Any value	At least one is "marked"	Marked	Unmarked	Stands as original value	F
6	Unmarked or .: missing	"All are blank"	Any value	"All are blank" or "blank or don't know"	Stands as original value	Stands as original value	Stands as original value	B F
7	Unmarked or .: missing	At least one is "marked"	Any value	"All are blank" or "blank or don't know"	Stands as original value	Unmarked	.N: Valid skip if missing; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 5_BI2:
Responses to S17BI02B-S17BI02E or S17BI03-S17BI20 are all missing.

Definition of "blank or don't know" in Coding Table for Note 5_BI2:
All of the following are true: S17BI03-S17BI20 are a combination of don't know (-5) or missing.

Definition of "marked" in Coding Table for Note 5_BI2:
Any pattern of marks outside the definitions "all are blank" and "blank or don't know".

**Coding Table for Note 5_BI3:
S17BI15-S17BI16**

N5_BI3	S17BI15 is:	S17BI16 is:	S17BI15 is coded as:	S17BI16 is coded as:	*
1	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	
2	1: Yes I spoke with a nurse	Any value	Stands as original value	Stands as original value	F
3	2-4, -5: Did not speak with nurse	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	.: Missing	1-2	1: Yes I spoke with a nurse	Stand as original value	B
5	.: Missing	-5 or missing	Stands as original value	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 5_BI4:
S17BI17-S17BI18**

N5_BI4	S17BI17 is:	S17BI18 is:	S17BI17 is coded as:	S17BI18 is coded as:	*
1	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	
2	1: Yes	Any value	Stands as original value	Stands as original value	F
3	2: No or -5: don't know	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	.: Missing	1: Yes	1: Yes	Stand as original value	B
5	.: Missing	2: No, -5: don't know or .: missing	Stands as original value	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 6:
H17019, H17020-H17027, S17009**

N6	H17019 is:	H17020- H17024 are:	H17025- H17026, S17009 are:	H17027 is:	H17019 is coded as:	H17020- H17026, S17009 are coded as:	H17027 is coded as:	*
1	1: Yes	Any value	Any value	Any value	Stands as original value	Stand as original value	.: Missing if -6; stands as original value otherwise	F
2	2: No or .: missing	Any value	Any value	0-10	1: Yes	Stand as original value	Stands as original value	B
3	2: No or .: missing	At least one is "marked"	Any value	.: Missing	1: Yes	Stand as original value	Stands as original value	B
4	2: No	At least one is "marked"	Any value	-6: No personal doctor	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	F
5	2: No	"Blank or NA"	Any value	-6: No personal doctor or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	Any value	Any value	-6: No personal doctor	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	B F
7	.: Missing	"Blank or NA"	Any value	.: Missing	Stands as original value	Stand as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "blank or NA" in Coding Table for Note 6:

All of the following are true: H17020 is either 0: None or missing and H17021-H17024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H17020-H17024 outside the definition "blank or NA".

**Coding Table for Note 7:
H17020, H17021-H17026**

N7	H17020 is:	H17021-H17026 are:	H17020 is coded as:	H17021-H17026 are coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stand as original value	
2	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	1-6: Visits, or .: missing	“Blank or NA”	0: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	1-6: Visits, or .: missing	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if -6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 7:
Responses to H17021-H17026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:
Responses to H17021-H17026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:
Any pattern of marks for H17021-H17024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:
H17025, H17026**

N8	H17025 is:	H17026 is:	H17025 is coded as:	H17026 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	Stands as original value	
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	.: Missing	Stands as original value	.N: Valid skip	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 8_01:
S17009, S17010**

N8_01	S17009 is:	S17010 is:	S17009 is coded as:	S17010 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	Any value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No	Any value	Stands as original value	Stands as original value	
4	.: Missing	Any value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 9:
H17028, H17029-H17031**

N9	H17028 is:	H17029-H17031 are:	H17028 is coded as:	H17029 is coded as:	H17030-H17031 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stands as original value otherwise	Stand as original value	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	Stand as original value	B
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 9:
Responses to H17029-H17031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H17029 and H17031 are a combination of not applicable (-6) or missing. H17030 is either missing or 0: None.

Definition of "marked" in Coding Table for Note 9:

Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 10:
H17030, H17031**

N10	H17030 is:	H17031 is:	H17030 is coded as:	H17031 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1-5: Specialists	0-10 or .: missing	Stands as original value	Stands as original value	
3	1-5: Specialists or .: missing	-6: Didn't see a specialist in the last 12 months	0: None	.C: Question should be skipped	B F
4	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	0-10 or .: missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 10_B1:
S17B02, S17B03-S17B04**

N10_B1	S17B02 is:	S17B03-S17B04 are:	S17B02 is coded as:	S17B03-S17B04 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 10_B1:
Responses to S17B03-S17B04 are all missing.

Definition of "blank or NA" in Coding Table for Note 10_B1:
All of the following are true: S17B03-S17B04 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 10_B1:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 11:
H17032, H17033**

N11	H17032 is:	H17033 is:	H17032 is coded as:	H17033 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need care, tests, or treatment	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need care, tests, or treatment or .: missing	Stands as original value	.N: Valid skip if missing; .C: Question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 12:
H17034, H17035**

N12	H17034 is:	H17035 is:	H17034 is coded as:	H17035 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't look for information	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't look for information or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 13:
H17036, H17037**

N13	H17036 is:	H17037 is:	H17036 is coded as:	H17037 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need service or equipment	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need service or equipment or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 14:
H17038, H17039**

N14	H17038 is:	H17039 is:	H17038 is coded as:	H17039 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need prescription meds	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need prescription meds or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 15:
H17040, H17041-H17042**

N15	H17040 is:	H17041-H17042 are:	H17040 is coded as:	H17041-H17042 are coded as:	*
1	1: Yes	At least one is "marked" or "all are blank"	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	1: Yes or .: missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
4	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 15:
Responses to H17041-H17042 are all missing.

Definition of "blank or NA" in Coding Table for Note 15:
All of the following are true: H17041-H17042 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 15:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 16:
H17043, H17044**

N16	H17043 is:	H17044 is:	H17043 is coded as:	H17044 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't receive forms to fill out	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't receive forms to fill out or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 17:
H17045, H17046-H17047**

N17	H17045 is:	H17046-H17047 are:	H17045 is coded as:	H17046-H17047 are coded as:	*
1	1: Yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	.: Missing if -6; stands as original value otherwise	F
2	1: Yes, -5: don't know or .: missing	"Blank or NA" or "NA or don't know"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No, -5: don't know or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	B F
4	2: No	None are "marked"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	-5: Don't know	"Blank or don't know" or "all are blank"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	"Blank or don't know" or "all are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 17:

Responses to H17046-H17047 are all missing.

Definition of "blank or NA" in Coding Table for Note 17:

Responses to H17046-H17047 are either all not applicable (-6) or a combination of missing and not applicable (-6).

Definition of "blank or don't know" in Coding Table for Note 17:

Responses to H17046-H17047 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "NA or don't know" in Coding Table for Note 17:

Responses to H17046-H17047 are a combination of not applicable (-6) and don't know (-5).

Definition of "marked" in Coding Table for Note 17:

Any pattern of marks outside the definitions "all are blank," "blank or NA," "blank or don't know," or "NA or don't know".

Coding Table for Note 18:

H17053, H17054-H17056, H17057A-H17057D

N18	H17053 is:	H17054- H17056 are:	H17057A- H17057D are:	H17053 is coded as:	H17054- H17056, H17057A- H17057D are coded as:	*
1	3: Some days, 4: every day, or .: missing	Any value	Any value	Stands as original value	Stand as original value	
2	2: Not at all or -5: don't know	Any value	"All are unmarked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
3	2: Not at all	Any value	At least one is "marked"	.: Missing	Stand as original value	B
4	-5: Don't know	Any value	At least one is "marked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Definition of "all are unmarked" in Coding Table for Note 18:
Responses to H17057A-H17057D are all missing or unmarked.

Definition of "marked" in Coding Table for Note 18:
Any pattern of marks outside the definition "all are unmarked"

Coding Table for Note 19:

Note 19 (Part A)

H17058, H17059B, H17060-H17064, SEX, XSEXA

N19A	H17058 is:	SEX is:	H17059B--H17064 are:	XSEXA is coded as:
1	:: Missing	F	Any marked	2: Female
2	:: Missing	F	All missing	2: Female
3	:: Missing	M	Any marked	1: Male
4	:: Missing	M	All missing	1: Male
5	:: Missing	Z or :: missing	Any marked	2: Female
6	:: Missing	Z	All missing	:: Missing
7	:: Missing	:: Missing	All missing	:: Missing
8	1: Male	Any value	All missing	1: Male
9	1: Male	F	Any marked	2: Female
10	1: Male	M, Z, or :: missing	Any marked	1: Male
11	2: Female	Any value	Any marked	2: Female
12	2: Female	M	All missing	1: Male
13	2: Female	F, Z, or :: missing	All missing	2: Female

SEX (PNSEXCD) is the gender from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

XSEXA is the recoded gender variable after taking into account the self-reported response (H17058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 19 (Part B):

XSEXA, H17059B, H17060-H17064

N19B	XSEXA is:	H17059B--H17064 are:	H17059B--H17064 are coded as:	*
1	1: Male	“All are blank”	.N: Valid skip	F
2	1: Male	At least one is “marked”	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	“All are blank” or at least one is “marked”	Stand as original value	
4	.: Missing	“All are blank” or at least one is “marked”	Missing value	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 19b:
All variables H17059B--H17064 are missing.

Definition of “marked” in Coding Table for Note 19b:
Any pattern of marks outside the definition “all are blank”.

Coding Table for Note 20

XSEXA, AGE, H17060, H17061

N20	XSEXA is:	AGE is:	H17060 is:	H17061 is:	H17060 is coded as:	H17061 is coded as:	*
1	1: Male	Any value	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Any value	Stands as original value	Stands as original value	
3	2: Female	Any value	1: Under 40	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	2: Female	Any value	.: Missing	Marked	2: >= 40	Stands as original value	B
5	2: Female	< 40	.: Missing	.: Missing	1: < 40	.N: Valid skip	F B
6	2: Female	>=40	.: Missing	.: Missing	2: >= 40	Stands as original value	B
7	2: Female	.: Missing	.: Missing	.: Missing	Stands as original value	Stands as original value	
8	.: Missing	Any value	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

AGE (DAGEQY) is from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

**Coding Table for Note 21:
XSEXA, H17062-H17064**

N21	XSEXA is:	H17062 is:	H17063 is:	H17064 is:	H17062 is coded as:	H17063 is coded as:	H17064 is coded as:	*
1	1: Male	Any value	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: Pregnant now	1: First trimester	Any value	Stands as original value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	1: Pregnant now	2: Second trimester	2: Third trimester	Stands as original value	Stands as original value	.: Missing	F
4	2: Female	1: Pregnant now	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	Stands as original value	Stands as original value	Stands as original value	
5	2: Female	1: Pregnant now	3: Third trimester or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	
6	2: Female	2: Pregnant in last 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	Stands as original value	F
7	2: Female	3: Not pregnant in past 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	2: Female	.: Missing	1: First trimester	Any value	1: Pregnant now	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
9	2: Female	.: Missing	2: Second trimester	2: Third trimester	1: Pregnant now	Stands as original value	.: Missing	B F
10	2: Female	.: Missing	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	1: Pregnant now	Stands as original value	Stands as original value	B
11	2: Female	.: Missing	3: Third trimester	Any value	1: Pregnant now	Stands as original value	Stands as original value	B
12	2: Female	.: Missing	.: Missing	Any value	Stands as original value	Stands as original value	Stands as original value	F
13	.: Missing	.: Missing	Marked or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F)

**Coding Table for Note 22:
H17067, H17068**

N22	H17067 is:	H17068 is:	H17067 is coded as:	H17068 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23:
H17069, H17070**

N23	H17069 is:	H17070 is:	H17069 is coded as:	H17070 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23_HT:
XSEXA, H17071F, H17071I**

N23_HT	XSEXA is:	H17071F and H17071I are:	H17071F and H17071I are coded as:	*
1	1: Male or 2: female	“Height within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Height out of range for gender”	.O: Out of range	F
3	.: Missing	“Height within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Height out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Height within range for gender” in Coding Table for Note 23_HT:
From 2006 NHIS, height for men is 63”-76” (5’3”-6’4”), height for woman is 59”-70” (4’11”-5’10”).

Definition of “Height out of range for gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for gender”.

Definition of “Height within range for either gender” in Coding Table for Note 23_HT:
Use lowest and highest height from either gender to set range: 59”-76” (4’11”- 6’4”).

Definition of “Height out of range for either gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for either gender”.

**Coding Table for Note 23_WT:
XSEXA, H17072**

N23_WT	XSEXA is:	H17072 is:	H17072 is coded as:	*
1	1: Male or 2: female	“Weight within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Weight out of range for gender”	.O: Out of range	F
3	.: Missing	“Weight within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Weight out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Weight within range for gender” in Coding Table for Note 23_WT:
From 2006 NHIS, weight for men is 126-299 pounds, weight for woman is 100-274 pounds.

Definition of “Weight out of range for gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for gender”.

Definition of “Weight within range for either gender” in Coding Table for Note 23_WT:
Use lowest and highest weight from either gender to set range: 100-299 pounds.

Definition of “Weight out of range for either gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for either gender”.

**Coding Table for Note 24:
H17073, H17073A-H17073E**

N24	H17073A is:	H17073B is:	H17073C is:	H17073D is:	H17073E is:	H17073 is coded as:	H17073A-E are coded as:	*
1	Any value	1: Marked	Any value	Any value	Any value	2: Yes, Mexican, Mexican American, Chicano	Stand as original value	F
2	Any value	2: Unmarked	Any value	Any value	1: Marked	5: Yes, other Spanish, Hispanic, or Latino	Stand as original value	F
3	Any value	2: Unmarked	1: Marked	Any value	2: Unmarked	3: Yes, Puerto Rican	Stand as original value	F
4	Any value	2: Unmarked	2: Unmarked	1: Marked	2: Unmarked	4: Yes, Cuban	Stand as original value	F
5	1: Marked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	1: No, not Spanish, Hispanic, or Latino	Stand as original value	F
6	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	.: Missing	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 25:
H17074, H17075-H17079**

N25	H17074 is:	H17075-H17079 are:	H17074 is coded as:	H17075-H17079 are coded as:	*
1	1: Yes	Any value	Stands as original value	Stand as original value	
2	2: No or -5: don't know	"All are uncovered/unknown"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No, -5: don't know, or .: missing	At least one is "covered"	1: Yes	Stand as original value	B
4	.: Missing	"All are uncovered/unknown"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are uncovered/unknown" in Coding Table for Note 25:
Responses to H17075-H17079 are all 2: no, -5: don't know, or missing.

Definition of "covered" in Coding Table for Note 25:
Any pattern of marks outside the definition "all are uncovered/unknown".

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APPENDIX B

CODING SCHEME AND CODING TABLES – QUARTER II

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QUARTER II

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB) CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS	ASCII/EBCDIC	Description
Numeric	Numeric	
.	-9	No response
.O	-7	Out of range error
.N	-6	Not applicable or valid skip
.D	-5	Scalable response of “don’t know” or “not sure”
.I	-4	Incomplete grid error
.C	-1	Question should have been skipped

Missing values ‘.’ and incomplete grids ‘.I’ are encoded prior to implementation of the Coding Scheme Notes (see below).

**Coding Table for Note 1:
H17003, H17004**

N1	H17003 is:	H17004 is:	H17003 is coded as:	H17004 is coded as:	*
1	1-17: Health plan	Marked or missing response	Stands as original value	Stands as original value	
2	-6: No usage in past 12 months or -5: not sure	Marked response	Stands as original value	.C: Question should be skipped	F
3	-6: No usage in past 12 months or -5: not sure	Missing response	Stands as original value	.N: Valid skip	F
4	Missing response	Marked or missing response	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 2:
H17006, H17007, H17008**

N2	H17006 is:	H17007-H17008 are:	H17006 is coded as:	H17007-H17008 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 2:
Responses to H17007-H17008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:
All of the following are true: H17007-H17008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:
H17007-H17008 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 2:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 3:
H17009, H17010, H17011**

N3	H17009 is:	H17010-H17011 are:	H17009 is coded as:	H17010-H17011 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 3:
Responses to H17010-H17011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:
All of the following are true: H17010-H17011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:
H17010-H17011 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 3:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

Coding Table for Note 3_BC1:

S16BC01A- S16BC01D, S16BC04A- S16BC04G

N3_BC1	S16BC01A- S16BC01C are:	S16BC01D is:	S16BC04A- S16BC04G are:	S16BC01A- S16BC01C are coded as:	S16BC01D is coded as:	S16BC04A- S16BC04G is coded as:	*
1	At least one is 1: marked	Any value	Any value	Stand as original	2: Unmarked	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
2	All are 2: unmarked	1: Marked	Any value	Stand as original	Stands as original	Stand as original	
3	All are 2: unmarked	2: Unmarked	None are marked	Stand as original	Stands as original	.N: Valid skip if missing or unmarked	
4	All are 2: unmarked	2: Unmarked	At least one is 1: marked	Stand as original	1: Marked	Stand as original	B

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC2:

S16BC01D, S16BC02A- S16BC02D, S16BC03A- S16BC03E, S16BC04A- S16BC04G, S16BC09

N3_BC2	S16BC01D is:	S16BC04A- S16BC04G are:	S16BC02A-D, S16BC03A-E and S16BC09 are:	S16BC01D is coded as:	S16BC04A- S16BC04G are coded as:	S16BC02A-D, S16BC03A-E and S16BC09 are coded as:	*
1	2: Unmarked	.N: Valid skip, or .C: question should be skipped	Any value	Stands as original	Stand as original	Stand as original	
2	1: Marked	Any value	Any value	Stands as original	Stand as original	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC3:

S16BC03D- S16BC03E

N3_BC3	S16BC03D is:	S16BC03E is:	S16BC03D is coded as:	S16BC03E is coded as:	*
1	Any value	1: Marked	2: Unmarked	Stands as original	B
2	1: Marked	2: Unmarked	Stands as original	Stands as original	

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC4:

S16BC03A- S16BC03E, S16BC04A- S16BC04G, S16BC09

N3_BC4	S16BC03A- S16BC03C are:	S16BC03D- S16BC03E are:	S16BC09 are:	S16BC03A- S16BC03C are coded as:	S16BC03D- S16BC03E are coded as:	S16BC09 are coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stand as original	Stand as original	Stands as original	
2	At least one is 1: marked	All are 2: unmarked	Any value	Stand as original	Stand as original	Stands as original	
3	Any pattern of 1: marked or 2: unmarked	At least one is 1: marked	Any value	2: Unmarked	Stand as original	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	B F
4	All are 2: unmarked	All are 2: unmarked	Any value	Stand as original	Stand as original	Stands as original	

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC5:

S16BC05A- S16BC05D, S16BC08A- S16BC08F

N3_BC5	S16BC05A- S16BC05C are:	S16BC05D is:	S16BC08A- S16BC08F are:	S16BC05A- S16BC05C are coded as:	S16BC05D is coded as:	S16BC08A- S16BC08F are coded as:	*
1	At least one is 1: marked	Any value	Any value	Stand as original	2: Unmarked	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
2	All are 2: unmarked	1: Marked	Any value	Stand as original	Stands as original	Stand as original	
3	All are 2: unmarked	2: Unmarked	All are 2: unmarked	Stand as original	Stands as original	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	
4	All are 2: unmarked	2: Unmarked	At least one is 1: marked	Stand as original	1: Marked	Stand as original	B

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC6:

S16BC05D, S16BC06A- S16BC06D, S16BC07A- S16BC07E, S16BC08A- S16BC08F, S16BC10

N3_BC6	S16BC05D is:	S16BC08A- S16BC08F are:	S16BC06A- S16BC06D, S16BC07A- S16BC07E and S16BC10 are:	S16BC05D is coded as:	S16BC08A- S16BC08F are coded as:	S16BC06A- S16BC06D, S16BC07A- S16BC07E and S16BC10 are coded as:	*
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1	2: Unmarked	.N: Valid skip, or .C: question should be skipped	Any value	Stands as original	Stand as original	Stand as original	
2	1: Marked	Any value	Any value	Stands as original	Stand as original	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC7:

S16BC07D- S16BC07E

N3_BC7	S16BC07D is:	S16BC07E is:	S16BC07D is coded as:	S16BC07E is coded as:	*
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1	Any value	1: Marked	2: Unmarked	Stands as original	B
2	1: Marked	2: Unmarked	Stands as original	Stands as original	

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 3_BC8:

S16BC07A- S16BC07E, S16BC08A- S16BC08F, S16BC10

N3_BC8	S16BC07A- S16BC07C are:	S16BC07D- S16BC07E are:	S16BC10 is:	S16BC07A- S16BC07C are coded as:	S16BC07D- S16BC07E is coded as:	S16BC10 is coded as:	*
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1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stand as original	Stand as original	Stands as original	
2	At least one is 1: marked	All are 2: unmarked	Any value	Stand as original	Stand as original	Stands as original	
3	Any pattern of 1: marked or 2: unmarked	At least one is 1: marked	Any value	2: Unmarked	Stand as original	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	B F
4	All are 2: unmarked	All are 2: unmarked	Any value	Stand as original	Stand as original	Stands as original	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 4:
H17013, H17014-H17018, H17033**

N4	H17013 is:	H17014-H17018, H17033 are:	H17013 is coded as:	H17014-H17018, H17033 are coded as:	*
1	1: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
2	2-7: Visits, or .: missing	“Blank or NA”	1: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2-7: Visits	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if –6; stand as original value otherwise	F
4	.: Missing	“All are blank”	Stands as original value	Stand as original value	
5	.: Missing	At least one is “marked”	Stands as original value	.: Missing if –6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 4:
Responses to H17014-H17018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:
All of the following are true: H17014-H17018 and H17033 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 4:
Any pattern of marks outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 5:
H17015, H17016-H17017**

N5	H17015 is:	H17016 is:	H17017 is:	H17015 is coded as:	H17016 is coded as:	H17017 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
3	2: No or .: missing	1: Definitely yes 2: somewhat yes	Any value	1: Yes	Stands as original value	Stands as original value	B
4	2: No or .: missing	3: Somewhat no, 4: definitely no, or .: missing	1: Definitely yes 2: somewhat yes	1: Yes	Stands as original value	Stands as original value	B
5	2: No	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 6:
H17019, H17020-H17027, S17009**

N6	H17019 is:	H17020- H17024 are:	H17025- H17026, S17009 are:	H17027 is:	H17019 is coded as:	H17020- H17026, S17009 are coded as:	H17027 is coded as:	*
1	1: Yes	Any value	Any value	Any value	Stands as original value	Stand as original value	.: Missing if -6; stands as original value otherwise	F
2	2: No or .: missing	Any value	Any value	0-10	1: Yes	Stand as original value	Stands as original value	B
3	2: No or .: missing	At least one is "marked"	Any value	.: Missing	1: Yes	Stand as original value	Stands as original value	B
4	2: No	At least one is "marked"	Any value	-6: No personal doctor	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	F
5	2: No	"Blank or NA"	Any value	-6: No personal doctor or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	Any value	Any value	-6: No personal doctor	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	B F
7	.: Missing	"Blank or NA"	Any value	.: Missing	Stands as original value	Stand as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "blank or NA" in Coding Table for Note 6:

All of the following are true: H17020 is either 0: None or missing and H17021-H17024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H17020-H17024 outside the definition "blank or NA".

**Coding Table for Note 7:
H17020, H17021-H17026**

N7	H17020 is:	H17021-H17026 are:	H17020 is coded as:	H17021-H17026 are coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stand as original value	
2	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	1-6: Visits, or .: missing	“Blank or NA”	0: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	1-6: Visits, or .: missing	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if -6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 7:
Responses to H17021-H17026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:
Responses to H17021-H17026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:
Any pattern of marks for H17021-H17024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:
H17025, H17026**

N8	H17025 is:	H17026 is:	H17025 is coded as:	H17026 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	Stands as original value	
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	.: Missing	Stands as original value	.N: Valid skip	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 8_01:
S17009, S17010**

N8_01	S17009 is:	S17010 is:	S17009 is coded as:	S17010 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	Any value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No	Any value	Stands as original value	Stands as original value	
4	.: Missing	Any value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 9:
H17028, H17029-H17031**

N9	H17028 is:	H17029-H17031 are:	H17028 is coded as:	H17029 is coded as:	H17030-H17031 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stands as original value otherwise	Stand as original value	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	Stand as original value	B
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 9:
Responses to H17029-H17031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H17029 and H17031 are a combination of not applicable (-6) or missing. H17030 is either missing or 0: None.

Definition of "marked" in Coding Table for Note 9:

Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 10:
H17030, H17031**

N10	H17030 is:	H17031 is:	H17030 is coded as:	H17031 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1-5: Specialists	0-10 or .: missing	Stands as original value	Stands as original value	
3	1-5: Specialists or .: missing	-6: Didn't see a specialist in the last 12 months	0: None	.C: Question should be skipped	B F
4	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	0-10 or .: missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 10_B1:
S17B02, S17B03-S17B04**

N10_B1	S17B02 is:	S17B03-S17B04 are:	S17B02 is coded as:	S17B03-S17B04 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 10_B1:
Responses to S17B03-S17B04 are all missing.

Definition of "blank or NA" in Coding Table for Note 10_B1:
All of the following are true: S17B03-S17B04 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 10_B1:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 12:
H17034, H17035**

N12	H17034 is:	H17035 is:	H17034 is coded as:	H17035 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't look for information	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't look for information or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 13:
H17036, H17037**

N13	H17036 is:	H17037 is:	H17036 is coded as:	H17037 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need service or equipment	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need service or equipment or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 14:
H17038, H17039**

N14	H17038 is:	H17039 is:	H17038 is coded as:	H17039 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need prescription meds	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need prescription meds or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 15:
H17040, H17041-H17042**

N15	H17040 is:	H17041-H17042 are:	H17040 is coded as:	H17041-H17042 are coded as:	*
1	1: Yes	At least one is "marked" or "all are blank"	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	1: Yes or .: missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
4	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 15:
Responses to H17041-H17042 are all missing.

Definition of "blank or NA" in Coding Table for Note 15:
All of the following are true: H17041-H17042 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 15:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 16:
H17043, H17044**

N16	H17043 is:	H17044 is:	H17043 is coded as:	H17044 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't receive forms to fill out	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't receive forms to fill out or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 17:
H17045, H17046-H17047**

N17	H17045 is:	H17046-H17047 are:	H17045 is coded as:	H17046-H17047 are coded as:	*
1	1: Yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	.: Missing if -6; stands as original value otherwise	F
2	1: Yes, -5: don't know or .: missing	"Blank or NA" or "NA or don't know"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No, -5: don't know or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	B F
4	2: No	None are "marked"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	-5: Don't know	"Blank or don't know" or "all are blank"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	"Blank or don't know" or "all are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 17:

Responses to H17046-H17047 are all missing.

Definition of "blank or NA" in Coding Table for Note 17:

Responses to H17046-H17047 are either all not applicable (-6) or a combination of missing and not applicable (-6).

Definition of "blank or don't know" in Coding Table for Note 17:

Responses to H17046-H17047 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "NA or don't know" in Coding Table for Note 17:

Responses to H17046-H17047 are a combination of not applicable (-6) and don't know (-5).

Definition of "marked" in Coding Table for Note 17:

Any pattern of marks outside the definitions "all are blank," "blank or NA," "blank or don't know," or "NA or don't know".

Coding Table for Note 18:

H17053, H17054-H17056, H17057A-H17057D

N18	H17053 is:	H17054- H17056 are:	H17057A- H17057D are:	H17053 is coded as:	H17054- H17056, H17057A- H17057D are coded as:	*
1	3: Some days, 4: every day, or .: missing	Any value	Any value	Stands as original value	Stand as original value	
2	2: Not at all or -5: don't know	Any value	"All are unmarked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
3	2: Not at all	Any value	At least one is "marked"	.: Missing	Stand as original value	B
4	-5: Don't know	Any value	At least one is "marked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Definition of "all are unmarked" in Coding Table for Note 18:
Responses to H17057A-H17057D are all missing or unmarked.

Definition of "marked" in Coding Table for Note 18:
Any pattern of marks outside the definition "all are unmarked"

**Coding Table for Note 18_BF1:
S17BF1, S17BF2, S17BF3-S17BF6**

N18_BF1	S17BF1 is:	S17BF2 is:	S17BF3-S17BF6 are:	S17BF1 is coded as:	S17BF2 is coded as:	S17BF3-S17BF6 are coded as:	*
1	1: Yes	1: Yes	Any value	Stands as original value	Stands as original value	Stand as original value	
2	1: Yes or .: missing	2: No or - 5: don't know	Any value	Stands as original value	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
3	1: Yes	.: Missing	Any "affirmative" value	Stands as original value	1: Yes	Stand as original value	B
4	1: Yes	.: Missing	No "affirmative" values	Stands as original value	Stands as original value	Stand as original value	
5	2: No or - 5: don't know	Any value	Any value	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
6	.: Missing	1: Yes	Any value	1: Yes	Stands as original value	Stand as original value	B
7	.: Missing	.: Missing	Any "affirmative" value	1: Yes	1: Yes	Stand as original value	B
8	.: Missing	.: Missing	No "affirmative" values	Stands as original value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "affirmative" in Coding Table for Note 18_BF1:

Response to S17BF3 is 1-4, or response to S17BF4 is 1: every day or 2: some days, or response to S17BF5 is 1: yes, or response to S17BF6 is 1: yes.

**Coding Table for Note 18_BF2:
S17BF4, S17BF5-S17BF6**

N18_BF2	S17BF4 is:	S17BF5 is:	S17BF6 is:	S17BF4 is coded as:	S17BF5-S17BF6 are coded as:	*
1	1: Every day, 2: some days or .: missing	Any value	Any value	Stands as original value	Stand as original value	
2	3: Not at all or -5: don't know	Any value	Any value	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
3	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Coding Table for Note 19:

Note 19 (Part A)

H17058, H17059B, H17060-H17064, SEX, XSEXA

N19A	H17058 is:	SEX is:	H17059B--H17064 are:	XSEXA is coded as:
1	:: Missing	F	Any marked	2: Female
2	:: Missing	F	All missing	2: Female
3	:: Missing	M	Any marked	1: Male
4	:: Missing	M	All missing	1: Male
5	:: Missing	Z or :: missing	Any marked	2: Female
6	:: Missing	Z	All missing	:: Missing
7	:: Missing	:: Missing	All missing	:: Missing
8	1: Male	Any value	All missing	1: Male
9	1: Male	F	Any marked	2: Female
10	1: Male	M, Z, or :: missing	Any marked	1: Male
11	2: Female	Any value	Any marked	2: Female
12	2: Female	M	All missing	1: Male
13	2: Female	F, Z, or :: missing	All missing	2: Female

SEX (PNSEXCD) is the gender from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

XSEXA is the recoded gender variable after taking into account the self-reported response (H17058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

**Note 19 (Part B):
XSEXA, H17059B, H17060-H17064**

N19B	XSEXA is:	H17059B--H17064 are:	H17059B--H17064 are coded as:	*
1	1: Male	“All are blank”	.N: Valid skip	F
2	1: Male	At least one is “marked”	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	“All are blank” or at least one is “marked”	Stand as original value	
4	.: Missing	“All are blank” or at least one is “marked”	Missing value	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 19b:
All variables H17059B--H17064 are missing.

Definition of “marked” in Coding Table for Note 19b:
Any pattern of marks outside the definition “all are blank”.

**Coding Table for Note 20
XSEXA, AGE, H17060, H17061**

N20	XSEXA is:	AGE is:	H17060 is:	H17061 is:	H17060 is coded as:	H17061 is coded as:	*
1	1: Male	Any value	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Any value	Stands as original value	Stands as original value	
3	2: Female	Any value	1: Under 40	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	2: Female	Any value	.: Missing	Marked	2: >= 40	Stands as original value	B
5	2: Female	< 40	.: Missing	.: Missing	1: < 40	.N: Valid skip	F B
6	2: Female	>=40	.: Missing	.: Missing	2: >= 40	Stands as original value	B
7	2: Female	.: Missing	.: Missing	.: Missing	Stands as original value	Stands as original value	
8	.: Missing	Any value	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

AGE (DAGEQY) is from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

**Coding Table for Note 21:
XSEXA, H17062-H17064**

N21	XSEXA is:	H17062 is:	H17063 is:	H17064 is:	H17062 is coded as:	H17063 is coded as:	H17064 is coded as:	*
1	1: Male	Any value	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: Pregnant now	1: First trimester	Any value	Stands as original value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	1: Pregnant now	2: Second trimester	2: Third trimester	Stands as original value	Stands as original value	.: Missing	F
4	2: Female	1: Pregnant now	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	Stands as original value	Stands as original value	Stands as original value	
5	2: Female	1: Pregnant now	3: Third trimester or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	
6	2: Female	2: Pregnant in last 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	Stands as original value	F
7	2: Female	3: Not pregnant in past 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	2: Female	.: Missing	1: First trimester	Any value	1: Pregnant now	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
9	2: Female	.: Missing	2: Second trimester	2: Third trimester	1: Pregnant now	Stands as original value	.: Missing	B F
10	2: Female	.: Missing	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	1: Pregnant now	Stands as original value	Stands as original value	B
11	2: Female	.: Missing	3: Third trimester	Any value	1: Pregnant now	Stands as original value	Stands as original value	B
12	2: Female	.: Missing	.: Missing	Any value	Stands as original value	Stands as original value	Stands as original value	F
13	.: Missing	.: Missing	Marked or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F)

**Coding Table for Note 22:
H17067, H17068**

N22	H17067 is:	H17068 is:	H17067 is coded as:	H17068 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23:
H17069, H17070**

N23	H17069 is:	H17070 is:	H17069 is coded as:	H17070 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23_HT:
XSEXA, H17071F, H17071I**

N23_HT	XSEXA is:	H17071F and H17071I is:	H17071F and H17071I are coded as:	*
1	1: Male or 2: female	“Height within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Height out of range for gender”	.O: Out of range	F
3	.: Missing	“Height within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Height out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Height within range for gender” in Coding Table for Note 23_HT:
From 2006 NHIS, height for men is 63”-76” (5’3”-6’4”), height for woman is 59”-70” (4’11”-5’10”).

Definition of “Height out of range for gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for gender”.

Definition of “Height within range for either gender” in Coding Table for Note 23_HT:
Use lowest and highest height from either gender to set range: 59”-76” (4’11”- 6’4”).

Definition of “Height out of range for either gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for either gender”.

**Coding Table for Note 23_WT:
XSEXA, H17072**

N23_WT	XSEXA is:	H17072 is:	H17072 is coded as:	*
1	1: Male or 2: female	“Weight within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Weight out of range for gender”	.O: Out of range	F
3	.: Missing	“Weight within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Weight out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Weight within range for gender” in Coding Table for Note 23_WT:
From 2006 NHIS, weight for men is 126-299 pounds, weight for woman is 100-274 pounds.

Definition of “Weight out of range for gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for gender”.

Definition of “Weight within range for either gender” in Coding Table for Note 23_WT:
Use lowest and highest weight from either gender to set range: 100-299 pounds.

Definition of “Weight out of range for either gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for either gender”.

**Coding Table for Note 24:
H17073, H17073A-H17073E**

N24	H17073A is:	H17073B is:	H17073C is:	H17073D is:	H17073E is:	H17073 is coded as:	H17073A-E are coded as:	*
1	Any value	1: Marked	Any value	Any value	Any value	2: Yes, Mexican, Mexican American, Chicano	Stand as original value	F
2	Any value	2: Unmarked	Any value	Any value	1: Marked	5: Yes, other Spanish, Hispanic, or Latino	Stand as original value	F
3	Any value	2: Unmarked	1: Marked	Any value	2: Unmarked	3: Yes, Puerto Rican	Stand as original value	F
4	Any value	2: Unmarked	2: Unmarked	1: Marked	2: Unmarked	4: Yes, Cuban	Stand as original value	F
5	1: Marked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	1: No, not Spanish, Hispanic, or Latino	Stand as original value	F
6	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	.: Missing	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 25:
H17074, H17075-H17079**

N25	H17074 is:	H17075-H17079 are:	H17074 is coded as:	H17075-H17079 are coded as:	*
1	1: Yes	Any value	Stands as original value	Stand as original value	
2	2: No or -5: don't know	"All are uncovered/unknown"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No, -5: don't know, or .: missing	At least one is "covered"	1: Yes	Stand as original value	B
4	.: Missing	"All are uncovered/unknown"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are uncovered/unknown" in Coding Table for Note 25:
Responses to H17075-H17079 are all 2: no, -5: don't know, or missing.

Definition of "covered" in Coding Table for Note 25:
Any pattern of marks outside the definition "all are uncovered/unknown".

APPENDIX B

CODING SCHEME AND CODING TABLES – QUARTER III

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QUARTER III

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB) CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS	ASCII/EBCDIC	Description
Numeric	Numeric	
.	-9	No response
.O	-7	Out of range error
.N	-6	Not applicable or valid skip
.D	-5	Scalable response of “don’t know” or “not sure”
.I	-4	Incomplete grid error
.C	-1	Question should have been skipped

Missing values ‘.’ and incomplete grids ‘.I’ are encoded prior to implementation of the Coding Scheme Notes (see below).

**Coding Table for Note 1:
H17003, H17004**

N1	H17003 is:	H17004 is:	H17003 is coded as:	H17004 is coded as:	*
1	1-17: Health plan	Marked or missing response	Stands as original value	Stands as original value	
2	-6: No usage in past 12 months or -5: not sure	Marked response	Stands as original value	.C: Question should be skipped	F
3	-6: No usage in past 12 months or -5: not sure	Missing response	Stands as original value	.N: Valid skip	F
4	Missing response	Marked or missing response	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 2:
H17006, H17007, H17008**

N2	H17006 is:	H17007-H17008 are:	H17006 is coded as:	H17007-H17008 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 2:
Responses to H17007-H17008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:
All of the following are true: H17007-H17008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:
H17007-H17008 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 2:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 3:
H17009, H17010, H17011**

N3	H17009 is:	H17010-H17011 are:	H17009 is coded as:	H17010-H17011 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 3:
Responses to H17010-H17011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:
All of the following are true: H17010-H17011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:
H17010-H17011 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 3:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 4:
H17013, H17014-H17018, H17033**

N4	H17013 is:	H17014-H17018, H17033 are:	H17013 is coded as:	H17014-H17018, H17033 are coded as:	*
1	1: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
2	2-7: Visits, or .: missing	“Blank or NA”	1: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2-7: Visits	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if –6; stand as original value otherwise	F
4	.: Missing	“All are blank”	Stands as original value	Stand as original value	
5	.: Missing	At least one is “marked”	Stands as original value	.: Missing if –6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 4:
Responses to H17014-H17018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:
All of the following are true: H17014-H17018 and H17033 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 4:
Any pattern of marks outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 5:
H17015, H17016-H17017**

N5	H17015 is:	H17016 is:	H17017 is:	H17015 is coded as:	H17016 is coded as:	H17017 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
3	2: No or .: missing	1: Definitely yes 2: somewhat yes	Any value	1: Yes	Stands as original value	Stands as original value	B
4	2: No or .: missing	3: Somewhat no, 4: definitely no, or .: missing	1: Definitely yes 2: somewhat yes	1: Yes	Stands as original value	Stands as original value	B
5	2: No	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	3: Somewhat no, 4: definitely no, or .: missing	3: Somewhat no, 4: definitely no, or .: missing	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 6:
H17019, H17020-H17027, S17009**

N6	H17019 is:	H17020- H17024 are:	H17025- H17026, S17009 are:	H17027 is:	H17019 is coded as:	H17020- H17026, S17009 are coded as:	H17027 is coded as:	*
1	1: Yes	Any value	Any value	Any value	Stands as original value	Stand as original value	.: Missing if -6; stands as original value otherwise	F
2	2: No or .: missing	Any value	Any value	0-10	1: Yes	Stand as original value	Stands as original value	B
3	2: No or .: missing	At least one is "marked"	Any value	.: Missing	1: Yes	Stand as original value	Stands as original value	B
4	2: No	At least one is "marked"	Any value	-6: No personal doctor	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	F
5	2: No	"Blank or NA"	Any value	-6: No personal doctor or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	Any value	Any value	-6: No personal doctor	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.C: Question should be skipped	B F
7	.: Missing	"Blank or NA"	Any value	.: Missing	Stands as original value	Stand as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "blank or NA" in Coding Table for Note 6:

All of the following are true: H17020 is either 0: None or missing and H17021-H17024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H17020-H17024 outside the definition "blank or NA".

**Coding Table for Note 7:
H17020, H17021-H17026**

N7	H17020 is:	H17021-H17026 are:	H17020 is coded as:	H17021-H17026 are coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stand as original value	
2	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	1-6: Visits, or .: missing	“Blank or NA”	0: None	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	1-6: Visits, or .: missing	At least one is “marked” or “all are blank”	Stands as original value	.: Missing if -6; stand as original value otherwise	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 7:
Responses to H17021-H17026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:
Responses to H17021-H17026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:
Any pattern of marks for H17021-H17024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:
H17025, H17026**

N8	H17025 is:	H17026 is:	H17025 is coded as:	H17026 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	Stands as original value	
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	.: Missing	Stands as original value	.N: Valid skip	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 8_01:
S17009, S17010**

N8_01	S17009 is:	S17010 is:	S17009 is coded as:	S17010 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	Any value	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No	Any value	Stands as original value	Stands as original value	
4	.: Missing	Any value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 9:
H17028, H17029-H17031**

N9	H17028 is:	H17029-H17031 are:	H17028 is coded as:	H17029 is coded as:	H17030-H17031 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stands as original value otherwise	Stand as original value	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	Stand as original value	B
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 9:
Responses to H17029-H17031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H17029 and H17031 are a combination of not applicable (-6) or missing. H17030 is either missing or 0: None.

Definition of "marked" in Coding Table for Note 9:

Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 10:
H17030, H17031**

N10	H17030 is:	H17031 is:	H17030 is coded as:	H17031 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1-5: Specialists	0-10 or .: missing	Stands as original value	Stands as original value	
3	1-5: Specialists or .: missing	-6: Didn't see a specialist in the last 12 months	0: None	.C: Question should be skipped	B F
4	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	0-10 or .: missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 10_B1:
S17B02, S17B03-S17B04**

N10_B1	S17B02 is:	S17B03-S17B04 are:	S17B02 is coded as:	S17B03-S17B04 are coded as:	*
1	1: Yes	Any value	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 10_B1:
Responses to S17B03-S17B04 are all missing.

Definition of "blank or NA" in Coding Table for Note 10_B1:

All of the following are true: S17B03-S17B04 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 10_B1:

Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 12:
H17034, H17035**

N12	H17034 is:	H17035 is:	H17034 is coded as:	H17035 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't look for information	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't look for information or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 13:
H17036, H17037**

N13	H17036 is:	H17037 is:	H17036 is coded as:	H17037 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need service or equipment	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need service or equipment or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 14:
H17038, H17039**

N14	H17038 is:	H17039 is:	H17038 is coded as:	H17039 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't need prescription meds	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't need prescription meds or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 15:
H17040, H17041-H17042**

N15	H17040 is:	H17041-H17042 are:	H17040 is coded as:	H17041-H17042 are coded as:	*
1	1: Yes	At least one is "marked" or "all are blank"	Stands as original value	.: Missing if -6; stand as original value otherwise	F
2	1: Yes or .: missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stand as original value otherwise	B F
4	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	"All are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 15:
Responses to H17041-H17042 are all missing.

Definition of "blank or NA" in Coding Table for Note 15:
All of the following are true: H17041-H17042 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 15:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 16:
H17043, H17044**

N16	H17043 is:	H17044 is:	H17043 is coded as:	H17044 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	1: Yes or .: missing	-6: Didn't receive forms to fill out	2: No	.C: Question should be skipped	B F
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	-6: Didn't receive forms to fill out or .: missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 17:
H17045, H17046-H17047**

N17	H17045 is:	H17046-H17047 are:	H17045 is coded as:	H17046-H17047 are coded as:	*
1	1: Yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	.: Missing if -6; stands as original value otherwise	F
2	1: Yes, -5: don't know or .: missing	"Blank or NA" or "NA or don't know"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	2: No, -5: don't know or .: missing	At least one is "marked"	1: Yes	.: Missing if -6; stands as original value otherwise	B F
4	2: No	None are "marked"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	-5: Don't know	"Blank or don't know" or "all are blank"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
6	.: Missing	"Blank or don't know" or "all are blank"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 17:
Responses to H17046-H17047 are all missing.

Definition of "blank or NA" in Coding Table for Note 17:
Responses to H17046-H17047 are either all not applicable (-6) or a combination of missing and not applicable (-6).

Definition of "blank or don't know" in Coding Table for Note 17:
Responses to H17046-H17047 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "NA or don't know" in Coding Table for Note 17:
Responses to H17046-H17047 are a combination of not applicable (-6) and don't know (-5).

Definition of "marked" in Coding Table for Note 17:
Any pattern of marks outside the definitions "all are blank," "blank or NA," "blank or don't know," or "NA or don't know".

Coding Table for Note 18:

H17053, H17054-H17056, H17057A-H17057D

N18	H17053 is:	H17054- H17056 are:	H17057A- H17057D are:	H17053 is coded as:	H17054- H17056, H17057A- H17057D are coded as:	*
1	3: Some days, 4: every day, or .: missing	Any value	Any value	Stands as original value	Stand as original value	
2	2: Not at all or -5: don't know	Any value	"All are unmarked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F
3	2: Not at all	Any value	At least one is "marked"	.: Missing	Stand as original value	B
4	-5: Don't know	Any value	At least one is "marked"	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	F

* Indication of backward coding (B) or forward coding (F).

Definition of "all are unmarked" in Coding Table for Note 18:
Responses to H17057A-H17057D are all missing or unmarked.

Definition of "marked" in Coding Table for Note 18:
Any pattern of marks outside the definition "all are unmarked"

Coding Table for Note 19:

Note 19 (Part A)

H17058, H17059B, H17060-H17064, SEX, XSEXA

N19A	H17058 is:	SEX is:	H17059B--H17064 are:	XSEXA is coded as:
1	.: Missing	F	Any marked	2: Female
2	.: Missing	F	All missing	2: Female
3	.: Missing	M	Any marked	1: Male
4	.: Missing	M	All missing	1: Male
5	.: Missing	Z or .: missing	Any marked	2: Female
6	.: Missing	Z	All missing	.: Missing
7	.: Missing	.: Missing	All missing	.: Missing
8	1: Male	Any value	All missing	1: Male
9	1: Male	F	Any marked	2: Female
10	1: Male	M, Z, or .: missing	Any marked	1: Male
11	2: Female	Any value	Any marked	2: Female
12	2: Female	M	All missing	1: Male
13	2: Female	F, Z, or .: missing	All missing	2: Female

SEX (PNSEXCD) is the gender from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

XSEXA is the recoded gender variable after taking into account the self-reported response (H17058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 19 (Part B):

XSEXA, H17059B, H17060-H17064

N19B	XSEXA	H17059B--H17064	H17059B--H17064	*
	is:	are:	are coded as:	
1	1: Male	“All are blank”	.N: Valid skip	F
2	1: Male	At least one is “marked”	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	“All are blank” or at least one is “marked”	Stand as original value	
4	.: Missing	“All are blank” or at least one is “marked”	Missing value	F

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 19b:
All variables H16059B--H16064 are missing.

Definition of “marked” in Coding Table for Note 19b:
Any pattern of marks outside the definition “all are blank”.

Coding Table for Note 20

XSEXA, AGE, H17060, H17061

N20	XSEXA	AGE	H17060	H17061	H17060	H17061	*
	is:	is:	is:	is:	is coded as:	is coded as:	
1	1: Male	Any value	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Any value	Stands as original value	Stands as original value	
3	2: Female	Any value	1: Under 40	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	2: Female	Any value	.: Missing	Marked	2: >= 40	Stands as original value	B
5	2: Female	< 40	.: Missing	.: Missing	1: < 40	.N: Valid skip	F B
6	2: Female	>=40	.: Missing	.: Missing	2: >= 40	Stands as original value	B
7	2: Female	.: Missing	.: Missing	.: Missing	Stands as original value	Stands as original value	
8	.: Missing	Any value	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

AGE (DAGEQY) is from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

**Coding Table for Note 21:
XSEXA, H17062-H17064**

N21	XSEXA is:	H17062 is:	H17063 is:	H17064 is:	H17062 is coded as:	H17063 is coded as:	H17064 is coded as:	*
1	1: Male	Any value	Any value	Any value	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: Pregnant now	1: First trimester	Any value	Stands as original value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: Female	1: Pregnant now	2: Second trimester	2: Third trimester	Stands as original value	Stands as original value	.: Missing	F
4	2: Female	1: Pregnant now	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	Stands as original value	Stands as original value	Stands as original value	
5	2: Female	1: Pregnant now	3: Third trimester or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	
6	2: Female	2: Pregnant in last 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	Stands as original value	F
7	2: Female	3: Not pregnant in past 12 months	Any value	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	2: Female	.: Missing	1: First trimester	Any value	1: Pregnant now	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	B F
9	2: Female	.: Missing	2: Second trimester	2: Third trimester	1: Pregnant now	Stands as original value	.: Missing	B F
10	2: Female	.: Missing	2: Second trimester	4: First trimester, 3: second trimester, 1: did not receive prenatal care, or .: missing	1: Pregnant now	Stands as original value	Stands as original value	B
11	2: Female	.: Missing	3: Third trimester	Any value	1: Pregnant now	Stands as original value	Stands as original value	B
12	2: Female	.: Missing	.: Missing	Any value	Stands as original value	Stands as original value	Stands as original value	F
13	.: Missing	.: Missing	Marked or .: missing	Any value	Stands as original value	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F)

**Coding Table for Note 21_BG1:
S17BG01**

N21_ S17BG01 is: S17BG01 is coded as: *

1	“Number within range”	Stands as original value	
2	88	0	F
3	“Number out of range”	.O	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Number within range” in Coding Table for Note 21_BG1: Any value not greater than 30.

Definition of “Number out of range” in Coding Table for Note 21_BG1:
Any value greater than 30 except 88.

**Coding Table for Note 21_BG2:
S17BG02**

N21_ S17BG02 is: S17BG02 is coded as: *

1	“Number within range”	Stands as original value	
2	88	0	F
3	“Number out of range”	.O	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Number within range” in Coding Table for Note 22_BG2:
Any value not greater than 30.

Definition of “Number out of range” in Coding Table for Note 22_BG2:
Any value greater than 30 except 88.

**Coding Table for Note 21_BG3:
S17BG01, S17BG02, S17BG03**

N21_ S17BG01 is: S17BG02 is: S17BG03 is: S17BG03 is coded as: *

1	0	0	.: Missing	0	
2	Any nonzero value	Any nonzero value	“Number within range”	Stands as original value	
3	Any nonzero value	Any nonzero value	88	0	F
4	Any nonzero value	Any nonzero value	“Number out of range”	.O	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Number within range” in Coding Table for Note 23_BG3:
Any value not greater than 30.

Definition of “Number out of range” in Coding Table for Note 23_BG3:
Any value greater than 30 except 88.

**Coding Table for Note 22:
H17067, H17068**

N22	H17067 is:	H17068 is:	H17067 is coded as:	H17068 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	:: Missing	Stands as original value	.N: Valid skip	F
4	:: Missing	:: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23:
H17069, H17070**

N23	H17069 is:	H17070 is:	H17069 is coded as:	H17070 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or .: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	:: Missing	Stands as original value	.N: Valid skip	F
4	:: Missing	:: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23_BE:
S17BE01A-S17BE01K**

N23_	S17BE02A-J are:	S17BE02K is:	S17BE02A-J are coded as:	S17BE02K is coded as:	*
BE					
1	Marked	Marked	Not marked	Stands as original value	B
2	Marked	Not Marked	Stand as original value	Stands as original value	
3	Not Marked	Any value	Stand as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23_HT:
XSEXA, H17071F, H17071I**

N23_HT	XSEXA is:	H17071F and H17071I is:	H17071F and H17071I are coded as:	*
1	1: Male or 2: female	“Height within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Height out of range for gender”	.O: Out of range	F
3	.: Missing	“Height within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Height out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Height within range for gender” in Coding Table for Note 23_HT:
From 2006 NHIS, height for men is 63”-76” (5’3”-6’4”), height for woman is 59”-70” (4’11”-5’10”).

Definition of “Height out of range for gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for gender”.

Definition of “Height within range for either gender” in Coding Table for Note 23_HT:
Use lowest and highest height from either gender to set range: 59”-76” (4’11”- 6’4”).

Definition of “Height out of range for either gender” in Coding Table for Note 23_HT:
Any height outside the definition of “Height within range for either gender”.

**Coding Table for Note 23_WT:
XSEXA, H17072**

N23_WT	XSEXA is:	H17072 is:	H17072 is coded as:	*
1	1: Male or 2: female	“Weight within range for gender” or .: missing	Stands as original value	
2	1: Male or 2: female	“Weight out of range for gender”	.O: Out of range	F
3	.: Missing	“Weight within range for either gender” or .: missing	Stands as original value	
4	.: Missing	“Weight out of range for either gender”	.O: Out of range	F

* Indication of backward coding (B) or forward coding (F).

Definition of “Weight within range for gender” in Coding Table for Note 23_WT:
From 2006 NHIS, weight for men is 126-299 pounds, weight for woman is 100-274 pounds.

Definition of “Weight out of range for gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for gender”.

Definition of “Weight within range for either gender” in Coding Table for Note 23_WT:
Use lowest and highest weight from either gender to set range: 100-299 pounds.

Definition of “Weight out of range for either gender” in Coding Table for Note 23_WT:
Any height outside the definition of “Weight within range for either gender”.

**Coding Table for Note 24:
H17073, H17073A-H17073E**

N24	H17073A is:	H17073B is:	H17073C is:	H17073D is:	H17073E is:	H17073 is coded as:	H17073A-E are coded as:	*
1	Any value	1: Marked	Any value	Any value	Any value	2: Yes, Mexican, Mexican American, Chicano	Stand as original value	F
2	Any value	2: Unmarked	Any value	Any value	1: Marked	5: Yes, other Spanish, Hispanic, or Latino	Stand as original value	F
3	Any value	2: Unmarked	1: Marked	Any value	2: Unmarked	3: Yes, Puerto Rican	Stand as original value	F
4	Any value	2: Unmarked	2: Unmarked	1: Marked	2: Unmarked	4: Yes, Cuban	Stand as original value	F
5	1: Marked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	1: No, not Spanish, Hispanic, or Latino	Stand as original value	F
6	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	2: Unmarked	∴ Missing	Stand as original value	F

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 25:
H17074, H17075-H17079**

N25	H17074 is:	H17075-H17079 are:	H17074 is coded as:	H17075-H17079 are coded as:	*
1	1: Yes	Any value	Stands as original value	Stand as original value	
2	2: No or -5: don't know	"All are uncovered/unknown"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	2: No, -5: don't know, or ∴ missing	At least one is "covered"	1: Yes	Stand as original value	B
4	∴ Missing	"All are uncovered/unknown"	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are uncovered/unknown" in Coding Table for Note 25:
Responses to H17075-H17079 are all 2: no, -5: don't know, or missing.

Definition of "covered" in Coding Table for Note 25:
Any pattern of marks outside the definition "all are uncovered/unknown".

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APPENDIX B

CODING SCHEME AND CODING TABLES – HEDIS

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HEDIS

2017 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB) CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS	ASCII/EBCDIC	Description
Numeric	Numeric	
.	-9	No response
.O	-7	Out of range error
.N	-6	Not applicable or valid skip
.D	-5	Scalable response of “don’t know” or “not sure”
.I	-4	Incomplete grid error
.C	-1	Question should have been skipped

Missing values ‘.’ and incomplete grids ‘.I’ are encoded prior to implementation of the Coding Scheme Notes (see below).

**Coding Table for Note 2:
H17006, H17007, H17008**

N2	H17006 is:	H17007-H17008 are:	H17006 is coded as:	H17007-H17008 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 2:
Responses to H17007-H17008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:
All of the following are true: H17007-H17008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:
H17007-H17008 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 2:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 3:
H17009, H17010, H17011**

N3	H17009 is:	H17010-H17011 are:	H17009 is coded as:	H17010-H17011 are coded as:	*
1	1: Yes	“All are blank”	Stands as original value	Stand as original value	
2	1: Yes or .: missing	“Blank or NA”	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
3	1: Yes	“One marked and one NA”	Stands as original value	.: Missing if -6; stand as original value otherwise	F
4	1: Yes	At least one is “marked”	Stands as original value	Stand as original value	
5	2: No	“One marked and one NA”	Stands as original value	.C: Question should be skipped	F
6	2: No or .: missing	At least one is “marked”	1: Yes	.: Missing if -6; stand as original value otherwise	B F
7	2: No	“All are blank” or “blank or NA”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
8	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 3:
Responses to H17010-H17011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:
All of the following are true: H17010-H17011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:
H17010-H17011 have one response marked not applicable (-6) and one marked response (other than not applicable).

Definition of “marked” in Coding Table for Note 3:
Any pattern of marks outside the definitions “all are blank”, “one marked and one NA”, and “blank or NA”.

**Coding Table for Note 4H:
H17013, S17BP01, H17018, H17033, S17BK01-04**

N4H	H17013 is:	S17BP01, H17018, H17033, S17BK01-04 are:	H17013 is coded as:	S17BP01, H17018, H17033, S17BK01-04 are coded as:	*
1	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
2	1-6: Visits	Any value	Stands as original value	Stand as original value	
3	.: Missing	Any value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 5H:
S17BK01-S17BK04**

N5H	S17BK01 is:	S17BK02-S17BK04 are:	S17BK01 is coded as:	S17BK02-S17BK04 are coded as:	*
1	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	Stands as original value	Stands as original value	
2	1: Yes	At least one is "marked"	Stands as original value	Stands as original value	
3	1: Yes	"All are blank"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	B F
4	2: No	At least one is "marked"	1: Yes	Stands as original value	B
5	2: No or .: missing	"All are blank"	Stands as original value	Stands as original value	
6	.: Missing	At least one is "marked"	1: Yes	Stands as original value	B

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 4H:
Responses to S17BK02-S17BK04 are all missing.

Definition of "marked" in Coding Table for Note 4H:
Any pattern of marks outside the definitions "all are blank".

**Coding Table for Note 6H:
H17019-H17027**

N6H	H17019 is:	H17020- H17024 are:	H17025- H17026 are:	H17027 is:	H17019 is coded as:	H17020-H17026 are coded as:	H17027 is coded as:	*
1	1: Yes	Any value	Any value	Any value	Stands as original value	Stand as original value	Stand as original value	
2	2: No or .: missing	Any value	Any value	0-10	1: Yes	Stand as original value	Stands as original value	B
3	2: No or .: missing	At least one is "marked"	Any value	.: Missing	1: Yes	Stand as original value	Stands as original value	B
4	2: No	"All are blank"	Any value	.: Missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	"All are blank"	Any value	.: Missing	Stands as original value	Stand as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all or blank" in Coding Table for Note 6H:
Responses to H17020-H17024 are all missing.

Definition of "marked" in Coding Table for Note 6H:
Any pattern of marks for H17020-H17024 outside the definition "blank or NA".

**Coding Table for Note 7H:
H17020-H17026**

N7H	H17020 is:	H17021-H17026 are:	H17020 is coded as:	H17021-H17026 are coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stand as original value	
2	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
3	1-6: Visits, or .: missing	At least one is “marked” or “all are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 7H:
Responses to H17021-H17026 are all missing.

Definition of “marked” in Coding Table for Note 7H:
Any pattern of marks for H17021-H17026 outside the definition “all are blank”.

**Coding Table for Note 8:
H17025, H17026**

N8	H17025 is:	H17026 is:	H17025 is coded as:	H17026 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1: Yes	Any value	Stands as original value	Stands as original value	
3	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
4	2: No	.: Missing	Stands as original value	.N: Valid skip	F
5	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 9H:
H17028-H17031**

N9H	H17028 is:	H17029-H17031 are:	H17028 is coded as:	H17029 is coded as:	H17030-H17031 are coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	Stand as original value	F
2	2: No or .: missing	At least one is "marked"	1: Yes	Stands as original value	Stand as original value	B
3	2: No	"All are blank" or "blank or NA"	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	"Blank or NA"	2: No	.N: Valid skip if missing; .C: question should be skipped if marked	.N: Valid skip if missing; .C: question should be skipped if marked	B F
5	.: Missing	"All are blank"	Stands as original value	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 9H:
Responses to H17029-H17031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9H:
All of the following are true: H17029 and H17031 are missing. H17030 is either missing or 0: None.

Definition of "marked" in Coding Table for Note 9H:
Any pattern of marks outside the definitions "all are blank" and "blank or NA".

**Coding Table for Note 10H:
H17030, H17031**

N10H	H17030 is:	H17031 is:	H17030 is coded as:	H17031 is coded as:	*
1	.N: Valid skip, or .C: question should be skipped	.N: Valid skip, or .C: question should be skipped	Stands as original value	Stands as original value	
2	1-5: Specialists	0-10 or .: missing	Stands as original value	Stands as original value	
3	0: None	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	0-10 or .: missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 12H:
H17034, H17035**

N12H	H17034 is:	H17035 is:	H17034 is coded as:	H17035 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 13H:
H17036, H17037**

N13H	H17036 is:	H17037 is:	H17036 is coded as:	H17037 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 14H:
H17038, H17039**

N14H	H17038 is:	H17039 is:	H17038 is coded as:	H17039 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 15H:
H17040, H17041-H17042**

N15H	H17040 is:	H17041-H17042 are:	H17040 is coded as:	H17041-H17042 are coded as:	*
1	1: Yes	At least one is “marked” or “all are blank”	Stands as original value	Stands as original value	
2	2: No or .: missing	At least one is “marked”	1: Yes	Stands as original value	B
3	2: No	“All are blank”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	“All are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 15H:
Responses to H17041-H17042 are all missing.

Definition of “marked” in Coding Table for Note 15H:
Any pattern of marks outside the definition “all are blank”.

**Coding Table for Note 16H:
H17043, H17044**

N16H	H17043 is:	H17044 is:	H17043 is coded as:	H17044 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 17H:
H17045, H17046-H17047**

N17H	H17045 is:	H17046-H17047 are:	H17045 is coded as:	H17046-H17047 are coded as:	*
1	1: Yes	At least one is “marked”, “all are blank” or “blank or don’t know”	Stands as original value	Stand as original value	
2	2: No, -5: don’t know or .: missing	At least one is “marked”	1: Yes	Stand as original value	B
3	2: No	None are “marked”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
4	-5: Don’t know	“Blank or don’t know” or “all are blank”	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F
5	.: Missing	“Blank or don’t know” or “all are blank”	Stands as original value	Stand as original value	

* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 17H:
Responses to H17046-H17047 are all missing.

Definition of “blank or don’t know” in Coding Table for Note 17H:
Responses to H17046-H17047 are either all don’t know (-5) or a combination of missing and don’t know (-5).

Definition of “marked” in Coding Table for Note 17H:
Any pattern of marks outside the definitions “all are blank,” “blank or NA,” “blank or don’t know,” or “NA or don’t know”.

**Coding Table for Note 18H:
H17053, H17054-H17056, H17057A-H17057E**

N18H	H17053 is:	H17054-H17056 are:	H17057E is:	H17057A-H17057D are:	H17053 is coded as:	H17054-H17056, are coded as:	H17057A-D are coded as:	H17057E is coded as:	*
1	1: Some days, 2: every day, or .: missing	Any value	Any value	At least one is marked	Stands as original value	Stand as original value	Stand as original value	Unmarked	F
2	1: Some days, 2: every day, or .: missing	Any value	Marked	None are marked	3: Not at all	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	Stand as original value	Stands as original value	B F
3	1: Some days, 2: every day, or .: missing	Any value	Unmarked	None are marked	Stands as original value	Stands as original value	Stand as original value	Stands as original value	
4	3: Not at all, -5: Don't know	Any value	Any value	None are marked	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	Stand as original value	Marked	B F
5	3: Not at all	Any value	Marked	At least one is marked	Stands as original value	Stands as original value	Unmarked	Stands as original value	F
6	3: Not at all	Any value	Unmarked	At least one is marked	.D: Don't know	Stands as original value	Stand as original value	Stands as original value	B
7	-5: Don't know	Any value	Any value	At least one is marked	Stands as original value	.N: Valid skip if missing or unmarked; .C: question should be skipped if marked	Stand as original value	Stands as original value	B F

* Indication of backward coding (B) or forward coding (F).

Definition of "all are unmarked" in Coding Table for Note 18H:
Responses to H17057A-H17057D are all missing or unmarked.

Definition of "marked" in Coding Table for Note 18H:
Any pattern of marks outside the definition "all are unmarked"

Note 19H

H17058, SEX, XSEXA

N19H	H17058 is:	SEX is:	XSEXA is coded as:
1	:: Missing	F	2: Female
2	:: Missing	M	1: Male
3	:: Missing	Z, :: missing	:: Missing
4	1: Male	F	2: Female
5	1: Male	M, Z, or :: missing	1: Male
6	2: Female	M	1: Male
7	2: Female	F, Z, or :: missing	2: Female

SEX (PNSEXCD) is the gender from the DEERS file. This variable is not used to override questionnaire responses, but to clear up any omissions or discrepancies in the responses.

XSEXA is the recoded gender variable after taking into account the self-reported response (H16058), and the gender of the sample beneficiary from DEERS.

**Coding Table for Note 22:
H17067, H17068**

N22	H17067 is:	H17068 is:	H17067 is coded as:	H17068 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or :: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	:: Missing	Stands as original value	.N: Valid skip	F
4	:: Missing	:: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 23:
H17069, H17070**

N23	H17069 is:	H17070 is:	H17069 is coded as:	H17070 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or :: missing	1: Yes or 2: no	1: Yes	Stands as original value	B
3	2: No	:: Missing	Stands as original value	.N: Valid skip	F
4	:: Missing	:: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 24H:
S17BM01, S17BM02A-S17BM02E**

N24H	S17BM01 is:	S17BM02A-S17BM02E are:	S17BM01 is coded as:	S17BM02 is coded as:	*
1	1: Yes	Any value	Stands as original value	Stands as original value	
2	2: No or :: missing	Marked	1: Yes	Stands as original value	B
3	2: No	Unmarked	Stands as original value	.N: Valid skip if missing;	F
4	:: Missing	Unmarked	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 25H:
S17BM05, S17BM06**

N25H	S17BM05 is:	S17BM06 is:	S17BM05 is coded as:	S17BM06 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 26H:
S17BM07, S17BM08**

N26H	S17BM07 is:	S17BM08 is:	S17BM07 is coded as:	S17BM08 is coded as:	*
1	1: Yes	1-4: How often or .: missing	Stands as original value	Stands as original value	
2	2: No or .: missing	1-4: How often	1: Yes	Stands as original value	B
3	2: No	.: Missing	Stands as original value	.N: Valid skip if missing	F
4	.: Missing	.: Missing	Stands as original value	Stands as original value	

* Indication of backward coding (B) or forward coding (F).

APPENDIX C

MAPPING THE MILITARY TREATMENT FACILITY (MTF) TO THE CATCHMENT AREA

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GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0001	0001	AHC FOX-REDSTONE ARSENAL	1246
0003	0003	AHC LYSTER-RUCKER	1420
0004	0004	AF-C-42nd MED GRP-MAXWELL	1971
0005	0005	ACH BASSETT-WAINWRIGHT	915
0005	0202	AHC-GREELY	44
0005	0204	THC RICHARDSON	280
0005	6033	KAMISH CLINIC-WAINWRIGHT	336
0006	0006	AF-H-673rd-ELMENDORF	2539
0008	0008	AHC R W BLISS-HUACHUCA	1906
0009	0009	AF-C-56th MED GRP-LUKE	2287
0010	0010	AF-C-355th MED GRP-DM	2232
0013	0013	AF-C-19th MED GRP-LITTLE ROCK	1446
0014	0014	AF-MC-60th MED GRP-TRAVIS	2419
0018	0018	AF-C-30th MED GRP-VANDENBERG	1734
0019	0019	AF-C-412th MED GRP-EDWARDS	1800
0024	0024	NH CAMP PENDLETON	1907
0024	0208	BMC MCB CAMP PENDLETON	108
0024	0210	BMC EDSON RANGE ANNEX	41
0024	0217	NBHC NAS POINT MUGU	10
0024	0269	BMC YUMA	175
0024	1406	BMC MCMH HORNO 53-PENDLTN	1
0024	1657	BMC CAMP DELMAR MCB	7
0024	1659	BMC SAN ONOFRE MCB	63
0024	6216	TRICARE OUTPATIENT-OCEANSIDE	23
0024	6225	BMC MCMH SAN MATEO 62-PENDLTN	24
0026	0026	NBHC PORT HUENEME	1892
0028	0028	NH LEMOORE	1269
0028	0319	NBHC FALLON	216
0029	0029	NMC SAN DIEGO	1110
0029	0230	NBHC MCRD SAN DIEGO	21
0029	0232	BMC MCAS MIRAMAR	354
0029	0239	NBHC EL CENTRO	18
0029	0406	NBHC RANCHO BERNARDO	67
0029	0410	NBHC EASTLAKE	135
0029	0414	BHC NALF SAN CLEMENTE ISLAND	1
0029	0701	NBHC NAVSTA SAN DIEGO	81
0029	6207	TRICARE OUTPATIENT-CLAIREMONT	361
0030	0030	NH TWENTYNINE PALMS	1396
0030	0212	NBHC NAVWPNCEN CHINA LAKE	212
0032	0032	ACH EVANS-CARSON	1903
0032	6102	CBMH PREMIER-CARSON	125
0032	6123	CBMH MTN POST-CARSON	145
0032	7293	TMC ROBINSON-CARSON	186
0032	7300	TMC DIRAIMONDO-CARSON	233
0033	0033	AF-C-10th MED GRP-ACADEMY	2585
0038	0038	NH PENSACOLA	1444
0038	0107	NBHC NSA MID-SOUTH	130
0038	0260	NBHC NAS PENSACOLA	74
0038	0261	NBHC MILTON WHITING FIELD	144
0038	0262	NBHC NATTC PENSACOLA	75

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0038	0265	NBHC NAVCOASTSYSC PANAMA CITY	57
0038	0316	NBHC GULFPORT	179
0038	0317	NBHC MERIDIAN	54
0038	0436	NBHC NAS BELLE CHASE	171
0038	0513	NBHC NTTC PENSACOLA	69
0039	0039	NH JACKSONVILLE	1608
0039	0266	NBHC NAS JACKSONVILLE	101
0039	0275	NBHC ALBANY	37
0039	0337	NBHC KINGS BAY	305
0039	0517	NBHC KEY WEST	67
0042	0042	AF-H-96th MED GRP-EGLIN	2558
0043	0043	AF-C-325th MED GRP-TYNDALL	1893
0045	0045	AF-C-6th MED GRP-MACDILL	1653
0045	1946	AF-CB-BRANDON COMM CLINIC-MIL	526
0046	0046	AF-C-45th MED GRP-PATRICK	2075
0047	0047	AMC EISENHOWER-GORDON	2128
0047	1550	TMC-4-GORDON	192
0047	7197	CONNELLY HLTH CLIN-GORDON	40
0047	7239	SOUTHCOM CLINIC-GORDON	144
0047	8924	AHC RODRIGUEZ-BUCHANAN	59
0048	0048	ACH MARTIN-BENNING	2011
0048	1315	CTMC-BENNING	183
0048	1316	FPC WINDER-BENNING	1
0048	1330	CTMC 2-HARMONY CHURCH-BENNING	79
0048	1332	TMC 9-7TH SPECIAL FORCES-EGLIN	63
0048	1555	TMC-5-BENNING	24
0048	6124	CBMH NORTH COLUMBUS-BENNING	258
0049	0049	ACH WINN-STEWART	1583
0049	0272	AHC TUTTLE-HUNTER ARMY AIRFLD	338
0049	6122	CBMH RICHMOND HILL-STEWART	212
0049	7344	TMC-STEWART	92
0049	7443	TMC LLOYD C HAWKS-STEWART	278
0051	0051	AF-C-78th MED GRP-ROBINS	2143
0052	0052	AMC TRIPLER-SHAFTER	1919
0052	0437	AHC SCHOFIELD BARRACKS	408
0052	0534	SCMH SCHOFIELD BARRACKS	294
0052	6120	CBMH WARRIOR OHANA-SHAFTER	110
0053	0053	AF-H-366th MED GRP-MT HOME	1727
0055	0055	AF-C-375th MED GRP-SCOTT	2165
0056	0056	JAMES A LOVELL FHCC	1411
0056	1660	NBHC NCTC INPR GREAT LAKES	50
0056	1959	NBHC NTC GREAT LAKES	140
0057	0057	ACH IRWIN-RILEY	1775
0057	1539	AVIATION CLINIC-RILEY	106
0057	6104	CBMH FLINT HILLS-RILEY	230
0057	7289	CUSTER HILL HC-RILEY	199
0057	7337	AMH FARRELLY AHC-RILEY	338
0058	0058	AHC MUNSON-LEAVENWORTH	1372
0058	1488	TMC #2-USDB 2-LEAVENWORTH	11
0058	1530	TMC #1-USDB-LEAVENWORTH	23

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0060	0060	ACH BLANCHFIELD-CAMPBELL	1581
0060	1506	AVIATION MEDICINE C-CAMPBELL	152
0060	6108	CBMH SCREAMING EAGLE-CAMPBELL	257
0060	7307	LA POINTE HLTH CLINIC-CAMPBELL	262
0060	7341	BYRD HEALTH CLINIC-CAMPBELL	278
0061	0061	AHC IRELAND-KNOX	2203
0061	0290	AHC ROCK ISLAND ARSENAL	142
0062	0062	AF-C-2nd MED GRP-BARKSDALE	1426
0064	0064	ACH BAYNE-JONES-POLK	969
0064	6081	SCMH PATRIOT BRIGADE-POLK	199
0064	7199	SCMH-POLK	305
0066	0066	AF-C-779th MED GRP-ANDREWS	2603
0067	0067	WALTER REED NATL MIL MED CNTR	2455
0067	0256	DILORENZO TRICARE HEALTH CLIN	242
0068	0068	NHC PATUXENT RIVER	841
0068	0301	NBHC INDIAN HEAD	166
0068	0386	NBHC DAHLGREN	265
0068	0522	NBHC ANDREWS AFB	142
0069	0069	KIMBROUGH AMB CAR CEN-MEADE	1715
0069	0255	AHC MCNAIR-MYER-HENDERSON HALL	31
0069	0308	AHC KIRK-ABERDEEN PRVNG GD	151
0069	0309	AHC BARQUIST-DETRICK	141
0069	0352	AHC DUNHAM-CARLISLE BARRACKS	135
0069	0390	AHC ANDREW RADER-MYER-HENDERSN	343
0069	0441	AHC FILLMORE-NEW CUMBERLAND	65
0069	0545	OHC EDGEWOOD ARS	2
0073	0073	AF-MC-81st MED GRP-KEESLER	1450
0074	0074	AF-C-14th MED GRP-COLUMBUS	2273
0075	0075	ACH LEONARD WOOD	1036
0075	6115	CBMH OZARK-LEONARD WOOD	439
0076	0076	AF-C-509th MED GRP-WHITEMAN	1775
0077	0077	AF-C-341st MED GRP-MALMSTROM	1754
0078	0078	AF-C-55th MED GRP-OFFUTT	2502
0079	0079	AF-MC-99th MED GRP-NELLIS	2491
0079	1271	AF-LS-CREECH AID STATN-NELLIS	51
0083	0083	AF-C-377th MED GRP-KIRTLAND	1861
0086	0086	ACH KELLER-WEST POINT	1027
0086	1815	TMC MOLOGNE-WEST POINT	509
0089	0089	AMC WOMACK-BRAGG	1229
0089	6034	TROOP & FAMILY MED CL-BRAGG	185
0089	6105	CBMH FAYETTEVILLE-BRAGG	94
0089	6106	CBMH HOPE MILLS-BRAGG	102
0089	6107	CBMH LINDEN OAKS-BRAGG	78
0089	7143	ROBINSON CLINIC-BRAGG	353
0089	7286	JOEL CLINIC-BRAGG	192
0089	7294	CLARK CLINIC-BRAGG	279
0091	0091	NH CAMP LEJEUNE	2175
0091	0333	BMC MCMH NEW RIVER-LEJEUNE	87
0091	1662	BMC CAMP GEIGER MCB	25
0091	1663	BMC CAMP JOHNSON MCB	3

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0091	1664	BMC MCMH COURTHOUSE BAY-LEJEUN	11
0091	1992	BMC BLDG 15 MCB CAMP LEJEUNE	48
0091	1995	BMC MCMH FRENCH CREEK-LEJEUNE	61
0092	0092	NHC CHERRY POINT	1461
0094	0094	AF-C-5th MED GRP-MINOT	1620
0095	0095	AF-MC-88th MED GRP-WRIGHT-PAT	2516
0096	0096	AF-C-72nd MED GRP-TINKER	2128
0098	0098	AHC REYNOLDS-SILL	2556
0100	0035	NBHC GROTON	649
0100	0100	NHC NEW ENGLAND	1339
0100	0321	NBHC PORTSMOUTH	172
0100	0328	NBHC SARATOGA SPRINGS	167
0101	0101	AF-C-20th MED GRP-SHAW	1528
0103	0103	NHC CHARLESTON	1593
0104	0104	NH BEAUFORT	1422
0104	0358	NBHC MCRD PARRIS ISLAND	121
0104	0360	NBHC MCAS BEAUFORT	37
0105	0105	AHC MONCRIEF-JACKSON	1941
0105	6114	CBMH MONCRIEF-JACKSON	434
0108	0108	AMC WILLIAM BEAUMONT-BLISS	1245
0108	0327	AHC MCAFEE-WHITE SANDS MSL RAN	41
0108	1259	EAST BLISS CLINIC-BLISS	100
0108	1481	MENDOZA SOLDIER FAM CC-BLISS	714
0108	1617	TMC MEDICAL EXAM STATION-BLISS	368
0108	6103	CBMH-RIO BRAVO-BLISS	142
0109	0109	AMC BAMC-FSH	1451
0109	1585	TAYLOR BURK H C-BAMC-BULLIS	142
0109	1587	TMC-MCWETHY-BAMC-FSH	18
0109	6095	CPT JENNFR MORENO PCC-BAMC-FSH	605
0109	6118	CBMH BAMC-WESTOVER	168
0109	6119	CBMH BAMC-SCHERTZ	194
0110	0110	AMC DARNALL-HOOD	1242
0110	1592	MONROE CONSOLIDATED-HOOD	161
0110	1599	TMC-12-HOOD	45
0110	1601	TMC-14-HOOD	1
0110	6014	CHARLES MOORE HLTH CLN-HOOD	160
0110	6076	RUSSELL COLLIER HLTH CLIN-HOOD	211
0110	6111	CBMH HARKER HEIGHTS-HOOD	143
0110	6112	CBMH KILLEEN-HOOD	145
0110	6113	CBMH COPPERAS COVE-HOOD	88
0110	7236	BENNETT FAM CARE CLINIC-HOOD	148
0110	7347	BLDG 36000-HOOD	115
0112	0112	AF-C-7th MED GRP-DYESS	1680
0113	0113	AF-C-82nd MED GRP-SHEPPARD	1599
0117	0117	AF-C-59th MDW-WHASC-LACKLAND	1952
0117	1350	AF-C-559th MDG-REID-JBSA-LACK	2
0117	2170	AF-CB-59th MDW-NRTH CNTRL CLN	209
0118	0118	NHC CORPUS CHRISTI	1289
0118	0369	NBHC KINGSVILLE	190
0118	0370	NBHC FORT WORTH	464

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0119	0119	AF-C-75th MED GRP-HILL	1408
0120	0120	AF-H-633rd MED GRP LANG-EUSTIS	2556
0121	0121	AHC MCDONALD-EUSTIS	2201
0121	0464	AHC-STORY	88
0121	0553	TMC-1-EUSTIS	4
0121	0554	TMC-2-EUSTIS	214
0122	0122	AHC KENNER-LEE	2412
0123	0123	FT BELVOIR COMMUNITY HOSP-FBCH	1743
0123	6200	FAIRFAX HEALTH CENTER	308
0123	6201	DUMFRIES HEALTH CENTER	355
0124	0124	NMC PORTSMOUTH	1193
0124	0380	NBHC NSY NORFOLK	7
0124	0381	NBHC YORKTOWN	70
0124	0382	NBHC DAM NECK	91
0124	0519	NBHC CHESAPEAKE	52
0124	6214	TRICARE OUTPATIENT CL VA BEACH	271
0124	6221	TRICARE OUTPATIENT CHESAPEAKE	252
0125	0125	AMC MADIGAN-LEWIS	1591
0125	0247	AHC MONTEREY	95
0125	1485	AHC-MCCHORD AFB	128
0125	1489	SCMH 555 EN/17 FIB-MAMC-JBLM	11
0125	1646	WINDER FAMILY MEDICAL CL-JBLM	284
0125	1649	OKUBO FAM PRACT CLIN-LEWIS	156
0125	6094	SCMH 1-2 GHOST BDE CLINIC-JBLM	72
0125	6116	CBMH MADIGAN-PUYALLUP	112
0125	6117	CBMH SOUTH SOUND-MADIGAN	122
0126	0126	NH BREMERTON	1853
0126	0398	NBHC PUGET SOUND	1
0126	1656	NBHC SUBASE BANGOR	355
0126	7138	NHCL EVERETT	164
0127	0127	NH OAK HARBOR	1468
0128	0128	AF-C-92nd MED GRP-FAIRCHILD	1859
0129	0129	AF-C-90th MED GRP-FE WARREN	1758
0131	0131	ACH WEED-IRWIN	1100
0131	0206	AHC YUMA PROVING GROUND	88
0131	1644	TMC-1-IRWIN	400
0231	0029	NMC SAN DIEGO	135
0231	0231	NBHC NAS NORTH ISLAND	1572
0248	0248	AF-C-61st MED GRP-LOS ANGELES	1794
0252	0252	AF-C-21st MED GRP-PETERSON	2300
0252	1497	AF-C-SCHRIEVER MED SQ-PETERSON	193
0280	0280	NHC HAWAII	1962
0280	0284	NBHC NAVCAMS EASTPAC	116
0280	0285	BMC MCAS KANEOHE BAY	452
0280	1987	NBHC MCB CAMP H.M. SMITH	58
0306	0306	NHC ANNAPOLIS	781
0306	0322	BMC COLTS NECK EARLE	160
0306	0401	BMC LAKEHURST	94
0306	0525	NBHC BANCROFT HALL	485
0310	0310	AF-C-66th MED GRP-HANSCOM	1701

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0330	0330	AHC GUTHRIE-DRUM	1876
0330	7113	CTMC CONNER-DRUM	796
0364	0364	AF-C-17th MED GRP-GOODFELLOW	1563
0366	0117	AF-C-59th MDW-WHASC-LACKLAND	367
0366	0366	AF-C-359 MDG-JBSA-RANDOLPH	1431
0378	0124	NMC PORTSMOUTH	194
0378	0378	NBHC LITTLE CREEK	1410
0385	0385	NHC QUANTICO	2185
0385	0703	NBHC WASHINGTON NAVY YARD	143
0385	1670	BMC OCS BROWN FIELD	35
0385	1671	NBHC THE BASIC SCHOOL	171
0387	0124	NMC PORTSMOUTH	142
0387	0387	NBHC OCEANA	1358
0405	0039	NH JACKSONVILLE	362
0405	0405	NBHC MAYPORT	1373
0407	0029	NMC SAN DIEGO	111
0407	0407	NBHC NTC SAN DIEGO	1385
0508	0124	NMC PORTSMOUTH	208
0508	0508	NBHC NAVSTA SEWELLS	1533
0607	0607	LANDSTUHL REGIONAL MEDCEN	377
0607	0611	AHC-VICENZA	349
0607	0614	AHC SHAPE	106
0607	1126	AHC BAUMHOLDER	203
0607	1128	AHC KAISERSLAUTERN	149
0607	1147	AHC WIESBADEN	245
0607	8977	AHC BRUSSELS	29
0609	1014	AHC ILLESHEIM	2
0609	1015	AHC ANSBACH	123
0609	1016	AHC GRAFENWOEHR	387
0609	1017	AHC VILSECK	400
0609	1019	AHC HOHENFELS	159
0609	8987	AHC PATCH BKS-STUTTGART	476
0612	0612	ACH BRIAN ALLGOOD-SEOUL	531
0612	1156	AHC CAMP STANLEY	29
0612	1157	AHC CAMP CASEY-TONGDUCHON	220
0612	8903	AHC CAMP HUMPHREYS-PYONGTAEK	493
0612	8907	AHC-CAMP WALKER-TAEGU	211
0612	8912	AHC-CAMP RED CLOUD-UIJONGBU	34
0612	8913	AHC-CAMP CARROLL-KOREA	66
0612	8916	AHC-YONGSAN-SEOUL	145
0620	0620	NH GUAM-AGANA	1466
0620	0871	BMC NAVSTA GUAM	313
0621	0621	NH OKINAWA	737
0621	0861	BMC MCAS FUTENMA	72
0621	0862	BMC EVANS-CAMP FOSTER	98
0621	1269	BMC CAMP KINSER	171
0621	7032	BMC CAMP BUSH/COURTNEY	212
0621	7033	BMC CAMP HANSEN	169
0621	7107	BMC CAMP SCHWAB-OKINAWA	67
0622	0622	NH YOKOSUKA	884

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
0622	0625	BMC IWAKUNI	264
0622	0852	NBHC COMFLEACT SASEBO	137
0622	0853	NBHC NAF ATSUGI	221
0622	0873	BMA CAMP FUJI	6
0622	8934	NBHC NSF DIEGO GARCIA	7
0622	8939	BMC CHINHAIE	13
0633	0633	AF-H-48th MED GRP-LAKENHEATH	1596
0804	0804	AF-C-18th MED GRP-KADENA	1540
0805	0805	AF-C-52nd MED GRP-SPANGDAHLEM	2328
0806	0806	AF-C-86th MED GRP-RAMSTEIN	1565
6215	0029	NMC SAN DIEGO	73
6215	6215	TRICARE OUTPATIENT-CHULA VISTA	2331
7139	7139	AF-C-1st SPCL OPS MED-HURLBURT	1534
9001	0009	AF-C-56th MED GRP-LUKE	2
9001	0015	AF-C-9th MED GRP-BEALE	1
9001	0024	NH CAMP PENDLETON	3
9001	0029	NMC SAN DIEGO	7
9001	0034	USCG CLINIC NEW LONDON	87
9001	0035	NBHC GROTON	1
9001	0036	AF-C-436th MED GRP-DOVER	457
9001	0038	NH PENSACOLA	59
9001	0039	NH JACKSONVILLE	4
9001	0042	AF-H-96th MED GRP-EGLIN	2
9001	0047	AMC EISENHOWER-GORDON	2
9001	0048	ACH MARTIN-BENNING	2
9001	0049	ACH WINN-STEWART	1
9001	0050	AF-C-23rd MED GRP-MOODY	2
9001	0055	AF-C-375th MED GRP-SCOTT	437
9001	0056	JAMES A LOVELL FHCC	484
9001	0057	ACH IRWIN-RILEY	2
9001	0059	AF-C-22nd MED GRP-MCCONNELL	2
9001	0060	ACH BLANCHFIELD-CAMPBELL	962
9001	0061	AHC IRELAND-KNOX	574
9001	0066	AF-C-779th MED GRP-ANDREWS	53
9001	0067	WALTER REED NATL MIL MED CNTR	1785
9001	0068	NHC PATUXENT RIVER	1
9001	0069	KIMBROUGH AMB CAR CEN-MEADE	60
9001	0078	AF-C-55th MED GRP-OFFUTT	1
9001	0084	AF-C-49th MED GRP-HOLLOMAN	2
9001	0085	AF-C-27th SPCLOPS MDGRP-CANNON	2
9001	0086	ACH KELLER-WEST POINT	352
9001	0089	AMC WOMACK-BRAGG	1888
9001	0090	AF-C-4th MED GRP-SJ	486
9001	0091	NH CAMP LEJEUNE	1459
9001	0092	NHC CHERRY POINT	1
9001	0093	AF-C-319th MED GRP-GRAND FORKS	1
9001	0095	AF-MC-88th MED GRP-WRIGHT-PAT	465
9001	0098	AHC REYNOLDS-SILL	2
9001	0100	NHC NEW ENGLAND	302
9001	0105	AHC MONCRIEF-JACKSON	2

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9001	0109	AMC BAMC-FSH	1
9001	0110	AMC DARNALL-HOOD	1
9001	0114	AF-C-47th MED GRP-LAUGHLIN	3
9001	0120	AF-H-633rd MED GRP LANG-EUSTIS	802
9001	0121	AHC MCDONALD-EUSTIS	76
9001	0122	AHC KENNER-LEE	193
9001	0123	FT BELVOIR COMMUNITY HOSP-FBCH	2101
9001	0124	NMC PORTSMOUTH	3341
9001	0130	USCG CLINIC KODIAK	1
9001	0203	AF-C-354th MED GRP-EIELSON	1
9001	0252	AF-C-21st MED GRP-PETERSON	1
9001	0280	NHC HAWAII	4
9001	0287	AF-C-15th MED GRP-HICKAM	3
9001	0306	NHC ANNAPOLIS	1
9001	0308	AHC KIRK-ABERDEEN PRVNG GD	1
9001	0310	AF-C-66th MED GRP-HANSCOM	1
9001	0326	AF-C-87th MED GRP-MCGUIRE	1942
9001	0330	AHC GUTHRIE-DRUM	56
9001	0338	AF-C-71st MED GRP-VANCE	1
9001	0356	AF-C-628th MED GRP-CHARLESTON	6
9001	0370	NBHC FORT WORTH	5
9001	0385	NHC QUANTICO	226
9001	0390	AHC ANDREW RADER-MYER-HENDERSN	5
9001	0395	AF-LS-62nd MED SQ-MCCHORD	2
9001	0413	AF-C-579th MED GRP-BOLLING	360
9001	0416	USCG CLINIC MOBILE	1
9001	0418	USCG CLINIC ALAMEDA	3
9001	0419	USCG CLINIC PETALUMA	8
9001	0420	USCG CLINIC DISTRICT OF COLUMB	102
9001	0421	USCG CLINIC AIR STATION MIAMI	1
9001	0422	USCG CLINIC CLEARWATER	2
9001	0423	USCG CLINIC NEW ORLEANS	1
9001	0424	USCG CLINIC BALTIMORE	25
9001	0425	USCG CLINIC CAPE COD	46
9001	0426	USCG CLINIC BOSTON	54
9001	0427	USCG CLINIC TRAVERSE CITY	8
9001	0428	USCG CLINIC CAPE MAY	115
9001	0430	USCG CLINIC ELIZABETH CITY	44
9001	0431	USCG CLINIC ASTORIA	1
9001	0432	USCG CLINIC PORTSMOUTH	92
9001	0433	USCG CLINIC YORKTOWN	37
9001	0434	USCG CLINIC PORT ANGELES	1
9001	0435	USCG CLINIC SEATTLE	4
9001	0615	NH GUANTANAMO BAY	45
9001	0617	NH NAPLES	3
9001	0618	NH ROTA	13
9001	0624	NH SIGONELLA	6
9001	0629	AF-65th MED FLT-LAJES	1
9001	0635	AF-C-39th MED GRP-INCIRLIK	3
9001	0638	AF-H-51st MED GRP-OSAN	4

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9001	0639	AF-H-35th MED GRP-MISAWA	1
9001	0640	AF-H-374th MED GRP-YOKOTA	5
9001	0779	KENTUCKY-FT CAMPBELL AREA	53
9001	0780	KENTUCKY-EXCL FT CAMPBELL AREA	677
9001	0781	NORTHEAST WEST VIRGINIA	122
9001	0782	WESTERN WEST VIRGINIA	414
9001	0783	EASTERN MISSOURI-ST LOUIS AREA	357
9001	0789	IOWA-QUAD CITIES AREA	62
9001	0802	AF-C-36th MED GRP-ANDERSEN	5
9001	0808	AF-H-31st MED GRP-AVIANO	4
9001	0814	AF-LS-423rd MDS-RAF ALCONBURY	3
9001	0858	BMC NAVSUPPACT SOUDA BAY	1
9001	0907	CONNECTICUT	749
9001	0908	DELAWARE	252
9001	0914	ILLINOIS	1206
9001	0915	INDIANA	1311
9001	0920	MAINE	515
9001	0921	MARYLAND	573
9001	0922	MASSACHUSETTS	868
9001	0923	MICHIGAN	1431
9001	0930	NEW HAMPSHIRE	422
9001	0931	NEW JERSEY	929
9001	0933	NEW YORK	2302
9001	0934	NORTH CAROLINA	1958
9001	0936	OHIO	1690
9001	0939	PENNSYLVANIA	2049
9001	0940	RHODE ISLAND	279
9001	0946	VERMONT	227
9001	0950	WISCONSIN	900
9001	0995	NORTHERN VIRGINIA	251
9001	0996	SOUTHERN VIRGINIA	1113
9001	0999	UNKNOWN LOCATION	226
9001	1153	BMC CAPODICHINO	8
9001	1170	NBHC NSA BAHRAIN	45
9001	5195	USCG CLINIC DETROIT	16
9001	5196	USCG CLINIC NEW YORK	22
9001	5199	USCG CLINIC KEY WEST	4
9001	6034	TROOP & FAMILY MED CL-BRAGG	3
9001	6200	FAIRFAX HEALTH CENTER	8
9001	6201	DUMFRIES HEALTH CENTER	12
9001	7042	USCG CLINIC BORINQUEN	1
9001	7046	USCG CLINIC SAN PEDRO	1
9001	7047	USCG CLINIC SITKA	1
9001	7048	USCG CLINIC BASE MIAMI	1
9001	7082	USCG CLINIC HOUSTON/GALVESTON	1
9001	7143	ROBINSON CLINIC-BRAGG	1
9001	7200	AF-C-460th MED GRP-BUCKLEY	2
9001	7286	JOEL CLINIC-BRAGG	9
9002	0003	AHC LYSTER-RUCKER	1
9002	0015	AF-C-9th MED GRP-BEALE	7

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9002	0024	NH CAMP PENDLETON	1
9002	0032	ACH EVANS-CARSON	2
9002	0034	USCG CLINIC NEW LONDON	4
9002	0036	AF-C-436th MED GRP-DOVER	6
9002	0038	NH PENSACOLA	731
9002	0039	NH JACKSONVILLE	1612
9002	0042	AF-H-96th MED GRP-EGLIN	883
9002	0045	AF-C-6th MED GRP-MACDILL	440
9002	0047	AMC EISENHOWER-GORDON	536
9002	0048	ACH MARTIN-BENNING	555
9002	0049	ACH WINN-STEWART	1020
9002	0050	AF-C-23rd MED GRP-MOODY	689
9002	0051	AF-C-78th MED GRP-ROBINS	469
9002	0052	AMC TRIPLER-SHAFTER	1
9002	0057	ACH IRWIN-RILEY	1
9002	0059	AF-C-22nd MED GRP-MCCONNELL	8
9002	0060	ACH BLANCHFIELD-CAMPBELL	9
9002	0064	ACH BAYNE-JONES-POLK	165
9002	0066	AF-C-779th MED GRP-ANDREWS	1
9002	0067	WALTER REED NATL MIL MED CNTR	5
9002	0069	KIMBROUGH AMB CAR CEN-MEADE	1
9002	0073	AF-MC-81st MED GRP-KEESLER	381
9002	0074	AF-C-14th MED GRP-COLUMBUS	1
9002	0078	AF-C-55th MED GRP-OFFUTT	1
9002	0079	AF-MC-99th MED GRP-NELLIS	1
9002	0084	AF-C-49th MED GRP-HOLLOMAN	3
9002	0085	AF-C-27th SPCLOPS MDGRP-CANNON	7
9002	0089	AMC WOMACK-BRAGG	2
9002	0090	AF-C-4th MED GRP-SJ	12
9002	0091	NH CAMP LEJEUNE	1
9002	0095	AF-MC-88th MED GRP-WRIGHT-PAT	1
9002	0096	AF-C-72nd MED GRP-TINKER	508
9002	0097	AF-C-97th MED GRP-ALTUS	260
9002	0098	AHC REYNOLDS-SILL	252
9002	0100	NHC NEW ENGLAND	5
9002	0101	AF-C-20th MED GRP-SHAW	2
9002	0104	NH BEAUFORT	239
9002	0105	AHC MONCRIEF-JACKSON	667
9002	0106	AF-C-28th MED GRP-ELLSWORTH	9
9002	0108	AMC WILLIAM BEAUMONT-BLISS	1
9002	0109	AMC BAMC-FSH	1308
9002	0110	AMC DARNALL-HOOD	1451
9002	0113	AF-C-82nd MED GRP-SHEPPARD	1
9002	0114	AF-C-47th MED GRP-LAUGHLIN	195
9002	0117	AF-C-59th MDW-WHASC-LACKLAND	86
9002	0121	AHC MCDONALD-EUSTIS	2
9002	0123	FT BELVOIR COMMUNITY HOSP-FBCH	3
9002	0125	AMC MADIGAN-LEWIS	2
9002	0126	NH BREMERTON	2
9002	0203	AF-C-354th MED GRP-EIELSON	2

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9002	0272	AHC TUTTLE-HUNTER ARMY AIRFLD	1
9002	0287	AF-C-15th MED GRP-HICKAM	8
9002	0326	AF-C-87th MED GRP-MCGUIRE	23
9002	0335	AF-LS-43rd MED SQ-POPE AFB	2
9002	0338	AF-C-71st MED GRP-VANCE	210
9002	0356	AF-C-628th MED GRP-CHARLESTON	734
9002	0366	AF-C-359 MDG-JBSA-RANDOLPH	3
9002	0370	NBHC FORT WORTH	1041
9002	0395	AF-LS-62nd MED SQ-MCCHORD	3
9002	0413	AF-C-579th MED GRP-BOLLING	28
9002	0416	USCG CLINIC MOBILE	76
9002	0418	USCG CLINIC ALAMEDA	2
9002	0419	USCG CLINIC PETALUMA	3
9002	0420	USCG CLINIC DISTRICT OF COLUMB	6
9002	0421	USCG CLINIC AIR STATION MIAMI	40
9002	0422	USCG CLINIC CLEARWATER	77
9002	0423	USCG CLINIC NEW ORLEANS	74
9002	0424	USCG CLINIC BALTIMORE	1
9002	0425	USCG CLINIC CAPE COD	1
9002	0426	USCG CLINIC BOSTON	1
9002	0427	USCG CLINIC TRAVERSE CITY	1
9002	0428	USCG CLINIC CAPE MAY	29
9002	0430	USCG CLINIC ELIZABETH CITY	7
9002	0432	USCG CLINIC PORTSMOUTH	3
9002	0433	USCG CLINIC YORKTOWN	16
9002	0434	USCG CLINIC PORT ANGELES	3
9002	0610	AHC BG CRAWFORD SAMS-CAMP ZAMA	4
9002	0611	AHC-VICENZA	1
9002	0615	NH GUANTANAMO BAY	20
9002	0617	NH NAPLES	1
9002	0618	NH ROTA	2
9002	0624	NH SIGONELLA	4
9002	0635	AF-C-39th MED GRP-INCIRLIK	4
9002	0637	AF-C-8th MED GRP-KUNSAN	6
9002	0638	AF-H-51st MED GRP-OSAN	26
9002	0639	AF-H-35th MED GRP-MISAWA	8
9002	0640	AF-H-374th MED GRP-YOKOTA	13
9002	0653	AF-LS-422nd MED FLT-CROUGHTON	2
9002	0787	GEORGIA-FORMER NOBLE CATCHMENT	16
9002	0799	AF-LS-470th MED FLT-GK	4
9002	0802	AF-C-36th MED GRP-ANDERSEN	5
9002	0808	AF-H-31st MED GRP-AVIANO	7
9002	0814	AF-LS-423rd MDS-RAF ALCONBURY	3
9002	0858	BMC NAVSUPPACT SOUDA BAY	2
9002	0901	ALABAMA	1941
9002	0904	ARKANSAS	1130
9002	0911	GEORGIA	3224
9002	0925	MISSISSIPPI	1124
9002	0937	OKLAHOMA	1536
9002	0941	SOUTH CAROLINA	1647

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9002	0943	TENNESSEE	1970
9002	0953	PUERTO RICO	4
9002	0983	OTHER PACIFIC	1
9002	0987	EASTERN FLORIDA	4211
9002	0988	WESTERN FLORIDA	388
9002	0989	EASTERN LOUISIANA	693
9002	0990	WESTERN LOUISIANA	580
9002	0993	EASTERN TEXAS	5258
9002	0999	UNKNOWN LOCATION	264
9002	1153	BMC CAPODICHINO	1
9002	1170	NBHC NSA BAHRAIN	16
9002	2170	AF-CB-59th MDW-NRTH CNTRL CLN	1
9002	5189	USCG CLINIC SAN DIEGO	1
9002	5196	USCG CLINIC NEW YORK	1
9002	5199	USCG CLINIC KEY WEST	50
9002	6095	CPT JENNFR MORENO PCC-BAMC-FSH	1
9002	6118	CBMH BAMC-WESTOVER	2
9002	6124	CBMH NORTH COLUMBUS-BENNING	1
9002	7032	BMC CAMP BUSH/COURTNEY	1
9002	7042	USCG CLINIC BORINQUEN	1
9002	7046	USCG CLINIC SAN PEDRO	1
9002	7048	USCG CLINIC BASE MIAMI	50
9002	7082	USCG CLINIC HOUSTON/GALVESTON	62
9002	7200	AF-C-460th MED GRP-BUCKLEY	4
9003	0005	ACH BASSETT-WAINWRIGHT	112
9003	0006	AF-H-673rd-ELMENDORF	360
9003	0008	AHC R W BLISS-HUACHUCA	4
9003	0009	AF-C-56th MED GRP-LUKE	339
9003	0010	AF-C-355th MED GRP-DM	410
9003	0014	AF-MC-60th MED GRP-TRAVIS	1052
9003	0015	AF-C-9th MED GRP-BEALE	403
9003	0018	AF-C-30th MED GRP-VANDENBERG	1
9003	0019	AF-C-412th MED GRP-EDWARDS	1
9003	0024	NH CAMP PENDLETON	2180
9003	0028	NH LEMOORE	86
9003	0029	NMC SAN DIEGO	3261
9003	0030	NH TWENTYNINE PALMS	148
9003	0032	ACH EVANS-CARSON	1343
9003	0033	AF-C-10th MED GRP-ACADEMY	88
9003	0034	USCG CLINIC NEW LONDON	6
9003	0036	AF-C-436th MED GRP-DOVER	3
9003	0038	NH PENSACOLA	34
9003	0039	NH JACKSONVILLE	2
9003	0046	AF-C-45th MED GRP-PATRICK	1
9003	0052	AMC TRIPLER-SHAFTER	1414
9003	0053	AF-H-366th MED GRP-MT HOME	49
9003	0055	AF-C-375th MED GRP-SCOTT	1
9003	0057	ACH IRWIN-RILEY	448
9003	0058	AHC MUNSON-LEAVENWORTH	2
9003	0059	AF-C-22nd MED GRP-MCCONNELL	444

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9003	0066	AF-C-779th MED GRP-ANDREWS	1
9003	0067	WALTER REED NATL MIL MED CNTR	1
9003	0075	ACH LEONARD WOOD	187
9003	0078	AF-C-55th MED GRP-OFFUTT	111
9003	0079	AF-MC-99th MED GRP-NELLIS	679
9003	0084	AF-C-49th MED GRP-HOLLOMAN	391
9003	0085	AF-C-27th SPCLOPS MDGRP-CANNON	478
9003	0089	AMC WOMACK-BRAGG	1
9003	0090	AF-C-4th MED GRP-SJ	1
9003	0091	NH CAMP LEJEUNE	2
9003	0093	AF-C-319th MED GRP-GRAND FORKS	194
9003	0096	AF-C-72nd MED GRP-TINKER	1
9003	0097	AF-C-97th MED GRP-ALTUS	4
9003	0100	NHC NEW ENGLAND	3
9003	0105	AHC MONCRIEF-JACKSON	1
9003	0106	AF-C-28th MED GRP-ELLSWORTH	446
9003	0108	AMC WILLIAM BEAUMONT-BLISS	765
9003	0110	AMC DARNALL-HOOD	1
9003	0114	AF-C-47th MED GRP-LAUGHLIN	1
9003	0121	AHC MCDONALD-EUSTIS	1
9003	0124	NMC PORTSMOUTH	3
9003	0125	AMC MADIGAN-LEWIS	1511
9003	0126	NH BREMERTON	734
9003	0127	NH OAK HARBOR	188
9003	0128	AF-C-92nd MED GRP-FAIRCHILD	2
9003	0130	USCG CLINIC KODIAK	40
9003	0131	ACH WEED-IRWIN	74
9003	0203	AF-C-354th MED GRP-EIELSON	212
9003	0231	NBHC NAS NORTH ISLAND	1
9003	0232	BMC MCAS MIRAMAR	1
9003	0252	AF-C-21st MED GRP-PETERSON	93
9003	0280	NHC HAWAII	281
9003	0287	AF-C-15th MED GRP-HICKAM	595
9003	0326	AF-C-87th MED GRP-MCGUIRE	8
9003	0338	AF-C-71st MED GRP-VANCE	4
9003	0356	AF-C-628th MED GRP-CHARLESTON	4
9003	0370	NBHC FORT WORTH	2
9003	0385	NHC QUANTICO	1
9003	0395	AF-LS-62nd MED SQ-MCCHORD	190
9003	0406	NBHC RANCHO BERNARDO	3
9003	0407	NBHC NTC SAN DIEGO	3
9003	0413	AF-C-579th MED GRP-BOLLING	2
9003	0416	USCG CLINIC MOBILE	2
9003	0417	USCG CLINIC KETCHIKAN	5
9003	0418	USCG CLINIC ALAMEDA	80
9003	0419	USCG CLINIC PETALUMA	59
9003	0420	USCG CLINIC DISTRICT OF COLUMB	3
9003	0422	USCG CLINIC CLEARWATER	2
9003	0425	USCG CLINIC CAPE COD	1
9003	0426	USCG CLINIC BOSTON	1

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9003	0428	USCG CLINIC CAPE MAY	19
9003	0430	USCG CLINIC ELIZABETH CITY	4
9003	0431	USCG CLINIC ASTORIA	16
9003	0432	USCG CLINIC PORTSMOUTH	4
9003	0433	USCG CLINIC YORKTOWN	7
9003	0434	USCG CLINIC PORT ANGELES	8
9003	0435	USCG CLINIC SEATTLE	60
9003	0437	AHC SCHOFIELD BARRACKS	1
9003	0611	AHC-VICENZA	1
9003	0615	NH GUANTANAMO BAY	37
9003	0617	NH NAPLES	9
9003	0618	NH ROTA	8
9003	0624	NH SIGONELLA	6
9003	0635	AF-C-39th MED GRP-INCIRLIK	3
9003	0637	AF-C-8th MED GRP-KUNSAN	4
9003	0638	AF-H-51st MED GRP-OSAN	15
9003	0639	AF-H-35th MED GRP-MISAWA	6
9003	0640	AF-H-374th MED GRP-YOKOTA	6
9003	0653	AF-LS-422nd MED FLT-CROUGHTON	1
9003	0784	WESTERN MISSOURI	1212
9003	0785	ARIZONA-EXCLUDING YUMA AREA	2007
9003	0786	YUMA ARIZONA AREA	153
9003	0788	IOWA-EXCLUDING QUAD CITIES	706
9003	0799	AF-LS-470th MED FLT-GK	2
9003	0802	AF-C-36th MED GRP-ANDERSEN	20
9003	0808	AF-H-31st MED GRP-AVIANO	3
9003	0858	BMC NAVSUPPACT SOUDA BAY	4
9003	0902	ALASKA	198
9003	0906	COLORADO	1053
9003	0912	HAWAII	96
9003	0917	KANSAS	905
9003	0924	MINNESOTA	1147
9003	0927	MONTANA	461
9003	0928	NEBRASKA	675
9003	0929	NEVADA	313
9003	0932	NEW MEXICO	701
9003	0935	NORTH DAKOTA	325
9003	0938	OREGON	1056
9003	0942	SOUTH DAKOTA	358
9003	0945	UTAH	1055
9003	0948	WASHINGTON	1290
9003	0951	WYOMING	278
9003	0953	PUERTO RICO	1
9003	0973	NORTHERN IDAHO	80
9003	0974	SOUTHERN IDAHO	589
9003	0985	NORTHERN CALIFORNIA	2003
9003	0986	SOUTHERN CALIFORNIA	2565
9003	0994	WESTERN TEXAS	4
9003	0999	UNKNOWN LOCATION	277
9003	1153	BMC CAPODICHINO	9

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9003	1170	NBHC NSA BAHRAIN	25
9003	1485	AHC-MCCHORD AFB	6
9003	5189	USCG CLINIC SAN DIEGO	9
9003	5195	USCG CLINIC DETROIT	1
9003	5197	USCG CLINIC SAN JUAN	1
9003	5199	USCG CLINIC KEY WEST	1
9003	6102	CBMH PREMIER-CARSON	1
9003	6117	CBMH SOUTH SOUND-MADIGAN	2
9003	6207	TRICARE OUTPATIENT-CLAIREMONT	4
9003	6215	TRICARE OUTPATIENT-CHULA VISTA	1
9003	6216	TRICARE OUTPATIENT-OCEANSIDE	3
9003	7043	USCG CLINIC HONOLULU	13
9003	7044	USCG CLINIC JUNEAU	19
9003	7045	USCG CLINIC NORTH BEND	12
9003	7046	USCG CLINIC SAN PEDRO	23
9003	7047	USCG CLINIC SITKA	10
9003	7083	USCG CLINIC HUMBOLDT BAY	9
9003	7200	AF-C-460th MED GRP-BUCKLEY	397
9004	0015	AF-C-9th MED GRP-BEALE	2
9004	0029	NMC SAN DIEGO	3
9004	0034	USCG CLINIC NEW LONDON	1
9004	0036	AF-C-436th MED GRP-DOVER	3
9004	0038	NH PENSACOLA	9
9004	0039	NH JACKSONVILLE	1
9004	0050	AF-C-23rd MED GRP-MOODY	2
9004	0055	AF-C-375th MED GRP-SCOTT	1
9004	0059	AF-C-22nd MED GRP-MCCONNELL	4
9004	0067	WALTER REED NATL MIL MED CNTR	1
9004	0084	AF-C-49th MED GRP-HOLLOMAN	4
9004	0085	AF-C-27th SPCLOPS MDGRP-CANNON	3
9004	0089	AMC WOMACK-BRAGG	1
9004	0090	AF-C-4th MED GRP-SJ	5
9004	0091	NH CAMP LEJEUNE	1
9004	0093	AF-C-319th MED GRP-GRAND FORKS	1
9004	0096	AF-C-72nd MED GRP-TINKER	2
9004	0097	AF-C-97th MED GRP-ALTUS	1
9004	0100	NHC NEW ENGLAND	3
9004	0106	AF-C-28th MED GRP-ELLSWORTH	3
9004	0114	AF-C-47th MED GRP-LAUGHLIN	1
9004	0124	NMC PORTSMOUTH	2
9004	0203	AF-C-354th MED GRP-EIELSON	1
9004	0280	NHC HAWAII	11
9004	0287	AF-C-15th MED GRP-HICKAM	4
9004	0326	AF-C-87th MED GRP-MCGUIRE	9
9004	0338	AF-C-71st MED GRP-VANCE	1
9004	0356	AF-C-628th MED GRP-CHARLESTON	4
9004	0395	AF-LS-62nd MED SQ-MCCHORD	1
9004	0413	AF-C-579th MED GRP-BOLLING	5
9004	0416	USCG CLINIC MOBILE	1
9004	0418	USCG CLINIC ALAMEDA	1

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9004	0419	USCG CLINIC PETALUMA	1
9004	0421	USCG CLINIC AIR STATION MIAMI	1
9004	0435	USCG CLINIC SEATTLE	1
9004	0607	LANDSTUHL REGIONAL MEDCEN	403
9004	0610	AHC BG CRAWFORD SAMS-CAMP ZAMA	178
9004	0611	AHC-VICENZA	1
9004	0612	ACH BRIAN ALLGOOD-SEOUL	185
9004	0615	NH GUANTANAMO BAY	163
9004	0617	NH NAPLES	532
9004	0618	NH ROTA	564
9004	0620	NH GUAM-AGANA	274
9004	0621	NH OKINAWA	288
9004	0622	NH YOKOSUKA	311
9004	0624	NH SIGONELLA	364
9004	0633	AF-H-48th MED GRP-LAKENHEATH	168
9004	0635	AF-C-39th MED GRP-INCIRLIK	148
9004	0637	AF-C-8th MED GRP-KUNSAN	230
9004	0638	AF-H-51st MED GRP-OSAN	966
9004	0639	AF-H-35th MED GRP-MISAWA	579
9004	0640	AF-H-374th MED GRP-YOKOTA	718
9004	0653	AF-LS-422nd MED FLT-CROUGHTON	80
9004	0799	AF-LS-470th MED FLT-GK	152
9004	0802	AF-C-36th MED GRP-ANDERSEN	499
9004	0805	AF-C-52nd MED GRP-SPANGDAHLEM	1
9004	0808	AF-H-31st MED GRP-AVIANO	729
9004	0814	AF-LS-423rd MDS-RAF ALCONBURY	149
9004	0858	BMC NAVSUPPACT SOUDA BAY	32
9004	0953	PUERTO RICO	3833
9004	0957	GERMANY	1097
9004	0958	GREECE	31
9004	0960	ITALY	152
9004	0961	JAPAN	381
9004	0963	PHILIPPINES	258
9004	0964	PORTUGAL	21
9004	0965	KOREA	138
9004	0966	SPAIN	38
9004	0967	TURKEY	58
9004	0968	UNITED KINGDOM	97
9004	0969	CANADA	6
9004	0970	OTHER CARIBBEAN	20
9004	0971	CENTRAL AMERICA	122
9004	0972	SOUTH AMERICA	51
9004	0975	U.S. VIRGIN ISLANDS	134
9004	0976	AFRICA	36
9004	0977	MIDEAST	455
9004	0978	SOUTHEAST ASIA	194
9004	0979	BELGIUM	103
9004	0982	OTHER EUROPE	108
9004	0983	OTHER PACIFIC	234
9004	0999	UNKNOWN LOCATION	5163

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2017
9004	1015	AHC ANSBACH	1
9004	1017	AHC VILSECK	1
9004	1126	AHC BAUMHOLDER	1
9004	1153	BMC CAPODICHINO	140
9004	1170	NBHC NSA BAHRAIN	407
9004	5197	USCG CLINIC SAN JUAN	50
9004	6899	OTHER LATIN AMERICA NON TGRO	1
9004	7032	BMC CAMP BUSH/COURTNEY	1
9004	7042	USCG CLINIC BORINQUEN	31
9004	7048	USCG CLINIC BASE MIAMI	1
9004	7200	AF-C-460th MED GRP-BUCKLEY	2
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APPENDIX D

RESPONSE RATE TABLES – QUARTERS I-III AND HEDIS

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TABLE G.1
RESPONSE RATES BY ENROLLMENT AND BENEFICIARY

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Active Duty	11.9	9.8	14.7	12.5	14.5	11.8	15.0	13.1	14.0	11.6
Active Duty fam, Prime, civ PCM	5.0	4.9	6.7	6.6	6.1	5.9	7.0	7.5	6.1	5.9
Active Duty fam, Prime, mil PCM	5.3	5.5	6.4	6.4	5.5	5.5	8.4	7.9	6.1	6.1
Active Duty fam, non-enrollee	2.6	2.6	5.1	5.2	4.7	5.2	.	.	4.1	4.3
Retired,<65, civ PCM	17.4	17.3	21.7	21.4	18.2	18.0	25.7	24.4	22.0	19.5
Retired,<65, mil PCM	16.3	16.9	19.1	20.3	18.3	18.6	24.8	24.4	20.0	19.7
Retired,<65, non- enrollee	8.5	9.3	16.3	19.5	14.0	16.6	.	.	13.0	15.1
Retired,65+, enrolled	22.4	22.7	47.1	47.3	50.6	50.6	.	.	39.2	39.4
Retired,65+, non- enrollee	20.3	20.2	46.1	45.9	44.6	44.5	.	.	37.1	37.0
TRICARE Reserve Select	5.8	5.8	10.4	10.4	10.0	10.0	.	.	8.7	8.8

TABLE G.2
RESPONSE RATES BY XOCONUS

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Europe	9.6	11.9	11.2	15.4	11.7	11.7	.	.	10.8	13.0
In Conus/Missing Region	9.3	13.6	12.7	24.9	11.8	23.5	18.1	16.6	12.5	20.3
Latin America	7.7	12.8	11.4	14.0	8.9	17.5	.	.	9.4	14.7
Western Pacific	8.2	8.8	10.7	12.0	9.7	10.6	50.0	80.3	9.5	10.4

TABLE G.3
RESPONSE RATES BY SEX

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Female	7.4	11.7	10.7	23.5	9.7	21.8	17.8	16.7	10.4	18.8
Male	11.7	15.2	15.0	25.3	14.4	24.1	18.3	16.6	14.7	21.1

TABLE G.4
RESPONSE RATES BY USA/OVERSEAS INDICATOR

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
In USA	9.4	13.7	12.8	24.9	11.9	23.6	18.3	16.9	12.6	20.4
Invalid/Missing	5.7	6.5	10.9	24.2	9.3	17.9	9.1	9.2	10.3	16.7
Not in USA	8.7	10.6	11.0	13.7	10.5	11.9	25.0	47.5	10.1	12.1

TABLE G.5
RESPONSE RATES BY BENEFICIARY CATEGORY

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted	
Active Duty and Guard/Reserve		11.8	9.6	14.6	12.3	14.4	11.8	15.0	13.1	13.9	11.5
Dependent of Active Duty & Guard/Reserve		4.4	4.7	6.0	6.4	5.3	5.7	8.2	7.8	5.5	5.9
Retiree/Dependant of Retiree/Survivor/Other 65+		20.5	20.5	46.2	46.1	45.1	45.0	.	.	37.3	37.2
Retiree/Dependant of Retiree/Survivor/Other <65		13.7	13.3	18.4	20.2	16.8	17.5	25.1	24.4	18.4	17.7

TABLE G.6
RESPONSE RATES BY CATCHMENT AREA

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINE D Unweighted	COMBINED Weighted
10th Med Group-USAF Academy CO	14.8	14.4	12.7	22.3	13.7	22.6	25.3	25.3	18.9	21.0
18th Med Grp-Kadena AB	10.3	12.6	10.4	12.7	9.7	12.0	.	.	10.1	12.4
20th Med Grp-Shaw	10.9	12.3	15.7	27.1	13.1	17.6	.	.	13.4	18.9
21st Med Grp-Peterson	10.1	13.1	15.4	19.0	13.7	16.1	22.5	22.5	17.4	17.8
2nd Med Grp-Barksdale	10.0	12.9	14.0	17.4	15.6	19.6	.	.	13.2	16.6
325th Med Grp-Tyndall	13.8	14.7	14.6	16.2	16.6	18.0	.	.	15.0	16.3
355th Med Grp-Davis Monthan	8.6	8.9	15.9	20.3	13.0	18.0	23.2	23.2	17.4	17.7
366th Med Grp-Mountain Home	13.4	12.6	14.9	17.3	16.0	26.3	.	.	14.8	19.1
374th Med Grp-Yokota AB	11.6	12.7	14.8	21.1	13.5	16.1	.	.	13.3	16.6
375th Med Grp-Scott	10.5	10.9	13.7	23.4	14.8	19.3	26.5	26.5	19.2	20.5
377th Med Grp-Kirtland	14.0	13.2	19.9	18.6	16.9	17.6	.	.	16.9	16.4
3rd Med Grp-Elmendorf	12.3	19.4	12.2	14.6	11.9	14.9	19.4	19.4	15.2	16.9
422 ABS Med Flt-Croughton	10.3	12.4	7.1	3.0	.	.	.	.	6.0	4.4
42nd Medical Group-Maxwell	15.8	15.8	20.1	21.5	16.2	17.3	.	.	17.4	18.2
45th Med Grp-Patrick	16.7	16.9	19.4	17.3	20.8	20.7	.	.	19.0	18.3
470 Med Flt-Geilenkirchen	2.5	1.7	20.0	21.3	13.8	14.6	.	.	13.3	13.9
48th Med Grp-Lakenheath	10.6	13.4	11.5	14.2	11.6	15.2	.	.	11.2	14.3
52nd Med Group-Spangdahlem	12.4	13.6	15.4	18.3	16.3	18.0	.	.	14.7	16.6
55th Med Grp-Offutt	11.8	13.8	16.1	19.6	14.1	21.9	22.7	22.7	17.4	19.4
56th Med Grp-Luke	11.9	17.7	12.4	18.2	10.7	16.8	23.5	23.5	17.1	19.5
59th Med Wing-Lackland	11.8	12.0	15.1	20.9	15.2	30.3	21.1	21.1	16.0	21.3
60th Med Grp-Travis	11.4	14.1	14.7	23.6	12.3	21.1	19.9	19.9	14.7	19.5
633rd Med Grp Langley-Eustis	10.8	14.6	12.6	23.9	12.2	23.7	20.1	20.1	14.3	20.6
6th Med Grp-MacDill	10.7	15.1	15.2	20.8	14.2	21.7	23.1	23.1	17.8	20.5
72nd Med Grp-Tinker	10.6	14.1	11.3	15.8	9.8	12.3	21.9	21.9	13.9	16.0
75th Med Grp-Hill	11.7	13.5	14.7	16.7	13.4	15.7	.	.	13.3	15.3
779th Med Grp-Andrews	11.0	13.7	12.1	13.3	13.3	17.3	20.2	20.2	15.5	15.8
78th Med Grp-Robins	12.9	16.6	12.2	14.2	13.6	17.6	20.9	20.9	16.6	17.8
7th Med Grp-Dyess	11.8	12.0	11.4	11.8	12.8	14.3	.	.	12.0	12.7
81st Med Grp-Keesler	7.6	6.8	12.6	21.6	11.2	24.9	.	.	10.5	18.0
82nd Med Grp-Sheppard	10.0	8.6	12.8	13.4	14.2	14.4	.	.	12.3	12.0
88th Med Grp-Wright-Patterson	14.6	21.1	17.3	22.8	17.1	31.9	26.6	26.6	20.5	25.6
90th Med Grp-F.E. Warren	13.1	14.0	13.8	17.1	15.1	16.6	.	.	14.0	15.9

TABLE G.6 (continued)

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINE D Unweighted	COMBINED Weighted
92nd Med Grp-Fairchild	13.6	12.4	19.4	29.5	14.9	16.4	.	.	16.0	19.7
95th Med Grp-Edwards	12.8	14.3	14.5	26.0	14.4	16.1	.	.	13.9	19.1
96th Med Grp-Eglin	8.2	17.3	13.7	25.7	11.6	32.0	21.1	21.1	14.6	24.3
99th Med Grp-O'Callaghan Hosp	8.9	8.1	12.7	30.6	11.1	18.6	23.2	23.2	15.5	19.9
Bassett ACH-Ft. Wainwright	7.2	9.3	9.4	11.3	7.8	9.7	.	.	8.1	10.1
Bavaria Meddac	8.6	12.4	9.0	9.2	12.8	12.9	.	.	10.2	11.6
Bayne-Jones ACH-Ft. Polk	8.0	14.5	9.3	9.7	9.9	10.1	.	.	9.0	11.5
Blanchfield ACH-Ft. Campbell	6.3	8.6	6.7	15.0	7.8	14.1	10.8	10.8	8.3	12.2
Brian Allgood ACH-Seoul	5.9	8.0	9.9	10.3	8.0	8.2	.	.	8.0	8.9
Brooke AMC-Ft. Sam Houston	8.3	16.6	11.0	24.6	11.3	25.6	20.6	20.6	13.4	22.1
Darnall ACH-Ft. Hood	6.7	12.4	6.2	12.3	4.7	15.6	11.9	11.9	7.7	13.1
Eisenhower AMC-Ft. Gordon	11.2	22.2	12.3	23.6	9.2	20.3	17.5	17.5	13.4	21.3
Evans ACH-Ft. Carson	4.7	10.2	8.2	20.3	6.5	17.5	10.2	10.2	7.6	15.2
FHCC-Formerly NHC Great Lakes	4.1	6.8	10.2	16.3	8.2	21.1	.	.	7.5	14.7
Fox AHC-Redstone Arsenal	12.9	15.5	17.2	20.5	16.5	17.0	.	.	15.5	17.6
Ft Belvoir Community Hosp-FBCH	9.8	19.7	16.1	25.2	13.8	22.8	22.9	22.9	15.8	22.5
Guthrie AHC-Ft. Drum	6.8	6.2	6.9	5.7	6.2	6.0	8.1	8.1	7.3	6.5
Ireland ACH-Ft. Knox	10.7	13.1	13.7	19.8	15.2	24.1	23.4	23.4	17.3	18.6
Irwin ACH-Ft. Riley	6.4	6.6	8.7	10.0	8.8	14.4	12.1	12.1	9.5	10.6
Keller ACH-West Point	10.4	11.4	11.5	16.3	13.2	17.5	.	.	11.7	15.2
Kenner AHC-Ft. Lee	9.2	9.9	11.1	14.3	13.3	16.9	19.5	19.5	15.0	15.2
Kimbrough Amb Car Cen-Ft Meade	12.7	15.5	14.5	20.5	14.3	17.7	18.1	18.1	15.1	17.9
L. Wood ACH-Ft. Leonard Wood	7.0	7.6	8.0	15.9	9.1	12.7	.	.	8.1	12.2
Landstuhl Regional Medcen	7.5	12.8	7.5	16.0	7.6	8.7	.	.	7.5	12.6
Lyster AHC-Ft. Rucker	11.9	21.8	13.7	16.1	13.2	15.2	.	.	12.9	17.9
Madigan AMC-Ft. Lewis	7.1	9.9	11.1	26.8	11.3	23.7	13.5	13.5	10.9	19.3
Martin ACH-Ft. Benning	4.7	5.5	9.1	14.3	8.0	11.9	15.5	15.5	10.4	11.4
McDonald AHC-Ft. Eustis	10.7	28.3	10.1	27.3	10.5	21.0	15.6	15.6	12.8	23.5
Moncrief ACH-Ft. Jackson	6.8	9.5	12.0	25.6	11.9	14.9	19.1	19.1	13.7	18.0
Munson AHC-Ft. Leavenworth	10.9	12.7	14.5	15.3	14.3	16.1	.	.	13.2	14.6
NBHC Fort Worth	.	.	.	.	.	.	20.1	20.1	20.1	20.1
NBHC Little Creek	10.0	12.3	11.3	13.9	8.4	11.6	.	.	9.9	12.6
NBHC Mayport	8.4	10.6	9.2	10.7	11.3	16.7	.	.	9.6	12.7
NBHC NAS North Island	10.8	10.4	8.4	9.7	9.0	17.6	.	.	9.4	12.7
NBHC NTC San Diego	7.0	7.9	10.2	10.5	8.0	17.4	.	.	8.4	12.0
NBHC Navsta Sewells	10.2	11.0	14.5	15.9	10.8	11.2	.	.	11.8	12.7

TABLE G.6 (continued)

	Q1 2017	Q1 2017	Q2 2017	Q2 2017	Q3 2017	Q3 2017	HEDIS	HEDIS	COMBINE	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	D	COMBINED
									Unweighted	Weighted
NBHC Oceana	11.1	14.3	8.8	11.8	8.9	13.1	.	.	9.6	13.1
NBHC Port Hueneme	8.5	8.8	10.1	10.7	12.2	12.6	.	.	10.3	10.7
NBHC Portsmouth	12.7	14.8	14.6	18.1	13.8	22.0	.	.	13.7	18.1
NH Beaufort	5.6	4.7	8.7	12.8	7.7	18.4	.	.	7.3	12.1
NH Bremerton	6.0	9.5	10.5	21.6	7.4	13.5	15.9	15.9	11.0	15.4
NH Camp Lejeune	5.9	12.1	8.2	10.4	7.2	12.5	11.9	11.9	8.6	11.7
NH Camp Pendleton	5.4	9.1	7.4	11.5	6.8	13.8	12.5	12.5	8.1	11.6
NH Guam-Agana	7.7	9.1	9.9	11.7	9.6	13.1	.	.	9.1	11.3
NH Guantanamo Bay	8.8	8.3	11.3	11.3	9.2	9.1	.	.	9.8	9.6
NH Jacksonville	7.3	9.8	10.9	19.8	11.6	26.2	16.2	16.2	11.5	18.3
NH LeMoore	8.4	7.7	8.5	9.8	7.3	9.1	.	.	8.1	8.7
NH Naples	6.7	7.9	9.3	9.1	8.5	9.4	.	.	8.2	8.8
NH Oak Harbor	10.2	15.4	9.2	15.1	7.6	10.4	.	.	9.0	13.7
NH Okinawa	4.9	6.3	6.6	8.1	8.2	10.0	.	.	6.5	8.1
NH Pensacola	9.1	16.3	11.4	29.7	9.5	17.6	17.4	17.4	12.7	20.7
NH Twentynine Palms	7.4	15.3	6.5	6.6	9.2	17.0	.	.	7.7	13.3
NH Yokosuka	6.6	7.3	8.7	9.8	6.7	8.0	.	.	7.3	8.4
NHC Cherry Point	6.9	8.5	9.4	12.0	9.7	12.0	.	.	8.7	10.8
NHC Corpus Christi	13.5	13.4	14.7	14.8	16.2	16.7	26.1	26.1	15.0	15.1
NHC Hawaii	9.1	9.4	13.9	15.0	12.1	12.6	12.6	12.6	12.1	12.4
NHC Patuxent River	9.8	11.9	14.6	26.3	11.7	15.5	.	.	12.0	18.2
NHC Quantico	13.0	13.7	15.8	18.5	12.3	14.3	18.9	18.9	16.0	16.5
NMC Portsmouth	6.0	8.8	9.5	17.9	7.8	14.0	13.3	13.3	8.9	13.4
NMC San Diego	6.4	10.6	9.2	20.1	8.6	15.9	14.1	14.1	9.3	15.2
Naval Health Care New England	10.4	12.5	13.5	15.7	11.1	18.1	18.1	18.1	14.5	16.1
Naval Health Clinic Charleston	6.6	7.7	11.4	11.2	10.3	9.4	.	.	9.5	9.4
Out of Catchment North Region	8.7	15.7	15.7	32.4	13.2	30.2	.	.	12.5	26.2
Out of Catchment OCONUS Region	7.0	7.4	10.7	20.2	9.1	13.2	.	.	8.9	13.7
Out of Catchment South Region	7.4	14.4	12.4	29.2	11.9	27.2	.	.	10.6	23.7
Out of Catchment West Region	9.1	15.4	16.2	32.7	13.6	31.2	.	.	12.9	26.4
R W Bliss AHC-Ft. Huachuca	15.4	11.4	15.8	15.6	16.0	12.3	.	.	15.7	12.9
RAF Upwood	14.0	18.3	18.2	23.2	4.3	5.5	.	.	12.9	16.9
Reynolds ACH-Ft. Sill	8.1	8.8	9.9	16.9	11.0	12.6	15.9	15.9	11.9	13.3
TRICARE Outpatient-Chula Vista	14.2	11.8	13.2	13.2	12.3	12.3	.	.	13.2	12.4
Tripler AMC-Ft. Shafter	8.4	16.4	9.5	18.6	9.4	19.2	12.2	12.2	10.0	17.3
USCG Clinic Detroit	.	.	33.3	33.3	60.0	60.0	.	.	35.3	35.3

TABLE G.6 (continued)

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINE D Unweighted	COMBINED Weighted
USCG Clinic Key West	15.4	16.4	18.2	16.6	29.4	29.4	.	.	20.4	20.6
Walter Reed AMC-Washington DC	37.1	36.9	42.9	42.7	36.6	37.1	.	.	38.7	38.8
Walter Reed Natl Mil Med Cntr	9.8	15.5	17.5	35.2	13.1	27.4	26.6	26.6	17.0	26.4
Weed ACH-Ft. Irwin	8.2	7.9	7.4	5.9	7.6	6.6	.	.	7.7	6.9
William Beaumont AMC-Ft. Bliss	6.8	11.0	8.1	12.6	9.6	12.3	12.2	12.2	9.4	12.0
Winn ACH-Ft. Stewart	5.0	9.6	7.3	15.3	6.6	13.6	1.3	1.3	8.6	12.9
Womack AMC-Ft. Bragg	7.7	12.3	8.9	13.2	6.2	8.1	13.1	13.1	9.1	11.6

TABLE G.7

RESPONSE RATES BY SERVICE AFFILIATION

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Administrative	.	.	17.6	10.1	18.2	72.3	.	.	13.2	26.8
Air Force	11.5	13.6	14.3	22.5	13.8	22.4	21.6	21.6	14.5	19.7
Army	7.8	11.8	9.6	16.9	9.3	15.5	14.1	13.1	10.2	14.5
Coast Guard	22.2	24.2	24.7	25.1	22.9	23.5	.	.	23.3	24.3
Missing/unknown	10.6	12.9	9.8	35.1	9.6	19.4	.	.	9.6	23.7
National Capital Region Medical Director	10.1	19.3	17.2	31.5	13.7	26.2	25.2	24.6	17.1	25.5
Navy	7.7	10.0	10.1	15.9	9.3	15.0	14.2	13.6	9.8	13.6
Noncatchment	6.6	15.0	13.5	34.1	12.0	33.6	.	.	10.6	27.5
Support Contractor	10.0	14.4	15.1	26.1	13.0	22.9	23.0	21.6	14.9	21.3
Uniformed Services Family Health Plan	14.4	19.7	17.9	35.6	14.9	28.2	10.0	10.4	15.7	28.0

TABLE G.8

RESPONSE RATES BY BRANCH OF SERVICE

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Air Force	11.7	15.9	15.3	30.7	14.6	27.4	23.1	23.2	15.3	24.6
Army	7.6	12.2	10.7	21.9	9.9	20.5	15.3	14.3	10.5	17.8
Coast Guard	13.7	13.4	17.5	26.4	16.9	27.9	19.6	18.7	16.4	22.6
Marine Corps	6.9	11.9	9.2	15.4	8.5	17.3	15.3	14.2	9.4	14.8
Navy	8.5	12.9	11.7	23.6	10.6	23.0	17.0	15.7	11.3	19.5
Other/Unknown	15.7	25.8	23.1	40.4	19.4	46.0	30.0	31.5	20.7	36.3

TABLE G.9

RESPONSE RATES BY TRICARE NEXT GENERATION OF CONTRACTS REGION GROUPING

	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
North	9.2	14.3	13.2	25.5	11.7	23.7	18.5	16.7	13.0	20.8
Overseas	8.3	9.7	10.9	13.6	10.3	11.6	5.9	8.3	9.8	11.7
South	9.2	13.6	12.5	24.8	12.2	24.0	18.5	17.8	12.5	20.6
West	9.7	13.0	12.8	24.6	11.8	22.8	17.4	15.6	12.4	19.7

TABLE G.10
RESPONSE RATES BY COMBINED GEOGRAPHIC AREA

TNEX Reg	Catchment	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
North	375th Med Grp-Scott	10.5	10.9	13.7	23.4	14.8	19.3	26.5	26.5	19.2	20.5
North	633rd Med Grp										
	Langley-Eustis	10.8	14.6	12.6	23.9	12.2	23.7	20.1	20.1	14.3	20.6
North	779th Med Grp- Andrews	11.0	13.7	12.1	13.3	13.3	17.3	20.2	20.2	15.5	15.8
North	88th Med Grp-Wright- Patterson	14.6	21.1	17.3	22.8	17.1	31.9	26.6	26.6	20.5	25.6
North	Blanchfield ACH-Ft. Campbell	6.3	8.6	6.7	15.0	7.8	14.1	10.8	10.8	8.3	12.2
North	FHCC-Formerly NHC Great Lakes	4.1	6.8	10.2	16.3	8.2	21.1	.	.	7.5	14.7
North	Ft Belvoir Community Hosp-FBCH	9.8	19.7	16.1	25.2	13.8	22.8	22.9	22.9	15.8	22.5
North	Guthrie AHC-Ft. Drum	6.8	6.2	6.9	5.7	6.2	6.0	8.1	8.1	7.3	6.5
North	Ireland ACH-Ft. Knox	10.7	13.1	13.7	19.8	15.2	24.1	23.4	23.4	17.3	18.6
North	Keller ACH-West Point	10.4	11.4	11.5	16.3	13.2	17.5	.	.	11.7	15.2
North	Kenner AHC-Ft. Lee	9.2	9.9	11.1	14.3	13.3	16.9	19.5	19.5	15.0	15.2
North	Kimbrough Amb Car Cen-Ft Meade	12.7	15.5	14.5	20.5	14.3	17.7	18.1	18.1	15.1	17.9
North	McDonald AHC-Ft. Eustis	10.7	28.3	10.1	27.3	10.5	21.0	15.6	15.6	12.8	23.5
North	NBHC Fort Worth	.	.	.	.	.	.	1.0	1.0	10.0	10.0
North	NBHC Little Creek	10.0	12.3	11.3	13.9	8.4	11.6	.	.	9.9	12.6
North	NBHC Navsta Sewells	10.2	11.0	14.5	15.9	10.8	11.2	.	.	11.8	12.7
North	NBHC Oceana	11.1	14.3	8.8	11.8	8.9	13.1	.	.	9.6	13.1
North	NBHC Portsmouth	12.7	14.8	14.6	18.1	13.8	22.0	.	.	13.7	18.1
North	NH Camp Lejeune	5.9	12.1	8.2	10.4	7.2	12.5	11.9	11.9	8.6	11.7
North	NHC Cherry Point	6.9	8.5	9.4	12.0	9.7	12.0	.	.	8.7	10.8
North	NHC Patuxent River	9.8	11.9	14.6	26.3	11.7	15.5	.	.	12.0	18.2
North	NHC Quantico	13.0	13.7	15.8	18.5	12.3	14.3	18.9	18.9	16.0	16.5
North	NMC Portsmouth	6.0	8.8	9.5	17.9	7.8	14.0	13.3	13.3	8.9	13.4
North	Naval Health Care New England	10.4	12.5	13.5	15.7	11.1	18.1	18.1	18.1	14.5	16.1

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
North	Out of Catchment North Region	8.7	15.7	15.7	32.4	13.2	30.2	.	.	12.5	26.2
North	Out of Catchment OCONUS Region	2.7	7.2	8.8	26.4	3.3	17.4	.	.	4.5	16.8
North	Out of Catchment South Region	.	.	19.2	18.0	.	.	.	.	9.4	9.9
North	USCG Clinic Detroit	.	.	33.3	33.3	60.0	60.0	.	.	35.3	35.3
North	USCG Clinic Key West	50.0	50.0	.	.	.	.	.	.	25.0	25.3
North	Walter Reed AMC- Washington DC	37.1	36.9	42.9	42.7	36.6	37.1	.	.	38.7	38.8
North	Walter Reed Natl Mil Med Cntr	9.8	15.5	17.5	35.2	13.1	27.4	26.6	26.6	17.0	26.4
North	Womack AMC-Ft. Bragg	7.7	12.3	8.9	13.2	6.2	8.1	13.1	13.1	9.1	11.6
Overseas	18th Med Grp- Kadena AB	10.3	12.6	10.4	12.7	9.7	12.0	.	.	10.1	12.4
Overseas	374th Med Grp- Yokota AB	11.6	12.7	14.8	21.1	13.5	16.1	.	.	13.3	16.6
Overseas	422 ABS Med Flt- Croughton	10.3	12.4	7.1	3.0	.	.	.	.	6.0	4.4
Overseas	470 Med Flt- Geilenkirchen	2.6	1.8	19.6	20.3	12.3	12.0	.	.	12.5	12.3
Overseas	48th Med Grp- Lakenheath	10.6	13.4	11.5	14.2	11.6	15.2	.	.	11.2	14.3
Overseas	52nd Med Group- Spangdahlem	12.4	13.6	15.4	18.3	16.3	18.0	.	.	14.7	16.6
Overseas	Bavaria Meddac	8.6	12.4	9.0	9.2	12.8	12.9	.	.	10.2	11.6
Overseas	Brian Allgood ACH- Seoul	5.9	8.0	9.9	10.3	8.0	8.2	.	.	8.0	8.9
Overseas	Landstuhl Regional Medcen	7.5	12.8	7.5	16.0	7.6	8.7	.	.	7.5	12.6
Overseas	NH Guam-Agana	7.7	9.1	9.9	11.7	9.6	13.1	.	.	9.1	11.3
Overseas	NH Guantanamo Bay	8.8	8.3	11.3	11.3	9.2	9.1	.	.	9.8	9.6
Overseas	NH Naples	6.7	7.9	9.3	9.1	8.5	9.4	.	.	8.2	8.8
Overseas	NH Okinawa	4.9	6.3	6.6	8.1	8.2	10.0	.	.	6.5	8.1
Overseas	NH Yokosuka	6.6	7.3	8.7	9.8	6.7	8.0	.	.	7.3	8.4
Overseas	Out of Catchment OCONUS Region	7.3	7.9	10.8	16.5	9.4	12.2	.	.	9.2	12.3
Overseas	RAF Upwood	14.0	18.3	18.2	23.2	4.3	5.5	.	.	12.9	16.9

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
South	20th Med Grp-Shaw	10.9	12.3	15.7	27.1	13.1	17.6	.	.	13.4	18.9
South	2nd Med Grp- Barksdale	10.0	12.9	14.0	17.4	15.6	19.6	.	.	13.2	16.6
South	325th Med Grp- Tyndall	13.8	14.7	14.6	16.2	16.6	18.0	.	.	15.0	16.3
South	42nd Medical Group- Maxwell	15.8	15.8	20.1	21.5	16.2	17.3	.	.	17.4	18.2
South	45th Med Grp-Patrick	16.7	16.9	19.4	17.3	20.8	20.7	.	.	19.0	18.3
South	470 Med Flt- Geilenkirchen	.	.	33.3	40.0	100.0	100.0	.	.	50.0	58.6
South	59th Med Wing- Lackland	11.8	12.0	15.1	20.9	15.2	30.3	21.1	21.1	16.0	21.3
South	6th Med Grp-MacDill	10.7	15.1	15.2	20.8	14.2	21.7	23.1	23.1	17.8	20.5
South	72nd Med Grp-Tinker	10.6	14.1	11.3	15.8	9.8	12.3	21.9	21.9	13.9	16.0
South	78th Med Grp-Robins	12.9	16.6	12.2	14.2	13.6	17.6	20.9	20.9	16.6	17.8
South	7th Med Grp-Dyess	11.8	12.0	11.4	11.8	12.8	14.3	.	.	12.0	12.7
South	81st Med Grp- Keesler	7.6	6.8	12.6	21.6	11.2	24.9	.	.	10.5	18.0
South	82nd Med Grp- Sheppard	10.0	8.6	12.8	13.4	14.2	14.4	.	.	12.3	12.0
South	96th Med Grp-Eglin	8.2	17.3	13.7	25.7	11.6	32.0	21.1	21.1	14.6	24.3
South	Bayne-Jones ACH- Ft. Polk	8.0	14.5	9.3	9.7	9.9	10.1	.	.	9.0	11.5
South	Brooke AMC-Ft. Sam Houston	8.3	16.6	11.0	24.6	11.3	25.6	20.6	20.6	13.4	22.1
South	Darnall ACH-Ft. Hood	6.7	12.4	6.2	12.3	4.7	15.6	11.9	11.9	7.7	13.1
South	Eisenhower AMC-Ft. Gordon	11.2	22.2	12.3	23.6	9.2	20.3	17.5	17.5	13.4	21.3
South	Fox AHC-Redstone Arsenal	12.9	15.5	17.2	20.5	16.5	17.0	.	.	15.5	17.6
South	Lyster AHC-Ft. Rucker	11.9	21.8	13.7	16.1	13.2	15.2	.	.	12.9	17.9
South	Martin ACH-Ft. Benning	4.7	5.5	9.1	14.3	8.0	11.9	15.5	15.5	10.4	11.4
South	Moncrief ACH-Ft. Jackson	6.8	9.5	12.0	25.6	11.9	14.9	19.1	19.1	13.7	18.0
South	NBHC Fort Worth	.	.	.	.	.	.	20.3	20.3	20.3	20.3
South	NBHC Mayport	8.4	10.6	9.2	10.7	11.3	16.7	.	.	9.6	12.7
South	NH Beaufort	5.6	4.7	8.7	12.8	7.7	18.4	.	.	7.3	12.1

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
South	NH Jacksonville	7.3	9.8	10.9	19.8	11.6	26.2	16.2	16.2	11.5	18.3
South	NH Pensacola	9.1	16.3	11.4	29.7	9.5	17.6	17.4	17.4	12.7	20.7
South	NHC Corpus Christi	13.5	13.4	14.7	14.8	16.2	16.7	26.1	26.1	15.0	15.1
South	Naval Health Clinic Charleston	6.6	7.7	11.4	11.2	10.3	9.4	.	.	9.5	9.4
South	Out of Catchment OCONUS Region	3.3	8.7	11.0	24.8	5.6	14.3	.	.	6.5	16.2
South	Out of Catchment South Region	7.4	14.4	12.4	29.2	11.9	27.3	.	.	10.6	23.7
South	Reynolds ACH-Ft. Sill	8.1	8.8	9.9	16.9	11.0	12.6	15.9	15.9	11.9	13.3
South	USCG Clinic Key West	13.0	13.0	22.2	22.2	29.4	29.4	.	.	20.4	20.7
South	Winn ACH-Ft. Stewart	5.0	9.6	7.3	15.3	6.6	13.6	1.3	1.3	8.6	12.9
West	10th Med Group- USAF Academy CO	14.8	14.4	12.7	22.3	13.7	22.6	25.3	25.3	18.9	21.0
West	21st Med Grp- Peterson	10.1	13.1	15.4	19.0	13.7	16.1	22.5	22.5	17.4	17.8
West	355th Med Grp-Davis Monthan	8.6	8.9	15.9	20.3	13.0	18.0	23.2	23.2	17.4	17.7
West	366th Med Grp- Mountain Home	13.4	12.6	14.9	17.3	16.0	26.3	.	.	14.8	19.1
West	377th Med Grp- Kirtland	14.0	13.2	19.9	18.6	16.9	17.6	.	.	16.9	16.4
West	3rd Med Grp- Elmendorf	12.3	19.4	12.2	14.6	11.9	14.9	19.4	19.4	15.2	16.9
West	55th Med Grp-Offutt	11.8	13.8	16.1	19.6	14.1	21.9	22.7	22.7	17.4	19.4
West	56th Med Grp-Luke	11.9	17.7	12.4	18.2	10.7	16.8	23.5	23.5	17.1	19.5
West	60th Med Grp-Travis	11.4	14.1	14.7	23.6	12.3	21.1	19.9	19.9	14.7	19.5
West	75th Med Grp-Hill	11.7	13.5	14.7	16.7	13.4	15.7	.	.	13.3	15.3
West	90th Med Grp-F.E. Warren	13.1	14.0	13.8	17.1	15.1	16.6	.	.	14.0	15.9
West	92nd Med Grp- Fairchild	13.6	12.4	19.4	29.5	14.9	16.4	.	.	16.0	19.7
West	95th Med Grp- Edwards	12.8	14.3	14.5	26.0	14.4	16.1	.	.	13.9	19.1
West	99th Med Grp- O'Callaghan Hosp	8.9	8.1	12.7	30.6	11.1	18.6	23.2	23.2	15.5	19.9
West	Bassett ACH-Ft. Wainwright	7.2	9.3	9.4	11.3	7.8	9.7	.	.	8.1	10.1

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
West	Evans ACH-Ft. Carson	4.7	10.2	8.2	20.3	6.5	17.5	10.2	10.2	7.6	15.2
West	Irwin ACH-Ft. Riley	6.4	6.6	8.7	10.0	8.8	14.4	12.1	12.1	9.5	10.6
West	L. Wood ACH-Ft. Leonard Wood	7.0	7.6	8.0	15.9	9.1	12.7	.	.	8.1	12.2
West	Madigan AMC-Ft. Lewis	7.1	9.9	11.1	26.8	11.3	23.7	13.5	13.5	10.9	19.3
West	Munson AHC-Ft. Leavenworth	10.9	12.7	14.5	15.3	14.3	16.1	.	.	13.2	14.6
West	NBHC NAS North Island	10.8	10.4	8.4	9.7	9.0	17.6	.	.	9.4	12.7
West	NBHC NTC San Diego	7.0	7.9	10.2	10.5	8.0	17.4	.	.	8.4	12.0
West	NBHC Port Hueneme	8.5	8.8	10.1	10.7	12.2	12.6	.	.	10.3	10.7
West	NH Bremerton	6.0	9.5	10.5	21.6	7.4	13.5	15.9	15.9	11.0	15.4
West	NH Camp Pendleton	5.4	9.1	7.4	11.5	6.8	13.8	12.5	12.5	8.1	11.6
West	NH LeMoore	8.4	7.7	8.5	9.8	7.3	9.1	.	.	8.1	8.7
West	NH Oak Harbor	10.2	15.4	9.2	15.1	7.6	10.4	.	.	9.0	13.7
West	NH Twentynine Palms	7.4	15.3	6.5	6.6	9.2	17.0	.	.	7.7	13.3
West	NHC Hawaii	9.1	9.4	13.9	15.0	12.1	12.6	12.6	12.6	12.1	12.4
West	NMC San Diego	6.4	10.6	9.2	20.1	8.6	15.9	14.1	14.1	9.3	15.2
West	Out of Catchment OCONUS Region	2.4	1.6	9.1	28.4	3.8	13.2	.	.	5.1	15.4
West	Out of Catchment West Region	9.1	15.4	16.2	32.7	13.6	31.2	.	.	12.9	26.4
West	R W Bliss AHC-Ft. Huachuca	15.4	11.4	15.8	15.6	16.0	12.3	.	.	15.7	12.9
West	TRICARE Outpatient- Chula Vista	14.2	11.8	13.2	13.2	12.3	12.3	.	.	13.2	12.4
West	Tripler AMC-Ft. Shafter	8.4	16.4	9.5	18.6	9.4	19.2	12.2	12.2	10.0	17.3
West	Weed ACH-Ft. Irwin	8.2	7.9	7.4	5.9	7.6	6.6	.	.	7.7	6.9
West	William Beaumont AMC-Ft. Bliss	6.8	11.0	8.1	12.6	9.6	12.3	12.2	12.2	9.4	12.0

TABLE G.11
RESPONSE RATES BY BENEFICIARY CATEGORY AND SEX

Beneficiary Category	Sex	Q1 2017 Unweighted	Q1 2017 Weighted	Q2 2017 Unweighted	Q2 2017 Weighted	Q3 2017 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Active Duty and Guard/Reserve	Female	13.9	11.7	18.3	17.0	17.9	15.5	18.8	16.7	17.2	15.0
Active Duty and Guard/Reserve	Male	11.4	9.1	13.8	11.4	13.7	11.0	14.2	12.3	13.2	10.7
Dependent of Active Duty & Guard/Reserve	Female	4.6	5.0	6.4	6.8	5.6	5.9	8.6	8.2	5.8	6.2
Dependent of Active Duty & Guard/Reserve	Male	2.7	2.7	3.6	3.9	3.5	4.0	5.9	5.5	3.5	3.8
Retiree/Dependant of Retiree/Survivor/Other 65+	Female	15.8	15.7	41.5	41.3	39.7	39.6	.	.	32.2	32.1
Retiree/Dependant of Retiree/Survivor/Other 65+	Male	26.2	26.2	51.4	51.2	51.5	51.3	.	.	43.2	43.1
Retiree/Dependant of Retiree/Survivor/Other <65	Female	12.3	12.3	17.3	19.6	15.8	16.9	24.4	24.0	17.3	16.9
Retiree/Dependant of Retiree/Survivor/Other <65	Male	15.2	14.4	19.7	20.8	17.8	18.2	25.7	24.7	19.6	18.5

TABLE G.12
RESPONSE RATES BY BENEFICIARY CATEGORY AND SERVICE

Beneficiary Category	Service	Q1 2017	Q1 2017	Q2 2017	Q2 2017	Q3 2017	Q3 2017	HEDIS	HEDIS	COMBINED	COMBINED
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Active Duty and Guard/Reserve	Air Force	16.7	16.2	20.0	19.8	21.2	20.4	23.7	24.0	20.0	19.3
	Army	7.8	7.0	9.9	8.9	9.4	8.4	10.8	9.9	9.5	8.3
	Coast Guard	22.3	21.7	25.1	24.5	22.0	21.6	24.4	22.4	23.2	22.6
	Marine Corps	7.1	7.0	9.2	8.0	8.2	7.3	12.1	11.4	9.2	7.9
	Navy	8.4	6.9	11.3	10.7	10.2	9.4	12.8	11.6	10.6	9.4
	Other/Unknown	32.9	33.0	42.6	43.5	33.9	33.5	38.7	42.4	37.0	37.5
Dependent of Active Duty & Guard/Reserve	Air Force	4.8	4.8	6.3	6.4	5.5	6.0	10.0	10.3	5.8	6.1
	Army	4.2	4.8	5.8	6.1	5.2	5.5	7.3	7.2	5.3	5.7
	Coast Guard	6.2	5.7	6.7	8.0	8.4	7.7	11.8	12.8	7.5	7.7
	Marine Corps	3.4	3.7	5.2	5.0	4.7	4.6	7.6	7.4	4.7	4.8
	Navy	4.3	4.6	6.0	6.9	4.9	5.8	7.6	7.0	5.2	5.9
	Other/Unknown	7.4	8.4	12.8	27.3	9.3	8.7	11.3	11.7	10.0	15.3
Retiree/Dependant of Retiree/Survivor/Other 65+	Air Force	20.7	20.8	51.6	51.3	45.2	45.2	.	.	39.1	39.0
	Army	20.5	20.4	44.6	44.3	43.3	43.3	.	.	36.0	35.9
	Coast Guard	5.7	6.0	40.0	39.9	55.9	54.6	.	.	33.9	33.6
	Marine Corps	25.8	25.8	35.6	35.7	43.7	43.8	.	.	35.3	35.4
	Navy	19.4	19.5	43.5	43.5	46.5	46.2	.	.	36.7	36.7
	Other/Unknown	66.7	66.5	54.5	54.3	87.5	87.6	.	.	68.0	67.8
Retiree/Dependant of Retiree/Survivor/Other <65	Air Force	14.8	14.3	19.6	22.5	17.5	19.6	26.8	26.6	19.6	19.5
	Army	12.2	12.1	17.3	18.9	15.7	16.0	24.1	23.4	17.4	16.4
	Coast Guard	15.5	16.5	24.0	24.8	22.0	22.7	23.3	21.5	21.4	21.6
	Marine Corps	13.2	12.3	16.5	16.3	15.6	15.9	23.9	23.5	17.3	15.5
	Navy	14.2	14.2	18.3	20.3	17.1	17.4	24.3	23.7	18.2	17.9
	Other/Unknown	11.3	12.1	18.6	21.1	27.1	33.8	41.5	39.0	20.3	19.2

APPENDIX E

TECHNICAL DESCRIPTION OF THE 2017 TRICARE BENEFICIARY REPORTS

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The beneficiary reports present 11 scores for each region and catchment area in the MHS and for the MHS overall. Scores will enable users to compare providers to national benchmarks in these areas: getting needed care; getting care quickly; how well doctors communicate; customer service; claims processing; rating of the health plan, health care, personal doctor, and specialist; preventive care standards; and health behavior. These scores are made up of three different types, described in Table E.1: CAHPS composites, ratings, and TMA standard composites. A trend page compares composites and ratings with values from previous quarters, calculates a quarterly trend, and tests the trend for statistical significance in the quarterly version of the beneficiary reports. In the annual version, results from 3 years are presented.

TABLE E.1

CONTENT OF THE 2017 TRICARE BENEFICIARY REPORTS

CAHPS COMPOSITES

The CAHPS composites group together survey responses to a set of related HCSDB questions taken from CAHPS. Scores expressed as CAHPS composites profile TRICARE beneficiaries' satisfaction with their ability to get needed care, the speed with which they receive care, interactions with their doctor, their experience with customer service representatives, and their experience with claims processing. Scores are presented in relation to national benchmarks.

SATISFACTION RATINGS

Scores expressed as ratings reflect beneficiaries' self-rated satisfaction with their health plan, health care, and personal providers. The scores, adjusted for patient age and health status, are presented relative to national benchmarks.

TMA STANDARD COMPOSITES

Two TMA standard composite scores are reported. One score is based on how the preventive care that beneficiaries received compares with Healthy People 2020 standards. Preventive care indicators to be combined are prenatal care, hypertension screening, mammography, and Pap smears. Another composite combines a non-smoking rate, the rate at which smokers are counseled to quit, and rate of non-obese BMI ratio.

Table E.2 lists the questions and response choices for the CAHPS 5.0 composites in the beneficiary reports. Question numbers refer to the CAHPS 5.0 Adult Questionnaire (Commercial). CAHPS Supplemental questions are from CAHPS 4.0, as noted in the table. Response choices for each question within a composite are collapsed into three-item scales so that all composites have the same range. Along with the composites, mean responses to each question are presented and compared to national civilian benchmarks.

Four scores are based on respondents' ratings of health care and health care providers: health plan, health care, personal doctor, and specialist. These ratings are measures of overall beneficiary satisfaction. Questions about these aspects of care request beneficiaries to rate their health plan, health care, and physicians on a scale of 0 to 10, with 0 being the worst and 10 being the best. The rating score will be the mean. For the purpose of presentation, the means are multiplied by 100 so that the scores are presented on a scale of 0 to 100.

TABLE E.2

CAHPS 5.0 QUESTIONS AND RESPONSE CHOICES
EXPRESSED AS COMPOSITE SCORES AND RATINGS

ADULT QUESTIONNAIRE CAHPS 5.0	GETTING NEEDED CARE	RESPONSE CHOICE
Q18	In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?	Never Sometimes Usually Always
Q9	In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?	Never Sometimes Usually Always
ADULT QUESTIONNAIRE CAHPS 5.0	GETTING CARE QUICKLY	RESPONSE CHOICE
Q6	In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?	Never Sometimes Usually Always
Q4	In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?	Never Sometimes Usually Always
ADULT QUESTIONNAIRE CAHPS 5.0	HOW WELL DOCTORS COMMUNICATE	RESPONSE CHOICE
Q13	In the last 12 months, how often did your personal doctor listen carefully to you?	Never Sometimes Usually Always
Q12	In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?	Never Sometimes Usually Always
Q14	In the last 12 months, how often did your personal doctor show respect for what you had to say?	Never Sometimes Usually Always

ADULT QUESTIONNAIRE CAHPS 5.0	HOW WELL DOCTORS COMMUNICATE	RESPONSE CHOICE
Q15	In the last 12 months, how often did your personal doctor spend enough time with you?	Never Sometimes Usually Always

ADULT QUESTIONNAIRE CAHPS 5.0	CUSTOMER SERVICE	RESPONSE CHOICE
Q22	In the last 12 months, how often did your health plan's customer service give you the information or help you needed?	Never Sometimes Usually Always
Q23	In the last 12 months, how often did your health plan's customer service staff treat you with courtesy and respect?	Never Sometimes Usually Always

ADULT SUPPLEMENTAL QUESTIONNAIRE CAHPS 4.0	CLAIMS PROCESSING	RESPONSE CHOICE
H14	In the last 12 months, how often did your health plan handle your claims quickly?	Never Sometimes Usually Always
H15	In the last 12 months, how often did your health plan handle your claims correctly?	Never Sometimes Usually Always

ADULT QUESTIONNAIRE CAHPS 5.0	RATING OF ALL HEALTH CARE	RESPONSE CHOICE
Q8	Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months?	0 Worst health care possible 1 2 3 4 5 6 7 8 9 10 Best health care possible

ADULT QUESTIONNAIRE CAHPS 5.0	RATING OF HEALTH PLAN	RESPONSE CHOICE
Q26	Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?	0 Worst health plan possible 1 2 3 4 5 6 7 8 9 10 Best health plan possible

ADULT QUESTIONNAIRE CAHPS 5.0	RATING OF PERSONAL DOCTOR	RESPONSE CHOICE
Q16	Using any number from 0 to 10, where 0 is the worst personal doctor or nurse possible and 10 is the best personal doctor or nurse possible, what number would you use to rate your personal doctor or nurse?	0 Worst personal doctor or nurse possible 1 2 3 4 5 6 7 8 9 10 Best personal doctor or nurse possible

ADULT QUESTIONNAIRE CAHPS 5.0	RATING OF SPECIALIST	RESPONSE CHOICE
Q20	We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate the specialist?	0 Worst specialist possible 1 2 3 4 5 6 7 8 9 10 Best specialist possible

The preventive care composite in the beneficiary reports measures MHS performance in terms of meeting TMA's goals for the provision of preventive services. The composite is calculated by combining the responses to individual questions pertaining to these goals. Questions and responses from the present version of the 2017 HCSDDB that are incorporated into the preventive care composite are presented in Table E.3. When individual scores in the preventive care composite are combined, the resulting composite is weighted by the number of questions to which a normal population has responded. Therefore, the weight a particular question receives in the composite score is based on the number of responses it "receives". The resulting proportion is presented as a percentage.

TABLE E.3

QUESTIONS AND RESPONSE CHOICES ON PREVENTIVE CARE
EXPRESSED AS A STANDARD TMA COMPOSITE

2017 ADULT HCSDB	COMPOSITE PREVENTIVE CARE	RESPONSE CHOICES
H17049	When did you last have a blood pressure reading?	Less than 12 months ago 1 to 2 years ago More than 2 years ago
H17050	Do you know if your blood pressure is too high?	Yes, it is too high No, it is not too high Don't know
H17059B	When did you last have a Pap smear test?	Within the last 12 months 1 to 2 years ago More than 2 but less than 3 years ago More than 3 but less than 5 years ago 5 or more years ago Never had a Pap smear
H17061	When was the last time your breasts were checked by mammography?	Within the last 12 months 1 to 2 years ago More than 2 but less than 5 years ago 5 or more years ago Never had a mammogram
H17064	In which trimester did you first receive prenatal care?	First trimester Second trimester Third trimester Did not receive prenatal care
H17071F, H17071I	How tall are you without your shoes on? Please give your answer in feet and inches.	_____ feet _____ inches
H17072	How much do you weigh without your shoes on? Please give your answer in pounds.	_____ pounds

The healthy behavior composite measures the success of TMA's efforts to reduce smoking and obesity rates. The composite consists of a non-smoking rate, which is the proportion of adults not smoking or who quit more than a year ago, the counseled to quit rate, which is the proportion of smokers with office visits who were counseled to quit during at least one visit, and the rate of adults with non-obese BMI ratio. The composite weights these three measures equally.

TABLE E.4.1

CAHPS 4.0 QUESTIONS AND RESPONSE CHOICES
EXPRESSED AS COMPOSITE SCORES AND RATINGS

ADULT SUPPLEMENTAL QUESTIONNAIRE CAHPS 4.0	SMOKING	RESPONSE CHOICE
H17	Do you now smoke cigarettes or use tobacco every day, some days or not at all?	Every day Some days Not at all Don't know
H18	In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?	Never Sometimes Usually Always

TABLE E.4.2

CAHPS 3.0 QUESTIONS AND RESPONSE CHOICES
EXPRESSED AS COMPOSITE SCORES AND RATINGS

ADULT SUPPLEMENTAL QUESTIONNAIRE CAHPS 3.0	SMOKING	RESPONSE CHOICE
H12	Have you ever <u>smoked</u> at least 100 cigarettes in your entire life?	Yes No Don't know

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APPENDIX F

SAS CODE FOR FILE DEVELOPMENT – QUARTERS I-III AND HEDIS

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F.1 - Q3FY2017\PROGRAMS\WEIGHTING\MERGESYN.SAS - Combine Item Response Data from survey contractor with the MPR sampling and DEERS variables.

```

*****
*
* PROGRAM:   Changed from MERGENRC.SAS to MERGESYN.SAS
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (6077-300)
* PURPOSE:  COMBINE ITEM RESPONSE DATA FROM IPSOS WITH THE MPR SAMPLING AND
*           DEERS VARIABLES.
* WRITTEN:  01/31/2001 BY KEITH RATHBUN
*
* MODIFIED: 06/12/2012 BY JACQUELINE AGUFA: Add code to modify the
observations of the file from Synovate
*           This process will reincorporate the overlapped
cases(currently missing in the synovate file)
*           back to the mergsyn file. The missing overlapped cases can be
found in bwt.sas7bdat or sampla02.sas7bdat
*           02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
*           03/30/2013 BY MTURBYFILL Add label for SURVTYPE
*           02/10/2017 BY MTURBYFILL Changed filepaths and capitalization to
match SAS Grid.
*
* INPUTS:   1) DODyyQnF.sas7bdat - Quarterly DOD Health Survey Data from
IPSOS
*           where n = Quarter Number
*                 yy = Survey Administration Year
*           2) BWT.sas7bdat - MPR Sampling and DEERS variables
*           3) EXTRACT.sas7bdat - DEERS variables
*
* OUTPUTS:  1) MERGESYN.sas7bdat - Quarterly DOD Health Survey Data
*           (Combined IPSOS, MPR, and DEERS variables)
*
*****
;
*LIBNAME INr          "N:\Project\40309_HCS\Restricted\DC1\Q&QT.FY20&YR."
access=readonly; /*Restricted folder*/
LIBNAME INr          "&EXPATH." access=readonly; /*Restricted folder*/
LIBNAME IN           "&DATAPATH." access=readonly;
LIBNAME OUT          "&DATAPATH.";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

%MACRO MERGE;
*****
* SORT the IPSOS-Provided file and the original sample (BWT).
*****
;
PROC SORT DATA=IN.dod&YR.q&QT.f OUT=SYNFILE;
      BY MPRID;
FORMAT _ALL_;
RUN;

%if &trickle=1 %then %do;

```

```

LIBNAME Int          ".../.../Q&QT.FY20&YR.t/Data/AFinal";
PROC SORT DATA=Int.dod&YR.q&QT.f_trk OUT=SYNFILE2;
      BY MPRID;
RUN;

*****
* To avoid the creation of more duplicates in the following data step,
* we are only keeping the complete trickle cases with Flag_fin=1
*****;
DATA complete_in_trckle;
      SET SYNFILE2;
      if FLAG_FIN=1;
RUN;

PROC SORT DATA=complete_in_trckle NODUPKEY; BY MPRID; RUN;

DATA CHECKDUP DROPRND1(KEEP=MPRID DRP_RND1);
      MERGE complete_in_trckle(IN=in2 keep=MPRID FLAG_FIN
RENAME=(FLAG_FIN=TFLAGFIN)) SYNFILE(IN=in1 keep=MPRID FLAG_FIN) ;

      LENGTH DRP_RND1 $3;

      BY MPRID;

      IF IN1 AND IN2 THEN DO;
          IF FLAG_FIN NE 1 AND TFLAGFIN=1 THEN DRP_RND1='YES';
          OUTPUT DROPRND1;
      END;

      OUTPUT CHECKDUP;
RUN;

*****
***
* delete the duplicate DROPRND1 records by MPRID since we only want to know
the
* IDs that had a duplicate record in round 1 and complete in the trickle
file.
*
* We will then use the variable DROPRND1 to change the value of dupflag for
* these case from YES to NO in SELECTQ.sas. This then reduces the inflated
* value of DUPFLAG.
*****
***;
PROC SORT DATA=DROPRND1 NODUPKEY; BY MPRID; RUN;

PROC FREQ DATA=CHECKDUP;
      TABLES FLAG_FIN*TFLAGFIN/list missing;
RUN;

*End of trickle code;
%end;

DATA SYNFILE;
      LENGTH MPRID $8;
      SET SYNFILE (in=in1)

```

```

        %if &trickle.=1 %then %do;
        SYNFILE2 (in=in2)
        %end;
        ;
    BY MPRID;
    LENGTH ONTIME $3;
    IF IN1 THEN ONTIME="YES";
    ELSE ONTIME="NO";
    LABEL ONTIME = "Responded Within 8 weeks of Mail-Out";
RUN;

```

```

PROC SORT DATA=IN.BWT OUT=BWT; BY MPRID; RUN;

```

```

*****
* Attach DEERS variables to the combined file that were omitted from the
* BWT file. Using extract.sas7bdat to obtain this data since the overlap
cases
* are not in SAMPLA02.sas7bdat
*****

```

```

;
PROC SORT DATA=INr.EXTRACT OUT=EXTRACT
    (KEEP=MPRID DBENCAT DMEDELG DSPONSVC
    MEDTYPE MRTLSTAT RACEETHN
    PNBRTHDT PAYPLNCD );
    BY MPRID;

```

```

RUN;

```

```

*****
* Attach the original sampling variables to the combined file.
*****

```

```

;
DATA MERGESYN;
    MERGE BWT(in=b) SYNFILE(in=in2) EXTRACT(in=in1)
        %if &trickle=1 %then %do; DROPRND1 %end;
    ;
    BY MPRID;

```

```

*****
* DROP variables that are not needed.

```

```

*****;
    DROP SVCCD GEOSMPL GEOCELL EBSMPL
        D_INSTAL ;

```

```

    LABEL   BWT           = 'BWT - Basic Sampling Weight'
           ENBGSMPL      = 'ENBGSMPL - Beneficiary/Enrollment Status'
           NHFF          = 'NHFF - Stratum Sample Size'
           SEXSMPL       = 'SEXSMPL - Sex'
           STRATUM       = 'Stratum'
           SVCSMPL       = 'SVCSMPL - Branch of Service'
           FLAG_FIN      = 'Final Disposition'
           SURVTYPE      = 'Web or Mail Survey'

```

```

;

```

```

IF IN2 AND NOT IN1 THEN
  PUT "ERROR: MPRID Not Found in both the IPSOS and MPR files, MPRID = "
MPRID;

IF IN2 AND IN1 THEN OUTPUT MERGESYN;

*****
Assign a flag_fin value of 99 to cases that overlap with TSS
Survey was never mailed to the respondent
*****
;
IF b AND NOT in2 THEN DO;
  FLAG_FIN=99;
  ONTIME="NA";
  output MERGESYN;
END;
RUN;

DATA OUT.MERGESYN;
  SET MERGESYN;
  BY MPRID;
  *****
  * Construct MPCSMPL.

*****;
IF PAYPLNCD = 'MO' THEN
  MPCSMPL = 2;
ELSE IF PAYPLNCD = 'MW' THEN
  MPCSMPL = 3;
ELSE
  MPCSMPL = 1;
*****
* Calculate FIELDAGE based on PNBRTHDT using fielding period
* starting date.

*****;
  FIELDAGE = INPUT("&FIELDAGE",mmdyy8.);
  DOB = SUBSTR(PNBRTHDT,5,2) || SUBSTR(PNBRTHDT,7,2) ||
SUBSTR(PNBRTHDT,1,4);
  BRTHDATE = INPUT(DOB,mmdyy8.);

  FIELDAGE = PUT(INT((FIELDAGE - BRTHDATE)/365.25),Z3.);
  LABEL MPCSMPL = "MPCSMPL - Military Personnel Category";
  LABEL FIELDAGE = "Age as of &FIELDLBL";
  LABEL DCATCH = "Catchment Area";

  LENGTH QUARTER $8;
  QUARTER = "Q&QT.FY20&YR.";
  LABEL QUARTER = 'Survey Quarter';

*****
* Recode unknown values of MRTLSTAT into one 'Unknown' group (Z).
*****;

```

```

IF MRTLSTAT NOT IN ("A","D","I","L","M","N","S","W","Z"," ") THEN
MRTLSTAT = "Z";

DROP FIELD DATE DOB BRTHDATE PNBRTHTDT PAYPLNCD;

RUN;

TITLE1 "Quarterly DOD Health Survey - Combine IPSOS, MPR and DEERS variables
(6663-0500)";
TITLE2 "Program Name: MERGESYN.SAS By Jacqueline Agufa";
TITLE3 "Program Inputs: DODyyQnF.sas7bdat, BWT.sas7bdat, EXTRACT.sas7bdat --
Program Output: MERGESYN.sas7bdat";

PROC CONTENTS VARNUM; RUN;

PROC FORMAT;
  Value $ACV
    'A'='Active Duty Prime'
    'B'='TRICARE Global Remote Overseas Prime Active Duty'
    'D'='TRICARE Senior Prime enrollee'
    'E'='Non-Active Duty Prime'
    'F'='TRICARE Global Remote Overseas Prime ADFM'
    'G'='TRICARE Plus (CHAMPUS/TFL Eligible)'
    'H'='TRICARE Overseas Prime AD'
    'J'='TRICARE Overseas Prime ADFM'
    'L'='TRICARE Plus (w/o civilian healthcare)'
    'M'='AD not reported as enrolled'
    'R'='TRICARE Reserve Select'
    'Q'='Active Duty enrolled to Op Forces'
    'U'='USFHP/USTF'
    'V'='TRICARE Retired Reserve'
    ' ','Z'='Not enrolled in TRICARE Prime or USFHP'
  ;

  VALUE $ENBGS
    '01' = "Active duty"
    '02' = "Active duty fam,Prime,civ PCM"
    '03' = "Active duty fam,Prime,mil PCM"
    '04' = "Active duty fam,non-enrollee"
    '05' = "Retired,<65,civ PCM"
    '06' = "Retired,<65,mil PCM"
    '07' = "Retired,<65,non-enrollee"
    '08' = "Retired,65+,civ PCM"
    '09' = "Retired,65+,mil PCM"
    '10' = "Retired,65+,non-enrollee"
    '11' = "TRICARE Reserve Select"
  ;

RUN;

PROC FREQ DATA=OUT.MERGESYN(DROP=MPRID PRN MIQCNTL);
  TABLES WEB ONTIME FLAG_FIN DAGEQY*FIELDAGE ACV PCM ENBGSMPL
  ACV*PCM ACV*ENBGSMPL
  _ALL_ /MISSING LIST;
  FORMAT ACV $ACV. ENBGSMPL $ENBGS.;
RUN;
%MEND;

```

%MERGE ;

F.2.A - Q1FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 1 FY2017

```

*****
**;
*   Program:  Cschmyyq.sas
*   Written:  06/04/2001
*   Author:   C. Rankin
*
*   Input:    MERGESYN.sas7bdat - Merged MPR Sampling, DEERS, and Synovate
Response Data
*   Output:   CSCHMyyQ.sas7bdat - Coding scheme file
*
* Modified:
*           12/15/2012 - Removed logic for handling check boxes for height
and
*                               weight variables. Also no longer have to convert
the
*                               weight variable from character to numeric
*           12/21/2012 - Added code on line 146 to correct out of range
height (in)
*           12/18/2013 - Updated for Q1 2014 - added ht/wt note
*           09/29/2014 - Added SQL statement to automatically make varlist1,
varlist2, and marked variables
*           07/22/2015 - NOPRINT added to first PROC SQL
*           02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
*           04/29/2016 - Added recoding for H16003, should be used only for
2016Q2.
*           02/10/2017 - Changed filepaths and capitalization to match SAS
Grid.
*                               Removed additional female-specific fields from
notes 19A and 19B.
*
* Purpose:   Apply Coding Scheme Specifications to DoD Health Care Survey
Response Data, check for consistency in responses and skip
patterns
* Include
*   files:   Cschmyyq.fmt
*
*****
**;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES SOURCE SOURCE2 VARLENCHK=NOWARN;
title "Coding Scheme for Q&qt. FY&yr."; title2; title3;

%LET INDATA=MERGESYN;
%LET OUTDATA=CSCHM&yr.q;

LIBNAME LIBRARY    "&fmtpath.";
LIBNAME IN         "&datapath.";
LIBNAME OUT        "&datapath.";

%MACRO CSCHM;
DATA &INDATA;

    SET IN.&INDATA;

```

```
*RENAME AND CREATE VARIABLES NEEDED FOR CODING SCHEME;
```

```
RENAME SRACEA = SRRACEA;  
RENAME SRACEB = SRRACEB;  
RENAME SRACEC = SRRACEC;  
RENAME SRACED = SRRACED;  
RENAME SRACEE = SRRACEE;
```

```
RENAME INTERVIEWTIME = INTTIME;
```

```
SEX=PNSEXCD;  
AGE=INPUT(DAGEQY,8.);
```

```
RUN;
```

```
*Create list of variables from dataset;  
*_O_ variables are the original values from the survey response;  
*Must remove any variable that ends with an alphabetic letter that  
is not a marked/unmarked variable from the 'markedvars' line of code;  
PROC SQL NOPRINT;
```

```
CREATE TABLE VARIABLES AS  
SELECT UPCASE(NAME) AS VARS,  
UPCASE(CAT('O_', NAME)) AS OVARS,  
CASE WHEN SUBSTR(NAME,LENGTH(NAME)) NOT IN ('0' '1' '2' '3' '4'  
'5' '6' '7' '8' '9')  
AND NAME NOT IN ("H&YR.059B", "H&YR.071F" ,"H&YR.071I",  
"SREDA", "SRAGE")  
THEN UPCASE(NAME) END AS MARKEDVARS,  
CASE WHEN CALCULATED MARKEDVARS NE ''  
THEN UPCASE(CAT('O_', CALCULATED MARKEDVARS)) END AS
```

```
OMARKEDVARS  
FROM DICTIONARY.COLUMNS  
WHERE LIBNAME = 'WORK' AND MEMNAME = "&INDATA"  
AND (NAME CONTAINS ("H&YR.") OR NAME CONTAINS ("S&YR.") OR NAME  
CONTAINS ("SR")) ;
```

```
SELECT COMPRESS(VARS), COMPRESS(OVARS), COMPRESS(MARKEDVARS),  
COMPRESS(OMARKEDVARS)
```

```
INTO :VARLIST1 SEPARATED BY " ",  
:VARLIST2 SEPARATED BY " ",  
:MARKEDVARS SEPARATED BY " ",  
:OMARKEDVARS SEPARATED BY " "  
FROM VARIABLES;
```

```
QUIT;
```

```
proc print data=variables; run;
```

```
%PUT &VARLIST1;  
%PUT &VARLIST2;  
%PUT &MARKEDVARS;  
%PUT &OMARKEDVARS;
```

```
TITLE "DoD 20&YR Survey";
TITLE2 "Apply Coding Scheme";
```

```
DATA OUT.&outdata.;
/* label and format statements for original variables */
LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
INFORMAT &VARLIST2. 4.;
```

```
%INCLUDE "cschm&YR.q.fmt";
```

```
SET &INDATA;
```

```
*****;
**** Recodes for invalid responses:*****;
*****;
```

```
/* This is a version of the coding scheme and coding tables for the
FY 20&YR. HCSDB Form A.
The following tables outline the coding of screening questions (skip),
and subsequent items to be answered (or not answered in a series
following a skip question.) */
```

```
/* First set up new variables that capture the original values */
/* recode the initial numeric values to the SAS numeric values */
/* specified in the coding scheme */
```

```
ARRAY RECODE(*) &VARLIST1;
ARRAY ORIG(*) &VARLIST2;
```

```
DO I = 1 to DIM(ORIG);
  ORIG(I) = RECODE(I);
  IF ORIG(I) < 0 THEN DO;
    IF ORIG(I) = -9 THEN RECODE(I) = .;
    ELSE IF ORIG(I) = -7 THEN RECODE(I) = .O;
    ELSE IF ORIG(I) = -6 THEN RECODE(I) = .N;
    ELSE IF ORIG(I) = -5 THEN RECODE(I) = .D;
    ELSE IF ORIG(I) = -4 THEN RECODE(I) = .I;
    ELSE IF ORIG(I) = -1 THEN RECODE(I) = .C;
  END;
END;
DROP I;
```

```
/* recode selected responses to be 1=marked, 2=unmarked */
```

```
ARRAY MARKED(*) &MARKEDVARS. ;
```

```

ARRAY INFORMAT(*) &OMARKEDVARS. ;

DO J=1 TO DIM(INFORMAT);
  IF INFORMAT(J) = 1 THEN MARKED(J)=1;
  ELSE MARKED(J)=2;
END;
DROP J;

FORMAT &MARKEDVARS. MARKED.;

*****;

/* skip coding scheme for all surveys not returned */
IF FLAG_FIN NE 1 THEN GOTO NOSURVEY;

/** Note 1 -- H&YR.003, H&YR.004 health plan usage */

IF H&YR.003 > 0 THEN N1=1;
ELSE IF H&YR.003=.N OR H&YR.003 =.D THEN DO;
  IF H&YR.004 NOT=. THEN DO;
    N1=2;
    H&YR.004=.C;
  END;
  ELSE DO;
    N1=3;
    H&YR.004=.N;
  END;
END;
ELSE IF H&YR.003=. THEN N1=4;

/** Note 2 -- H&YR.006,H&YR.007,H&YR.008: illness or injury */

ARRAY NOTE2 H&YR.007 H&YR.008;
N2MARK=0;
N2NMISS=0;
N2NN=0;

DO OVER NOTE2;
  IF NOTE2 NE . THEN N2NMISS+1;
  IF NOTE2 NOT IN (.N,.) THEN N2MARK+1;
  IF NOTE2 EQ .N THEN N2NN+1;
END;

IF H&YR.006=1 AND N2NMISS=0 THEN DO;
  N2=1;
END;
ELSE IF H&YR.006 IN (1,.) AND N2NMISS>0 AND N2MARK=0 THEN DO;
  H&YR.006=2;
  N2=2;
  DO OVER NOTE2;

```

```

        IF NOTE2=. THEN NOTE2=.N;
        ELSE NOTE2=.C;
    END;
END;
ELSE IF H&YR.006=1 AND N2MARK=1 AND N2NN=1 THEN DO;
    DO OVER NOTE2;
        IF NOTE2=.N THEN NOTE2=.;
    END;
    N2=3;
END;
ELSE IF H&YR.006=1 AND N2MARK>0 THEN DO;
    N2=4;
END;
ELSE IF H&YR.006=2 AND N2MARK=1 AND N2NN=1 THEN DO;
    H&YR.007=.C;
    H&YR.008=.C;
    N2=5;
END;
ELSE IF H&YR.006 IN (2,.) AND N2MARK>0 THEN DO;
    H&YR.006=1;
    N2=6;
    DO OVER NOTE2;
        IF NOTE2=.N THEN NOTE2=.;
    END;
END;
ELSE IF H&YR.006=2 AND (N2NMISS=0 OR (N2NMISS>0 AND N2MARK=0)) THEN DO;
    N2=7;
    DO OVER NOTE2;
        IF NOTE2=. THEN NOTE2=.N;
        ELSE NOTE2=.C;
    END;
END;
ELSE IF H&YR.006=. AND N2NMISS=0 THEN N2=8;

```

```

DROP N2NMISS N2MARK N2NN;

```

```

/** Note 3 -- H&YR.009,H&YR.010,H&YR.011: regular or routine healthcare **/

```

```

ARRAY Note3 H&YR.010 H&YR.011;
N3MARK=0;
N3NMISS=0;
N3NN=0;

```

```

DO OVER Note3;
    IF Note3 NE . THEN N3NMISS+1;
    IF Note3 NOT IN (.N,.) THEN N3MARK+1;
    IF Note3 EQ .N THEN N3NN+1;
END;

```

```

IF H&YR.009=1 AND N3NMISS=0 THEN DO;
    N3=1;
END;
ELSE IF H&YR.009 IN (1,.) AND N3NMISS>0 AND N3MARK=0 THEN DO;
    H&YR.009=2;
    N3=2;

```

```

DO OVER Note3;
  IF Note3=. THEN Note3=.N;
  ELSE Note3=.C;
END;
END;
ELSE IF H&YR.009=1 AND N3MARK=1 AND N3NN=1 THEN DO;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
  N3=3;
END;
ELSE IF H&YR.009=1 AND N3MARK>0 THEN DO;
  N3=4;
END;
ELSE IF H&YR.009=2 AND N3MARK=1 AND N3NN=1 THEN DO;
  H&YR.010=.C;
  H&YR.011=.C;
  N3=5;
END;
ELSE IF H&YR.009 IN (2,.) AND N3MARK>0 THEN DO;
  H&YR.009=1;
  N3=6;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
END;
ELSE IF H&YR.009=2 AND (N3NMISS=0 OR (N3NMISS>0 AND N3MARK=0)) THEN DO;
  N3=7;
  DO OVER Note3;
    IF Note3=. THEN Note3=.N;
    ELSE Note3=.C;
  END;
END;
ELSE IF H&YR.009=. AND N3NMISS=0 THEN N3=8;

```

```

DROP N3NMISS N3MARK N3NN;

```

```

/** Note 4 -- H&YR.013, H&YR.014-H&YR.018: doctor's office or clinic **/

```

```

ARRAY NOTE4 H&YR.014-H&YR.018;

```

```

N4MARK=0;

```

```

N4NMISS=0;

```

```

DO OVER NOTE4;

```

```

  IF NOTE4 NE . THEN N4NMISS+1;

```

```

  IF NOTE4 NOT IN (., .N) THEN N4MARK+1;

```

```

END;

```

```

IF H&YR.013=1 THEN DO;

```

```

N4=1;
DO OVER NOTE4;
  IF NOTE4=. THEN NOTE4=.N;
  ELSE NOTE4=.C;
END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7,.) AND N4NMISS>0 AND N4MARK=0 THEN DO;
  H&YR.013=1;
  N4=2;
  DO OVER NOTE4;
    IF NOTE4=. THEN NOTE4=.N;
    ELSE NOTE4=.C;
  END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7) AND (N4NMISS=0 OR N4MARK>0) THEN DO;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
  N4=3;
END;
ELSE IF H&YR.013=. AND N4NMISS=0 THEN N4=4;
ELSE IF H&YR.013 IN (.) AND N4MARK>0 THEN DO;
  N4=5;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
END;
END;

DROP N4NMISS N4MARK;

```

```

/** Note 5 -- H&YR.015, H&YR.016-H&YR.017: doctor's office or clinic-
treatment **/

```

```

IF H&YR.015 IN (.N,.C) THEN N5=1;
ELSE IF H&YR.015= 1 THEN N5=2;
ELSE IF H&YR.015 IN (2,.) AND H&YR.016 IN (1,2) THEN DO;
  N5=3;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2,.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (1,2))
THEN DO;
  N5=4;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,))
THEN DO;
  N5=5;
  IF H&YR.016 = . THEN H&YR.016 = .N;
  ELSE H&YR.016 = .C;
  IF H&YR.017 = . THEN H&YR.017 = .N;
  ELSE H&YR.017 = .C;
END;
ELSE IF H&YR.015 IN (.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,))
THEN DO;
  N5=6;
END;

```

```

/** Note 5_BI1 -- S&YR.01-S&YR.020: go to urgent care center **/

ARRAY NOTE5_BI1A S&YR.BI03-S&YR.BI20;
ARRAY NOTE5_BI1B S&YR.BI02A S&YR.BI02B S&YR.BI02C S&YR.BI02D ;
ARRAY NOTE5_BI1 S&YR.BI03-S&YR.BI20 S&YR.BI02A S&YR.BI02B S&YR.BI02C
S&YR.BI02D ;

N5_BI1MARK=0;
N5_BI1NMISS=0;

DO OVER NOTE5_BI1A;
  IF NOTE5_BI1A NE . THEN N5_BI1NMISS+1;
  IF NOTE5_BI1A NOT IN (., .N) THEN N5_BI1MARK+1;
END;
DO OVER NOTE5_BI1B;
  IF NOTE5_BI1B NE . THEN N5_BI1NMISS+1;
  IF NOTE5_BI1B NOT IN (., .N, 2) THEN N5_BI1MARK+1;
END;

IF S&YR.BI01=1 AND S&YR.BI02E NE 1 THEN DO;
  N5_BI1=1;
END;
ELSE IF S&YR.BI01 IN (1, .) AND S&YR.BI02E = 1 THEN DO;
  N5_BI1=2;
  S&YR.BI01=2;
  DO OVER NOTE5_BI1;
    IF NOTE5_BI1=. THEN NOTE5_BI1=.N;
    ELSE NOTE5_BI1 = .C;
  END;
END;
ELSE IF S&YR.BI01 = 2 THEN DO;
  IF N5_BI1MARK = 0 THEN DO;
    N5_BI1=3;
    DO OVER NOTE5_BI1;
      IF NOTE5_BI1=. THEN NOTE5_BI1=.N;
      ELSE NOTE5_BI1 = .C;
    END;
  END;
  ELSE DO;
    N5_BI1=4;
    S&YR.BI01=1;
  END;
END;
ELSE IF S&YR.BI01 = . THEN DO;
  IF N5_BI1MARK>0 THEN DO;
    N5_BI1=5;
    S&YR.BI01=1;
  END;
  ELSE N5_BI1=6;
END;

DROP N5_BI1NMISS N5_BI1MARK;

```



```
/** Note 5_BI2 -- S&YR.02-S&YR.020: go to urgent care center **/
```

```
ARRAY NOTE5_BI2A S&YR.BI02B S&YR.BI02C S&YR.BI02D;
```

```
ARRAY NOTE5_BI2B S&YR.BI03-S&YR.BI20;
```

```
N5_BI2AMARK=0;
```

```
N5_BI2ANMISS=0;
```

```
DO OVER NOTE5_BI2A;
```

```
IF NOTE5_BI2A NE . THEN N5_BI2ANMISS+1;
```

```
IF NOTE5_BI2A NOT IN (., .N, 2) THEN N5_BI2AMARK+1;
```

```
END;
```

```
N5_BI2BMARK=0;
```

```
N5_BI2BNMISS=0;
```

```
DO OVER NOTE5_BI2B;
```

```
IF NOTE5_BI2B NE . THEN N5_BI2BNMISS+1;
```

```
IF NOTE5_BI2B NOT IN (., .N) THEN N5_BI2BMARK+1;
```

```
END;
```

```
IF S&YR.BI02A IN (.N, .C) THEN N5_BI2=1;
```

```
ELSE IF S&YR.BI02A IN (1) THEN DO;
```

```
IF N5_BI2BMARK >= 1 THEN DO;
```

```
    N5_BI2=2;
```

```
    S&YR.BI02E = 2;
```

```
END;
```

```
ELSE IF N5_BI2AMARK >= 1 THEN DO;
```

```
    N5_BI2=3;
```

```
    S&YR.BI02A = 2;
```

```
    S&YR.BI02E = 2;
```

```
END;
```

```
ELSE IF N5_BI2AMARK = 0 THEN DO;
```

```
    N5_BI2=4;
```

```
    S&YR.BI02A = 2;
```

```
END;
```

```
END;
```

```
ELSE IF S&YR.BI02A IN (2, .) THEN DO;
```

```
IF N5_BI2BMARK >= 1 THEN DO;
```

```
    N5_BI2=5;
```

```
    S&YR.BI02A = 1;
```

```
    S&YR.BI02E = 2;
```

```
END;
```

```
ELSE IF N5_BI2AMARK =0 THEN DO;
```

```
    N5_BI2=6;
```

```
END;
```

```
ELSE IF N5_BI2AMARK > 0 THEN DO;
```

```
    N5_BI2=7;
```

```
    S&YR.BI02E = 2;
```

```
    DO OVER NOTE5_BI2B;
```

```
        IF NOTE5_BI2B = . THEN NOTE5_BI2B = .N;
```

```
        ELSE NOTE5_BI2B = .C;
```

```
    END;
```

```
END;
```

END;

DROP N5_BI2ANMISS N5_BI2AMARK N5_BI2BNMISS N5_BI2BMARK;

/** Note 5_BI3 -- S&YR.BI15, S&YR.BI16: did nurse advise urgent care **/

```
IF S&yr.BI15 IN (.N, .C) THEN N5_BI3=1;
IF S&yr.BI15= 1 THEN N5_BI3=2;
ELSE IF S&yr.BI15 IN (2,3,4,.D) THEN DO;
    N5_BI3=3;
    IF S&yr.BI16 = . THEN S&yr.BI16 = .N;
    ELSE S&yr.BI16 = .C;
END;
ELSE IF S&yr.BI15 IN (.) AND (S&yr.BI16 IN (1,2)) THEN DO;
    N5_BI3=4;
    S&yr.BI15=1;
END;
ELSE IF S&yr.BI15 IN (.) AND (S&yr.BI16 IN (.D,.)) THEN DO;
    N5_BI3=5;
END;
```

/** Note 5_BI4 -- S&yr.BI17, S&yr.BI18: advised to seek care in an ER **/

```
IF S&yr.BI17 IN (.N, .C) THEN N5_BI4=1;
ELSE IF S&yr.BI17= 1 THEN N5_BI4=2;
ELSE IF S&yr.BI17 IN (2,.D) THEN DO;
    N5_BI4=3;
    IF S&yr.BI18 = . THEN S&yr.BI18 = .N;
    ELSE S&yr.BI18 = .C;
END;
ELSE IF S&yr.BI17 IN (.) AND (S&yr.BI18 IN (1)) THEN DO;
    N5_BI4=4;
    S&yr.BI17=1;
END;
ELSE IF S&yr.BI17 IN (.) AND (S&yr.BI18 IN (2,.D,.)) THEN DO;
    N5_BI4=5;
END;
```

/** Note 6 -- H&YR.019, H&YR.020-H&YR.027, S&YR.009: personal doctor **/
/* MER 07/01/09 */

ARRAY NOTE6 H&YR.021-H&YR.024;

N6MARK=0;

```
DO OVER NOTE6;
    IF NOTE6 NOT IN (., .N) THEN N6MARK+1;
```

```

END;

IF H&YR.020 NOT IN (0,.) THEN N6MARK+1;

IF H&YR.019 = 1 THEN DO;
  N6=1;
  IF H&YR.027=.N THEN H&YR.027=.;
END;
ELSE IF H&YR.019 in (2,.) AND H&YR.027 in (0,1,2,3,4,5,6,7,8,9,10) THEN
DO;
  N6=2;
  H&YR.019=1;
END;
ELSE IF H&YR.019 in (2,.) AND N6MARK>0 AND H&YR.027 = . THEN DO;
  N6=3;
  H&YR.019=1;
END;
ELSE IF H&YR.019 = 2 AND N6MARK>0 AND H&YR.027 = .N THEN DO;
  N6=4;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;
  DO OVER NOTE6;
    IF NOTE6=. THEN NOTE6=.N;
    ELSE NOTE6=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
  IF S&YR.009=. THEN S&YR.009=.N;
  ELSE S&YR.009=.C;
  H&YR.027=.C;
END;
ELSE IF H&YR.019 = 2 AND N6MARK=0 AND H&YR.027 in (.N,.) THEN DO;
  N6=5;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;
  DO OVER NOTE6;
    IF NOTE6=. THEN NOTE6=.N;
    ELSE NOTE6=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
  IF S&YR.009=. THEN S&YR.009=.N;
  ELSE S&YR.009=.C;
  IF H&YR.027=. THEN H&YR.027=.N;
  ELSE H&YR.027=.C;
END;
ELSE IF H&YR.019 = . AND H&YR.027 = .N THEN DO; /* MER 07/31/09 combined
rows 6 and 7 */
  N6=6;
  H&YR.019=2;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;

```

```

DO OVER NOTE6;
  IF NOTE6=. THEN NOTE6=.N;
  ELSE NOTE6=.C;
END;
IF H&YR.025=. THEN H&YR.025=.N;
ELSE H&YR.025=.C;
IF H&YR.026=. THEN H&YR.026=.N;
ELSE H&YR.026=.C;
IF S&YR.009=. THEN S&YR.009=.N;
ELSE S&YR.009=.C;
H&YR.027=.C;
END;
ELSE IF H&YR.019 = . AND N6MARK=0 AND H&YR.027 = . THEN N6=7;

DROP N6MARK;

```

/** Note 7 -- H&YR.020, H&YR.021-H&YR.024: personal doctor visit **/

```

ARRAY NOTE7 H&YR.021-H&YR.024;

N7MARK=0;
N7NMISS=0;

DO OVER NOTE7;
  IF NOTE7 NE . THEN N7NMISS+1;
  IF NOTE7 NOT IN (., .N) THEN N7MARK+1;
END;

IF H&YR.020 IN (.N, .C) THEN N7=1;
ELSE IF H&YR.020=0 THEN DO;
  N7=2;
  DO OVER NOTE7;
    IF NOTE7=. THEN NOTE7=.N;
    ELSE NOTE7=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
END;
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND N7NMISS>0 AND N7MARK=0 THEN DO;
  H&YR.020=0;
  N7=3;
  DO OVER NOTE7;
    IF NOTE7=. THEN NOTE7=.N;
    ELSE NOTE7=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
END;
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND (N7NMISS=0 OR N7MARK>0) THEN DO;
  DO OVER NOTE7;
    IF NOTE7=.N THEN NOTE7=. ;

```

```

        END;
        N7=4;
    END;

    DROP N7NMISS N7MARK;

/** Note 8 -- H&YR.025, H&YR.026:  care from another doctor or healthcare
provider **/

    IF H&YR.025 IN (.N, .C) THEN N8=1;
    ELSE IF H&YR.025=1 THEN N8=2;
    ELSE IF H&YR.025 IN (2,.) AND H&YR.026 IN (1,2,3,4) THEN DO;
        H&YR.025=1;
        N8=3;
    END;
    ELSE IF H&YR.025=2 AND H&YR.026 IN (.) THEN DO;
        H&YR.026=.N;
        N8=4;
    END;
    ELSE IF H&YR.025=. AND H&YR.026=. THEN N8=5;

/** Note 8_01 -- S&YR.009, S&YR.010:  problem getting new personal doctor or
nurse **/

    IF S&YR.009 IN (.N,.C) THEN N8_01=1; /* MER 07/31/09 gave each S&YR.009
value its own row for analysis purposes */
    ELSE IF S&YR.009=1 THEN DO;
        N8_01=2;
        IF S&YR.010=. THEN S&YR.010=.N;
        ELSE S&YR.010=.C;
    END;
    ELSE IF S&YR.009=2 THEN N8_01=3;
    ELSE IF S&YR.009=. THEN N8_01=4; /* MER 07/31/09 eliminated backward
coding for missing S&YR.009 */

/** Note 9 -- H&YR.028, H&YR.029-H&YR.031:  needed to see a specialist in
last 12 months **/

    ARRAY NOTE9  H&YR.029 H&YR.031;

    N9MARK=0;
    N9NMISS=0;

    DO OVER NOTE9;
        IF NOTE9 NE . THEN N9NMISS+1;
        IF NOTE9 NOT IN (., .N) THEN N9MARK+1;
    END;

    IF H&YR.030 NE . THEN N9NMISS+1;
    IF H&YR.030 NOT IN (.,0) THEN N9MARK+1;

    IF H&YR.028 IN (1) THEN DO;
        N9=1;

```

```

        IF H&YR.029=.N THEN H&YR.029=. ;
    END;
    ELSE IF H&YR.028 in (2,.) AND N9MARK>0 THEN DO;
        N9=2;
        H&YR.028=1;
        IF H&YR.029=.N THEN H&YR.029=. ;
    END;
    ELSE IF H&YR.028 in (2) THEN DO;
        N9=3;
        DO OVER NOTE9;
            IF NOTE9=. THEN NOTE9=.N;
            ELSE NOTE9=.C;
        END;
        IF H&YR.030=. THEN H&YR.030=.N;
        ELSE H&YR.030=.C;
    END;
    ELSE IF H&YR.028=. AND N9NMISS>0 AND N9MARK=0 THEN DO;
        N9=4;
        H&YR.028=2;
        DO OVER NOTE9;
            IF NOTE9=. THEN NOTE9=.N;
            ELSE NOTE9=.C;
        END;
        IF H&YR.030=. THEN H&YR.030=.N;
        ELSE H&YR.030=.C;
    END;
    ELSE IF H&YR.028=. AND N9NMISS=0 THEN N9=5;

    DROP N9NMISS N9MARK;

/** Note 10 -- H&YR.030, H&YR.031: saw a specialist in last 12 months **/

    IF H&YR.030 IN (.N,.C) AND H&YR.031 IN (.N,.C) THEN N10=1;
    ELSE IF H&YR.030 IN (1,2,3,4,5) AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,.)
THEN N10=2;
    ELSE IF H&YR.030 IN (1,2,3,4,5,.) AND H&YR.031 = .N THEN DO;
        N10=3;
        H&YR.030=0;
        H&YR.031=.C;
    END;
    ELSE IF H&YR.030 = 0 THEN DO;
        N10=4;
        IF H&YR.031 = . THEN H&YR.031 = .N;
        ELSE H&YR.031 = .C;
    END;
    ELSE IF H&YR.030 = . AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,.) THEN
N10=5;

/** Note 10_B1 -- S&YR.B02, S&YR.B03-S&YR.B04: overall mental health **/

    ARRAY NOTE10B1 S&YR.B03-S&YR.B04;

    N10B1MARK=0;
    N10B1NMISS=0;

```

```

DO OVER NOTE10B1;
  IF NOTE10B1 NE . THEN N10B1NMISS+1;
  IF NOTE10B1 NOT IN (., .N) THEN N10B1MARK+1;
END;

IF S&YR.B02 = 1 THEN DO;
  N10_B1=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02 IN (2,.) AND (N10B1MARK>0) THEN DO;
  N10_B1=2;
  S&YR.B02=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02=2 AND (N10B1NMISS=0 OR (N10B1NMISS > 0 AND N10B1MARK =
0)) THEN DO;
  N10_B1=3;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND (N10B1NMISS > 0 AND N10B1MARK = 0) THEN DO;
  N10_B1=4;
  S&YR.B02=2;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND N10B1NMISS=0 THEN N10_B1=5;

DROP N10B1NMISS N10B1MARK;

/** Note 11 -- H&YR.032, H&YR.033:  tried to get care, tests, or treatment
from health plan**/

IF H&YR.032=1 AND H&YR.033 IN (1,2,3,4,.) THEN N11=1;
ELSE IF H&YR.032 IN (1,.) AND H&YR.033=.N THEN DO;
  H&YR.032=2;
  H&YR.033=.C;
  N11=2;
END;
ELSE IF H&YR.032 IN (2,.) AND H&YR.033 IN (1,2,3,4) THEN DO;
  H&YR.032=1;
  N11=3;
END;
ELSE IF H&YR.032=2 AND H&YR.033 IN (.,.N) THEN DO;
  IF H&YR.033=. THEN H&YR.033=.N;
  ELSE H&YR.033=.C;
  N11=4;
END;

```

```
ELSE IF H&YR.032=. AND H&YR.033=. THEN N11=5;
```

```
/** Note 12 -- H&YR.034, H&YR.035: look for info in written materials or on internet**/
```

```
IF H&YR.034=1 AND H&YR.035 IN (1,2,3,4,.) THEN N12=1;  
ELSE IF H&YR.034 IN (1,.) AND H&YR.035=.N THEN DO;  
    N12=2;  
    H&YR.034=2;  
    H&YR.035=.C;  
END;  
ELSE IF H&YR.034 IN (2,.) AND H&YR.035 IN (1,2,3,4) THEN DO;  
    N12=3;  
    H&YR.034=1;  
END;  
ELSE IF H&YR.034=2 AND H&YR.035 IN (.N,.) THEN DO;  
    N12=4;  
    IF H&YR.035=. THEN H&YR.035=.N;  
    ELSE H&YR.035=.C;  
END;  
ELSE IF H&YR.034=. AND H&YR.035=. THEN N12=5;
```

```
/** Note 13 -- H&YR.036, H&YR.037: tried to get cost of service/equipment from health plan**/
```

```
IF H&YR.036=1 AND H&YR.037 IN (1,2,3,4,.) THEN N13=1;  
ELSE IF H&YR.036 IN (1,.) AND H&YR.037=.N THEN DO;  
    H&YR.036=2;  
    H&YR.037=.C;  
    N13=2;  
END;  
ELSE IF H&YR.036 IN (2,.) AND H&YR.037 IN (1,2,3,4) THEN DO;  
    H&YR.036=1;  
    N13=3;  
END;  
ELSE IF H&YR.036=2 AND H&YR.037 IN (.,.N) THEN DO;  
    IF H&YR.037=. THEN H&YR.037=.N;  
    ELSE H&YR.037=.C;  
    N13=4;  
END;  
ELSE IF H&YR.036=. AND H&YR.037=. THEN N13=5;
```

```
/** Note 14 -- H&YR.038, H&YR.039: tried to get cost of prescription meds from health plan**/
```

```
IF H&YR.038=1 AND H&YR.039 IN (1,2,3,4,.) THEN N14=1;  
ELSE IF H&YR.038 IN (1,.) AND H&YR.039=.N THEN DO;  
    H&YR.038=2;  
    H&YR.039=.C;  
    N14=2;  
END;  
ELSE IF H&YR.038 IN (2,.) AND H&YR.039 IN (1,2,3,4) THEN DO;  
    H&YR.038=1;  
    N14=3;  
END;
```



```

ELSE IF H&YR.038=2 AND H&YR.039 IN (.,.N) THEN DO;
  IF H&YR.039=. THEN H&YR.039=.N;
  ELSE H&YR.039=.C;
  N14=4;
END;
ELSE IF H&YR.038=. AND H&YR.039=. THEN N14=5;

/** Note 15 -- H&YR.040, H&YR.041-H&YR.042: tried to use health plan's
customer service **/

ARRAY NOTE15 H&YR.041-H&YR.042;

N15MARK=0;
N15NMISS=0;

DO OVER NOTE15;
  IF NOTE15 NE . THEN N15NMISS+1;
  IF NOTE15 NOT IN (., .N) THEN N15MARK+1;
END;

IF H&YR.040 = 1 AND (N15MARK>0 OR N15NMISS=0) THEN DO;
  DO OVER NOTE15;
    IF NOTE15=.N THEN NOTE15=.;
  END;
  N15=1;
END;
ELSE IF H&YR.040 IN (1,.) AND (N15NMISS > 0 AND N15MARK = 0) THEN DO;
  N15=2;
  H&YR.040=2;
  DO OVER NOTE15;
    IF NOTE15 = . THEN NOTE15=.N;
    ELSE NOTE15 = .C;
  END;
END;
ELSE IF H&YR.040 IN (2,.) AND (N15MARK>0) THEN DO;
  N15=3;
  H&YR.040=1;
  DO OVER NOTE15;
    IF NOTE15=.N THEN NOTE15=.;
  END;
END;
ELSE IF H&YR.040=2 AND (N15NMISS=0 OR (N15NMISS > 0 AND N15MARK = 0))
THEN DO;
  N15=4;
  DO OVER NOTE15;
    IF NOTE15 = . THEN NOTE15=.N;
    ELSE NOTE15 = .C;
  END;
END;
ELSE IF H&YR.040 IN (.) AND N15NMISS=0 THEN N15=5;

DROP N15NMISS N15MARK;

/** Note 16 -- H&YR.043, H&YR.044: received forms to fill out from health
plan **/

```

```

IF H&YR.043=1 AND H&YR.044 IN (1,2,3,4,.) THEN N16=1;
ELSE IF H&YR.043 IN (1,.) AND H&YR.044=.N THEN DO;
  H&YR.043=2;
  H&YR.044=.C;
  N16=2;
END;
ELSE IF H&YR.043 IN (2,.) AND H&YR.044 IN (1,2,3,4) THEN DO;
  H&YR.043=1;
  N16=3;
END;
ELSE IF H&YR.043=2 AND H&YR.044 IN (.,.N) THEN DO;
  IF H&YR.044=. THEN H&YR.044=.N;
  ELSE H&YR.044=.C;
  N16=4;
END;
ELSE IF H&YR.043=. AND H&YR.044=. THEN N16=5;

/** Note 17 -- H&YR.045, H&YR.046-H&YR.047: claims to health plan **/

ARRAY NOTE17 H&YR.046-H&YR.047;
N17MARK=0;
N17NDK=0;

DO OVER NOTE17;
  IF NOTE17 NOT IN (.N,.D,.) THEN N17MARK+1; /* At least one is marked */
  IF NOTE17 NOT IN (.,.D) THEN N17NDK+1; /* All are missing or blank or
dnk */
END;

IF H&YR.045=1 AND (N17MARK>0 OR N17NDK=0) THEN DO;
  N17=1;
  DO OVER NOTE17;
    IF NOTE17=.N THEN NOTE17=.;
  END;
END;
ELSE IF H&YR.045 IN (1,.,.D) AND N17MARK=0 AND N17NDK>0 THEN DO;
  N17=2;
  H&YR.045=2;
  DO OVER NOTE17;
    IF NOTE17=. THEN NOTE17=.N;
    ELSE NOTE17=.C;
  END;
END;
ELSE IF H&YR.045 IN (2,.,.D) AND N17MARK>0
  THEN DO;
  H&YR.045=1;
  N17=3;
  DO OVER NOTE17;
    IF NOTE17=.N THEN NOTE17=.;
  END;
END;
ELSE IF H&YR.045 IN (2) AND N17MARK=0 THEN DO;
  N17=4;
  DO OVER NOTE17;
    IF NOTE17=. THEN NOTE17=.N;

```

```

        ELSE NOTE17=.C;
    END;
END;
ELSE IF H&YR.045 IN (.D) AND N17NDK=0 THEN DO;
    N17=5;
    DO OVER NOTE17;
        IF NOTE17=. THEN NOTE17=.N;
        ELSE NOTE17=.C;
    END;
END;
ELSE IF H&YR.045 IN (.) AND N17NDK=0 THEN N17=6;

DROP N17MARK N17NDK;

/** Note 18 -- smoking:  H&YR.053, H&YR.054-H&YR.056, H&YR.057A-H&YR.057D
**/

ARRAY NOTE18a H&YR.054 H&YR.055 H&YR.056;
ARRAY NOTE18b H&YR.057A--H&YR.057D;

N18MARK = 0;

DO OVER NOTE18b;
    IF NOTE18b NOT IN (2,..) THEN N18MARK+1;
END;

IF H&YR.053 IN (3,4,..) THEN N18=1;
ELSE IF H&YR.053 IN (2,.D) AND N18MARK = 0 THEN DO;
    N18=2;
    DO OVER NOTE18a;
        IF NOTE18a=. THEN NOTE18a=.N;
        ELSE NOTE18a=.C;
    END;
    DO OVER NOTE18b;
        IF NOTE18b IN (2,..) THEN NOTE18b=.N;
        ELSE NOTE18b=.C;
    END;
END;
ELSE IF H&YR.053 = 2 AND N18MARK > 0 THEN DO;
    N18=3;
    H&YR.053=.;
END;
ELSE IF H&YR.053 = .D AND N18MARK > 0 THEN DO;
    N18=4;
    DO OVER NOTE18a;
        IF NOTE18a=. THEN NOTE18a=.N;
        ELSE NOTE18a=.C;
    END;
    DO OVER NOTE18b;
        IF NOTE18b IN (2,..) THEN NOTE18b=.N;
        ELSE NOTE18b=.C;
    END;
END;

DROP N18MARK;

```

```

/** Note 19a - gender H&YR.058, SEX, H&YR.059B--H&YR.064,
    XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
   if there is discrepancy between SRSEX and SEX */
/* set imputed FMALE and MALE based on gender specific questions */

ARRAY fmaleval H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
    ;

cntfemale=0;
DO OVER fmaleval;          /* mammogram/pap smear/PREGNANT*/
    IF fmaleval>0 THEN cntfemale=cntfemale+1;
END;

IF cntfemale>0 THEN FMALE=1;
ELSE FMALE = 0;

IF H&YR.058=. THEN DO;
    IF (SEX='F' AND FMALE) THEN DO;
        N19a=1;
        XSEXA=2;
    END;
    ELSE IF (SEX='F' AND FMALE=0) THEN DO;
        N19a=2;
        XSEXA=2;
    END;
    ELSE IF (SEX='M' AND FMALE) THEN DO;
        N19a=3;
        XSEXA=1;
    END;
    ELSE IF (SEX='M' AND FMALE=0) THEN DO;
        N19a=4;
        XSEXA=1;
    END;
    ELSE IF ((SEX IN ('Z', ' ') AND FMALE)) THEN DO;
        N19a=5;
        XSEXA=2;
    END;
    ELSE IF (SEX='Z' AND FMALE=0) THEN DO;
        N19a=6;
        XSEXA=.;
    END;
    ELSE IF (SEX=' ' AND FMALE=0) THEN DO;
        N19a=7;
        XSEXA=.;
    END;
END;
ELSE IF (H&YR.058=1) THEN DO;
    IF FMALE=0 THEN DO;
        N19a=8;
        XSEXA=1;
    END;
    ELSE IF FMALE THEN DO;

```

```

        IF SEX='F' THEN DO;
            N19a=9;
            XSEXA=2;
        END;
        ELSE DO;
            N19a=10;
            XSEXA=1;
        END;
    END;
END;
ELSE IF (H&YR.058=2) THEN DO;
    IF FMALE THEN DO;
        N19a=11;
        XSEXA=2;
    END;
    ELSE IF FMALE=0 THEN DO;
        IF SEX='M' THEN DO;
            N19a=12;
            XSEXA=1;
        END;
        ELSE DO;
            N19a=13;
            XSEXA=2;
        END;
    END;
END;
END;

```

/* Note 19b - gender vs mammogram/paps/pregnancy */

```

ARRAY NOTE19b H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
        ;
IF XSEXA=1 THEN DO; /* male */
    IF FMALE=0 THEN DO;
        N19b=1;
        DO OVER NOTE19b;
            NOTE19b=.N;
        END;
    END; /* valid skip */
    ELSE IF FMALE=1 THEN DO;
        N19b=2;
        DO OVER NOTE19b;
            IF NOTE19b=. THEN NOTE19b = .N;
            ELSE NOTE19b=.C;
        END;
    END; /* inconsistent response */
END;
ELSE IF XSEXA=2 THEN N19b=3; /* female */
ELSE IF XSEXA=. THEN DO; /* missing sex */
    N19b=4;
    DO OVER NOTE19b;
        NOTE19b=.;
    END;
END;
END;

DROP FMALE CNTFMALE;

```

/* Note 20- breast exam for female 40 or over */

```
IF XSEXA=1 THEN DO; /* male */
  IF (H&YR.060=.C OR H&YR.060=.N) AND (H&YR.061=.C OR H&YR.061=.N)
    THEN N20 = 1;
END;
ELSE IF XSEXA=2 THEN DO;
  IF H&YR.060=2 THEN N20=2; /* female 40 or over */
  ELSE IF H&YR.060=1 THEN DO; /* female < 40 */
    IF H&YR.061 NE . THEN H&YR.061=.C;
    ELSE H&YR.061=.N;
    N20=3;
  END;
  ELSE IF H&YR.060=. THEN DO;
    IF H&YR.061 NE . THEN DO;
      H&YR.060=2;
      N20=4;
    END;
    ELSE IF H&YR.061=. THEN DO;
      IF AGE<40 THEN DO;
        H&YR.060 = 1;
        H&YR.061=.N;
        N20=5;
      END;
      ELSE IF AGE >= 40 THEN DO;
        H&YR.060=2;
        N20=6;
      END;
      ELSE IF AGE=. THEN N20=7;
    END;
  END;
END;
ELSE IF XSEXA=. THEN N20=8;
```

/* Note 21 - gender vs Pregnancy */

```
IF XSEXA=1 THEN N21=1; /* male */
ELSE IF XSEXA=2 THEN DO; /* female */
  IF H&YR.062=1 THEN DO; /* pregnant */
    IF H&YR.063=1 THEN DO;
      N21=2;
      IF H&YR.064=. THEN H&YR.064 = .N;
      ELSE H&YR.064=.C;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;
      N21=3;
      H&YR.064=. ;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,..) THEN DO;
      N21=4;
    END;
    ELSE IF H&YR.063 IN (3,..) THEN N21=5;
```

```

END;
ELSE IF H&YR.062=2 THEN DO;
  IF H&YR.063=. THEN H&YR.063 = .N;
  ELSE H&YR.063=.C;
  N21=6;
END;
ELSE IF H&YR.062=3 THEN DO;
  N21=7;
  IF H&YR.063=. THEN H&YR.063 = .N;
  ELSE H&YR.063=.C;
  IF H&YR.064=. THEN H&YR.064=.N;
  ELSE H&YR.064=.C;
END;
ELSE IF H&YR.062 IN (.) THEN DO;
  IF H&YR.063=1 THEN DO;
    N21=8;
    H&YR.062=1;
    IF H&YR.064=. THEN H&YR.064 = .N;
    ELSE H&YR.064=.C;
  END;
  ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;
    N21=9;
    H&YR.062=1;
    H&YR.064=.;
  END;
  ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,.) THEN DO;
    H&YR.062=1;
    N21=10;
  END;
  ELSE IF H&YR.063=3 THEN DO;
    H&YR.062=1;
    N21=11;
  END;
  ELSE IF H&YR.063=. THEN DO;
    N21=12;
  END;
END;
END;
END;
ELSE IF XSEXA=. AND H&YR.062 IN (.) THEN N21=13;

```

DROP AGE SEX;

/** Note 22 -- H&YR.067, H&YR.068: seen doctor 3 or more times for same condition **/

```

IF H&YR.067=1 THEN N22=1;
ELSE IF H&YR.067 IN (2,.) AND H&YR.068 IN (1,2) THEN DO;
  H&YR.067=1;
  N22=2;
END;
ELSE IF H&YR.067=2 AND H&YR.068 IN (.) THEN DO;

```

```

        H&YR.068=.N;
        N22=3;
    END;
    ELSE IF H&YR.067=. AND H&YR.068=. THEN N22=4;

/** Note 23 -- H&YR.069, H&YR.070: need or take medicine prescribed by a
doctor **/

    IF H&YR.069=1 THEN N23=1;
    ELSE IF H&YR.069 IN (2,.) AND H&YR.070 IN (1,2) THEN DO;
        H&YR.069=1;
        N23=2;
    END;
    ELSE IF H&YR.069=2 AND H&YR.070 IN (.) THEN DO;
        H&YR.070=.N;
        N23=3;
    END;
    ELSE IF H&YR.069=. AND H&YR.070=. THEN N23=4;

/** Note 23_HT -- XSEXA, H&YR.071F, H&YR.071I: height restrictions
**/
*AMK 9/25/13
Set height and weight restriction to conform with NHIS 2006 guidelines
Men: height between 63-76 inches, weight between 126-299 pounds
Women: height between 59-70 inches, weight between 100-274 pounds;

*INCHES;
    IF H&YR.071F NE . AND H&YR.071I = . THEN H&YR.071I=0;
    IF H&YR.071F = . AND H&YR.071I >11 THEN DO;
        H&YR.071F=FLOOR(H&YR.071I/12);
        H&YR.071I=H&YR.071I-(H&YR.071F*12);
    END;
    IF H&YR.071F NE . THEN INCHES=(H&YR.071F*12+H&YR.071I);
    ELSE INCHES=H&YR.071I;

    IF (XSEXA = 1 AND (63<=INCHES<=76 OR INCHES = .)) OR
        (XSEXA = 2 AND (59<=INCHES<=70 OR INCHES = .)) THEN N23_HT=1;
    ELSE IF XSEXA IN (1,2) THEN DO;
        N23_HT=2;
        H&YR.071F=.0;
        H&YR.071I=.0;
    END;
    ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
        IF 59<=INCHES<=76 OR INCHES = . THEN N23_HT=3;
        ELSE DO;
            N23_HT=4;
            H&YR.071F=.0;
            H&YR.071I=.0;
        END;
    END;

    DROP INCHES;

/** Note 23_WT -- H&YR.072: weight restrictions
**/

```


*AMK 9/25/13

Set height and weight restriction to conform with NHIS 2006 guidelines
Men: height between 63-76 inches, weight between 126-299 pounds
Women: height between 59-70 inches, weight between 100-274 pounds;

```
IF (XSEXA = 1 AND (126<=H&YR.072<=299 OR H&YR.072 = .)) OR
  (XSEXA = 2 AND (100<=H&YR.072<=274 OR H&YR.072 = .)) THEN N23_WT=1;
ELSE IF XSEXA IN (1,2) THEN DO;
  N23_WT=2;
  H&YR.072 =.0;
END;
ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
  IF 100<=H&YR.072<=299 OR H&YR.072 = . THEN N23_WT=3;
  ELSE DO;
    N23_WT=4;
    H&YR.072=.0;
  END;
END;
```

/** Note 24 -- H&YR.073, H&YR.073A-H&YR.073E: Hispanic or Latino origin or descent **/

```
/* JMA
****Multiple responses were given to this question so H&YR.073 is being
created
****from the multiple responses.;
*/
```

```
IF H&YR.073B=1 THEN DO;
  N24=1;
  H&YR.073=2;
END;
ELSE IF H&YR.073E=1 THEN DO;
  N24=2;
  H&YR.073=5;
END;
ELSE IF H&YR.073C=1 THEN DO;
  N24=3;
  H&YR.073=3;
END;
ELSE IF H&YR.073D=1 THEN DO;
  N24=4;
  H&YR.073=4;
END;
ELSE IF H&YR.073A=1 THEN DO;
  N24=5;
  H&YR.073=1;
END;
ELSE IF H&YR.073A IN (2,..) AND H&YR.073B IN (2,..) AND H&YR.073C IN (2,..)
AND
  H&YR.073D IN (2,..) AND H&YR.073E IN (2,..) THEN DO;
  N24=6;
  H&YR.073=.;
```

```

END;

/** Note 25 -- currently covered by Medicare: H&YR.074, H&YR.075-H&YR.079
**/

ARRAY NOTE25 H&YR.075-H&YR.079;

N25MARK = 0;

DO OVER NOTE25;
  IF NOTE25 NOT IN (2,.D,.) THEN N25MARK+1;
END;

IF H&YR.074 = 1 THEN N25=1;
ELSE IF H&YR.074 IN (2,.D) AND N25MARK = 0 THEN DO;
  N25=2;
  DO OVER NOTE25;
    IF NOTE25=. THEN NOTE25=.N;
    ELSE NOTE25=.C;
  END;
END;
ELSE IF H&YR.074 IN (2,.D,.) AND N25MARK > 0 THEN DO;
  N25=3;
  H&YR.074=1;
END;
ELSE IF H&YR.074 = . AND N25MARK = 0 THEN N25=4;

DROP N25MARK;

NOSURVEY:

/* missing values */

ARRAY MISS MISS_9 MISS_7 MISS_6 MISS_5 MISS_4 MISS_1 ;
MISS_TOT=0;
DO OVER MISS;
  MISS = 0;
END;
ARRAY MISSARRAY &VARLIST2.;

DO OVER MISSARRAY;
  IF (MISSARRAY EQ -9 ) THEN MISS_9 = MISS_9 + 1;
  ELSE IF (MISSARRAY EQ -7) THEN MISS_7 = MISS_7 + 1;
  ELSE IF (MISSARRAY EQ -6) THEN MISS_6 = MISS_6 + 1;
  ELSE IF (MISSARRAY EQ -5) THEN MISS_5 = MISS_5 + 1;
  ELSE IF (MISSARRAY EQ -4) THEN MISS_4 = MISS_4 + 1;
  ELSE IF (MISSARRAY EQ -1) THEN MISS_1 = MISS_1 + 1;
END;
DO OVER MISS;
  MISS_TOT=MISS_TOT + MISS;
END;

*****;

```

```
OUTPUT;
```

```
RUN;
```

```
proc contents data=out.&outdata. varnum;  
run;  
%MEND;  
%CSCHM;
```

F.2.B - Q1FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.FMT - Include file for Coding Scheme for Quarter 1 FY2017

/* Formats for original answers to survey questions,
after variables have been recoded */

FORMAT H&YR.001 O_H&YR.001 YN.

/* H&YR.002 has no format.*/

H&YR.003 O_H&YR.003 HPLAN1_.
H&YR.004 O_H&YR.004 HPTIME.

H&YR.005 O_H&YR.005 PLACE.

H&YR.006 O_H&YR.006
H&YR.009 O_H&YR.009
H&YR.019 O_H&YR.019
YN.

H&YR.007 O_H&YR.007 OFTEN2_.
H&YR.008 O_H&YR.008 TIME1_.

H&YR.010 O_H&YR.010 OFTEN3_.
H&YR.011 O_H&YR.011 TIME2_.

H&YR.012 O_H&YR.012 OFTEN4_.
H&YR.013 O_H&YR.013 OFTEN4_.
H&YR.014 O_H&YR.014 OFTEN8_.
H&YR.015 O_H&YR.015 YN.
H&YR.016 O_H&YR.016 YNDEF.
H&YR.017 O_H&YR.017 YNDEF.
H&YR.018 O_H&YR.018 RATE3_.

/* H&YR.019 has no format.*/

S&YR.BI01 O_S&YR.BI01 YN.
S&YR.BI03 O_S&YR.BI03 DSAGR4_.
S&YR.BI04 O_S&YR.BI04 DSAGR4_.
S&YR.BI05 O_S&YR.BI05 DSAGR4_.
S&YR.BI06 O_S&YR.BI06 DSAGR4_.
S&YR.BI07 O_S&YR.BI07 DSAGR4_.
S&YR.BI08 O_S&YR.BI08 DSAGR4_.
S&YR.BI09 O_S&YR.BI09 DSAGR4_.
S&YR.BI10 O_S&YR.BI10 DSAGR4_.
S&YR.BI11 O_S&YR.BI11 DSAGR4_.
S&YR.BI12 O_S&YR.BI12 DSAGR4_.
S&YR.BI13 O_S&YR.BI13 DSAGR4_.
S&YR.BI14 O_S&YR.BI14 DSAGR4_.
S&YR.BI15 O_S&YR.BI15 S&YR.BI15_.
S&YR.BI16 O_S&YR.BI16 YNDNK.
S&YR.BI17 O_S&YR.BI17 YNDNK.
S&YR.BI18 O_S&YR.BI18 YNDNK.
S&YR.BI19 O_S&YR.BI19 S&YR.BI19_.
S&YR.BI20 O_S&YR.BI20 RATE_URG.

H&YR.020 O_H&YR.020 OFTEN10_.

H&YR.021-H&YR.024 O_H&YR.021--O_H&YR.024 OFTEN5_.

H&YR.025 O_H&YR.025 YN.
H&YR.026 O_H&YR.026 OFTEN8_.
H&YR.027 O_H&YR.027 RATE6_.

S&YR.009 O_S&YR.009 YN.
S&YR.010 O_S&YR.010 PROBL_.

H&YR.028 O_H&YR.028 YN.
H&YR.029 O_H&YR.029 OFTEN9_.
H&YR.030 O_H&YR.030 SPCLST.
H&YR.031 O_H&YR.031 RATE2_.

S&YR.B01 O_S&YR.B01 MNTLHLTH.
S&YR.B02 O_S&YR.B02 YN.
S&YR.B03 O_S&YR.B03 PROBL_.
S&YR.B04 O_S&YR.B04 RATE5_.

H&YR.032 O_H&YR.032 YN.
H&YR.033 O_H&YR.033 OFTEN11_.
H&YR.034 O_H&YR.034 YN.
H&YR.035 O_H&YR.035 OFTEN12_.
H&YR.036 O_H&YR.036 YN.
H&YR.037 O_H&YR.037 OFTEN13_.
H&YR.038 O_H&YR.038 YN.
H&YR.039 O_H&YR.039 OFTEN14_.
H&YR.040 O_H&YR.040 YN.
H&YR.041 O_H&YR.041 OFTEN15_.
H&YR.042 O_H&YR.042 OFTEN15_.
H&YR.043 O_H&YR.043 YN.
H&YR.044 O_H&YR.044 OFTEN16_.
H&YR.045 O_H&YR.045 YNDNK.
H&YR.046 O_H&YR.046 OFTEN6_.
H&YR.047 O_H&YR.047 OFTEN6_.
H&YR.048 O_H&YR.048 RATE4_.

H&YR.049 O_H&YR.049 TIME5_.
H&YR.050 O_H&YR.050 YNBP_.

H&YR.051 O_H&YR.051 TIME7_.
H&YR.052 O_H&YR.052 YNDNK.
H&YR.053 O_H&YR.053 TIME8_.
H&YR.054 O_H&YR.054 OFTEN8_.
H&YR.055 O_H&YR.055 OFTEN8_.
H&YR.056 O_H&YR.056 OFTEN8_.

/* H&YR.057 has no format.*/

H&YR.058 O_H&YR.058 SEX.
H&YR.059B O_H&YR.059B TIME16_.

H&YR.060 O_H&YR.060 H&YR.066 O_H&YR.066 YN.

H&YR.061 O_H&YR.061 TIME12_.
H&YR.062 O_H&YR.062 YNPREG.
H&YR.063 O_H&YR.063 PREG1_.
H&YR.064 O_H&YR.064 PREG2_.

H&YR.065 O_H&YR.065 HEALTH.
H&YR.067 O_H&YR.067 YN.
H&YR.068 O_H&YR.068 YN.
H&YR.069 O_H&YR.069 YN.

H&YR.070 O_H&YR.070 YN.

H&YR.071F O_H&YR.071F
H&YR.071I O_H&YR.071I
H&YR.072 O_H&YR.072
TIME14_.

SREDA O_SREDA EDUC.

H&YR.073 HISP.

SRAGE SRAGE AGEGRP.

H&YR.074 O_H&YR.074 YNDNK.
H&YR.075 O_H&YR.075 MEDA.
H&YR.076 O_H&YR.076 MEDB.
H&YR.077 O_H&YR.077 YNDNK.
H&YR.078 O_H&YR.078 MEDSUPP.
H&YR.079 O_H&YR.079 YNDNK.

S&YR.011 O_S&YR.011 AGREE2_.
S&YR.014 O_S&YR.014 SATISFY.

MISS_1 MISS_4-MISS_7 MISS_9 MISS_TOT 4.
;

LABEL O_H&YR.001='Are you the person listed on envelope'
H&YR.001 ='Are you the person listed on envelope'
O_H&YR.002A='Health plan(s) covered: TRICARE Prime'
H&YR.002A ='Health plan(s) covered: TRICARE Prime'
O_H&YR.002C='Health plan(s) covered: TRICARE Ext/Stnd'
H&YR.002C ='Health plan(s) covered: TRICARE Ext/Stnd'
O_H&YR.002N='Health plan(s) covered: TRICARE Plus'
H&YR.002N ='Health plan(s) covered: TRICARE Plus'
O_H&YR.002O='Health plan(s) covered: TRICARE For Life'
H&YR.002O ='Health plan(s) covered: TRICARE For Life'
O_H&YR.002P='Health plan(s) covered: TRICARE Supplmntl Ins'

H&YR.002P = 'Health plan(s) covered: TRICARE Supplmntl Ins'
 O_H&YR.002Q='Health plan(s) covered: TRICARE Reserve Select'
 H&YR.002Q = 'Health plan(s) covered: TRICARE Reserve Select'
 O_H&YR.002S='Health plan(s) covered: TRICARE Retired Reserve'
 H&YR.002S = 'Health plan(s) covered: TRICARE Retired Reserve'
 O_H&YR.002T='Health plan(s) covered: TRICARE Young Adult
 Prime'
 H&YR.002T = 'Health plan(s) covered: TRICARE Young Adult
 Prime'
 O_H&YR.002V='Health plan(s) covered: TRICARE Young Adult Ex
 or Standard'
 H&YR.002V = 'Health plan(s) covered: TRICARE Young Adult Ex or
 Standard'
 O_H&YR.002U='Health plan(s) covered: CHCBP'
 H&YR.002U = 'Health plan(s) covered: CHCBP'
 O_H&YR.002F='Health plan(s) covered: Medicare'
 H&YR.002F = 'Health plan(s) covered: Medicare'
 O_H&YR.002G='Health plan(s) covered: FEHBP'
 H&YR.002G = 'Health plan(s) covered: FEHBP'
 O_H&YR.002H='Health plan(s) covered: Medicaid'
 H&YR.002H = 'Health plan(s) covered: Medicaid'
 O_H&YR.002I='Health plan(s) covered: civilian HMO'
 H&YR.002I = 'Health plan(s) covered: civilian HMO'
 O_H&YR.002J='Health plan(s) covered: other civilian'
 H&YR.002J = 'Health plan(s) covered: other civilian'
 O_H&YR.002K='Health plan(s) covered: USFHP'
 H&YR.002K = 'Health plan(s) covered: USFHP'
 O_H&YR.002M='Health plan(s) covered: veterans'
 H&YR.002M = 'Health plan(s) covered: veterans'
 O_H&YR.002R='Health plan(s) covered: gov hlth ins-other
 cntry'
 H&YR.002R = 'Health plan(s) covered: gov hlth ins-other cntry'
 O_H&YR.002L='Health plan(s) covered: not sure'
 H&YR.002L = 'Health plan(s) covered: not sure'
 O_H&YR.003='Which health plan did you use most'
 H&YR.003 = 'Which health plan did you use most'
 O_H&YR.004='Yrs in a row with health plan'
 H&YR.004 = 'Yrs in a row with health plan'
 O_H&YR.005='In lst yr:fclty use most for health care'
 H&YR.005 = 'In lst yr:fclty use most for health care'
 O_H&YR.006='In lst yr:ill/injry/cond care right away'
 H&YR.006 = 'In lst yr:ill/injry/cond care right away'
 O_H&YR.007='In lst yr:get urgnt care as soon as wntd'
 H&YR.007 = 'In lst yr:get urgnt care as soon as wntd'
 O_H&YR.008='In lst yr:wait btwn try get care,see prv'
 H&YR.008 = 'In lst yr:wait btwn try get care,see prv'
 O_H&YR.009='In lst yr:make appts non-urgnt hlth care'
 H&YR.009 = 'In lst yr:make appts non-urgnt hlth care'
 O_H&YR.010='In lst yr:non-urg hlth cre appt whn wntd'
 H&YR.010 = 'In lst yr:non-urg hlth cre appt whn wntd'
 O_H&YR.011='In lst yr:days btwn appt & see prvder'
 H&YR.011 = 'In lst yr:days btwn appt & see prvder'
 O_H&YR.012='In lst yr:go to emrgncy rm for own care'
 H&YR.012 = 'In lst yr:go to emrgncy rm for own care'
 O_H&YR.013='In lst yr:go to Dr office/clinic for care'
 H&YR.013 = 'In lst yr:go to Dr office/clinic for care'

O_H&YR.014 = 'Lst yr: how often talk to doctor about illness
 prvntn'
 H&YR.014='Lst yr: how often talk to doctor about illness
 prvntn'
 O_H&YR.015 = 'Lst yr: did doctor tell you more than 1 choice
 for trtmnt'
 H&YR.015='Lst yr: did doctor tell you more than 1 choice for
 trtmnt'
 O_H&YR.016 = 'Lst yr: did talk to doctor about pros/cons of
 trtmnt'
 H&YR.016='Lst yr: did talk to doctor about pros/cons of
 trtmnt'
 O_H&YR.017 = 'Lst yr: did doctor ask which trtmnt option best
 for you'
 H&YR.017='Lst yr: did doctor ask which trtmnt option best for
 you'
 O_H&YR.018='Rating of all health care in lst yr'
 H&YR.018 = 'Rating of all health care in lst yr'

 S&YR.BI01 ="In last 6 mos, did you need care right away in
 an urgent care center, ER, or doctor's office?"
 O_S&YR.BI01="In last 6 mos, did you need care right away in
 an urgent care center, ER, or doctor's office?"
 S&YR.BI02A ="In last 6 mos, when you needed care right away,
 did you go to an urgent care center?"
 O_S&YR.BI02A="In last 6 mos, when you needed care right away,
 did you go to an urgent care center?"
 S&YR.BI02B ="In last 6 mos, when you needed care right away,
 did you go to a hospital ER?"
 O_S&YR.BI02B="In last 6 mos, when you needed care right away,
 did you go to a hospital ER?"
 S&YR.BI02C ="In last 6 mos, when you needed care right away,
 did you go to a doctor's office?"
 O_S&YR.BI02C="In last 6 mos, when you needed care right away,
 did you go to a doctor's office?"
 S&YR.BI02D ="In last 6 mos, when you needed care right away,
 did you go someplace else?"
 O_S&YR.BI02D="In last 6 mos, when you needed care right away,
 did you go someplace else?"
 S&YR.BI02E ="In last 6 mos, I didn't need care right away
 for an illness, injury, or condition "
 O_S&YR.BI02E="In last 6 mos, I didn't need care right away
 for an illness, injury, or condition "
 S&YR.BI19 ="On most recent visit to urgent care center, what
 was the main reason you went?"
 O_S&YR.BI19="On most recent visit to urgent care center, what
 was the main reason you went?"
 S&YR.BI03 ="Urgent care center: Location is more convenient
 than my normal place of care"
 O_S&YR.BI03="Urgent care center: Location is more convenient
 than my normal place of care"
 S&YR.BI04 ="Urgent care center: Urgent care was low cost or
 no cost to me"
 O_S&YR.BI04="Urgent care center: Urgent care was low cost or
 no cost to me"
 S&YR.BI05 ="Urgent care center: Urgent care was faster than
 making an appt with my primary care provider"

O_S&YR.BI05="Urgent care center: Urgent care was faster than making an appt with my primary care provider"

S&YR.BI06 ="Urgent care center: I could just walk in for care without an appt"

O_S&YR.BI06="Urgent care center: I could just walk in for care without an appt"

S&YR.BI07 ="Urgent care center: I trust the urgent care center provider(s)"

O_S&YR.BI07="Urgent care center: I trust the urgent care center provider(s)"

S&YR.BI08 ="Urgent care center: The urgent care center would process my TRICARE claim without problems"

O_S&YR.BI08="Urgent care center: The urgent care center would process my TRICARE claim without problems"

S&YR.BI09 ="Urgent care center: Would have used appt with regular provider if had been available"

O_S&YR.BI09="Urgent care center: Would have used appt with regular provider if had been available"

S&YR.BI10 ="Urgent care center: I wanted to avoid the wait at a hospital ER"

O_S&YR.BI10="Urgent care center: I wanted to avoid the wait at a hospital ER"

S&YR.BI11 ="Urgent care center: The location is more convenient than the hospital ER"

O_S&YR.BI11="Urgent care center: The location is more convenient than the hospital ER"

S&YR.BI12 ="Urgent care center: My condition was not a medical emergency requiring a hospital ER"

O_S&YR.BI12="Urgent care center: My condition was not a medical emergency requiring a hospital ER"

S&YR.BI13 ="Urgent care center: Normal place of care was not open"

O_S&YR.BI13="Urgent care center: Normal place of care was not open"

S&YR.BI14 ="Urgent care center: I thought it would take less time than at my usual place of care"

O_S&YR.BI14="Urgent care center: I thought it would take less time than at my usual place of care"

S&YR.BI15 ="Urgent care center, did you or someone else call a nurse advice line before going to urgent care"

O_S&YR.BI15="Urgent care center, did you or someone else call a nurse advice line before going to urgent care"

S&YR.BI16 ="Did the nurse advise you to seek urgent care?"

O_S&YR.BI16="Did the nurse advise you to seek urgent care?"

S&YR.BI17 ="Urgent care center, did the health care providers advise you to seek care in a hospital ER?"

O_S&YR.BI17="Urgent care center, did the health care providers advise you to seek care in a hospital ER?"

S&YR.BI18 ="Did you seek care at a hospital ER?"

O_S&YR.BI18="Did you seek care at a hospital ER?"

S&YR.BI20 ="What number would you use to rate your care during this urgent care center visit?"

O_S&YR.BI20="What number would you use to rate your care during this urgent care center visit?"

O_H&YR.019='Have one person think of as personal Dr'

H&YR.019 ='Have one person think of as personal Dr'

O_H&YR.020 = 'Lst yr: how often visit prsnl doctor for care
 for yourself'
 H&YR.020='Lst yr: how often visit prsnl doctor for care for
 yourself'
 O_H&YR.021='Lst yr: how oftn Drs listen to you'
 H&YR.021 = 'Lst yr: how oftn Drs listen to you'
 O_H&YR.022='Lst yr: how oftn Drs explain things'
 H&YR.022 = 'Lst yr: how oftn Drs explain things'
 O_H&YR.023='Lst yr: how oftn Drs show respect'
 H&YR.023 = 'Lst yr: how oftn Drs show respect'
 O_H&YR.024='Lst yr: how oftn Drs spend enough time'
 H&YR.024 = 'Lst yr: how oftn Drs spend enough time'
 O_H&YR.025 = 'Lst yr: did get care from doctor other than
 prsnl doctor'
 H&YR.025='Lst yr: did get care from doctor other than prsnl
 doctor'
 O_H&YR.026 = 'Lst yr: how often prsnl doctor seemed infrmd of
 care from other doctors'
 H&YR.026='Lst yr: how often prsnl doctor seemed infrmd of
 care from other doctors'
 O_H&YR.027='Rating of your personal Dr'
 H&YR.027 = 'Rating of your personal Dr'
 O_H&YR.028 = 'Lst yr: did make any appointments to see
 spclst'
 H&YR.028='Lst yr: did make any appointments to see spclst'
 O_H&YR.029 = 'Lst yr: how often easy to get appointments with
 spclsts'
 H&YR.029='Lst yr: how often easy to get appointments with
 spclsts'
 O_H&YR.030 = 'Lst yr: how many spclsts seen'
 H&YR.030='Lst yr: how many spclsts seen'
 O_H&YR.031='Rating of specialist seen in lst yr'
 H&YR.031 = 'Rating of specialist seen in lst yr'
 O_H&YR.032 = 'Lst yr: did try to get care, test, or trtmnt
 through health plan'
 H&YR.032='Lst yr: did try to get care, test, or trtmnt
 through health plan'
 O_H&YR.033 = 'Lst yr: how often easy to get care, test, or
 trtmnt'
 H&YR.033='Lst yr: how often easy to get care, test, or
 trtmnt'
 O_H&YR.034 = 'Lst yr: did look for info from written
 material/Internet'
 H&YR.034='Lst yr: did look for info from written
 material/Internet'
 O_H&YR.035 = 'Lst yr: how often written material/Internet
 provide needed info'
 H&YR.035='Lst yr: how often written material/Internet provide
 needed info'
 O_H&YR.036 = 'Lst yr: did look for info from health plan on
 cost of service/equipment'
 H&YR.036='Lst yr: did look for info from health plan on cost
 of service/equipment'
 O_H&YR.037 = 'Lst yr: how often able to find out cost of
 service/equipment'
 H&YR.037='Lst yr: how often able to find out cost of
 service/equipment'

O_H&YR.038 = 'Lst yr: did look for info from health plan on cost of prescription meds'
 H&YR.038= 'Lst yr: did look for info from health plan on cost of prescription meds'
 O_H&YR.039 = 'Lst yr: how often able to find out cost of prescription meds'
 H&YR.039= 'Lst yr: how often able to find out cost of prescription meds'
 O_H&YR.040 = "Lst yr: did try to get info/help from health plan's cstmr service"
 H&YR.040="Lst yr: did try to get info/help from health plan's cstmr service"
 O_H&YR.041 = 'Lst yr: how often did cstmr service give needed info/help'
 H&YR.041='Lst yr: how often did cstmr service give needed info/help'
 O_H&YR.042 = 'Lst yr: how often did cstmr service treat with courtesy/respect'
 H&YR.042='Lst yr: how often did cstmr service treat with courtesy/respect'
 O_H&YR.043 = 'Lst yr: did health plan give any forms to fill out'
 H&YR.043='Lst yr: did health plan give any forms to fill out'
 O_H&YR.044 = 'Lst yr: how often were forms easy to fill out'
 H&YR.044='Lst yr: how often were forms easy to fill out'
 O_H&YR.045 = 'Lst yr: send in any claims'
 H&YR.045='Lst yr: send in any claims'
 O_H&YR.046 = 'Lst yr: how often did health plan handle claims quickly'
 H&YR.046='Lst yr: how often did health plan handle claims quickly'
 O_H&YR.047='Lst yr: how oftn handle claims correctly'
 H&YR.047 = 'Lst yr: how oftn handle claims correctly'
 O_H&YR.048 = 'Rating of all experience with hlth plan'
 H&YR.048='Rating of all experience with hlth plan'
 O_H&YR.049='Blood pressure: when lst reading'
 H&YR.049 = 'Blood pressure: when lst reading'
 O_H&YR.050='Blood pressure: know if too high or not'
 H&YR.050 = 'Blood pressure: know if too high or not'

 O_H&YR.051='When did you lst have a flu shot'
 H&YR.051 = 'When did you lst have a flu shot'
 O_H&YR.052 = 'Smoked at least 100 cigarettes in life'
 H&YR.052='Smoked at least 100 cigarettes in life'
 O_H&YR.053 = 'Smoke or use tobacco everyday, some days or not at all'
 H&YR.053='Smoke or use tobacco everyday, some days or not at all'
 O_H&YR.054='Lst yr: how often advised to quit smoking or use tobacco'
 H&YR.054 = 'Lst yr: how often advised to quit smoking or use tobacco'
 O_H&YR.055 = 'Lst yr: how often recom medic assist quit smoking or using tobacco'
 H&YR.055='Lst yr: how often recom medic assist quit smoking or using tobacco'

O_H&YR.056 = 'Lst yr: how often discu meth/strag asst quit smoking or using tobacco'
 H&YR.056= 'Lst yr: how often discu meth/strag asst quit smoking or using tobacco'
 O_H&YR.057A = 'Do you smoke or use: cigarettes'
 H&YR.057A= 'Do you smoke or use: cigarettes'
 O_H&YR.057B = 'Do you smoke or use: dip, chewing tobacco, snuff, or snus'
 H&YR.057B= 'Do you smoke or use: dip, chewing tobacco, snuff, or snus'
 O_H&YR.057C = 'Do you smoke or use: cigars'
 H&YR.057C= 'Do you smoke or use: cigars'
 O_H&YR.057D = 'Do you smoke or use: pipes, bidis, or kreteks'
 H&YR.057D= 'Do you smoke or use: pipes, bidis, or kreteks'
 O_H&YR.058= 'Are you male or female'
 H&YR.058 = 'Are you male or female'
 O_H&YR.059B= 'Lst have a Pap smear test'
 H&YR.059B = 'Lst have a Pap smear test'
 O_H&YR.060= 'Are you under age 40 '
 H&YR.060 = 'Are you under age 40 '
 O_H&YR.061= 'Lst time: breasts checked mammography'
 H&YR.061 = 'Lst time: breasts checked mammography'
 O_H&YR.062= 'Been pregnant in lst yr or pregnant now'
 H&YR.062 = 'Been pregnant in lst yr or pregnant now'
 O_H&YR.063= 'In what trimester is your pregnancy'
 H&YR.063 = 'In what trimester is your pregnancy'
 O_H&YR.064= 'Trimester first received prenatal care'
 H&YR.064 = 'Trimester first received prenatal care'

 O_H&YR.065= 'In gnrl, how would you rate ovrall hlth'
 H&YR.065 = 'In gnrl, how would you rate ovrall hlth'

 O_H&YR.066= 'Impairment/Hlth prblm limit activities'
 H&YR.066 = 'Impairment/Hlth prblm limit activities'
 O_H&YR.067 = 'Lst yr: have seen doctor 3 or more times for same condition'
 H&YR.067= 'Lst yr: have seen doctor 3 or more times for same condition'

 O_H&YR.068 = 'Has condition lasted for at least 3 months'
 H&YR.068= 'Has condition lasted for at least 3 months'
 O_H&YR.069 = 'Need to take medicine prescribed by a doctor'
 H&YR.069= 'Need to take medicine prescribed by a doctor'
 O_H&YR.070 = 'Medicine to treat condition that has lasted for at least 3 months'
 H&YR.070= 'Medicine to treat condition that has lasted for at least 3 months'

 O_H&YR.071F= 'Height without shoes (feet)'
 H&YR.071F = 'Height without shoes (feet)'
 O_H&YR.071I= 'Height without shoes (inches)'
 H&YR.071I = 'Height without shoes (inches)'

O_H&YR.072='Weight without shoes'
 H&YR.072 = 'Weight without shoes'
 O_SREDA = 'Highest grade completed'
 SREDA = 'Highest grade completed'
 H&YR.073 = 'Are you Spanish/Hispanic/Latino'
 O_H&YR.073A='Not Spanish/Hispanic/Latino'
 H&YR.073A = 'Not Spanish/Hispanic/Latino'
 O_H&YR.073B='Mexican, Mexican American, Chicano'
 H&YR.073B = 'Mexican, Mexican American, Chicano'
 O_H&YR.073C='Puerto Rican'
 H&YR.073C = 'Puerto Rican'
 O_H&YR.073D='Cuban'
 H&YR.073D = 'Cuban'
 O_H&YR.073E='Other Spanish, Hispanic, or Latino'
 H&YR.073E = 'Other Spanish, Hispanic, or Latino'
 O_SRRACEA='Race: White'
 SRRACEA = 'Race: White'
 O_SRRACEB='Race: Black or African American'
 SRRACEB = 'Race: Black or African American'
 O_SRRACEC='Race: American Indian or Alaska Native'
 SRRACEC = 'Race: American Indian or Alaska Native'
 O_SRRACED='Race: Asian'
 SRRACED = 'Race: Asian'
 O_SRRACEE='Race: Native Hawaiian/other Pacific Isl.'
 SRRACEE = 'Race: Native Hawaiian/other Pacific Isl.'
 O_SRAGE = 'What is your age now'
 SRAGE = 'What is your age now'
 O_H&YR.074 = 'Currently Covered Medicare'
 H&YR.074='Currently Covered Medicare'
 O_H&YR.075 = 'Currently Covered Medicare Part A'
 H&YR.075='Currently Covered Medicare Part A'
 O_H&YR.076 = 'Currently Covered Medicare Part B'
 H&YR.076='Currently Covered Medicare Part B'
 O_H&YR.077 = 'Enrolled Medicare Advantage'
 H&YR.077='Enrolled Medicare Advantage'
 O_H&YR.078 = 'Currently Covered Medicare Supplemental'
 H&YR.078='Currently Covered Medicare Supplemental'
 O_H&YR.079 = 'Enrolled Medicare Part D'
 H&YR.079='Enrolled Medicare Part D'

O_S&YR.009='Same prsnl doctor/nurse before this hlth plan'
 S&YR.009 = 'Same prsnl doctor/nurse before this hlth plan'
 O_S&YR.010='Prblm getting prsnl doctor/nurse you are happy
 with'

S&YR.010 = 'Prblm getting prsnl doctor/nurse you are happy
 with'

O_S&YR.B01='Self rate of overall mental/emotional health'
 S&YR.B01 = 'Self rate of overall mental/emotional health'
 O_S&YR.B02='Lst yr: needed treatmnt/cnslng-prsnl prob'
 S&YR.B02 = 'Lst yr: needed treatmnt/cnslng-prsnl prob'
 O_S&YR.B03='Lst yr: prblm gttng needed treatmnt/cnslng'
 S&YR.B03 = 'Lst yr: prblm gttng needed treatmnt/cnslng'
 O_S&YR.B04='Lst yr: rate of treatmnt/cnslng received'
 S&YR.B04 = 'Lst yr: rate of treatmnt/cnslng received'

```

O_S&YR.011 = 'Agree/disagree: able to see provider when needed'
S&YR.011= 'Agree/disagree: able to see provider when needed'
O_S&YR.014 = 'How satisfied with health care during last
visit'
S&YR.014='How satisfied with health care during last visit'

```

```

N1 = "Coding Scheme Note 1"
N2 = "Coding Scheme Note 2"
N3 = "Coding Scheme Note 3"
N4 = "Coding Scheme Note 4"
N5 = "Coding Scheme Note 5"
N5_BI1= "Coding Scheme Note 5_BI1"
N5_BI2= "Coding Scheme Note 5_BI2"
N5_BI3= "Coding Scheme Note 5_BI3"
N5_BI4= "Coding Scheme Note 5_BI4"
N6 = "Coding Scheme Note 6"
N7 = "Coding Scheme Note 7"
N8 = "Coding Scheme Note 8"
N8_01 = "Coding Scheme Note 8_01"
N9 = "Coding Scheme Note 9"
N10 = "Coding Scheme Note 10"
N10_B1= "Coding Scheme Note 10_B1"
N11 = "Coding Scheme Note 11"
N12 = "Coding Scheme Note 12"
N13 = "Coding Scheme Note 13"
N14 = "Coding Scheme Note 14"
N15 = "Coding Scheme Note 15"
N16 = "Coding Scheme Note 16"
N17 = "Coding Scheme Note 17"
N18 = "Coding Scheme Note 18"
N19A = "Coding Scheme Note 19A"
N19B = "Coding Scheme Note 19B"
N20 = "Coding Scheme Note 20"
N21 = "Coding Scheme Note 21"
N22 = "Coding Scheme Note 22"
N23 = "Coding Scheme Note 23"
N23_HT= "Coding Scheme Note 23_HT"
N23_WT= "Coding Scheme Note 23_WT"
N24 = "Coding Scheme Note 24"
N25 = "Coding Scheme Note 25"

```

```

MISS_1 = "Count of original survey responses (pre-cleaning):
violates skip pattern"
/*MISS_3 = "Count of original survey responses (pre-
cleaning): do not use other tobacco products response"*/
MISS_4 = "Count of original survey responses (pre-cleaning):
incomplete grid error"
MISS_5 = "Count of original survey responses (pre-cleaning):
scalable reponse of don't know"
MISS_6 = "Count of original survey responses (pre-cleaning):
not applicable - valid skip"
MISS_7 = "Count of original survey responses (pre-cleaning):
out-of-range error"
MISS_9 = "Count of original survey responses (pre-cleaning):
no response - invalid skip"

```

```
MISS_TOT = "Total number of missing responses (pre-cleaning)"  
XSEXA = "Male or Female - R"  
;
```

F.2.C - Q2FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 2 FY2017

```
*****
**;
* Program: Cschmyyq.sas
* Written: 06/04/2001
* Author: C. Rankin
*
* Input: MERGESYN.sas7bdat - Merged MPR Sampling, DEERS, and Synovate
Response Data
* Output: CSCHMyyQ.sas7bdat - Coding scheme file
*
* Modified:
* 12/15/2012 - Removed logic for handling check boxes for height
and
* weight variables. Also no longer have to convert
the
* weight variable from character to numeric
* 12/21/2012 - Added code on line 146 to correct out of range
height (in)
* 12/18/2013 - Updated for Q1 2014 - added ht/wt note
* 09/29/2014 - Added SQL statement to automatically make varlist1,
varlist2, and marked variables
* 07/22/2015 - NOPRINT added to first PROC SQL
* 02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
* 04/29/2016 - Added recoding for H16003, should be used only for
2016Q2.
* 02/10/2017 - Changed filepaths and capitalization to match SAS
Grid.
* Removed additional female-specific fields from
notes 19A and 19B.
* 04/21/2017 - H__032 is removed for the foreseeable future.
*
* Purpose: Apply Coding Scheme Specifications to DoD Health Care Survey
Response Data, check for consistency in responses and skip
patterns
* Include
* files: Cschmyyq.fmt
*
*****
**;
```

```
OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES SOURCE SOURCE2 VARLENCHK=NOWARN;
title "Coding Scheme for Q&qt. FY&yr."; title2; title3;
```

```
%LET INDATA=MERGESYN;
%LET OUTDATA=CSCHM&yr.q;
```

```
LIBNAME LIBRARY "&fmtpath.";
LIBNAME IN "&datapath.";
LIBNAME OUT "&datapath.";
```

```
%MACRO CSCHM;
DATA &INDATA;
```



```

SET IN.&INDATA;

*RENAME AND CREATE VARIABLES NEEDED FOR CODING SCHEME;

RENAME SRACEA = SRRACEA;
RENAME SRACEB = SRRACEB;
RENAME SRACEC = SRRACEC;
RENAME SRACED = SRRACED;
RENAME SRACEE = SRRACEE;

RENAME INTERVIEWTIME = INTTIME;

SEX=PNSEXCD;
AGE=INPUT(DAGEQY,8.);

RUN;

*Create list of variables from dataset;
*O_ variables are the original values from the survey response;
*Must remove any variable that ends with an alphabetic letter that
is not a marked/unmarked variable from the 'markedvars' line of code;
PROC SQL NOPRINT;
  CREATE TABLE VARIABLES AS
    SELECT UPCASE(NAME) AS VARS,
           UPCASE(CAT('O_', NAME)) AS OVARS,
           CASE WHEN SUBSTR(NAME,LENGTH(NAME)) NOT IN ('0' '1' '2' '3' '4'
'5' '6' '7' '8' '9')
              AND NAME NOT IN ("H&YR.059B", "H&YR.071F" ,"H&YR.071I",
"SREDA", "SRAGE")
              THEN UPCASE(NAME) END AS MARKEDVARS,
           CASE WHEN CALCULATED MARKEDVARS NE ''
              THEN UPCASE(CAT('O_', CALCULATED MARKEDVARS)) END AS
OMARKEDVARS
  FROM DICTIONARY.COLUMNS
  WHERE LIBNAME = 'WORK' AND MEMNAME = "&INDATA"
        AND (NAME CONTAINS ("H&YR.") OR NAME CONTAINS ("S&YR.") OR NAME
CONTAINS ("SR"));
  SELECT COMPRESS(VARS), COMPRESS(OVARS), COMPRESS(MARKEDVARS),
COMPRESS(OMARKEDVARS)
  INTO :VARLIST1 SEPARATED BY " ",
       :VARLIST2 SEPARATED BY " ",
       :MARKEDVARS SEPARATED BY " ",
       :OMARKEDVARS SEPARATED BY " "
  FROM VARIABLES;
QUIT;

proc print data=variables; run;

%PUT &VARLIST1;
%PUT &VARLIST2;
%PUT &MARKEDVARS;

```

```

%PUT &OMARKEDVARS;

TITLE "DoD 20&YR Survey";
TITLE2 "Apply Coding Scheme";

DATA OUT.&outdata.;
/* label and format statements for original variables */
LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
INFORMAT &VARLIST2. 4.;

%INCLUDE "cschm&YR.q.fmt";

SET &INDATA;

*****;
**** Recodes for invalid responses:*****;
*****;

/* This is a version of the coding scheme and coding tables for the
FY 20&YR. HCSDB Form A.
The following tables outline the coding of screening questions (skip),
and subsequent items to be answered (or not answered in a series
following a skip question.) */

/* First set up new variables that capture the original values */
/* recode the initial numeric values to the SAS numeric values */
/* specified in the coding scheme */

ARRAY RECODE(*) &VARLIST1;
ARRAY ORIG(*) &VARLIST2;

DO I = 1 to DIM(ORIG);
  ORIG(I) = RECODE(I);
  IF ORIG(I) < 0 THEN DO;
    IF ORIG(I)= -9 THEN RECODE(I)=.;
    ELSE IF ORIG(I)= -7 THEN RECODE(I)=.O;
    ELSE IF ORIG(I)= -6 THEN RECODE(I)=.N;
    ELSE IF ORIG(I)= -5 THEN RECODE(I)=.D;
    ELSE IF ORIG(I)= -4 THEN RECODE(I)=.I;
    ELSE IF ORIG(I)= -1 THEN RECODE(I)=.C;
  END;
END;
DROP I;

/* recode selected responses to be 1=marked, 2=unmarked */

```

```
ARRAY MARKED(*) &MARKEDVARS. ;
ARRAY INFORMAT(*) &OMARKEDVARS. ;
```

```
DO J=1 TO DIM(INFORMAT);
  IF INFORMAT(J) = 1 THEN MARKED(J)=1;
  ELSE MARKED(J)=2;
END;
DROP J;
```

```
FORMAT &MARKEDVARS. MARKED.;
```

```
*****;
```

```
/* skip coding scheme for all surveys not returned */
```

```
IF FLAG_FIN NE 1 THEN GOTO NOSURVEY;
```

```
/** Note 1 -- H&YR.003, H&YR.004 health plan usage */
```

```
IF H&YR.003 > 0 THEN N1=1;
ELSE IF H&YR.003=.N OR H&YR.003 =.D THEN DO;
  IF H&YR.004 NOT=. THEN DO;
    N1=2;
    H&YR.004=.C;
  END;
  ELSE DO;
    N1=3;
    H&YR.004=.N;
  END;
END;
ELSE IF H&YR.003=. THEN N1=4;
```

```
/** Note 2 -- H&YR.006,H&YR.007,H&YR.008: illness or injury */
```

```
ARRAY NOTE2 H&YR.007 H&YR.008;
N2MARK=0;
N2NMISS=0;
N2NN=0;
```

```
DO OVER NOTE2;
  IF NOTE2 NE . THEN N2NMISS+1;
  IF NOTE2 NOT IN (.N,.) THEN N2MARK+1;
  IF NOTE2 EQ .N THEN N2NN+1;
END;
```

```
IF H&YR.006=1 AND N2NMISS=0 THEN DO;
  N2=1;
END;
ELSE IF H&YR.006 IN (1,.) AND N2NMISS>0 AND N2MARK=0 THEN DO;
  H&YR.006=2;
  N2=2;
```

```

DO OVER NOTE2;
  IF NOTE2=. THEN NOTE2=.N;
  ELSE NOTE2=.C;
END;
END;
ELSE IF H&YR.006=1 AND N2MARK=1 AND N2NN=1 THEN DO;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
  N2=3;
END;
ELSE IF H&YR.006=1 AND N2MARK>0 THEN DO;
  N2=4;
END;
ELSE IF H&YR.006=2 AND N2MARK=1 AND N2NN=1 THEN DO;
  H&YR.007=.C;
  H&YR.008=.C;
  N2=5;
END;
ELSE IF H&YR.006 IN (2,.) AND N2MARK>0 THEN DO;
  H&YR.006=1;
  N2=6;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
END;
ELSE IF H&YR.006=2 AND (N2NMISS=0 OR (N2NMISS>0 AND N2MARK=0)) THEN DO;
  N2=7;
  DO OVER NOTE2;
    IF NOTE2=. THEN NOTE2=.N;
    ELSE NOTE2=.C;
  END;
END;
ELSE IF H&YR.006=. AND N2NMISS=0 THEN N2=8;

```

```

DROP N2NMISS N2MARK N2NN;

```

```

/** Note 3 -- H&YR.009,H&YR.010,H&YR.011: regular or routine healthcare **/

```

```

ARRAY Note3 H&YR.010 H&YR.011;
N3MARK=0;
N3NMISS=0;
N3NN=0;

```

```

DO OVER Note3;
  IF Note3 NE . THEN N3NMISS+1;
  IF Note3 NOT IN (.N,.) THEN N3MARK+1;
  IF Note3 EQ .N THEN N3NN+1;
END;

```

```

IF H&YR.009=1 AND N3NMISS=0 THEN DO;
  N3=1;
END;
ELSE IF H&YR.009 IN (1,.) AND N3NMISS>0 AND N3MARK=0 THEN DO;
  H&YR.009=2;

```

```

N3=2;
DO OVER Note3;
  IF Note3=. THEN Note3=.N;
  ELSE Note3=.C;
END;
END;
ELSE IF H&YR.009=1 AND N3MARK=1 AND N3NN=1 THEN DO;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
  N3=3;
END;
ELSE IF H&YR.009=1 AND N3MARK>0 THEN DO;
  N3=4;
END;
ELSE IF H&YR.009=2 AND N3MARK=1 AND N3NN=1 THEN DO;
  H&YR.010=.C;
  H&YR.011=.C;
  N3=5;
END;
ELSE IF H&YR.009 IN (2,..) AND N3MARK>0 THEN DO;
  H&YR.009=1;
  N3=6;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
END;
ELSE IF H&YR.009=2 AND (N3NMISS=0 OR (N3NMISS>0 AND N3MARK=0)) THEN DO;
  N3=7;
  DO OVER Note3;
    IF Note3=. THEN Note3=.N;
    ELSE Note3=.C;
  END;
END;
ELSE IF H&YR.009=. AND N3NMISS=0 THEN N3=8;

```

```

DROP N3NMISS N3MARK N3NN;

```

```

/** Note 3_BC1 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or
routine healthcare **/

```

```

ARRAY Note3_BC1A S&YR.BC01A--S&YR.BC01C;
ARRAY Note3_BC1B S&YR.BC04A--S&YR.BC04G;
N3_BC1AMARK=0;
N3_BC1BMARK=0;

```

```

DO OVER Note3_BC1A;
  IF Note3_BC1A = 1 THEN N3_BC1AMARK+1;
END;

```

```

DO OVER Note3_BC1B;
  IF Note3_BC1B = 1 THEN N3_BC1BMARK+1;
END;

```

```

IF N3_BC1AMARK >= 1 THEN DO;
    N3_BC1=1;
    S&YR.BC01D=2;
    DO OVER Note3_BC1B;
        IF Note3_BC1B IN (2 .) THEN Note3_BC1B=.N;
        ELSE Note3_BC1B=.C;
    END;
END;
ELSE IF S&YR.BC01D = 1 THEN DO;
    N3_BC1=2;
END;
ELSE DO;
    N3_BC1 = 3;
    DO OVER Note3_BC1B;
        IF Note3_BC1B IN (2 .) THEN Note3_BC1B=.N;
        ELSE Note3_BC1B=.C;
    END;
END;

```

```

DROP N3_BC1AMARK ;
DROP N3_BC1BMARK ;

```

```

/** Note 3_BC2 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or
routine healthcare **/

```

```

ARRAY Note3_BC2A S&YR.BC04A--S&YR.BC04G;
ARRAY Note3_BC2B S&YR.BC02A--S&YR.BC02D;
ARRAY Note3_BC2C S&YR.BC03A--S&YR.BC03E;
N3_BC2ASKIP=0;
N3_BC2AMISS=0;
N3_BC2AMARK=0;

```

```

DO OVER Note3_BC2A;
    IF Note3_BC2A IN (.N, .C) THEN N3_BC2ASKIP+1;
    IF Note3_BC2A IN (2, ., 0) THEN N3_BC2AMISS+1;
    IF Note3_BC2A = 1 THEN N3_BC2AMARK+1;
END;

```

```

IF N3_BC2AMARK = 0 AND N3_BC2ASKIP >= 1 THEN DO;
    N3_BC2 = 1;
END;
ELSE IF S&YR.BC01D = 1 THEN DO;
    N3_BC2 = 2;
    DO OVER Note3_BC2B;
        IF Note3_BC2B IN (2 .) THEN Note3_BC2B=.N;
        ELSE Note3_BC2B=.C;
    END;
    DO OVER Note3_BC2C;
        IF Note3_BC2C IN (2 .) THEN Note3_BC2C=.N;
        ELSE Note3_BC2C=.C;
    END;

```

```

        END;
        IF S&YR.BC09 IN (2 .) THEN S&YR.BC09=.N;
        ELSE S&YR.BC09=.C;
    END;
    /*ELSE IF S&YR.BC01D = 2 AND N3_BC2AMARK = 0 AND N3_BC2AMISS >= 1 THEN DO;
        N3_BC2 = 3;
    END;
    ELSE DO;
        N3_BC2 = 4;
        DO OVER Note3_BC2B;
            IF Note3_BC2B IN (2 . .N) THEN Note3_BC2B=.N;
            ELSE Note3_BC2B=.C;
        END;
        DO OVER Note3_BC2C;
            IF Note3_BC2C IN (2 . .N) THEN Note3_BC2C=.N;
            ELSE Note3_BC2C=.C;
        END;
        IF S&YR.BC09 IN (2 . .N) THEN S&YR.BC09=.N;
        ELSE S&YR.BC09=.C;
    END;*/

```

```

DROP N3_BC2ASKIP ;
DROP N3_BC2AMISS ;
DROP N3_BC2AMARK ;

```

```

/** Note 3_BC3 -- S&YR.BC03D-E **/

```

```

    IF S&YR.BC03E = 1 THEN DO;
        N3_BC3 = 1;
        S&YR.BC03D = 2;
    END;
    ELSE DO;
        N3_BC3 = 2;
    END;

```

```

/** Note 3_BC4 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or
routine healthcare **/

```

```

ARRAY Note3_BC4A S&YR.BC03A--S&YR.BC03C;
ARRAY Note3_BC4B S&YR.BC03D--S&YR.BC03E;
N3_BC4AMARK=0;
N3_BC4BMARK=0;
N3_BC4ASKIP=0;
N3_BC4BSKIP=0;

```

```

DO OVER Note3_BC4A;
    IF Note3_BC4A = 1 THEN N3_BC4AMARK+1;

```

```

    IF Note3_BC4A IN (.N .C) THEN N3_BC4ASKIP+1;
END;

DO OVER Note3_BC4B;
    IF Note3_BC4B = 1 THEN N3_BC4BMARK+1;
    IF Note3_BC4B IN (.N .C) THEN N3_BC4BSKIP+1;
END;

IF N3_BC4ASKIP = 3 AND N3_BC4BSKIP = 2 THEN DO;
    N3_BC4 = 1;
END;
ELSE DO;
    IF N3_BC4AMARK >= 1 THEN DO;
        IF N3_BC4BMARK = 0 THEN DO;
            N3_BC4 = 2;
        END;
    END;
    IF N3_BC4BMARK >= 1 THEN DO;
        N3_BC4 = 3;
        DO OVER Note3_BC4A;
            Note3_BC4A = 2;
        END;
        IF S&YR.BC09 IN (2 . ) THEN S&YR.BC09=.N;
        ELSE S&YR.BC09=.C;
    END;
    ELSE IF N3_BC4AMARK = 0 THEN DO;
        N3_BC4 = 4;
    END;
END;

DROP N3_BC4AMARK N3_BC4ASKIP;
DROP N3_BC4BMARK N3_BC4BSKIP;

```

```

/** Note 3_BC5 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or
routine healthcare **/

```

```

ARRAY Note3_BC5A S&YR.BC05A--S&YR.BC05C;
ARRAY Note3_BC5B S&YR.BC08A--S&YR.BC08F;
N3_BC5AMARK=0;
N3_BC5BMARK=0;

DO OVER Note3_BC5A;
    IF Note3_BC5A = 1 THEN N3_BC5AMARK+1;
END;

DO OVER Note3_BC5B;
    IF Note3_BC5B = 1 THEN N3_BC5BMARK+1;
END;

IF N3_BC5AMARK >= 1 THEN DO;
    N3_BC5=1;

```



```

S&YR.BC05D=2;
DO OVER Note3_BC5B;
  IF Note3_BC5B IN ( 2 .) THEN Note3_BC5B=.N;
  ELSE Note3_BC5B=.C;
END;
END;
ELSE IF S&YR.BC05D = 1 THEN DO;
  N3_BC5=2;
END;
ELSE DO;
  N3_BC5 = 4;
  DO OVER Note3_BC5B;
    IF Note3_BC5B IN ( 2 .) THEN Note3_BC5B=.N;
    ELSE Note3_BC5B=.C;
  END;
END;

```

```

DROP N3_BC5AMARK ;
DROP N3_BC5BMARK ;

```

/** Note 3_BC6 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or routine healthcare **/

```

ARRAY Note3_BC6A S&YR.BC08A--S&YR.BC08F;
ARRAY Note3_BC6B S&YR.BC07A--S&YR.BC07E;
ARRAY Note3_BC6C S&YR.BC06A--S&YR.BC06D;
N3_BC6ASKIP=0;
N3_BC6AMISS=0;
N3_BC6AMARK=0;

```

```

DO OVER Note3_BC6A;
  IF Note3_BC6A IN (.N .C) THEN N3_BC6ASKIP+1;
  IF Note3_BC6A IN ( 2 .) THEN N3_BC6AMISS+1;
  IF Note3_BC6A = 1 THEN N3_BC6AMARK+1;
END;

```

```

IF N3_BC6AMARK = 0 AND N3_BC6ASKIP >= 1 THEN DO;
  N3_BC6 = 1;
END;
ELSE IF S&YR.BC05D = 1 THEN DO;
  N3_BC6 = 2;
  DO OVER Note3_BC6B;
    IF Note3_BC6B IN ( 2 .) THEN Note3_BC6B=.N;
    ELSE Note3_BC6B=.C;
  END;
  DO OVER Note3_BC6C;
    IF Note3_BC6C IN ( 2 .) THEN Note3_BC6C=.N;
    ELSE Note3_BC6C=.C;
  END;
  IF S&YR.BC10 IN ( 2 .) THEN S&YR.BC10=.N;

```

```

ELSE S&YR.BC10=.C;
END;
/*ELSE IF S&YR.BC05D = 2 AND N3_BC6AMARK = 0 AND N3_BC6AMISS >= 1 THEN DO;
N3_BC6 = 3;
END;
ELSE DO;
N3_BC6 = 4;
DO OVER Note3_BC6B;
IF Note3_BC6B IN (2 . .N) THEN Note3_BC6B=.N;
ELSE Note3_BC6B=.C;
END;
DO OVER Note3_BC6C;
IF Note3_BC6C IN (2 . .N) THEN Note3_BC6C=.N;
ELSE Note3_BC6C=.C;
END;
IF S&YR.BC10 IN (2 . .N) THEN S&YR.BC10=.N;
ELSE S&YR.BC10=.C;
END;*/

```

```

DROP N3_BC6ASKIP ;
DROP N3_BC6AMISS ;
DROP N3_BC6AMARK ;

```

```

/** Note 3_BC7 -- S&YR.BC07D-E **/

```

```

IF S&YR.BC07E = 1 THEN DO;
N3_BC7 = 1;
S&YR.BC07D = 2;
END;
ELSE DO;
N3_BC7 = 2;
END;

```

```

/** Note 3_BC8 -- S&YR.BC01A-S&YR.BC01D,S&YR.BC04A-S&YR.BC04G: regular or
routine healthcare **/

```

```

ARRAY Note3_BC8A S&YR.BC07A--S&YR.BC07C;
ARRAY Note3_BC8B S&YR.BC07D--S&YR.BC07E;
N3_BC8AMARK=0;
N3_BC8BMARK=0;
N3_BC8ASKIP=0;
N3_BC8BSKIP=0;

DO OVER Note3_BC8A;
IF Note3_BC8A = 1 THEN N3_BC8AMARK+1;
IF Note3_BC8A IN (.N .C) THEN N3_BC8ASKIP+1;
END;

DO OVER Note3_BC8B;

```

```

    IF Note3_BC8B = 1 THEN N3_BC8BMARK+1;
    IF Note3_BC8B IN (.N .C) THEN N3_BC8BSKIP+1;
END;

```

```

IF N3_BC8ASKIP = 3 AND N3_BC8BSKIP = 2 THEN DO;
    N3_BC8 = 1;

```

```

END;

```

```

ELSE DO;

```

```

    IF N3_BC8AMARK >= 1 THEN DO;

```

```

        IF N3_BC8BMARK = 0 THEN DO;

```

```

            N3_BC8 = 2;

```

```

        END;

```

```

    END;

```

```

    IF N3_BC8BMARK >= 1 THEN DO;

```

```

        N3_BC8 = 3;

```

```

        DO OVER Note3_BC8A;

```

```

            Note3_BC8A=2;

```

```

        END;

```

```

        IF S&YR.BC10 IN (2 .) THEN S&YR.BC10=.N;

```

```

        ELSE S&YR.BC10=.C;

```

```

    END;

```

```

    ELSE IF N3_BC8AMARK = 0 THEN DO;

```

```

        N3_BC8 = 4;

```

```

    END;

```

```

END;

```

```

DROP N3_BC8AMARK N3_BC8ASKIP;

```

```

DROP N3_BC8BMARK N3_BC8BSKIP;

```

```

/** Note 4 -- H&YR.013, H&YR.014-H&YR.018, H&YR.033: doctor's office or
clinic **/

```

```

ARRAY NOTE4 H&YR.014-H&YR.018 H&YR.033;

```

```

N4MARK=0;

```

```

N4NMISS=0;

```

```

DO OVER NOTE4;

```

```

    IF NOTE4 NE . THEN N4NMISS+1;

```

```

    IF NOTE4 NOT IN (., .N) THEN N4MARK+1;

```

```

END;

```

```

IF H&YR.013=1 THEN DO;

```

```

    N4=1;

```

```

    DO OVER NOTE4;

```

```

        IF NOTE4=. THEN NOTE4=.N;

```

```

        ELSE NOTE4=.C;

```

```

    END;

```

```

END;

```

```

ELSE IF H&YR.013 IN (2,3,4,5,6,7,.) AND N4NMISS>0 AND N4MARK=0 THEN DO;

```

```

    H&YR.013=1;

```

```

N4=2;
DO OVER NOTE4;
  IF NOTE4=. THEN NOTE4=.N;
  ELSE NOTE4=.C;
END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7) AND (N4NMISS=0 OR N4MARK>0) THEN DO;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
  N4=3;
END;
ELSE IF H&YR.013=. AND N4NMISS=0 THEN N4=4;
ELSE IF H&YR.013 IN (.) AND N4MARK>0 THEN DO;
  N4=5;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
END;

DROP N4NMISS N4MARK;

/** Note 5 -- H&YR.015, H&YR.016-H&YR.017: doctor's office or clinic-
treatment **/

IF H&YR.015 IN (.N,.C) THEN N5=1;
ELSE IF H&YR.015= 1 THEN N5=2;
ELSE IF H&YR.015 IN (2,.) AND H&YR.016 IN (1,2) THEN DO;
  N5=3;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2,.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (1,2))
THEN DO;
  N5=4;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,))
THEN DO;
  N5=5;
  IF H&YR.016 = . THEN H&YR.016 = .N;
  ELSE H&YR.016 = .C;
  IF H&YR.017 = . THEN H&YR.017 = .N;
  ELSE H&YR.017 = .C;
END;
ELSE IF H&YR.015 IN (.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,))
THEN DO;
  N5=6;
END;

/** Note 6 -- H&YR.019, H&YR.020-H&YR.027, S&YR.009: personal doctor **/
/* MER 07/01/09 */

ARRAY NOTE6 H&YR.021-H&YR.024;

```

```

N6MARK=0;

DO OVER NOTE6;
  IF NOTE6 NOT IN (., .N) THEN N6MARK+1;
END;

IF H&YR.020 NOT IN (0,.) THEN N6MARK+1;

IF H&YR.019 = 1 THEN DO;
  N6=1;
  IF H&YR.027=.N THEN H&YR.027=.;
END;
ELSE IF H&YR.019 in (2,.) AND H&YR.027 in (0,1,2,3,4,5,6,7,8,9,10) THEN
DO;
  N6=2;
  H&YR.019=1;
END;
ELSE IF H&YR.019 in (2,.) AND N6MARK>0 AND H&YR.027 = . THEN DO;
  N6=3;
  H&YR.019=1;
END;
ELSE IF H&YR.019 = 2 AND N6MARK>0 AND H&YR.027 = .N THEN DO;
  N6=4;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;
  DO OVER NOTE6;
    IF NOTE6=. THEN NOTE6=.N;
    ELSE NOTE6=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
  IF S&YR.009=. THEN S&YR.009=.N;
  ELSE S&YR.009=.C;
  H&YR.027=.C;
END;
ELSE IF H&YR.019 = 2 AND N6MARK=0 AND H&YR.027 in (.N,.) THEN DO;
  N6=5;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;
  DO OVER NOTE6;
    IF NOTE6=. THEN NOTE6=.N;
    ELSE NOTE6=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
  IF S&YR.009=. THEN S&YR.009=.N;
  ELSE S&YR.009=.C;
  IF H&YR.027=. THEN H&YR.027=.N;
  ELSE H&YR.027=.C;
END;

```

```

ELSE IF H&YR.019 = . AND H&YR.027 = .N THEN DO; /* MER 07/31/09 combined
rows 6 and 7 */
  N6=6;
  H&YR.019=2;
  IF H&YR.020=. THEN H&YR.020=.N;
  ELSE H&YR.020=.C;
  DO OVER NOTE6;
    IF NOTE6=. THEN NOTE6=.N;
    ELSE NOTE6=.C;
  END;
  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;
  IF S&YR.009=. THEN S&YR.009=.N;
  ELSE S&YR.009=.C;
  H&YR.027=.C;
END;
ELSE IF H&YR.019 = . AND N6MARK=0 AND H&YR.027 = . THEN N6=7;

DROP N6MARK;

```

```

/** Note 7 -- H&YR.020, H&YR.021-H&YR.024: personal doctor visit **/

```

```

ARRAY NOTE7 H&YR.021-H&YR.024;

```

```

N7MARK=0;
N7NMISS=0;

```

```

DO OVER NOTE7;
  IF NOTE7 NE . THEN N7NMISS+1;
  IF NOTE7 NOT IN (., .N) THEN N7MARK+1;
END;

```

```

IF H&YR.020 IN (.N, .C) THEN N7=1;
ELSE IF H&YR.020=0 THEN DO;

```

```

  N7=2;
  DO OVER NOTE7;
    IF NOTE7=. THEN NOTE7=.N;
    ELSE NOTE7=.C;
  END;

```

```

  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;
  IF H&YR.026=. THEN H&YR.026=.N;
  ELSE H&YR.026=.C;

```

```

END;
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND N7NMISS>0 AND N7MARK=0 THEN DO;

```

```

  H&YR.020=0;
  N7=3;
  DO OVER NOTE7;
    IF NOTE7=. THEN NOTE7=.N;
    ELSE NOTE7=.C;
  END;

```

```

  IF H&YR.025=. THEN H&YR.025=.N;
  ELSE H&YR.025=.C;

```

```

        IF H&YR.026=. THEN H&YR.026=.N;
        ELSE H&YR.026=.C;
    END;
    ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND (N7NMISS=0 OR N7MARK>0) THEN DO;
        DO OVER NOTE7;
            IF NOTE7=.N THEN NOTE7=.;
        END;
        N7=4;
    END;

    DROP N7NMISS N7MARK;

/** Note 8 -- H&YR.025, H&YR.026: care from another doctor or healthcare
provider **/

    IF H&YR.025 IN (.N, .C) THEN N8=1;
    ELSE IF H&YR.025=1 THEN N8=2;
    ELSE IF H&YR.025 IN (2,.) AND H&YR.026 IN (1,2,3,4) THEN DO;
        H&YR.025=1;
        N8=3;
    END;
    ELSE IF H&YR.025=2 AND H&YR.026 IN (.) THEN DO;
        H&YR.026=.N;
        N8=4;
    END;
    ELSE IF H&YR.025=. AND H&YR.026=. THEN N8=5;

/** Note 8_01 -- S&YR.009, S&YR.010: problem getting new personal doctor or
nurse **/

    IF S&YR.009 IN (.N,.C) THEN N8_01=1; /* MER 07/31/09 gave each S&YR.009
value its own row for analysis purposes */
    ELSE IF S&YR.009=1 THEN DO;
        N8_01=2;
        IF S&YR.010=. THEN S&YR.010=.N;
        ELSE S&YR.010=.C;
    END;
    ELSE IF S&YR.009=2 THEN N8_01=3;
    ELSE IF S&YR.009=. THEN N8_01=4; /* MER 07/31/09 eliminated backward
coding for missing S&YR.009 */

/** Note 9 -- H&YR.028, H&YR.029-H&YR.031: needed to see a specialist in
last 12 months **/

    ARRAY NOTE9 H&YR.029 H&YR.031;

    N9MARK=0;
    N9NMISS=0;

    DO OVER NOTE9;
        IF NOTE9 NE . THEN N9NMISS+1;
        IF NOTE9 NOT IN (., .N) THEN N9MARK+1;
    END;

```

```

IF H&YR.030 NE . THEN N9NMISS+1;
IF H&YR.030 NOT IN (.,0) THEN N9MARK+1;

IF H&YR.028 IN (1) THEN DO;
  N9=1;
  IF H&YR.029=.N THEN H&YR.029=.;
END;
ELSE IF H&YR.028 in (2,.) AND N9MARK>0 THEN DO;
  N9=2;
  H&YR.028=1;
  IF H&YR.029=.N THEN H&YR.029=.;
END;
ELSE IF H&YR.028 in (2) THEN DO;
  N9=3;
  DO OVER NOTE9;
    IF NOTE9=. THEN NOTE9=.N;
    ELSE NOTE9=.C;
  END;
  IF H&YR.030=. THEN H&YR.030=.N;
  ELSE H&YR.030=.C;
END;
ELSE IF H&YR.028=. AND N9NMISS>0 AND N9MARK=0 THEN DO;
  N9=4;
  H&YR.028=2;
  DO OVER NOTE9;
    IF NOTE9=. THEN NOTE9=.N;
    ELSE NOTE9=.C;
  END;
  IF H&YR.030=. THEN H&YR.030=.N;
  ELSE H&YR.030=.C;
END;
ELSE IF H&YR.028=. AND N9NMISS=0 THEN N9=5;

DROP N9NMISS N9MARK;

/** Note 10 -- H&YR.030, H&YR.031: saw a specialist in last 12 months **/

IF H&YR.030 IN (.N,.C) AND H&YR.031 IN (.N,.C) THEN N10=1;
ELSE IF H&YR.030 IN (1,2,3,4,5) AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,..)
THEN N10=2;
ELSE IF H&YR.030 IN (1,2,3,4,5,..) AND H&YR.031 = .N THEN DO;
  N10=3;
  H&YR.030=0;
  H&YR.031=.C;
END;
ELSE IF H&YR.030 = 0 THEN DO;
  N10=4;
  IF H&YR.031 = . THEN H&YR.031 = .N;
  ELSE H&YR.031 = .C;
END;
ELSE IF H&YR.030 = . AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,..) THEN
N10=5;

/** Note 10_B1 -- S&YR.B02, S&YR.B03-S&YR.B04: overall mental health **/

```



```

ARRAY NOTE10B1 S&YR.B03-S&YR.B04;

N10B1MARK=0;
N10B1NMISS=0;

DO OVER NOTE10B1;
  IF NOTE10B1 NE . THEN N10B1NMISS+1;
  IF NOTE10B1 NOT IN (., .N) THEN N10B1MARK+1;
END;

IF S&YR.B02 = 1 THEN DO;
  N10_B1=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02 IN (2,.) AND (N10B1MARK>0) THEN DO;
  N10_B1=2;
  S&YR.B02=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02=2 AND (N10B1NMISS=0 OR (N10B1NMISS > 0 AND N10B1MARK =
0)) THEN DO;
  N10_B1=3;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND (N10B1NMISS > 0 AND N10B1MARK = 0) THEN DO;
  N10_B1=4;
  S&YR.B02=2;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND N10B1NMISS=0 THEN N10_B1=5;

DROP N10B1NMISS N10B1MARK;

```

```

/** Note 12 -- H&YR.034, H&YR.035: look for info in written materials or on
internet**/

```

```

IF H&YR.034=1 AND H&YR.035 IN (1,2,3,4,.) THEN N12=1;
ELSE IF H&YR.034 IN (1,.) AND H&YR.035=.N THEN DO;
  N12=2;
  H&YR.034=2;
  H&YR.035=.C;
END;
ELSE IF H&YR.034 IN (2,.) AND H&YR.035 IN (1,2,3,4) THEN DO;
  N12=3;

```

```

    H&YR.034=1;
END;
ELSE IF H&YR.034=2 AND H&YR.035 IN (.N,.) THEN DO;
    N12=4;
    IF H&YR.035=. THEN H&YR.035=.N;
    ELSE H&YR.035=.C;
END;
ELSE IF H&YR.034=. AND H&YR.035=. THEN N12=5;

/** Note 13 -- H&YR.036, H&YR.037:  tried to get cost of service/equipment
from health plan**/

IF H&YR.036=1 AND H&YR.037 IN (1,2,3,4,.) THEN N13=1;
ELSE IF H&YR.036 IN (1,.) AND H&YR.037=.N THEN DO;
    H&YR.036=2;
    H&YR.037=.C;
    N13=2;
END;
ELSE IF H&YR.036 IN (2,.) AND H&YR.037 IN (1,2,3,4) THEN DO;
    H&YR.036=1;
    N13=3;
END;
ELSE IF H&YR.036=2 AND H&YR.037 IN (.,.N) THEN DO;
    IF H&YR.037=. THEN H&YR.037=.N;
    ELSE H&YR.037=.C;
    N13=4;
END;
ELSE IF H&YR.036=. AND H&YR.037=. THEN N13=5;

/** Note 14 -- H&YR.038, H&YR.039:  tried to get cost of prescription meds
from health plan**/

IF H&YR.038=1 AND H&YR.039 IN (1,2,3,4,.) THEN N14=1;
ELSE IF H&YR.038 IN (1,.) AND H&YR.039=.N THEN DO;
    H&YR.038=2;
    H&YR.039=.C;
    N14=2;
END;
ELSE IF H&YR.038 IN (2,.) AND H&YR.039 IN (1,2,3,4) THEN DO;
    H&YR.038=1;
    N14=3;
END;
ELSE IF H&YR.038=2 AND H&YR.039 IN (.,.N) THEN DO;
    IF H&YR.039=. THEN H&YR.039=.N;
    ELSE H&YR.039=.C;
    N14=4;
END;
ELSE IF H&YR.038=. AND H&YR.039=. THEN N14=5;

/** Note 15 -- H&YR.040, H&YR.041-H&YR.042:  tried to use health plan's
customer service  **/

ARRAY NOTE15  H&YR.041-H&YR.042;

```

```

N15MARK=0;
N15NMISS=0;

DO OVER NOTE15;
  IF NOTE15 NE . THEN N15NMISS+1;
  IF NOTE15 NOT IN (., .N) THEN N15MARK+1;
END;

IF H&YR.040 = 1 AND (N15MARK>0 OR N15NMISS=0) THEN DO;
  DO OVER NOTE15;
    IF NOTE15=.N THEN NOTE15=.;
  END;
  N15=1;
END;
ELSE IF H&YR.040 IN (1,.) AND (N15NMISS > 0 AND N15MARK = 0) THEN DO;
  N15=2;
  H&YR.040=2;
  DO OVER NOTE15;
    IF NOTE15 = . THEN NOTE15=.N;
    ELSE NOTE15 = .C;
  END;
END;
ELSE IF H&YR.040 IN (2,.) AND (N15MARK>0) THEN DO;
  N15=3;
  H&YR.040=1;
  DO OVER NOTE15;
    IF NOTE15=.N THEN NOTE15=.;
  END;
END;
ELSE IF H&YR.040=2 AND (N15NMISS=0 OR (N15NMISS > 0 AND N15MARK = 0))
THEN DO;
  N15=4;
  DO OVER NOTE15;
    IF NOTE15 = . THEN NOTE15=.N;
    ELSE NOTE15 = .C;
  END;
END;
ELSE IF H&YR.040 IN (.) AND N15NMISS=0 THEN N15=5;

DROP N15NMISS N15MARK;

/** Note 16 -- H&YR.043, H&YR.044: received forms to fill out from health
plan **/

IF H&YR.043=1 AND H&YR.044 IN (1,2,3,4,.) THEN N16=1;
ELSE IF H&YR.043 IN (1,.) AND H&YR.044=.N THEN DO;
  H&YR.043=2;
  H&YR.044=.C;
  N16=2;
END;
ELSE IF H&YR.043 IN (2,.) AND H&YR.044 IN (1,2,3,4) THEN DO;
  H&YR.043=1;
  N16=3;
END;
ELSE IF H&YR.043=2 AND H&YR.044 IN (.,.N) THEN DO;
  IF H&YR.044=. THEN H&YR.044=.N;

```

```

        ELSE H&YR.044=.C;
        N16=4;
    END;
    ELSE IF H&YR.043=. AND H&YR.044=. THEN N16=5;

/** Note 17 -- H&YR.045, H&YR.046-H&YR.047: claims to health plan **/

    ARRAY NOTE17 H&YR.046-H&YR.047;
    N17MARK=0;
    N17NDK=0;

    DO OVER NOTE17;
        IF NOTE17 NOT IN (.N,.D,.) THEN N17MARK+1; /* At least one is marked */
        IF NOTE17 NOT IN (.,.D) THEN N17NDK+1; /* All are missing or blank or
dnk */
    END;

    IF H&YR.045=1 AND (N17MARK>0 OR N17NDK=0) THEN DO;
        N17=1;
        DO OVER NOTE17;
            IF NOTE17=.N THEN NOTE17=.;
        END;
    END;
    ELSE IF H&YR.045 IN (1,.,.D) AND N17MARK=0 AND N17NDK>0 THEN DO;
        N17=2;
        H&YR.045=2;
        DO OVER NOTE17;
            IF NOTE17=. THEN NOTE17=.N;
            ELSE NOTE17=.C;
        END;
    END;
    ELSE IF H&YR.045 IN (2,.,.D) AND N17MARK>0
        THEN DO;
        H&YR.045=1;
        N17=3;
        DO OVER NOTE17;
            IF NOTE17=.N THEN NOTE17=.;
        END;
    END;
    ELSE IF H&YR.045 IN (2) AND N17MARK=0 THEN DO;
        N17=4;
        DO OVER NOTE17;
            IF NOTE17=. THEN NOTE17=.N;
            ELSE NOTE17=.C;
        END;
    END;
    ELSE IF H&YR.045 IN (.D) AND N17NDK=0 THEN DO;
        N17=5;
        DO OVER NOTE17;
            IF NOTE17=. THEN NOTE17=.N;
            ELSE NOTE17=.C;
        END;
    END;
    ELSE IF H&YR.045 IN (.) AND N17NDK=0 THEN N17=6;

    DROP N17MARK N17NDK;

```

```
/** Note 18 -- smoking: H&YR.053, H&YR.054-H&YR.056, H&YR.057A-H&YR.057D
**/
```

```
ARRAY NOTE18a H&YR.054 H&YR.055 H&YR.056;
ARRAY NOTE18b H&YR.057A--H&YR.057D;
```

```
N18MARK = 0;
```

```
DO OVER NOTE18b;
  IF NOTE18b NOT IN (2,.) THEN N18MARK+1;
END;
```

```
IF H&YR.053 IN (3,4,.) THEN N18=1;
ELSE IF H&YR.053 IN (2,.D) AND N18MARK = 0 THEN DO;
```

```
  N18=2;
  DO OVER NOTE18a;
    IF NOTE18a=. THEN NOTE18a=.N;
    ELSE NOTE18a=.C;
```

```
  END;
  DO OVER NOTE18b;
    IF NOTE18b IN (2,.) THEN NOTE18b=.N;
    ELSE NOTE18b=.C;
```

```
  END;
```

```
END;
ELSE IF H&YR.053 = 2 AND N18MARK > 0 THEN DO;
```

```
  N18=3;
  H&YR.053=.;
```

```
END;
ELSE IF H&YR.053 = .D AND N18MARK > 0 THEN DO;
```

```
  N18=4;
  DO OVER NOTE18a;
    IF NOTE18a=. THEN NOTE18a=.N;
    ELSE NOTE18a=.C;
```

```
  END;
  DO OVER NOTE18b;
    IF NOTE18b IN (2,.) THEN NOTE18b=.N;
    ELSE NOTE18b=.C;
```

```
  END;
```

```
END;
```

```
DROP N18MARK;
```

```
/** Note 18_BF1 -- smoking: H&YR.053, H&YR.054-H&YR.056, H&YR.057A-
H&YR.057D **/
```

```
ARRAY NOTE18BF1 S&YR.BF3 S&YR.BF4 S&YR.BF5 S&YR.BF6;
ARRAY NOTE18BF1B S&YR.BF2 S&YR.BF3 S&YR.BF4 S&YR.BF5 S&YR.BF6;
```

```
N18AFF = 0;
```

```
IF S&YR.BF3 IN (1 2 3 4) THEN N18AFF+1;
```

```

IF S&YR.BF4 IN (1 2) THEN N18AFF+1;
IF S&YR.BF5 IN (1) THEN N18AFF+1;
IF S&YR.BF6 IN (1) THEN N18AFF+1;

IF S&YR.BF1 =1 THEN DO;
  IF S&YR.BF2 = 1 THEN N18_BF1=1;
  ELSE IF S&YR.BF2 IN (2, .D) THEN DO;
    N18_BF1=2;
    DO OVER NOTE18BF1;
      IF NOTE18BF1 = . THEN NOTE18BF1 = .N;
      ELSE NOTE18BF1 = .C;
    END;
  END;
  ELSE IF S&YR.BF2 = . THEN DO;
    IF N18AFF>0 THEN DO;
      N18_BF1=3;
      S&YR.BF2=1;
    END;
    ELSE N18_BF1=4;
  END;
END;
ELSE IF S&YR.BF1 IN (2 .D) THEN DO;
  N18_BF1=5;
  DO OVER NOTE18BF1B;
    IF NOTE18BF1B = . THEN NOTE18BF1B = .N;
    ELSE NOTE18BF1B = .C;
  END;
END;
ELSE IF S&YR.BF2 = 1 THEN DO;
  N18_BF1=6;
  S&YR.BF1=1;
END;
ELSE IF S&YR.BF2 IN (2 .D) THEN DO;
  N18_BF1=2;
  DO OVER NOTE18BF1;
    IF NOTE18BF1 = . THEN NOTE18BF1 = .N;
    ELSE NOTE18BF1 = .C;
  END;
END;
ELSE DO;
  IF N18AFF>0 THEN DO;
    N18_BF1=7;
    S&YR.BF1=1;
    S&YR.BF2=1;
  END;
  ELSE N18_BF1=8;
END;

DROP N18AFF;

```

```

/** Note 18_BF2 -- smoking: H&YR.053, H&YR.054-H&YR.056, H&YR.057A-
H&YR.057D **/

```

```
ARRAY NOTE18BF2 S&YR.BF5 S&YR.BF6;  
ARRAY NOTE18BF2B S&YR.BF4 S&YR.BF5 S&YR.BF6;
```

```
IF S&YR.BF4 IN (1 2 .) THEN N18_BF2 = 1;  
ELSE IF S&YR.BF4 IN (3 .D) THEN DO;  
  N18_BF2=2;  
  DO OVER NOTE18BF2;  
    IF NOTE18BF2 = . THEN NOTE18BF2 = .N;  
    ELSE NOTE18BF2 = .C;  
  END;  
END;  
ELSE IF S&YR.BF4 IN (.N .C) THEN DO;  
  N18_BF2=3;  
END;
```

```
/** Note 19a - gender H&YR.058, SEX, H&YR.059B--H&YR.064,  
XSEXA */
```

```
/* 1/21/98 use SRSEX & responses to gender specific questions  
if there is discrepancy between SRSEX and SEX */  
/* set imputed FMALE and MALE based on gender specific questions */
```

```
ARRAY fmaleval H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064  
;
```

```
cntfemale=0;  
DO OVER fmaleval; /* mammogram/pap smear/PREGNANT*/  
  IF fmaleval>0 THEN cntfemale=cntfemale+1;  
END;
```

```
IF cntfemale>0 THEN FMALE=1;  
ELSE FMALE = 0;
```

```
IF H&YR.058=. THEN DO;  
  IF (SEX='F' AND FMALE) THEN DO;  
    N19a=1;  
    XSEXA=2;  
  END;  
  ELSE IF (SEX='F' AND FMALE=0) THEN DO;  
    N19a=2;  
    XSEXA=2;  
  END;  
  ELSE IF (SEX='M' AND FMALE) THEN DO;  
    N19a=3;  
    XSEXA=1;  
  END;  
  ELSE IF (SEX='M' AND FMALE=0) THEN DO;  
    N19a=4;  
    XSEXA=1;  
  END;  
  ELSE IF ((SEX IN ('Z', ' ') AND FMALE)) THEN DO;
```

```

        N19a=5;
        XSEXA=2;
    END;
    ELSE IF (SEX='Z' AND FMALE=0) THEN DO;
        N19a=6;
        XSEXA=.;
    END;
    ELSE IF (SEX=' ' AND FMALE=0) THEN DO;
        N19a=7;
        XSEXA=.;
    END;
END;
ELSE IF (H&YR.058=1) THEN DO;
    IF FMALE=0 THEN DO;
        N19a=8;
        XSEXA=1;
    END;
    ELSE IF FMALE THEN DO;
        IF SEX='F' THEN DO;
            N19a=9;
            XSEXA=2;
        END;
    ELSE DO;
        N19a=10;
        XSEXA=1;
    END;
END;
END;
ELSE IF (H&YR.058=2) THEN DO;
    IF FMALE THEN DO;
        N19a=11;
        XSEXA=2;
    END;
    ELSE IF FMALE=0 THEN DO;
        IF SEX='M' THEN DO;
            N19a=12;
            XSEXA=1;
        END;
    ELSE DO;
        N19a=13;
        XSEXA=2;
    END;
END;
END;
END;

```

/* Note 19b - gender vs mammogram/paps/pregnancy */

```

ARRAY NOTE19b H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
      ;
IF XSEXA=1 THEN DO; /* male */
    IF FMALE=0 THEN DO;
        N19b=1;
        DO OVER NOTE19b;
            NOTE19b=.N;
        END;
    END;
END; /* valid skip */

```



```

ELSE IF FMALE=1 THEN DO;
  N19b=2;
  DO OVER NOTE19b;
    IF NOTE19b=. THEN NOTE19b = .N;
    ELSE NOTE19b=.C;
  END;
END; /* inconsistent response */
END;
ELSE IF XSEXA=2 THEN N19b=3; /* female */
ELSE IF XSEXA=. THEN DO; /* missing sex */
  N19b=4;
  DO OVER NOTE19b;
    NOTE19b=.;
  END;
END;

```

```

DROP FMALE CNTFMALE;

```

```

/* Note 20- breast exam for female 40 or over */

```

```

IF XSEXA=1 THEN DO; /* male */
  IF (H&YR.060=.C OR H&YR.060=.N) AND (H&YR.061=.C OR H&YR.061=.N)
  THEN N20 = 1;
END;
ELSE IF XSEXA=2 THEN DO;
  IF H&YR.060=2 THEN N20=2; /* female 40 or over */
  ELSE IF H&YR.060=1 THEN DO; /* female < 40 */
    IF H&YR.061 NE . THEN H&YR.061=.C;
    ELSE H&YR.061=.N;
    N20=3;
  END;
  ELSE IF H&YR.060=. THEN DO;
    IF H&YR.061 NE . THEN DO;
      H&YR.060=2;
      N20=4;
    END;
    ELSE IF H&YR.061=. THEN DO;
      IF AGE<40 THEN DO;
        H&YR.060 = 1;
        H&YR.061=.N;
        N20=5;
      END;
      ELSE IF AGE >= 40 THEN DO;
        H&YR.060=2;
        N20=6;
      END;
      ELSE IF AGE=. THEN N20=7;
    END;
  END;
END;
ELSE IF XSEXA=. THEN N20=8;

```

```

/* Note 21 - gender vs Pregnancy */

```

```

IF XSEXA=1 THEN N21=1;          /* male */
ELSE IF XSEXA=2 THEN DO;      /* female */
  IF H&YR.062=1 THEN DO;      /* pregnant */
    IF H&YR.063=1 THEN DO;
      N21=2;
      IF H&YR.064=. THEN H&YR.064 = .N;
      ELSE H&YR.064=.C;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;
      N21=3;
      H&YR.064=.;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,.) THEN DO;
      N21=4;
    END;
    ELSE IF H&YR.063 IN (3,.) THEN N21=5;
  END;
  ELSE IF H&YR.062=2 THEN DO;
    IF H&YR.063=. THEN H&YR.063 = .N;
    ELSE H&YR.063=.C;
    N21=6;
  END;
  ELSE IF H&YR.062=3 THEN DO;
    N21=7;
    IF H&YR.063=. THEN H&YR.063 = .N;
    ELSE H&YR.063=.C;
    IF H&YR.064=. THEN H&YR.064=.N;
    ELSE H&YR.064=.C;
  END;
  ELSE IF H&YR.062 IN (.) THEN DO;
    IF H&YR.063=1 THEN DO;
      N21=8;
      H&YR.062=1;
      IF H&YR.064=. THEN H&YR.064 = .N;
      ELSE H&YR.064=.C;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;
      N21=9;
      H&YR.062=1;
      H&YR.064=.;
    END;
    ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,.) THEN DO;
      H&YR.062=1;
      N21=10;
    END;
    ELSE IF H&YR.063=3 THEN DO;
      H&YR.062=1;
      N21=11;
    END;
    ELSE IF H&YR.063=. THEN DO;
      N21=12;
    END;
  END;
END;
ELSE IF XSEXA=. AND H&YR.062 IN (.) THEN N21=13;

```

DROP AGE SEX;

/** Note 22 -- H&YR.067, H&YR.068: seen doctor 3 or more times for same condition **/

```
IF H&YR.067=1 THEN N22=1;
ELSE IF H&YR.067 IN (2,.) AND H&YR.068 IN (1,2) THEN DO;
  H&YR.067=1;
  N22=2;
END;
ELSE IF H&YR.067=2 AND H&YR.068 IN (.) THEN DO;
  H&YR.068=.N;
  N22=3;
END;
ELSE IF H&YR.067=. AND H&YR.068=. THEN N22=4;
```

/** Note 23 -- H&YR.069, H&YR.070: need or take medicine prescribed by a doctor **/

```
IF H&YR.069=1 THEN N23=1;
ELSE IF H&YR.069 IN (2,.) AND H&YR.070 IN (1,2) THEN DO;
  H&YR.069=1;
  N23=2;
END;
ELSE IF H&YR.069=2 AND H&YR.070 IN (.) THEN DO;
  H&YR.070=.N;
  N23=3;
END;
ELSE IF H&YR.069=. AND H&YR.070=. THEN N23=4;
```

/** Note 23_HT -- XSEXA, H&YR.071F, H&YR.071I: height restrictions **/

*AMK 9/25/13

Set height and weight restriction to conform with NHIS 2006 guidelines
Men: height between 63-76 inches, weight between 126-299 pounds
Women: height between 59-70 inches, weight between 100-274 pounds;

*INCHES;

```
IF H&YR.071F NE . AND H&YR.071I = . THEN H&YR.071I=0;
IF H&YR.071F = . AND H&YR.071I >11 THEN DO;
  H&YR.071F=FLOOR(H&YR.071I/12);
  H&YR.071I=H&YR.071I-(H&YR.071F*12);
END;
IF H&YR.071F NE . THEN INCHES=(H&YR.071F*12+H&YR.071I);
ELSE INCHES=H&YR.071I;
```

```
IF (XSEXA = 1 AND (63<=INCHES<=76 OR INCHES = .)) OR
```

```

        (XSEXA = 2 AND (59<=INCHES<=70 OR INCHES = .)) THEN N23_HT=1;
ELSE IF XSEXA IN (1,2) THEN DO;
    N23_HT=2;
    H&YR.071F=.0;
    H&YR.071I=.0;
END;
ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
    IF 59<=INCHES<=76 OR INCHES = . THEN N23_HT=3;
    ELSE DO;
        N23_HT=4;
        H&YR.071F=.0;
        H&YR.071I=.0;
    END;
END;

DROP INCHES;

```

```

/** Note 23_WT -- H&YR.072: weight restrictions                                **/
*AMK 9/25/13

```

```

Set height and weight restriction to conform with NHIS 2006 guidelines
Men: height between 63-76 inches, weight between 126-299 pounds
Women: height between 59-70 inches, weight between 100-274 pounds;

```

```

IF (XSEXA = 1 AND (126<=H&YR.072<=299 OR H&YR.072 = .)) OR
(XSEXA = 2 AND (100<=H&YR.072<=274 OR H&YR.072 = .)) THEN N23_WT=1;
ELSE IF XSEXA IN (1,2) THEN DO;
    N23_WT=2;
    H&YR.072 =.0;
END;
ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
    IF 100<=H&YR.072<=299 OR H&YR.072 = . THEN N23_WT=3;
    ELSE DO;
        N23_WT=4;
        H&YR.072=.0;
    END;
END;

```

```

/** Note 24 -- H&YR.073, H&YR.073A-H&YR.073E: Hispanic or Latino origin or
descent **/

```

```

/* JMA
****Multiple responses were given to this question so H&YR.073 is being
created
****from the multiple responses.;
*/

```

```

IF H&YR.073B=1 THEN DO;
    N24=1;
    H&YR.073=2;
END;
ELSE IF H&YR.073E=1 THEN DO;
    N24=2;
    H&YR.073=5;

```

```

END;
ELSE IF H&YR.073C=1 THEN DO;
    N24=3;
    H&YR.073=3;
END;
ELSE IF H&YR.073D=1 THEN DO;
    N24=4;
    H&YR.073=4;
END;
ELSE IF H&YR.073A=1 THEN DO;
    N24=5;
    H&YR.073=1;
END;
ELSE IF H&YR.073A IN (2,.) AND H&YR.073B IN (2,.) AND H&YR.073C IN (2,.)
AND
    H&YR.073D IN (2,.) AND H&YR.073E IN (2,.) THEN DO;
    N24=6;
    H&YR.073=.;
END;

```

```

/** Note 25 -- currently covered by Medicare: H&YR.074, H&YR.075-H&YR.079
**/

```

```

ARRAY NOTE25 H&YR.075-H&YR.079;

```

```

N25MARK = 0;

```

```

DO OVER NOTE25;
    IF NOTE25 NOT IN (2,.D,.) THEN N25MARK+1;
END;

```

```

IF H&YR.074 = 1 THEN N25=1;
ELSE IF H&YR.074 IN (2,.D) AND N25MARK = 0 THEN DO;
    N25=2;
    DO OVER NOTE25;
        IF NOTE25=. THEN NOTE25=.N;
        ELSE NOTE25=.C;
    END;
END;

```

```

ELSE IF H&YR.074 IN (2,.D,.) AND N25MARK > 0 THEN DO;
    N25=3;
    H&YR.074=1;
END;

```

```

ELSE IF H&YR.074 = . AND N25MARK = 0 THEN N25=4;

```

```

DROP N25MARK;

```

```

NOSURVEY:

```

```

/* missing values */

```

```

ARRAY MISS MISS_9 MISS_7 MISS_6 MISS_5 MISS_4 MISS_1 ;
MISS_TOT=0;
DO OVER MISS;

```

```

MISS = 0;
END;
ARRAY MISSARRAY &VARLIST2.;

DO OVER MISSARRAY;
  IF (MISSARRAY EQ -9 ) THEN MISS_9 = MISS_9 + 1;
  ELSE IF (MISSARRAY EQ -7) THEN MISS_7 = MISS_7 + 1;
  ELSE IF (MISSARRAY EQ -6) THEN MISS_6 = MISS_6 + 1;
  ELSE IF (MISSARRAY EQ -5) THEN MISS_5 = MISS_5 + 1;
  ELSE IF (MISSARRAY EQ -4) THEN MISS_4 = MISS_4 + 1;
  ELSE IF (MISSARRAY EQ -1) THEN MISS_1 = MISS_1 + 1;
END;
DO OVER MISS;
  MISS_TOT=MISS_TOT + MISS;
END;

*****;

OUTPUT;

RUN;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;

```

F.2.D - Q2FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.FMT - Include file for Coding Scheme for Quarter 2 FY2017

/* Formats for original answers to survey questions,
after variables have been recoded */

FORMAT H&YR.001 O_H&YR.001 YN.

/* H&YR.002 has no format.*/

H&YR.003 O_H&YR.003 HPLAN1_.
H&YR.004 O_H&YR.004 HPTIME.

H&YR.005 O_H&YR.005 PLACE.

H&YR.006 O_H&YR.006
H&YR.009 O_H&YR.009
H&YR.019 O_H&YR.019
YN.

H&YR.007 O_H&YR.007 OFTEN2_.
H&YR.008 O_H&YR.008 TIME1_.

H&YR.010 O_H&YR.010 OFTEN3_.
H&YR.011 O_H&YR.011 TIME2_.

/* S&YR.BC01 O_S&YR.BC01
S&YR.BC02 O_S&YR.BC02
S&YR.BC03 O_S&YR.BC03
S&YR.BC04 O_S&YR.BC04
S&YR.BC05 O_S&YR.BC05
S&YR.BC06 O_S&YR.BC06
S&YR.BC07 O_S&YR.BC07
S&YR.BC08 O_S&YR.BC08 are marked*/

S&YR.BC09 O_S&YR.BC09
S&YR.BC10 O_S&YR.BC10 YN.

H&YR.012 O_H&YR.012 OFTEN4_.
H&YR.013 O_H&YR.013 OFTEN4_.
H&YR.014 O_H&YR.014 OFTEN8_.
H&YR.015 O_H&YR.015 YN.
H&YR.016 O_H&YR.016 YNDEF.
H&YR.017 O_H&YR.017 YNDEF.
H&YR.018 O_H&YR.018 RATE3_.

/* H&YR.019 has no format.*/

H&YR.020 O_H&YR.020 OFTEN10_.

H&YR.021-H&YR.024 O_H&YR.021--O_H&YR.024 OFTEN5_.

H&YR.025 O_H&YR.025 YN.

H&YR.026 O_H&YR.026 OFTEN8_
 H&YR.027 O_H&YR.027 RATE6_

 S&YR.009 O_S&YR.009 YN.
 S&YR.010 O_S&YR.010 PROB1_

 H&YR.028 O_H&YR.028 YN.
 H&YR.029 O_H&YR.029 OFTEN9_
 H&YR.030 O_H&YR.030 SPCLST.
 H&YR.031 O_H&YR.031 RATE2_

 S&YR.B01 O_S&YR.B01 MNTLHLTH.
 S&YR.B02 O_S&YR.B02 YN.
 S&YR.B03 O_S&YR.B03 PROB1_
 S&YR.B04 O_S&YR.B04 RATE5_

 H&YR.033 O_H&YR.033 OFTEN11_
 H&YR.034 O_H&YR.034 YN.
 H&YR.035 O_H&YR.035 OFTEN12_
 H&YR.036 O_H&YR.036 YN.
 H&YR.037 O_H&YR.037 OFTEN13_
 H&YR.038 O_H&YR.038 YN.
 H&YR.039 O_H&YR.039 OFTEN14_
 H&YR.040 O_H&YR.040 YN.
 H&YR.041 O_H&YR.041 OFTEN15_
 H&YR.042 O_H&YR.042 OFTEN15_
 H&YR.043 O_H&YR.043 YN.
 H&YR.044 O_H&YR.044 OFTEN16_
 H&YR.045 O_H&YR.045 YNDNK.
 H&YR.046 O_H&YR.046 OFTEN6_
 H&YR.047 O_H&YR.047 OFTEN6_
 H&YR.048 O_H&YR.048 RATE4_

 H&YR.049 O_H&YR.049 TIME5_
 H&YR.050 O_H&YR.050 YNBP_

 H&YR.051 O_H&YR.051 TIME7_
 H&YR.052 O_H&YR.052 YNDNK.
 H&YR.053 O_H&YR.053 TIME8_
 H&YR.054 O_H&YR.054 OFTEN8_
 H&YR.055 O_H&YR.055 OFTEN8_
 H&YR.056 O_H&YR.056 OFTEN8_

/* H&YR.057 has no format.*/

S&YR.BF1 O_S&YR.BF1 YNDNK.
 S&YR.BF2 O_S&YR.BF2 YNDNK.
 S&YR.BF3 O_S&YR.BF3 S&YR.BF3_
 S&YR.BF4 O_S&YR.BF4 TIME15_
 S&YR.BF5 O_S&YR.BF5 S&YR.BF5_
 S&YR.BF6 O_S&YR.BF6 YN.

H&YR.058 O_H&YR.058 SEX.
H&YR.059B O_H&YR.059B TIME16_.

H&YR.060 O_H&YR.060 H&YR.066 O_H&YR.066 YN.

H&YR.061 O_H&YR.061 TIME12_.
H&YR.062 O_H&YR.062 YNPREG.
H&YR.063 O_H&YR.063 PREG1_.
H&YR.064 O_H&YR.064 PREG2_.

H&YR.065 O_H&YR.065 HEALTH.
H&YR.067 O_H&YR.067 YN.
H&YR.068 O_H&YR.068 YN.
H&YR.069 O_H&YR.069 YN.

H&YR.070 O_H&YR.070 YN.

H&YR.071F O_H&YR.071F
H&YR.071I O_H&YR.071I
H&YR.072 O_H&YR.072
TIME14_.

SREDA O_SREDA EDUC.

H&YR.073 HISP.

SRAGE SRAGE AGEGRP.

H&YR.074 O_H&YR.074 YNDNK.
H&YR.075 O_H&YR.075 MEDA.
H&YR.076 O_H&YR.076 MEDB.
H&YR.077 O_H&YR.077 YNDNK.
H&YR.078 O_H&YR.078 MEDSUPP.
H&YR.079 O_H&YR.079 YNDNK.

S&YR.011 O_S&YR.011 AGREE2_.
S&YR.014 O_S&YR.014 SATISFY.

MISS_1 MISS_4-MISS_7 MISS_9 MISS_TOT 4.
;

LABEL O_H&YR.001='Are you the person listed on envelope'
H&YR.001 ='Are you the person listed on envelope'
O_H&YR.002A='Health plan(s) covered: TRICARE Prime'
H&YR.002A ='Health plan(s) covered: TRICARE Prime'
O_H&YR.002C='Health plan(s) covered: TRICARE Ext/Stdnd'
H&YR.002C ='Health plan(s) covered: TRICARE Ext/Stdnd'
O_H&YR.002N='Health plan(s) covered: TRICARE Plus'
H&YR.002N ='Health plan(s) covered: TRICARE Plus'
O_H&YR.002O='Health plan(s) covered: TRICARE For Life'
H&YR.002O ='Health plan(s) covered: TRICARE For Life'

O_H&YR.002P='Health plan(s) covered: TRICARE Supplmntl Ins'
 H&YR.002P = 'Health plan(s) covered: TRICARE Supplmntl Ins'
 O_H&YR.002Q='Health plan(s) covered: TRICARE Reserve Select'
 H&YR.002Q = 'Health plan(s) covered: TRICARE Reserve Select'
 O_H&YR.002S='Health plan(s) covered: TRICARE Retired Reserve'
 H&YR.002S = 'Health plan(s) covered: TRICARE Retired Reserve'
 O_H&YR.002T='Health plan(s) covered: TRICARE Young Adult
 Prime'
 H&YR.002T = 'Health plan(s) covered: TRICARE Young Adult
 Prime'
 O_H&YR.002V='Health plan(s) covered: TRICARE Young Adult Ex
 or Standard'
 H&YR.002V = 'Health plan(s) covered: TRICARE Young Adult Ex or
 Standard'
 O_H&YR.002U='Health plan(s) covered: CHCBP'
 H&YR.002U = 'Health plan(s) covered: CHCBP'
 O_H&YR.002F='Health plan(s) covered: Medicare'
 H&YR.002F = 'Health plan(s) covered: Medicare'
 O_H&YR.002G='Health plan(s) covered: FEHBP'
 H&YR.002G = 'Health plan(s) covered: FEHBP'
 O_H&YR.002H='Health plan(s) covered: Medicaid'
 H&YR.002H = 'Health plan(s) covered: Medicaid'
 O_H&YR.002I='Health plan(s) covered: civilian HMO'
 H&YR.002I = 'Health plan(s) covered: civilian HMO'
 O_H&YR.002J='Health plan(s) covered: other civilian'
 H&YR.002J = 'Health plan(s) covered: other civilian'
 O_H&YR.002K='Health plan(s) covered: USFHP'
 H&YR.002K = 'Health plan(s) covered: USFHP'
 O_H&YR.002M='Health plan(s) covered: veterans'
 H&YR.002M = 'Health plan(s) covered: veterans'
 O_H&YR.002R='Health plan(s) covered: gov hlth ins-other
 cntry'
 H&YR.002R = 'Health plan(s) covered: gov hlth ins-other cntry'
 O_H&YR.002L='Health plan(s) covered: not sure'
 H&YR.002L = 'Health plan(s) covered: not sure'
 O_H&YR.003='Which health plan did you use most'
 H&YR.003 = 'Which health plan did you use most'
 O_H&YR.004='Yrs in a row with health plan'
 H&YR.004 = 'Yrs in a row with health plan'
 O_H&YR.005='In lst yr:fclty use most for health care'
 H&YR.005 = 'In lst yr:fclty use most for health care'
 O_H&YR.006='In lst yr:ill/injry/cond care right away'
 H&YR.006 = 'In lst yr:ill/injry/cond care right away'
 O_H&YR.007='In lst yr:get urgnt care as soon as wntd'
 H&YR.007 = 'In lst yr:get urgnt care as soon as wntd'
 O_H&YR.008='In lst yr:wait btwn try get care,see prv'
 H&YR.008 = 'In lst yr:wait btwn try get care,see prv'
 O_H&YR.009='In lst yr:make appts non-urgnt hlth care'
 H&YR.009 = 'In lst yr:make appts non-urgnt hlth care'
 O_H&YR.010='In lst yr:non-urg hlth cre appt whn wntd'
 H&YR.010 = 'In lst yr:non-urg hlth cre appt whn wntd'
 O_H&YR.011='In lst yr:days btwn appt & see prvder'
 H&YR.011 = 'In lst yr:days btwn appt & see prvder'
 O_H&YR.012='In lst yr:go to emrgncy rm for own care'
 H&YR.012 = 'In lst yr:go to emrgncy rm for own care'
 O_H&YR.013='In lst yr:go to Dr office/clinic for care'

H&YR.013 = 'In lst yr:go to Dr office/clinic for care'
O_H&YR.014 = 'Lst yr: how often talk to doctor about illness
prvntn'
H&YR.014='Lst yr: how often talk to doctor about illness
prvntn'
O_H&YR.015 = 'Lst yr: did doctor tell you more than 1 choice
for trtmnt'
H&YR.015='Lst yr: did doctor tell you more than 1 choice for
trtmnt'
O_H&YR.016 = 'Lst yr: did talk to doctor about pros/cons of
trtmnt'
H&YR.016='Lst yr: did talk to doctor about pros/cons of
trtmnt'
O_H&YR.017 = 'Lst yr: did doctor ask which trtmnt option best
for you'
H&YR.017='Lst yr: did doctor ask which trtmnt option best for
you'
O_H&YR.018='Rating of all health care in lst yr'
H&YR.018 = 'Rating of all health care in lst yr'

O_H&YR.019='Have one person think of as personal Dr'
H&YR.019 = 'Have one person think of as personal Dr'
O_H&YR.020 = 'Lst yr: how often visit prsnl doctor for care
for yourself'
H&YR.020='Lst yr: how often visit prsnl doctor for care for
yourself'

O_H&YR.021='Lst yr: how oftn Drs listen to you'
H&YR.021 = 'Lst yr: how oftn Drs listen to you'
O_H&YR.022='Lst yr: how oftn Drs explain things'
H&YR.022 = 'Lst yr: how oftn Drs explain things'
O_H&YR.023='Lst yr: how oftn Drs show respect'
H&YR.023 = 'Lst yr: how oftn Drs show respect'
O_H&YR.024='Lst yr: how oftn Drs spend enough time'
H&YR.024 = 'Lst yr: how oftn Drs spend enough time'
O_H&YR.025 = 'Lst yr: did get care from doctor other than
prsnl doctor'
H&YR.025='Lst yr: did get care from doctor other than prsnl
doctor'

O_H&YR.026 = 'Lst yr: how often prsnl doctor seemed infrmd of
care from other doctors'
H&YR.026='Lst yr: how often prsnl doctor seemed infrmd of
care from other doctors'

O_H&YR.027='Rating of your personal Dr'
H&YR.027 = 'Rating of your personal Dr'
O_H&YR.028 = 'Lst yr: did make any appointments to see
spclst'
H&YR.028='Lst yr: did make any appointments to see spclst'
O_H&YR.029 = 'Lst yr: how often easy to get appointments with
spclsts'
H&YR.029='Lst yr: how often easy to get appointments with
spclsts'

O_H&YR.030 = 'Lst yr: how many spclsts seen'
H&YR.030='Lst yr: how many spclsts seen'
O_H&YR.031='Rating of specialist seen in lst yr'
H&YR.031 = 'Rating of specialist seen in lst yr'

O_H&YR.033 = 'Lst yr: how often easy to get care, test, or
 trtmnt'
 H&YR.033='Lst yr: how often easy to get care, test, or
 trtmnt'
 O_H&YR.034 = 'Lst yr: did look for info from written
 material/Internet'
 H&YR.034='Lst yr: did look for info from written
 material/Internet'
 O_H&YR.035 = 'Lst yr: how often written material/Internet
 provide needed info'
 H&YR.035='Lst yr: how often written material/Internet provide
 needed info'
 O_H&YR.036 = 'Lst yr: did look for info from health plan on
 cost of service/equipment'
 H&YR.036='Lst yr: did look for info from health plan on cost
 of service/equipment'
 O_H&YR.037 = 'Lst yr: how often able to find out cost of
 service/equipment'
 H&YR.037='Lst yr: how often able to find out cost of
 service/equipment'
 O_H&YR.038 = 'Lst yr: did look for info from health plan on
 cost of prescription meds'
 H&YR.038='Lst yr: did look for info from health plan on cost
 of prescription meds'
 O_H&YR.039 = 'Lst yr: how often able to find out cost of
 prescription meds'
 H&YR.039='Lst yr: how often able to find out cost of
 prescription meds'
 O_H&YR.040 = "Lst yr: did try to get info/help from health
 plan's cstmr service"
 H&YR.040="Lst yr: did try to get info/help from health plan's
 cstmr service"
 O_H&YR.041 = 'Lst yr: how often did cstmr service give needed
 info/help'
 H&YR.041='Lst yr: how often did cstmr service give needed
 info/help'
 O_H&YR.042 = 'Lst yr: how often did cstmr service treat with
 courtesy/respect'
 H&YR.042='Lst yr: how often did cstmr service treat with
 courtesy/respect'
 O_H&YR.043 = 'Lst yr: did health plan give any forms to fill
 out'
 H&YR.043='Lst yr: did health plan give any forms to fill out'
 O_H&YR.044 = 'Lst yr: how often were forms easy to fill out'
 H&YR.044='Lst yr: how often were forms easy to fill out'
 O_H&YR.045 = 'Lst yr: send in any claims'
 H&YR.045='Lst yr: send in any claims'
 O_H&YR.046 = 'Lst yr: how often did health plan handle claims
 quickly'
 H&YR.046='Lst yr: how often did health plan handle claims
 quickly'
 O_H&YR.047='Lst yr: how oftn handle claims correctly'
 H&YR.047 = 'Lst yr: how oftn handle claims correctly'
 O_H&YR.048 = 'Rating of all experience with hlth plan'
 H&YR.048='Rating of all experience with hlth plan'
 O_H&YR.049='Blood pressure: when lst reading'
 H&YR.049 = 'Blood pressure: when lst reading'

O_H&YR.050='Blood pressure: know if too high or not'
 H&YR.050 = 'Blood pressure: know if too high or not'

O_H&YR.051='When did you lst have a flu shot'
 H&YR.051 = 'When did you lst have a flu shot'

O_H&YR.052 = 'Smoked at least 100 cigarettes in life'
 H&YR.052='Smoked at least 100 cigarettes in life'

O_H&YR.053 = 'Smoke or use tobacco everyday, some days or not
 at all'
 H&YR.053='Smoke or use tobacco everyday, some days or not at
 all'

O_H&YR.054='Lst yr: how often advised to quit smoking or use
 tobacco'
 H&YR.054 = 'Lst yr: how often advised to quit smoking or use
 tobacco'

O_H&YR.055 = 'Lst yr: how often recom medic assist quit
 smoking or using tobacco'
 H&YR.055='Lst yr: how often recom medic assist quit smoking
 or using tobacco'

O_H&YR.056 = 'Lst yr: how often discu meth/strag asst quit
 smoking or using tobacco'
 H&YR.056='Lst yr: how often discu meth/strag asst quit
 smoking or using tobacco'

O_H&YR.057A = 'Do you smoke or use: cigarettes'
 H&YR.057A='Do you smoke or use: cigarettes'

O_H&YR.057B = 'Do you smoke or use: dip, chewing tobacco,
 snuff, or snus'
 H&YR.057B='Do you smoke or use: dip, chewing tobacco, snuff,
 or snus'

O_H&YR.057C = 'Do you smoke or use: cigars'
 H&YR.057C='Do you smoke or use: cigars'

O_H&YR.057D = 'Do you smoke or use: pipes, bidis, or kreteks'
 H&YR.057D='Do you smoke or use: pipes, bidis, or kreteks'

O_H&YR.058='Are you male or female'
 H&YR.058 = 'Are you male or female'

O_H&YR.059B='Lst have a Pap smear test'
 H&YR.059B = 'Lst have a Pap smear test'

O_H&YR.060='Are you under age 40'
 H&YR.060 = 'Are you under age 40'

O_H&YR.061='Lst time: breasts checked mammography'
 H&YR.061 = 'Lst time: breasts checked mammography'

O_H&YR.062='Been pregnant in lst yr or pregnant now'
 H&YR.062 = 'Been pregnant in lst yr or pregnant now'

O_H&YR.063='In what trimester is your pregnancy'
 H&YR.063 = 'In what trimester is your pregnancy'

O_H&YR.064='Trimester first received prenatal care'
 H&YR.064 = 'Trimester first received prenatal care'

O_H&YR.065='In gnrl, how would you rate ovrall hlth'
 H&YR.065 = 'In gnrl, how would you rate ovrall hlth'

O_H&YR.066='Impairment/Hlth prblm limit activities'

H&YR.066 = 'Impairment/Hlth prblm limit activities'
 O_H&YR.067 = 'Lst yr: have seen doctor 3 or more times for
 same condition'
 H&YR.067='Lst yr: have seen doctor 3 or more times for same
 condition'
 O_H&YR.068 = 'Has condition lasted for at least 3 months'
 H&YR.068='Has condition lasted for at least 3 months'
 O_H&YR.069 = 'Need to take medicine prescribed by a doctor'
 H&YR.069='Need to take medicine prescribed by a doctor'
 O_H&YR.070 = 'Medicine to treat condition that has lasted for
 at least 3 months'
 H&YR.070='Medicine to treat condition that has lasted for at
 least 3 months'

O_H&YR.071F='Height without shoes (feet)'
 H&YR.071F = 'Height without shoes (feet)'
 O_H&YR.071I='Height without shoes (inches)'
 H&YR.071I = 'Height without shoes (inches)'
 O_H&YR.072='Weight without shoes'
 H&YR.072 = 'Weight without shoes'
 O_SREDA = 'Highest grade completed'
 SREDA = 'Highest grade completed'
 H&YR.073 = 'Are you Spanish/Hispanic/Latino'
 O_H&YR.073A='Not Spanish/Hispanic/Latino'
 H&YR.073A = 'Not Spanish/Hispanic/Latino'
 O_H&YR.073B='Mexican, Mexican American, Chicano'
 H&YR.073B = 'Mexican, Mexican American, Chicano'
 O_H&YR.073C='Puerto Rican'
 H&YR.073C = 'Puerto Rican'
 O_H&YR.073D='Cuban'
 H&YR.073D = 'Cuban'
 O_H&YR.073E='Other Spanish, Hispanic, or Latino'
 H&YR.073E = 'Other Spanish, Hispanic, or Latino'
 O_SRRACEA='Race: White'
 SRRACEA = 'Race: White'
 O_SRRACEB='Race: Black or African American'
 SRRACEB = 'Race: Black or African American'
 O_SRRACEC='Race: American Indian or Alaska Native'
 SRRACEC = 'Race: American Indian or Alaska Native'
 O_SRRACED='Race: Asian'
 SRRACED = 'Race: Asian'
 O_SRRACEE='Race: Native Hawaiian/other Pacific Isl.'
 SRRACEE = 'Race: Native Hawaiian/other Pacific Isl.'
 O_SRAGE = 'What is your age now'
 SRAGE = 'What is your age now'
 O_H&YR.074 = 'Currently Covered Medicare'
 H&YR.074='Currently Covered Medicare'
 O_H&YR.075 = 'Currently Covered Medicare Part A'
 H&YR.075='Currently Covered Medicare Part A'
 O_H&YR.076 = 'Currently Covered Medicare Part B'
 H&YR.076='Currently Covered Medicare Part B'
 O_H&YR.077 = 'Enrolled Medicare Advantage'
 H&YR.077='Enrolled Medicare Advantage'
 O_H&YR.078 = 'Currently Covered Medicare Supplemental'
 H&YR.078='Currently Covered Medicare Supplemental'

O_H&YR.079 = 'Enrolled Medicare Part D'
H&YR.079= 'Enrolled Medicare Part D'

O_S&YR.009='Same prsnl doctor/nurse before this hlth plan'
S&YR.009 = 'Same prsnl doctor/nurse before this hlth plan'
O_S&YR.010='Prblm getting prsnl doctor/nurse you are happy
with'
S&YR.010 = 'Prblm getting prsnl doctor/nurse you are happy
with'

O_S&YR.B01='Self rate of overall mental/emotional health'
S&YR.B01 = 'Self rate of overall mental/emotional health'
O_S&YR.B02='Lst yr: needed treatmnt/cnslnng-prsnl prob'
S&YR.B02 = 'Lst yr: needed treatmnt/cnslnng-prsnl prob'
O_S&YR.B03='Lst yr: prblm gttng needed treatmnt/cnslnng'
S&YR.B03 = 'Lst yr: prblm gttng needed treatmnt/cnslnng'
O_S&YR.B04='Lst yr: rate of treatmnt/cnslnng received'
S&YR.B04 = 'Lst yr: rate of treatmnt/cnslnng received'

O_S&YR.BC01A = 'Past 12 mth: did you try making appt at MTF? Yes, by
calling'
S&YR.BC01A = 'Past 12 mth: did you try making appt at MTF? Yes, by calling'
O_S&YR.BC01B = 'Past 12 mth: did you try making appt at MTF? Yes, online'
S&YR.BC01B = 'Past 12 mth: did you try making appt at MTF? Yes, online'
O_S&YR.BC01C = 'Past 12 mth: did you try making appt at MTF? Yes, in person'
S&YR.BC01C = 'Past 12 mth: did you try making appt at MTF? Yes, in person'
O_S&YR.BC01D = 'Past 12 mth: did you try making appt at MTF? No'
S&YR.BC01D = 'Past 12 mth: did you try making appt at MTF? No'
O_S&YR.BC02A = 'Why make appt at MTF? New illness, condition, or injury'
S&YR.BC02A = 'Why make appt at MTF? New illness, condition, or injury'
O_S&YR.BC02B = 'Why make appt at MTF? I was referred for specialist care'
S&YR.BC02B = 'Why make appt at MTF? I was referred for specialist care'
O_S&YR.BC02C = 'Why make appt at MTF? Routine wellness'
S&YR.BC02C = 'Why make appt at MTF? Routine wellness'
O_S&YR.BC02D = 'Why make appt at MTF? Follow-up on illness, condition, or
injury'
S&YR.BC02D = 'Why make appt at MTF? Follow-up on illness, condition, or
injury'
O_S&YR.BC03A = 'True when you tried to make appt at MTF: No appts available'
S&YR.BC03A = 'True when you tried to make appt at MTF: No appts available'
O_S&YR.BC03B = 'True when you tried to make appt at MTF: Appt too far in
future'
S&YR.BC03B = 'True when you tried to make appt at MTF: Appt too far in
future'
O_S&YR.BC03C = 'True when you tried to make appt at MTF: No convenient
times'
S&YR.BC03C = 'True when you tried to make appt at MTF: No convenient times'
O_S&YR.BC03D = 'True when you tried to make appt at MTF: Time not
convenient'
S&YR.BC03D = 'True when you tried to make appt at MTF: Time not convenient'
O_S&YR.BC03E = 'True when you tried to make appt at MTF: Always able to make
appt'
S&YR.BC03E = 'True when you tried to make appt at MTF: Always able to make
appt'
O_S&YR.BC04A = 'Reasons why did not try to make appt at MTF? Did not need
health care'

S&YR.BC04A = 'Reasons why did not try to make appt at MTF? Did not need health care'
O_S&YR.BC04B = 'Reasons why did not try to make appt at MTF? Would not have been able to get appt when needed'
S&YR.BC04B = 'Reasons why did not try to make appt at MTF? Would not have been able to get appt when needed'
O_S&YR.BC04C = 'Reasons why did not try to make appt at MTF? Would not have gotten appt at good time'
S&YR.BC04C = 'Reasons why did not try to make appt at MTF? Would not have gotten appt at good time'
O_S&YR.BC04D = 'Reasons why did not try to make appt at MTF? Did not have referral needed for specialist'
S&YR.BC04D = 'Reasons why did not try to make appt at MTF? Did not have referral needed for specialist'
O_S&YR.BC04E = 'Reasons why did not try to make appt at MTF? Inconvenient MTF location'
S&YR.BC04E = 'Reasons why did not try to make appt at MTF? Inconvenient MTF location'
O_S&YR.BC04F = 'Reasons why did not try to make appt at MTF? Only use civilian providers'
S&YR.BC04F = 'Reasons why did not try to make appt at MTF? Only use civilian providers'
O_S&YR.BC04G = 'Reasons why did not try to make appt at MTF? Prefer civilian providers'
S&YR.BC04G = 'Reasons why did not try to make appt at MTF? Prefer civilian providers'
O_S&YR.BC05A = 'Past 12 mth: did you try making appt at civ provider? Yes, by calling'
S&YR.BC05A = 'Past 12 mth: did you try making appt at civ provider? Yes, by calling'
O_S&YR.BC05B = 'Past 12 mth: did you try making appt at civ provider? Yes, online'
S&YR.BC05B = 'Past 12 mth: did you try making appt at civ provider? Yes, online'
O_S&YR.BC05C = 'Past 12 mth: did you try making appt at civ provider? Yes, in person'
S&YR.BC05C = 'Past 12 mth: did you try making appt at civ provider? Yes, in person'
O_S&YR.BC05D = 'Past 12 mth: did you try making appt at civ provider? No'
S&YR.BC05D = 'Past 12 mth: did you try making appt at civ provider? No'
O_S&YR.BC06A = 'Why make appt with civilian provider: New illness, condition, or injury'
S&YR.BC06A = 'Why make appt with civilian provider: New illness, condition, or injury'
O_S&YR.BC06B = 'Why make appt with civilian provider: I was referred for specialist care'
S&YR.BC06B = 'Why make appt with civilian provider: I was referred for specialist care'
O_S&YR.BC06C = 'Why make appt with civilian provider: Routine wellness'
S&YR.BC06C = 'Why make appt with civilian provider: Routine wellness'
O_S&YR.BC06D = 'Why make appt with civilian provider: Follow-up on illness, condition, or injury'
S&YR.BC06D = 'Why make appt with civilian provider: Follow-up on illness, condition, or injury'
O_S&YR.BC07A = 'True when you tried to make appt at civ provider: No appts available'

S&YR.BC07A = 'True when you tried to make appt at civ provider: No appts available'
O_S&YR.BC07B = 'True when you tried to make appt at civ provider: Appt too far in future'
S&YR.BC07B = 'True when you tried to make appt at civ provider: Appt too far in future'
O_S&YR.BC07C = 'True when you tried to make appt at civ provider: No convenient times'
S&YR.BC07C = 'True when you tried to make appt at civ provider: No convenient times'
O_S&YR.BC07D = 'True when you tried to make appt at civ provider: Time not convenient'
S&YR.BC07D = 'True when you tried to make appt at civ provider: Time not convenient'
O_S&YR.BC07E = 'True when you tried to make appt at civ provider: Always able to make appt'
S&YR.BC07E = 'True when you tried to make appt at civ provider: Always able to make appt'
O_S&YR.BC08A = 'Reasons why did not try to make appt at civ provider? Did not need health care'
S&YR.BC08A = 'Reasons why did not try to make appt at civ provider? Did not need health care'
O_S&YR.BC08B = 'Reasons why did not try to make appt at civ provider? Get all health care from MTF'
S&YR.BC08B = 'Reasons why did not try to make appt at civ provider? Get all health care from MTF'
O_S&YR.BC08C = 'Reasons why did not try to make appt at civ provider? Would not have been able to get appt when needed'
S&YR.BC08C = 'Reasons why did not try to make appt at civ provider? Would not have been able to get appt when needed'
O_S&YR.BC08D = 'Reasons why did not try to make appt at civ provider? Would not have gotten appt at good time'
S&YR.BC08D = 'Reasons why did not try to make appt at civ provider? Would not have gotten appt at good time'
O_S&YR.BC08E = 'Reasons why did not try to make appt at civ provider? Did not have needed referral for specialist'
S&YR.BC08E = 'Reasons why did not try to make appt at civ provider? Did not have needed referral for specialist'
O_S&YR.BC08F = 'Reasons why did not try to make appt at civ provider? Inconvenient location'
S&YR.BC08F = 'Reasons why did not try to make appt at civ provider? Inconvenient location'
O_S&YR.BC09 = 'Were you asked to call back at a future date when appts might be available [MTF]'
S&YR.BC09 = 'Were you asked to call back at a future date when appts might be available [MTF]'
O_S&YR.BC10 = 'Were you asked to call back at a future date when appts might be available [Civilian]'
S&YR.BC10 = 'Were you asked to call back at a future date when appts might be available [Civilian]'

O_S&YR.BF1='Have you heard of e-cigarettes before today'
S&YR.BF1 = 'Have you heard of e-cigarettes before today'
O_S&YR.BF2='Have you ever used an e-cigarette'
S&YR.BF2 = 'Have you ever used an e-cigarette'

cigarette' O_S&YR.BF3='How many times in your life have you used an e-
cigarette' S&YR.BF3 = 'How many times in your life have you used an e-
cigarette'
O_S&YR.BF4='Often do you use e-cigarettes'
S&YR.BF4 = 'Often do you use e-cigarettes'
days' O_S&YR.BF5='Did you use flavored e-cigarettes in the past 30
days' S&YR.BF5 = 'Did you use flavored e-cigarettes in the past 30
past 12 months' O_S&YR.BF6='Did you completely switch to e-cigarettes in the
past 12 months' S&YR.BF6 = 'Did you completely switch to e-cigarettes in the
visit' O_S&YR.011 = 'Agree/disagree: able to see provider when needed'
S&YR.011='Agree/disagree: able to see provider when needed'
O_S&YR.014 = 'How satisfied with health care during last
S&YR.014='How satisfied with health care during last visit'

N1 = "Coding Scheme Note 1"
N2 = "Coding Scheme Note 2"
N3 = "Coding Scheme Note 3"
N3_BC1= "Coding Scheme Note 3_BC1"
N3_BC2= "Coding Scheme Note 3_BC2"
N3_BC3= "Coding Scheme Note 3_BC3"
N3_BC4= "Coding Scheme Note 3_BC4"
N3_BC5= "Coding Scheme Note 3_BC5"
N3_BC6= "Coding Scheme Note 3_BC6"
N3_BC7= "Coding Scheme Note 3_BC7"
N3_BC8= "Coding Scheme Note 3_BC8"
N4 = "Coding Scheme Note 4"
N5 = "Coding Scheme Note 5"
N6 = "Coding Scheme Note 6"
N7 = "Coding Scheme Note 7"
N8 = "Coding Scheme Note 8"
N8_01 = "Coding Scheme Note 8_01"
N9 = "Coding Scheme Note 9"
N10 = "Coding Scheme Note 10"
N10_B1= "Coding Scheme Note 10_B1"

N12 = "Coding Scheme Note 12"
N13 = "Coding Scheme Note 13"
N14 = "Coding Scheme Note 14"
N15 = "Coding Scheme Note 15"
N16 = "Coding Scheme Note 16"
N17 = "Coding Scheme Note 17"
N18 = "Coding Scheme Note 18"
N18_BF1="Coding Scheme Note 18_BF1"
N18_BF2="Coding Scheme Note 18_BF2"
N19A = "Coding Scheme Note 19A"
N19B = "Coding Scheme Note 19B"
N20 = "Coding Scheme Note 20"
N21 = "Coding Scheme Note 21"
N22 = "Coding Scheme Note 22"

```
N23   = "Coding Scheme Note 23"
N23_HT= "Coding Scheme Note 23_HT"
N23_WT= "Coding Scheme Note 23_WT"
N24   = "Coding Scheme Note 24"
N25   = "Coding Scheme Note 25"
```

```
MISS_1 = "Count of original survey responses (pre-cleaning):
violates skip pattern"
/*MISS_3 = "Count of original survey responses (pre-
cleaning): do not use other tobacco products response"*/
MISS_4 = "Count of original survey responses (pre-cleaning):
incomplete grid error"
MISS_5 = "Count of original survey responses (pre-cleaning):
scalable response of don't know"
MISS_6 = "Count of original survey responses (pre-cleaning):
not applicable - valid skip"
MISS_7 = "Count of original survey responses (pre-cleaning):
out-of-range error"
MISS_9 = "Count of original survey responses (pre-cleaning):
no response - invalid skip"
MISS_TOT = "Total number of missing responses (pre-cleaning)"
XSEXA = "Male or Female - R"
;
```

F.2.E - Q3FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 3 FY2017

```

*****
**;
* Program: Cschmyyq.sas
* Written: 06/04/2001
* Author: C. Rankin
*
* Input: MERGESYN.sas7bdat - Merged MPR Sampling, DEERS, and Synovate
Response Data
* Output: CSCHMyyQ.sas7bdat - Coding scheme file
*
* Modified:
* 12/15/2012 - Removed logic for handling check boxes for height
and
* weight variables. Also no longer have to convert
the
* weight variable from character to numeric
* 12/21/2012 - Added code on line 146 to correct out of range
height (in)
* 12/18/2013 - Updated for Q1 2014 - added ht/wt note
* 09/29/2014 - Added SQL statement to automatically make varlist1,
varlist2, and marked variables
* 07/22/2015 - NOPRINT added to first PROC SQL
* 02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
* 04/29/2016 - Added recoding for H16003, should be used only for
2016Q2.
* 02/10/2017 - Changed filepaths and capitalization to match SAS
Grid.
* Removed additional female-specific fields from
notes 19A and 19B.
* 04/21/2017 - H__032 is removed for the foreseeable future.
*
* Purpose: Apply Coding Scheme Specifications to DoD Health Care Survey
Response Data, check for consistency in responses and skip
patterns
* Include
* files: Cschmyyq.fmt
*
*****
**;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES SOURCE SOURCE2 VARLENCHK=NOWARN;
title "Coding Scheme for Q&qt. FY&yr."; title2; title3;

%LET INDATA=MERGESYN;
%LET OUTDATA=CSCHM&yr.q;

LIBNAME LIBRARY "&fmtpath.";
LIBNAME IN "&datapath.";
LIBNAME OUT "&datapath.";

%MACRO CSCHM;
DATA &INDATA;

```

```

SET IN.&INDATA;

*RENAME AND CREATE VARIABLES NEEDED FOR CODING SCHEME;

RENAME SRACEA = SRRACEA;
RENAME SRACEB = SRRACEB;
RENAME SRACEC = SRRACEC;
RENAME SRACED = SRRACED;
RENAME SRACEE = SRRACEE;

RENAME INTERVIEWTIME = INTTIME;

SEX=PNSEXCD;
AGE=INPUT(DAGEQY,8.);

RUN;

*Create list of variables from dataset;
*O_ variables are the original values from the survey response;
*Must remove any variable that ends with an alphabetic letter that
is not a marked/unmarked variable from the 'markedvars' line of code;
PROC SQL NOPRINT;
  CREATE TABLE VARIABLES AS
    SELECT UPCASE(NAME) AS VARS,
           UPCASE(CAT('O_', NAME)) AS OVARS,
           CASE WHEN SUBSTR(NAME,LENGTH(NAME)) NOT IN ('0' '1' '2' '3' '4'
'5' '6' '7' '8' '9')
              AND NAME NOT IN ("H&YR.059B", "H&YR.071F" ,"H&YR.071I",
"SREDA", "SRAGE")
              THEN UPCASE(NAME) END AS MARKEDVARS,
           CASE WHEN CALCULATED MARKEDVARS NE ''
              THEN UPCASE(CAT('O_', CALCULATED MARKEDVARS)) END AS
OMARKEDVARS
  FROM DICTIONARY.COLUMNS
  WHERE LIBNAME = 'WORK' AND MEMNAME = "&INDATA"
        AND (NAME CONTAINS ("H&YR.") OR NAME CONTAINS ("S&YR.") OR NAME
CONTAINS ("SR"));
  SELECT COMPRESS(VARS), COMPRESS(OVARS), COMPRESS(MARKEDVARS),
COMPRESS(OMARKEDVARS)
  INTO :VARLIST1 SEPARATED BY " ",
       :VARLIST2 SEPARATED BY " ",
       :MARKEDVARS SEPARATED BY " ",
       :OMARKEDVARS SEPARATED BY " "
  FROM VARIABLES;
QUIT;

proc print data=variables; run;

%PUT &VARLIST1;
%PUT &VARLIST2;
%PUT &MARKEDVARS;

```

```

%PUT &OMARKEDVARS;

TITLE "DoD 20&YR Survey";
TITLE2 "Apply Coding Scheme";

DATA OUT.&outdata.;
/* label and format statements for original variables */
LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
INFORMAT &VARLIST2. 4.;

%INCLUDE "cschm&YR.q.fmt";

SET &INDATA;

*****;
**** Recodes for invalid responses:*****;
*****;

/* This is a version of the coding scheme and coding tables for the
FY 20&YR. HCSDB Form A.
The following tables outline the coding of screening questions (skip),
and subsequent items to be answered (or not answered in a series
following a skip question.) */

/* First set up new variables that capture the original values */
/* recode the initial numeric values to the SAS numeric values */
/* specified in the coding scheme */

ARRAY RECODE(*) &VARLIST1;
ARRAY ORIG(*) &VARLIST2;

DO I = 1 to DIM(ORIG);
  ORIG(I) = RECODE(I);
  IF ORIG(I) < 0 THEN DO;
    IF ORIG(I)= -9 THEN RECODE(I)=.;
    ELSE IF ORIG(I)= -7 THEN RECODE(I)=.O;
    ELSE IF ORIG(I)= -6 THEN RECODE(I)=.N;
    ELSE IF ORIG(I)= -5 THEN RECODE(I)=.D;
    ELSE IF ORIG(I)= -4 THEN RECODE(I)=.I;
    ELSE IF ORIG(I)= -1 THEN RECODE(I)=.C;
  END;
END;
DROP I;

/* recode selected responses to be 1=marked, 2=unmarked */

```

```
ARRAY MARKED(*) &MARKEDVARS. ;
ARRAY INFORMAT(*) &OMARKEDVARS. ;
```

```
DO J=1 TO DIM(INFORMAT);
  IF INFORMAT(J) = 1 THEN MARKED(J)=1;
  ELSE MARKED(J)=2;
END;
DROP J;
```

```
FORMAT &MARKEDVARS. MARKED.;
```

```
*****;
```

```
/* skip coding scheme for all surveys not returned */
```

```
IF FLAG_FIN NE 1 THEN GOTO NOSURVEY;
```

```
/** Note 1 -- H&YR.003, H&YR.004 health plan usage */
```

```
IF H&YR.003 > 0 THEN N1=1;
ELSE IF H&YR.003=.N OR H&YR.003 =.D THEN DO;
  IF H&YR.004 NOT=. THEN DO;
    N1=2;
    H&YR.004=.C;
  END;
  ELSE DO;
    N1=3;
    H&YR.004=.N;
  END;
END;
ELSE IF H&YR.003=. THEN N1=4;
```

```
/** Note 2 -- H&YR.006,H&YR.007,H&YR.008: illness or injury */
```

```
ARRAY NOTE2 H&YR.007 H&YR.008;
N2MARK=0;
N2NMISS=0;
N2NN=0;
```

```
DO OVER NOTE2;
  IF NOTE2 NE . THEN N2NMISS+1;
  IF NOTE2 NOT IN (.N,.) THEN N2MARK+1;
  IF NOTE2 EQ .N THEN N2NN+1;
END;
```

```
IF H&YR.006=1 AND N2NMISS=0 THEN DO;
  N2=1;
END;
ELSE IF H&YR.006 IN (1,.) AND N2NMISS>0 AND N2MARK=0 THEN DO;
  H&YR.006=2;
  N2=2;
```

```

DO OVER NOTE2;
  IF NOTE2=. THEN NOTE2=.N;
  ELSE NOTE2=.C;
END;
END;
ELSE IF H&YR.006=1 AND N2MARK=1 AND N2NN=1 THEN DO;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
  N2=3;
END;
ELSE IF H&YR.006=1 AND N2MARK>0 THEN DO;
  N2=4;
END;
ELSE IF H&YR.006=2 AND N2MARK=1 AND N2NN=1 THEN DO;
  H&YR.007=.C;
  H&YR.008=.C;
  N2=5;
END;
ELSE IF H&YR.006 IN (2,.) AND N2MARK>0 THEN DO;
  H&YR.006=1;
  N2=6;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
END;
ELSE IF H&YR.006=2 AND (N2NMISS=0 OR (N2NMISS>0 AND N2MARK=0)) THEN DO;
  N2=7;
  DO OVER NOTE2;
    IF NOTE2=. THEN NOTE2=.N;
    ELSE NOTE2=.C;
  END;
END;
ELSE IF H&YR.006=. AND N2NMISS=0 THEN N2=8;

```

```

DROP N2NMISS N2MARK N2NN;

```

```

/** Note 3 -- H&YR.009,H&YR.010,H&YR.011: regular or routine healthcare **/

```

```

ARRAY Note3 H&YR.010 H&YR.011;
N3MARK=0;
N3NMISS=0;
N3NN=0;

```

```

DO OVER Note3;
  IF Note3 NE . THEN N3NMISS+1;
  IF Note3 NOT IN (.N,.) THEN N3MARK+1;
  IF Note3 EQ .N THEN N3NN+1;
END;

```

```

IF H&YR.009=1 AND N3NMISS=0 THEN DO;
  N3=1;
END;
ELSE IF H&YR.009 IN (1,.) AND N3NMISS>0 AND N3MARK=0 THEN DO;
  H&YR.009=2;

```



```

N3=2;
DO OVER Note3;
  IF Note3=. THEN Note3=.N;
  ELSE Note3=.C;
END;
END;
ELSE IF H&YR.009=1 AND N3MARK=1 AND N3NN=1 THEN DO;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
  N3=3;
END;
ELSE IF H&YR.009=1 AND N3MARK>0 THEN DO;
  N3=4;
END;
ELSE IF H&YR.009=2 AND N3MARK=1 AND N3NN=1 THEN DO;
  H&YR.010=.C;
  H&YR.011=.C;
  N3=5;
END;
ELSE IF H&YR.009 IN (2,..) AND N3MARK>0 THEN DO;
  H&YR.009=1;
  N3=6;
  DO OVER Note3;
    IF Note3=.N THEN Note3=.;
  END;
END;
ELSE IF H&YR.009=2 AND (N3NMISS=0 OR (N3NMISS>0 AND N3MARK=0)) THEN DO;
  N3=7;
  DO OVER Note3;
    IF Note3=. THEN Note3=.N;
    ELSE Note3=.C;
  END;
END;
ELSE IF H&YR.009=. AND N3NMISS=0 THEN N3=8;

DROP N3NMISS N3MARK N3NN;

```

```

/** Note 4 -- H&YR.013, H&YR.014-H&YR.018, H&YR.033: doctor's office or
clinic **/

```

```

ARRAY NOTE4 H&YR.014-H&YR.018 H&YR.033;

N4MARK=0;
N4NMISS=0;

DO OVER NOTE4;
  IF NOTE4 NE . THEN N4NMISS+1;
  IF NOTE4 NOT IN (., .N) THEN N4MARK+1;
END;

```

```

IF H&YR.013=1 THEN DO;
  N4=1;
  DO OVER NOTE4;
    IF NOTE4=. THEN NOTE4=.N;
    ELSE NOTE4=.C;
  END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7,.) AND N4NMISS>0 AND N4MARK=0 THEN DO;
  H&YR.013=1;
  N4=2;
  DO OVER NOTE4;
    IF NOTE4=. THEN NOTE4=.N;
    ELSE NOTE4=.C;
  END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7) AND (N4NMISS=0 OR N4MARK>0) THEN DO;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
  N4=3;
END;
ELSE IF H&YR.013=. AND N4NMISS=0 THEN N4=4;
ELSE IF H&YR.013 IN (.) AND N4MARK>0 THEN DO;
  N4=5;
  DO OVER NOTE4;
    IF NOTE4=.N THEN NOTE4=.;
  END;
END;
END;

DROP N4NMISS N4MARK;

```

/** Note 5 -- H&YR.015, H&YR.016-H&YR.017: doctor's office or clinic-treatment **/

```

IF H&YR.015 IN (.N,.C) THEN N5=1;
ELSE IF H&YR.015= 1 THEN N5=2;
ELSE IF H&YR.015 IN (2,.) AND H&YR.016 IN (1,2) THEN DO;
  N5=3;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2,.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (1,2))
THEN DO;
  N5=4;
  H&YR.015=1;
END;
ELSE IF H&YR.015 IN (2) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,))
THEN DO;
  N5=5;
  IF H&YR.016 = . THEN H&YR.016 = .N;
  ELSE H&YR.016 = .C;
  IF H&YR.017 = . THEN H&YR.017 = .N;
  ELSE H&YR.017 = .C;
END;

```

```

ELSE IF H&YR.015 IN (.) AND (H&YR.016 IN (3,4,.) AND H&YR.017 IN (3,4,.))
THEN DO;
    N5=6;
END;

```

```

/** Note 6 -- H&YR.019, H&YR.020-H&YR.027, S&YR.009: personal doctor **/
/* MER 07/01/09 */

```

```

ARRAY NOTE6 H&YR.021-H&YR.024;

```

```

N6MARK=0;

```

```

DO OVER NOTE6;
    IF NOTE6 NOT IN (., .N) THEN N6MARK+1;
END;

```

```

IF H&YR.020 NOT IN (0,.) THEN N6MARK+1;

```

```

IF H&YR.019 = 1 THEN DO;

```

```

    N6=1;

```

```

    IF H&YR.027=.N THEN H&YR.027=.;

```

```

END;

```

```

ELSE IF H&YR.019 in (2,.) AND H&YR.027 in (0,1,2,3,4,5,6,7,8,9,10) THEN
DO;

```

```

    N6=2;

```

```

    H&YR.019=1;

```

```

END;

```

```

ELSE IF H&YR.019 in (2,.) AND N6MARK>0 AND H&YR.027 = . THEN DO;

```

```

    N6=3;

```

```

    H&YR.019=1;

```

```

END;

```

```

ELSE IF H&YR.019 = 2 AND N6MARK>0 AND H&YR.027 = .N THEN DO;

```

```

    N6=4;

```

```

    IF H&YR.020=. THEN H&YR.020=.N;

```

```

    ELSE H&YR.020=.C;

```

```

    DO OVER NOTE6;

```

```

        IF NOTE6=. THEN NOTE6=.N;

```

```

        ELSE NOTE6=.C;

```

```

    END;

```

```

    IF H&YR.025=. THEN H&YR.025=.N;

```

```

    ELSE H&YR.025=.C;

```

```

    IF H&YR.026=. THEN H&YR.026=.N;

```

```

    ELSE H&YR.026=.C;

```

```

    IF S&YR.009=. THEN S&YR.009=.N;

```

```

    ELSE S&YR.009=.C;

```

```

    H&YR.027=.C;

```

```

END;

```

```

ELSE IF H&YR.019 = 2 AND N6MARK=0 AND H&YR.027 in (.N,.) THEN DO;

```

```

    N6=5;

```

```

    IF H&YR.020=. THEN H&YR.020=.N;

```

```

    ELSE H&YR.020=.C;

```

```

    DO OVER NOTE6;

```

```

        IF NOTE6=. THEN NOTE6=.N;

```

```

        ELSE NOTE6=.C;
    END;
    IF H&YR.025=. THEN H&YR.025=.N;
    ELSE H&YR.025=.C;
    IF H&YR.026=. THEN H&YR.026=.N;
    ELSE H&YR.026=.C;
    IF S&YR.009=. THEN S&YR.009=.N;
    ELSE S&YR.009=.C;
    IF H&YR.027=. THEN H&YR.027=.N;
    ELSE H&YR.027=.C;
END;
ELSE IF H&YR.019 = . AND H&YR.027 = .N THEN DO; /* MER 07/31/09 combined
rows 6 and 7 */
    N6=6;
    H&YR.019=2;
    IF H&YR.020=. THEN H&YR.020=.N;
    ELSE H&YR.020=.C;
    DO OVER NOTE6;
        IF NOTE6=. THEN NOTE6=.N;
        ELSE NOTE6=.C;
    END;
    IF H&YR.025=. THEN H&YR.025=.N;
    ELSE H&YR.025=.C;
    IF H&YR.026=. THEN H&YR.026=.N;
    ELSE H&YR.026=.C;
    IF S&YR.009=. THEN S&YR.009=.N;
    ELSE S&YR.009=.C;
    H&YR.027=.C;
END;
ELSE IF H&YR.019 = . AND N6MARK=0 AND H&YR.027 = . THEN N6=7;

DROP N6MARK;

/** Note 7 -- H&YR.020, H&YR.021-H&YR.024: personal doctor visit **/

ARRAY NOTE7 H&YR.021-H&YR.024;

N7MARK=0;
N7NMISS=0;

DO OVER NOTE7;
    IF NOTE7 NE . THEN N7NMISS+1;
    IF NOTE7 NOT IN (., .N) THEN N7MARK+1;
END;

IF H&YR.020 IN (.N, .C) THEN N7=1;
ELSE IF H&YR.020=0 THEN DO;
    N7=2;
    DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
    END;
    IF H&YR.025=. THEN H&YR.025=.N;
    ELSE H&YR.025=.C;
    IF H&YR.026=. THEN H&YR.026=.N;

```

```

        ELSE H&YR.026=.C;
    END;
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND N7NMISS>0 AND N7MARK=0 THEN DO;
    H&YR.020=0;
    N7=3;
    DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
    END;
    IF H&YR.025=. THEN H&YR.025=.N;
    ELSE H&YR.025=.C;
    IF H&YR.026=. THEN H&YR.026=.N;
    ELSE H&YR.026=.C;
END;
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND (N7NMISS=0 OR N7MARK>0) THEN DO;
    DO OVER NOTE7;
        IF NOTE7=.N THEN NOTE7=.;
    END;
    N7=4;
END;

DROP N7NMISS N7MARK;

/** Note 8 -- H&YR.025, H&YR.026: care from another doctor or healthcare
provider **/

IF H&YR.025 IN (.N, .C) THEN N8=1;
ELSE IF H&YR.025=1 THEN N8=2;
ELSE IF H&YR.025 IN (2,.) AND H&YR.026 IN (1,2,3,4) THEN DO;
    H&YR.025=1;
    N8=3;
END;
ELSE IF H&YR.025=2 AND H&YR.026 IN (.) THEN DO;
    H&YR.026=.N;
    N8=4;
END;
ELSE IF H&YR.025=. AND H&YR.026=. THEN N8=5;

/** Note 8_01 -- S&YR.009, S&YR.010: problem getting new personal doctor or
nurse **/

IF S&YR.009 IN (.N,.C) THEN N8_01=1; /* MER 07/31/09 gave each S&YR.009
value its own row for analysis purposes */
ELSE IF S&YR.009=1 THEN DO;
    N8_01=2;
    IF S&YR.010=. THEN S&YR.010=.N;
    ELSE S&YR.010=.C;
END;
ELSE IF S&YR.009=2 THEN N8_01=3;
ELSE IF S&YR.009=. THEN N8_01=4; /* MER 07/31/09 eliminated backward
coding for missing S&YR.009 */

/** Note 9 -- H&YR.028, H&YR.029-H&YR.031: needed to see a specialist in
last 12 months **/

```

```
ARRAY NOTE9 H&YR.029 H&YR.031;
```

```
N9MARK=0;
```

```
N9NMISS=0;
```

```
DO OVER NOTE9;
```

```
IF NOTE9 NE . THEN N9NMISS+1;
```

```
IF NOTE9 NOT IN (., .N) THEN N9MARK+1;
```

```
END;
```

```
IF H&YR.030 NE . THEN N9NMISS+1;
```

```
IF H&YR.030 NOT IN (.,0) THEN N9MARK+1;
```

```
IF H&YR.028 IN (1) THEN DO;
```

```
N9=1;
```

```
IF H&YR.029=.N THEN H&YR.029=.;
```

```
END;
```

```
ELSE IF H&YR.028 in (2,.) AND N9MARK>0 THEN DO;
```

```
N9=2;
```

```
H&YR.028=1;
```

```
IF H&YR.029=.N THEN H&YR.029=.;
```

```
END;
```

```
ELSE IF H&YR.028 in (2) THEN DO;
```

```
N9=3;
```

```
DO OVER NOTE9;
```

```
IF NOTE9=. THEN NOTE9=.N;
```

```
ELSE NOTE9=.C;
```

```
END;
```

```
IF H&YR.030=. THEN H&YR.030=.N;
```

```
ELSE H&YR.030=.C;
```

```
END;
```

```
ELSE IF H&YR.028=. AND N9NMISS>0 AND N9MARK=0 THEN DO;
```

```
N9=4;
```

```
H&YR.028=2;
```

```
DO OVER NOTE9;
```

```
IF NOTE9=. THEN NOTE9=.N;
```

```
ELSE NOTE9=.C;
```

```
END;
```

```
IF H&YR.030=. THEN H&YR.030=.N;
```

```
ELSE H&YR.030=.C;
```

```
END;
```

```
ELSE IF H&YR.028=. AND N9NMISS=0 THEN N9=5;
```

```
DROP N9NMISS N9MARK;
```

```
/** Note 10 -- H&YR.030, H&YR.031: saw a specialist in last 12 months **/
```

```
IF H&YR.030 IN (.N,.C) AND H&YR.031 IN (.N,.C) THEN N10=1;
```

```
ELSE IF H&YR.030 IN (1,2,3,4,5) AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,.)  
THEN N10=2;
```

```
ELSE IF H&YR.030 IN (1,2,3,4,5,.) AND H&YR.031 = .N THEN DO;
```

```
N10=3;
```

```
H&YR.030=0;
```

```
H&YR.031=.C;
```

```

END;
ELSE IF H&YR.030 = 0 THEN DO;
  N10=4;
  IF H&YR.031 = . THEN H&YR.031 = .N;
  ELSE H&YR.031 = .C;
END;
ELSE IF H&YR.030 = . AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,.) THEN
N10=5;

/** Note 10_B1 -- S&YR.B02, S&YR.B03-S&YR.B04: overall mental health **/

ARRAY NOTE10B1 S&YR.B03-S&YR.B04;

N10B1MARK=0;
N10B1NMISS=0;

DO OVER NOTE10B1;
  IF NOTE10B1 NE . THEN N10B1NMISS+1;
  IF NOTE10B1 NOT IN (., .N) THEN N10B1MARK+1;
END;

IF S&YR.B02 = 1 THEN DO;
  N10_B1=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02 IN (2,.) AND (N10B1MARK>0) THEN DO;
  N10_B1=2;
  S&YR.B02=1;
  DO OVER NOTE10B1;
    IF NOTE10B1=.N THEN NOTE10B1=.;
  END;
END;
ELSE IF S&YR.B02=2 AND (N10B1NMISS=0 OR (N10B1NMISS > 0 AND N10B1MARK =
0)) THEN DO;
  N10_B1=3;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND (N10B1NMISS > 0 AND N10B1MARK = 0) THEN DO;
  N10_B1=4;
  S&YR.B02=2;
  DO OVER NOTE10B1;
    IF NOTE10B1 = . THEN NOTE10B1=.N;
    ELSE NOTE10B1 = .C;
  END;
END;
ELSE IF S&YR.B02 IN (.) AND N10B1NMISS=0 THEN N10_B1=5;

DROP N10B1NMISS N10B1MARK;

```

```
/** Note 12 -- H&YR.034, H&YR.035: look for info in written materials or on internet**/
```

```
IF H&YR.034=1 AND H&YR.035 IN (1,2,3,4,..) THEN N12=1;
ELSE IF H&YR.034 IN (1,..) AND H&YR.035=.N THEN DO;
  N12=2;
  H&YR.034=2;
  H&YR.035=.C;
END;
ELSE IF H&YR.034 IN (2,..) AND H&YR.035 IN (1,2,3,4) THEN DO;
  N12=3;
  H&YR.034=1;
END;
ELSE IF H&YR.034=2 AND H&YR.035 IN (.N,..) THEN DO;
  N12=4;
  IF H&YR.035=. THEN H&YR.035=.N;
  ELSE H&YR.035=.C;
END;
ELSE IF H&YR.034=. AND H&YR.035=. THEN N12=5;
```

```
/** Note 13 -- H&YR.036, H&YR.037: tried to get cost of service/equipment from health plan**/
```

```
IF H&YR.036=1 AND H&YR.037 IN (1,2,3,4,..) THEN N13=1;
ELSE IF H&YR.036 IN (1,..) AND H&YR.037=.N THEN DO;
  H&YR.036=2;
  H&YR.037=.C;
  N13=2;
END;
ELSE IF H&YR.036 IN (2,..) AND H&YR.037 IN (1,2,3,4) THEN DO;
  H&YR.036=1;
  N13=3;
END;
ELSE IF H&YR.036=2 AND H&YR.037 IN (,..N) THEN DO;
  IF H&YR.037=. THEN H&YR.037=.N;
  ELSE H&YR.037=.C;
  N13=4;
END;
ELSE IF H&YR.036=. AND H&YR.037=. THEN N13=5;
```

```
/** Note 14 -- H&YR.038, H&YR.039: tried to get cost of prescription meds from health plan**/
```

```
IF H&YR.038=1 AND H&YR.039 IN (1,2,3,4,..) THEN N14=1;
ELSE IF H&YR.038 IN (1,..) AND H&YR.039=.N THEN DO;
  H&YR.038=2;
  H&YR.039=.C;
  N14=2;
END;
ELSE IF H&YR.038 IN (2,..) AND H&YR.039 IN (1,2,3,4) THEN DO;
  H&YR.038=1;
  N14=3;
END;
ELSE IF H&YR.038=2 AND H&YR.039 IN (,..N) THEN DO;
  IF H&YR.039=. THEN H&YR.039=.N;
```



```

        ELSE H&YR.039=.C;
        N14=4;
    END;
    ELSE IF H&YR.038=. AND H&YR.039=. THEN N14=5;

/** Note 15 -- H&YR.040, H&YR.041-H&YR.042: tried to use health plan's
customer service **/

    ARRAY NOTE15 H&YR.041-H&YR.042;

    N15MARK=0;
    N15NMISS=0;

    DO OVER NOTE15;
        IF NOTE15 NE . THEN N15NMISS+1;
        IF NOTE15 NOT IN (., .N) THEN N15MARK+1;
    END;

    IF H&YR.040 = 1 AND (N15MARK>0 OR N15NMISS=0) THEN DO;
        DO OVER NOTE15;
            IF NOTE15=.N THEN NOTE15=.;
        END;
        N15=1;
    END;
    ELSE IF H&YR.040 IN (1,.) AND (N15NMISS > 0 AND N15MARK = 0) THEN DO;
        N15=2;
        H&YR.040=2;
        DO OVER NOTE15;
            IF NOTE15 = . THEN NOTE15=.N;
            ELSE NOTE15 = .C;
        END;
    END;
    ELSE IF H&YR.040 IN (2,.) AND (N15MARK>0) THEN DO;
        N15=3;
        H&YR.040=1;
        DO OVER NOTE15;
            IF NOTE15=.N THEN NOTE15=.;
        END;
    END;
    ELSE IF H&YR.040=2 AND (N15NMISS=0 OR (N15NMISS > 0 AND N15MARK = 0))
THEN DO;
        N15=4;
        DO OVER NOTE15;
            IF NOTE15 = . THEN NOTE15=.N;
            ELSE NOTE15 = .C;
        END;
    END;
    ELSE IF H&YR.040 IN (.) AND N15NMISS=0 THEN N15=5;

    DROP N15NMISS N15MARK;

/** Note 16 -- H&YR.043, H&YR.044: received forms to fill out from health
plan **/

    IF H&YR.043=1 AND H&YR.044 IN (1,2,3,4,.) THEN N16=1;

```

```

ELSE IF H&YR.043 IN (1,.) AND H&YR.044=.N THEN DO;
  H&YR.043=2;
  H&YR.044=.C;
  N16=2;
END;
ELSE IF H&YR.043 IN (2,.) AND H&YR.044 IN (1,2,3,4) THEN DO;
  H&YR.043=1;
  N16=3;
END;
ELSE IF H&YR.043=2 AND H&YR.044 IN (.,.N) THEN DO;
  IF H&YR.044=. THEN H&YR.044=.N;
  ELSE H&YR.044=.C;
  N16=4;
END;
ELSE IF H&YR.043=. AND H&YR.044=. THEN N16=5;

/** Note 17 -- H&YR.045, H&YR.046-H&YR.047: claims to health plan **/

ARRAY NOTE17 H&YR.046-H&YR.047;
N17MARK=0;
N17NDK=0;

DO OVER NOTE17;
  IF NOTE17 NOT IN (.N,.D,.) THEN N17MARK+1; /* At least one is marked */
  IF NOTE17 NOT IN (.,.D) THEN N17NDK+1; /* All are missing or blank or
dnk */
END;

IF H&YR.045=1 AND (N17MARK>0 OR N17NDK=0) THEN DO;
  N17=1;
  DO OVER NOTE17;
    IF NOTE17=.N THEN NOTE17=.;
  END;
END;
ELSE IF H&YR.045 IN (1,..,D) AND N17MARK=0 AND N17NDK>0 THEN DO;
  N17=2;
  H&YR.045=2;
  DO OVER NOTE17;
    IF NOTE17=. THEN NOTE17=.N;
    ELSE NOTE17=.C;
  END;
END;
ELSE IF H&YR.045 IN (2,..,D) AND N17MARK>0
  THEN DO;
  H&YR.045=1;
  N17=3;
  DO OVER NOTE17;
    IF NOTE17=.N THEN NOTE17=.;
  END;
END;
ELSE IF H&YR.045 IN (2) AND N17MARK=0 THEN DO;
  N17=4;
  DO OVER NOTE17;
    IF NOTE17=. THEN NOTE17=.N;
    ELSE NOTE17=.C;
  END;
END;

```

```

END;
ELSE IF H&YR.045 IN (.D) AND N17NDK=0 THEN DO;
  N17=5;
  DO OVER NOTE17;
    IF NOTE17=. THEN NOTE17=.N;
    ELSE NOTE17=.C;
  END;
END;
ELSE IF H&YR.045 IN (.) AND N17NDK=0 THEN N17=6;

DROP N17MARK N17NDK;

/** Note 18 -- smoking:  H&YR.053, H&YR.054-H&YR.056, H&YR.057A-H&YR.057D
**/

ARRAY NOTE18a H&YR.054 H&YR.055 H&YR.056;
ARRAY NOTE18b H&YR.057A--H&YR.057D;

N18MARK = 0;

DO OVER NOTE18b;
  IF NOTE18b NOT IN (2,.) THEN N18MARK+1;
END;

IF H&YR.053 IN (3,4,.) THEN N18=1;
ELSE IF H&YR.053 IN (2,.D) AND N18MARK = 0 THEN DO;
  N18=2;
  DO OVER NOTE18a;
    IF NOTE18a=. THEN NOTE18a=.N;
    ELSE NOTE18a=.C;
  END;
  DO OVER NOTE18b;
    IF NOTE18b IN (2,.) THEN NOTE18b=.N;
    ELSE NOTE18b=.C;
  END;
END;
ELSE IF H&YR.053 = 2 AND N18MARK > 0 THEN DO;
  N18=3;
  H&YR.053=.;
END;
ELSE IF H&YR.053 = .D AND N18MARK > 0 THEN DO;
  N18=4;
  DO OVER NOTE18a;
    IF NOTE18a=. THEN NOTE18a=.N;
    ELSE NOTE18a=.C;
  END;
  DO OVER NOTE18b;
    IF NOTE18b IN (2,.) THEN NOTE18b=.N;
    ELSE NOTE18b=.C;
  END;
END;

DROP N18MARK;

```

```

/** Note 19a - gender H&YR.058, SEX, H&YR.059B--H&YR.064,
    XSEXa */

/* 1/21/98 use SRSEX & responses to gender specific questions
   if there is discrepancy between SRSEX and SEX */
/* set imputed FMALE and MALE based on gender specific questions */

ARRAY fmaleval H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
      ;

cntfemale=0;
DO OVER fmaleval;          /* mammogram/pap smear/PREGNANT*/
  IF fmaleval>0 THEN cntfemale=cntfemale+1;
END;

IF cntfemale>0 THEN FMALE=1;
ELSE FMALE = 0;

IF H&YR.058=. THEN DO;
  IF (SEX='F' AND FMALE) THEN DO;
    N19a=1;
    XSEXa=2;
  END;
  ELSE IF (SEX='F' AND FMALE=0) THEN DO;
    N19a=2;
    XSEXa=2;
  END;
  ELSE IF (SEX='M' AND FMALE) THEN DO;
    N19a=3;
    XSEXa=1;
  END;
  ELSE IF (SEX='M' AND FMALE=0) THEN DO;
    N19a=4;
    XSEXa=1;
  END;
  ELSE IF ((SEX IN ('Z',' ') AND FMALE)) THEN DO;
    N19a=5;
    XSEXa=2;
  END;
  ELSE IF (SEX='Z' AND FMALE=0) THEN DO;
    N19a=6;
    XSEXa=.;
  END;
  ELSE IF (SEX=' ' AND FMALE=0) THEN DO;
    N19a=7;
    XSEXa=.;
  END;
END;
ELSE IF (H&YR.058=1) THEN DO;

```

```

IF FMALE=0 THEN DO;
  N19a=8;
  XSEXA=1;
END;
ELSE IF FMALE THEN DO;
  IF SEX='F' THEN DO;
    N19a=9;
    XSEXA=2;
  END;
  ELSE DO;
    N19a=10;
    XSEXA=1;
  END;
END;
END;
ELSE IF (H&YR.058=2) THEN DO;
  IF FMALE THEN DO;
    N19a=11;
    XSEXA=2;
  END;
  ELSE IF FMALE=0 THEN DO;
    IF SEX='M' THEN DO;
      N19a=12;
      XSEXA=1;
    END;
    ELSE DO;
      N19a=13;
      XSEXA=2;
    END;
  END;
END;
END;

```

/* Note 19b - gender vs mammogram/paps/pregnancy */

```

ARRAY NOTE19b H&YR.059B H&YR.060 H&YR.061 H&YR.062 H&YR.063 H&YR.064
;
IF XSEXA=1 THEN DO; /* male */
  IF FMALE=0 THEN DO;
    N19b=1;
    DO OVER NOTE19b;
      NOTE19b=.N;
    END;
  END; /* valid skip */
  ELSE IF FMALE=1 THEN DO;
    N19b=2;
    DO OVER NOTE19b;
      IF NOTE19b=. THEN NOTE19b = .N;
      ELSE NOTE19b=.C;
    END;
  END; /* inconsistent response */
END;
ELSE IF XSEXA=2 THEN N19b=3; /* female */
ELSE IF XSEXA=. THEN DO; /* missing sex */
  N19b=4;
  DO OVER NOTE19b;
    NOTE19b=.;
  END;
END;

```

```
END;  
END;
```

```
DROP FMALE CNTFMALE;
```

```
/* Note 20- breast exam for female 40 or over */
```

```
IF XSEXA=1 THEN DO; /* male */  
  IF (H&YR.060=.C OR H&YR.060=.N) AND (H&YR.061=.C OR H&YR.061=.N)  
  THEN N20 = 1;  
END;  
ELSE IF XSEXA=2 THEN DO;  
  IF H&YR.060=2 THEN N20=2; /* female 40 or over */  
  ELSE IF H&YR.060=1 THEN DO; /* female < 40 */  
    IF H&YR.061 NE . THEN H&YR.061=.C;  
    ELSE H&YR.061=.N;  
    N20=3;  
  END;  
  ELSE IF H&YR.060=. THEN DO;  
    IF H&YR.061 NE . THEN DO;  
      H&YR.060=2;  
      N20=4;  
    END;  
    ELSE IF H&YR.061=. THEN DO;  
      IF AGE<40 THEN DO;  
        H&YR.060 = 1;  
        H&YR.061=.N;  
        N20=5;  
      END;  
      ELSE IF AGE >= 40 THEN DO;  
        H&YR.060=2;  
        N20=6;  
      END;  
      ELSE IF AGE=. THEN N20=7;  
    END;  
  END;  
END;  
ELSE IF XSEXA=. THEN N20=8;
```

```
/* Note 21 - gender vs Pregnancy */
```

```
IF XSEXA=1 THEN N21=1; /* male */  
ELSE IF XSEXA=2 THEN DO; /* female */  
  IF H&YR.062=1 THEN DO; /* pregnant */  
    IF H&YR.063=1 THEN DO;  
      N21=2;  
      IF H&YR.064=. THEN H&YR.064 = .N;  
      ELSE H&YR.064=.C;  
    END;  
    ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;  
      N21=3;  
      H&YR.064=.;
```

```

        END;
        ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,.) THEN DO;
            N21=4;
        END;
        ELSE IF H&YR.063 IN (3,.) THEN N21=5;
    END;
    ELSE IF H&YR.062=2 THEN DO;
        IF H&YR.063=. THEN H&YR.063 = .N;
        ELSE H&YR.063=.C;
        N21=6;
    END;
    ELSE IF H&YR.062=3 THEN DO;
        N21=7;
        IF H&YR.063=. THEN H&YR.063 = .N;
        ELSE H&YR.063=.C;
        IF H&YR.064=. THEN H&YR.064=.N;
        ELSE H&YR.064=.C;
    END;
    ELSE IF H&YR.062 IN (.) THEN DO;
        IF H&YR.063=1 THEN DO;
            N21=8;
            H&YR.062=1;
            IF H&YR.064=. THEN H&YR.064 = .N;
            ELSE H&YR.064=.C;
        END;
        ELSE IF H&YR.063=2 AND H&YR.064 IN (2) THEN DO;
            N21=9;
            H&YR.062=1;
            H&YR.064=.;
        END;
        ELSE IF H&YR.063=2 AND H&YR.064 IN (4,3,1,.) THEN DO;
            H&YR.062=1;
            N21=10;
        END;
        ELSE IF H&YR.063=3 THEN DO;
            H&YR.062=1;
            N21=11;
        END;
        ELSE IF H&YR.063=. THEN DO;
            N21=12;
        END;
    END;
END;
ELSE IF XSEXA=. AND H&YR.062 IN (.) THEN N21=13;

```

```

DROP AGE SEX;

```

```

/** Note 21_BG1 -- S&YR.BG01: Number of days physical health not good **/

```

```

IF NOT (S&YR.BG01 > 30) THEN N21_BG1=1;
ELSE DO;

```

```

        IF S&YR.BG01 = 88 THEN DO;
            S&YR.BG01 = 0;
            N21_BG1=2;
        END;
        ELSE DO;
            N21_BG1=3;
            S&YR.BG01=.0;
        END;
    END;
END;

/** Note 21_BG2 -- S&YR.BG02:  Number of days mental health not good **/

IF NOT (S&YR.BG02 > 30) THEN N21_BG2=1;
ELSE DO;
    IF S&YR.BG02 = 88 THEN DO;
        S&YR.BG02 = 0;
        N21_BG2=2;
    END;
    ELSE DO;
        N21_BG2=3;
        S&YR.BG02=.0;
    END;
END;

/** Note 21_BG3 -- S&YR.BG03:  Number of days physical/mental health kept
from usual activities **/

IF NOT (S&YR.BG03 > 30) THEN N21_BG3=1;
ELSE DO;
    IF S&YR.BG03 = 88 THEN DO;
        S&YR.BG03 = 0;
        N21_BG3=2;
    END;
    ELSE DO;
        N21_BG3=3;
        S&YR.BG03=.0;
    END;
END;

/** Note 22 -- H&YR.067, H&YR.068:  seen doctor 3 or more times for same
condition **/

IF H&YR.067=1 THEN N22=1;
ELSE IF H&YR.067 IN (2,.) AND H&YR.068 IN (1,2) THEN DO;
    H&YR.067=1;
    N22=2;
END;
ELSE IF H&YR.067=2 AND H&YR.068 IN (.) THEN DO;
    H&YR.068=.N;
    N22=3;
END;
ELSE IF H&YR.067=. AND H&YR.068=. THEN N22=4;

```



```
/** Note 23 -- H&YR.069, H&YR.070: need or take medicine prescribed by a
doctor **/
```

```
IF H&YR.069=1 THEN N23=1;
ELSE IF H&YR.069 IN (2,.) AND H&YR.070 IN (1,2) THEN DO;
  H&YR.069=1;
  N23=2;
END;
ELSE IF H&YR.069=2 AND H&YR.070 IN (.) THEN DO;
  H&YR.070=.N;
  N23=3;
END;
ELSE IF H&YR.069=. AND H&YR.070=. THEN N23=4;
```

```
/** Note 23_HT -- XSEXA, H&YR.071F, H&YR.071I: height restrictions
**/
```

```
*AMK 9/25/13
```

```
Set height and weight restriction to conform with NHIS 2006 guidelines
```

```
Men: height between 63-76 inches, weight between 126-299 pounds
```

```
Women: height between 59-70 inches, weight between 100-274 pounds;
```

```
*INCHES;
```

```
IF H&YR.071F NE . AND H&YR.071I = . THEN H&YR.071I=0;
IF H&YR.071F = . AND H&YR.071I >11 THEN DO;
  H&YR.071F=FLOOR(H&YR.071I/12);
  H&YR.071I=H&YR.071I-(H&YR.071F*12);
END;
IF H&YR.071F NE . THEN INCHES=(H&YR.071F*12+H&YR.071I);
ELSE INCHES=H&YR.071I;
```

```
IF (XSEXA = 1 AND (63<=INCHES<=76 OR INCHES = .)) OR
(XSEXA = 2 AND (59<=INCHES<=70 OR INCHES = .)) THEN N23_HT=1;
ELSE IF XSEXA IN (1,2) THEN DO;
  N23_HT=2;
  H&YR.071F=.0;
  H&YR.071I=.0;
END;
ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
  IF 59<=INCHES<=76 OR INCHES = . THEN N23_HT=3;
  ELSE DO;
    N23_HT=4;
    H&YR.071F=.0;
    H&YR.071I=.0;
  END;
END;
```

```
DROP INCHES;
```

```
/** Note 23_WT -- H&YR.072: weight restrictions **/
```

```
*AMK 9/25/13
```

```
Set height and weight restriction to conform with NHIS 2006 guidelines
```

```
Men: height between 63-76 inches, weight between 126-299 pounds
```

```
Women: height between 59-70 inches, weight between 100-274 pounds;
```

```
IF (XSEXA = 1 AND (126<=H&YR.072<=299 OR H&YR.072 = .)) OR
(XSEXA = 2 AND (100<=H&YR.072<=274 OR H&YR.072 = .)) THEN N23_WT=1;
```

```

ELSE IF XSEXA IN (1,2) THEN DO;
  N23_WT=2;
  H&YR.072 =.0;
END;
ELSE IF XSEXA = . THEN DO; *MISSING GENDER;
  IF 100<=H&YR.072<=299 OR H&YR.072 = . THEN N23_WT=3;
  ELSE DO;
    N23_WT=4;
    H&YR.072=.0;
  END;
END;

/** Note 23_BE1 -- H&YR.069, H&YR.070: need or take medicine prescribed by
a doctor **/

ARRAY NOTE23_BE S&YR.BE01A--S&YR.BE01J;

N23BEMARK=0;
N23BENMISS=0;

DO OVER NOTE23_BE;
  IF NOTE23_BE NE . THEN N23BENMISS+1;
  IF NOTE23_BE NOT IN (2, ., .N) THEN N23BEMARK+1;
END;

IF N23BEMARK>=1 THEN DO;
  IF S&YR.BE01K=1 THEN DO;
    N23_BE = 1;
    DO OVER NOTE23_BE;
      NOTE23_BE = 2;
    END;
  END;
  ELSE N23_BE=2;
END;
ELSE N23_BE=3;

DROP N23BENMISS N23BEMARK;

/** Note 24 -- H&YR.073, H&YR.073A-H&YR.073E: Hispanic or Latino origin or
descent **/

/* JMA
****Multiple responses were given to this question so H&YR.073 is being
created
****from the multiple responses.;
*/

IF H&YR.073B=1 THEN DO;
  N24=1;
  H&YR.073=2;
END;
ELSE IF H&YR.073E=1 THEN DO;
  N24=2;

```

```

        H&YR.073=5;
    END;
    ELSE IF H&YR.073C=1 THEN DO;
        N24=3;
        H&YR.073=3;
    END;
    ELSE IF H&YR.073D=1 THEN DO;
        N24=4;
        H&YR.073=4;
    END;
    ELSE IF H&YR.073A=1 THEN DO;
        N24=5;
        H&YR.073=1;
    END;
    ELSE IF H&YR.073A IN (2,..) AND H&YR.073B IN (2,..) AND H&YR.073C IN (2,..)
AND
        H&YR.073D IN (2,..) AND H&YR.073E IN (2,..) THEN DO;
        N24=6;
        H&YR.073=.;
    END;
END;

```

```

/** Note 25 -- currently covered by Medicare:  H&YR.074, H&YR.075-H&YR.079
**/

```

```

ARRAY NOTE25 H&YR.075-H&YR.079;

N25MARK = 0;

DO OVER NOTE25;
    IF NOTE25 NOT IN (2,.D,..) THEN N25MARK+1;
END;

IF H&YR.074 = 1 THEN N25=1;
ELSE IF H&YR.074 IN (2,.D) AND N25MARK = 0 THEN DO;
    N25=2;
    DO OVER NOTE25;
        IF NOTE25=. THEN NOTE25=.N;
        ELSE NOTE25=.C;
    END;
END;
ELSE IF H&YR.074 IN (2,.D,..) AND N25MARK > 0 THEN DO;
    N25=3;
    H&YR.074=1;
END;
ELSE IF H&YR.074 = . AND N25MARK = 0 THEN N25=4;

DROP N25MARK;

```

```

NOSURVEY:

```

```

/* missing values */

```

```

ARRAY MISS MISS_9 MISS_7 MISS_6 MISS_5 MISS_4 MISS_1 ;
MISS_TOT=0;

```

```

DO OVER MISS;
  MISS = 0;
END;
ARRAY MISSARRAY &VARLIST2.;

DO OVER MISSARRAY;
  IF (MISSARRAY EQ -9 ) THEN MISS_9 = MISS_9 + 1;
  ELSE IF (MISSARRAY EQ -7) THEN MISS_7 = MISS_7 + 1;
  ELSE IF (MISSARRAY EQ -6) THEN MISS_6 = MISS_6 + 1;
  ELSE IF (MISSARRAY EQ -5) THEN MISS_5 = MISS_5 + 1;
  ELSE IF (MISSARRAY EQ -4) THEN MISS_4 = MISS_4 + 1;
  ELSE IF (MISSARRAY EQ -1) THEN MISS_1 = MISS_1 + 1;
END;
DO OVER MISS;
  MISS_TOT=MISS_TOT + MISS;
END;

*****;

OUTPUT;

RUN;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;

```

F.2.F - Q3FY2017\PROGRAMS\CODINGScheme\CSCHM17Q.FMT - Include file for Coding Scheme for Quarter 3 FY2017

/* Formats for original answers to survey questions,
after variables have been recoded */

FORMAT H&YR.001 O_H&YR.001 YN.

/* H&YR.002 has no format.*/

H&YR.003 O_H&YR.003 HPLAN1_.
H&YR.004 O_H&YR.004 HPTIME.

H&YR.005 O_H&YR.005 PLACE.

H&YR.006 O_H&YR.006
H&YR.009 O_H&YR.009
H&YR.019 O_H&YR.019
YN.

H&YR.007 O_H&YR.007 OFTEN2_.
H&YR.008 O_H&YR.008 TIME1_.

H&YR.010 O_H&YR.010 OFTEN3_.
H&YR.011 O_H&YR.011 TIME2_.

H&YR.012 O_H&YR.012 OFTEN4_.
H&YR.013 O_H&YR.013 OFTEN4_.
H&YR.014 O_H&YR.014 OFTEN8_.
H&YR.015 O_H&YR.015 YN.
H&YR.016 O_H&YR.016 YNDEF.
H&YR.017 O_H&YR.017 YNDEF.
H&YR.018 O_H&YR.018 RATE3_.

H&YR.020 O_H&YR.020 OFTEN10_.

H&YR.021-H&YR.024 O_H&YR.021--O_H&YR.024 OFTEN5_.

H&YR.025 O_H&YR.025 YN.
H&YR.026 O_H&YR.026 OFTEN8_.
H&YR.027 O_H&YR.027 RATE6_.

S&YR.009 O_S&YR.009 YN.
S&YR.010 O_S&YR.010 PROB1_.

H&YR.028 O_H&YR.028 YN.
H&YR.029 O_H&YR.029 OFTEN9_.
H&YR.030 O_H&YR.030 SPCLST.
H&YR.031 O_H&YR.031 RATE2_.

S&YR.B01 O_S&YR.B01 MNTLHLTH.
S&YR.B02 O_S&YR.B02 YN.
S&YR.B03 O_S&YR.B03 PROB1_.

S&YR.B04 O_S&YR.B04 RATE5_.

H&YR.033 O_H&YR.033 OFTEN11_.
H&YR.034 O_H&YR.034 YN.
H&YR.035 O_H&YR.035 OFTEN12_.
H&YR.036 O_H&YR.036 YN.
H&YR.037 O_H&YR.037 OFTEN13_.
H&YR.038 O_H&YR.038 YN.
H&YR.039 O_H&YR.039 OFTEN14_.
H&YR.040 O_H&YR.040 YN.
H&YR.041 O_H&YR.041 OFTEN15_.
H&YR.042 O_H&YR.042 OFTEN15_.
H&YR.043 O_H&YR.043 YN.
H&YR.044 O_H&YR.044 OFTEN16_.
H&YR.045 O_H&YR.045 YNDNK.
H&YR.046 O_H&YR.046 OFTEN6_.
H&YR.047 O_H&YR.047 OFTEN6_.
H&YR.048 O_H&YR.048 RATE4_.

H&YR.049 O_H&YR.049 TIME5_.
H&YR.050 O_H&YR.050 YNBP_.

H&YR.051 O_H&YR.051 TIME7_.
H&YR.052 O_H&YR.052 YNDNK.
H&YR.053 O_H&YR.053 TIME8_.
H&YR.054 O_H&YR.054 OFTEN8_.
H&YR.055 O_H&YR.055 OFTEN8_.
H&YR.056 O_H&YR.056 OFTEN8_.

/* H&YR.057 has no format.*/

S&YR.BF4 O_S&YR.BF4 TIME15_.

H&YR.058 O_H&YR.058 SEX.
H&YR.059B O_H&YR.059B TIME16_.

H&YR.060 O_H&YR.060 H&YR.066 O_H&YR.066 YN.

H&YR.061 O_H&YR.061 TIME12_.
H&YR.062 O_H&YR.062 YNPREG.
H&YR.063 O_H&YR.063 PREG1_.
H&YR.064 O_H&YR.064 PREG2_.

H&YR.065 O_H&YR.065 HEALTH.
H&YR.067 O_H&YR.067 YN.
H&YR.068 O_H&YR.068 YN.
H&YR.069 O_H&YR.069 YN.

H&YR.070 O_H&YR.070 YN.

H&YR.071F O_H&YR.071F
H&YR.071I O_H&YR.071I
H&YR.072 O_H&YR.072
TIME14_.

SREDA O_SREDA EDUC.

H&YR.073 HISP.

SRAGE SRAGE AGEGRP.

H&YR.074 O_H&YR.074 YNDNK.
H&YR.075 O_H&YR.075 MEDA.
H&YR.076 O_H&YR.076 MEDB.
H&YR.077 O_H&YR.077 YNDNK.
H&YR.078 O_H&YR.078 MEDSUPP.
H&YR.079 O_H&YR.079 YNDNK.

S&YR.011 O_S&YR.011 AGREE2_.
S&YR.014 O_S&YR.014 SATISFY.

S&YR.BG01 O_S&YR.BG01 NUM_NONE.
S&YR.BG02 O_S&YR.BG02 NUM_NONE.
S&YR.BG03 O_S&YR.BG03 NUM_NONE.

S&YR.BJ01 O_S&YR.BJ01 S_17BJ_.
S&YR.BJ02 O_S&YR.BJ02 S_17BJ_.
S&YR.BJ03 O_S&YR.BJ03 S_17BJ_.
S&YR.BJ04 O_S&YR.BJ04 S_17BJ_.

MISS_1 MISS_4-MISS_7 MISS_9 MISS_TOT 4.

;

LABEL O_H&YR.001='Are you the person listed on envelope'
H&YR.001 ='Are you the person listed on envelope'
O_H&YR.002A='Health plan(s) covered: TRICARE Prime'
H&YR.002A ='Health plan(s) covered: TRICARE Prime'
O_H&YR.002C='Health plan(s) covered: TRICARE Ext/Stdnd'
H&YR.002C ='Health plan(s) covered: TRICARE Ext/Stdnd'
O_H&YR.002N='Health plan(s) covered: TRICARE Plus'
H&YR.002N ='Health plan(s) covered: TRICARE Plus'
O_H&YR.002O='Health plan(s) covered: TRICARE For Life'
H&YR.002O ='Health plan(s) covered: TRICARE For Life'
O_H&YR.002P='Health plan(s) covered: TRICARE Supplmntl Ins'
H&YR.002P ='Health plan(s) covered: TRICARE Supplmntl Ins'
O_H&YR.002Q='Health plan(s) covered: TRICARE Reserve Select'
H&YR.002Q ='Health plan(s) covered: TRICARE Reserve Select'
O_H&YR.002S='Health plan(s) covered: TRICARE Retired Reserve'
H&YR.002S ='Health plan(s) covered: TRICARE Retired Reserve'
O_H&YR.002T='Health plan(s) covered: TRICARE Young Adult

Prime'

H&YR.002T ='Health plan(s) covered: TRICARE Young Adult

Prime'

or Standard' O_H&YR.002V='Health plan(s) covered: TRICARE Young Adult Ex
 Standard' H&YR.002V ='Health plan(s) covered: TRICARE Young Adult Ex or
 O_H&YR.002U='Health plan(s) covered: CHCBP'
 H&YR.002U ='Health plan(s) covered: CHCBP'
 O_H&YR.002F='Health plan(s) covered: Medicare'
 H&YR.002F ='Health plan(s) covered: Medicare'
 O_H&YR.002G='Health plan(s) covered: FEHBP'
 H&YR.002G ='Health plan(s) covered: FEHBP'
 O_H&YR.002H='Health plan(s) covered: Medicaid'
 H&YR.002H ='Health plan(s) covered: Medicaid'
 O_H&YR.002I='Health plan(s) covered: civilian HMO'
 H&YR.002I ='Health plan(s) covered: civilian HMO'
 O_H&YR.002J='Health plan(s) covered: other civilian'
 H&YR.002J ='Health plan(s) covered: other civilian'
 O_H&YR.002K='Health plan(s) covered: USFHP'
 H&YR.002K ='Health plan(s) covered: USFHP'
 O_H&YR.002M='Health plan(s) covered: veterans'
 H&YR.002M ='Health plan(s) covered: veterans'
 O_H&YR.002R='Health plan(s) covered: gov hlth ins-other
 cntry'
 H&YR.002R ='Health plan(s) covered: gov hlth ins-other cntry'
 O_H&YR.002L='Health plan(s) covered: not sure'
 H&YR.002L ='Health plan(s) covered: not sure'
 O_H&YR.003='Which health plan did you use most'
 H&YR.003 ='Which health plan did you use most'
 O_H&YR.004='Yrs in a row with health plan'
 H&YR.004 ='Yrs in a row with health plan'
 O_H&YR.005='In lst yr:fclty use most for health care'
 H&YR.005 ='In lst yr:fclty use most for health care'
 O_H&YR.006='In lst yr:ill/injry/cond care right away'
 H&YR.006 ='In lst yr:ill/injry/cond care right away'
 O_H&YR.007='In lst yr:get urgnt care as soon as wntd'
 H&YR.007 ='In lst yr:get urgnt care as soon as wntd'
 O_H&YR.008='In lst yr:wait btwn try get care,see prv'
 H&YR.008 ='In lst yr:wait btwn try get care,see prv'
 O_H&YR.009='In lst yr:make appts non-urgnt hlth care'
 H&YR.009 ='In lst yr:make appts non-urgnt hlth care'
 O_H&YR.010='In lst yr:non-urg hlth cre appt whn wntd'
 H&YR.010 ='In lst yr:non-urg hlth cre appt whn wntd'
 O_H&YR.011='In lst yr:days btwn appt & see prvder'
 H&YR.011 ='In lst yr:days btwn appt & see prvder'
 O_H&YR.012='In lst yr:go to emrgncy rm for own care'
 H&YR.012 ='In lst yr:go to emrgncy rm for own care'
 O_H&YR.013='In lst yr:go to Dr office/clinic for care'
 H&YR.013 ='In lst yr:go to Dr office/clinic for care'
 O_H&YR.014 ='Lst yr: how often talk to doctor about illness
 prvntn'
 H&YR.014='Lst yr: how often talk to doctor about illness
 prvntn'
 O_H&YR.015 ='Lst yr: did doctor tell you more than 1 choice
 for trtmnt'
 H&YR.015='Lst yr: did doctor tell you more than 1 choice for
 trtmnt'

O_H&YR.016 = 'Lst yr: did talk to doctor about pros/cons of
 trtmnt'
 H&YR.016='Lst yr: did talk to doctor about pros/cons of
 trtmnt'
 O_H&YR.017 = 'Lst yr: did doctor ask which trtmnt option best
 for you'
 H&YR.017='Lst yr: did doctor ask which trtmnt option best for
 you'
 O_H&YR.018='Rating of all health care in lst yr'
 H&YR.018 = 'Rating of all health care in lst yr'

 O_H&YR.019='Have one person think of as personal Dr'
 H&YR.019 = 'Have one person think of as personal Dr'
 O_H&YR.020 = 'Lst yr: how often visit prsnl doctor for care
 for yourself'
 H&YR.020='Lst yr: how often visit prsnl doctor for care for
 yourself'
 O_H&YR.021='Lst yr: how oftn Drs listen to you'
 H&YR.021 = 'Lst yr: how oftn Drs listen to you'
 O_H&YR.022='Lst yr: how oftn Drs explain things'
 H&YR.022 = 'Lst yr: how oftn Drs explain things'
 O_H&YR.023='Lst yr: how oftn Drs show respect'
 H&YR.023 = 'Lst yr: how oftn Drs show respect'
 O_H&YR.024='Lst yr: how oftn Drs spend enough time'
 H&YR.024 = 'Lst yr: how oftn Drs spend enough time'
 O_H&YR.025 = 'Lst yr: did get care from doctor other than
 prsnl doctor'
 H&YR.025='Lst yr: did get care from doctor other than prsnl
 doctor'
 O_H&YR.026 = 'Lst yr: how often prsnl doctor seemed infrmd of
 care from other doctors'
 H&YR.026='Lst yr: how often prsnl doctor seemed infrmd of
 care from other doctors'
 O_H&YR.027='Rating of your personal Dr'
 H&YR.027 = 'Rating of your personal Dr'
 O_H&YR.028 = 'Lst yr: did make any appointments to see
 spclst'
 H&YR.028='Lst yr: did make any appointments to see spclst'
 O_H&YR.029 = 'Lst yr: how often easy to get appointments with
 spclsts'
 H&YR.029='Lst yr: how often easy to get appointments with
 spclsts'
 O_H&YR.030 = 'Lst yr: how many spclsts seen'
 H&YR.030='Lst yr: how many spclsts seen'
 O_H&YR.031='Rating of specialist seen in lst yr'
 H&YR.031 = 'Rating of specialist seen in lst yr'

 O_H&YR.033 = 'Lst yr: how often easy to get care, test, or
 trtmnt'
 H&YR.033='Lst yr: how often easy to get care, test, or
 trtmnt'
 O_H&YR.034 = 'Lst yr: did look for info from written
 material/Internet'
 H&YR.034='Lst yr: did look for info from written
 material/Internet'

O_H&YR.035 = 'Lst yr: how often written material/Internet
 provide needed info'
 H&YR.035='Lst yr: how often written material/Internet provide
 needed info'
 O_H&YR.036 = 'Lst yr: did look for info from health plan on
 cost of service/equipment'
 H&YR.036='Lst yr: did look for info from health plan on cost
 of service/equipment'
 O_H&YR.037 = 'Lst yr: how often able to find out cost of
 service/equipment'
 H&YR.037='Lst yr: how often able to find out cost of
 service/equipment'
 O_H&YR.038 = 'Lst yr: did look for info from health plan on
 cost of prescription meds'
 H&YR.038='Lst yr: did look for info from health plan on cost
 of prescription meds'
 O_H&YR.039 = 'Lst yr: how often able to find out cost of
 prescription meds'
 H&YR.039='Lst yr: how often able to find out cost of
 prescription meds'
 O_H&YR.040 = "Lst yr: did try to get info/help from health
 plan's cstmr service"
 H&YR.040="Lst yr: did try to get info/help from health plan's
 cstmr service"
 O_H&YR.041 = 'Lst yr: how often did cstmr service give needed
 info/help'
 H&YR.041='Lst yr: how often did cstmr service give needed
 info/help'
 O_H&YR.042 = 'Lst yr: how often did cstmr service treat with
 courtesy/respect'
 H&YR.042='Lst yr: how often did cstmr service treat with
 courtesy/respect'
 O_H&YR.043 = 'Lst yr: did health plan give any forms to fill
 out'
 H&YR.043='Lst yr: did health plan give any forms to fill out'
 O_H&YR.044 = 'Lst yr: how often were forms easy to fill out'
 H&YR.044='Lst yr: how often were forms easy to fill out'
 O_H&YR.045 = 'Lst yr: send in any claims'
 H&YR.045='Lst yr: send in any claims'
 O_H&YR.046 = 'Lst yr: how often did health plan handle claims
 quickly'
 H&YR.046='Lst yr: how often did health plan handle claims
 quickly'
 O_H&YR.047='Lst yr: how oftn handle claims correctly'
 H&YR.047 = 'Lst yr: how oftn handle claims correctly'
 O_H&YR.048 = 'Rating of all experience with hlth plan'
 H&YR.048='Rating of all experience with hlth plan'
 O_H&YR.049='Blood pressure: when lst reading'
 H&YR.049 = 'Blood pressure: when lst reading'
 O_H&YR.050='Blood pressure: know if too high or not'
 H&YR.050 = 'Blood pressure: know if too high or not'

 O_H&YR.051='When did you lst have a flu shot'
 H&YR.051 = 'When did you lst have a flu shot'
 O_H&YR.052 = 'Smoked at least 100 cigarettes in life'
 H&YR.052='Smoked at least 100 cigarettes in life'

at all' O_H&YR.053 ='Smoke or use tobacco everyday, some days or not
 H&YR.053='Smoke or use tobacco everyday, some days or not at
 all'
 tobacco' O_H&YR.054='Lst yr: how often advised to quit smoking or use
 tobacco' H&YR.054 ='Lst yr: how often advised to quit smoking or use
 smoking or using tobacco' O_H&YR.055 ='Lst yr: how often recom medic assist quit
 H&YR.055='Lst yr: how often recom medic assist quit smoking
 or using tobacco'
 smoking or using tobacco' O_H&YR.056 ='Lst yr: how often discu meth/strag asst quit
 H&YR.056='Lst yr: how often discu meth/strag asst quit
 smoking or using tobacco'
 O_H&YR.057A ='Do you smoke or use: cigarettes'
 H&YR.057A='Do you smoke or use: cigarettes'
 O_H&YR.057B ='Do you smoke or use: dip, chewing tobacco,
 snuff, or snus'
 H&YR.057B='Do you smoke or use: dip, chewing tobacco, snuff,
 or snus'
 O_H&YR.057C ='Do you smoke or use: cigars'
 H&YR.057C='Do you smoke or use: cigars'
 O_H&YR.057D ='Do you smoke or use: pipes, bidis, or kreteks'
 H&YR.057D='Do you smoke or use: pipes, bidis, or kreteks'
 O_H&YR.058='Are you male or female'
 H&YR.058 ='Are you male or female'
 O_H&YR.059B='Lst have a Pap smear test'
 H&YR.059B ='Lst have a Pap smear test'
 O_H&YR.060='Are you under age 40'
 H&YR.060 ='Are you under age 40'
 O_H&YR.061='Lst time: breasts checked mammography'
 H&YR.061 ='Lst time: breasts checked mammography'
 O_H&YR.062='Been pregnant in lst yr or pregnant now'
 H&YR.062 ='Been pregnant in lst yr or pregnant now'
 O_H&YR.063='In what trimester is your pregnancy'
 H&YR.063 ='In what trimester is your pregnancy'
 O_H&YR.064='Trimester first received prenatal care'
 H&YR.064 ='Trimester first received prenatal care'

 O_H&YR.065='In gnrl, how would you rate ovrall hlth'
 H&YR.065 ='In gnrl, how would you rate ovrall hlth'

 O_H&YR.066='Impairment/Hlth prblm limit activities'
 H&YR.066 ='Impairment/Hlth prblm limit activities'
 O_H&YR.067 ='Lst yr: have seen doctor 3 or more times for
 same condition'
 H&YR.067='Lst yr: have seen doctor 3 or more times for same
 condition'
 O_H&YR.068 ='Has condition lasted for at least 3 months'
 H&YR.068='Has condition lasted for at least 3 months'
 O_H&YR.069 ='Need to take medicine prescribed by a doctor'

H&YR.069='Need to take medicine prescribed by a doctor'
O_H&YR.070 ='Medicine to treat condition that has lasted for
at least 3 months'
H&YR.070='Medicine to treat condition that has lasted for at
least 3 months'

O_H&YR.071F='Height without shoes (feet)'
H&YR.071F='Height without shoes (feet)'
O_H&YR.071I='Height without shoes (inches)'
H&YR.071I='Height without shoes (inches)'
O_H&YR.072='Weight without shoes'
H&YR.072 ='Weight without shoes'
O_SREDA ='Highest grade completed'
SREDA ='Highest grade completed'
H&YR.073 ='Are you Spanish/Hispanic/Latino'
O_H&YR.073A='Not Spanish/Hispanic/Latino'
H&YR.073A ='Not Spanish/Hispanic/Latino'
O_H&YR.073B='Mexican, Mexican American, Chicano'
H&YR.073B ='Mexican, Mexican American, Chicano'
O_H&YR.073C='Puerto Rican'
H&YR.073C ='Puerto Rican'
O_H&YR.073D='Cuban'
H&YR.073D ='Cuban'
O_H&YR.073E='Other Spanish, Hispanic, or Latino'
H&YR.073E ='Other Spanish, Hispanic, or Latino'
O_SRRACEA='Race: White'
SRRACEA ='Race: White'
O_SRRACEB='Race: Black or African American'
SRRACEB ='Race: Black or African American'
O_SRRACEC='Race: American Indian or Alaska Native'
SRRACEC ='Race: American Indian or Alaska Native'
O_SRRACED='Race: Asian'
SRRACED ='Race: Asian'
O_SRRACEE='Race: Native Hawaiian/other Pacific Isl.'
SRRACEE ='Race: Native Hawaiian/other Pacific Isl.'
O_SRAGE ='What is your age now'
SRAGE ='What is your age now'
O_H&YR.074 ='Currently Covered Medicare'
H&YR.074='Currently Covered Medicare'
O_H&YR.075 ='Currently Covered Medicare Part A'
H&YR.075='Currently Covered Medicare Part A'
O_H&YR.076 ='Currently Covered Medicare Part B'
H&YR.076='Currently Covered Medicare Part B'
O_H&YR.077 ='Enrolled Medicare Advantage'
H&YR.077='Enrolled Medicare Advantage'
O_H&YR.078 ='Currently Covered Medicare Supplemental'
H&YR.078='Currently Covered Medicare Supplemental'
O_H&YR.079 ='Enrolled Medicare Part D'
H&YR.079='Enrolled Medicare Part D'

O_S&YR.009='Same prsnl doctor/nurse before this hlth plan'
S&YR.009 ='Same prsnl doctor/nurse before this hlth plan'
O_S&YR.010='Prblm getting prsnl doctor/nurse you are happy
with'

with' S&YR.010 ='Prblm getting prsnl doctor/nurse you are happy

O_S&YR.B01='Self rate of overall mental/emotional health'
S&YR.B01 ='Self rate of overall mental/emotional health'
O_S&YR.B02='Lst yr: needed treatmnt/cnslng-prsnl prob'
S&YR.B02 ='Lst yr: needed treatmnt/cnslng-prsnl prob'
O_S&YR.B03='Lst yr: prblm gttng needed treatmnt/cnslng'
S&YR.B03 ='Lst yr: prblm gttng needed treatmnt/cnslng'
O_S&YR.B04='Lst yr: rate of treatmnt/cnslng received'
S&YR.B04 ='Lst yr: rate of treatmnt/cnslng received'

O_S&YR.BF4='Often do you use e-cigarettes'
S&YR.BF4 ='Often do you use e-cigarettes'

O_S&YR.BG01 ='How many days was phys health not good in past
30 days'
S&YR.BG01 ='How many days was phys health not good in past
30 days'
O_S&YR.BG02 ='How many days was mental health not good in
past 30 days'
S&YR.BG02 ='How many days was mental health not good in
past 30 days'
O_S&YR.BG03 ='How many days did poor health stop usual
activities in past 30 days'
S&YR.BG03 ='How many days did poor health stop usual
activities in past 30 days'

O_S&YR.BJ01 ='How often over the last two weeks have you
felt anxious, nervous, or on edge'
S&YR.BJ01 ='How often over the last two weeks have you
felt anxious, nervous, or on edge'
O_S&YR.BJ02 ='How often over the last two weeks have you
felt unable to stop or control worrying'
S&YR.BJ02 ='How often over the last two weeks have you
felt unable to stop or control worrying'
O_S&YR.BJ03 ='How often over the last two weeks have you
felt little interest or pleasure in doing things'
S&YR.BJ03 ='How often over the last two weeks have you
felt little interest or pleasure in doing things'
O_S&YR.BJ04 ='How often over the last two weeks have you
felt down, depressed, or hopeless'
S&YR.BJ04 ='How often over the last two weeks have you
felt down, depressed, or hopeless'

O_S&YR.011 ='Agree/disagree: able to see provider when needed'
S&YR.011='Agree/disagree: able to see provider when needed'

O_S&YR.014 = 'How satisfied with health care during last
visit'
S&YR.014='How satisfied with health care during last visit'

N1 = "Coding Scheme Note 1"
N2 = "Coding Scheme Note 2"
N3 = "Coding Scheme Note 3"
N4 = "Coding Scheme Note 4"
N5 = "Coding Scheme Note 5"
N6 = "Coding Scheme Note 6"
N7 = "Coding Scheme Note 7"
N8 = "Coding Scheme Note 8"
N8_01 = "Coding Scheme Note 8_01"
N9 = "Coding Scheme Note 9"
N10 = "Coding Scheme Note 10"
N10_B1= "Coding Scheme Note 10_B1"

N12 = "Coding Scheme Note 12"
N13 = "Coding Scheme Note 13"
N14 = "Coding Scheme Note 14"
N15 = "Coding Scheme Note 15"
N16 = "Coding Scheme Note 16"
N17 = "Coding Scheme Note 17"
N18 = "Coding Scheme Note 18"
N19A = "Coding Scheme Note 19A"
N19B = "Coding Scheme Note 19B"
N20 = "Coding Scheme Note 20"
N21 = "Coding Scheme Note 21"
N21_BG1= "Coding Scheme Note 21_BG1"
N21_BG2= "Coding Scheme Note 21_BG2"
N21_BG3= "Coding Scheme Note 21_BG3"
N22 = "Coding Scheme Note 22"
N23 = "Coding Scheme Note 23"
N23_BE= "Coding Scheme Note 23_BE"
N23_HT= "Coding Scheme Note 23_HT"
N23_WT= "Coding Scheme Note 23_WT"
N24 = "Coding Scheme Note 24"
N25 = "Coding Scheme Note 25"

MISS_1 = "Count of original survey responses (pre-cleaning):
violates skip pattern"
/*MISS_3 = "Count of original survey responses (pre-
cleaning): do not use other tobacco products response"*/
MISS_4 = "Count of original survey responses (pre-cleaning):
incomplete grid error"
MISS_5 = "Count of original survey responses (pre-cleaning):
scalable reponse of don't know"
MISS_6 = "Count of original survey responses (pre-cleaning):
not applicable - valid skip"
MISS_7 = "Count of original survey responses (pre-cleaning):
out-of-range error"
MISS_9 = "Count of original survey responses (pre-cleaning):
no response - invalid skip"
MISS_TOT = "Total number of missing responses (pre-cleaning)"
XSEXA = "Male or Female - R"

;

F.2.G - HCSDB_HEDIS\PROGRAMS\CODINGScheme\CSCHEM17Q.SAS - Implement Coding Scheme and Coding Tables for HEDIS FY2017

```
*****
**;
* Program: Cschmyyq.sas
* Written: 06/04/2001
* Author: C. Rankin
*
* Input: MERGESYN.sas7bdat - Merged MPR Sampling, DEERS, and Synovate
Response Data
* Output: CSCHEM17Q.sas7bdat - Coding scheme file
*
* Modified:
* 12/15/2012 - Removed logic for handling check boxes for height
and
* weight variables. Also no longer have to convert
the
* weight variable from character to numeric
* 12/21/2012 - Added code on line 146 to correct out of range
height (in)
* 12/18/2013 - Updated for Q1 2014 - added ht/wt note
* 09/29/2014 - Added SQL statement to automatically make varlist1,
varlist2, and marked variables
* 07/22/2015 - NOPRINT added to first PROC SQL
* 02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
* 04/29/2016 - Added recoding for H16003, should be used only for
2016Q2.
* 02/10/2017 - Changed filepaths and capitalization to match SAS
Grid.
* Removed additional female-specific fields from
notes 19A and 19B.
* 04/21/2017 - H__032 is removed for the foreseeable future.
* 08/31/2017 - Various changes for HEDIS:
* H17011, S17BM03, S17BM04, and
SRRACE renamed to match previous HCSDB questions.
* H17045, 46, 47, 51, 53, S17BL01
and 02 all have "Don't know" values recoded
* H17053 and 65 have their values
reversed from HCSDB
* H17013 has its values shifted from
HCSDB
* Bene Level Responses about
insurance coverage are imported directly from an Excel workbook.
* One MPRID is hardcoded at the end
so that its Note18 coding is correct
*
*
* Purpose: Apply Coding Scheme Specifications to DoD Health Care Survey
Response Data, check for consistency in responses and skip
patterns
* Include
* files: Cschmyyq.fmt
*
*****
**;
```



```
OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES SOURCE SOURCE2 VARLENCHK=NOWARN;  
title "Coding Scheme for Q&qt. FY&yr."; title2; title3;
```

```
%LET INDATA=MERGESYN;  
%LET OUTDATA=CSCHM&yr.q;
```

```
LIBNAME LIBRARY "&fmtpath.";  
LIBNAME IN "&datapath.";  
LIBNAME OUT "&datapath.";
```

```
%MACRO CSCHM;  
DATA &INDATA.1;
```

```
SET IN.&INDATA;
```

```
*RENAME AND CREATE VARIABLES NEEDED FOR CODING SCHEME;
```

```
RENAME H17011A = H17057E;  
RENAME H17011B = H17057A;  
RENAME H17011C = H17057B;  
RENAME H17011D = H17057C;  
RENAME H17011E = H17057D;  
RENAME S17BM03 = H17008;  
RENAME S17BM04 = H17011;  
RENAME SRRACEC = SRRACED;  
RENAME SRRACED = SRRACEE;  
RENAME SRRACEE = SRRACEC;  
RENAME S&YR.BJ01=S&YR.BN01;  
RENAME H&YR.051 = S&YR.BO01;  
RENAME H&YR.014 = S&YR.BP01;
```

```
/*These correspond to questions 39, 40, 41, 45, and 46*/
```

```
IF H&YR.045 = 3 THEN H&YR.045 = -5;  
IF H&YR.046 = 5 THEN H&YR.046 = -5;  
IF H&YR.047 = 5 THEN H&YR.047 = -5;  
IF H&YR.051 = 3 THEN H&YR.051 = -5;  
IF H&YR.053 = 4 THEN H&YR.053 = -5;  
IF S&YR.BL01 = 3 THEN S&YR.BL01 = -5;  
IF S&YR.BL02 = 3 THEN S&YR.BL02 = -5;
```

```
IF H&YR.065 >0 THEN H&YR.065 = 6-H&YR.065;  
IF H&YR.053 >0 THEN H&YR.053 = 5-H&YR.053;
```

```
/*Recode H17013 to original numbers*/
```

```
IF H17013 IN (0 1 2 3 4 5 6) THEN H17013 = H17013+1;
```

```
RENAME INTERVIEWTIME = INTTIME;
```

```
SEX=PNSEXCD;  
AGE=INPUT(DAGEQY,8.);
```

```
RUN;
```

```
*Create list of variables from dataset;
```

```
*O_ variables are the original values from the survey response;
```

```

*Must remove any variable that ends with an alphabetic letter that
is not a marked/unmarked variable from the 'markedvars' line of code;
PROC SQL NOPRINT;
  CREATE TABLE VARIABLES AS
    SELECT UPCASE(NAME) AS VARS,
           UPCASE(CAT('O_', NAME)) AS OVARS,
           CASE WHEN SUBSTR(NAME,LENGTH(NAME)) NOT IN ('0' '1' '2' '3' '4'
'5' '6' '7' '8' '9')
              AND NAME NOT IN ("H&YR.059B", "H&YR.071F" ,"H&YR.071I",
"SREDA", "SRAGE")
            THEN UPCASE(NAME) END AS MARKEDVARS,
           CASE WHEN CALCULATED MARKEDVARS NE ''
              THEN UPCASE(CAT('O_', CALCULATED MARKEDVARS)) END AS
OMARKEDVARS
    FROM DICTIONARY.COLUMNS
    WHERE LIBNAME = 'WORK' AND MEMNAME = "&INDATA.1"
      AND (NAME CONTAINS ("H&YR.") OR NAME CONTAINS ("S&YR.") OR NAME
CONTAINS ("SR")) ;
    SELECT COMPRESS(VARS), COMPRESS(OVARS), COMPRESS(MARKEDVARS),
COMPRESS(OMARKEDVARS)
    INTO :VARLIST1 SEPARATED BY " ",
        :VARLIST2 SEPARATED BY " ",
        :MARKEDVARS SEPARATED BY " ",
        :OMARKEDVARS SEPARATED BY " "
    FROM VARIABLES;
QUIT;

proc print data=variables; run;

%PUT &VARLIST1;
%PUT &VARLIST2;
%PUT &MARKEDVARS;
%PUT &OMARKEDVARS;

TITLE "DoD 20&YR Survey";
TITLE2 "Apply Coding Scheme";

/**/ IMPORT QUESTION 2 RESPONSES /**/

/*Raw file received from Ipsos*/
PROC IMPORT DATAFILE = "&PATH./Data/AFinal/Hedis17_Qu2Verbatim_Import.xlsx"
out = Q2IMPORT DBMS=XLSX REPLACE;
RUN;

/*This spreadsheet maps responses to flags for overwriting S17BJ01 and also
equivalent H17003 values*/
PROC IMPORT DATAFILE = "&PATH./Data/AFinal/Q2_Values.xlsx"
out = Q2values DBMS=XLSX REPLACE;
RUN;

/*This spreadsheet maps responses to flags for overwriting S17BJ01 and also
equivalent H17003 values*/
PROC IMPORT DATAFILE = "&PATH./Data/AFinal/Bene_Level_Responses.xlsx"
out = Benevalues DBMS=XLSX REPLACE;
RUN;

```

```

data benevalues;
set benevalues;
if final_s17bj01 = . then final_s17bj01=s17bj01;
DROP S17BJ01;
run;
/*
proc sql;
create table q2lookup as
select DISTINCT
PUT('IPSOS ID'n,10.)||CONTROL as MIQCNTL
, bj0lover
, x17003
,b.s17bj02

from q2import as a
left join benevalues as b
on a.mprid=b.mprid
and a.miqcntl=b.miqcntl
;
quit;

proc sql;
create table q2lookup as
select DISTINCT
PUT('IPSOS ID'n,10.)||CONTROL as MIQCNTL
, bj0lover
, x17003
,b.s17bj02

from q2import as a
left join q2values as b
on strip(uppercase(a.'VERBATIM RESPONSE'n)) = strip(b.s17bj02)
order by MIQCNTL
;
quit;

PROC SORT DATA = Q2LOOKUP DUPOUT = T1 NODUPKEY;BY MIQCNTL;RUN;
*/
PROC SQL;
CREATE TABLE &INDATA AS
SELECT
A.*
, B.x17003
, B.s17bj02 as s17bn02
,b.final_s17bj01
FROM &INDATA.1 AS A
left join benevalues as b
on a.mprid=b.mprid
and a.miqcntl=b.miqcntl
;
QUIT;

/*

```

```

PROC SQL;
CREATE TABLE &INDATA AS
SELECT
A.*
, B.bj0lover
, B.x17003
,b.s17bj02
FROM &INDATA.1 AS A
LEFT JOIN Q2LOOKUP AS B
ON (A.MIQCNTRL) = B.MIQCNTRL
;
QUIT;
*/

```

```

DATA OUT.&outdata.;
/* label and format statements for original variables */
LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
INFORMAT &VARLIST2. 4.;

```

```
%INCLUDE "cschm&YR.q.fmt";
```

```
SET &INDATA;
```

```

*****;
**** Recodes for invalid responses:*****;
*****;

```

```

/* This is a version of the coding scheme and coding tables for the
FY 20&YR. HCSDB Form A.
The following tables outline the coding of screening questions (skip),
and subsequent items to be answered (or not answered in a series
following a skip question.) */

```

```

/* First set up new variables that capture the original values */
/* recode the initial numeric values to the SAS numeric values */
/* specified in the coding scheme */

```

```

ARRAY RECODE(*) &VARLIST1;
ARRAY ORIG(*) &VARLIST2;

```

```

DO I = 1 to DIM(ORIG);
ORIG(I) = RECODE(I);
IF ORIG(I) < 0 THEN DO;
IF ORIG(I)= -9 THEN RECODE(I)=.;
ELSE IF ORIG(I)= -7 THEN RECODE(I)=.O;
ELSE IF ORIG(I)= -6 THEN RECODE(I)=.N;
ELSE IF ORIG(I)= -5 THEN RECODE(I)=.D;
ELSE IF ORIG(I)= -4 THEN RECODE(I)=.I;
ELSE IF ORIG(I)= -1 THEN RECODE(I)=.C;

```

```
END;
```

```
END;
```

```
DROP I;
```

```

/* recode selected responses to be 1=marked, 2=unmarked */

ARRAY MARKED(*) &MARKEDVARS. ;
ARRAY INFORMAT(*) &OMARKEDVARS. ;

DO J=1 TO DIM(INFORMAT);
  IF INFORMAT(J) = 1 THEN MARKED(J)=1;
  ELSE MARKED(J)=2;
END;
DROP J;

FORMAT &MARKEDVARS. MARKED.;

*****;

/* skip coding scheme for all surveys not returned **/

IF FLAG_FIN NE 1 THEN GOTO NOSURVEY;

IF FINAL_S&YR.BJ01 NE . THEN S&YR.BN01 = FINAL_S&YR.BJ01;
RENAME final_S17BJ01=S17BN01F;
IF S17BN01 = 1 THEN X17003=1;
IF S&YR.BN01 = -9 THEN S&YR.BN01 = .;
IF final_S17BJ01 = -9 THEN final_S17BJ01 = .;

IF X&YR.003 = -5 THEN X&YR.003 = .D;

/** Note 2 -- H&YR.006,H&YR.007,H&YR.008: illness or injury **/
/*Stop skipping 008*/
ARRAY NOTE2 H&YR.007 H&YR.008;
ARRAY NOTE2A H&YR.007;
N2MARK=0;
N2NMISS=0;
N2NN=0;

DO OVER NOTE2;
  IF NOTE2 NE . THEN N2NMISS+1;
  IF NOTE2 NOT IN (.N,.) THEN N2MARK+1;
  IF NOTE2 EQ .N THEN N2NN+1;
END;

IF H&YR.006=1 AND N2NMISS=0 THEN DO;
  N2=1;

```

```

END;
ELSE IF H&YR.006 IN (1,.) AND N2NMISS>0 AND N2MARK=0 THEN DO;
  H&YR.006=2;
  N2=2;
  DO OVER NOTE2;
    IF NOTE2=. THEN NOTE2=.N;
    ELSE NOTE2=.C;
  END;
END;
ELSE IF H&YR.006=1 AND N2MARK=1 AND N2NN=1 THEN DO;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
  N2=3;
END;
ELSE IF H&YR.006=1 AND N2MARK>0 THEN DO;
  N2=4;
END;
ELSE IF H&YR.006=2 AND N2MARK=1 AND N2NN=1 THEN DO;
  H&YR.007=.C;
  H&YR.008=.C;
  N2=5;
END;
ELSE IF H&YR.006 IN (2,.) AND N2MARK>0 THEN DO;
  H&YR.006=1;
  N2=6;
  DO OVER NOTE2;
    IF NOTE2=.N THEN NOTE2=.;
  END;
END;
ELSE IF H&YR.006=2 AND (N2NMISS=0 OR (N2NMISS>0 AND N2MARK=0)) THEN DO;
  N2=7;
  DO OVER NOTE2;
    IF NOTE2=. THEN NOTE2=.N;
    ELSE NOTE2=.C;
  END;
END;
ELSE IF H&YR.006=. AND N2NMISS=0 THEN N2=8;

```

```

DROP N2NMISS N2MARK N2NN;

```

```

/** Note 3 -- H&YR.009,H&YR.010,H&YR.011: regular or routine healthcare **/
/*Stop skipping 011*/

```

```

ARRAY Note3 H&YR.010 H&YR.011;
ARRAY Note3A H&YR.010 ;
N3MARK=0;
N3NMISS=0;
N3NN=0;

DO OVER Note3;
  IF Note3 NE . THEN N3NMISS+1;
  IF Note3 NOT IN (.N,.) THEN N3MARK+1;
  IF Note3 EQ .N THEN N3NN+1;
END;

```

```

IF H&YR.009=1 AND N3NMISS=0 THEN DO;
    N3=1;
END;
ELSE IF H&YR.009 IN (1,.) AND N3NMISS>0 AND N3MARK=0 THEN DO;
    H&YR.009=2;
    N3=2;
    DO OVER Note3;
        IF Note3=. THEN Note3=.N;
        ELSE Note3=.C;
    END;
END;
ELSE IF H&YR.009=1 AND N3MARK=1 AND N3NN=1 THEN DO;
    DO OVER Note3;
        IF Note3=.N THEN Note3=.;
    END;
    N3=3;
END;
ELSE IF H&YR.009=1 AND N3MARK>0 THEN DO;
    N3=4;
END;
ELSE IF H&YR.009=2 AND N3MARK=1 AND N3NN=1 THEN DO;
    H&YR.010=.C;
    H&YR.011=.C;
    N3=5;
END;
ELSE IF H&YR.009 IN (2,.) AND N3MARK>0 THEN DO;
    H&YR.009=1;
    N3=6;
    DO OVER Note3;
        IF Note3=.N THEN Note3=.;
    END;
END;
ELSE IF H&YR.009=2 AND (N3NMISS=0 OR (N3NMISS>0 AND N3MARK=0)) THEN DO;
    N3=7;
    DO OVER Note3;
        IF Note3=. THEN Note3=.N;
        ELSE Note3=.C;
    END;
END;
ELSE IF H&YR.009=. AND N3NMISS=0 THEN N3=8;

```

```

DROP N3NMISS N3MARK N3NN;

```

```

/** Note 4H -- H&YR.013, S&YR.BP01 H&YR.018, H&YR.033: doctor's office or
clinic **/

```

```

ARRAY NOTE4H S&YR.BP01 H&YR.018 H&YR.033 S&YR.BK01 S&YR.BK02 S&YR.BK03
S&YR.BK04;

```

```

N4MARK=0;

```

```

N4NMISS=0;

DO OVER NOTE4H;
  IF NOTE4H NE . THEN N4NMISS+1;
  IF NOTE4H NOT IN (., .N) THEN N4MARK+1;
END;

IF H&YR.013=1 THEN DO;
  N4H=1;
  DO OVER NOTE4H;
    IF NOTE4H=. THEN NOTE4H=.N;
    ELSE NOTE4H=.C;
  END;
END;
ELSE IF H&YR.013 IN (2,3,4,5,6,7) THEN DO;
  N4H=2;
END;
ELSE IF H&YR.013 IN (.) THEN DO;
  N4H=3;
END;

DROP N4NMISS N4MARK;

/** Note 5H -- S&YR.BK01-S&YR.BK04 : doctor's office or clinic- treatment
**/

ARRAY NOTE5H S&YR.BK02-S&YR.BK04;

N5HMARK=0;

DO OVER NOTE5H;
  IF NOTE5H NOT IN (., .N, 2) THEN N5HMARK+1;
END;

IF S&YR.BK01 IN (.N,.C) THEN N5H=1;
ELSE IF S&YR.BK01= 1 THEN DO;
  IF N5HMARK>=1 THEN N5H=2;
  ELSE DO;
    N5H=3;
    S&YR.BK01 = 2;
    DO OVER NOTE5H;
      IF NOTE5H = . THEN NOTE5H = .N;
      ELSE NOTE5H=.C;
    END;
  END;
END;
ELSE IF S&YR.BK01 IN (2) AND N5HMARK >= 1 THEN DO;
  N5H=4;
  S&YR.BK01=1;
END;
ELSE IF S&YR.BK01 IN (2 .) THEN DO;
  IF N5HMARK = 0 THEN DO;
    N5H=5;
  END;
  ELSE IF S&YR.BK01 = . THEN DO;

```



```

        N5H=6;
        S&YR.BK01=1;
    END;
END;

DROP N5HMARK;

/** Note 6H -- H&YR.019, H&YR.020-H&YR.027, S&YR.009: personal doctor **/
/* MER 07/01/09 */

    ARRAY NOTE6H  H&YR.021-H&YR.024;

    N6MARK=0;

    DO OVER NOTE6H;
        IF NOTE6H NOT IN (., .N) THEN N6MARK+1;
    END;

    IF H&YR.020 NOT IN (0,.) THEN N6MARK+1;

    IF H&YR.019 = 1 THEN DO;
        N6H=1;
        IF H&YR.027=.N THEN H&YR.027=.;
    END;
    ELSE IF H&YR.019 in (2,.) AND H&YR.027 in (0,1,2,3,4,5,6,7,8,9,10) THEN
DO;
        N6H=2;
        H&YR.019=1;
    END;
    ELSE IF H&YR.019 in (2,.) AND N6MARK>0 AND H&YR.027 = . THEN DO;
        N6H=3;
        H&YR.019=1;
    END;
    ELSE IF H&YR.019 = 2 AND N6MARK=0 AND H&YR.027 in (.) THEN DO;
        N6H=4;
        IF H&YR.020=. THEN H&YR.020=.N;
        ELSE H&YR.020=.C;
        DO OVER NOTE6H;
            IF NOTE6H=. THEN NOTE6H=.N;
            ELSE NOTE6H=.C;
        END;
        IF H&YR.025=. THEN H&YR.025=.N;
        ELSE H&YR.025=.C;
        IF H&YR.026=. THEN H&YR.026=.N;
        ELSE H&YR.026=.C;
        IF H&YR.027=. THEN H&YR.027=.N;
        ELSE H&YR.027=.C;
    END;
    ELSE IF H&YR.019 = . AND N6MARK=0 AND H&YR.027 = . THEN N6H=5;

    DROP N6MARK;

/** Note 7H -- H&YR.020, H&YR.021-H&YR.024: personal doctor visit **/

```

```
ARRAY NOTE7H H&YR.021-H&YR.024;
```

```
N7MARK=0;  
N7NMISS=0;
```

```
DO OVER NOTE7H;  
  IF NOTE7H NE . THEN N7NMISS+1;  
  IF NOTE7H NOT IN (., .N) THEN N7MARK+1;  
END;
```

```
IF H&YR.020 IN (.N, .C) THEN N7H=1;  
ELSE IF H&YR.020=1 THEN DO;
```

```
  N7H=2;  
  DO OVER NOTE7H;  
    IF NOTE7H=. THEN NOTE7H=.N;  
    ELSE NOTE7H=.C;  
  END;  
  IF H&YR.025=. THEN H&YR.025=.N;  
  ELSE H&YR.025=.C;  
  IF H&YR.026=. THEN H&YR.026=.N;  
  ELSE H&YR.026=.C;
```

```
END;  
ELSE IF H&YR.020 IN (1,2,3,4,5,6,.) AND (N7NMISS=0 OR N7MARK>0) THEN DO;  
  DO OVER NOTE7H;  
    IF NOTE7H=.N THEN NOTE7H=.;  
  END;  
  N7H=3;  
END;
```

```
DROP N7NMISS N7MARK;
```

```
/** Note 8 -- H&YR.025, H&YR.026: care from another doctor or healthcare  
provider **/
```

```
IF H&YR.025 IN (.N, .C) THEN N8=1;  
ELSE IF H&YR.025=1 THEN N8=2;  
ELSE IF H&YR.025 IN (2,.) AND H&YR.026 IN (1,2,3,4) THEN DO;  
  H&YR.025=1;  
  N8=3;  
END;  
ELSE IF H&YR.025=2 AND H&YR.026 IN (.) THEN DO;  
  H&YR.026=.N;  
  N8=4;  
END;  
ELSE IF H&YR.025=. AND H&YR.026=. THEN N8=5;
```

```
/** Note 9H -- H&YR.028, H&YR.029-H&YR.031: needed to see a specialist in  
last 12 months **/
```

```
ARRAY NOTE9H H&YR.029 H&YR.031;
```

```
N9MARK=0;  
N9NMISS=0;
```

```

DO OVER NOTE9H;
  IF NOTE9H NE . THEN N9NMISS+1;
  IF NOTE9H NOT IN (., .N) THEN N9MARK+1;
END;

IF H&YR.030 NE . THEN N9NMISS+1;
IF H&YR.030 NOT IN (.,0) THEN N9MARK+1;

IF H&YR.028 IN (1) THEN DO;
  N9H=1;
  IF H&YR.029=.N THEN H&YR.029=.;
END;
ELSE IF H&YR.028 IN (2,.) AND N9MARK>0 THEN DO;
  N9H=2;
  H&YR.028=1;
  IF H&YR.029=.N THEN H&YR.029=.;
END;
ELSE IF H&YR.028 IN (2) THEN DO;
  N9H=3;
  DO OVER NOTE9H;
    IF NOTE9H=. THEN NOTE9H=.N;
    ELSE NOTE9H=.C;
  END;
  IF H&YR.030=. THEN H&YR.030=.N;
  ELSE H&YR.030=.C;
END;
ELSE IF H&YR.028=. AND N9NMISS>0 AND N9MARK=0 THEN DO;
  N9H=4;
  H&YR.028=2;
  DO OVER NOTE9H;
    IF NOTE9H=. THEN NOTE9H=.N;
    ELSE NOTE9H=.C;
  END;
  IF H&YR.030=. THEN H&YR.030=.N;
  ELSE H&YR.030=.C;
END;
ELSE IF H&YR.028=. AND N9NMISS=0 THEN N9H=5;

DROP N9NMISS N9MARK;

/** Note 10H -- H&YR.030, H&YR.031: saw a specialist in last 12 months **/

IF H&YR.030 IN (.N,.C) AND H&YR.031 IN (.N,.C) THEN N10H=1;
ELSE IF H&YR.030 IN (1,2,3,4,5) AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,..)
THEN N10H=2;
ELSE IF H&YR.030 = 0 THEN DO;
  N10H=3;
  IF H&YR.031 = . THEN H&YR.031 = .N;
  ELSE H&YR.031 = .C;
END;
ELSE IF H&YR.030 = . AND H&YR.031 IN (0,1,2,3,4,5,6,7,8,9,10,..) THEN
N10H=4;

```

```
/** Note 12H -- H&YR.034, H&YR.035: look for info in written materials or  
on internet**/
```

```
IF H&YR.034=1 AND H&YR.035 IN (1,2,3,4,.) THEN N12H=1;  
ELSE IF H&YR.034 IN (2,.) AND H&YR.035 IN (1,2,3,4) THEN DO;  
    N12H=2;  
    H&YR.034=1;  
END;  
ELSE IF H&YR.034=2 AND H&YR.035 IN (.N,.) THEN DO;  
    N12H=3;  
    IF H&YR.035=. THEN H&YR.035=.N;  
    ELSE H&YR.035=.C;  
END;  
ELSE IF H&YR.034=. AND H&YR.035=. THEN N12H=4;
```

```
/** Note 13H -- H&YR.036, H&YR.037: tried to get cost of service/equipment  
from health plan**/
```

```
IF H&YR.036=1 AND H&YR.037 IN (1,2,3,4,.) THEN N13H=1;  
ELSE IF H&YR.036 IN (2,.) AND H&YR.037 IN (1,2,3,4) THEN DO;  
    H&YR.036=1;  
    N13H=2;  
END;  
ELSE IF H&YR.036=2 AND H&YR.037 IN (.,.N) THEN DO;  
    IF H&YR.037=. THEN H&YR.037=.N;  
    ELSE H&YR.037=.C;  
    N13H=3;  
END;  
ELSE IF H&YR.036=. AND H&YR.037=. THEN N13H=4;
```

```
/** Note 14H -- H&YR.038, H&YR.039: tried to get cost of prescription meds  
from health plan**/
```

```
IF H&YR.038=1 AND H&YR.039 IN (1,2,3,4,.) THEN N14H=1;  
ELSE IF H&YR.038 IN (2,.) AND H&YR.039 IN (1,2,3,4) THEN DO;  
    H&YR.038=1;  
    N14H=2;  
END;  
ELSE IF H&YR.038=2 AND H&YR.039 IN (.,.N) THEN DO;  
    IF H&YR.039=. THEN H&YR.039=.N;  
    ELSE H&YR.039=.C;  
    N14H=3;  
END;  
ELSE IF H&YR.038=. AND H&YR.039=. THEN N14H=4;
```

```
/** Note 15H -- H&YR.040, H&YR.041-H&YR.042: tried to use health plan's  
customer service **/
```

```
ARRAY NOTE15H H&YR.041-H&YR.042;
```

```
N15MARK=0;
```

```

N15NMISS=0;

DO OVER NOTE15H;
  IF NOTE15H NE . THEN N15NMISS+1;
  IF NOTE15H NOT IN (., .N) THEN N15MARK+1;
END;

IF H&YR.040 = 1 AND (N15MARK>0 OR N15NMISS=0) THEN DO;
  DO OVER NOTE15H;
    IF NOTE15H=.N THEN NOTE15H=.;
  END;
  N15H=1;
END;
ELSE IF H&YR.040 IN (2,.) AND (N15MARK>0) THEN DO;
  N15H=2;
  H&YR.040=1;
  DO OVER NOTE15H;
    IF NOTE15H=.N THEN NOTE15H=.;
  END;
END;
ELSE IF H&YR.040=2 AND (N15NMISS=0 OR (N15NMISS > 0 AND N15MARK = 0))
THEN DO;
  N15H=3;
  DO OVER NOTE15H;
    IF NOTE15H = . THEN NOTE15H=.N;
    ELSE NOTE15H = .C;
  END;
END;
ELSE IF H&YR.040 IN (.) AND N15NMISS=0 THEN N15H=4;

DROP N15NMISS N15MARK;

/** Note 16H -- H&YR.043, H&YR.044: received forms to fill out from health
plan **/

IF H&YR.043=1 AND H&YR.044 IN (1,2,3,4,.) THEN N16H=1;
ELSE IF H&YR.043 IN (2,.) AND H&YR.044 IN (1,2,3,4) THEN DO;
  H&YR.043=1;
  N16H=2;
END;
ELSE IF H&YR.043=2 AND H&YR.044 IN (.,.N) THEN DO;
  IF H&YR.044=. THEN H&YR.044=.N;
  ELSE H&YR.044=.C;
  N16H=3;
END;
ELSE IF H&YR.043=. AND H&YR.044=. THEN N16H=4;

/** Note 17H -- H&YR.045, H&YR.046-H&YR.047: claims to health plan **/

ARRAY NOTE17H H&YR.046-H&YR.047;
N17MARK=0;
N17NDK=0;

DO OVER NOTE17H;

```

```

        IF NOTE17H NOT IN (.N,.D,.) THEN N17MARK+1; /* At least one is marked
*/
        IF NOTE17H NOT IN (.,.D) THEN N17NDK+1; /* All are missing or blank or
dnk */
        END;

```

```

IF H&YR.045=1 AND (N17MARK>0 OR N17NDK=0) THEN DO;
    N17H=1;
    DO OVER NOTE17H;
        IF NOTE17H=.N THEN NOTE17H=.;
    END;
END;

```

```

ELSE IF H&YR.045 IN (2,.,.D) AND N17MARK>0
    THEN DO;
    H&YR.045=1;
    N17H=2;
    DO OVER NOTE17H;
        IF NOTE17H=.N THEN NOTE17H=.;
    END;
END;

```

```

ELSE IF H&YR.045 IN (2) AND N17MARK=0 THEN DO;
    N17H=3;
    DO OVER NOTE17H;
        IF NOTE17H=. THEN NOTE17H=.N;
        ELSE NOTE17H=.C;
    END;
END;

```

```

ELSE IF H&YR.045 IN (.D) AND N17NDK=0 THEN DO;
    N17H=4;
    DO OVER NOTE17H;
        IF NOTE17H=. THEN NOTE17H=.N;
        ELSE NOTE17H=.C;
    END;
END;

```

```

ELSE IF H&YR.045 IN (.) AND N17NDK=0 THEN N17H=5;

```

```

DROP N17MARK N17NDK;

```

```

/** Note 18H -- smoking: H&YR.053, H&YR.054-H&YR.056, H&YR.057A-H&YR.057E
**/

```

```

ARRAY NOTE18a H&YR.054 H&YR.055 H&YR.056;
ARRAY NOTE18b H&YR.057A H&YR.057B H&YR.057C H&YR.057D;

```

```

N18MARK = 0;

```

```

DO OVER NOTE18b;
    IF NOTE18b NOT IN (2,.) THEN N18MARK+1;
        *IF H17057C NE 2 THEN N18MARK=N18MARK+1;
        /*IF H17057C = 2 THEN N18MARK=N18MARK+2;
        TEST=NOTE18B * 1000;
        IF H17057C NOT IN (2,.) THEN FFLAG=1;
        IF H17057C NE 2 THEN GFLAG=1;*/
END;

```

```

IF H17057C NOT IN (2,.) THEN DFLAG=1;

```

```

IF H&YR.057C = 2 THEN EFLAG=1;
IF H&YR.057D = 2 THEN EFLAGD=1;

IF H&YR.053 IN (3,4,..) AND N18MARK>0 THEN DO;
    N18H=1;
    H&YR.057E = 2;
END;
ELSE IF H&YR.053 IN (3,4,..) AND N18MARK = 0 AND H&YR.057E =1 THEN DO;
    N18H=2;
    H&YR.053=2;
    DO OVER NOTE18a;
        IF NOTE18a=. THEN NOTE18a=.N;
        ELSE NOTE18a=.C;
    END;
END;
ELSE IF H&YR.053 IN (3,4,..) AND N18MARK = 0 AND H&YR.057E =2 THEN
N18H=3;
ELSE DO;
    IF H&YR.053 NOT IN (2,..D) THEN AFLAG = 1;
    IF N18MARK NE 0 THEN BFLAG = 1;
    IF H&YR.053 IN (2,..D) AND N18MARK = 0 THEN DO;
        N18H=4;
        DO OVER NOTE18a;
            IF NOTE18a=. THEN NOTE18a=.N;
            ELSE NOTE18a=.C;
        END;
    END;
ELSE IF H&YR.053 = 2 THEN DO;
    IF N18MARK > 0 THEN DO;
        IF H&YR.057E = 1 THEN DO;
            N18H=5;
            DO OVER NOTE18b;
                NOTE18B = 2;
            END;
        END;
    ELSE DO;
        H&YR.053 = .D;
        N18H=6;
    END;
END;
END;
ELSE IF H&YR.053 = .D AND N18MARK > 0 THEN DO;
    N18H=7;
    DO OVER NOTE18a;
        IF NOTE18a=. THEN NOTE18a=.N;
        ELSE NOTE18a=.C;
    END;
END;
END;
DROP N18MARK;

```

/** Note 19h - gender H&YR.058, SEX, H&YR.059B--H&YR.064,

XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
if there is discrepancy between SRSEX and SEX */
/* set imputed FEMALE and MALE based on gender specific questions */

```
IF H&YR.058=. THEN DO;
  IF (SEX='F') THEN DO;
    N19H=1;
    XSEXA=2;
  END;
  ELSE IF (SEX='M') THEN DO;
    N19H=2;
    XSEXA=1;
  END;
  ELSE IF ((SEX IN ('Z',' '))) THEN DO;
    N19H=3;
    XSEXA=.;
  END;
END;
ELSE IF (H&YR.058=1) THEN DO;
  IF SEX='F' THEN DO;
    N19H=4;
    XSEXA=2;
  END;
  ELSE DO;
    N19H=5;
    XSEXA=1;
  END;
END;
ELSE IF (H&YR.058=2) THEN DO;
  IF SEX='M' THEN DO;
    N19H=6;
    XSEXA=1;
  END;
  ELSE DO;
    N19H=7;
    XSEXA=2;
  END;
END;
```

/** Note 22 -- H&YR.067, H&YR.068: seen doctor 3 or more times for same condition **/

```
IF H&YR.067=1 THEN N22=1;
ELSE IF H&YR.067 IN (2,..) AND H&YR.068 IN (1,2) THEN DO;
  H&YR.067=1;
  N22=2;
END;
ELSE IF H&YR.067=2 AND H&YR.068 IN (.) THEN DO;
  H&YR.068=.N;
  N22=3;
END;
```



```
ELSE IF H&YR.067=. AND H&YR.068=. THEN N22=4;
```

```
/** Note 23 -- H&YR.069, H&YR.070: need or take medicine prescribed by a  
doctor **/
```

```
IF H&YR.069=1 THEN N23=1;  
ELSE IF H&YR.069 IN (2,.) AND H&YR.070 IN (1,2) THEN DO;  
    H&YR.069=1;  
    N23=2;  
END;  
ELSE IF H&YR.069=2 AND H&YR.070 IN (.) THEN DO;  
    H&YR.070=.N;  
    N23=3;  
END;  
ELSE IF H&YR.069=. AND H&YR.070=. THEN N23=4;
```

```
/** Note 24H -- S&YR.BM01, S&YR.BM02: did someone help you complete this  
survey, and how **/
```

```
ARRAY NOTE24H S&YR.BM02A S&YR.BM02B S&YR.BM02C S&YR.BM02D S&YR.BM02E;
```

```
N24MARK = 0;
```

```
DO OVER NOTE24H;  
    IF NOTE24H =1 THEN N24MARK=N24MARK+1;  
END;
```

```
IF S&YR.BM01=1 THEN N24h=1;  
ELSE IF S&YR.BM01 IN (2,.) AND N24MARK >= 1 THEN DO;  
    S&YR.BM01=1;  
    N24H=2;  
END;  
ELSE IF S&YR.BM01=2 AND N24MARK = 0 THEN DO;  
    DO OVER NOTE24H;  
        NOTE24H=.N;  
    END;  
    N24H=3;  
END;  
ELSE IF S&YR.BM01=. AND N24MARK=0 THEN N24H=4;
```

```
DROP N24MARK;
```

```
/** Note 25H -- S&YR.BM05, S&YR.BM06: did you visit doctor's office after  
regular office hours **/
```

```
IF S&YR.BM05=1 THEN N25h=1;  
ELSE IF S&YR.BM05 IN (2,.) AND S&YR.BM06 >=1 THEN DO;
```

```

S&YR.BM05=1;
N25H=2;
END;
ELSE IF S&YR.BM05=2 AND S&YR.BM06 = . THEN DO;
  IF S&YR.BM06=. THEN S&YR.BM06=.N;
  ELSE S&YR.BM06=.C;
  N25H=3;
END;
ELSE IF S&YR.BM05=. AND S&YR.BM06=. THEN N25H=4;

```

/** Note 26H -- S&YR.BM07, S&YR.BM08: did you need care during evenings, weekends, or holidays **/

```

IF S&YR.BM07=1 THEN N26h=1;
ELSE IF S&YR.BM07 IN (2,..) AND S&YR.BM08 >=1 THEN DO;
  S&YR.BM07=1;
  N26H=2;
END;
ELSE IF S&YR.BM07=2 AND S&YR.BM08 = . THEN DO;
  IF S&YR.BM08=. THEN S&YR.BM08=.N;
  ELSE S&YR.BM08=.C;
  N26H=3;
END;
ELSE IF S&YR.BM07=. AND S&YR.BM08=. THEN N26H=4;

```

NOSURVEY:

/* missing values */

```

ARRAY MISS MISS_9 MISS_7 MISS_6 MISS_5 MISS_4 MISS_1 ;
MISS_TOT=0;
DO OVER MISS;
  MISS = 0;
END;
ARRAY MISSARAY &VARLIST2.;

DO OVER MISSARAY;
  IF (MISSARAY EQ -9 ) THEN MISS_9 = MISS_9 + 1;
  ELSE IF (MISSARAY EQ -7) THEN MISS_7 = MISS_7 + 1;
  ELSE IF (MISSARAY EQ -6) THEN MISS_6 = MISS_6 + 1;
  ELSE IF (MISSARAY EQ -5) THEN MISS_5 = MISS_5 + 1;
  ELSE IF (MISSARAY EQ -4) THEN MISS_4 = MISS_4 + 1;
  ELSE IF (MISSARAY EQ -1) THEN MISS_1 = MISS_1 + 1;
END;
DO OVER MISS;
  MISS_TOT=MISS_TOT + MISS;
END;

```

*****;

```
OUTPUT;

RUN;
DATA OUT.CSCHM17Q;
SET OUT.CSCHM17Q;

/****HARDCODE****/

/*This ID would not get coded correctly, it is unclear why*/
  ARRAY NOTE18a H&YR.054 H&YR.055 H&YR.056;

IF MPRID = '16337724' THEN DO;
  N18H=4;
  DO OVER NOTE18a;
    IF NOTE18a=. THEN NOTE18a=.N;
    ELSE NOTE18a=.C;
  END;
END;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;
```

F.2.H - HCSDB_HEDIS\PROGRAMS\CODINGScheme\CSCHEM17Q.FMT - Include file for Coding Scheme for HEDIS FY2017

/* Formats for original answers to HEDIS survey questions, after variables have been recoded */

FORMAT

/* no format needed for S&YR.BJ02, text box*/

H&YR.006	O_H&YR.006	YN.
H&YR.007	O_H&YR.007	often8_.
H&YR.009	O_H&YR.009	YN.
H&YR.008	O_H&YR.008	TIME1_.
H&YR.010	O_H&YR.010	OFTEN3_.
H&YR.011	O_H&YR.011	TIME3_.
H&YR.013	O_H&YR.013	often4_.
S&YR.BP01	O_S&YR.BP01	YN.
S&YR.BK01	O_S&YR.BK01	YN.
S&YR.BK02	O_S&YR.BK02	YN.
S&YR.BK03	O_S&YR.BK03	YN.
S&YR.BK04	O_S&YR.BK04	YN.
H&YR.018	O_H&YR.018	rate4_.
H&YR.033	O_H&YR.033	often8_.
H&YR.019	O_H&YR.019	YN.
H&YR.020	O_H&YR.020	often4_.
H&YR.022	O_H&YR.022	often8_.
H&YR.021	O_H&YR.021	often8_.
H&YR.023	O_H&YR.023	often8_.
H&YR.024	O_H&YR.024	often8_.
H&YR.025	O_H&YR.025	YN.
H&YR.026	O_H&YR.026	often8_.
H&YR.027	O_H&YR.027	rate4_.
H&YR.028	O_H&YR.028	YN.
H&YR.029	O_H&YR.029	often8_.
H&YR.030	O_H&YR.030	SPCLST.
H&YR.031	O_H&YR.031	rate2_.
H&YR.034	O_H&YR.034	YN.
H&YR.035	O_H&YR.035	OFTEN12_.
H&YR.036	O_H&YR.036	YN.
H&YR.037	O_H&YR.037	OFTEN13_.
H&YR.038	O_H&YR.038	YN.
H&YR.039	O_H&YR.039	OFTEN14_.
H&YR.040	O_H&YR.040	YN.
H&YR.041	O_H&YR.041	OFTEN15_.
H&YR.042	O_H&YR.042	OFTEN15_.
H&YR.043	O_H&YR.043	YN.
H&YR.044	O_H&YR.044	OFTEN16_.
H&YR.045	O_H&YR.045	YNDNK.
H&YR.046	O_H&YR.046	OFTEN6_.
H&YR.047	O_H&YR.047	OFTEN6_.
H&YR.048	O_H&YR.048	RATE4_.
H&YR.065	O_H&YR.065	HEALTH.
S&YR.B01	O_S&YR.B01	MNTLHLTH.

S&YR.B001	O_S&YR.B001	YNDNK.
H&YR.053	O_H&YR.053	TIME8_.
H&YR.054	O_H&YR.054	OFTEN8_.
H&YR.055	O_H&YR.055	OFTEN8_.
H&YR.056	O_H&YR.056	OFTEN8_.
S&YR.BL01	O_S&YR.BL01	YNDNK.
S&YR.BL02	O_S&YR.BL02	YNDNK.
S&YR.BL03	O_S&YR.BL03	YNDNK.
H&YR.067	O_H&YR.067	YN.
H&YR.068	O_H&YR.068	YN.
H&YR.069	O_H&YR.069	YN.
H&YR.070	O_H&YR.070	YN.
SRAGE	SRAGE	AGEGRP.
H&YR.058	O_H&YR.058	SEX.
SREDA	O_SREDA	educ.
H&YR.073	O_H&YR.073	HISPYN_.

/*no format needed for race, mark all*/

S&YR.BM01	O_S&YR.BM01	YN.
-----------	-------------	-----

/*no format needed for S17BM02 or H17057, mark all*/

S&YR.BM05	O_S&YR.BM05	YN.
S&YR.BM06	O_S&YR.BM06	OFTEN8_.
S&YR.BM07	O_S&YR.BM07	YN.
S&YR.BM08	O_S&YR.BM08	OFTEN8_.
S&YR.011	O_S&YR.011	agree2_.
S&YR.014	O_S&YR.014	satisfy.

MISS_1	MISS_4-MISS_7	MISS_9	MISS_TOT	4.
;				

LABEL

O_S&YR.BN01 = 'Record shows you are in TRICARE Prime. Is that right?'

S&YR.BN01 = 'Record shows you are in TRICARE Prime. Is that right?'

S&YR.BN02 = 'What is the name of your health plan?'

O_H&YR.006='Past 12 mth: ill/injry/cond care right away'
H&YR.006 = 'Past 12 mth: ill/injry/cond care right away'
O_H&YR.007='Past 12 mth: get urgnt care as soon as wntd'
H&YR.007 = 'Past 12 mth: get urgnt care as soon as wntd'

O_H&YR.009='Past 12 mth: make appts non-urgnt hlth care'
H&YR.009 = 'Past 12 mth: make appts non-urgnt hlth care'
O_H&YR.010='Past 12 mth: non-urg hlth cre appt whn wntd'
H&YR.010 = 'Past 12 mth: non-urg hlth cre appt whn wntd'
O_H&YR.011='Past 12 mth: days btwn appt & see prvder'
H&YR.011 = 'Past 12 mth: days btwn appt & see prvder'

O_H&YR.013='Past 12 mth: go to Dr office/clinic for care'
H&YR.013 = 'Past 12 mth: go to Dr office/clinic for care'

O_S&YR.BP01='Past 12 mth: how often talk to doctor about illness prvntn'
S&YR.BP01 ='Past 12 mth: how often talk to doctor about illness prvntn'

Final_S&YR.BJ01 ='Our records show that you are now in TRICARE Prime. Is that right?'
X&YR.003 ='Which health plan did you use for all or most of your healthcare in the last 12 months?'

O_S&YR.BK01 ='Past 12 mth: did you talk about starting or stopping a prescription medicine with dr?'
S&YR.BK01 ='Past 12 mth: did you talk about starting or stopping a prescription medicine with dr?'
O_S&YR.BK02 ='Past 12 mth: talk about the reasons you might want to take a medicine?'
S&YR.BK02 ='Past 12 mth: talk about the reasons you might want to take a medicine?'
O_S&YR.BK03 ='Past 12 mth: talk about the reasons you might not want to take a medicine?'
S&YR.BK03 ='Past 12 mth: talk about the reasons you might not want to take a medicine?'
O_S&YR.BK04 ='When starting/stopping a prescription med, did dr ask what you thought was best for you?'
S&YR.BK04 ='When starting/stopping a prescription med, did dr ask what you thought was best for you?'
O_H&YR.018='Rating of all health care in lst yr'
H&YR.018 ='Rating of all health care in lst yr'
O_H&YR.033 ='Lst yr: how often easy to get care, test, or trtmnt'
H&YR.033='Lst yr: how often easy to get care, test, or trtmnt'

O_H&YR.019='Have one person think of as personal Dr'
H&YR.019 ='Have one person think of as personal Dr'
O_H&YR.020 ='Lst yr: how often visit prsnl doctor for care for yourself'
H&YR.020='Lst yr: how often visit prsnl doctor for care for yourself'

O_H&YR.021='Lst yr: how oftn Drs listen to you'
H&YR.021 ='Lst yr: how oftn Drs listen to you'
O_H&YR.022='Lst yr: how oftn Drs explain things'
H&YR.022 ='Lst yr: how oftn Drs explain things'
O_H&YR.023='Lst yr: how oftn Drs show respect'
H&YR.023 ='Lst yr: how oftn Drs show respect'
O_H&YR.024='Lst yr: how oftn Drs spend enough time'
H&YR.024 ='Lst yr: how oftn Drs spend enough time'
O_H&YR.025 ='Lst yr: did get care from doctor other than prsnl doctor'
H&YR.025='Lst yr: did get care from doctor other than prsnl doctor'

O_H&YR.026 ='Lst yr: how often prsnl doctor seemed infrmd of care from other doctors'
H&YR.026='Lst yr: how often prsnl doctor seemed infrmd of care from other doctors'
O_H&YR.027='Rating of your personal Dr'
H&YR.027 ='Rating of your personal Dr'

O_H&YR.028 = 'Lst yr: did make any appointments to see
 spclst'
 H&YR.028='Lst yr: did make any appointments to see spclst'
 O_H&YR.029 = 'Lst yr: how often easy to get appointments with
 spclsts'
 H&YR.029='Lst yr: how often easy to get appointments with
 spclsts'
 O_H&YR.030 = 'Lst yr: how many spclsts seen'
 H&YR.030='Lst yr: how many spclsts seen'
 O_H&YR.031='Rating of specialist seen in lst yr'
 H&YR.031 = 'Rating of specialist seen in lst yr'

 O_H&YR.034 = 'Lst yr: did look for info from written
 material/Internet'
 H&YR.034='Lst yr: did look for info from written
 material/Internet'
 O_H&YR.035 = 'Lst yr: how often written material/Internet
 provide needed info'
 H&YR.035='Lst yr: how often written material/Internet provide
 needed info'
 O_H&YR.036 = 'Lst yr: did look for info from health plan on
 cost of service/equipment'
 H&YR.036='Lst yr: did look for info from health plan on cost
 of service/equipment'
 O_H&YR.037 = 'Lst yr: how often able to find out cost of
 service/equipment'
 H&YR.037='Lst yr: how often able to find out cost of
 service/equipment'
 O_H&YR.038 = 'Lst yr: did look for info from health plan on
 cost of prescription meds'
 H&YR.038='Lst yr: did look for info from health plan on cost
 of prescription meds'
 O_H&YR.039 = 'Lst yr: how often able to find out cost of
 prescription meds'
 H&YR.039='Lst yr: how often able to find out cost of
 prescription meds'
 O_H&YR.040 = "Lst yr: did try to get info/help from health
 plan's cstmr service"
 H&YR.040="Lst yr: did try to get info/help from health plan's
 cstmr service"
 O_H&YR.041 = 'Lst yr: how often did cstmr service give needed
 info/help'
 H&YR.041='Lst yr: how often did cstmr service give needed
 info/help'
 O_H&YR.042 = 'Lst yr: how often did cstmr service treat with
 courtesy/respect'
 H&YR.042='Lst yr: how often did cstmr service treat with
 courtesy/respect'
 O_H&YR.043 = 'Lst yr: did health plan give any forms to fill
 out'
 H&YR.043='Lst yr: did health plan give any forms to fill out'
 O_H&YR.044 = 'Lst yr: how often were forms easy to fill out'
 H&YR.044='Lst yr: how often were forms easy to fill out'
 O_H&YR.045 = 'Lst yr: send in any claims'
 H&YR.045='Lst yr: send in any claims'

quickly' O_H&YR.046 = 'Lst yr: how often did health plan handle claims
quickly' H&YR.046='Lst yr: how often did health plan handle claims
O_H&YR.047='Lst yr: how oftn handle claims correctly'
H&YR.047 = 'Lst yr: how oftn handle claims correctly'
O_H&YR.048 = 'Rating of all experience with hlth plan'
H&YR.048='Rating of all experience with hlth plan'

O_H&YR.065='In gnrl, how would you rate ovrall hlth'
H&YR.065 = 'In gnrl, how would you rate ovrall hlth'

O_S&YR.B01='Self rate of overall mental/emotional health'
S&YR.B01 = 'Self rate of overall mental/emotional health'

O_S&YR.BO01='When did you lst have a flu shot'
S&YR.BO01 = 'When did you lst have a flu shot'

at all' O_H&YR.053 = 'Smoke or use tobacco everyday, some days or not
all' H&YR.053='Smoke or use tobacco everyday, some days or not at
tobacco' O_H&YR.054='Lst yr: how often advised to quit smoking or use
tobacco' H&YR.054 = 'Lst yr: how often advised to quit smoking or use
smoking or using tobacco' O_H&YR.055 = 'Lst yr: how often recom medic assist quit
or using tobacco' H&YR.055='Lst yr: how often recom medic assist quit smoking
O_H&YR.056 = 'Lst yr: how often discu meth/strag asst quit
smoking or using tobacco' H&YR.056='Lst yr: how often discu meth/strag asst quit
smoking or using tobacco'

O_S&YR.BL01 = 'Do you take aspirin daily or every other day?'
S&YR.BL01 = 'Do you take aspirin daily or every other day?'
O_S&YR.BL02 = 'Do you have a health problem or take
medication that makes taking aspirin unsafe for you?'
S&YR.BL02 = 'Do you have a health problem or take
medication that makes taking aspirin unsafe for you?'
O_S&YR.BL03 = 'Has dr ever discussed the risks/benefits of
aspirin to prevent heart attack/stroke?'
S&YR.BL03 = 'Has dr ever discussed the risks/benefits of
aspirin to prevent heart attack/stroke?'
O_S&YR.BL04A = 'Have following condition: High cholesterol'
S&YR.BL04A = 'Have following condition: High cholesterol'
O_S&YR.BL04B = 'Have following condition: High blood
pressure'
S&YR.BL04B = 'Have following condition: High blood
pressure'
O_S&YR.BL04C = 'Have following condition: Parent/Sibling
heart attack before age 60'
S&YR.BL04C = 'Have following condition: Parent/Sibling
heart attack before age 60'
O_S&YR.BL05A = 'Has dr ever told you that you have: Heart
attack'

S&YR.BL05A = 'Has dr ever told you that you have: Heart
 attack'
 O_S&YR.BL05B = 'Has dr ever told you that you have:
 Angina/coronary heart disease'
 S&YR.BL05B = 'Has dr ever told you that you have:
 Angina/coronary heart disease'
 O_S&YR.BL05C = 'Has dr ever told you that you have: Stroke'
 S&YR.BL05C = 'Has dr ever told you that you have: Stroke'
 O_S&YR.BL05D = 'Has dr ever told you that you have: Diabetes
 or high blood sugar'
 S&YR.BL05D = 'Has dr ever told you that you have: Diabetes
 or high blood sugar'

 O_H&YR.067 = 'Lst yr: have seen doctor 3 or more times for
 same condition'
 H&YR.067 = 'Lst yr: have seen doctor 3 or more times for same
 condition'
 O_H&YR.068 = 'Has condition lasted for at least 3 months'
 H&YR.068 = 'Has condition lasted for at least 3 months'
 O_H&YR.069 = 'Need to take medicine prescribed by a doctor'
 H&YR.069 = 'Need to take medicine prescribed by a doctor'
 O_H&YR.070 = 'Medicine to treat condition that has lasted for
 at least 3 months'
 H&YR.070 = 'Medicine to treat condition that has lasted for at
 least 3 months'

 O_SRAGE = 'What is your age now'
 SRAGE = 'What is your age now'

 O_H&YR.058 = 'Are you male or female'
 H&YR.058 = 'Are you male or female'

 O_SREDA = 'Highest grade completed'
 SREDA = 'Highest grade completed'

 O_H&YR.073 = 'Are you Hispanic/Latino origin/descent?'
 H&YR.073 = 'Are you Hispanic/Latino origin/descent?'

 O_SRRACEA = 'Race: White'
 SRRACEA = 'Race: White'
 O_SRRACEB = 'Race: Black or African American'
 SRRACEB = 'Race: Black or African American'
 O_SRRACEC = 'Race: American Indian or Alaska Native'
 SRRACEC = 'Race: American Indian or Alaska Native'
 O_SRRACED = 'Race: Asian'
 SRRACED = 'Race: Asian'
 O_SRRACEE = 'Race: Native Hawaiian/other Pacific Isl.'
 SRRACEE = 'Race: Native Hawaiian/other Pacific Isl.'
 O_SRRACEF = 'Race: Other'
 SRRACEF = 'Race: Other'

 O_S&YR.BM01 = 'Did someone help you complete this survey?'
 S&YR.BM01 = 'Did someone help you complete this survey?'
 O_S&YR.BM02A = 'How did person help you? Read questions to
 me '

me' S&YR.BM02A = 'How did person help you? Read questions to

I gave' O_S&YR.BM02B = 'How did person help you? Wrote down answers

I gave' S&YR.BM02B = 'How did person help you? Wrote down answers

for me' O_S&YR.BM02C = 'How did person help you? Answered questions

for me' S&YR.BM02C = 'How did person help you? Answered questions

questions into my language' O_S&YR.BM02D = 'How did person help you? Translated

questions into my language' S&YR.BM02D = 'How did person help you? Translated

other way' O_S&YR.BM02E = 'How did person help you? Helped in some

other way' S&YR.BM02E = 'How did person help you? Helped in some

O_H&YR.057A = 'Do you smoke or use: cigarettes'

H&YR.057A = 'Do you smoke or use: cigarettes'

O_H&YR.057B = 'Do you smoke or use: dip, chewing tobacco,

snuff, or snus'

H&YR.057B = 'Do you smoke or use: dip, chewing tobacco, snuff,

or snus'

O_H&YR.057C = 'Do you smoke or use: cigars'

H&YR.057C = 'Do you smoke or use: cigars'

O_H&YR.057D = 'Do you smoke or use: pipes, bidis, or kreteks'

H&YR.057D = 'Do you smoke or use: pipes, bidis, or kreteks'

O_H&YR.057E = 'I do not smoke/use tobacco products'

H&YR.057E = 'I do not smoke/use tobacco products'

O_S&YR.BM05 = 'Past 12 mth: did you need to visit Dr.

office/clinic after regular office hrs?'

S&YR.BM05 = 'Past 12 mth: did you need to visit Dr.

office/clinic after regular office hrs?'

O_S&YR.BM06 = 'Past 12 mth: how often able to get care

from Dr. office/clinic after regular office hrs?'

S&YR.BM06 = 'Past 12 mth: how often able to get care

from Dr. office/clinic after regular office hrs?'

O_S&YR.BM07 = 'Past 12 mth: did you need care during

evenings, weekends, or holidays?'

S&YR.BM07 = 'Past 12 mth: did you need care during

evenings, weekends, or holidays?'

O_S&YR.BM08 = 'Past 12 mth: how often able to get care

from Dr. office/clinic during evenings/weekends/holidays?'

S&YR.BM08 = 'Past 12 mth: how often able to get care

from Dr. office/clinic during evenings/weekends/holidays?'

O_S&YR.011 = 'Agree/disagree: able to see provider when needed'

S&YR.011 = 'Agree/disagree: able to see provider when needed'

O_S&YR.014 = 'How satisfied with health care during last

visit'

S&YR.014 = 'How satisfied with health care during last visit'

```

N2      = "Coding Scheme Note 2"
N3      = "Coding Scheme Note 3"
N4H    = "Coding Scheme Note 4H"
N5H    = "Coding Scheme Note 5H"
N6H    = "Coding Scheme Note 6H"
N7H    = "Coding Scheme Note 7H"
N8      = "Coding Scheme Note 8"
N9H    = "Coding Scheme Note 9H"
N10H   = "Coding Scheme Note 10H"

N12H   = "Coding Scheme Note 12H"
N13H   = "Coding Scheme Note 13H"
N14H   = "Coding Scheme Note 14H"
N15H   = "Coding Scheme Note 15H"
N16H   = "Coding Scheme Note 16H"
N17H   = "Coding Scheme Note 17H"
N18H   = "Coding Scheme Note 18H"
N19H   = "Coding Scheme Note 19H"

N22    = "Coding Scheme Note 22"
N23    = "Coding Scheme Note 23"
N24H   = "Coding Scheme Note 24H"
N25H   = "Coding Scheme Note 25H"
N26H   = "Coding Scheme Note 26H"

```

```

MISS_1 = "Count of original survey responses (pre-cleaning):
violates skip pattern"
/*MISS_3 = "Count of original survey responses (pre-
cleaning): do not use other tobacco products response"*/
MISS_4 = "Count of original survey responses (pre-cleaning):
incomplete grid error"
MISS_5 = "Count of original survey responses (pre-cleaning):
scalable reponse of don't know"
MISS_6 = "Count of original survey responses (pre-cleaning):
not applicable - valid skip"
MISS_7 = "Count of original survey responses (pre-cleaning):
out-of-range error"
MISS_9 = "Count of original survey responses (pre-cleaning):
no response - invalid skip"
MISS_TOT = "Total number of missing responses (pre-cleaning)"
XSEXA = "Male or Female - R"
;

```

F.3.A - Q3FY2017\PROGRAMS\WEIGHTING\SELECTQ.SAS - Create Flag for Record Selection - Run Quarterly

```

*****
*
* PROGRAM:    SELECTQ.SAS
* TASK:      QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (6244-300)
* PURPOSE:   ASSIGN FINAL STATUS FOR RECORD SELECTION PURPOSES.
* WRITTEN:   12/14/2000 BY KEITH RATHBUN
*
* MODIFIED:  01/24/2014 BY AMANDA KUDIS, new code when no tss selectq
available
*           and new evaluation logic with web data
*           02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
*           06/27/2016 by Matt Turbyfill INDB.AccessDB_Q&QT._20&YR.
changed to INDB.AccessDB_Q&QT.FY20&YR. at direction of Jim Tully
*           02/10/2017 BY MTURBYFILL Changed filepaths and capitalization to
match SAS Grid.
*           Changed EMAILDATABASE to use imported
CSV file rather than SQL server.
*
*
* INPUTS:    1) CSCHM&YR.Q.sas7bdat - 20&YR. Quarterly DOD Health Survey Data
*
* OUTPUTS:   1) SELECTQ.sas7bdat - 20&YR. Quarterly DOD Health Survey Data
w/FNSTATUS
*
*****
* ;

LIBNAME IN          "&datapath.";
%macro sqlserver(dbname,svr);
                init_string="Provider=SQLNCLI10;
                                Integrated Security=SSPI;
                                Persist Security Info=True;
                                Initial Catalog=&dbname.;
                                Data Source=&svr."
%mend sqlserver;
/*libname INDB oledb %sqlserver(40309_SEC__HCSDB,
sql_isprod01.mathematica.net);*/

LIBNAME OUT          "&datapath.";
LIBNAME LIBRARY      "&fmtpath.";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER MPRINT ;
TITLE "Assign final status for record selection purposes. ";

%LET OVERLAPCASE=N;

*-----
  Web Data
-----;
%MACRO SELECTQ;

data EMAILDATABASE(keep=mprid emailres);
infile "&datapath./&emailpath." dsd dlm=",";

```

```

informat
    MPRID          $8.
    EMAILRES       $100.;
input
    SynovateID    $
    Password       $
    MPRID          $
    Last_Name     $
    First_Name    $
    Rank          $
    email1        $
    email2        $
    email3
    Notes
    EMAILRES      $
    Dummy12       $
    Dummy13       $
    Dummy14       $
    Dummy15       $
    Dummy16       $
    Dummy17       $
    Dummy18       $
    Dummy19       $
    Dummy20       $
;
format
    MPRID          $8.
    EMAILRES       $100.;

run;

/*
DATA EMAILDATABASE (DROP=CATEGORY MPRIDo);
LENGTH EMAILRES $25 MPRID $8;
SET INDB.AccessDB_Q&QT.FY20&YR. (KEEP=MPRID CATEGORY RENAME=(MPRID=MPRIDo));
EMAILRES=CATEGORY;
MPRID=MPRIDo;
RUN;
*/

PROC FREQ; TABLE EMAILRES/LIST; RUN;

PROC SORT DATA=EMAILDATABASE nodupkey; BY MPRID; RUN;

PROC SORT DATA=IN.CSCHM&YR.Q OUT=TEMPA1; BY MPRID; RUN;

proc freq data=tempa1; table flag_fin/list; run;

DATA TEMP2 OUT.DUPSA OVERLAP;
MERGE TEMP1 (IN=A) EMAILDATABASE (IN=B);
BY MPRID;
IF A;

/*****
** KEY VARIABLES (Total=20)
**/

```

```

/*****/
  ARRAY KEYVAR H&YR.003 H&YR.005 H&YR.006 H&YR.009 H&YR.013 H&YR.018
H&YR.019 H&YR.027
          H&YR.028 H&YR.031 H&YR.033 H&YR.040 H&YR.043 H&YR.048
H&YR.051 H&YR.052
          H&YR.065 H&YR.073 SREDA
          ;

  ARRAY RACE(5) SRRACEA SRRACEB SRRACEC SRRACED SRRACEE;

  FLAGRACE = 0; DROP FLAGRACE;
  DO I = 1 TO DIM(RACE);
    IF RACE(I) IN (1) THEN FLAGRACE = 1;
  END;

  KEYCOUNT = 0;
  DO I = 1 TO DIM(KEYVAR); DROP I;
    IF KEYVAR(I) NOT IN (.,.A,.O,.I,.B) THEN KEYCOUNT = KEYCOUNT + 1;
  END;
  KEYCOUNT = KEYCOUNT + FLAGRACE;

/*****/
  /** SET FLAG FOR DUPLICATES
**/

/*****/
  LENGTH DUPFLAG $3;
  DUPFLAG = 'NO';
  IF NOT (FIRST.MPRID AND LAST.MPRID) THEN DUPFLAG = 'YES';

/*****/
  /** DETERMINE FNSTATUS
**/

/*****/
  FNSTATUS = 0;
  IF FLAG_FIN = 1 THEN DO;
    *****
    **** APPLY THE COMPLETE QUESTIONNAIRE RULE (50% OF KEY *****
    **** VARIABLES). *****
    *****;
    IF KEYCOUNT GT 9 THEN FNSTATUS = 11;
    ELSE FNSTATUS = 12;
  END;
  ELSE IF FLAG_FIN IN(3,6,8,10,11,14,16,21,23,24) OR EMAILRES = 'Refusal'
THEN DO;
    FNSTATUS = 20;
  END;
  ELSE IF FLAG_FIN IN(2,4,5,7,12,13,15) THEN DO;
    FNSTATUS = 31;
  END;
  ELSE IF FLAG_FIN IN (25,26) THEN DO;
    FNSTATUS = 32;
  END;

```

```

ELSE IF FLAG_FIN IN(9,17,18,19,20,22) OR EMAILRES IN ('Bad email', 'Wrong
Respondent') THEN DO;
  IF FLAG_FIN IN (18,19,20) OR EMAILRES IN ('Bad email', 'Wrong
Respondent') THEN DO;
    FNSTATUS = 42;
  END;
ELSE DO;
  FNSTATUS = 41;
END;
END;
ELSE IF FLAG_FIN IN(99) THEN DO;
  CALL SYMPUT("OVERLAPCASE","Y");
  OUTPUT OVERLAP; **cases that overlap with another survey;
END;

IF DUPFLAG = 'YES' THEN OUTPUT OUT.DUPSA ;
ELSE IF FLAG_FIN NE 99 THEN OUTPUT TEMPA2;

RUN;

```

```

*****
* Select the "most complete" questionnaire from duplicates and
* SET it back into the non-duplicates file. For now assume the lowest
* FNSTATUS Value is the "most complete".
*****
;
PROC SORT DATA=OUT.DUPSA ;
BY MPRID FNSTATUS;
RUN;

```

```

DATA DEDUPED;
  SET OUT.DUPSA ;
  BY MPRID FNSTATUS;
  IF FIRST.MPRID; *KEEP only the first - most complete questionnaire;
RUN;
%MEND;
%SELECTQ;

```

```

*****
* Assign FNSTATUS for the overlap cases if they are some this quarter
*****;

```

```

%MACRO OVERLAP;
  %IF "&OVERLAPCASE"="Y" %THEN %DO;
    %IF "&NOSELECTQ"="Y" %THEN %DO; *WHEN THERE IS NO SELECTQ TO COMPARE
TO;
      DATA OVERLAP_FNSTATUS;
      SET OVERLAP;
      FNSTATUS=41;
      RUN;
    %END;
  %ELSE %DO;
    %INCLUDE "OVERLAP_FNSTATUS.INC" /SOURCE2;
  %END;
%END;

```

```

        %END;
%END;

DATA OUT.SELECTQ;
  SET TEMP2 DEDUPED
    %IF "&OVERLAPCASE"="Y" %THEN %DO;
      overlap_fnstatus
    %END;
  ;
  LABEL FNSTATUS = "Final Status"
        DUPFLAG  = "Multiple Response Indicator"
        STRATUM  = "Sampling STRATUM"
        KEYCOUNT = "# Key Questions Answered"
        EMAILRES = "Email response"
  ;
  FORMAT EMAILRES EMAILR.;

%if &trickle=1 %then %do;
/** UPDATE DUPLICATE FLAG FOR TRICKLE RESPONSES **/
IF DRP_RND1 EQ 'YES' THEN DUPFLAG = 'NO';
%end;

RUN;
%MEND;

%OVERLAP;

TITLE1 "Quarterly DOD Health Survey FNSTATUS assignment (6663-500)";
TITLE2 "Program Name: SELECTQ.SAS By Keith Rathbun";
TITLE3 "Program Output: SELECTQ.sas7bdat";

PROC CONTENTS DATA=OUT.SELECTQ VARNUM; RUN;

PROC FREQ DATA=OUT.SELECTQ ;
TABLES FNSTATUS KEYCOUNT FLAG_FIN
        FNSTATUS*KEYCOUNT*FLAG_FIN*EMAILRES
  /MISSING LIST;
RUN;

```


F.3.B - Q3FY2017\PROGRAMS\WEIGHTING\OVERLAP_FNSTATUS.INC - Include file for SELECTQ.SAS

```

*****
* PROGRAM:    OVERLAP_FNSTATUS.INC
* TASK:      DOD HEALTH CARE SURVEY ANALYSIS (6663-300)
* PURPOSE:   Update Fnstatus for the Overlap cases using the
selectq.sas7bdat
*           of the survey that overlapped with this HCSDB survey
*
* WRITTEN:   07/09/2012 BY JACQUELINE AGUFA-MALOPA
*
* MODIFIED:
*
*
* INPUTS:   1) OthrSrvy.selectq - The selectq.sas7bdat of the sample that
overlaps
*           with this sample
*           2) overlap - The cases is this sample that overlap with the
other survey.
*
* OUTPUT:   1) overlap_fnstatus - Temporary SAS dataset with fnstatus
*
* NOTES:   1) This code is called from selectq and is only necessary when
there
*           are some cases in this sample that overlap with another
sample
*           2) SIS will update this code at time of sampling for the source
of
*           the overlap.
*           3) SIS will either provide us with the necessary code or update
the code that assigns the fnstatus for the overlap cases
*
*
*****
;

*-----
***SIS will need to indicate the sample that overlaps with this
***hcsdb sample
*-----;

LIBNAME OthrSrvy "&TSS_Lib.";

PROC SORT DATA=OthrSrvy.Selectq OUT=Oselectq(KEEP=MPRID PRN FNSTATUS);
  BY PRN;
RUN;

PROC SORT DATA=overlap;
  BY PRN;
RUN;

DATA overlap_fnstatus(DROP=oFNSTATUS oMPRID) ovlp_nomatch(KEEP=MPRID PRN
FNSTATUS);
  MERGE overlap(IN=ovlp)
        Oselectq(IN=slct RENAME=(FNSTATUS=oFNSTATUS MPRID=oMPRID))

```

```

;
BY PRN;

IF slct AND ovlp THEN DO;
  *-----
  ****SIS will need to provide us specifications of how to update
  ****fnstatus;
  *-----;
  IF oFNSTATUS IN (11,12,20) THEN FNSTATUS=20;
  ELSE FNSTATUS=oFNSTATUS;

  OUTPUT overlap_fnstatus;
END;
ELSE IF ovlp THEN OUTPUT ovlp_nomatch;
RUN;

PROC PRINT DATA=ovlp_nomatch;
  TITLE "Cases in the file that are not found in the overlap selectq
file";
RUN;

```

F.4.A - Q3FY2017\PROGRAMS\CONSTRUCT\CONVARQ.SAS - Construct Variables for Analysis - Run Quarterly

```

*****
*****
* PROGRAM:      CONVARQ.SAS
* WRITTEN:     2/3/99 BY KELLY WHITE
*
*
* UPDATED:     12/23/2013 BY AKUDIS for Q1FY2014
*              2/2/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
*
* PURPOSE:     TO CREATE INDEPENDENT VARIABLES: XENRLLMT, XENR_PCM, XINS_COV,
*              XBNFGRP, XBENCAT, XINS_RSV, XENR_RSV
*              TO CREATE DEPENDENT VARIABLES: KDISENRL, KBGPRB1,
*              KBGPRB2, KMILOFFC, KCIVOFFC, KMILOPQY, KCIVOPQY, HP_PRNTL,
HP_MAMOG,
*              HP_MAM50, HP_PAP, HP_BP, HP_FLU, HP_PROS, KCIVINS, KPRSCPTN,
HP_GP,
*              HP_CHOL, HP_BRST, HP_SMOKE, HP_SMOKH, HP_CESS, HP_OBESE,
*
*              TO CREATE OUTCATCH
* INPUT:       ..\..\DATA\AFINAL\SELECTQ.sas7bdat
* OUTPUT:      ..\..\DATA\AFINAL\CONVARQ.sas7bdat
*
* INCLUDES:    1) CONSVAR0.SAS - Construct XREGION, XTNEXREG and USA based on
CACSMPL.
*              2) Construct_cacsmpl.SAS
*****
*****;

LIBNAME IN      "&datapath.";
LIBNAME LIBRARY "&fmtpath.";

OPTIONS PS=78 LS=256 ERRORS=2 NOCENTER ;

***Create cacsmpl;
%MACRO CONVARQ;

TITLE1 "FY 20&YR. Quarter &QT. Health Care Survey of DoD Beneficiaries
Study";
TITLE2 'CREATE CONSTRUCTED & OUTCOME MEASURE VARIABLES';

PROC SORT DATA=IN.SELECTQ OUT=SELECTQ; BY MPRID; RUN;
%INCLUDE "construct_cacsmpl.sas"/SOURCE2; /* Move construct_cacsmpl here to
use selectq sort */

/* Reset titles after construct_cacsmpl is finished */
TITLE1 "FY 20&YR. Quarter &QT. Health Care Survey of DoD Beneficiaries
Study";
TITLE2 'CREATE CONSTRUCTED & OUTCOME MEASURE VARIABLES';

PROC SORT DATA=IN.CONSTRUCT_CACSMPL OUT=CACSMPL; BY MPRID; RUN;

```

```

DATA IN.CONVARQ(KEEP=XENRLLMT XENR_PCM XINS_COV
                XREGION XTNEXREG USA
                ENBGSMPX XBNFGRP XOCONUS SERVAREA
                KMILOPQY KCIVOPQY HP_PRNTL HP_MAMOG HP_MAM50 HP_PAP
HP_BP HP_FLU
                MPRID KCIVINS HP_SMOKE
                OUTCATCH HP_SMKH3 HP_CESH3 HP_OBESE
                XBMI XBMICAT CACSMPL XBENCAT XENR_RSV XINS_RSV
                RDAGEQY RFLDAGE JSFLAG)

```

```

CONVARQ;
MERGE SELECTQ(IN=in1)
      CACSMPL(IN=in2 RENAME=(CACSMPL=XCACSMPL));
BY MPRID;

```

```
IF IN1;
```

```

*****
* Construct XREGION, XTNEXREG and USA.

```

```
*****;
```

```

/*CHANGE CACSMPL TO BE NUMERIC*/
CACSMPL = INPUT(XCACSMPL,8.);
DROP XCACSMPL;

```

```
%INCLUDE "CONSVAR0.SAS"/SOURCE2;
```

```

LENGTH JSFLAG    3.
        XREGION   3.
        XTNEXREG  3.
        USA       3.
        XBMI      8.
        XBMICAT   3.
        XOCONUS   3.
        XBENCAT   3.
        XINS_RSV  3.
        XENR_RSV  3.
        RDAGEQY   3.
        RFLDAGE   3.

```

```
;
```

```
LABEL
```

```

JSFLAG      = "Joint Service Flag"
XENRLLMT    = "Enrollment in TRICARE Prime"
XENR_PCM    = "Enrollment by PCM type"
XINS_COV    = "Insurance Coverage"
XBNFGRP     = "Beneficiary Group"
KMILOPQY    = "Outpat. visits-use Military fcilty most"
KCIVOPQY    = "Outpat. visits-use Civilian fcilty most"
HP_PRNTL    = "Prgnt in 1st yr, receivd cre 1st trimstr"
HP_MAMOG    = "Women 40>=, mammography in pst 2 yrs"
HP_MAM50    = "Women 50>=, mammography in pst 2 yrs"
HP_PAP      = "All women, Pap smear in last 3 yrs"
HP_BP       = "Bld prsre chck in last 2 yrs, know rsalts"

```

HP_FLU = "65 and older, flu shot in last 12 mnths"
 HP_SMOKE = "Advised to quit smoking in last 12 mnths"
 KCIVINS = "Beneficiary covered by civilian insurance"
 OUTCATCH = "Out of catchment area indicator"
 HP_SMKH3 = "Smoker under HEDIS definition (modified)"
 HP_CESH3 = "Had smoking cessation counseling - HEDIS (modified)"
 XREGION = "XREGION - Region"
 XTNEXREG = "TNEX Region - Based on Location of Health Services"
 USA = "USA - USA/OCONUS Indicator"
 XBMI = "Body Mass Index"
 XBMICAT = "Body Mass Index Category"
 HP_OBESE = "Obese/Morbidly obese"
 XOCONUS = "Overseas Europe/Pacific/Latin Indicator"
 XBENCAT = "Beneficiary Category"
 XINS_RSV = "Insurance Coverage - Reservist"
 XENR_RSV = "Enrollment by PCM type - Reservist"
 CACSMPL = "Catchment Area"
 SERVAREA = "Service Area"
 RDAGEQY = "Age at sampling-Capped(18 and below, 86 and above)"
 RFLDAGE = "Age at fielding-Capped(18 and below, 86 and above)"
 ;

FORMAT

JSFLAG JSFLAG.
 XENRLLMT ENROLL.
 XENR_PCM PCM.
 XINS_COV INSURE.
 XBNFGRP XBGC_S.
 KMILOPQY HAGRID.
 KCIVOPQY HAGRID.
 HP_PRNTL PRNTL.
 HP_MAMOG HAYNN.
 HP_MAM50 HAYNN.
 HP_OBESE HAYNN.
 HP_PAP HAYNN.
 HP_BP HAYNN2_.
 HP_FLU HAYNN.
 HP_SMOKE HAYNN.
 KCIVINS HAYNN2_.
 OUTCATCH OCATCH.
 HP_SMKH3 SMOKE.
 HP_CESH3 SMOKE.
 ENBGSMPPL \$ENBGS.
 XREGION CREG.
 XTNEXREG TNEX.
 USA USAMHS.
 XBMICAT XBMICAT.
 XOCONUS XOCONUS.
 XBENCAT XBENCAT.
 XINS_RSV XINSRSV.
 XENR_RSV XENRRSV.
 CACSMPL CAC.
 SERVAREA \$SRVAREA.
 RDAGEQY AGE_r.
 RFLDAGE AGE_r.

```

;

/* Create Joint Service flag */
IF PUT(CACSMPL, JOINTSRV.)='1' THEN JSFLAG=1;
ELSE JSFLAG=0;

/* CREATE INDEPENDENT VARIABLES */

/* XENRLLMT--ENROLLMENT STATUS */
IF ENBGSMPL ^= "b" THEN DO;
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 1 THEN XENRLLMT = 1; /* Active duty (<65) */
    ELSE IF INPUT(ENBGSMPL,8.) IN (2, 3, 5, 6) THEN XENRLLMT = 2; /* Non-active duty enrolled (<65)*/
    ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7,11) THEN XENRLLMT = 3; /* Not Enrolled (<65)*/
END;
ELSE IF INPUT(FIELDAGE,8.) > = 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 10 THEN XENRLLMT = 4; /* Not Enrolled (65+)*/
    ELSE IF INPUT(ENBGSMPL,8.) IN (8,9) THEN XENRLLMT = 5; /* Enrolled (65+) */
END;

/* XENR_PCM--ENROLLMENT BY PCM TYPE */
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 1 THEN XENR_PCM = 1; /* Active duty (<65) */
    ELSE IF INPUT(ENBGSMPL,8.) IN (3, 6) THEN XENR_PCM = 2; /* Enrolled (<65) - mil PCM */
    ELSE IF INPUT(ENBGSMPL,8.) IN (2, 5) THEN XENR_PCM = 3; /* Enrolled (<65) - civ PCM */
    ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7,11) THEN XENR_PCM = 4; /* Not Enrolled (<65) */
END;
ELSE IF INPUT(FIELDAGE,8.) > = 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 10 THEN XENR_PCM = 5; /* Not Enrolled (65+) */
    IF INPUT(ENBGSMPL,8.) = 9 THEN XENR_PCM = 6; /* Enrolled (65+)-mil PCM */
    IF INPUT(ENBGSMPL,8.) = 8 THEN XENR_PCM = 7; /* Enrolled (65+)-civ PCM */ /*NJ_Q2*/
END;
END;

/* XINS_COV--INSURANCE COVERAGE */
IF XENRLLMT = 1 THEN XINS_COV =1; /* Prime <65-Active Duty */
ELSE IF 17 <= INPUT(FIELDAGE,8.) < 65 AND H&YR.003 IN (1) THEN XINS_COV = 2; /* Prime <65-Non-active Duty */
ELSE IF H&YR.003 = 3 THEN XINS_COV = 3; /* Standard/Extra */
ELSE IF H&YR.003 = 11 THEN XINS_COV = 7; /* Plus and Medicare */

```

```

ELSE IF H&YR.003 = 4 THEN XINS_COV = 4; /*
Medicare*/
ELSE IF H&YR.003 IN (5,6, 7, 8, 9, 13) THEN XINS_COV = 5; /*
Other civilian health insurance*/
ELSE IF H&YR.003 = 10 THEN XINS_COV = 8; /*
Veterans Administration (VA) */
ELSE IF H&YR.003 = 12 THEN XINS_COV = 9; /*
TRICARE Reserve Select */
ELSE IF H&YR.003 = 14 THEN XINS_COV = 10; /*
TRICARE Retired Reserve - MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
AND H&YR.003 = 15 THEN XINS_COV = 13; /*
TRICARE Young Adult Prime - AMK 2/10/14 new categor since now specific for
prime */
ELSE IF H&YR.003 = 16 THEN XINS_COV = 12; /*
CHCBP - MER 06/21/11 */
ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
AND H&YR.003 = 17 THEN XINS_COV = 14; /*
TRICARE Young Adult Standard/Extra - AMK 02/06/14 */

ELSE IF (INPUT(FIELDAGE,8.)>= 65 AND XENRLLMT = 5 and H&YR.003 = 1) THEN
XINS_COV = 6; /* Prime, >= 65 */
ELSE IF H&YR.075=1 AND H&YR.076=1 AND H&YR.003 NE .N THEN XINS_COV = 4;
/* NEW Q2 Medicare/Medicaid */

/* XBNFGRP-Beneficiary Group that excludes those 65 and over-Active Duty
and Family Members of Active Duty */
IF ENBGSMPL ^= "b" THEN DO;
IF INPUT(FIELDAGE,8.) >= 65 AND INPUT(ENBGSMPL,8.) IN (1, 2, 3, 4) THEN
XBNFGRP = .;
ELSE IF INPUT(ENBGSMPL,8.) = 1 THEN XBNFGRP = 1;
/* Active Duty <65 */
ELSE IF INPUT(ENBGSMPL,8.) IN (2, 3, 4) THEN XBNFGRP = 2;
/* Family of Active <65 */
ELSE IF INPUT(ENBGSMPL,8.) IN (5, 6, 7) THEN XBNFGRP = 3;
/* Ret/Surv/Fam <65 */
ELSE IF INPUT(ENBGSMPL,8.) IN (8, 9, 10) THEN XBNFGRP = 4;
/* Ret/Surv/Fam 65+ */
ELSE IF INPUT(ENBGSMPL,8.) IN (11) THEN XBNFGRP = .;
END;

/* CREATE DEPENDENT VARIABLES */

/* KMILOPQY--OUTPATIENT VISITS TO MILITARY FACILITY
KCIVOPQY--OUTPATIENT VISITS TO CIVILIAN FACILITY */
IF H&YR.005 = 1 THEN DO;
KMILOPQY=H&YR.013;
KCIVOPQY=1;
END;
ELSE IF H&YR.005 IN (2, 3, 4) THEN DO;
KCIVOPQY=H&YR.013;
KMILOPQY=1;
END;
ELSE IF H&YR.005 = 5 THEN DO;
KMILOPQY=1;

```

```

    KCIVOPQY=1;
END;

/* HP_PRNTL--IF PREGNANT LAST YEAR, RECEIVED PRENATAL CARE IN 1ST TRIMESTER
*/
IF H&YR.062 IN (1,2) THEN DO; /*
Pregnant in last 12 months */
    IF H&YR.064 = 4 THEN HP_PRNTL = 1; /* Yes
*/
    ELSE IF (H&YR.063 = 1 AND H&YR.064 = 1) THEN HP_PRNTL = .; /* <3
months pregnant now */
    ELSE IF H&YR.064 IN (1,2,3) THEN HP_PRNTL = 2; /* No
*/
END;
ELSE IF H&YR.062 IN (.C,.N) THEN HP_PRNTL = .N; /* Male */

/* HP_MAMOG--FOR WOMEN AGE 40 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS */
IF XSEXA = 2 AND INPUT(FIELDAGE,8.) >= 40 THEN DO;
    IF H&YR.061 IN (5, 4) THEN HP_MAMOG = 1; /* Yes */
    ELSE IF H&YR.061 IN (1, 2, 3) THEN HP_MAMOG = 2; /* No */
END;

/* HP_MAM50--FOR WOMEN AGE 50 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS */
IF XSEXA = 2 AND INPUT(FIELDAGE,8.) >= 50 THEN DO;
    IF H&YR.061 IN (5, 4) THEN HP_MAM50 = 1; /* Yes */
    ELSE IF H&YR.061 IN (1, 2, 3) THEN HP_MAM50 = 2; /* No */
END;

/* HP_PAP--FOR ALL WOMEN, HAD PAP SMEAR IN LAST 3 YEARS */
IF XSEXA = 2 THEN DO;
    IF H&YR.059B IN (4, 5, 6) THEN HP_PAP = 1; /* Yes */
    ELSE IF H&YR.059B IN (1, 2, 3) THEN HP_PAP = 2; /* No */
END;

/* HP_BP--HAD BLOOD PRESSURE SCREENING IN LAST 2 YEARS AND KNOW RESULT */
IF H&YR.049 IN (2,3) AND H&YR.050 IN (1,2) THEN HP_BP = 1; /* Yes */
ELSE IF H&YR.049 = 1 THEN HP_BP = 2; /* No */
ELSE IF H&YR.049 < 0 OR H&YR.050 < 0 THEN HP_BP = .; /* Unknown */
ELSE HP_BP = 2; /* No */

/* HP_FLU--FOR PERSON AGE 65 OR OVER, HAD FLU SHOT IN LAST 12 MONTHS */
IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
    IF H&YR.051 = 4 THEN HP_FLU = 1; /* Yes */
    ELSE IF H&YR.051 IN (1, 2, 3) THEN HP_FLU = 2; /* No */
END;

/* HP_SMOKE--ADVISED TO QUIT SMOKING IN PAST 12 MONTHS */
IF H&YR.054 IN (2, 3, 4) THEN HP_SMOKE = 1; /* Yes */
ELSE IF H&YR.054 = 1 THEN HP_SMOKE = 2; /* No */

/* KCIVINS--IS BENEFICIARY COVERED BY PRIVATE CIVILIAN INSURANCE */
IF H&YR.002G=1 OR H&YR.002I=1 OR H&YR.002J=1 THEN KCIVINS=1; /*
YES */
ELSE KCIVINS=2; /* NO */

/* Add code for smoking and smoking cessation counseling according to the
HEDIS */

```



```

IF H&YR.052 IN (1,2) THEN DO;
  IF H&YR.052=1 AND (H&YR.053=3 OR H&YR.053=4) AND H&YR.057A=1 THEN
HP_SMKH3=1; /* Yes */
  ELSE IF H&YR.052=2 OR H&YR.053=2 OR H&YR.057A NE 1 THEN HP_SMKH3=2;
/* No */
END;

IF (H&YR.053=3 OR H&YR.053=4) AND H&YR.054>0 THEN DO;
  IF H&YR.054>1 THEN HP_CESH3=1; /* Yes */
  ELSE HP_CESH3=2; /* No */
END;

/* OUTCATCH -- OUT OF CATCHMENT AREA */
IF 9900 < CACSMPL < 9999 THEN OUTCATCH=1; /* Out of catchment area */
ELSE IF CACSMPL = 9999 THEN OUTCATCH=.;
ELSE OUTCATCH=0; /* Catchment area */

*****
*****
* Calculate XBMI- Body Mass Index and XBMICAT- Body Mass Index Category
* BMI=Weight(in pounds)*703 divide by Height(in inch)*Height(in inch)
*****
*****;

IF H&YR.071F IN (.A,.O,.I,.B) THEN TSRHGTF=.; ELSE TSRHGTF=H&YR.071F;
IF H&YR.071I IN (.A,.O,.I,.B) THEN TSRHGTI=.; ELSE TSRHGTI=H&YR.071I;
IF H&YR.072 IN (.A,.O,.I,.B) THEN TSRWGT =.; ELSE TSRWGT =H&YR.072;

IF TSRHGTF IN (.) OR
  TSRWGT IN (.) THEN XBMI=.;
ELSE DO;
  XBMI = ROUND((TSRWGT*703)/
                (SUM(TSRHGTF*12,TSRHGTI)*SUM(TSRHGTF*12,TSRHGTI)), .1);
END;

IF XBMI < 12 OR XBMI > 70 THEN XBMI=.;

DROP TSRHGTF TSRHGTI TSRWGT;

/* Same category as Healthy People 2010 where there is no sex distinction */
IF XBMI = . THEN XBMICAT=.;
ELSE IF XBMI < 18.5 THEN XBMICAT=1; *Underweight;
ELSE IF XBMI < 25 THEN XBMICAT=2; *Normal Weight;
ELSE IF XBMI < 30 THEN XBMICAT=3; *Overweight;
ELSE IF XBMI < 40 THEN XBMICAT=4; *Obese;
ELSE XBMICAT=5; *Morbidly Obese;

IF XBMICAT=. THEN HP_OBESE=.;
ELSE IF XBMICAT IN (4,5) THEN HP_OBESE=1; *OBESE ;
ELSE HP_OBESE=2; *NOT OBESE;

/*
Tricare Reserve Select and the increasing presence of inactive reservists
and their dependents in our data.

```

In order to accomodate them, we will need to create additional variables.
*/

```
IF DBENCAT='ACT' THEN XBENCAT=1;      *Active duty;
ELSE IF DBENCAT='DA' THEN XBENCAT=2;  *Active Duty family member;
ELSE IF DBENCAT='GRD' THEN XBENCAT=3; *Active reservist;
ELSE IF DBENCAT='DGR' THEN XBENCAT=4; *Dependent of Reservist;
ELSE IF DBENCAT='IGR' THEN XBENCAT=5; *Inactive Reservist";
ELSE IF DBENCAT='IDG' THEN XBENCAT=6; *Dependent of Inactive Guard";
ELSE IF DBENCAT IN ('RET','DR','DS') THEN DO;
    IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN XBENCAT=7;  *Retired or Dependent
of Retiree <65;
    ELSE IF INPUT(FIELDAGE,8.) > = 65 THEN XBENCAT=8; *Retired or Dependent
of Retiree >=65;
END;
```

/*We also need to redefine xins_cov, call it xins_rsv,
which is the same as xins_cov but where
reservists are separated from other active duty - xins_cov will =1 if active
duty,
but not active reservist or inactive reservist.

Similarly we need xenr_rsv which is xenr_pcm but reservists will not be
treated as active duty
ie xenr_pcm=1 if active duty but not reservist. We also need to define
another category
for xins_rsv, xins_rsv=9 for tricare reserve select -we also need to account
for the value
covered by insurance of another country - that should be classified as
civilian insurance.
Use H&YR.003 for this.*/

```
/* XINS_RSV--INSURANCE COVERAGE DISTINGUISHING RESERVISTS FROM ACTIVE DUTY*/
IF XENRLLMT = 1 THEN DO;
    IF XBENCAT IN (1) THEN XINS_RSV =1;          /*
Prime <65-Active Duty (Non reservists) */
    ELSE IF XBENCAT IN (3,5) THEN XINS_RSV=10;  /*
Prime <65-Active Duty (Reservists) */
    END;
    ELSE IF 17 <= INPUT(FIELDAGE,8.) < 65 AND H&YR.003 IN (1) THEN XINS_RSV =
2; /* Prime <65-Non-active Duty */
    ELSE IF H&YR.003 =3 THEN XINS_RSV = 3;      /*
Standard/Extra */
    ELSE IF H&YR.003 = 11 THEN XINS_RSV = 7;    /*
Plus and Medicare */
    ELSE IF H&YR.003 = 4 THEN XINS_RSV = 4;    /*
Medicare*/
    ELSE IF H&YR.003 IN (5,6, 7, 8, 9, 13) THEN XINS_RSV = 5; /*
Other civilian health insurance*/
    ELSE IF H&YR.003 = 10 THEN XINS_RSV = 8;   /*
Veterans Administration (VA) */
    ELSE IF H&YR.003 = 12 THEN XINS_RSV = 9;   /*
TRICARE Reserve Select */
    ELSE IF H&YR.003 = 14 THEN XINS_RSV = 11;  /*
TRICARE Retired Reserve - MER 06/21/11 */
    ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
```

```

        AND H&YR.003 = 15 THEN XINS_RSV = 14;                                /*
TRICARE Young Adult Prime - MER 06/21/11 */
        ELSE IF H&YR.003 = 16 THEN XINS_RSV = 13;                                /*
CHCBP - MER 06/21/11 */
        ELSE IF 21 <= INPUT(FIELDAGE,8.) <= 26
            AND H&YR.003 = 17 THEN XINS_RSV = 15;                                /*
TRICARE Young Adult Standard/Extra- AMK 02/06/14 */
        ELSE IF (INPUT(FIELDAGE,8.)>= 65 AND XENRLLMT = 5 and H&YR.003 = 1) THEN
XINS_RSV = 6; /* Prime, >= 65 */
        ELSE IF H&YR.075=1 AND H&YR.076=1 AND H&YR.003 NE .N THEN XINS_RSV = 4;
/* Medicare/Medicaid */

/* XENR_RSV--ENROLLMENT DISTINGUISHING RESERVISTS FROM ACTIVE DUTY */
IF 17 <= INPUT(FIELDAGE,8.) < 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 1 THEN DO;
        IF XBENCAT IN (1) THEN XENR_RSV = 1;                                /* Active
duty (<65) Non reservists */
        ELSE IF XBENCAT IN (3,5) THEN XENR_RSV = 8;                                /* Active
duty (<65) Reservists */
    END;
    ELSE IF INPUT(ENBGSMPL,8.) IN (3, 6) THEN XENR_RSV = 2;                                /*
Enrolled (<65) - mil PCM */
    ELSE IF INPUT(ENBGSMPL,8.) IN (2, 5) THEN XENR_RSV = 3;                                /*
Enrolled (<65) - civ PCM */
    ELSE IF INPUT(ENBGSMPL,8.) IN (4, 7,11) THEN XENR_RSV = 4;                                /* Not
Enrolled (<65) */
END;
ELSE IF INPUT(FIELDAGE,8.) >= 65 THEN DO;
    IF INPUT(ENBGSMPL,8.) = 10 THEN XENR_RSV = 5;                                /* Not
Enrolled (65+) */
    IF INPUT(ENBGSMPL,8.) = 9 THEN XENR_RSV = 6;                                /* Enrolled
(65+)-mil PCM */
    IF INPUT(ENBGSMPL,8.) = 8 THEN XENR_RSV = 7;                                /* Enrolled
(65+)-civ PCM */
END;

/*Capping/Recode dageqy and fieldage by combining 18 and below and 86 and
above. */

    IF INPUT(DAGEQY,8.)=. THEN RDAGEQY=.;
    ELSE IF INPUT(DAGEQY,8.) LT 18 THEN RDAGEQY=18;
    ELSE IF INPUT(DAGEQY,8.) GT 86 THEN RDAGEQY=86;
    ELSE RDAGEQY=INPUT(DAGEQY,8.);

    IF INPUT(FIELDAGE,8.)=. THEN RFLDAGE=.;
    ELSE IF INPUT(FIELDAGE,8.) LT 18 THEN RFLDAGE=18;
    ELSE IF INPUT(FIELDAGE,8.) GT 86 THEN RFLDAGE=86;
    ELSE RFLDAGE=INPUT(FIELDAGE,8.);

RUN;

PROC FREQ DATA=CONVARQ;
    TABLES JSFLAG*CACSMPL/LIST MISSING;
    TITLE3 'Comparison of Joint Service flag vs. CACSMPL';
RUN;

```

```

DATA CONVARQ2;
  SET CONVARQ;
  WHERE FNSTATUS=11;
RUN;

/* CHECK RECONSTRUCTED VARIABLES */
PROC FREQ DATA=CONVARQ2;
  TABLES XENRLLMT XENR_PCM XINS_COV XBENCAT XENR_RSV XINS_RSV XREGION
  XTNEXREG
  XBMICAT ENBGSMPL XBNFGRP
  KMILOPQY KCIVOPQY HP_PRNTL HP_MAMOG HP_MAM50 HP_PAP HP_BP HP_FLU
  HP_SMOKE KCIVINS OUTCATCH
  HP_SMKH3 HP_CESH3 XBMI HP_OBESE XOCONUS SERVAREA
  / MISSING LIST;
  TITLE3 "ONE WAY FREQUENCIES ON 20&YR. RECONSTRUCTED VARIABLES";
RUN;

/* CROSSTABS TO CHECK RECONSTRUCTION VARIABLES */
/* COLLAPSE AGE FOR CROSSTABS */
PROC FORMAT;
  VALUE $AGE
    "017" -< "065" = "LESS THAN 65"
    "065" -< "120" = "65 OR OLDER"
    "0"      = "Out of range err"
    " "     = "Missing/unknown" ;
RUN;

PROC FREQ DATA=CONVARQ2;
  TABLES
    FIELDAGE*ENBGSMPL*XENRLLMT
    FIELDAGE*ENBGSMPL*XENR_PCM
    FIELDAGE*XENRLLMT*H&YR.003*H&YR.075*H&YR.076*XINS_COV
    DBENCAT*XBENCAT
    FIELDAGE*ENBGSMPL*XENR_RSV*XENR_PCM
    FIELDAGE*XENRLLMT*H&YR.003*H&YR.075*H&YR.076*XINS_COV*XINS_RSV
    XTNEXREG*XREGION*CACSMPL
    XREGION*USA
    FIELDAGE*ENBGSMPL*XBNFGRP
    H&YR.005*H&YR.013*KMILOPQY
    H&YR.005*H&YR.013*KCIVOPQY
    H&YR.062*H&YR.063*H&YR.064*HP_PRNTL
    XSEXA*H&YR.059B*HP_PAP
    H&YR.049*H&YR.050*HP_BP
    FIELDAGE*H&YR.051*HP_FLU
    H&YR.054*HP_SMOKE
    H&YR.002I*H&YR.002J*H&YR.002G*KCIVINS
    OUTCATCH*CACSMPL
    H&YR.052*H&YR.053*HP_SMKH3
    HP_SMKH3*H&YR.054*HP_CESH3
    H&YR.071F*H&YR.071I*H&YR.072*XBMI
    XBMICAT*HP_OBESE
    XREGION*XOCONUS*USA

  / MISSING LIST;

```

```

        FORMAT XSEX HASEX. FIELDAGE $AGE.
              XBMICAT XBMICAT.
              ;
TITLE3 'CROSSTABS ON NEW VARIABLES';
RUN;

PROC FREQ DATA=CONVARQ2;
  tables XTNEXREG*XREGION*CACSMPL
         XTNEXREG*XREGION*CACSMPL*D_HEALTH*DCATCH
         ENBGSMP*CACSMPL*SERVAREA

         RDAGEQY*DAGEQY
         RFLDAGE*FIELDAGE

        / MISSING LIST;
run;

/* COLLAPSE FOR MAMMOGRAPHY, BREAST CANCER, AND PROSTATE XTABS*/
PROC FORMAT;
  VALUE $AGE2_
    "017" - "049" = "LESS THAN 50"
    "050" -< "120" = "50 OR OLDER"
    "0"      = "Out of range err"
    " "      = "Missing/unknown" ;

  VALUE $AGE3_
    "017" - "039" = "LESS THAN 40"
    "040" -< "120" = "40 OR OLDER"
    "0"      = "Out of range err"
    " "      = "Missing/unknown" ;
RUN ;

PROC FREQ DATA=CONVARQ2;
  TABLES XSEX*FIELDAGE*H&YR.061*HP_MAM50
        /MISSING LIST;
  FORMAT FIELDAGE $AGE2_. XSEX HASEX.;
RUN;

PROC FREQ DATA=CONVARQ2;
  TABLES XSEX*FIELDAGE*H&YR.061*HP_MAMOG
        /MISSING LIST;
  FORMAT FIELDAGE $AGE3_. XSEX HASEX.;
RUN;

PROC FORMAT;
  VALUE $AGE4_
    "017" - "020" = "LESS THAN 21"
    "021" - "026" = "21 TO 26"
    "027" -< "120" = "27 OR OLDER"
    "0"      = "Out of range err"
    " "      = "Missing/unknown" ;
RUN ;

PROC FREQ DATA=CONVARQ2;
  TABLES FIELDAGE*H&YR.003*XINS_COV*XINS_RSV

```

```
                /MISSING LIST;
                FORMAT FIELDAGE $AGE4_.;
    RUN;

    PROC FREQ DATA=CONVARQ2(WHERE=(XINS_COV=10));
        TABLES DBENCAT DBENCAT*FIELDAGE/list missing;
        TITLE3 "DBENCAT frequencies for TRICARE Retired Reserve";
    RUN;
TITLE3;

    PROC CONTENTS DATA=OUT.CONVARQ VARNUM;
    RUN;

%MEND;
%CONVARQ;
```

F.4.B - Q3FY2017\PROGRAMS\CONSTRUCT\CONSTRUCT_CACSMPL.SAS - Include file for Convarq.sas

```
*****
*** Project: Health Care Survey of DoD Beneficiaries - Adult
*** Purpose: Create cacsmpl for the reporting purpose for adult survey
***
*** Program: construct_cacsmpl.sas
***
*** Inputs:  extract.sas7bdat:  Extracted DoD data set
***          TMA.sas7bdat:      DMIS information
***          frame_cacsmpl.inc:  Include file
***
*** Outputs: construct_cacsmpl.sas7bdat - the adult frame with cacsmpl in
***
*** Updated: 02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
***
*** Note: 01/03/2007 by Haixia Xu
***       This program is copied from q4fy2006 sampling,
***       and modified for Q2FY2007 to create the cacamp1 to be used for
reporting, not for sampling purpose
***
*****;

*** Set up options. ***;
options ls=132 ps=79 compress=yes nocenter;* mprint mlogic symbolgen;

*** Set up the input and output paths. ***;
libname ext      "&EXPATH."; /* extract.sas7bdat */
libname inTMA    "&DATAPATH."; /* TMA.sas7bdat */
libname out      "&DATAPATH."; /* construct_cacsmpl.sas7bdat */

*** Set up the titles. ***;
title1 'Program: Construct_cacsmpl.SAS';
title2 'Construct cacsmpl for reporting';

data frame;
set ext.extract;
run;

title4 'Freq of PRRECFLG in the frame';
proc freq data=frame;
tables PRRECFLG/ missing list;
run;

/* MER 06/22/09 Added the following blocks to */
/* facilitate merge of selectq with the frame.*/
/* Resulting dataset renamed sample instead of*/
/* frame. */
proc sort data=frame;
  by mprid;
run;

data sample;
  merge frame(in=a) selectq(in=b keep = mprid);
  by mprid;
```

```

    if b=1;
run;

*****
*****
* Added q2 2003, Don and Keith created a template to be used each quarter;
* The code below and the include file construct cacsmpl
* and collapse historically small catchment areas;
*****
*****;
data TMA (keep = geocell d_par d_fac d_instal d_health d_dmis servaff);
    set inTMA.TMA;
    ***Extract the facility service code variable(servaff) starting with the
November 2004TMA spreadsheet in Q1,2005;
    rename facility_Type_Code=d_fac
           installation_Name=d_instal
           dmis_facility_Name=d_dmis
           facility_Service_Code=servaff ;
    length d_par $4.;
    d_par = DMIS_PARENT_ID;
    length geocell $4.;
    geocell = DMIS_ID;
    length d_health $2.;
    d_health = HEALTH_Service_region;
run;

title4 "Freq of servaff, d_fac in TMA spreadsheet";
proc freq data=TMA;
tables servaff d_fac/missing list;
run;

%include "construct_cacsmpl.inc" ;

data out.construct_cacsmpl;
    set t_sample(keep=mprid cacsmpl); /* MER 06/22/09 renamed from t_framea */
run;

title4 'Freq of cacsmpl';
proc freq data=out.construct_cacsmpl;
tables cacsmpl/missing list;
run;

title4 'Information for the Sample';
proc contents data = out.construct_cacsmpl varnum;
run;

***** The End *****;

```


F.4.C - Q3FY2017\PROGRAMS\CONSTRUCT\CONSTRUCT_CACSMPL.INC - Include file for Construct_Cacsmpl.SAS

```

*****
*****
*** Project:      Health Care Survey of DoD Beneficiaries -
Quarterly/Annual Adult Dataset
*** Program:      Construct_cacsmpl.inc -- include file used in
construct_cacsmpl.sas
***
*** Note: 01/04/2007 by Haixia Xu
***      This program is copied from q4fy2006 sampling,
***      and modified for qlfy2007 to create the cacampl to be used for
reporting, not for sampling purpose
***
*****
*****;

DATA SAMPLE; /* MER 06/22/09 renamed from FRAME to SAMPLE */
  SET SAMPLE;
  if pcm='MTF' then do;

    /* Use the list produced by sampling program for the current quarter
*/

    %include "../Sampling/assignngeocell.inc" /source2;

    /* all the old assignments from frame.inc for q2, 2005 */

    else if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' )
or
      ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
      ('7166' <= enrid <= '7195') or ( '6700' <= enrid <= '6881' ) or
enrid='0000'
      then geocell=dcatch; *administrative assignment 1976-1980 added q4
2002, 6700-6881 added q1 2004,
      0000 added q1,2005;
    else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')
      then geocell = dcatch; *Managed care contractor assignment, added
in q1 2005; *8001-8036 added q2 2005;
    else if ('3031' <= enrid <= '3057')
      then geocell = dcatch; ***On board ship***;
    else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213',
'0235', '0585', '5208', '0250',
      '0449', '0626', '0012')
      then geocell = dcatch; ***Inactive***; *0626 added q2 2003, 0012
added q4 2003,
      0041, 0044, 0082, 0111,
0213, 0235, 0585 added q2 2005;
    else if enrid = ' ' then geocell = dcatch; ***enrolled, but missing
ENRID, added q2 2005***;
    *****;
    else if ('0190' <= enrid <='0199') then geocell = dcatch;***BYDON;
    *****;

    else geocell = enrid;

```

```

        end;
        else geocell=dcatch;

RUN;

title4 "Check the correctness of the assignments of geocell";
proc freq data=sample;
tables enrid*geocell*dcatch/missing list;
where pcm='MTF';
run;

proc sort nodupkey data=TMA;
    by geocell;
run;

proc sort data=sample;
    by geocell;
run;

data sample2 sa_only fy_only; /* MER 06/22/09 renamed from frame2 and
fr_only */
    merge sample (in=insa) TMA (in=infy);
    by geocell;
if insa=1 and infy=1 then output sample2;
else if insa=1 and infy=0 then output sa_only;
else if insa=0 and infy=1 then output fy_only;
run;

title4 "The records in the sample but not in TMA spreadsheet";
proc print data=sa_only;
run;

/*AMK 7/10/13 - OUTPUT RECORDS IN SA_ONLY*/
DATA OUT.sa_only;
SET sa_only;
RUN;

title4 "Freq of PCM*d_fac in the sample";
proc freq data=sample2;
tables pcm*d_fac/missing list;
run;

data t_sample; /* MER 06/22/09 renamed from t_framea */
set sample2;
*****;
com_geo=geocell;
*****;

if pcm='MTF' then do;

    /* Use the list produced by the sampling program for the current
quarter */

    %include "../Sampling/assigncom_geo.inc" / source2;

```

```

/* all the old assignments from frame.inc for q2, 2005 */

else if ('1976' <= enrid <= '1980') or ('6301' <= enrid <= '6323') or
('6991' <= enrid <= '6994') or ('6501' <= enrid <= '6512') or
('7166' <= enrid <= '7195') or ('6700' <= enrid <= '6881') or
enrid='0000'
then com_geo = geocell; *Administrative assignment--1976-1980 added
q4 2002. 0000 added q1,2005;
else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')
then com_geo = geocell; *Managed care contractor assignment, added
in q1, 2005;*8001-8036 added q2 2005;
else if ('3031' <= enrid <= '3057')
then com_geo = geocell; ***On board ship***;
else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213',
'0235', '0585', '5208', '0250',
'0449', '0626', '0012')
then com_geo = geocell; ***Inactive***; *'0626' added q2 2003, 0012
added q4 2003,
0041, 0044, 0082, 0111,
0213, 0235, 0585 added q2 2005;

else com_geo = d_par;
end;
else if patcat='ACTDTY' then com_geo=d_par;

*****;
***Made the following 9 Navy sites stand alone in q1,2005: ***;
***'0026','0068','0231','0378','0387','0405','0407','0508','6215'***;
*****;

if geocell in
('0026','0068','0231','0378','0387','0405','0407','0508','6215') then
com_geo=geocell;

*****;
*** Collapsing small areas with nearest facility ***;
*****;

*****;
*** Collapsed the following 9 Air force sites to achieve the sample ***;
*** size of 50000 due to making 9 Navy sites stand alone in q1,2005:***;
*** '0013','0036','0059','0090','0287','0326','0638','0805','7139'. ***;
*****;

if com_geo in ('0074','0416') then com_geo='0001';
else if com_geo in ('0203','0130','0417',
'7044','7047') then com_geo='0005';
else if com_geo in ('0418','0419','7083',
'0015','0287') then com_geo='0014'; *0287
added in q1,2005 by Haixia;
else if com_geo in ('0018','0248') then com_geo='0019';
else if com_geo in ('7046') then com_geo='0029'; *By emf
added q4 2003;
else if com_geo in ('0420') then com_geo='0037';
else if com_geo in ('0422') then com_geo='0038';
else if com_geo in ('0421','7048','0050') then com_geo='0039';

```

```

    else if com_geo in ('7139')                then com_geo='0043'; /*changed
from 0045 to 0043 in qlfy2007 reporting due to different xregion*/
    else if com_geo in ('7043')                then com_geo='0052';
    else if com_geo in ('0427')                then com_geo='0056'; *By emf
added q3 2003;
    else if com_geo in ('0076')                then com_geo='0058';
    else if com_geo in ('0423')                then com_geo='0064';
    else if com_geo in ('0413','0428','0326',
                        '0036')                then com_geo='0066'; *Taken out
0068, added 0036, 0326 in ql,2005 by Haixia;
    else if com_geo in ('0424')                then com_geo='0067';
    else if com_geo in ('0306')                then com_geo='0069';
    else if com_geo in ('0059')                then com_geo='0078'; *changed in
ql,2005;
    else if com_geo in ('0085')                then com_geo='0083';
    else if com_geo in ('0081','5196')        then com_geo='0086'; *By emf
added ql 2003;
    else if com_geo in ('0430','0335','7143') then com_geo='0089';
    else if com_geo in ('0013')                then com_geo='0096'; *0013
added in ql,2005 by Haixia;
    else if com_geo in ('0338','0097')        then com_geo='0098';
/*moved 0338 from 0078 to here due to different xregion*/
    else if com_geo in ('0356')                then com_geo='0103';
    else if com_geo in ('0084')                then com_geo='0108';
    else if com_geo in ('0363','7082','1587') then com_geo='0109';
    else if com_geo in ('0364')                then com_geo='0112';
    else if com_geo in ('0114')                then com_geo='0117';
    else if com_geo in ('0077')                then com_geo='0119';
    else if com_geo in ('0432','0433','0090') then com_geo='0120'; *Added
0090 in ql,2005 by Haixia;
    *else if com_geo in ('0122')                then com_geo='0121';
*Uncollapse 0122(KENNER AHC-FT. LEE)
                                                    to make
it a seperate cacsmp1 in ql,2005 by Haixia;
    else if com_geo in ('0431','0434','0395',
                        '1646')                then com_geo='0125';
    else if com_geo in ('0435')                then com_geo='0126';
    else if com_geo in ('7045')                then com_geo='0128';
    else if com_geo in ('0106','7200','0093',
                        '0094')                then com_geo='0129'; *Changed
in ql,2005 by Haixia;
    *Collapse 0093,0094 with an Air Force site in the west TNEX region, 0129,
instead of the south TNEX region, 0096;
    else if com_geo in ('0310','0425','0426') then com_geo='0321';
    else if com_geo in ('0808')                then com_geo='0609';
    else if com_geo in ('0618','0623','0629',
                        '0624','0635','0825') then com_geo='0617';
/* comment it out in qlfy2007 for reporting
    else if com_geo in ('0802','0616','0615',
                        '7042','5197')        then com_geo='0620'; *0616
added in q3,2004 by Haixia;
*/
    else if com_geo in ('0802')                then com_geo='0620'; /*xregion=14*/
    else if com_geo in ('0616','7042','5197') then com_geo='0615';
/*xregion=15*/
    else if com_geo in ('8931')                then com_geo='0633';
    else if com_geo in ('0610','0639','0637',

```

```

                                '0638')                                then com_geo='0640'; *changed
in q1,2005;
    else if com_geo in ('0805','8982')                                then com_geo='0806'; *0805
added in q1,2005 by Haixia;
    else if com_geo in ('0034','0035','0100') then com_geo='6223'; *changed
emf q1 2004;

*** added on 01/27/2004 by Haixia Xu to collapse small cells
for the facility type of TGRO into out of catchment area;

    if d_fac='NONCAT' or d_fac='TGRO' or d_fac="TPR" then do;
        if d_health in ('01','02','05','17') then com_geo='9901';
            else if d_health in ('03','04','06','18') then com_geo='9902';
            else if d_health in ('07','08','09','10','11','12','19') then
com_geo='9903';
            else if d_health in ('00','13','14','15') then com_geo='9904';
        end;

*****
*****;
    ***d_fac="TPR" and d_health = '17', '18', '19' were added above for Q4,
2004, ***;
    ***since we got the new regions 17(North T_NEX),18(South T_NEX),19(West
T_NEX).***;

*****
*****;

    if com_geo in ('9900', '0999', '0998',' ') then com_geo='9904';

    rename com_geo = cacsmpl;

RUN;

***** The end *****;

```

F.4.D - Q3FY2017\PROGRAMS\CONSTRUCT\CONSVAR0.SAS - Include file for Convarq.sas

```

*****
*   PROGRAM:   CONSVAR0.SAS
*   TASK:      1999 DOD HEALTH CARE SURVEY ANALYSIS (8676-100)
*   PURPOSE:   Create XREGION and CONUS
*
*   WRITTEN:   February 11, 2000
*   MODIFIED:
*
*   NOTES:    1) This file needs to be included in the CONVARQ.SAS program.
*
*****
* Assign XREGION using CACSMPL
*****
;
IF      CACSMPL IN (0035, 0036, 0037, 0066, 0067,
                  0068, 0069, 0081, 0086, 0100,
                  0123, 0306, 0310, 0321, 0326,
                  0330, 0385, 0413, 6201, 6223) THEN XREGION= 1;
ELSE IF CACSMPL IN (0089, 0090, 0091, 0092, 0120,
                  0121, 0122, 0124, 0335, 0378, 0387, 0432,
                  0433, 0508, 7143, 7286, 7294) THEN XREGION= 2;
ELSE IF CACSMPL IN (0039, 0041, 0045, 0046, 0047,
                  0048, 0049, 0050, 0051, 0101,
                  0103, 0104, 0105, 0337, 0356,
                  0405, 0422, 0511, 5191 ) THEN XREGION= 3;
ELSE IF CACSMPL IN (0001, 0002, 0003, 0004, 0038,
                  0042, 0043, 0073, 0074, 0107,
                  0297, 7139 ) THEN XREGION= 4;
ELSE IF CACSMPL IN (0055, 0056, 0060, 0061, 0095,
                  5195, 9905 ) THEN XREGION= 5;
ELSE IF CACSMPL IN (0013, 0062, 0064, 0096, 0097,
                  0098, 0109, 0110, 0112, 0113,
                  0114, 0117, 0118, 0338, 0363,
                  0364, 0365, 0366, 1350, 1587, 1592, 7236, 9906 )
THEN XREGION= 6;
ELSE IF CACSMPL IN (0008, 0009, 0010, 0079, 0083,
                  0084, 0085, 0108, 9907 ) THEN XREGION= 7;
ELSE IF CACSMPL IN (0031, 0032, 0033, 0053, 0057,
                  0058, 0059, 0075, 0076, 0077,
                  0078, 0093, 0094, 0106, 0119,
                  0129, 0252, 7200, 7293, 9908 ) THEN XREGION=
8;
ELSE IF CACSMPL IN (0018, 0019, 0024, 0026, 0029, 0030,
                  0131, 0213, 0231, 0248, 0407, 5205,
                  6215, 9909 ) THEN XREGION= 9;
ELSE IF CACSMPL IN (0014, 0015, 0028, 0235, 0250,
                  9910 ) THEN XREGION=10;
ELSE IF CACSMPL IN (0125, 0126, 0127, 0128, 0395, 1646,
                  9911 ) THEN XREGION=11;
ELSE IF CACSMPL IN (0052, 0280, 0287, 0534, 7043, 9912 ) THEN XREGION=12;
ELSE IF CACSMPL IN (0606, 0607, 0609, 0617, 0618,
                  0623, 0624, 0629, 0633, 0635,
                  0653, 0805, 0806, 0808, 0814,
                  8931, 8982, 9913 ) THEN XREGION=13;

```

```

ELSE IF CACSMPL IN (0610, 0612, 0620, 0621, 0622,
                    0637, 0638, 0639, 0640, 0802,
                    0804, 0853, 0862, 9914      ) THEN XREGION=14;
ELSE IF CACSMPL IN (0449, 0613, 0615, 0616, 9915 ) THEN XREGION=15;
ELSE IF CACSMPL IN (0005, 0006, 0203, 9916      ) THEN XREGION=16;
ELSE IF CACSMPL = 9999                          THEN XREGION= .;

IF CACSMPL IN (9901,9902,9903,9904) THEN DO;
  IF D_HEALTH NOT IN ('00','17','18','19') THEN DO;
    XREGION=INPUT(D_HEALTH,8.)+0;
  END;
ELSE DO;
  IF DCATCH IN ('0037', '0067', '0123', '0781', '0907',
                '0908', '0920', '0921', '0922', '0930',
                '0931', '0933', '0939', '0940', '0946',
                '0995')
  THEN XREGION=1;
  ELSE IF DCATCH IN ('0124', '0934', '0996')
  THEN XREGION=2;
  ELSE IF DCATCH IN ('0039', '0048', '0105', '0911', '0941',
                    '0987')
  THEN XREGION=3;
  ELSE IF DCATCH IN ('0003', '0787', '0901', '0925', '0943',
                    '0988', '0989')
  THEN XREGION=4;
  ELSE IF DCATCH IN ('0055', '0056', '0061', '0782', '0783',
                    '0789', '0914', '0915', '0918', '0923',
                    '0936', '0950')
  THEN XREGION=5;
  ELSE IF DCATCH IN ('0113', '0904', '0937', '0990', '0993')
  THEN XREGION=6;
  ELSE IF DCATCH IN ('0785', '0929', '0932')
  THEN XREGION=7;
  ELSE IF DCATCH IN ('0078', '0784', '0788', '0906', '0917',
                    '0924', '0927', '0928', '0935', '0942',
                    '0945', '0951', '0974')
  THEN XREGION=8;
  ELSE IF DCATCH IN ('0029', '0786', '0986')
  THEN XREGION=9;
  ELSE IF DCATCH IN ('0014', '0985')
  THEN XREGION=10;
  ELSE IF DCATCH IN ('0125', '0938', '0948', '0973')
  THEN XREGION=11;
  ELSE IF DCATCH IN ('0912')
  THEN XREGION=12;
  ELSE IF DCATCH IN ('0957', '0958', '0960', '0964', '0966',
                    '0967', '0976', '0977', '0979',
                    '0982')
  THEN XREGION=13;
  ELSE IF DCATCH IN ('0006', '0052', '0640', '0961', '0963',
                    '0965', '0978', '0983')
  THEN XREGION=14;
  ELSE IF DCATCH IN ('0075', '0120', '0615', '0622', '0953',
                    '0970', '0971', '0972', '0975')
  THEN XREGION=15;
  ELSE IF DCATCH IN ('0902')
  THEN XREGION=16;

```

```

END;
END;

IF D_PAR = '0902' THEN XREGION=16;
IF XREGION = 0 THEN XREGION = .;

*****
* Assign indicator of CONUS based on XREGION. CONUS stands for
* Continental United States it but includes both Alaska and Hawaii.
*****
;
IF XREGION IN (1,2,3,4,5,6,7,8,9,10,11,12,16) THEN USA=1;
ELSE IF XREGION IN (13,14,15) THEN USA=0;
ELSE IF XREGION = . THEN USA=.;

*****
* Assign XTNEXREG using XREGION
*****
;
IF XREGION IN (1,2,5) THEN XTNEXREG=1;
ELSE IF XREGION IN (3,4,6) THEN XTNEXREG=2;
ELSE IF XREGION IN (7,8,9,10,11,12,16) THEN XTNEXREG=3;
ELSE IF XREGION IN (13,14,15) THEN XTNEXREG=4;
ELSE IF XREGION = . THEN DO;
    IF TNEXREG = 'N' THEN XTNEXREG=1;
    ELSE IF TNEXREG = 'S' THEN XTNEXREG=2;
    ELSE IF TNEXREG = 'W' THEN XTNEXREG=3;
    ELSE IF TNEXREG = 'O' THEN XTNEXREG=4;
    ELSE XTNEXREG=.;
END;

*****
* CREATE XOCONUS FOR europe, pacific, latin america
*****;

IF XREGION=13 THEN XOCONUS=1;
ELSE IF XREGION=14 THEN XOCONUS=2;
ELSE IF XREGION=15 THEN XOCONUS=3;

*****
* Construct SERVAREA.
*****;

IF ENBGSMPL IN ('04','07','10') THEN DO;
    SELECT(CACSMPL);
        WHEN (0024,0029) SERVAREA='01';
        WHEN (0032,0033) SERVAREA='02';
        WHEN (0037,0066,0067,0123) SERVAREA='03';
        WHEN (0038,0042) SERVAREA='04';
        WHEN (0049,0103,0104) SERVAREA='05';
        WHEN (0091,0092) SERVAREA='06';
        WHEN (0098,0113) SERVAREA='07';
        WHEN (0101,0105) SERVAREA='08';
        WHEN (0109,0117) SERVAREA='09';
        WHEN (0120,0121,0124) SERVAREA='10';
        WHEN (0125,0126,0127) SERVAREA='11';

```



```
        OTHERWISE SERVAREA= '  ' ;  
    END ;  
END ;
```

F.5.A - Q3FY2017\PROGRAMS\CONSTRUCT\MERGEQ.SAS - Merge Constructed Variables onto Data File - Run Quarterly

```

*****
****
* PROGRAM:    MERGEQ.SAS
* WRITTEN:   1/28/00 BY KELLY WHITE
*
* MODIFIED:  12/23/14 BY A KUDIS FOR q1 FY 2014
                04/07/15 BY M TURBYFILL TO REMOVE ELAPSED_SEC FROM THE
DROP STATEMENT
*           02/02/2016 BY MTURBYFILL Add VARNUM to PROC CONTENTS
*           02/10/2017 BY MTURBYFILL Changed filepaths and capitalization to
match SAS Grid.
*           04/21/2017 BY MTURBYFILL H__032 and N11 are removed for
the foreseeable future.
*
* PURPOSE:   TO MERGE FINAL FILES TOGETHER AND REORDER BY VARIABLE TYPE
*           To reorder variables within the record use a
*           LENGTH statement before the SET statement.
*           Make sure that MPRID is the first variable in the
*           record followed by:
*
*           1) other sampling variables
*           2) DEERS variables
*           3) Post-stratification vars
*           4) questionnaire responses
*           5) DRC variables
*           6) recoded questionnaire responses
*           3) coding scheme flags
*           8) constructed variables
*           9) weights (NOT AVAILABLE FOR PRELIMINARY
DATA)
* INPUT:    ..\..\DATA\AFINAL\SELECTQ.sas7bdat
* INPUT:    ..\..\DATA\AFINAL\CONVARQ.sas7bdat
* OUTPUT:   ..\..\DATA\AFINAL\MERGEQ.sas7bdat
* INCLUDE:  SERVAFF.SAS
                TO MERGE ON VARIABLE SERVAFF
*****
****
* ;
LIBNAME IN1           "&DATAPATH. ";
LIBNAME OUT           "&DATAPATH. ";
LIBNAME LIBRARY       "&FMTPATH. ";

OPTIONS PS=78 LS=124 ERRORS=2 COMPRESS=YES VARLENCHK=NOWARN;

%MACRO MERGEQ;

%INCLUDE SERVAFF/SOURCE2;

PROC SORT DATA=IN1.SELECTQ OUT=SELECTQ;
    BY MPRID;
RUN;

PROC SORT DATA=IN1.CONVARQ OUT=CONVARQ;

```

```

    BY MPRID;
RUN;

PROC SORT DATA=IN1.SERVAFF OUT=SERVAFF;
    BY MPRID;
RUN;

PROC FREQ DATA=SERVAFF;
    TABLES SERVAFF;
RUN;

DATA MERGEQ (DROP =

O_ :

PRRECFLG

D_DMIS
DMIS
R_MTF
GROUP
GRP_GEO
DELGIND
);

    MERGE SELECTQ(in=hcsdb rename=(flag_fin=dummy)
                DROP=PCM SERVAFF enbgsmpl)
    CONVARQ
    SERVAFF(DROP=DCATCH ENRID);

    BY MPRID;
    if hcsdb;

/*MAKE FLAG_FIN IN Q4 CHARACTER*/
    FLAG_FIN=PUT(DUMMY,5.);
    DROP DUMMY;

FORMAT
SERVAFF $SERVAFF.
CACSMPL CAC.
DBENCAT $BENCAT.
DMEDELG $MEDELG.
DSPONSVC $SPONSVC.
FLAG_FIN $FINAL.
FNSTATUS FNSTATS.
MBRRELCD $MBRREL.
MEDTYPE $MEDTYP.
MRTLSTAT $MSTATUS.
PATCAT $AGGBCAT.
MISS_1 HAMISS.
MISS_4 HAMISS.
MISS_5 HAMISS.
MISS_6 HAMISS.
MISS_7 HAMISS.

```

```

MISS_9    HAMISS.
MISS_TOT  HAMISS.
PCM       $PCM.
PNLCATCD $PNLCAT.
PNSEXCD   $SEXCD.
RACEETHN $RACECD.
SEXSMPL   SEX.
SVCSMPL   SVCSMPL.
XSEXA     HASEX.
SERVAREA  $SRVAREA.
MPCSMPL   MPCSMPL.
D_HEALTH  $DHEALTH.
TNEXREG   $TNEXREG.
D_FAC     $DFAC.
MSM       $MSM.
XBMICAT   XBMICAT.
ENRID     $ENRID.
WEB       WEB.
XOCONUS   XOCONUS.
ACV       $ACV2_.
SURVTYPE  SURVTYPE.

XSERVAFF  XSERVAFF.

PNTYPCD   $PNTYPCD.

MPRID     $8.

```

```
;
```

```
LABEL
```

```

ENBGSMPL = "Enrollment by beneficiary category"
SERVAFF   = "Service Affiliation"
MPCSMPL   = "MPCSMPL - Military Personnel Category"
FLAG_FIN  = "Final Disposition"
CACSMPL   = "Catchment Area"
WEB       = "Web survey indicator"
D_PAR     = "DMIS Parent ID"
D_Health  = "Health Service Region"
TNEXREG   = "TNEX Region - Based on Address"
MSM       = 'Multiple Service Market Areas'
MIQCNTL   = 'Synovate ID'
XSERVAFF  = "Service Affiliation"
SERVAREA  = 'Service Area'
COM_GEO   = "Catchment Area"
SURVTYPE  = 'Web or Mail Survey'

```

```
;
```

```
RUN;
```

```

PROC CONTENTS DATA=MERGEQ;
RUN;

```

```
DATA OUT.MERGEQ;
```

```
LENGTH
```

MPRID	\$ 8	/* ID	*/
SVCSMPL	8	/* sampling variable	*/
SEXSMPL	8	/* sampling variable	*/
STRATUM	\$ 7	/* sampling variable	*/
CACSMPL	8	/* sampling variable	*/
JSFLAG	3	/* sampling variable	*/
ENBGSMPL	\$ 2	/* sampling variable	*/
MPCSMPL	8	/* sampling variable	*/
NHFF	8	/* sampling variable	*/
SERVAREA	\$ 2	/* sampling variable	*/
QUARTER	\$ 8	/* sampling variable	*/
PRN	8	/* sampling variable	*/
DCATCH	\$ 4	/* sampling variable	*/
ENRID	\$ 4	/* sampling variable	*/
DMIS_ID	\$ 9	/* sampling variable	*/
MSM	\$ 2	/* sampling variable	*/
D_FAC	\$ 9	/* sampling variable	*/
D_PAR	\$ 4	/* sampling variable	*/
D_HEALTH	\$ 2	/* sampling variable	*/
TNEXREG	\$ 1	/* sampling variable	*/
SERVAFF	\$ 1	/* sampling variable	*/
BWT	8	/* sampling variable	*/
COM_GEO	\$ 4	/* sampling variable	*/
MRTLSTAT	\$ 1	/* DEERS variable	*/
RACEETHN	\$ 1	/* DEERS variable	*/
PNSEXCD	\$ 1	/* DEERS variable	*/
DAGEQY	\$ 3	/* DEERS variable	*/
RDAGEQY	3	/* DEERS variable	*/
FIELDAGE	\$ 3	/* DEERS variable	*/
RFLDAGE	3	/* DEERS variable	*/
PCM	\$ 3	/* DEERS variable	*/
ACV	\$ 1	/* DEERS variable	*/
DBENCAT	\$ 3	/* DEERS variable	*/
DMEDELG	\$ 1	/* DEERS variable	*/
DSPONSVC	\$ 1	/* DEERS variable	*/
MBRRELCD	\$ 1	/* DEERS variable	*/
MEDTYPE	\$ 1	/* DEERS variable	*/
PATCAT	\$ 7	/* DEERS variable	*/
PNTYPCD	\$ 1	/* DEERS variable	*/
PNLCATCD	\$ 1	/* DEERS variable	*/
H&YR.001	4	/* questionnaire	*/
H&YR.002A	4	/* questionnaire	*/
H&YR.002C	4	/* questionnaire	*/
H&YR.002N	4	/* questionnaire	*/
H&YR.002O	4	/* questionnaire	*/
H&YR.002P	4	/* questionnaire	*/
H&YR.002Q	4	/* questionnaire	*/
H&YR.002S	4	/* questionnaire	*/
H&YR.002T	4	/* questionnaire	*/
H&YR.002V	4	/* questionnaire	*/
H&YR.002K	4	/* questionnaire	*/
H&YR.002U	4	/* questionnaire	*/
H&YR.002F	4	/* questionnaire	*/
H&YR.002G	4	/* questionnaire	*/

H&YR.002H	4	/* questionnaire	*/
H&YR.002I	4	/* questionnaire	*/
H&YR.002J	4	/* questionnaire	*/
H&YR.002M	4	/* questionnaire	*/
H&YR.002R	4	/* questionnaire	*/
H&YR.002L	4	/* questionnaire	*/
H&YR.003	4	/* questionnaire	*/
H&YR.004	4	/* questionnaire	*/
H&YR.005	4	/* questionnaire	*/
H&YR.006	4	/* questionnaire	*/
H&YR.007	4	/* questionnaire	*/
H&YR.008	4	/* questionnaire	*/
H&YR.009	4	/* questionnaire	*/
H&YR.010	4	/* questionnaire	*/
H&YR.011	4	/* questionnaire	*/
H&YR.012	4	/* questionnaire	*/
H&YR.013	4	/* questionnaire	*/
H&YR.014	4	/* questionnaire	*/
H&YR.015	4	/* questionnaire	*/
H&YR.016	4	/* questionnaire	*/
H&YR.017	4	/* questionnaire	*/
H&YR.018	4	/* questionnaire	*/
H&YR.019	4	/* questionnaire	*/
H&YR.020	4	/* questionnaire	*/
H&YR.021	4	/* questionnaire	*/
H&YR.022	4	/* questionnaire	*/
H&YR.023	4	/* questionnaire	*/
H&YR.024	4	/* questionnaire	*/
H&YR.025	4	/* questionnaire	*/
H&YR.026	4	/* questionnaire	*/
H&YR.027	4	/* questionnaire	*/
H&YR.028	4	/* questionnaire	*/
H&YR.029	4	/* questionnaire	*/
H&YR.030	4	/* questionnaire	*/
H&YR.031	4	/* questionnaire	*/
H&YR.033	4	/* questionnaire	*/
H&YR.034	4	/* questionnaire	*/
H&YR.035	4	/* questionnaire	*/
H&YR.036	4	/* questionnaire	*/
H&YR.037	4	/* questionnaire	*/
H&YR.038	4	/* questionnaire	*/
H&YR.039	4	/* questionnaire	*/
H&YR.040	4	/* questionnaire	*/
H&YR.041	4	/* questionnaire	*/
H&YR.042	4	/* questionnaire	*/
H&YR.043	4	/* questionnaire	*/
H&YR.044	4	/* questionnaire	*/
H&YR.045	4	/* questionnaire	*/
H&YR.046	4	/* questionnaire	*/
H&YR.047	4	/* questionnaire	*/
H&YR.048	4	/* questionnaire	*/
H&YR.049	4	/* questionnaire	*/
H&YR.050	4	/* questionnaire	*/
H&YR.051	4	/* questionnaire	*/
H&YR.052	4	/* questionnaire	*/
H&YR.053	4	/* questionnaire	*/

H&YR.054	4	/* questionnaire	*/
H&YR.055	4	/* questionnaire	*/
H&YR.056	4	/* questionnaire	*/
H&YR.057A	4	/* questionnaire	*/
H&YR.057B	4	/* questionnaire	*/
H&YR.057C	4	/* questionnaire	*/
H&YR.057D	4	/* questionnaire	*/
H&YR.058	4	/* questionnaire	*/
H&YR.059B	4	/* questionnaire	*/
H&YR.060	4	/* questionnaire	*/
H&YR.061	4	/* questionnaire	*/
H&YR.062	4	/* questionnaire	*/
H&YR.063	4	/* questionnaire	*/
H&YR.064	4	/* questionnaire	*/
H&YR.065	4	/* questionnaire	*/
H&YR.066	4	/* questionnaire	*/
H&YR.067	4	/* questionnaire	*/
H&YR.068	4	/* questionnaire	*/
H&YR.069	4	/* questionnaire	*/
H&YR.070	4	/* questionnaire	*/
H&YR.071F	4	/* questionnaire	*/
H&YR.071I	4	/* questionnaire	*/
H&YR.072	4	/* questionnaire	*/
SREDA	4	/* questionnaire	*/
H&YR.073	4	/* questionnaire	*/
H&YR.073A	4	/* questionnaire	*/
H&YR.073B	4	/* questionnaire	*/
H&YR.073C	4	/* questionnaire	*/
H&YR.073D	4	/* questionnaire	*/
H&YR.073E	4	/* questionnaire	*/
SRRACEA	4	/* questionnaire	*/
SRRACEB	4	/* questionnaire	*/
SRRACEC	4	/* questionnaire	*/
SRRACED	4	/* questionnaire	*/
SRRACEE	4	/* questionnaire	*/
SRAGE	4	/* questionnaire	*/
H&YR.074	4	/* questionnaire	*/
H&YR.075	4	/* questionnaire	*/
H&YR.076	4	/* questionnaire	*/
H&YR.077	4	/* questionnaire	*/
H&YR.078	4	/* questionnaire	*/
H&YR.079	4	/* questionnaire	*/
S&YR.009	4	/* supplemental	*/
S&YR.010	4	/* supplemental	*/
S&YR.011	4	/* supplemental	*/
S&YR.014	4	/* supplemental	*/
S&YR.B01	4	/* supplemental	*/
S&YR.B02	4	/* supplemental	*/
S&YR.B03	4	/* supplemental	*/
S&YR.B04	4	/* supplemental	*/
S&YR.BE01A	4	/* supplemental	*/
S&YR.BE01B	4	/* supplemental	*/
S&YR.BE01C	4	/* supplemental	*/
S&YR.BE01D	4	/* supplemental	*/
S&YR.BE01E	4	/* supplemental	*/

S&YR.BE01F	4	/* supplemental	*/
S&YR.BE01G	4	/* supplemental	*/
S&YR.BE01H	4	/* supplemental	*/
S&YR.BE01I	4	/* supplemental	*/
S&YR.BE01J	4	/* supplemental	*/
S&YR.BE01K	4	/* supplemental	*/
S&YR.BF4	4	/* supplemental	*/
S&YR.BG01	4	/* supplemental	*/
S&YR.BG02	4	/* supplemental	*/
S&YR.BG03	4	/* supplemental	*/
S&YR.BJ01	4	/* supplemental	*/
S&YR.BJ02	4	/* supplemental	*/
S&YR.BJ03	4	/* supplemental	*/
S&YR.BJ04	4	/* supplemental	*/
ONTIME	\$ 3	/* Survey fielding variable	*/
FLAG_FIN	\$ 5	/* Survey fielding variable	*/
DUPFLAG	\$ 3	/* Survey fielding variable	*/
FNSTATUS	8	/* Survey fielding variable	*/
KEYCOUNT	8	/* Survey fielding variable	*/
WEB	8	/* Survey fielding variable	*/
MIQCNTL	\$ 12	/* Survey fielding variable	*/
EMAILRES	\$ 25	/* Survey fielding variable	*/
INTTIME	8	/* Survey fielding variable	*/
SURVTYPE	8	/* Survey fielding variable	*/
N1	8	/* CS flag variable	*/
N2	8	/* CS flag variable	*/
N3	8	/* CS flag variable	*/
N4	8	/* CS flag variable	*/
N5	8	/* CS flag variable	*/
N6	8	/* CS flag variable	*/
N7	8	/* CS flag variable	*/
N8	8	/* CS flag variable	*/
N8_01	8	/* CS flag variable	*/
N9	8	/* CS flag variable	*/
N10	8	/* CS flag variable	*/
N10_B1	8	/* CS flag variable	*/
N12	8	/* CS flag variable	*/
N13	8	/* CS flag variable	*/
N14	8	/* CS flag variable	*/
N15	8	/* CS flag variable	*/
N16	8	/* CS flag variable	*/
N17	8	/* CS flag variable	*/
N18	8	/* CS flag variable	*/
N19A	8	/* CS flag variable	*/
N19B	8	/* CS flag variable	*/
N20	8	/* CS flag variable	*/


```

N21          8          /* CS flag variable */
  N21_BG1    8          /* CS flag variable */
  N21_BG2    8          /* CS flag variable */
  N21_BG3    8          /* CS flag variable */
N22          8          /* CS flag variable */
N23          8          /* CS flag variable */
N23_HT       8          /* CS flag variable */
N23_WT       8          /* CS flag variable */
  N23_BE     8          /* CS flag variable */
N24          8          /* CS flag variable */
N25          8          /* CS flag variable */

```

```

MISS_1       8          /* CS Count */
MISS_4       8          /* CS Count */
MISS_5       8          /* CS Count */
MISS_6       8          /* CS Count */
MISS_7       8          /* CS Count */
MISS_9       8          /* CS Count */
MISS_TOT     8          /* CS Count */

```

```

XENRLMT      8          /* constructed */
XENR_PCM     8          /* constructed */
XINS_COV     8          /* constructed */
XBENCAT      8          /* constructed */
XENR_RSV     8          /* constructed */
XINS_RSV     8          /* constructed */
XREGION      3          /* constructed */
XTNEXREG     3          /* constructed */
USA          3          /* constructed */
XOCONUS      3          /* constructed */
OUTCATCH     8          /* constructed */
XSEXA       8          /* constructed */
XBMI         8          /* constructed */
XBMICAT      3          /* constructed */
XBNFGRP      8          /* constructed */
XSERVAFF     3          /* constructed */
KMILOPQY    8          /* constructed */
KCIVOPQY    8          /* constructed */
KCIVINS      8          /* constructed */
HP_PRNTL    8          /* constructed */
HP_MAMOG    8          /* constructed */
HP_MAM50    8          /* constructed */
HP_PAP      8          /* constructed */
HP_BP       8          /* constructed */
HP_FLU     8          /* constructed */
HP_OBESE    8          /* constructed */
HP_SMOKE    8          /* constructed */
HP_SMKH3    8          /* constructed */
HP_CESH3    8          /* constructed */

```

```
;
```

```
SET MERGEQ;
```

```
RUN;
```

```
PROC CONTENTS DATA=OUT.MERGEQ POSITION VARNUM;
```

```
title1 "HCSDB for Q&QT. FY 20&YR., ordered by variable type";  
RUN;  
  
PROC FREQ DATA=OUT.MERGEQ;  
TABLE PCM ACV CACSMPL /MISSPRINT;  
RUN;  
  
%MEND;  
%MERGEQ;
```

**F.5.B - Q3FY2017\PROGRAMS\CONSTRUCT\SERVAFF.SAS - Include File for merging
SERVAFF variable to quarterly Data File**

```

/*****
*****/
/* PROJECT: 8687-100 (DOD QUARTERLY 2001)
*/
/* AUTHOR: NATALIE JUSTH
*/
/* DATE: APRIL 24, 2001
*/
/*
*/
/* PURPOSE: INCLUDE PROGRAM FOR MERGEQ.SAS
*/
/* MERGES VARIABLE SERVAFF TO QUARTERLY DATASET
*/
/* INPUT: ... \DATA\AFINAL\S200204.sas7bdat
*/
/* ... \DATA\AFINAL\SAMPLA02.sas7bdat
*/
/* OUTPUT: ... \DATA\AFINAL\SERVAFF.sas7bdat
*/
/*****
*****/

```

```

LIBNAME INr "&INRLIB."; /*Restricted folder*/
LIBNAME TMA "&DATAPATH.";
LIBNAME serv "&DATAPATH.";

```

```

/* Create new DMIS merge variable */
/* First use ENRID, then ULOCDMIS, then DCATCH */

```

```

DATA SAMPLA02(KEEP=DMIS_ID ENRID MSM MPRID PCM DCATCH);
SET INr.SAMPLA02;
LENGTH DMIS_ID $9;
DMIS_ID=ENRID;
IF DMIS_ID=' ' THEN DO;
    IF ULOCDMIS NE ' ' THEN DMIS_ID=ULOCDMIS;
    ELSE DMIS_ID=DCATCH;
END;

```

```

*****
* Construct MSM.

```

```

*****;

```

```

IF PCM = 'MTF' THEN DO;
    SELECT(DMIS_ID);
        WHEN ('0037', '0066', '0067', '0068', '0069',
              '0123', '0256', '0306', '0309', '0385', '0413') MSM='01';
        WHEN ('0120', '0121', '0124') MSM='02';
        WHEN ('0089', '0335') MSM='03';

```

```

        WHEN ('0103', '0356')                MSM='04';
        WHEN ('0101', '0105')                MSM='05';
        WHEN ('0297', '0316', '0436', '0654', '1990', '0073') MSM='06';
        WHEN ('0109', '0117', '0363', '0366') MSM='07';
        WHEN ('0032', '0033', '0252', '7200') MSM='08';
        WHEN ('0024', '0029')                MSM='09';
        WHEN ('0125', '0126', '0127', '0395', '7138') MSM='10';
        WHEN ('0052', '0280', '0287')       MSM='11';
        WHEN ('0204', '0006')                MSM='12';
        WHEN ('0005', '0203')                MSM='13';
        OTHERWISE MSM='';
    END;
END;
ELSE DO;
    SELECT(DCATCH);
        WHEN ('0037', '0066', '0067', '0068', '0069',
              '0123', '0256', '0306', '0309', '0385', '0413') MSM='01';
        WHEN ('0120', '0121', '0124')        MSM='02';
        WHEN ('0089', '0335')                MSM='03';
        WHEN ('0103', '0356')                MSM='04';
        WHEN ('0101', '0105')                MSM='05';
        WHEN ('0297', '0316', '0436', '0654', '1990', '0073') MSM='06';
        WHEN ('0109', '0117', '0363', '0366') MSM='07';
        WHEN ('0032', '0033', '0252', '7200') MSM='08';
        WHEN ('0024', '0029')                MSM='09';
        WHEN ('0125', '0126', '0127', '0395', '7138') MSM='10';
        WHEN ('0052', '0280', '0287')       MSM='11';
        WHEN ('0204', '0006')                MSM='12';
        WHEN ('0005', '0203')                MSM='13';
        OTHERWISE MSM='';
    END;
END;

RUN;

PROC PRINT DATA=SAMPLA02(OBS=50);
RUN;

PROC SORT DATA=SAMPLA02;
    BY DMIS_ID;
RUN;

PROC SORT DATA=TMA.TMA(KEEP=DMIS_ID FACILITY_SERVICE_CODE) OUT=TMA;
    BY DMIS_ID;
RUN;

DATA SERV.SERVAFF;
    MERGE SAMPLA02(IN=IN1)
          TMA(RENAME=(FACILITY_SERVICE_CODE=SERVAFF));
    BY DMIS_ID;

    LENGTH XSERVAFF 3;

    IF SERVAFF='A' THEN XSERVAFF=1; *Army;
    IF SERVAFF='F' THEN XSERVAFF=2; *Air Force;
    IF SERVAFF='N' THEN XSERVAFF=3; *Navy;

```

```
/**Coast Guard, Administrative, Support Contractor, USTF, Noncatchment,  
Other, Not available, Missing/unknown will collapsed to other per Eric  
Shone ***/
```

```
IF SERVAFF IN ('C' 'J' 'M' 'T' 'S' 'O' 'X' ' ' ') THEN XSERVAFF=4; *Other;  
IF SERVAFF = 'P' THEN XSERVAFF=5; *AMK 2/27/14 ADDED JOINT SERVICE;
```

```
IF IN1;  
RUN;
```

```
PROC PRINT DATA=SERV.SERVAFF(OBS=200);  
RUN;
```

```
PROC CONTENTS DATA=SERV.SERVAFF; RUN;
```

F.6 - Q3FY2017\Programs\Weighting\NewWeights\smplA1A2.SAS - Define the data sets and create the variables

```

*****
*****
*** Program: smplA1A2.sas
*** Task   : (40309.31H)
*** Purpose: Define the data sets and construct the variables to be used in
the propensity model
***
*** Written: Haixia Xu 12/18/2006 for Q1FY2007 Weighting
***
*** Inputs:  extract.sas7bdat   : Extract file
***          selectq.sas7bdat  : Survey file with CAHPS4.0 questionnaires
***          deers001-004.sas7bat
***
*** Outputs: smplA1A2.sas7bdat
***          smplA1.sas7bdat: Dataset to be used to calculate the unknown
eligibility factor A1
***          smplA2.sas7bdat: Dataset to be used to calculate the
nonresponse adjustment A2
***          conusA1.sas7bdat, oconusA1.sas7bdat, conusA2.sas7bdat,
oconusA2.sas7bdat
***
*** Note:    1)Modified for Q1FY2007 weighting:
***           a) Two more variables are added in CHAID tree analysis to
capture the new
***              sample design in qlfy2007
***           b) Uncollapse PCM to differentiate CIV and MTF.
***           2)Modified for Q1FY2009 weighting:
***           a) Email notification sent to all Active duty whose email
address is available
***              Looks like the variable name in Answer Tree has to be no
longer than 8.
***           b) Define patc_grp based on patcat & Has_email, it has 4
categories instead of 3.
***           3)Q1fy2012 had 42 overlap with TSS 2011. We dropped 42 cases
from sample.
***              For weigthing purpose, we need to make there status as Non-
Response.
***           4)Q2FY2012 We do not create data 'sampla03_2' and 'Has-Email'
variable any more.
***           5)Q1FY2014: Starting from Q1FY2014, Sample Size increased to
100,000 and it's WebOnly
*****
*****;
options formdlim='=' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE
nocenter ls=150 ps=60
formchar="|----||---+|-\<>*" ;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/'),));
%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/

```

```

%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

libname inr "/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER."
access=readonly; *extract, deers;
libname in "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; *selectq;
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";
*smp1a1a1,smp1a1,smp1a2,conusa1;

libname library v9
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal/fmtlib"
access=readonly;
%let outpath =
/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/AnswerTree/;

title1 "Program: smp1A1A2.SAS (&quarter.)";
title2 "Purpose: Define the data sets and construct the variables";

*****
***
Put the data together;
*****
***;
data selectq;
    set in.selectq(keep=BWT COM_GEO D_HEALTH D_FAC dageqy ENBGSMPL FNSTATUS
MPCSMPL MPRID
                PATCAT PCM PNLCDTCD PNSEXCD SERVAFF SEXSMPL STRATUM
SVCSMPL WEB TNEXREG
                GROUP DBENCD);
run;

*****
***
Get the variables PGCD, PTNT_ID from extract data
*****
***;
proc sort data=selectq; by mprid;
run;

proc sort data=inr.extract(keep=mprid pgcd ptnt_id PAYPLNCD) out=extract;
by mprid;
run;

data selectq;
    merge selectq(in=a)    extract(in=b);
    by mprid;

```

```

    if a and b;
run;

*****
***
Merge the selectq with DEERS to get the address variable c_addr1
*****
***;
data deers;
set inr.DEERS(keep=ptnt_id c_addr1);
if c_addr1=' ' then CHCSAddr=0;
if c_addr1~=' ' then CHCSAddr=1;
run;

proc sort data=selectq; by ptnt_id; run;
proc sort data=deers; by ptnt_id; run;

data selectq;
merge selectq (in=A) deers;
by ptnt_id;
if A=1;
run;

*****
***
Construct the new variables
*****
***;
data smpl;
set selectq;

***age***;
age=input(dageqy, 3.);

*Define the age group with 5 categories, which will be used in CHAID;
length AGE_GRP4 $1;
if age <= 24 then AGE_GRP4 = '1';
else if 24 < age <= 34 then AGE_GRP4 = '2';
else if 34 < age <= 44 then AGE_GRP4 = '3';
else if age > 44 then AGE_GRP4 = '4';
if age=. then AGE_GRP4='4';

***PATCAT***;
***Define PATCAT this way so it won't be associated with the age ***;
length PATC_grp $15;
if PATCAT = 'UNKNOWN' then do;
    if ENBGSMPL in ('01') then PATC_grp='ACTDTY';
    else if ENBGSMPL in ('02', '03', '04') then PATC_grp='DEPACT';
    else if ENBGSMPL in ('05', '06', '07', '10') then PATC_grp='NADD';
end;
else if PATCAT in ('NADD<65','NADD65+') then PATC_grp = 'NADD';
else PATC_grp = PATCAT;

***PCM***;
length PCM_grp $3;

```



```

if PCM = ' ' then PCM_grp='NON';
else if PCM in ('CIV', 'MTF') then PCM_grp = PCM;

***PNLCATCD***;
length PNLC_grp $8;
if PNLCATCD in ('N','V') then PNLC_grp='Grd/Resv';
else PNLC_grp= 'Other';

***RANKPAY***;
length RankPay $3;
if MPCSMPL=1 then do;
  if PGCD in (' ', '00', '99','WW','NS') then RankPay = 'E01';
  else RankPay = 'E' || PGCD;
end;
else if MPCSMPL=2 then do;
  if PGCD in (' ', '00', '99' ) then RankPay = '001';
  else RankPay = '0' || PGCD;
end;
else if MPCSMPL=3 then do;
  if PGCD in (' ', '00', '99') then RankPay = 'W01';
  else RankPay = 'W' || PGCD;
end;

length RANK_grp $15;
if RankPay in ('E01', 'E02', 'E03', 'E04') then RANK_grp = 'E1234';
else if RankPay in ('E05', 'E06', 'E07', 'E08', 'E09', 'E10',
'E11', 'E12', 'E13', 'E14', 'E15') then RANK_grp = 'E56789101112';
else if RankPay in ('EZZ') then RANK_grp = 'E56789101112'; *In Q2FY15, 1
person is in RankPay EZZ. Per Nancy and Eric's recomendation, we assign EZZ
to largest Rank_grp;
else if Rankpay in ('W01', 'W02', 'W03', '001', '002', '003') then RANK_grp
= 'W1230123';
else if RankPay in ('W04', 'W05', '004', '005', '006', '007', '008', '009',
'010') then RANK_grp = 'W45045678910';

***sex***;
*Put the missing sex with male;
length SEX_grp $1;
if SEXSMPL in (1, 3) then SEX_grp = '1';
else if SEXSMPL=2 then SEX_grp='2';

***service***;
length SVC_grp $16;
if SVCSMPL = 1 then SVC_grp='Army';
else if SVCSMPL in (2,3,5,6) then SVC_grp='N/M/C/O/U';
else if SVCSMPL = 4 then SVC_grp='Air Force';

***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01','05') then TNEX_grp='N';
else if d_health in ('18','04') then TNEX_grp='S';
else if d_health in ('19','08','11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which
is the region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';

```

```

else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

***CONUS region***;
length conus $1;
if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('N', 'S', 'W') then conus='1';

***Catchment areaindicator***;
length in_catch $1;
if d_fac='NONCAT' or d_fac='TGRO' or d_fac="TPR" then in_catch='0';
else in_catch = '1';

if group='0' then TRS=1;
else TRS=2;

label in_catch='In-catchment area indicator'
      TRS='TRICARE Reserve Select indicator';
run;

title3 'Checking the Coding after Constructing New Variables';
proc freq data=smpl;
tables CHCSAddr AGE_GRP4 AGE_GRP4*AGE*dageqy
      PATC_grp PATC_grp*PATCAT*ENBGSMPL
      PCM_grp PCM_grp*PCM
      PNLC_grp PNLC_grp*PNLCATCD
      RANKPAY*MPCSMPL*PGCD
      RANK_grp RANK_grp*RANKPAY
      SEX_grp SEX_grp*SEXSMPL*PNSEXCD
      SVC_grp SVC_grp*SVCSMPL
      TNEX_grp TNEX_grp*d_health TNEX_grp*d_health*com_geo
      CONUS CONUS*TNEX_grp
      in_catch in_catch*d_fac
      TRS*group
      com_geo*TNEX_grp
/missing list;
run;

*****
***
Output the data sets
*****
***;
data OUT.smplA1A2 OUT.smplA1 OUT.smplA2 OUT.conusA1 OUT.oconusA1 OUT.conusA2
OUT.oconusA2;
set smpl(drop=DAGEQY PNSEXCD MPCSMPL PGCD PTNT_ID);
*Rename has_email=HasEmail;
if fnstatus in (11, 12, 20, 31, 32, 41, 42) then output OUT.smplA1A2;

if fnstatus in (11, 12, 20, 31, 41, 42) then do;
  if fnstatus in (11, 12, 20, 31) then eligkwn=1; else eligkwn=0;
  label eligkwn = 'Eligibility known indicator';
  output OUT.smplA1;

```

```

    if conus='1' then output OUT.conusA1;
    else if conus='0' then output OUT.oconusA1;
end;

if fnstatus in (11, 12, 20) then do;
    if fnstatus = 11 then complete = 1; else complete =0;
    label complete = 'Eligible respondent/complete indicator';
    output OUT.smplA2;

    if conus='1' then output OUT.conusA2;
    else if conus='0' then output OUT.oconusA2;
end;
run;

options compress=no;
title3 'Freq of conus*fnstatus for 100,000 beneficiaries';
proc freq data=OUT.smplA1A2;
tables conus*fnstatus / missing list;
run;

title3 'Freq of fnstatus*eligkwn for 100,000 benes except fnstatus=32';
proc freq data=OUT.smplA1;
tables conus*fnstatus*eligkwn/ missing list;
run;

title3 'Freq of fnstatus*complete for fnstatus=11,12,20';
proc freq data=OUT.smplA2;
tables conus*fnstatus*complete/ missing list;
run;

/*****
/* Proc Export to convert SAS dataset to SPSS file for the Answer Tree*/
*****/
%MACRO SASToSAV(FNAME);
    PROC EXPORT DATA=OUT.&FNAME.
        OUTFILE= "&outpath./&FNAME..sav" REPLACE;
    RUN;
%MEND SASToSAV;

%SASToSAV(conusA1);
%SASToSAV(oconusA1);
%SASToSAV(conusA2);
%SASToSAV(oconusA2);

proc printto;
run;

***** The End *****;

```

F.7.A - Q3FY2017\Programs\Weighting\NewWeights\logmdA1.SAS - Predict the response propensity score for the unknown eligibility adjustment

```
*****
*****
*** Program: logmdA1.sas (40309.31H)
*** Purpose: Use the SUDAAN model to predict the response propensity
***           score for the unknown eligibility adjustment step
*** Inputs  : conusA1.sas7bdat, oconusA1.sas7bdat, smplA1A2.sas7bdat
*** Outputs: logmdA1.sas7bdat
***
*** Written: Haixia Xu 12/27/2006 Q4fy2007 weighting
***
*** Note   : 1) We need to carefully check log for Sudaan Warning and review
to make sure it's not
***           falls warning (Sudaan Bug we identified couple of years
ago). If we notice Singularity
***           warning, we need to check how to avoid it.
***           See note: L:\Q4FY2010\Programs\Weighting\NewWeights\SUDAAN
Warning_Proc RLOGIST.msg
***
***           2) Starting from Q3FY2011:
***           a) Active duty 'with and without' email has been collapsed,
since these cases are
***           involved in so many zero cell.
***           b) has_email is no longer used in the model since most of
the time it is not included
***           in the final model.For Detail:
***           See note:
L:\Q3FY2011\Programs\Weighting\NewWeights\ImportantNote_PleaseCheck
***
***           3) Starting from Q1FY2015, instead of 3-level interactions, we
will use 2-level
***           (Dept=2 option) for Chaid AnswerTree.
***
***           4) Starting from Q3FY2015, using /NORM option in SAS Stepwise.
Otherwise standard errors will be way too small.
***
***           5) Starting from Q3FY2015, we selected a sample from Non-
Respondent for a paper
***           followup. Only 'CONUS and non-AD' non-respondents are
eligible for paper survey.
***           We created three flag variables to use in model: Flag_NR,
Flag_NADD, Flag_ADFM
***           Flag_NR is main effect and (Flag_NADD and Flag_ADFM) are
interactions here.
***
***           6) Starting from Q2FY2016t, we decided to use all decisions we
took in regular quarter
***           for the corresponding Trickle Quarter. We historically
noticed, with few hundred extra
***           responses decisions hardly change in trickle quarter than
regular quarter, so we want
***           to keep code as is to reduce extra afford.
***
```

```

***          7) We decided to always collapse AgeGroup='5'(age65+) with
AgeGroup='4' for both CONUS
***          and OCONUS since it always causes problems (zerocell,
smallcell, singularity warning)
***
***          8) Review for updates and Update Common Weighting README file
with suggestions, QA Comments
***
N:\Project\40309_HCS\DC1\HCSDB\README_File_For_HCSDB_Weighting.txt
***          (you may find a shortcut in individual qtr folder)
***
***          9) Starting from Q2FY2017, creating 4-level Age Group instead
of 5-level,
***          since it always causes problems.
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
/*validvarname=upcase*/ nocenter
formchar= "|----+|----+|-/\<>*" orientation=portrait mprint symbolgen spool
obs=max nocodegen;

*Common Code for Grid (Grid is case sensitive);
%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
      %scan(&_sasprogramfile,-1,'/')));
%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
);
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;
%let shortquarter = fy17q3;

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeigh
hts/Zero_One_Cells.sas";

libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* conusA1.sas7bdat, oconusA1.sas7bdat, smp1A1A2.sas7bat */
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";
/* logmdA1.sas7bdat */

libname in2
"/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER./paper_&shortquarter."
access=readonly; /*Sample non-respondents selected for paper ques*/

proc format;
value FMT_TNEX 1 = '1-North'
                2 = '2-South'
                3 = '3-West'
                4 = '4-Other';
value FMT_AGE  1 = '<=24'

```

```

                2 = '(24,34]'
                3 = '(34,44]'
                4 = '>=45';
value FMT_PAT  1 = '1-ACTDTY'
                2 = '2-DEPACT'
                3 = '3-NADD';
value FMT_PCM  1 = '1-Nonenrollee'
                2 = '2-CIV Enrollee'
                3 = '3-MTF Enrollee';
value FMT_PNLC 1 = '1-Other'
                2 = '2-Grd/Resv';
value FMT_RANK 1 = '1-E1234'
                2 = '2-E56789101112'
                3 = '3-W1230123'
                4 = '4-W45045678910';
value FMT_RK   1 = '1-E1_12'
                2 = '2-W1_501_10';
value FMT_SEX  1 = '1-Male'
                2 = '2-Female';
value FMT_SVC  1 = '1-Army'
                2 = '2-Air Force'
                3 = '3-N/M/C/O/U';
value FMT_INCT 1 = '1-Not in Catch'
                2 = '2-In catch';
value FMT_PLUS 1 = '1- TRICARE PLUS'
                2 = '2- Not TRICARE PLUS';
value FMT_TRS  1 = '1- TRICARE Reserve Select'
                2 = '2- Not TRICARE Reserve Select';
value FMT_addr 0 = '0- CHCS mailling address unavailable'
                1 = '1- CHCS mailling address available';
value FMT_chcs 1 = '1- CHCS mailling address unavailable'
                2 = '2- CHCS mailling address available';
value FMT_emai 1 = 'AD with Email Address available'
                2 = 'AD with Email Address unavailable'
                3 = 'Non Active Duty(AD)';
run;

```

```

title1 "Program: logmdA1.sas (&quarter.)";
title2 "Purpose: Predict the Response Probability for the unknown
Eligibility Adjustment";

```

```

*=====
=====
Create the dummy variables to be used in the SUDAAN model
=====
=====;
data logmdA1;
set in.conusA1 in.oconusA1;

*Convert MPRID and stratum into numerical values since SUDAAN takes only
numerical values;
length MPRID_c9 $9 stratum1 $8 ;
MPRID_c9='1' || MPRID;
MPRID_nm = input (MPRID_c9, 9.);

```

```

stratum1='1' || stratum;
STRAT_nm = input (stratum1, 8.);

*****
Convert all the categorical variables into numeric variables
*****;
if TNEX_grp='N' then TNEX_num=1;
else if TNEX_grp='S' then TNEX_num=2;
else if TNEX_grp='W' then TNEX_num=3;
else if TNEX_grp='O' then TNEX_num=4;

AGE_num4=input(AGE_GRP4, 1.);

/*Collapse Active Duty with Email/NO-Email, since they are involved in so
many zero cell
  If PATC_grp in ('ACTDTY_EMAIL','ACTDTY_NOEMAIL') then PATC_grp= 'ACTDTY'*/
if PATC_grp='ACTDTY' then PATC_num=1;
else if PATC_grp= 'DEPACT' then PATC_num=2;
else if PATC_grp = 'NADD' then PATC_num=3;

if PCM_grp='NON' then PCM_num=1;
else if PCM_grp='CIV' then PCM_num=2;
else if PCM_grp='MTF' then PCM_num=3;

if PNLC_grp = 'Other' then PNLC_num=1;
else if PNLC_grp= 'Grd/Resv' then PNLC_num=2;

if RANK_grp='E1234' then RANK_num=1;
else if RANK_grp= 'E56789101112' then RANK_num=2 ;
else if RANK_grp = 'W1230123' then RANK_num= 3;
else if RANK_grp = 'W45045678910' then RANK_num=4;

if SEX_grp='1' then SEX_num=1;
else if SEX_grp= '2' then SEX_num = 2;

if SVC_grp='Army' then SVC_num=1;
else if SVC_grp='Air Force' then SVC_num=2;
else if SVC_grp='N/M/C/O/U' then SVC_num=3;

if IN_CATCH='0' then INCAT_num=1;
else if IN_CATCH='1' then INCAT_num=2;

if CHCSAddr='0' then CHCS_num=1;
else if CHCSAddr='1' then CHCS_num=2;
run;

*****
*****
*Starting from Q3FY2015, to increase RR, we selected a sample from non-
respondents
  to send a paper follow-up middle of the survey period. Nancy suggested to
create
  a Flag variable using paper mailing information. We will use the flag in
SAS Stepwise

```

as a main effect (Ref=1). Also, will include a flag*Patc interaction term in SAS modelling.

Merging data to create Flag flag_smplNR.

Program for followup survey 'Select_Sample_for_Paper_Instrument.sas' is in Q3 folder

*****;

```
data EligNR (keep=flag_smplNR mprid);
```

```
set in2.sampla02pq;
```

```
flag_smplNR=1;
```

```
run;
```

```
proc sort data=EligNR; by MPRID; run;
```

```
proc sort data=logmdA1; by MPRID; run;
```

```
data logmdA1;
```

```
merge logmdA1(In=A) EligNR(in=B);
```

```
by MPRID;
```

```
If A;
```

```
if (flag_smplNR=. and PATC_grp~='ACTDTY') then flag_smplNR=0;
```

```
Run;
```

*New as of Q3FY2015.

Nancy: Flag variable flag_smplNR may have a interaction with PATC.

As we know, none of the AD were offered a paper instrument

ie., all AD have a flag_smplNR=0. So to include in model,

we need to create new variables flag_NADD and flag_ADFM;

```
data logmdA1;
```

```
set logmdA1;
```

```
*creating a main effect for modelling;
```

```
if flag_smplNR=1 then flag_NR=1;
```

```
else flag_NR=2;
```

```
*creating a crosstab (NR flag and PATC);
```

```
if PATC_grp='DEPACT' then do;
```

```
if flag_smplNR=1 then flag_ADFM=1;
```

```
else flag_ADFM=2;
```

```
end;
```

```
if PATC_grp='NADD' then do;
```

```
if flag_smplNR=1 then flag_NADD=1;
```

```
else flag_NADD=2;
```

```
end;
```

```
if flag_ADFM=. then flag_ADFM=2;
```

```
if flag_NADD=. then flag_NADD=2;
```

```
run;
```

```
proc sort data=logmdA1;
```

```
by conus;
```

```
run;
```

```
/*
```

```
title3 'Freq of MPRID_nm*mprid strat_nm*stratum';
```



```

proc freq data=logmdA1(obs=10);
tables MPRID_nm*mprid strat_nm*stratum/ missing list;
run;
*/

title3 'Check the construction of the numeric variables';
proc freq data=logmdA1;
tables TNEX_num*TNEX_grp
      AGE_num4*AGE_GRP4
      PATC_num*PATC_grp
      PCM_num*PCM_grp
      PNLC_num*PNLC_grp
      RANK_num*RANK_grp
      SEX_num*SEX_grp
      SVC_num*SVC_grp
      INCAT_num*IN_CATCH
      CHCS_num*CHCSAddr
/missing list;
run;

title3 "Checking Crosstab/Freq";
proc freq data=logmdA1;
tables fnstatus
      conus*fnstatus/list missing;
run;

title3 "Checking the Construction of new flag variables:";
proc freq data=logmdA1;
tables flag_smp1NR*patc_grp*flag_NR*flag_ADFM*flag_nadd
      conus*flag_ADFM*flag_NADD/list missing;
run;

*Creating Conus and Oconus Data sets;
data conus oconus;
set logmdA1;
if conus='1' then output conus;
else if conus='0' then output oconus;
run;

*=====
=====
Start the modeling for CONUS
In the full model, all the variables put in the answer tree are used as main
effects, and
the interactions are picked based on the tree for Conus A1 for the current
quarter
=====
=====;
/*Running macro to check ZeroCell for CONUS*/
*We can keep all variables as macro variable Vars_in_interactions_conus
below;
%Let Vars_in_interactions_conus = AGE_GRP4 tnex_grp patc_grp pnlc_grp
pcm_grp rank_grp
                                chcsaddr in_catch svc_grp sex_grp;

```

```

/*The interactions below are determined based on the Conus A1 tree for the
current quarter*/
%let Interactions_from_chaid_conus =
/*Q3FY2017:*/
AGE_GRP4*Patc_grp
AGE_GRP4*SVC_grp
;

title3 "Check the zero cells for Conus";
%ZERO_ONE_CELLS(conus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);

/*NOTE:
If Zero cell found, please add code here to perform following tasks and
check zero cell again for Conus:
    -Check to see how to collapse (CONUS):
    -Collapse the Zero Cells (CONUS)
    -Checks zero cell collapsements (CONUS)

title3 "Checks the zero cells again for Conus after zero cell collapse ";
%ZERO_ONE_CELLS(conus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);
*/

*****
Run the SAS stepwise model
*****;
%macro modelselect_conus(method= );
title3 "SAS Logistic for CONUS - &method.";
proc logistic data=conus descending;
CLASS
TNEX_grp (ref='N')
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='NON')
PNLC_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='0')
TRS (ref='2')
CHCSAddr (ref='0')
flag_NR (ref='2')
flag_ADFM (ref='2')
flag_NADD (ref='2')

/*HASEmail(ref='YES')*/
/param=ref descending;
MODEL eligkwn =
TNEX_grp
AGE_GRP4
PATC_grp
PCM_grp
PNLC_grp

```

```

RANK_grp
SEX_grp
SVC_grp
IN_CATCH
TRS
CHCSAddr
flag_NR

/*Two way interaction terms we use for modelling*/
flag_ADFM /*two way interaction flag variable*/
flag_NADD /*two way interaction flag variable*/

/*Q3FY2017: Two way interaction from the 2-level chaid answer tree ran*/
AGE_GRP4*Patc_grp
AGE_GRP4*SVC_grp

/Lackfit rsquare details hierarchy=single selection=&method. slentry=0.15
slstay=0.20;
OUTPUT OUT=out_conus PREDICTED=predicted;
WEIGHT bwt /norm ; /*Weighted SAS Model*/
run;
%mend modelselect_conus;

%modelselect_conus(method=stepwise);

```

*Note: We treat flag_NR as main effect and flag_ADFM and flag_NADD are interaction of NR selected for survey flag and PATC. ;

```

*****
*****
: Summary of Stepwise Selection :
*****
*****;

```

```

/*
Selection

```

Wald	Variable	Effect	Number	Score
Step Entered	Removed	DF	In	Chi-Square
Chi-Square Pr >	ChiSq Label			
<.0001	1 AGE_GRP4	3	1	8638.7442
<.0001	2 FLAG_NR	1	2	9952.0634
<.0001	3 PATC_GRP	2	3	5111.0572
<.0001	4 CHCSADDR	1	4	540.9925
<.0001	5 RANK_GRP	3	5	422.8287
<.0001	6 SVC_GRP	2	6	236.1875

```

          7 AGE_GRP4*SVC_GRP                6          7    279.3221
<.0001
          8 PCM_GRP                          2          8    214.7613
<.0001
          9 AGE_GRP4*PATC_GRP                6          9    202.2092
<.0001
         10 TRS                             1         10    32.2986
<.0001 TRICARE Reserve Select indicator
         11 SEX_GRP                          1         11    29.7021
<.0001
         12 TNEX_GRP                         2         12    27.4737
<.0001
         13 IN_CATCH                         1         13    10.0993
0.0015 In-catchment area indicator
         14 FLAG_ADFM                        1         14     3.7427
0.0530
*/

```

```

*****
Macro to Check the SUDAAN fit for the the SAS Final Model above
*****;
*Proc Sort before Proc Rlogist;
proc sort data=conus;
by STRAT_nm;
run;

%macro sudaan_conus(ttl, vars);
Title3 " The Final Model from SAS Stepwise - CONUS ";
Title4 " &ttl.";
proc rlogist data=conus design=STRWR filetype=SAS;
NEST STRAT_nm/missunit;
weight bwt;
CLASS    AGE_num4      PATC_num      PCM_num      RANK_num      sex_num
PNLC_num
          SVC_num      incat_num      TRS          chcs_num      tnex_num
          flag_NR      flag_NADD      flag_ADFM;

REFLEVEL AGE_num4=1   PATC_num=3   PCM_num=1   RANK_num=1   SEX_num=1
PNLC_num=1
          SVC_num=1   INCAT_num=1   TRS=2      chcs_num=1   tnex_num=1
          flag_NR=2   flag_NADD=2   flag_ADFM=2;

MODEL   eligkwn = &vars.;
idvar   MPRID_nm;
print   beta sebeta t_beta p_beta
HLCHISQ HLCHIDF HLCHIP HLWALDF HLWALDDF HLWALDP HLSATF HLSATDF HLSATP DF
WALDCHI WALDCHP
/betafmt=f7.3 sebetafmt=f7.3 WALDCHIFMT=F8.2 waldchpfmt=f8.6;
output  expected observed nest idvar /filename =pred_c filetype=sas replace;
rformat AGE_num4 FMT_AGE.;
rformat PATC_num FMT_PAT.;
rformat PCM_num FMT_PCM.;
rformat RANK_num FMT_RANK.;
rformat sex_num FMT_SEX.;
rformat PNLC_num FMT_PNLC.;
rformat SVC_num FMT_SVC.;
rformat INCAT_num FMT_INCT.;
rformat trs FMT_TRS.;

```

```

rformat tnex_num FMT_tnex.;
rformat chcs_num FMT_CHCS.;
run;
%mend sudaan_conus;

```

```

*****
Macro to Check AIC and Concordant/Discordant) for Sudaan Models:
*****;
%macro Check_AIC_and_rates(InFile=, RunNo=, VariableList=);
title3 "Check AIC and Concordant/Discordant for Run=&RunNo.";
proc logistic data=&InFile. descending;
class
TNEX_grp (ref='N')
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='NON')
PNLC_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='0')
TRS (ref='2')
CHCSAddr (ref='0')
flag_ADFM (ref='2')
flag_NADD (ref='2')
/*HASEmail(ref='YES')*/
/param=ref descending;
MODEL eligkwn =
&variablelist.;
ods select FitStatistics Association;
run;
%mend Check_AIC_and_rates;

```

```

/*****/
/* SUDAAN MODELLING: */
/* 1st Approach (usual way) */
/*****/
*Running Initial Model from SAS Stepwise;
%sudaan_conus(
%str(Run0: Initial Model),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEX_NUM
INCAT_num
FLAG_ADFM
);
*HL =0.0024

```

```

*Variable-to-drop: INCAT_NUM/0.310787;

%sudaan_conus(
%str(Run1: Dropping Incat),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEX_NUM
/*INCAT_num 1st*/
FLAG_ADFM
);
*HL = 0.0005
*Variable-to-drop:TNEX_NUM/0.201352 ;

%sudaan_conus(
%str(Run2: Dropping Incat),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
FLAG_ADFM
);
*HL = 0.0058
*Variable-to-drop: FLAG_ADFM/0.148891 ;

%sudaan_conus(
%str(Run3: Dropping Incat),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/

```

```

/*FLAG_ADFM 3rd*/
);
*HL =0.0120
*Variable-to-drop: SEX_NUM/0.078685 ;

%sudaan_conus(
%str(Run4: Dropping Incat),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
/*SEX_NUM 4th*/
/*TNEC_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
);
*HL = 0.0004
*Variable-to-drop:TRS/0.000634 ;

%sudaan_conus(
%str(Run5: Dropping Incat),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS 5th*/
/*SEX_NUM 4th*/
/*TNEC_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
);
*HL = 0.0011
*Variable-to-drop:X ;

/*
The method we used, drop one variable with the biggest P-value)
does not apply here, we got HL value low all the time with the
maximum 0.0120(run3).Which is not good and we should try
the other method.
*/

*****
*                               2ND APPROACH                               *
* -----*
* Since the final hl value is not high enough using the *
* usual method, we want to try the following method to *

```

```

* increase the hl value:
*
* Remove last 4 variables added to stepwise model plus
* any variables causing singularities.
*
*****;
/*
Dropping the last 4 variables that entered the SAS
stepwise selection model does not work either. We already dropped
last 5 variables in model above .
*/

*****
*                               3RD APPROACH                               *
* -----*
* Since the final hl value is too low from the above two
* methods, we want to try the following method to increase
* the hl value:
*
* Begin with the main effects then slowly adding interaction
* terms one by one into the model.
*****;
%sudaan_conus(
%str(Run6: Main Effects only model),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
TNEX_NUM
INCAT_num
/*FLAG_ADFM dropping interaction term*/
);
*HL = 0.0180
*Variable-to-drop:INCAT_NUM /0.370771 ;

%sudaan_conus(
%str(Run7: Main Effects only model),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
TNEX_NUM
/*INCAT_num 1st*/

```



```

/*FLAG_ADFM dropping interaction term*/
);
*HL = 0.0090
*Variable-to-drop:TNEX_NUM/0.225752 ;

%sudaan_conus(
%str(Run8: Main Effects only model),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM dropping interaction term*/
);
*HL =0.0003
*Variable-to-drop:SEX_NUM/0.072228 ;

%sudaan_conus(
%str(Run9: Main Effects only model),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
/*SEX_NUM 3rd*/
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM dropping interaction term*/
);
*HL = 0.0000
*Variable-to-drop:X ;

*****
*                               4th APPROACH                               *
* -----*
* Trying to take out strong covariates one at a time                       *
*****;

*Taking AGE Out then one by one variables based on large pvalue;
%sudaan_conus(
%str(Run10: Trying to take out strong covariates one at a time ),
/*AGE_NUM4 */
FLAG_NR

```

```

PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
/*AGE_NUM4*PATC_NUM */
/*TRS      5th*/
/*SEX_NUM   4th*/
/*TNEC_NUM  2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
);
*HL = 0.0005
*Variable-to-drop:X ;

*Taking FLAG_NR out;
%sudaan_conus(
%str(Run11: Trying to take out strong covariates one at a time ),
AGE_NUM4
/*FLAG_NR*/
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEC_NUM 1st*/
/*INCAT_num 2nd*/
/*FLAG_ADFM*/
);
*HL = 0.0005
*Variable-to-drop: ;

*Taking RANK out;
%sudaan_conus(
%str(Run12: Trying to take out strong covariates one at a time ),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
/*RANK_NUM */
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEC_NUM
/*INCAT_num 1st*/
FLAG_ADFM
);
*HL = 0.0016
*Variable-to-drop: ;

```

```

*****
*                               5th APPROACH                               *
* -----*
* Trying Random Combination                                             *
*****;
%sudaan_conus(
%str(Run13:Trying Random Combination),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
);
*HL = 0.2657
*Variable-to-drop:TNEX_NUM/0.241843 ;
*Dropping TNEX will reduce HL=0.0006, dropping another variable instead;

%sudaan_conus(
%str(Run14:Trying Random Combination),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
);
*HL = 0.3338
*Variable-to-drop:TNEX_NUM/0.235743 ;
*Dropping TNEX will reduce HL=0.0001, dropping another variable instead;

%sudaan_conus(
%str(Run15:Trying Random Combination),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */

```

```

/*PCM_NUM*/
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
);
*HL = 0.0703
*Variable-to-drop:TNEX_NUM/0.235743 ;
*Dropping Tnext will reduce HL =0.0028,dropping another variable instead ;

```

```

%sudaan_conus(
%str(Run16:Trying Random Combination),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
/*AGE_NUM4*PATC_NUM*/
/*TRS */
/*SEX_NUM */
/*TNEX_NUM*/
/*INCAT_num */
/*FLAG_ADFM */
);
*HL = 0.0062
*Variable-to-drop:TNEX_NUM /0.226973 ;
*Dropping Tnext will reduce HL =0.0000;

```

```

%sudaan_conus(
%str(Run17:Trying Random Combination),
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
/*SVC_NUM*/
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
);
*HL = 0.0012
*Variable-to-drop: Tnex/ 0.127891 ;

```

```

*****
*                               6th APPROACH                               *

```

```

* -----*
* Running Final Model from Previous Quarter *
/* (Variable list won't match with current quarter) *
*****;
%sudaan_conus(
%str(Run18: Using PREVIOUS QUARTER Final Model),
AGE_num4
flag_NR
PATC_num
RANK_num
CHCS_num
SVC_num
AGE_num4*PATC_num
PCM_num
TRS
/*TNEX_num 1st */
);
*HL =0.0006
Drop = X;

*****
* CHECKING AIC and Rates: *
*****;
%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEX_NUM
INCAT_num
FLAG_ADFM
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run0, VariableList=&Var0.);
*HL =0.0024
*Variable-to-drop: INCAT_NUM/0.310787;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEX_NUM

```

```

/*INCAT_num 1st*/
FLAG_ADFM
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run1, VariableList=&Var0.);
*HL = 0.0005
*Variable-to-drop:TNEX_NUM/0.201352 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
FLAG_ADFM
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run2, VariableList=&Var0.);
*HL = 0.0058
*Variable-to-drop: FLAG_ADFM/0.148891 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run3, VariableList=&Var0.);
*HL =0.0120
*Variable-to-drop: SEX_NUM/0.078685 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM

```

```

TRS
/*SEX_NUM 4th*/
/*TNEC_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run4, VariableList=&Var0.);
*HL = 0.0004
*Variable-to-drop:TRS/0.000634;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS 5th*/
/*SEX_NUM 4th*/
/*TNEC_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run5, VariableList=&Var0.);
*HL = 0.0011
*Variable-to-drop:X ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
TNEC_NUM
INCAT_num
/*FLAG_ADFM dropping interaction term*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run6, VariableList=&Var0.);
*HL = 0.0180
*Variable-to-drop:INCAT_NUM /0.370771 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM

```

```

/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
TNEX_NUM
/*INCAT_num 1st*/
/*FLAG_ADFM dropping interaction term*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run7, VariableList=&Var0.);
*HL = 0.0090
*Variable-to-drop:TNEX_NUM/0.225752 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
SEX_NUM
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM dropping interaction term*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run8, VariableList=&Var0.);
*HL =0.0003
*Variable-to-drop:SEX_NUM/0.072228 ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM dropping interaction term*/
PCM_NUM
/*AGE_NUM4*PATC_NUM dropping interaction term*/
TRS
/*SEX_NUM 3rd*/
/*TNEX_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM dropping interaction term*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run9, VariableList=&Var0.);
*HL = 0.0000
*Variable-to-drop:X ;

%Let Var0 =
/*AGE_NUM4 */
FLAG_NR
PATC_NUM

```



```

CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
/*AGE_NUM4*PATC_NUM */
/*TRS      5th*/
/*SEX_NUM  4th*/
/*TNEC_NUM 2nd*/
/*INCAT_num 1st*/
/*FLAG_ADFM 3rd*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run10, VariableList=&Var0.);
*HL = 0.0005
*Variable-to-drop:X ;

%Let Var0 =
AGE_NUM4
/*FLAG_NR*/
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
/*TNEC_NUM 1st*/
/*INCAT_num 2nd*/
/*FLAG_ADFM*/
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run11, VariableList=&Var0.);
*HL = 0.0005
*Variable-to-drop: ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
/*RANK_NUM */
SVC_NUM
AGE_NUM4*SVC_NUM
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
SEX_NUM
TNEC_NUM
/*INCAT_num 1st*/
FLAG_ADFM
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run12, VariableList=&Var0.);
*HL = 0.0016
*Variable-to-drop: ;

%Let Var0 =

```

```

AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
TRS
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run13, VariableList=&Var0.);
*HL = 0.2657
*Variable-to-drop:TNEX_NUM/0.241843 ;
*Dropping TNEX will reduce HL=0.0006, dropping another variable instead;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run14, VariableList=&Var0.);
*HL = 0.3338
*Variable-to-drop:TNEX_NUM/0.235743 ;
*Dropping TNEX will reduce HL=0.0001, dropping another variable instead;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
/*PCM_NUM*/
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */

```

```

;
%Check_AIC_and_rates(InFile=conus, RunNo=Run15, VariableList=&Var0.);
*HL = 0.0703
*Variable-to-drop:TNEX_NUM/0.235743 ;
*Dropping Tnext will reduce HL =0.0028,dropping another variable instead ;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
SVC_NUM
/*AGE_NUM4*SVC_NUM */
PCM_NUM
/*AGE_NUM4*PATC_NUM*/
/*TRS */
/*SEX_NUM */
/*TNEX_NUM*/
/*INCAT_num */
/*FLAG_ADFM */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run16, VariableList=&Var0.);
*HL = 0.0062
*Variable-to-drop:TNEX_NUM /0.226973 ;
*Dropping Tnext will reduce HL =0.0000;

%Let Var0 =
AGE_NUM4
FLAG_NR
PATC_NUM
CHCS_num
RANK_NUM
/*SVC_NUM*/
/*AGE_NUM4*SVC_NUM */
PCM_NUM
AGE_NUM4*PATC_NUM
/*TRS */
/*SEX_NUM */
TNEX_NUM
/*INCAT_num */
/*FLAG_ADFM */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run17, VariableList=&Var0.);
*HL = 0.0012
*Variable-to-drop: Tnex/ 0.127891 ;

%Let Var0 =
AGE_num4
flag_NR
PATC_num
RANK_num
CHCS_num
SVC_num
AGE_num4*PATC_num
PCM_num
TRS

```

```

/*TNEX_num 1st */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run18, VariableList=&Var0.);
*HL =0.0006
Drop = X;

```

```

/*          SUMMARY TABLE :
#   Sudaan Fit Largest Ind.Pvalue Intercept Only Intercept & Covariates
Concordant Discordant
0   0.0024      0.310787      65141.668      48410.239
80.3      19.6
1   0.0005      0.201352      65141.668      48421.097
80.3      19.6
2   0.0058      0.148891      65141.668      48430.019
80.1      19.5
3   0.0120      0.078685      65141.668      49575.174
79.6      19.9
4   0.0004      0.000634      65141.668      49913.513
79.4      19.9
5   0.0011      X      65141.668      49930.376
79.3      19.9
6   0.0180      0.370771      65141.668      49547.686
79.8      20.0
7   0.0090      0.225752      65141.668      49587.302
79.8      20.0
8   0.0003      0.072228      65141.668      49595.526
79.6      19.9
9   0.0000      X      65141.668      49948.337
79.4      19.8
10  0.0005      X      65141.668      50863.245
77.1      21.4
11  0.0005      X      65141.668      59461.571
71.8      27.6
12  0.0016      X      65141.668      48693.773
79.7      19.9
13  0.2657      0.241843      65141.668      49913.961
79.6      20.1
14  0.3338      0.235743      65141.668      49931.883
79.6      20.1
15  0.0703      0.235743      65141.668      49930.428
79.6      20.0
16  0.0062      0.226973      65141.668      49964.782
79.4      19.8
17  0.0012      0.127891      65141.668      49960.762
79.3      19.9
18  0.0006      X      65141.668      49920.583
79.4      19.9

```

```

Final Model:
#   Sudaan Fit Largest Ind.Pvalue Intercept Only Intercept & Covariates
Concordant Discordant
13  0.2657      0.241843      65141.668      49913.961
79.6      20.1

```

Between run 13 and 14, 13 has a better AIC, with virtually no difference between concordant/discordant values. Individual pvalue is large for both models. Eric mentioned, once we get above a p-value of 0.2, there is practical difference between a p-value of 0.33 and 0.26.

** Note: Smallest is better for AIC and Discordant.
Largest is better for Concordant and Sudaan fit.
*/

**Run FINAL CONUS Model:

*****;

*Run the final sudaan model again for conus once confirmed with Eric/Nancy;

%sudaan_conus(

%str(Run13:FINAL CONUS MODEL),

AGE_NUM4

FLAG_NR

PATC_NUM

CHCS_num

RANK_NUM

SVC_NUM

/*AGE_NUM4*SVC_NUM */

PCM_NUM

AGE_NUM4*PATC_NUM

TRS

/*SEX_NUM */

TNEX_NUM

/*INCAT_num */

/*FLAG_ADFM */

);

*HL = 0.2657

*Variable-to-drop: X and large pvalue 0.241843 ;

*=====

Start the modeling for OCONUS

In the full model, all the variables put in the answer tree are used as main effects, and

the interactions are picked based on the tree for Oconus A1 for the current quarter

=====

/*Running macro to check ZeroCell*/

%let Vars_in_interactions_oconus = AGE_GRP4 PATC_grp PCM_grp PNLG_grp

RANK_grp SEX_grp

SVC_grp CHCSAddr TNEX_grp in_catch TRS ;

/*The interactions below are determined based on the oconus A1 tree for the current quarter*/

%let Interactions_from_chaid_oconus =

/*Q3FY2017*/

PATC_GRP*AGE_GRP4

PATC_GRP*SVC_GRP

```

PATC_GRP*RANK_GRP
;

title3 "Check the zero cells for Oconus";
%ZERO_ONE_CELLS(oconus, &Vars_in_interactions_oconus., eligkwn,
&Interactions_from_chaid_oconus.);

/*
If Zero cell found, please add code here to perform following tasks and
check zero cell again for Oconus:
-Check to see how to collapse(OCONUS):
-Collapse the Zero Cell +s (OCONUS)
-Checks zero cell collapsements (OCONUS)

title3 "Checks the zero cells again for Oconus after zero cell collapse ";
%ZERO_ONE_CELLS(oconus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);
*/

*****
/* SAS modeling*/
*****;
%macro modelselect_oconus(method= );
title3 "SAS Logistic for OCONUS - &method.";
proc logistic data=oconus descending;
WEIGHT BWT; /*Weighted SAS Model*/
CLASS
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='NON')
PNLC_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='0')
TRS (ref='2')
CHCSAddr (ref='0')

/*HASEmail(ref='YES')*/
/param=ref descending;
MODEL eligkwn =
AGE_GRP4
PATC_grp
PCM_grp
PNLC_grp
RANK_grp
SEX_grp
SVC_grp
IN_CATCH
TRS
CHCSAddr

/*Q3FY2017: Two way interaction from Answer Tree*/
PATC_GRP*AGE_GRP4
PATC_GRP*SVC_GRP
PATC_GRP*RANK_GRP

```

```

/Lackfit rsquare details hierarchy=single selection=&method. slentry=0.15
slstay=0.20;
OUTPUT OUT=out_oconus PREDICTED=predicted;
WEIGHT bwt /norm ; /*Weighted SAS Model*/
run;
%mend modelselect_oconus;

```

```

%modelselect_oconus(method=stepwise);

```

```

/* Q3FY2017:
Summary of Stepwise Selection

```

Wald	Variable	Effect	Number	Score
Step Entered	Pr > ChiSq	Removed	DF	In Chi-Square
<.0001	1 PATC_GRP		2	240.0722
<.0001	2 AGE_GRP4		3	221.1536
<.0001	3 SVC_GRP		2	144.0579
<.0001	4 PATC_GRP*SVC_GRP		4	82.0763
<.0001	5 SEX_GRP		1	47.1984
<.0001	6 RANK_GRP		3	51.2553
0.0001	7 PATC_GRP*RANK_GRP		6	27.0260
0.0389	8 AGE_GRP4*PATC_GRP		6	13.2697
0.0703	9 CHCSADDR		1	3.2755

```

*****
Checks the SUDAAN fit for the the SAS Final Model above
*****;
*Proc Sort before Proc Rlogist;
proc sort data=oconus;
by STRAT_nm;
run;

```

```

%macro sudaan_oconus(ttl,vars);
title3 "The Final Model from SAS stepwise -OCONUS";
title4 " &ttl.";
proc rlogist data=oconus design=STRWR filetype=SAS;
NEST STRAT_nm / missunit;
weight bwt;
CLASS AGE_num4 PATC_num PCM_num PNLC_num RANK_num
SEX_num

```

```

                SVC_num      TRS          incat_num   /*tnex_num*/   chcs_num;
REFLEVEL AGE_num4=1    PATC_num=3    PCM_num=1    pnlc_num=1    RANK_num=1
SEX_num=1
                SVC_num=1    TRS=2          incat_num=1 /*tnex_num=1*/   chcs_num=1;
MODEL eligkwn = &vars.;
idvar MPRID_nm;
print beta sebeta t_beta p_beta
HLCHISQ HLCHIDF HLCHIP HLWALDF HLWALDDF HLWALDP HLSATF HLSATDF HLSATP DF
WALDCHI WALDCHP
/betafmt=f7.3 sebetafmt=f7.3 WALDCHIFMT=F8.2 waldchpfmt=f8.6;;
output expected observed nest idvar /filename =pred_o filetype=sas replace;
rformat AGE_num4 FMT_AGE.;
rformat PATC_num FMT_PAT.;
rformat PCM_num FMT_PCM.;
rformat PNLC_num FMT_PNLC.;
rformat RANK_num FMT_RanK.;
rformat sex_num FMT_sex.;
rformat SVC_num FMT_SVC.;
rformat INCAT_num FMT_INCT.;
rformat trs FMT_TRS.;
*rformat tnex_num FMT_tnex.;
rformat chcs_num fmt_chcs.;
run;
%mend sudaan_oconus;

```

```

%macro Oconus_check_AIC_and_rates(InFile=, RunNo=, VariableList=);
title3 "Check AIC and Concordant/Discordant for Run=&RunNo.";
proc logistic data=&InFile. descending;
WEIGHT BWT; /*Weighted SAS Model*/
CLASS
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='NON')
PNLC_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='0')
TRS (ref='2')
CHCSAddr (ref='0')
flag_ADFM (ref='2')
flag_NADD (ref='2')
/*HASEmail(ref='YES')*/
/param=ref descending;
MODEL eligkwn =
&variablelist.;
ods select FitStatistics Association;
run;
%mend Oconus_check_AIC_and_rates;

```

```

/*****/
/* 1st Approach (usual way) */
/*****/
%sudaan_oconus(

```



```

%str(Run0: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
AGE_NUM4*PATC_NUM
CHCS_NUM
);
*HL = 0.1228
*Variable-to-drop/Largest Pvalue = CHCS_NUM/0.681558;

%sudaan_oconus(
%str(Run1: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
AGE_NUM4*PATC_NUM
/*CHCS_NUM 1st */
);
*HL = 0.1335
*Variable-to-drop/Largest Pvalue =AGE_NUM4 * PATC_NUM/0.099031;

%sudaan_oconus(
%str(Run2: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM 1st */
);
*HL = 0.0516
*Variable-to-drop/Largest Pvalue =SEX_NUM/0.033111;

%sudaan_oconus(
%str(Run3: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
/*SEX_NUM          3rd */
RANK_NUM
PATC_NUM*RANK_NUM
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM          1st */
);
*HL = 0.0618

```

*Variable-to-drop/Largest Pvalue =PATC_NUM * RANK_NUM/0.019894;

```
%sudaan_oconus(  
%str(Run4: Final model from SAS stepwise),  
PATC_NUM  
AGE_NUM4  
SVC_NUM  
PATC_NUM*SVC_NUM  
/*SEX_NUM          3rd */  
RANK_NUM  
/*PATC_NUM*RANK_NUM 4th */  
/*AGE_NUM4*PATC_NUM 2nd */  
/*CHCS_NUM         1st */  
);  
*HL = 0.1417  
*Variable-to-drop/Largest Pvalue =RANK_NUM /0.002656 ;
```

```
%sudaan_oconus(  
%str(Run5: Final model from SAS stepwise),  
PATC_NUM  
AGE_NUM4  
SVC_NUM  
PATC_NUM*SVC_NUM  
/*SEX_NUM          3rd */  
/*RANK_NUM         5th */  
/*PATC_NUM*RANK_NUM 4th */  
/*AGE_NUM4*PATC_NUM 2nd */  
/*CHCS_NUM         1st */  
);  
*HL = 0.0879  
*Variable-to-drop/Largest Pvalue = PATC_NUM * SVC_NUM/0.000043;
```

```
%sudaan_oconus(  
%str(Run6: Final model from SAS stepwise),  
PATC_NUM  
AGE_NUM4  
SVC_NUM  
/*PATC_NUM*SVC_NUM 6th */  
/*SEX_NUM          3rd */  
/*RANK_NUM         5th */  
/*PATC_NUM*RANK_NUM 4th */  
/*AGE_NUM4*PATC_NUM 2nd */  
/*CHCS_NUM         1st */  
);  
*HL = 0.1292  
*Variable-to-drop/Largest Pvalue = SVC_NUM/0.000611;
```

```
%sudaan_oconus(  
%str(Run7: Final model from SAS stepwise),  
PATC_NUM  
AGE_NUM4  
/*SVC_NUM          7th */  
/*PATC_NUM*SVC_NUM 6th */  
/*SEX_NUM          3rd */  
/*RANK_NUM         5th */  
/*PATC_NUM*RANK_NUM 4th */
```

```

/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM          1st */
);
*HL = 0.0117
*Variable-to-drop/Largest Pvalue = X;

*****
Checking AIC and Concordant/Discordant) for Sudaan Models:
*****;
%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=0, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
AGE_NUM4*PATC_NUM
CHCS_NUM
);
*HL = 0.1228
*Variable-to-drop/Largest Pvalue = CHCS_NUM/0.681558
AIC          238094.27      222635.10
Percent Concordant      67.7
Percent Discordant      30.7 ;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=1, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
AGE_NUM4*PATC_NUM
/*CHCS_NUM 1st */
);
*HL = 0.1335
*Variable-to-drop/Largest Pvalue =AGE_NUM4*PATC_NUM/0.099031
AIC          238094.27      222638.07
Percent Concordant      67.5
Percent Discordant      30.5;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=2, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM          1st */
);
*HL = 0.0516

```

```

*Variable-to-drop/Largest Pvalue =SEX_NUM / 0.033111
AIC                238094.27      224309.23
Percent Concordant      65.8
Percent Discordant     32.2
;

```

```

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=3, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
/*SEX_NUM          3rd */
RANK_NUM
PATC_NUM*RANK_NUM
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM         1st */
);
*HL = 0.0618
*Variable-to-drop/Largest Pvalue =PATC_NUM * RANK_NUM/0.019894
AIC                238094.27      227776.13
Percent Concordant      63.6
Percent Discordant     32.9
;

```

```

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=4, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
/*SEX_NUM          3rd */
RANK_NUM
/*PATC_NUM*RANK_NUM 4th */
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM         1st */
);
*HL = 0.1417
*Variable-to-drop/Largest Pvalue =RANK_NUM /0.002656
AIC                238094.27      228483.11
Percent Concordant      63.0
Percent Discordant     33.5
;

```

```

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=5, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
/*SEX_NUM          3rd */
/*RANK_NUM         5th */
/*PATC_NUM*RANK_NUM 4th */
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM         1st */
);
*HL = 0.0879
*Variable-to-drop/Largest Pvalue = PATC_NUM * SVC_NUM/0.000043
AIC                238094.27      228824.35
Percent Concordant      60.5

```

Percent Discordant 33.6
;

```
%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=6, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
/*PATC_NUM*SVC_NUM 6th */
/*SEX_NUM 3rd */
/*RANK_NUM 5th */
/*PATC_NUM*RANK_NUM 4th */
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM 1st */
);
*HL = 0.1292
*Variable-to-drop/Largest Pvalue = SVC_NUM/0.000611
AIC 238094.27 228970.98
Percent Concordant 61.0
Percent Discordant 33.2
;
```

```
%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=7, VariableList=
PATC_NUM
AGE_NUM4
/*SVC_NUM 7th */
/*PATC_NUM*SVC_NUM 6th */
/*SEX_NUM 3rd */
/*RANK_NUM 5th */
/*PATC_NUM*RANK_NUM 4th */
/*AGE_NUM4*PATC_NUM 2nd */
/*CHCS_NUM 1st */
);
*HL = 0.0117
*Variable-to-drop/Largest Pvalue = X
AIC 238094.27 229346.37
Percent Concordant 57.9
Percent Discordant 26.9
;
```

```
/* SUMMARY TABLE :
# Sudaan Fit Largest Ind.Pvalue Intercept Only Intercept & Covariates
Concordant Discordant
0 0.1228 30.7 0.681558 238094.27 222635.10
67.7
1 0.1335 30.5 0.099031 238094.27 222638.07
67.5
2 0.0516 32.2 0.033111 238094.27 224309.23
65.8
3 0.0618 32.9 0.019894 238094.27 227776.13
63.6
4 0.1417 33.5 0.002656 238094.27 228483.11
63.0
5 0.0879 33.6 0.000043 238094.27 228824.35
60.5
6 0.1292 33.2 0.000611 238094.27 228970.98
61.0
```

7	0.0117		X	238094.27	229346.37
57.9		26.9			

Final Model:

1	0.1335		0.099031	238094.27	222638.07
67.5		30.5			

** Note:
Smallest is better for AIC and Discordant.
Largest is better for Concordant and Sudaan Fit.
*/

```
*****
**Run FINAL OCONUS Model;;
*****;
*Q3FY2017;;
```

```
%sudaan_oconus(
%str(Run1:FINAL OCONUS MODEL),
PATC_NUM
AGE_NUM4
SVC_NUM
PATC_NUM*SVC_NUM
SEX_NUM
RANK_NUM
PATC_NUM*RANK_NUM
AGE_NUM4*PATC_NUM
/*CHCS_NUM 1st */
);
*HL = 0.1335;
```

```
*=====
=====
Compute the unknown eligibility adjustment factor A1
=====
=====;
data pred (Drop=STRAT_nm);
set pred_c pred_o;
run;

proc sort data=pred;
by mprid_nm;
run;

proc sort data=logmdA1;
by mprid_nm;
run;

data logmdA1 only1 only2 problem;
merge logmdA1(in=A) pred(in=B);
by mprid_nm;
if A and B then output logmdA1;
else if A and NOT B then output only1;
else if B and NOT A then output only2;
else output problem;
run;
```

```

data out.logmdA1;
set logmdA1(rename=(expected=PscoreA1) drop=MPRID_c9 stratum1);
label TNEX_grp="Facility's TNEX region"
      PscoreA1="Propensity score for unknown eligibility adjustment";
run;

Title3 "Proc Print if PscoreA1 is Missing (Problem):";
proc freq data=out.logmdA1;
tables pscoreA1/list missing;
where pscoreA1=.;
run;
title3 "Univariate of expected";
title4;
proc univariate data=out.logmdA1;
var PscoreA1;
run;

title3 "Contents of OUT.logmdA1";
title4;
proc contents data=OUT.logmdA1;
run;

proc printto;
run;

***** The End *****;

```

F.7.B - Q3FY2017\Programs\Weighting\NewWeights\Zero_One_Cells.SAS - Include file for logmdA1.sas

```
*****
*****
*** MACRO
*** Project: Charter School (6043-100)
*** Program: H:\SCRATCH\HXu\CommonProgramsData\Zero_One_Cells.sas
*** Purpose: Check the zero cells
***
*** Inputs:
*** Outputs:
***
*** Note: This macro is originally written by Fan Zhang from NSF
*****
*****;

%MACRO ZERO_ONE_CELLS(INPUT_DATA, CLASS_VARS, INPUT_VARS, BY_VARS);

PROC TABULATE DATA=&INPUT_DATA OUT=TABLE_TEMP1 (DROP=_TYPE_ _PAGE_ _TABLE_);
  CLASS &CLASS_VARS.;
  VAR &INPUT_VARS.;
  TABLES &BY_VARS.,
          &INPUT_VARS.*(MEAN N);
RUN;

DATA TABLE_TEMP2;
  SET TABLE_TEMP1;
  IF &INPUT_VARS._MEAN IN (0, 1);
RUN;

PROC PRINT DATA=TABLE_TEMP2;
  SUM &INPUT_VARS._N;
RUN;

%MEND ZERO_ONE_CELLS;
```


F.8 - Q3FY2017\Programs\Weighting\NewWeights\adjwt1.SAS - Calculate the unknown eligibility adjusted weight

```

dm 'clear output;clear log';
*****
*****
*** Program : Adjwt1.sas
*** Task    : 40309.31H
*** Purpose : Create the weighting class cells based on the propensity from
***          the unknown eligibility modeling
***          Calculate the unknown eligibility adjusted weight
*** Inputs  : logmdA1.sas7bdat, framea.sas7bat
*** Outputs : adjwt1.sas7bdat
*** Modified: Sabrina R. for GRID Testing with Q3FY2016
***
*** Note:
*** From Q1Fy2014, our sample size increased from 50k to 100k. It is now
web only and RR dropped.
*** For low RR, A1 is too large using the usual 10 cells and 5cells. So now
we are trying following
*** three different approaches:
*** - Create 5 CONUS and 4 OCONUS weighting class
*** - Create 5 CONUS and 4 OCONUS then collapsing if necessary (usually
combine first 2 CONUS and
*** OCONUS to create 4 CONUS and 3 OCONUS).
*** - Create fewer Strata (4 CONUS and 3 OCONUS) instead of collapsing
*** After looking at the A1 for each of the 3 scenarios, we take the
final collapsing decision
*** - In this program, we created 5 CONUS and 4 OCONUS then collapsed
***
*** Starting from Q2FY2016t, we decided to use all decisions we took in
regular quarter to the
*** corresponding Trickle Quarter. We historically noticed, with few
hundred extra responses
*** decisions hardly change in trickle quarter than regular quarter, so we
want to keep code as
*** is to reduce extra afford.
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

```

```

%let quarter=Q3FY2017;

libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* logmdA1.sas7bdat */
libname in_f
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"; /*
adjwt1.sas7bdat */

title1 "Program: Adjwt1.sas (&quarter.)";
title2 "Purpose: Calculate the unknown Eligibility Adjusted Weight";
title3 " ";

title4 "Checking Univariate of Propensity Score (PscoreA1) for CONUS:";
proc univariate data=in.logmdA1 plot;
var PscoreA1;
where conus='1';
run;

title4 "Checking Univariate of Propensity Score (PscoreA1) for OCONUS:";
proc univariate data=in.logmdA1 plot;
var PscoreA1;
where conus='0';
run;

*** Weighting Class Construction for CONUS***;
%macro univ_conus(inputdata=, step=, region=, var=, cellvar=, outputdata=);

proc univariate data=&inputdata. noprint;
var &var.;
where conus="&region.";
output out=out pctlpts =60 90 pctlpre=cutoff;
run;

*Q3FY2017 Update Title below based on current quarter cutoff decision;
title3 "Cutoff points for conus=&region. (pctlpts =60 90):";
proc print data=out;
var cutoff60 cutoff90;
run;

data temp;
set &inputdata.;
M=1;
where conus="&region.";
run;

data out;
set out;
M=1;
run;

```

```

data &outputdata.;
merge temp out;
by M;
run;

data &outputdata.;
set &outputdata.;
length &cellvar. $4;
if &var.<=cutoff60 then &cellvar. = "&step.&region.01";
else if &var.<=cutoff90 then &cellvar. = "&step.&region.02";
else if &var. >cutoff90 then &cellvar. = "&step.&region.03";
run;

data &outputdata.;
set &outputdata.;
drop cutoff60 cutoff90 M;
run;

title3 "Freq of &cellvar.*&var. for conus=&region.";
proc freq data=&outputdata.;
tables &cellvar. &cellvar.*&var. /missing list;
run;
%mend univ_conus;

*** Weighting Class Construction for OCONUS***;
%macro univ_oconus(inputdata=, step=, region=, var=, cellvar=, outputdata=);

proc univariate data=&inputdata. noprint;
var &var.;
where conus="&region.";
output out=out pctlpts =60 90 pctlpre=cutoff;
run;

*Q3FY2017 Update Title below based on current quarter cutoff decision;
title3 "Cutoff points for conus=&region. (pctlpts =60 90)";
proc print data=out;
var cutoff60 cutoff90;
run;

data temp;
set &inputdata.;
M=1;
where conus="&region.";
run;

data out;
set out;
M=1;
run;

data &outputdata.;
merge temp out;
by M;
run;

data &outputdata.;

```

```

set &outputdata.;
length &cellvar. $4;

if &var.<=cutoff60 then &cellvar. = "&step.&region.01";
else if &var.<=cutoff90 then &cellvar. = "&step.&region.02";
else if &var. >cutoff90 then &cellvar. = "&step.&region.03";

run;

data &outputdata.;
set &outputdata.;
drop cutoff60 cutoff90 M;
run;

title3 "Freq of &cellvar.*&var. for conus=&region.";
proc freq data=&outputdata.;
tables &cellvar. &cellvar.*&var. /missing list;
run;
%mend univ_oconus;

*****
***
Compute the dencile of PscoreA1 within conus/oconus region
*****
***;
%univ_conus (inputdata=in.logmdA1, step=1, region=1, var=PscoreA1,
cellvar=Pcell_A1, outputdata=A1conus);
%univ_oconus(inputdata=in.logmdA1, step=1, region=0, var=PscoreA1,
cellvar=Pcell_A1, outputdata=Aloconus);

```

```

/*Q3FY2017:
adjwt1_Run1_5Conus4Oconus:
CONUS (pctlpts = 20 40 60 80) and OCONUS (pctlpts =25 50 75)
-----

```

Obs	PCELL_A1	CNTG1	CNTG2	CNTG3	CELLCNT	SUMG1
SUMG2	SUMG3		SUMBWT	A1		
1	1001	70	0	3075	3145	928.17
0.00	48660.94	49589.11	53.4268			
2	1002	221	2	3335	3558	6145.96
24.62	102270.93	108441.51	17.5740			
3	1003	448	0	2541	2989	12902.93
0.00	72423.62	85326.55	6.6130			
4	1004	636	1	2231	2868	19149.09
10.44	58419.45	77578.98	4.0491			
5	1101	389	0	17314	17703	17233.56
0.00	723391.03	740624.59	42.9757			
6	1102	664	0	17254	17918	26714.21
0.00	700236.25	726950.46	27.2121			
7	1103	1253	2	15731	16986	49172.86
218.15	667843.09	717234.10	14.5216			
8	1104	2542	1	15082	17625	205489.97
53.23	1146892.42	1352435.62	6.5798			
9	1105	5860	17	11486	17363	1375504.42
7036.67	2125783.26	3508324.35	2.5376			

Using (pctlpts =60 90) for both CONUS and OCONUS:

 CONUS CUTOFF60 CUTOFF90
 0.097044 0.26741

OCONUS CUTOFF60 CUTOFF90
 0.13068 0.23366

Obs	PCELL_A1	CNTG1	CNTG2	CNTG3	CELLCNT	SUMG1
SUMG2	SUMG3	SUMBWT	A1			
1	1001	414	2	7120	7536	11288.05
24.62	176065.63	187378.30		16.5636		
2	1002	693	1	3369	4063	19771.43
10.44	85876.54	105658.40		5.3412		
3	1003	268	0	693	961	8066.67
0.00	19832.77	27899.44		3.4586		
4	1101	2306	2	50299	52607	93120.63
218.15	2091470.37	2184809.15		23.4073		
5	1102	4221	1	22097	26319	479280.98
53.23	1990457.45	2469791.66		5.1525		
6	1103	4181	17	4471	8669	1101713.41
7036.67	1282218.23	2390968.31		2.1565		
=====	=====	=====	=====	=====	=====	=====
7343.11	5645921.00	12083	23	88049	100155	1713241.17
		7366505.27				

Using (pctlpts =65 90) for both CONUS and OCONUS:

 CONUS CUTOFF65 CUTOFF90
 0.12046 0.26747

OCONUS CUTOFF65 CUTOFF90
 0.13561 0.23366

Obs	PCELL_A1	CNTG1	CNTG2	CNTG3	CELLCNT	SUMG1
SUMG2	SUMG3	SUMBWT	A1			
1	1001	542	2	7966	8510	14918.61
24.62	198535.96	213479.18		14.2860		
2	1002	565	1	2523	3089	16140.88
10.44	63406.22	79557.53		4.9258		
3	1003	268	0	693	961	8066.67
0.00	19832.77	27899.44		3.4586		
4	1101	2760	2	54331	57093	120001.55
218.15	2339715.69	2459935.39		20.4620		
5	1102	3767	1	18065	21833	452400.05
53.23	1742212.14	2194665.42		4.8506		
6	1103	4181	12	4420	8613	1101713.41
6968.92	1280732.30	2389414.63		2.1552		
=====	=====	=====	=====	=====	=====	=====
7275.36	5644435.07	12083	18	87998	100099	1713241.17
		7364951.59				

```

Finally we used (pctlpts =60 90) for both CONUS and OCONUS:
*/

***combine conus/oconus together;
data merged;
set Alconus Aloconus;
/*****\
Comment Out the next 2 lines next quarter if not needed:
\*****/
*if Pcell_A1='1001' then Pcell_A1='1002';
*if Pcell_A1='1101' then Pcell_A1='1102';
run;

*** Ratio is still little large but we will keep it as is to differentiate
between propensity scores.

*****
* Start to calculate the adjusted weight using the weighting class method
*****
;

%MACRO PROCESS(DOMAIN1, INPT);

*** Initial Information. ***;

title3 "Frame (FRAMEA) Count";
proc freq data=in_f.framea;
table enbgsmpl / list missing;
run;

title3 "Weighted Counts Using BWT as the Weight - excluding fnstatus=32";
proc freq data=&inpt.;
table enbgsmpl fnstatus / list missing;
weight bwt;
run;

title3 "Sample Counts - excluding fnstatus=32";
proc freq data=&inpt.;
table enbgsmpl fnstatus web*fnstatus/ list missing;
run;

PROC SORT DATA=&inpt.;
BY &DOMAIN1.;
RUN;

*****
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****
;
Data cellsal (keep=sumbwt sumg1-sumg3 A1 cellcnt cntg1-cntg3 &domain1. )
mpridsal (keep=mprid fnstatus bwt &domain1. com_geo enbgsmpl)
;

```

```

SET &INPT.;
BY &DOMAIN1.;

IF FIRST.&DOMAIN1. THEN DO;
  CELLCNT = 0;
  cntg1   = 0;
  cntg2   = 0;
  cntg3   = 0;
  SUMBWT  = 0.0;
  SUMG1   = 0.0;
  SUMG2   = 0.0;
  SUMG3   = 0.0;
  A1      = 0.0;
END;
CELLCNT + 1;

*****
* Accumulate total weight sum
*****;

SUMBWT + BWT;

*****
* Accumulate group 1 weight sum
*****;
IF FNSTATUS IN (11,12) THEN
  do;
    SUMG1 + BWT;
    cntg1 + 1;
  end;

*****
* Accumulate group 2 weight sum
*****;
ELSE IF FNSTATUS in (20,31) THEN
  do;
    SUMG2 + BWT;
    cntg2 + 1;
  end;

*****
* Accumulate group 3 weight sum
*****;
ELSE IF FNSTATUS in (41,42) THEN
  do;
    SUMG3 + BWT;
    cntg3 + 1;
  end;

RETAIN SUMBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 MPRID;

IF LAST.&DOMAIN1. THEN DO;
  A1 = SUMBWT/(SUMG1 + SUMG2);
  OUTPUT CELLSA1;
END;

OUTPUT MPRIDSA1;

```



```

RUN;

*Q3FY2017 Update Title below based on current quarter cutoff decision;
title3 "Check for CELLSA1 Data Set (using pctlpts =60 90 for both Conus and
Oconus):";
proc print data=cellsal;
var &domain1. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

title3 "Checks the Adjustment ratio";
title4 "Print if: ( a1> 7 ) or ( cntg1 + cntg2 < 100 )";
proc print data=cellsal;
where ( a1> 7 ) or ( cntg1 + cntg2 < 100 );
var &domain1. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

title3 "Univariate of Adjustment ratio (A1)";
proc univariate data=cellsal normal ;
var a1;
run;

proc sort data=mpridsal;
by &domain1.;
run;

proc sort data=cellsal;
by &domain1.;
run;

data adj_one;
merge mpridsal cellsal;
by &domain1.;
if fnstatus in (11,12,20,31) then adj1 = a1;
else adj1 = 0;
adjwt1 = adj1 * bwt;
run;

title3 "Checks for ADJ_ONE Data Set";
title4 "Cross Freq of fnstatus and Adjustment Factor by various Domains";
proc freq data=adj_one;
table &domain1.*fnstatus*adj1/ list missing;
run;

title3 "Checks for ADJ_ONE Data Set";
title4 "Cross Freq of Adjusted Weight (Adjwt1) and BWT by variaous Domains
where adjwt1 ~=0";
proc freq data=adj_one;
tables adjwt1*&domain1.*bwt/missing list;
where adjwt1 ~=0;
run;

/*
proc freq data=adj_one;
tables &domain1.*stratum*bwt/missing list;

```

```

where adjwt1 ~=0;
run;
*/

title3 " Checking the individuals with the largest adjwt";
proc sort data=adj_one out=sorted;
by descending adjwt1;
run;

title3 " Checking the individuals with the largest adjwt";
title4 " sorting adjwt1 descending order (obs=200)";
proc print data=sorted (obs=200);
var &domain1. fnstatus BWT a1 adj1 adjwt1 ;
run;

proc means data=adj_one n sum NOPRINT;
class enbgsmpl;
var adjwt1;
output out=print sum=sum;
run;

Title3 "Print the Proc Means of Adjwt1 by enbgsmpl";
Proc print data=print;
sum _freq_ sum;
where _type_=1;
run;

*****
* Sort the original data
*****
;
PROC SORT DATA=&INPT.;
BY MPRID;
RUN;

*****
* Sort the ADJ_ONE data set
*****
;
PROC SORT DATA=adj_one;
BY MPRID;
RUN;

*****
* Append the adjusted weight variable (adjwt1)
*****
;
Data adj_one(Drop=bwt com_geo enbgsmpl FNSTATUS Pcell_A1);
Set Adj_one;
run;

DATA Out.adjwt1;
MERGE adj_one(in=A) &INPT.(in=B);
BY MPRID;
if A and B;
RUN;

```

```

title3 "Sum of Adjusted Weight (Adjwt1) by Final Status";
proc means data=Out.adjwt1 n sum NOPRINT;
class fnstatus;
var adjwt1;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 "Proc Univariate of Adjusted Weight";
title4 "Propensity Score Weighting Method - Individual Level Adjwt";
title5 " where fnstatus=11";
proc univariate data=Out.adjwt1 normal ;
where fnstatus=11;
var adjwt1;
run;

/*Beneficiary's tnexreg*/
proc sort data=Out.adjwt1;
by tnexreg;
run;

title3 "Distribution of weights by tnexreg";
title4 " where fnstatus=11";
proc means data=Out.adjwt1 noprint ;
where fnstatus=11;
var adjwt1;
by tnexreg;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min
max=max ;
run;

proc print data=out_tnex;
sum n;
run;

/*Facility's tnexreg*/
proc sort data=Out.adjwt1;
by TNEX_grp;
run;

title3 "Distribution of weights by Facility's TNEX region: TNEX_grp";
title4 " where fnstatus=11";
proc means data=Out.adjwt1 noprint ;
where fnstatus=11;
var adjwt1;
by TNEX_grp;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min
max=max ;
run;

proc print data=out_tnex;
sum n;
run;

```

```

*****
* Calculate final weight based on user-specified parameters.
*****
;
%MEND PROCESS;
%PROCESS(Pcell_A1, merged);
RUN;

/*Added in Q1FY2013*/
title "Checks ADJWT1>9000:";
data max1;
set Out.adjwt1;
*if adjwt1>9000;
if adjwt1>10000;
run;

/*
proc freq data=max1;
tables stratum*AGE_num4*SVC_num*RANK_num*PATC_num*PCM_num*
SEX_num*CHCS_num*PNLC_num*incat_num*TNEX_num*TRS*adjwt1/list missing nocum
nopercent;
run;

proc freq data=max1;
tables stratum*AGE_GRP4*SVC_grp*RANK_grp*PATC_grp*PCM_grp*
SEX_grp*CHCSAddr*PNLC_grp*in_catch*TNEX_grp*TRS*adjwt1/list missing nocum
nopercent;
run;
*/

title "Proc Contents of ADJWT1:";
proc contents data=Out.adjwt1;
run;

proc printto;
run;

***** The end *****;

```

F.9 - Q3FY2017\Programs\Weighting\NewWeights\adjwt2.SAS - Calculate the nonresponse adjusted weight

```

*****
*****
*** Program: Adjwt2.sas
*** Task   : 40309.31H
*** Purpose: Calculate the nonresponse adjusted weight
*** Inputs:  smplA2.sas7bdat,
***          adjwt1.sas7bdat
*** Outputs: adjwt2.sas7bdat
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+|=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

libname in   "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly;
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";

title1 "Program: adjwt2.sas (&quarter.)";
title2 "Purpose: Calculate the nonresponse adjusted weight";

*****
***
Merge smplA2 with adjwt1 to get the variable adjwt1
*****
***;
proc sort data=in.smplA2 out=smplA2;
by MPRID;
run;

proc sort data=in.adjwt1(keep=MPRID adj1 adjwt1)
out=adjwt1;
by MPRID;
run;

```

```

data merged only1 only2 problem;
merge smplA2(in=A) adjwt1(in=B);
by MPRID;
if A and B then output merged;
else if A and NOT B then output only1;
else if B and NOT A then output only2;
else output problem;
run;

*****
***
Since there is not much going on in 2nd stage, we decided not to do the
modeling,
and instead to create the weight cells based on the A2 tree for the current
quarter.
Pcell_A2=adjustment stage||region||cell index.
adjustment stage: 1-unknown eligibility adjustment stage, 2 - nonresponse
adjustment stage
region: 1 - conus, 0-oconus
cell index: 01- #of terminal nodes
*****
***;
data merged;
set merged;
length Pcell_A2 $4;
/*Based on conus_A2_level2_ageGRP4_tree.htm*/
/*Q3FY2017*/
if conus='1' then do;
  if AGE_GRP4 in ('4') then do;
    if PATC_GRP in ('NADD','ACTDTY') then pcell_a2='2101';
    else if PATC_GRP in ('DEPACT') then pcell_a2='2102';
  end;
  else if AGE_GRP4 in ('3','2') then do;
    if PATC_GRP in ('NADD','ACTDTY') then pcell_a2='2103';
    else if PATC_GRP in ('DEPACT') then pcell_a2='2104';
  end;
  else if AGE_GRP4 in ('1') then do;
    if PATC_GRP in ('NADD','DEPACT') then pcell_a2='2105';
    else if PATC_GRP in ('ACTDTY') then pcell_a2='2106';
  end;
end;
/*Based on oconus_A2_level2_ageGRP4_tree.htm*/
/*Q3FY2017*/
else if conus='0' then do;
  if AGE_GRP4 in ('4','3','2') Then pcell_a2='2001';
  else if AGE_GRP4 in ('1') Then pcell_a2='2002';
end;
run;

title3 'Check the construction of weighting classes';
proc freq data=merged;
tables conus*Pcell_A2/missing list;
run;

/*Q3FY2017*/
title3 'Check the Construction of Weighting Classes (CONUS)';

```

```

proc freq data=merged;
where conus='1';
tables pcell_a2*conus*AGE_GRP4*PATC_GRP/missing list;
run;

/*Q3FY2017*/
title3 'Check the Construction of Weighting Classes (OCONUS)';
proc freq data=merged;
where conus='0';
tables pcell_a2*conus*AGE_GRP4/missing list;
run;

* Calculate nonresponse adjusted weight based on user-specified domains.
*****
;
%MACRO PROCESS(DOMAIN2, INPT);

title3 "Freq of fnstatus";
proc freq data=&inpt.;
tables fnstatus/missing list;
run;

proc sort data=&inpt.;
BY &domain2.;
run;

DATA CELLSA2 (KEEP= &domain2. NUMER DENOM numercnt denomcnt A2);
set &inpt. ;
BY &domain2.;

IF FIRST.&domain2. THEN DO;
A2 = 0.0;
NUMER = 0.0;
DENOM = 0.0;
numercnt = 0;
denomcnt = 0;
END;

RETAIN NUMER DENOM A2 numercnt denomcnt;

IF FNSTATUS IN (11,12,20) THEN
do;
NUMER + adjwt1;
numercnt + 1;
end;

IF FNSTATUS = 11 THEN
do;
DENOM + adjwt1;
denomcnt + 1;
end;

IF LAST.&domain2. THEN DO;
A2 = NUMER/DENOM;

```

```

        OUTPUT CELLSA2;
    END;
RUN;

title3 "Check for CELLSA2 Data Set";
title4 "Checks the Adjustment Ratio";
proc print data=cellsa2;
var &domain2. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

title3 "Checks the Adjustment Ratio";
title4 "Print if ( a2 > 7 ) or ( denomcnt < 100 )";
proc print data=cellsa2;
where ( a2 > 7 ) or ( denomcnt < 100 );
var &domain2. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

title3 "Proc Univariate of Adjustment Ratio (A2)";
proc univariate data=cellsa2 normal ;
var a2;
run;

proc sort data=cellsa2;
by &domain2.;
run;

data adjwt2;
merge &inpt. cellsa2;
by &domain2.;
if fnstatus = 11 then adj2 = a2;
    else adj2 = 0;
adjwt2 = adj2 * adjwt1;
label adjwt2 = "Nonrresponse adjusted weight";
KEEP MPRID fnstatus enbgsmpl adj1 adj2 adjwt1 &domain2. a2 adjwt2 ;
run;

title3 "Check for ADJWT2 Data Set";
title4 "Cross Freq of fnstatus and Adjustment Factor (adj2) with variaous Domains";
proc freq data=adjwt2;
table &domain2.*fnstatus*adj2 / list missing;
run;

proc means data=adjwt2 n sum NOPRINT;
class fnstatus;
var adjwt2;
output out=print sum=sum;
run;

title3 "Printing proc means of Adjust2 by fnstatus";
Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

```



```
proc means data=adjwt2 n sum NOPRINT;
class enbgsmpl;
var adjwt2;
output out=print sum=sum;
run;

title3 "Printing proc means of Adjust2 by enbgsmpl";
Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

data out.adjwt2;
set adjwt2;
run;
%MEND PROCESS;

%PROCESS(Pcell_A2, merged);

title3 "Proc Contents of Nonresponse Adjusted Weight (Adjwt2)";
proc contents data=out.adjwt2;
run;

proc printto;
run;

***** The End *****;
```

F.10 - Q3FY2017\Programs\Weighting\NewWeights\adjwtp.SAS - Calculate the final adjusted weight

```

*****
**
*** Program: adjwtp.sas
*** Task   : 40309.31H
*** Purpose: Assign the final adjusted weight for all sample cases
*** Inputs: Adjwt1.sas7bdat adjwt2.sas7bdat, selectq.sas7bdat,
framea.sas7bdat
*** Outputs: Adjwtp.sas7bdat
***
*****
***;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

libname inr  "/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER."
access=readonly; *Extract.sas7bdat;
libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; * adjwt1.sas7bdat, adjwt2.sas7bdat;
libname inv9 "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; * selectq.sas7bdat;
libname in_f "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; * framea.sas7bdat;
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";

title1 "Program: Adjwtp.sas (&quarter.)";
title2 "Purpose: Assign the final adjusted weight";

*****
* Sort the original data selectq.sd2
*****
;
proc sort data=inv9.selectq
      (keep=BWT COM_GEO D_HEALTH dageqy ENBGSMPL FNSTATUS MPCSMPL MPRID

```

```

PATCAT PCM PNLCDTCD PNSEXCD SERVAFF SEXSMPL STRATUM SVCSMPL WEB
TNEXREG DBENCAT/*Keep DBENCAT for DE*/
  out=selectq;
  format _all_;
  by mprid;
run;

*****
* Sort the ADJWT1, ADJWT2, data set
*****
;
proc sort data=selectq;
by MPRID;
run;

PROC SORT DATA=in.adjwt1(keep=mprid pcell_a1 a1 adj1 adjwt1) out=adjwt1;
BY MPRID;
RUN;

PROC SORT DATA=in.adjwt2(keep=mprid pcell_a2 a2 adj2 adjwt2) out=adjwt2;
BY MPRID;
RUN;

PROC SORT DATA=in.smplA1A2(keep=mprid conus tnex_grp chcsaddr /*fnstatus*/)
out=smplA1A2;
BY MPRID;
RUN;

*****
* Append final weight variable (adjwt)
*****
;
DATA out.adjwtp;
MERGE selectq adjwt1 adjwt2 smplA1A2;
BY MPRID;

  encounter=chcsaddr;
  drop chcsaddr;

*Assign a1, adj1, adjwt1 for fnstatus=32;
  if fnstatus = 32 then do;
    a1=1;
    adj1=1;
    adjwt1 = bwt*adj1;
  end;
*Assign a2, adj2, adjwt2 for fnstatus in (31, 32, 41, 42);
  if fnstatus in (31, 32, 41, 42) then do;
    if fnstatus in (31, 32) then do;
      a2=1;
      adj2=1;
    end;
    else if fnstatus in (41, 42) then do;
      a2=0;
      adj2=0;
    end;
    adjwt2=adj2*adjwt1;
  end;
end;

```

```

adjwt = adjwt2;

RUN;

title3 'Sum of Adjwtp By Final Status';
proc means data=out.adjwtp n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Frame counts By enbgsmpl';
proc freq data=in_f.framea;
tables enbgsmpl/missing list;
run;

title3 'Sum of Adjwtp By enbgsmpl';
proc means data=out.adjwtp n sum NOPRINT;
class enbgsmpl;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Selectq using BWT as the weight';
title4 'Sum of BWT by Final Status';
proc means data=selectq n sum NOPRINT;
class fnstatus;
var bwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Sum of BWT by enbgsmpl';
proc means data=selectq n sum NOPRINT;
class enbgsmpl;
var bwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;

```

```

run;

title3 'Checks for Adjwtp Dataset';
proc sort data=out.adjwtp out=chk;
by pcell_a1 pcell_a2 fnstatus;
run;

data sub_chk;
set chk(keep = com_geo stratum pcell_a1 pcell_a2 fnstatus bwt adj1 adj2
adjwt);
by pcell_a1 pcell_a2 fnstatus;
prodadjs = adj1 * adj2;
retain cellcnt sumadjwt;
if first.fnstatus then
do;
cellcnt = 1;
sumadjwt = adjwt;
end;
else
do;
cellcnt = cellcnt +1;
sumadjwt = sumadjwt + adjwt;
end;
if last.fnstatus then output sub_chk;
run;

proc print data=sub_chk noobs;
var pcell_a1 pcell_a2 fnstatus bwt adj1 adj2 prodadjs adjwt cellcnt
sumadjwt;
sum cellcnt sumadjwt;
run;

proc freq data=sub_chk noprint;
tables prodadjs/missing list out=prodadjs;
run;

title3 "Univariate of Prodadjs = adj1 * adj2";
proc univariate data=prodadjs normal ;
var prodadjs;
run;

title3 "Univariate of Adjwtp (fnstatus=11)";
proc univariate data=out.adjwtp normal ;
where fnstatus=11;
var adjwt;
run;

title3 " Checking the individuals with the largest adjwtp";
proc sort data=out.adjwtp out=sorted;
by descending adjwt;
run;

data sorted;
set sorted;
prodadjs=a1*a2;
run;

```

```

title3 "Proc Print: Checking the individuals with the largest adjwt (obs=200
descending)";
proc print data=sorted (obs=200);
var stratum pcell_a1 pcell_a2 BWT fnstatus a1 adj1 adjwt1 a2 adj2 adjwt
prodadjs;
run;

data OUT.adjwtp;
set OUT.adjwtp;
drop a1 a2 ;
run;

*tnexreg;
proc sort data=out.adjwtp;
by tnexreg;
run;

title3 "Distribution of weights by tnexreg for FNSTATUS=11";
proc means data=out.adjwtp noprint ;
where fnstatus=11;
var adjwt;
by tnexreg;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min
max=max ;
run;

proc print data=out_tnex;
sum n;
run;

title3 "Contents of OUT.adjwtp";
proc contents data=out.adjwtp;
run;

proc printto;
run;

***** The End *****;

```

F.11.A - Q3FY2017\Programs\Weighting\NewWeights\postwt.SAS - Do the poststratification

```
*****
*****
*** Program: postwt.sas
*** Task   : 40309.31H
*** Purpose: Do the poststratification to force weighted counts to
population counts in certain domain.
*** Inputs : framea.sas7bdat: the frame file
***         adjwtp.sas7bdat: weighted survey data
***
*** Outputs: postwt.sas7bdat: final weight data after poststratification
*** Written: Haixia Xu on 12/27/2006
*** Note:   1) From Q1FY2011, we will create POSTCELL from Sampling
'Stratum' instead of (Group||Comgeo)
***         ie., Postcell=substr(Stratum,1,5)
***         2) Starting from Q1FY2014, SampleSize Increased to 100,000 and
it's WebOnly for all
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|---|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

Title1 "Program: postwt.sas (&quarter.)";
Title2 "Purpose: Do the poststratification";

*** Set up the input and output paths. ***;
libname in   "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */
libname inv9 "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";
/* postwt.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeig
hts/calpoststr.sas";
```

```

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/design_effects_unequal_weights.sas";

***Sample***;
data framea;
set inv9.framea;
length postcell $5;
postcell=substr(stratum,1,5); *Creating Postcell from Sampling Stratum;

*****
*Construct Necessary Variables:
*****;
***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01','05') then TNEX_grp='N';
else if d_health in ('18','04') then TNEX_grp='S';
else if d_health in ('19','08','11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which
is the region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

***CONUS region***;
length conus $1;
if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('N', 'S', 'W') then conus='1';
run;

Title3 "Checking the Construction of PostCell";
Title4 " Postcell=substr(stratum,1,5)";
proc freq data=framea;
tables stratum*Postcell/list missing;
run;

proc sort data=framea;
by MPRID;
run;

proc sort data=in.adjwtp out=adjwt;
by MPRID;
run;

data adjwt;
merge adjwt(in=A) framea(in=B keep=mprid postcell group) ;
by MPRID;
if A and B;
run;

*****
***
*** Do the Poststratification

```



```

*****
***;
options compress=yes;
%calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell,
preadjw=adjwt, psratio=ps, postwt=postwt, outdata=OUT.postwt);

Title3 "Proc Univariate of Postwt (where Postwt>0):";
proc univariate data=out.postwt plot;
var postwt ;
where postwt>0;
run;

*****
***
*** Compare the weighted counts and the population counts by the domains
*****
***;
options compress=no;
%macro comparecnt(smpldata=, frmedata=, domain=, weight=);

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight &weight.;
run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by &domain.;
if a and not b and popcnt=. then popcnt=0;
if b and not a and wtcnt=. then wtcnt=0;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff;
run;

%mend comparecnt;

title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by the different
domains';
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=postcell,
weight=postwt);

```

```

%comparecnt(smpldata=in.postwt, frmedata=framea, domain=group,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=TNEX_grp,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=PCM, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea,
domain=enbgsmpl,weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=patcat,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=stratum,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=com_geo,
weight=postwt);
*%comparecnt(smpldata=in.postwt, frmedata=framea, domain=servaff,
weight=postwt);

*
*_____
*Domain=(TNEX_grp*PCM)
*_____
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
proc freq data=in.postwt NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight postwt;
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff ;
run;

proc univariate data=cnt_sf;
var diff ;
run;

*
*_____
*Domain=(TNEX_grp*PCM)
where Group=(1,2,3)
*_____
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
title5 " where, Group = (1,2,3)";
proc freq data=in.postwt NOPRINT;

```

```

tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight postwt;
where group IN ('1','2','3');
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
where group IN ('1','2','3');
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff ;
run;

*
*_____
*Domain=(TNEX_grp*servaff)
*_____ ;
*title3 'Check to see if the poststratification is done correctly';
*title4 'Compare the weighted count and the frame count by (TNEX*servaff)';
*proc freq data=in.postwt NOPRINT;
*tables TNEX_grp*servaff/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
*weight postwt;
*where group IN ('1','2','3');
*run;

*proc freq data=framea NOPRINT;
*tables TNEX_grp*servaff/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
*run;

*data cnt_sf;
*merge weight_s(in=A) unweight_f(in=B);
*by TNEX_grp servaff;
*diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
*if A and B;
*run;

*proc print data=cnt_sf;
*sum wtcnt popcnt diff ;
*run;

```

```

*proc univariate data=cnt_sf;
*var diff ;
*run;

*****
***
*** Compare the weighted sum before and after the poststratification
*****
***;

%macro procmeans(weightvar=, classvar=);
proc means data=OUT.postwt noprint;
class &classvar.;
var &weightvar.;
output out=out sum=/autoname;
run;

data print;
set out;
where _type_=1;
run;

title3 "weighted info by &classvar. using &weightvar. as weight";
proc print data=print;
sum _freq_ bwt_sum adjwt1_sum adjwt2_sum adjwt_sum postwt_sum;
run;
%mend procmeans;

%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=fnstatus);
*%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=stratum);

*****
*Additional Checking:
*****;
data chk;
set OUT.postwt;
run;

Proc sort data=chk;
by decending postwt ;
run;

Title1 "Checking 50 largest Postwts:";
Proc print data=chk (obs=50);
var postcell stratum postwt ps adjwt adjwt2 adj2 adjwt1 adj1 bwt;
run;

*****
***
*** Output the datasets
*****
***;

options compress=yes;

```

```

data out.postwt;
set out.postwt(drop=adjwt );
label  ENBGSMPL = 'ENBGSMPL - Beneficiary/Enrollment Status'
       PCM = 'Primary care Manager Code';
run;

*****
***
*** Calculate the Design Effects
*****
***;

**create dataset of completes only;
data postwt_fnl;
set out.postwt;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, postcell,  postwt,
deff_overall, deff_postcell );
%design_effects_unequal_weights ( postwt_fnl, com_geo,  postwt,
deff_overall, deff_cac );
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, postwt,
deff_overall, deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg,  postwt,
deff_overall, deff_tnexreg );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, postwt,
deff_overall, deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus,    postwt,
deff_overall, deff_conus );
*%design_effects_unequal_weights ( postwt_fnl, servaff,  postwt,
deff_overall, deff_servaff );
*%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff,  postwt,
deff_overall, deff_TNEXservaff );

title3 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For postcell ***;
title3 "Design Effects for postcell";
proc print data= deff_postcell;
sum _freq_;
run;

*** For geographic Area ***;
title3 "Design Effects for com_geo";
proc print data= deff_cac;
sum _freq_;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

```

```

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

*** For Service Affiliation for the facility ***;
*title3 "Design Effects for Facility's Service Affiliation";
*proc print data= deff_servaff;
*sum _freq_;
*run;

*** For TNEX_grp*Servaff ***;
*title3 "Design Effects for TNEX_grp by Servaff";
*proc print data= deff_TNEXservaff;
*sum _freq_;
*run;

title3 "Contents of OUT.postwt";
proc contents data=OUT.postwt;
run;

proc printto;
run;

***** The end *****;

```

F.11.B - Q3FY2017\Programs\Weighting\NewWeights\calpoststr.SAS - Include file for postwt.sas, trim.sas, postwt_trimmed.sas

```
*****
* Macro to do the poststratification
*****;
%macro calpoststr(smpldata=, frmedata=, domain=, preadjwt=, psratio=,
postwt=, outdata=);

proc freq data=&smpldata. NOPRINT;
where fnstatus in (11, 31, 32);
tables &domain./missing list out=unweight_s(rename=(count=unwtcnt)
drop=percent);
run;

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight &preadjwt.;
run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf out.only_f_calpoststr;
merge unweight_s(in=A) weight_s(in=B) unweight_f(in=C);
by &domain.;
if A and B and C then do;
  &psratio.=popcnt/wtcnt;
  label &psratio.="poststratification ratio";
  output cnt_sf;
end;
else if C and NOT A then output out.only_f_calpoststr;
run;

*Sorting data with Poststratification Ratio by PS;
proc sort data=cnt_sf out=test;
by &psratio.;
run;

title3 "Check the calculation of poststratification ratio";
title4 "(sorted by PS)";
proc print data=test;
sum unwtcnt wtcnt popcnt;
run;

title3 "Univariate of poststratification ratio";
proc univariate data=cnt_sf;
var &psratio.;
run;

title3 "Check the small cells or too small/large ratios - or (unwtcnt<15) or
(&psratio. < 0.75) or (&psratio. > 2)";
proc print data=cnt_sf;
```

```

where (&psratio. > 2) or (&psratio. < 0.75) or (unwtcnt <15);
run;

*Append cnt_sf back to the adjusted weight data;
proc sort data=&smpldata.;
by &domain.;
run;

data &outdata.;
merge &smpldata. cnt_sf(keep=&psratio. &domain.);
by &domain.;
run;

data &outdata.;
set &outdata.;
if fnstatus in (11, 31, 32) then &psratio.=&psratio.;
else if fnstatus in (12, 20, 41, 42) then &psratio.=0;
&postwt. = &preadjwt.*&psratio.;
run;

title3 "check the calculation of final weight";
proc print data=&outdata.(obs=200);
var &domain. fnstatus &preadjwt. &psratio. &postwt.;
run;

title3 "Univariate of final weight";
proc univariate data=&outdata.;
var &postwt.;
where fnstatus=11;
run;
%mend calpoststr;

```


**F.11.C - Q3FY2017\Programs\Weighting\NewWeights\design_effects_unequal_weights.sas -
Include file for postwt.sas, trim.sas, postwt_trimmed.sas**

Name:
design_effects_unequal_weights

Purpose:
Calculate the design effects due to unequal weights. Creates two data sets. One data set contains the overall design effect and the information used to calculate the design effect. The other data set contains the design effects for each category of the analysis variable and the information used to calculate these design effects. In the two data sets, the additional information refers to the number of observations, the sum of the squared weights, and the sum of the weights squared.

Programmer:
Darryl V. Creel

Parameters:
There are five:

- (1) in_data_set - The input data set.
- (2) analysis_variable - The analysis variable contains the categories by which the design effects are calculated.
- (3) weight_variable - The weight variable.
- (4) out_overall_data_set - Name of the data set that contains the overall design effect.
- (5) out_data_set - Name of the output data set that contains the design effects for each category of the analysis variable.

Output:
There are two data sets:

- (1) A data set that contains the overall design effect and the information used to calculate the overall design effect. It includes observations that have a missing value for the analysis variable. This data set is named by the out_overall_data_set parameter.
- (2) A data set that contains the design effects for each category of the analysis variable and the information used to calculate these design effects. There is one observation for each category of the analysis variable, including a missing category, if there

are missing values for the analysis variable. This data set is named by the out_data_set parameter.

Side Effects:
None

Notes:

- (1) Use with SAS V8.
- (2) Do NOT use the following variable names as parameters:
 - (a) _weight_variables
 - (b) _overall_design_effect
 - (c) _design_effect.

*****;

```
%macro design_effects_unequal_weights
  ( in_data_set,
    analysis_variable,
    weight_variable,
    out_overall_data_set,
    out_data_set );

  data _weight_variables;
    set &in_data_set. ( keep = &analysis_variable. &weight_variable. );
    &weight_variable._sq = &weight_variable. * &weight_variable.;
  run;

  proc means data = _weight_variables missing noprint;
    var &weight_variable. &weight_variable._sq;
    output out = _overall_design_effect
           sum ( &weight_variable. &weight_variable._sq ) =
           sum_&weight_variable. sum_&weight_variable._sq;
  run;

  data &out_overall_data_set.;
    set _overall_design_effect ( drop = _type_ );
    design_effect = ( _freq_ * sum_&weight_variable._sq ) / (
sum_&weight_variable. * sum_&weight_variable. );
  run;

  proc sort data = _weight_variables;
    by &analysis_variable.;
  run;

  proc means data = _weight_variables missing noprint;
    var &weight_variable. &weight_variable._sq;
    by &analysis_variable;
    output out = _design_effect
           sum ( &weight_variable. &weight_variable._sq ) =
           sum_&weight_variable. sum_&weight_variable._sq;
  run;
```

```
data &out_data_set.;
  set _design_effect ( drop = _type_ );
  design_effect = ( _freq_ * sum_&weight_variable._sq ) / (
sum_&weight_variable. * sum_&weight_variable. );
run;

proc datasets;
  delete _weight_variables _overall_design_effect _design_effect;
run;

%mend design_effects_unequal_weights;
```

F.12 - Q3FY2017\Programs\Weighting\NewWeights\trim.sas - Trim the large adjusted weights by one or more of 6 domains

```

*****
*** Project: Health Care Survey of DoD Beneficiaries - Adult
*** Task No: 40309.31H
*** Purpose: Trim the Large Adjusted Weights by One or More of Domains :
***           Postcell,Enbgsmpl,Patcat,Tnexreg, PCM and Servaff
*** Program: Trim.sas
*** Inputs:  postwt.sas7bdat - post weight data
*** Outputs: trimmed.sas7bdat
*** Written: 1)Sky Andrecheck 6/07
*** Updated: 1)H. Xu on 03/29/2007 for q3fy2007 weightng
***           2)Sabrina Rahman on 06/25/2008 for q3fy2008 weighting
***             (last macro minmax is new for q3fy2008 to produce
***             some tables we need to take trimmin decision)
***           3)Sabrina Rahman on 09/26/2008 for q4fy2008 weighting
***           4)S.Rahman on 09/21/2011 for Q4Fy2011 Adult Weighting
***             Trimmed 2 times with postcell and then patcat, this is
***             a different order then the original trim.sas program
***             See "trimming decision" note in folder
***             L:\Q4FY2011\Programs\Weighting\NewWeights\checking
***           5)Sabrina R. 06/26/2012: Similar to Q1FY2012 and Q4FY2011
***             we are trimming ONCE in Q3FY2012 using PATCAT. Trimming
***             by Postcell do not do much, using enbgsmpl have max weight
***             over 10,000. Trimming once by PATCAT seems our best option.
***           6) Starting in Q2FY2016, included DBENCAT design effects
***           7) Q1FY2017: Instead of "cutoff=means+stdev*6" we are using
***             "cutoff=means+stdev*4" to avoid large DE (4+).
***             Also, trim Domain "TNEXREG" looks better than PATCAT. so
***             we are using TNEXREG as our final Trimming Domain.
***           8) Using cutoff=means+stdev*6 as before.
***           9) Added Macro Variable for Final Trim Weight and Domain
*****
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+|=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/'),));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

*** Set up the input and output paths. ***;

```

```

libname in    "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */
libname inv6  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out   "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";
/* trimmed.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/calpoststr.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/design_effects_unequal_weights.sas";

title1 "Program: Trim.sas (&quarter.)";
title2 "                ";

data trim;
set in.postwt;
tnexenbgsmpl=tnexreg||enbgsmpl;
groupenbgsmpl=group||enbgsmpl;
run;

Title3 'Checking CrossTab of group*enbgsmpl: ';
proc freq data=trim;
table group*enbgsmpl /list missing;
run;

**create dataset of completes only;
data postwt_fnl;
set in.postwt;
where fnstatus=11;
run;

***Using include macro : Design_effects_unequal_weights***;
%design_effects_unequal_weights ( postwt_fnl, postcell, postwt,
deff_overall, deff_postcell );
%design_effects_unequal_weights ( postwt_fnl, com_geo, postwt,
deff_overall, deff_cac );
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, postwt,
deff_overall, deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, postwt,
deff_overall, deff_tnexreg );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, postwt,
deff_overall, deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus, postwt,
deff_overall, deff_conus );
%design_effects_unequal_weights ( postwt_fnl, servaff, postwt,
deff_overall, deff_servaff );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff, postwt,
deff_overall, deff_TNEXservaff );
%design_effects_unequal_weights ( postwt_fnl, patcat, postwt, deff_overall,
deff_patcat );
%design_effects_unequal_weights ( postwt_fnl, pcm, postwt, deff_overall,
deff_pcm );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp pcm, postwt,
deff_overall, deff_TNEXpcm );

```

```
%design_effects_unequal_weights ( postwt_fnl, dbencat, postwt, deff_overall,  
deff_bencat );
```

```
Title4 "Original Design Effects (Before Trimming)";  
Title5 'Design Effects Overall';  
proc print data = deff_overall;  
run;
```

```
*** For postcell ***;  
Title4 "Design Effects for postcell";  
proc print data= deff_postcell;  
sum _freq_;  
run;
```

```
*** For geographic Area ***;  
Title4 "Design Effects for com_geo";  
proc print data= deff_cac;  
sum _freq_;  
run;
```

```
*** For ENBGSMP L Groups ***;  
Title4 'Design Effects for ENBGSMP L';  
proc print data= deff_enb;  
sum _freq_;  
run;
```

```
*** For Beneficiary TNEX Region ***;  
Title4 'Design Effects for TNEXREG';  
proc print data= deff_tnexreg;  
sum _freq_;  
run;
```

```
*** For Facility TNEX region (TNEX_grp) ***;  
Title4 "Design Effects for Facility's TNEX region (TNEX_grp)";  
proc print data= deff_tnexgrp;  
sum _freq_;  
run;
```

```
*** For conus region ***;  
Title4 "Design Effects for conus";  
proc print data= deff_conus;  
sum _freq_;  
run;
```

```
*** For Service Affiliation for the facility ***;  
Title4 "Design Effects for Facility's Service Affiliation";  
proc print data= deff_servaff;  
sum _freq_;  
run;
```

```
*** For TNEX_grp*Servaff ***;  
Title4 "Design Effects for TNEX_grp by Servaff";  
proc print data= deff_TNEXservaff;  
sum _freq_;  
run;
```

```

*** For PATCAT ***;
Title4 "Design Effects for PATCAT";
proc print data= deff_patcat;
sum _freq_;
run;

*** For PCM ***;
Title4 "Design Effects for PCM";
proc print data= deff_pcm;
sum _freq_;
run;

*** For TNEX_grp*PCM ***;
Title4 "Design Effects for TNEX_grp by PCM";
proc print data= deff_TNEXpcm;
sum _freq_;
run;

*** For dbencat ***;
Title4 "Design Effects for Bencat";
proc print data= deff_bencat;
sum _freq_;
run;

*****
Creating Data with Original Design Effects (Before Trimming):
*****;

data overall;
set deff_overall;
original=design_effect;
mergevar=1;
run;

data postcell;
set deff_postcell;
original=design_effect;
run;

data cac;
set deff_cac;
original=design_effect;
run;

data enb;
set deff_enb;
original=design_effect;
run;

data tnexreg;
set deff_tnexreg;
original=design_effect;
run;

data tnexgrp;

```

```
set deff_tnexgrp;
original=design_effect;
run;
```

```
data conus;
set deff_conus;
original=design_effect;
run;
```

```
data servaff;
set deff_servaff;
original=design_effect;
run;
```

```
data tnexservaff;
set deff_tnexservaff;
original=design_effect;
run;
```

```
data pcm;
set deff_pcm;
original=design_effect;
run;
```

```
data patcat;
set deff_patcat;
original=design_effect;
run;
```

```
data tnexpcm;
set deff_tnexpm;
original=design_effect;
run;
```

```
data bencat;
set deff_bencat;
original=design_effect;
run;
```

```
*****
* Trimming Macro *
*****;
```

```
%macro trimmer(domain,oldw,neww);
data trim;
set trim;
%if &neww.^= Newtrim1 %then %do;
drop number means stdev sumweight cutoff toobig trimadj sumold sumnew;
%end;
run;
```

```
proc sort data=trim;
by &domain;
run;
```



```

title4 "Checks the Calculation of CutOff Point (Cutoff=Means+StDev*6) by
&domain:";
proc means data=trim n mean std sum noprint;
var &oldw;
by &domain;
where fnstatus=11;
output out=meanspostwt n=number mean=means std=stdev
sum=sumweight max=maxi min=mini;
run;

data trim;
merge trim meanspostwt;
by &domain;
cutoff=means+stdev*6;
toobig=.;
trimadj=.;
if &oldw>cutoff and fnstatus=11 then toobig=1;
if toobig=1 then &neww=cutoff;
if cutoff=. and toobig=1 then &neww=&oldw;
if toobig=. then &neww=&oldw;
run;

data meanspostwt;
set meanspostwt;
cutoff=means+stdev*6;
run;

title5 " here, number=# of respondents (fnstatus=11)";
proc print data=meanspostwt;
var &domain number means stdev mini maxi cutoff;
run;

*****
*Calculation of SumOld, SumNew and TrimAdj Factor:
*****;
proc means data=trim sum noprint;
var &oldw &neww;
by &domain;
where fnstatus=11;
output out=meansbig sum=sumold sumnew;
run;

*Merging SumOld SumNew with Trim data;
data trim;
merge trim meansbig;
by &domain;
run;

*03/30/2012: A Freq Checking;
proc sort data=trim out=chk;
by postwt;
run;

title4 "Checks for NewTrim Weight (Before Adjusting)";
title5 " If &oldw>CutOff and Fnstatus=11 then TooBig=1 and
&neww.=cutoff:";
proc freq data=chk;

```

```

tables &oldw.*postcell*means*stdev*toobig*CUTOFF*&neww./list missing
nopercent;
where toobig=1;
run;

*Calculation of trimadj and &neww;
data trim;
set trim;
/*cutoff~= . filter guards against divide by zero error
  if there is only 1 obs in domain */
if cutoff~= . then trimadj=sumold/sumnew;
if trimadj=. or fnstatus~=11 then trimadj=1;
&neww=trimadj*&neww;
run;

*Checking the Calculation of TrimAdj Factor;
Title4 "Checking the Calculation of TrimAdj Factor (first 10 obs, where,
TrimAdj~=1):";
title5 "  TrimAdj = (SumOld/SumNew) by &Domain.";
title6 "  &neww = trimadj*&neww";
Proc Print data=Trim (Obs=10) Noobs;
Var &domain FNSTATUS &oldw. SumOld SumNew TrimAdj  &neww;
where TrimAdj~=1;
Run;

title4 "Checks for NewTrim Weight (After Adjustment):";
title5 "  where, &neww.=(TrimAdj*&neww.):";
proc freq data=trim;
tables &oldw.*postcell*CUTOFF*TOOBIG*trimadj*&neww./list missing /*nocum*/
nopercent;
where toobig=1;
run;

proc means data=trim sum noprint;
var &oldw &neww;
by &domain;
output out=sumcheck2 sum=old new;
run;

data sumcheck2;
set sumcheck2;
diff=new-old;
run;

title4 "Proc Means of Diff=(New-Old):";
title5 "  where, New & Old are Sum of &oldw. & &neww. Weights resp";
proc means data=sumcheck2;
var diff;
run;

proc means data=trim sum noprint;
var &oldw &neww;
by &domain;
where fnstatus=11;
output out=sumcheck sum=old new;
run;

```

```

data sumcheck;
set sumcheck;
diff=new-old;
run;

title4 "Proc Means of Diff=(New-Old), where fnstatus=11";
proc means data=sumcheck;
var diff;
run;

title4 "Print of Old and New Weight by Domain:";
title5 " where, New/Old is Sum of &oldw. & &neww. Weights:";
proc print data=sumcheck2;
var &domain old new;
run;

title4 "CrossTab of Variable (where &oldw>5000):";
proc freq data=trim;
table &oldw*&neww*toobig*stratum*&domain/list missing;
where &oldw>5000;
run;

title4 "More Checking for Trim Weight:";
title5 " Proc Freq of Variables (where toobig=1):";
proc freq data=trim;
table toobig*&oldw*&neww*stratum*&domain /list missing;
where toobig=1;
run;

title5 "Proc Print of Variables (where toobig=1):";
proc print data=trim NOOBS;
var toobig postcell com_geo enbgsmpl tnexreg conus servaff pcm patcat;
where toobig=1;
sum toobig;
run;

*****
Calculation of Design Effects after Trimming:
*****;
**Create Dataset of Completes ONLY for Design Effects Calculation:**
title4 " DESIGN EFFECTS USING NEWTRIM WEIGHT (&neww.):";
title5 " ";
data postwt_fnl;
set trim;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, postcell, &neww, deff_overall,
deff_postcell );
%design_effects_unequal_weights ( postwt_fnl, com_geo, &neww, deff_overall,
deff_cac );
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, &neww, deff_overall,
deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, &neww, deff_overall,
deff_tnexreg );

```

```

%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, &neww, deff_overall,
deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus,      &neww, deff_overall,
deff_conus );
%design_effects_unequal_weights ( postwt_fnl, servaff,  &neww, deff_overall,
deff_servaff );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff, &neww,
deff_overall, deff_TNEXservaff );
%design_effects_unequal_weights ( postwt_fnl, pcm,      &neww, deff_overall,
deff_pcm );
%design_effects_unequal_weights ( postwt_fnl, patcat,  &neww, deff_overall,
deff_patcat );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp pcm, &neww,
deff_overall, deff_TNEXpcm );
%design_effects_unequal_weights ( postwt_fnl, dbencat,  &neww,
deff_overall, deff_bencat );

```

```

Title6 '  Design Effects Overall';
proc print data = deff_overall;
run;

```

```

*** For postcell ***;
Title6 "  Design Effects for postcell";
proc print data= deff_postcell;
sum _freq_;
run;

```

```

*** For geographic Area ***;
Title6 "  Design Effects for com_geo";
proc print data= deff_cac;
sum _freq_;
run;

```

```

*** For ENBGSMPL Groups ***;
Title6 '  Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

```

```

*** For Beneficiary TNEX Region ***;
Title6 '  Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

```

```

*** For Facility TNEX region ***;
Title6 "  Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

```

```

*** For conus region ***;
Title6 "  Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

```

```

*** For Service Affiliation for the facility ***;
Title6 " Design Effects for Facility's Service Affiliation";
proc print data= deff_servaff;
sum _freq_;
run;

*** For TNEX_grp*Servaff ***;
Title6 " Design Effects for TNEX_grp by Servaff";
proc print data= deff_TNEXservaff;
sum _freq_;
run;

*** For PCM ***;
Title6 " Design Effects for PCM";
proc print data= deff_pcm;
sum _freq_;
run;

*** For PATCAT ***;
Title6 " Design Effects for PATCAT";
proc print data= deff_patcat;
sum _freq_;
run;

*** For TNEX_grp*PCM ***;
Title6 " Design Effects for TNEX_grp by PCM";
proc print data= deff_TNEXpcm;
sum _freq_;
run;

*** For Bencat ***;
Title6 " Design Effects for Bencat";
proc print data= deff_bencat;
sum _freq_;
run;

title6 " Proc MEANS of &neww:";
proc means data=trim;
var &oldw &neww;
run;
%mend trimmer;

*****
MACRO TO CREATE DESIGN EFFECTS
*****;
%macro CreateDE(DE=);
data deff_overall;
set deff_overall;
mergevar=1;
run;

data overall;
merge overall deff_overall;
&de.=design_effect;
by mergevar;
run;

```

```

data postcell;
merge postcell deff_postcell;
by postcell;
&de.=design_effect;
run;

data cac;
merge cac deff_cac;
by com_geo;
&de.=design_effect;
run;

data enb;
merge enb deff_enb;
by enbgsmpl;
&de.=design_effect;
run;

data tnexreg;
merge tnexreg deff_tnexreg;
by tnexreg;
&de.=design_effect;
run;

data tnexgrp;
merge tnexgrp deff_tnexgrp;
by tnex_grp;
&de.=design_effect;
run;

data conus;
merge conus deff_conus;
by conus;
&de.=design_effect;
run;

data servaff;
merge servaff deff_servaff;
by servaff;
&de.=design_effect;
run;

data tnexservaff;
merge tnexservaff deff_tnexservaff;
by tnex_grp servaff;
&de.=design_effect;
run;

data patcat;
merge patcat deff_patcat;
by patcat;
&de.=design_effect;
run;

data pcm;
merge pcm deff_pcm;

```

```
by pcm;
&de.=design_effect;
run;
```

```
data tnexpcm;
merge tnexpcm deff_tnexpcm;
by tnex_grp pcm;
&de.=design_effect;
run;
```

```
data bencat;
merge bencat deff_bencat;
by dbencat;
&de.=design_effect;
run;
```

```
%mend CreateDE;
```

```
*****
CALLS MACRO TRIMMER :
*****;
```

```
Title3 'MACRO TRIMMER: DOMAIN=POSTCELL, TRIMMING=POSTWT: ';
%trimmer(Postcell,Postwt,Newtrim1);
*Creating Design Effects using NEWTRIM1;;
%CreateDE(De=De1);
```

```
*
_____
*CALLS MACRO TRIMMER :
*_____;
```

```
Title3 'MACRO TRIMMER: DOMAIN=ENBGSMPL, TRIMMING=POSTWT: ';
%trimmer(Enbgsmpl,Postwt,Newtrim2);
*Creating Design Effects using NEWTRIM2;;
%CreateDE(De=De2);
```

```
*
_____
*CALLS MACRO TRIMMER :
*_____;
```

```
Title3 'MACRO TRIMMER: DOMAIN=PATCAT, TRIMMING=POSTWT: ';
%trimmer(Patcat,Postwt,Newtrim3);
*Creating Design Effects using NEWTRIM3;;
%CreateDE(De=De3);
```

```
*
_____
*CALLS MACRO TRIMMER :
*_____;
```

```
Title3 'MACRO TRIMMER: DOMAIN=TNEXREG, TRIMMING=POSTWT: ';
%trimmer(Tnexreg,Postwt,Newtrim4);
*Creating Design Effects using NEWTRIM4;;
%CreateDE(De=De4);
```

```
*
_____
```

```

*CALLS MACRO TRIMMER :
* _____;

Title3 'MACRO TRIMMER: DOMAIN=PCM, TRIMMING=POSTWT: ';
%trimmer(Pcm,Postwt,Newtrim5);
*Creating Design Effects using NEWTRIM5:;
%CreateDE(De=De5);

* _____
*CALLS MACRO TRIMMER :
* _____;

Title3 'MACRO TRIMMER: DOMAIN=SERVAFF, TRIMMING=POSTWT: ';
%trimmer(Servaff,Postwt,Newtrim6);
*Creating Design Effects using NEWTRIM6:;
%CreateDE(De=De6);

*****
* PROC PRINT OF DESIGN EFFECTS:
*****;

Title3 "PROC PRINT OF DESIGN EFFECTS (by Different Trimmed Weights):";
Title4 "Postcell,Enbgsmpl,Patcat,Tnexreg, PCM and Servaff";
proc print data=overall;
var original del de2 de3 de4 de5 de6;
run;

proc print data=postcell;
var postcell original del de2 de3 de4 de5 de6;
run;

proc print data=cac;
var com_geo original del de2 de3 de4 de5 de6;
run;

proc print data=enb;
var enbgsmpl original del de2 de3 de4 de5 de6;
run;

proc print data=tnexreg;
var tnexreg original del de2 de3 de4 de5 de6 ;
run;

proc print data=tnexgrp;
var tnex_grp original del de2 de3 de4 de5 de6 ;
run;

proc print data=conus;
var conus original del de2 de3 de4 de5 de6;
run;

proc print data=servaff;
var servaff original del de2 de3 de4 de5 de6;
run;

```



```
proc print data=tnexservaff;  
var tnex_grp servaff original del de2 de3 de4 de5 de6;  
run;
```

```
proc print data=patcat;  
var patcat original del de2 de3 de4 de5 de6;  
run;
```

```
proc print data=pcm;  
var pcm original del de2 de3 de4 de5 de6;  
run;
```

```
proc print data=tnexpcm;  
var tnex_grp pcm original del de2 de3 de4 de5 de6;  
run;
```

```
proc print data=bencat;  
var dbencat original del de2 de3 de4 de5 de6;  
run;
```

```
data overall;  
set overall;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data postcell;  
set postcell;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data cac;  
set cac;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data enb;  
set enb;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;
```

```
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data tnexreg;  
set tnexreg;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data tnexgrp;  
set tnexgrp;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data conus;  
set conus;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data servaff;  
set servaff;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data tnexservaff;  
set tnexservaff;  
diff1=sum_newtrim1/sum_postwt;  
diff2=sum_newtrim2/sum_postwt;  
diff3=sum_newtrim3/sum_postwt;  
diff4=sum_newtrim4/sum_postwt;  
diff5=sum_newtrim5/sum_postwt;  
diff6=sum_newtrim6/sum_postwt;  
run;
```

```
data patcat;  
set patcat;  
diff1=sum_newtrim1/sum_postwt;
```

```

diff2=sum_newtrim2/sum_postwt;
diff3=sum_newtrim3/sum_postwt;
diff4=sum_newtrim4/sum_postwt;
diff5=sum_newtrim5/sum_postwt;
diff6=sum_newtrim6/sum_postwt;
run;

```

```

data pcm;
set pcm;
diff1=sum_newtrim1/sum_postwt;
diff2=sum_newtrim2/sum_postwt;
diff3=sum_newtrim3/sum_postwt;
diff4=sum_newtrim4/sum_postwt;
diff5=sum_newtrim5/sum_postwt;
diff6=sum_newtrim6/sum_postwt;
run;

```

```

data tnexpcm;
set tnexpcm;
diff1=sum_newtrim1/sum_postwt;
diff2=sum_newtrim2/sum_postwt;
diff3=sum_newtrim3/sum_postwt;
diff4=sum_newtrim4/sum_postwt;
diff5=sum_newtrim5/sum_postwt;
diff6=sum_newtrim6/sum_postwt;
run;

```

```

data bencat;
set bencat;
diff1=sum_newtrim1/sum_postwt;
diff2=sum_newtrim2/sum_postwt;
diff3=sum_newtrim3/sum_postwt;
diff4=sum_newtrim4/sum_postwt;
diff5=sum_newtrim5/sum_postwt;
diff6=sum_newtrim6/sum_postwt;
run;

```

```

*****
* Proc Print:
*****;
%macro print(infile=, var=);
proc print data=&infile.;
var &var. sum_postwt sum_newtrim1 sum_newtrim2 sum_newtrim3 sum_newtrim4
sum_newtrim5 sum_newtrim6 diff1 diff2 diff3 diff4 diff5 diff6;
run;
%mend print;
%print(infile=overall);
%print(infile=postcell, var=postcell);
%print(infile=cac, var=com_geo);
%print(infile=enb, var=enbgsmpl);
%print(infile=tnexreg, var=tnexreg);
%print(infile=tnexgrp, var=tnex_grp);
%print(infile=conus, var=conus);
%print(infile=servaff, var=servaff);

```

```

%print(infile=tnexservaff, var=tnex_grp servaff);
%print(infile=patcat, var=patcat);
%print(infile=pcm, var=pcm);
%print(infile=tnexpcm, var=tnex_grp pcm);
%print(infile=bencat, var=dbencat);

Title3 "CrossTab of trim weight variables where POSTWT>6500";
Title4 " here, NewTrim1=Postcell, NewTrim2=Enbgsmpl, NewTrim3=PATCAT,
NewTrim4=Tnexreg, NewTrim5=PCM, NewTrim6=Servaff";
proc freq data=trim;
table postwt*newtrim1*newtrim2*newtrim3*newtrim4*newtrim5*newtrim6*stratum
/list missing nocum;
where POSTWT>6500;
run;

*****
Creating data Trimmed with Final Trimmed Weight
*****;

*Q3FY2017: Update Final Trim Weight and Domain Macro variables Every
Quarter;
%LET TrimWtThisQtr = Newtrim2;
%LET TrimDomainThisQtr = Enbgsmpl;

data trimmed;
set trim;
trimwt=&TrimWtThisQtr.;
run;

Title3 "Proc Means (here, Trimwt=&TrimWtThisQtr.(Domain=&TrimDomainThisQtr.)
-- for &QUARTER.)";
Title4 " NewTrim1=Postcell, NewTrim2=Enbgsmpl";
Title5 " NewTrim3=PATCAT, NewTrim4=Tnexreg";
Title6 " NewTrim5=PCM, NewTrim6=Servaff";
Proc Means data=trimmed;
var postwt newtrim1-newtrim6 Trimwt; *BV 6/2/14 Added newtrim6 to output
list;
run;

Title3 "Proc Univariate (Var=Trimwt)";
Title4 " here, Trimwt=&TrimWtThisQtr. and Domain=&TrimDomainThisQtr.-- for
&QUARTER.";
Proc Univariate Data=Trimmed;
Var Trimwt;
Run;

*****
OUTPUT DATA WITH FINAL TRIMMED WEIGHT
*****;
data out.trimmed;
set trimmed;
drop sumnew sumold trimadj toobig cutoff sumweight stdev number means
newtrim1 newtrim2 newtrim3 newtrim4 newtrim5 newtrim6 ;
run;

```

```
proc printto;  
run;
```

```
***** End of Main Program *****;
```

F.13 - Q3FY2017\Programs\Weighting\NewWeights\postwt_trimmed.sas - Do the poststratification again after trimming

```

*****
***
*** Project: Health Care Survey of DoD Beneficiaries - Adult
*** Purpose: Do the poststratification again after trimming
***           force weighted counts to population counts in certain domain.
*** Task no: 40309.31H
*** Program: Postwt_trimmed.sas
***
*** Inputs:  framea.sd2: the frame file
***           trimmed.sas7bdat - trimmed survey data

*** Outputs: postwt_trimmed.sas7bdat: final weight data after
poststratification
*** Written: 1) Haixia Xu on 12/27/2006
*** Update : 1) Starting in Q2FY2016, included DBENCAT design effects
*****
****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/')));
%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

*** Set up the input and output paths. ***;
libname in   "/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */
libname inv6 "/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Data/AFinal";
/* postwt_trimmed.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/calpoststr.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeights/design_effects_unequal_weights.sas";

```

```

title1 "Program: Postwt_trimmed.sas (&quarter.)";
title2 "Purpose: Do the poststratification again after Trimming";

***Sample***;
data framea;
set inv6.framea;
length postcell $5;
postcell=substr(stratum,1,5); *Creating Postcell from Sampling Stratum;

*****
*Construct Necessary Variables:
*****;

***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01','05') then TNEX_grp='N';
else if d_health in ('18','04') then TNEX_grp='S';
else if d_health in ('19','08','11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which
is the region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

***CONUS region***;
length conus $1;
if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('N', 'S', 'W') then conus='1';
run;

Title3 "Checking the Construction of PostCell";
proc freq data=framea;
tables stratum*postcell*group*com_geo/missing list;
run;

/*trimmed data already has postcell group variables in, so no need to merge
it with framea data:
proc sort data=framea;
by MPRID;
run;

proc sort data=in.trimmed out=adjwt;
by MPRID;
run;

data adjwt;
merge adjwt(in=A) framea(in=B) ;
by MPRID;
if A and B;
run;
*/

```

```

data adjwt;
  set in.trimmed;
run;

*****
***
*** Do the Poststratification & OUTPUT Postwt_Trimmed.sas7bdat data :
*****
***;
options compress=yes;
%calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell,
preadjwt=trimwt,
           psratio=ps2, postwt=postwt2, outdata=OUT.postwt_trimmed);

title3 "Univariate of Postwt (where Postwt>0";
proc univariate data=OUT.postwt_trimmed;
var Postwt2 ;
run;

*****
***
*** Compare the weighted counts and the population counts by the domains
*****
***;
options compress=no;
%macro comparecnt(smpldata=, frmedata=, domain=, weight=);

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight &weight.;
run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by &domain.;
if a and not b and popcnt=. then popcnt=0;
if b and not a and wtcnt=. then wtcnt=0;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
*if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff ;
run;

```



```

%mend comparecnt;

title3 'Check to see if the poststratification is done correctly';
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=postcell,
weight=postwt2);

title3 'Compare the weighted count and the frame count by the different
domains';
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=group,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=TNEX_grp,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=PCM,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=enbgsmpl,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=patcat,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=stratum,
weight=postwt2);
%comparecnt(smpldata=in.postwt_trimmed, frmedata=framea, domain=com_geo,
weight=postwt2);

title3 'Compare the weighted count and the frame count by TNEX_grp*PCM';
proc freq data=in.postwt_trimmed NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight postwt;
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff;
run;

*****
***
*** Compare the weighted sum before and after the poststratification

```

```

*****
***;

%macro procmeans(weightvar=, classvar=);
proc means data=OUT.postwt_trimmed noprint;
class &classvar.;
var &weightvar.;
output out=out sum=/autoname;
run;

data print;
set out;
where _type_=1;
run;

title3 "weighted info by &classvar. using &weightvar. as weight";
proc print data=print;
sum _freq_ bwt_sum adjwt1_sum adjwt2_sum postwt_sum trimwt_sum
postwt2_sum;
run;
%mend procmeans;

%procmeans(weightvar= bwt adjwt1 adjwt2 postwt trimwt postwt2,
classvar=fnstatus);

*****
*** Output the datasets
*****;

options compress=yes;

data out.postwt_trimmed;
set out.postwt_trimmed;
label ENBGSMPL = 'ENBGSMPL - Beneficiary/Enrollment Status'
PCM = 'Primary care Manager Code';
run;

*****
*** Calculate the Design Effects
*****;

**create dataset of completes only;
data postwt_fnl;
set out.postwt_trimmed;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, postcell, postwt2,
deff_overall, deff_postcell );
%design_effects_unequal_weights ( postwt_fnl, com_geo, postwt2,
deff_overall, deff_cac );
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, postwt2,
deff_overall, deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, postwt2,
deff_overall, deff_tnexreg );

```

```

%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, postwt2,
deff_overall, deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus, postwt2,
deff_overall, deff_conus );
%design_effects_unequal_weights ( postwt_fnl, servaff, postwt2,
deff_overall, deff_servaff );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff, postwt2,
deff_overall, deff_TNEXservaff );
%design_effects_unequal_weights ( postwt_fnl, dbencat, postwt2,
deff_overall, deff_bencat );

title3 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For postcell ***;
title3 "Design Effects for postcell";
proc print data= deff_postcell;
sum _freq_;
run;

*** For geographic Area ***;
title3 "Design Effects for com_geo";
proc print data= deff_cac;
sum _freq_;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

*** For Service Affiliation for the facility ***;
title3 "Design Effects for Facility's Service Affiliation";
proc print data= deff_servaff;
sum _freq_;
run;

```

```
*** For TNEX_grp*Servaff ***;
title3 "Design Effects for TNEX_grp by Servaff";
proc print data= deff_TNEXservaff;
sum _freq_;
run;

*** For Bencat ***;
title3 'Design Effects for BENCAT';
proc print data= deff_bencat;
sum _freq_;
run;

title3 "Contents of OUT.postwt_trimmed";
proc contents data=OUT.postwt_trimmed;
run;

proc printto;
run;

***** The end *****;
```

F.14 - Q3FY2017\Programs\Weighting\NewWeights\repwtp_trimmed.SAS - Create the replicate weights

```

*****
* PROGRAM: Repwtp_Trimmed.sas
* TASK:    DOD QUARTERLY HEALTH CARE SURVEY
* Task No: 40309.31H
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY
*          USING THE NEW WEIGHTING METHOD.
* WRITTEN: 12/30/1999 BY Keith Ranthbun
* Modified 1) Haixia Xu on 12/27/2006
*          2) H. Xu on 03/30/2007 for q3fy2007 weighting
*
* INPUTS  : postwt.sas7bdat - Final Weights file
*          framea_postwt.sas7bdat - The q3 frame file with
*          corrected PCM and postcell defined
*
* OUTPUTS: repwtp.sas7bdat - Replicate Weights File
*
* Note   : 1) Beginning in Q1FY2011, we create POSTCELL from Sampling
Stratum
*          Oldway: Postcell=(Group||Comgeo)
*          Newway: Postcell=substr(Stratum,1,5)
*          2) The order of trimming was switched in Q4Fy2011. See "trimming
decision"
*          note in L:\Q4FY2011\Programs\Weighting\NewWeights\checking
*          3) Q1FY2017: using Trim Domain TnexReg for this quarter.
*          4) Q3FY2017: added Macro Variables for Final Trim Wt & Domain
@Line 412
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
validvarname=upcase nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool
obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2017;

title1 "Program: Repwtp_Trimmed.sas (&quarter.)";
title2 "Purpose: Create the Replicate Weights";

LIBNAME INv6 "/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"
access=readonly; /* framea.sas7bdat */

```

```

LIBNAME IN      "/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"
access=readonly; /* postwt.sas7bdat */
LIBNAME OUT
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"; /*
repwtp.sas7bdat */

/*MACRO FOR TRIMMING */
%macro trimmer(domain,oldw,neww);
data trim;
set trim;
*%if &neww.^= newtriml %then %do;
*drop number means stdev sumweight cutoff toobig trimadj sumold sumnew;
*%end;
run;

proc sort data=trim;
by &domain;
run;

proc means data=trim n mean std sum noprint;
var &oldw;
by &domain;
where fnstatus=11;
output out=meanspostwt(drop=_FREQ_ _TYPE_) n=number mean=means std=stdev
sum=sumweight;
run;

data trim;
merge trim meanspostwt;
by &domain;
cutoff=means+stdev*6;
toobig=.;
trimadj=.;
if &oldw>cutoff and fnstatus=11 then toobig=1;
if toobig=1 then &neww=cutoff;
if cutoff=. and toobig=1 then &neww=&oldw;
if toobig=. then &neww=&oldw;
run;

proc means data=trim sum noprint;
var &oldw &neww;
by &domain;
where fnstatus=11;
output out=meansbig(drop=_FREQ_ _TYPE_) sum=sumold sumnew;
run;

data trim;
merge trim meansbig;
by &domain;
run;

data trim;
set trim;
/*cutoff~= . filter guards against divide by zero error if there is only 1
obs in domain */
if cutoff~= . then trimadj=sumold/sumnew;
if trimadj=. or fnstatus~=11 then trimadj=1;

```

```

&neww=trimadj*&neww;
run;

proc means data=trim sum noprint;
var &oldw &neww;
by &domain;
where fnstatus=11;
output out=sumcheck sum=old new;
run;

/*
data sumcheck;
set sumcheck;
diff=new-old;
run;

proc means data=sumcheck;
var diff;
run;

proc print data=sumcheck;
var &domain old new;
run;

proc freq data=trim;
table &oldw*&neww*toobig*stratum/list missing;
where &oldw>4000;
run;

proc freq data=trim;
table toobig*&oldw*&neww*stratum /list missing;
where toobig=1;
run;
*/
%mend trimmer;

%MACRO PROCESS(DOMAIN1,DOMAIN2,DOMAIN3,reps);
*****
* calculate the population counts to be used in the poststratification
*****;
data framea;
set inv6.framea;
length POSTCELL $5;
postcell=substr(stratum,1,5); *Creating Postcell from Sampling Stratum;
run;

proc freq data=framea NOPRINT;
tables &domain3./missing list out=framecnt(drop=percent
rename=(count=popcnt));
run;

*****
* Sort the final weights file by user-specified domains
*****;

PROC SORT DATA=IN.postwt_trimmed OUT=postwt;

```

```

        BY stratum MPRID ;
RUN;

*****
* Append SUBSET index (I) to each observation
*****;
DATA SUBSETS;
    SET postwt;
    BY stratum MPRID;

    IF _N_ = 1 OR MOD(_N_-1,&reps.) = 0 THEN SUBSET = 1;
    ELSE SUBSET + 1;

    RETAIN SUBSET;
    BBWT = BWT * (&reps. / (&reps. - 1));
RUN;

*****
*****
* Generate JackKnife/replicated weights adjwt01-adjwt60
*****;
%DO I = 1 %TO &reps.;

DATA SUBSET;
    SET SUBSETS;
    IF &I. = SUBSET THEN DELETE; *Remove the current subset;
RUN;

*****
* Calculate adjustment factor A1 for each cell
*****
;

proc sort data=subset;
by &domain1.;
run;

*****
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****
;
DATA CELLSA1 (KEEP=SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 &domain1.)
    MPRIDSA1 (KEEP=MPRID FNSTATUS BBWT &DOMAIN1. &DOMAIN2. &domain3.
stratum com_geo enbgsmpl patcat Tnexreg)
;
    SET subset;
    BY &DOMAIN1.;

if FNSTATUS in (11, 12, 20, 31, 41, 42) THEN DO;

    IF FIRST.&DOMAIN1. THEN DO;
        CELLCNT = 0;
        cntg1   = 0;
        cntg2   = 0;
        cntg3   = 0;

```



```

SUMBBWT = 0.0;
SUMG1 = 0.0;
SUMG2 = 0.0;
SUMG3 = 0.0;
A1 = 0.0;
END;
CELLCNT + 1;

*****
* Accumulate total weight sum
*****;

SUMBBWT + BBWT;

*****
* Accumulate group 1 weight sum
*****;

IF FNSTATUS IN (11,12) THEN
  do;
    SUMG1 + BBWT;
    cntg1 + 1;
  end;

*****
* Accumulate group 2 weight sum
*****;

ELSE IF FNSTATUS in (20,31) THEN
  do;
    SUMG2 + BBWT;
    cntg2 + 1;
  end;

*****
* Accumulate group 3 weight sum
*****;

ELSE IF FNSTATUS in (41,42) THEN
  do;
    SUMG3 + BBWT;
    cntg3 + 1;
  end;

RETAIN SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 MPRID;

IF LAST.&DOMAIN1. THEN DO;
  A1 = (SUMG1 + SUMG2 + SUMG3)/(SUMG1 + SUMG2);
  OUTPUT CELLSA1;
END;
END;

OUTPUT MPRIDSA1;
RUN;

proc sort data=mpridsa1;
by &domain1.;

```

```

run;

proc sort data=cellsal;
by &domain1.;
run;

data adj_one;
merge mpridsal cellsal;
by &domain1.;
if fnstatus in (11,12,20,31) then adj1 = a1;
  else if fnstatus = 32 then adj1=1;
  else adj1 = 0;
adj_wt1 = adj1 * bbwt;
run;

/*
proc print data=mpridsal;
var stratum PATCAT com_geo enbgsmpl;
run;

proc print data= cellsal;
var stratum PATCAT com_geo enbgsmpl;
run;
*/

*****
* Calculate adjustment factor A2 for each cell.
* This is the Nonresponse adjustment and creates the final weight (adjwt).
*****;

proc sort data=adj_one;
by &domain2.;
run;

DATA CELLSA2 (KEEP= &domain2. NUMER DENOM numercnt denomcnt A2);
  set adj_one;
  BY &domain2.;

IF FNSTATUS in (11, 12, 20) THEN DO;

  IF FIRST.&domain2. THEN DO;
    A2 = 0.0;
    NUMER = 0.0;
    DENOM = 0.0;
    numercnt = 0;
    denomcnt = 0;
  END;

  RETAIN NUMER DENOM A2 numercnt denomcnt;

  IF FNSTATUS IN (11,12,20) THEN
  do;
    NUMER + adj_wt1;
    numercnt + 1;
  end;

```

```

IF FNSTATUS = 11 THEN
  do;
    DENOM + adj_wt1;
    denomcnt + 1;
  end;

IF LAST.&domain2. THEN DO;
  A2 = NUMER/DENOM;
  OUTPUT CELLSA2;
END;
END;

RUN;

proc sort data=adj_one;
by &domain2.;
run;

proc sort data=cellsa2;
by &domain2.;
run;

data adj_two;
merge adj_one cellsa2;
by &domain2.;
if fnstatus = 11 then adj2 = a2;
  else if fnstatus in (31, 32) then adj2 = 1;
  else adj2 = 0;
adj_wt2 = adj2 * adj_wt1;
*KEEP MPRID FNSTATUS adj_wt2 bbwt &DOMAIN1. &DOMAIN2. &domain3.;
run;

*****
* Calculate poststratification adjustment factor ps for each cell.
*****
;
proc freq data=adj_two NOPRINT;
tables &domain3./missing list out=weighted(drop=percent
rename=(count=wtcnt));
weight adj_wt2;
run;

proc sort data=framecnt;
by &domain3.;
run;

proc sort data=weighted;
by &domain3.;
run;

data ps;
merge framecnt(in=A) weighted(in=B);
by &domain3.;
ps = popcnt/wtcnt;
if A and B;
run;

```

```

proc sort data=ps;
by &domain3.;
run;

proc sort data=adj_two;
by &domain3.;
run;

data subset&i.;
merge adj_two ps;
by &domain3.;
jkweight = ps * adj_wt2;
subset = &i.;
*KEEP MPRID subset jkweight;
run;

proc sort data=subset&i.;
by mprid;
run;

*****;
/*          TRIMMING          */
*****;
data trim;
set subset&i.;
run;

*****
*Trimming Decision for this Quarter:
  NewTrim1=Postcell      NewTrim2=Enbgsmpl
  NewTrim3=PATCAT       NewTrim4=Tnexreg
  NewTrim5=PCM          NewTrim6=Servaff
*****;

*Q3FY2017: Update Final Trim Weight and Domain
          Macro variables Below Every Quarter;
%LET TrimWtThisQtr      = Newtrim2;
%LET TrimDomainThisQtr = Enbgsmpl;

%trimmer(&TrimDomainThisQtr., jkweight, &TrimWtThisQtr.);

*****
TRIMWT THIS QUARTER:
*****;
data trim;
set trim;
trimwt=&TrimWtThisQtr.;
run;

*****
          POSTSTRATIFY THE TRIMMED WEIGHTS
*****;
proc freq data=trim NOPRINT;
tables &domain3./missing list out=weighted(drop=percent
rename=(count=wtcnt));

```

```

weight trimwt;
run;

proc sort data=framecnt;
by &domain3.;
run;

proc sort data=weighted;
by &domain3.;
run;

data ps;
merge framecnt(in=A) weighted(in=B);
by &domain3.;
ps2 = popcnt/wtcnt;
if A and B;
run;

proc sort data=ps;
by &domain3.;
run;

proc sort data=trim;
by &domain3.;
run;

data subset&i.;
merge trim ps(drop=popcnt wtcnt);
by &domain3.;
jkweight2 = ps2 * trimwt;
subset = &i.;
*KEEP MPRID subset jkweight2;
run;

proc sort data=subset&i.;
by mprid;
run;

/*
proc means data=subset&i.;
var jkweight2;
run;
*/

*****
*****
* End of JackKnife/replicated weights WRWT01-WRWT60 assignments
*****
*****;
%END;

*****
* Combine all of the JackKnife weight subsets by MPRID
*****;
DATA ALLSETS;
    SET SUBSET1    SUBSET2    SUBSET3    SUBSET4    SUBSET5
        SUBSET6    SUBSET7    SUBSET8    SUBSET9    SUBSET10

```

```

SUBSET11 SUBSET12 SUBSET13 SUBSET14 SUBSET15
SUBSET16 SUBSET17 SUBSET18 SUBSET19 SUBSET20
SUBSET21 SUBSET22 SUBSET23 SUBSET24 SUBSET25
SUBSET26 SUBSET27 SUBSET28 SUBSET29 SUBSET30
SUBSET31 SUBSET32 SUBSET33 SUBSET34 SUBSET35
SUBSET36 SUBSET37 SUBSET38 SUBSET39 SUBSET40
SUBSET41 SUBSET42 SUBSET43 SUBSET44 SUBSET45
SUBSET46 SUBSET47 SUBSET48 SUBSET49 SUBSET50
SUBSET51 SUBSET52 SUBSET53 SUBSET54 SUBSET55
SUBSET56 SUBSET57 SUBSET58 SUBSET59 SUBSET60
;
BY MPRID;
ARRAY JKWT(&reps.) wrwt1-wrwt&reps.; RETAIN wrwt1-wrwt&reps.;
IF FIRST.MPRID THEN DO;
DO I = 1 TO &reps.; DROP I;
JKWT(I) = . ;
END;
END;
JKWT(SUBSET) = JKWEIGHT2;
IF LAST.MPRID THEN OUTPUT;
KEEP MPRID SUBSET wrwt1-wrwt&reps.;
RUN;

*****
* Sort the original data, get the final weight (WRWT), append the
* JackKnife/Replicated weights (WRWT1-WRWT60), and label variables.
*****;
PROC SORT DATA=IN.postwt_trimmed OUT=trimwt;
BY MPRID;
RUN;

proc sort data=allsets;
by mprid;
run;

options compress=yes;

*****
OUTPUT FINAL DATA :
*****;
DATA OUT.repwt ;
MERGE trimwt ALLSETS;
BY MPRID;

LABEL
MPRID = 'MPR ID Number'
WRWT1 = 'Replicated/JackKnife Weight 1'
WRWT2 = 'Replicated/JackKnife Weight 2'
WRWT3 = 'Replicated/JackKnife Weight 3'
WRWT4 = 'Replicated/JackKnife Weight 4'
WRWT5 = 'Replicated/JackKnife Weight 5'
WRWT6 = 'Replicated/JackKnife Weight 6'
WRWT7 = 'Replicated/JackKnife Weight 7'
WRWT8 = 'Replicated/JackKnife Weight 8'
WRWT9 = 'Replicated/JackKnife Weight 9'
WRWT10 = 'Replicated/JackKnife Weight 10'

```

WRWT11 = 'Replicated/JackKnife Weight 11'
WRWT12 = 'Replicated/JackKnife Weight 12'
WRWT13 = 'Replicated/JackKnife Weight 13'
WRWT14 = 'Replicated/JackKnife Weight 14'
WRWT15 = 'Replicated/JackKnife Weight 15'
WRWT16 = 'Replicated/JackKnife Weight 16'
WRWT17 = 'Replicated/JackKnife Weight 17'
WRWT18 = 'Replicated/JackKnife Weight 18'
WRWT19 = 'Replicated/JackKnife Weight 19'
WRWT20 = 'Replicated/JackKnife Weight 20'
WRWT21 = 'Replicated/JackKnife Weight 21'
WRWT22 = 'Replicated/JackKnife Weight 22'
WRWT23 = 'Replicated/JackKnife Weight 23'
WRWT24 = 'Replicated/JackKnife Weight 24'
WRWT25 = 'Replicated/JackKnife Weight 25'
WRWT26 = 'Replicated/JackKnife Weight 26'
WRWT27 = 'Replicated/JackKnife Weight 27'
WRWT28 = 'Replicated/JackKnife Weight 28'
WRWT29 = 'Replicated/JackKnife Weight 29'
WRWT30 = 'Replicated/JackKnife Weight 30'
WRWT31 = 'Replicated/JackKnife Weight 31'
WRWT32 = 'Replicated/JackKnife Weight 32'
WRWT33 = 'Replicated/JackKnife Weight 33'
WRWT34 = 'Replicated/JackKnife Weight 34'
WRWT35 = 'Replicated/JackKnife Weight 35'
WRWT36 = 'Replicated/JackKnife Weight 36'
WRWT37 = 'Replicated/JackKnife Weight 37'
WRWT38 = 'Replicated/JackKnife Weight 38'
WRWT39 = 'Replicated/JackKnife Weight 39'
WRWT40 = 'Replicated/JackKnife Weight 40'
WRWT41 = 'Replicated/JackKnife Weight 41'
WRWT42 = 'Replicated/JackKnife Weight 42'
WRWT43 = 'Replicated/JackKnife Weight 43'
WRWT44 = 'Replicated/JackKnife Weight 44'
WRWT45 = 'Replicated/JackKnife Weight 45'
WRWT46 = 'Replicated/JackKnife Weight 46'
WRWT47 = 'Replicated/JackKnife Weight 47'
WRWT48 = 'Replicated/JackKnife Weight 48'
WRWT49 = 'Replicated/JackKnife Weight 49'
WRWT50 = 'Replicated/JackKnife Weight 50'
WRWT51 = 'Replicated/JackKnife Weight 51'
WRWT52 = 'Replicated/JackKnife Weight 52'
WRWT53 = 'Replicated/JackKnife Weight 53'
WRWT54 = 'Replicated/JackKnife Weight 54'
WRWT55 = 'Replicated/JackKnife Weight 55'
WRWT56 = 'Replicated/JackKnife Weight 56'
WRWT57 = 'Replicated/JackKnife Weight 57'
WRWT58 = 'Replicated/JackKnife Weight 58'
WRWT59 = 'Replicated/JackKnife Weight 59'
WRWT60 = 'Replicated/JackKnife Weight 60'

;
RUN;

TITLE1 "2011 DoD Quarterly Health Survey Final/Replicated Weights";
title2 "Checks for the Replicate Weights";
TITLE3 "Program Name: Repwtp_Trimmed.sas";

```

*****
Check the structure of the data set OUT.repwtp;
*****;

proc sort data=OUT.repwtp out=sorted;
by stratum mprid;
run;

proc print data=sorted (obs=500);
var stratum mprid SUBSET fnstatus postwt trimwt postwt2 wrwt1-wrwt5;
run;

Title4 " here, TRIMWT=&TrimWtThisQtr.(&TrimDomainThisQtr.) for &Quarter.:";
PROC MEANS DATA=OUT.repwtp n sum;
VAR postwt trimwt postwt2 WRWT1-WRWT&reps.;
RUN;

PROC SORT DATA=OUT.repwtp out=repwtp;
BY MPRID;
RUN;

DATA OUT.repwtp;
SET repwtp;
BY MPRID;

ARRAY WGTS(&reps.) WRWT1-WRWT&reps.;
DO I = 1 TO &reps.; DROP I;
IF WGTS(I) EQ . THEN WGTS(I) = 0;
END;

KEEP MPRID BWT postwt trimwt postwt2 WRWT1-WRWT&reps. fnstatus &domain1.
&domain2. &domain3. com_geo web encounter;
RUN;

title4 "Check the replicate weights -- for all 100,000 cases";
PROC MEANS DATA=OUT.repwtp n sum;
VAR postwt trimwt postwt2 wrwt1-wrwt&reps.;
output out=sums sum(postwt trimwt postwt2 wrwt1-wrwt&reps.)=postwt trimwt
postwt2 wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var postwt trimwt postwt2 wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var coll;
run;

title4 "Check the replicate weights -- for the final completes";
PROC MEANS DATA=OUT.repwtp n sum;
where fnstatus=11;
VAR postwt trimwt postwt2 wrwt1-wrwt&reps.;
output out=sums sum(postwt trimwt postwt2 wrwt1-wrwt&reps.)=postwt trimwt
postwt2 wrwt1-wrwt&reps.;
Run;

```



```

proc transpose data=sums out=t_sums;
var postwt trimwt postwt2 wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var coll;
run;

**added for Amang q4 2002;
data repwt2;
  set OUT.repwt;
  where fnstatus = 11;
  array subset2(60) wrwt1-wrwt60;
  do m=1 to 60;
    if subset2(m)=0 then
      subset=m;
  end;
run;

proc sort data = repwt2;
by subset;
run;

proc means data = repwt2 noprint;
by subset;
var postwt2 wrwt1-wrwt60;
output out = amang sum= / autoname;
run;

***added by Haixia on 05/11/2005 for q1, 2005 weighting.
rename wrwt1_sum, ..., wrwt60_sum as sum_wrwt1, ..., sum_wrwt60
so the numbered range list sum_wrwt1 - sum_wrwt60 can be used in the proc
print below;

data amang;
set amang;
rename postwt2_sum = sum_postwt2;
%do i =1 %to 60;
rename wrwt&i._sum = sum_wrwt&i.;
%end;
run;

proc print data = amang;
sum _freq_ sum_postwt2 sum_wrwt1 - sum_wrwt60;
run;

*****
* CREATE FINAL REPWT DATASET FOR KEITH -- Rename the variables
*****;
data OUT.repwt; (drop = postwt postwt2 com_geo trimwt encounter web);
set in.repwt;
fwrwt = postwt2;
%do i =1 %to 60;
rename wrwt&i.= fwrwt&i.;
%end;
label &domain1. = 'Weighting cell in the unknown eligibility adjustment';

```

```

label &domain2. = 'Weighting cell in the nonresponse adjustment';
label &domain3. = "ps cell for new wts - for all 3 quarters";
label fwrwt = "Final NEW Weight";
run;

data OUT.repwtp;
set OUT.repwtp;
* Label wts;
  %DO I = 1 %TO 60;
    LABEL    FWRWT&I. = "Replicated/JackKnife NEW Weight &I.";
  %END;
run;

PROC CONTENTS DATA=OUT.repwtp;
run;

%MEND process;

%PROCESS(pcell_a1, pcell_a2, postcell, 60);

proc printto;
run;

*****          END *****;

```

F.15 - Q3FY2017\Programs\WEIGHTING\ADDWGTSA.SAS - Merge the final quarterly weights with the final questionnaire/sample file - Run Quarterly

```

*****
*
* PROGRAM:   ADDWGTSA.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (6401-903)
* PURPOSE:  MERGE THE FINAL WEIGHTS FILE WITH THE FINAL
*           QUESTIONNAIRE/SAMPLE FILE
*
* WRITTEN:  02/02/2001 BY KEITH RATHBUN
*
* INPUTS:   1) REPWTP.sas7bdat - Final/Replicated Weights file - FORM A
*           2) MERGEQ.sas7bdat - Final FORM A Questionnaire/Sample File
*
* OUTPUTS:  1) HCSyyq_n.sas7bdat - Final FORM A Questionnaire/Sample File
*           combined with Final/Replicated Weights file - FORM A
*           where yy = Year
*                q = Quarter Number
*                n = Final Dataset Suffix/Version Number
*           2) HCSyyq_v.XPT - Final Public-Use Adult SAS XPORT Dataset
*
* MODIFIED:
*           02/10/2017 BY MTURBYFILL Changed filepaths and capitalization to
match SAS Grid.
*
*****
*
* Define global parameters.
*****
;
%LET DSN1 = HCS&YR.&QT._1; * Public-Use data set;
%LET DSN2 = HCS&YR.&QT._2; * Private-Use data set;
%LET DSN3 = HCS&YR.&QT._3; * Private-Use data set;
%LET DSNw = REPWTP; * Final and replicate weight file;
%LET QTR  = Q&QT.FY20&YR.; * Current Quarters data folder name;

*****
* Define libraries and options.
*****
;
LIBNAME IN1      "&DATAPATH.";
LIBNAME IN2      "/sasdata/Projects/40309_HCS_Restricted/DATA/&QTR.";
* Location of restricted-use sample file;
LIBNAME OUT      "&DATAPATH.";
LIBNAME LIBRARY  "&FMTPATH.";

OPTIONS PS=79 LS=132 COMPRESS=NO NOCENTER MPRINT MLOGIC;

*****
* Merge the final weights file with the final Questionnaire/Sample file
*****
;
PROC SORT DATA=IN1.&DSNw  OUT=&DSNw; BY MPRID; RUN;
PROC SORT DATA=IN1.MERGEQ OUT=MERGEQ; BY MPRID; RUN;

```

```

PROC CONTENTS DATA=IN1.&DSNw; Title 'repwtp- New weights'; RUN;
PROC CONTENTS DATA=IN1.MERGEQ; Title 'mergeq'; RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TMPXCTCH with XCATCH is created by this include file.
*****
;
DATA TEMP1;
  SET MERGEQ;
  IF FNSTATUS = 11;
RUN;

%INCLUDE "XCATCH.INC"; * Requires input dataset called TEMP1;

PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

DATA OUT.&DSN1(DROP=PRN      DMIS_ID  D_PAR      ENRID
              CACSMPL  SERVAREA  DCATCH     MSM
              D_FAC    DAGEQY    FIELDAGE   PNLCATCD
              DMEDELG  MEDTYPE   MBRRELCD   MRTLSTAT  INTTIME)
  T_&DSN2(DROP=PRN  DMIS_ID  D_PAR )
  ;
  MERGE MERGEQ( IN=IN2  DROP=MIQCNTL  COM_GEO)
        TMPXCTCH( IN=IN3 )
        &DSNw( IN=IN1  KEEP=MPRID  POSTCELL  FWRWT  FWRWT1--FWRWT60
              RENAME=(fwrwt=FWRWT  postcell=POSTCELL
                      fwrwt1=FWRWT1  fwrwt2=FWRWT2  fwrwt3=FWRWT3
fwrwt4=FWRWT4  fwrwt5=FWRWT5
                      fwrwt6=FWRWT6  fwrwt7=FWRWT7  fwrwt8=FWRWT8
fwrwt9=FWRWT9  fwrwt10=FWRWT10
                      fwrwt11=FWRWT11  fwrwt12=FWRWT12
fwrwt13=FWRWT13  fwrwt14=FWRWT14  fwrwt15=FWRWT15
                      fwrwt16=FWRWT16  fwrwt17=FWRWT17
fwrwt18=FWRWT18  fwrwt19=FWRWT19  fwrwt20=FWRWT20
                      fwrwt21=FWRWT21  fwrwt22=FWRWT22
fwrwt23=FWRWT23  fwrwt24=FWRWT24  fwrwt25=FWRWT25
                      fwrwt26=FWRWT26  fwrwt27=FWRWT27
fwrwt28=FWRWT28  fwrwt29=FWRWT29  fwrwt30=FWRWT30
                      fwrwt31=FWRWT31  fwrwt32=FWRWT32
fwrwt33=FWRWT33  fwrwt34=FWRWT34  fwrwt35=FWRWT35
                      fwrwt36=FWRWT36  fwrwt37=FWRWT37
fwrwt38=FWRWT38  fwrwt39=FWRWT39  fwrwt40=FWRWT40
                      fwrwt41=FWRWT41  fwrwt42=FWRWT42
fwrwt43=FWRWT43  fwrwt44=FWRWT44  fwrwt45=FWRWT45
                      fwrwt46=FWRWT46  fwrwt47=FWRWT47
fwrwt48=FWRWT48  fwrwt49=FWRWT49  fwrwt50=FWRWT50
                      fwrwt51=FWRWT51  fwrwt52=FWRWT52
fwrwt53=FWRWT53  fwrwt54=FWRWT54  fwrwt55=FWRWT55
                      fwrwt56=FWRWT56  fwrwt57=FWRWT57
fwrwt58=FWRWT58  fwrwt59=FWRWT59  fwrwt60=FWRWT60
              ));
  BY MPRID;

  IF FNSTATUS = 11;

  IF NOT (IN1 AND IN2)

```

```
THEN PUT "ERROR: NO MATCHING MPRID WITH MERGEQ..sas7bdat AND
&DSNw..sas7bdat";
```

```
IF IN1 AND IN2 AND IN3;
```

```
FORMAT XCATCH CACR.
```

```
;
```

```
RUN;
```

```
*****
* Extract private-use variables from quarterly sample file.
*****
```

```
;
```

```
DATA SAMPLA02;
```

```
SET IN2.SAMPLA02
```

```
(KEEP=MPRID MASTCD MAPRZIP MAPRZIPX PNBRTHTD PGCD RANKCD MSA_ID);
```

```
RUN;
```

```
PROC SORT DATA=SAMPLA02; BY MPRID; RUN;
```

```
*****
* Append private-use variables to the public-use file.
*****
```

```
;
```

```
DATA OUT.&DSN2;
```

```
MERGE T_&DSN2(IN=IN1) SAMPLA02(IN=IN2);
```

```
BY MPRID;
```

```
IF IN1 AND IN2; *KEEP only eligible respondents;
```

```
DROP INTTIME;
```

```
RUN;
```

```
/* The third file is the same as the one above, but with INTTIME included.
MT 3/26/2015 */
```

```
DATA OUT.&DSN3;
```

```
MERGE T_&DSN2(IN=IN1) SAMPLA02(IN=IN2);
```

```
BY MPRID;
```

```
IF IN1 AND IN2; *KEEP only eligible respondents;
```

```
RUN;
```

```
TITLE1 "DOD Quarterly Health Care Survey (6663-300)";
```

```
TITLE2 "Program Name: ADDWGTSAS.SAS";
```

```
TITLE3 "Program Inputs: Mergeq.sas7bdat -- &DSNw..sas7bdat";
```

```
TITLE4 "Program Outputs: &DSN1..sas7bdat/XPT";
```

```
PROC CONTENTS DATA=OUT.&DSN1; RUN;
```

```
*****
* Output the restricted use CONTENTS text file for delivery with the
* database CD.
*****
```

```
;
```

```
PROC PRINTTO PRINT="&DSN2..TXT" NEW; RUN;
```

```
OPTIONS PAGENO=1;
```

```

TITLE4 "Program Outputs: &DSN2..sas7bdat/XPT";
PROC CONTENTS DATA=OUT.&DSN2; RUN;
PROC PRINTTO; RUN;
*****
* Define and generate SAS Transport file.
*****
;
LIBNAME XFILE1 XPORT "&datapath./&DSN1..XPT";
PROC COPY IN=OUT OUT=XFILE1; * Converts input file to transport file;
      SELECT &DSN1;          * Selects sas7bdat file to copy;
RUN;

LIBNAME XFILE2 XPORT "&datapath./&DSN2..XPT";
PROC COPY IN=OUT OUT=XFILE2; * Converts input file to transport file;
      SELECT &DSN2;          * Selects sas7bdat file to copy;
RUN;

LIBNAME XFILE3 XPORT "&datapath./&DSN3..XPT";
PROC COPY IN=OUT OUT=XFILE3; * Converts input file to transport file;
      SELECT &DSN3;          * Selects sas7bdat file to copy;
RUN;

```

F.16 - Q2FY2017h\Programs\Weighting\addwgtsa_HEDISB.sas - Attach HEDIS weights to Q2 weights

```

*****
*
* PROGRAM:   ADDWGTS.A.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (6401-903)
* PURPOSE:  MERGE THE FINAL WEIGHTS FILE WITH THE FINAL
*           QUESTIONNAIRE/SAMPLE FILE
*
* WRITTEN:  02/02/2001 BY KEITH RATHBUN
*
* INPUTS:   1) REPWTP.sas7bdat - Final/Replicated Weights file - FORM A
*           2) MERGEQ.sas7bdat - Final FORM A Questionnaire/Sample File
*
* OUTPUTS:  1) HCSyyq_n.sas7bdat - Final FORM A Questionnaire/Sample File
*           combined with Final/Replicated Weights file - FORM A
*           where yy = Year
*             q = Quarter Number
*             n = Final Dataset Suffix/Version Number
*           2) HCSyyq_v.XPT - Final Public-Use Adult SAS XPORT Dataset
*
* MODIFIED:
*           02/10/2017 BY MTURBYFILL Changed filepaths and capitalization to
match SAS Grid.
*
*****
* ;
* Define global parameters.
*****
;
%LET YR = 17;
%LET QT = 2;
x "cd
/sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.h/Programs/Weighting";

%LET PATH = /sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.h;

%LET DATAPATH= &path./Data/AFinal;

%LET DSN1 = HCS&YR.&QT._1; * Public-Use data set;
%LET DSN2 = HCS&YR.&QT._2; * Private-Use data set;
%LET DSN3 = HCS&YR.&QT._3; * Private-Use data set;
%LET DSNw = REPWTP; * Final and replicate weight file;
%LET QTR = Q&QT.FY20&YR.; * Current Quarters data folder name;

*****
* Define libraries and options.
*****
;
LIBNAME IN1 "&DATAPATH.";
LIBNAME IN1
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2";
LIBNAME INT
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.t/Data/AFinal";
LIBNAME INH "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal";

```

```

LIBNAME IN2      "/sasdata/Projects/40309_HCS_Restricted/DATA/&QTR.";
* Location of restricted-use sample file;
LIBNAME IN2H    "/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS";
* Location of restricted-use sample file;
LIBNAME OUT     "&DATAPATH.";
LIBNAME LIBRARY "&DATAPATH./fmtlib";

OPTIONS PS=79 LS=132 COMPRESS=NO NOCENTER MPRINT MLOGIC;

*****
* Merge the final weights file with the final Questionnaire/Sample file
*****
;

PROC SORT DATA=IN1.&DSNw (RENAME=(FNSTATUS=NEWFNSTATUS))  OUT=&DSNw;  BY
MPRID; RUN;
PROC SORT DATA=INT.MERGEQ  OUT=MERGEQ2; BY MPRID; RUN;
PROC SORT DATA=INH.MERGEQ  OUT=MERGEQH; BY MPRID; RUN;

PROC CONTENTS DATA=IN1.&DSNw; Title 'repwtp- New weights'; RUN;
PROC CONTENTS DATA=INT.MERGEQ; Title 'mergeq'; RUN;
PROC CONTENTS DATA=INH.MERGEQ; Title 'mergeq'; RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TMPXCTCH with XCATCH is created by this include file.
*****
;
DATA TEMP1;
    SET MERGEQH MERGEQ2 ;

*Commented out so that the alternate FNSTATUS is merged on prior to
XCATCH.INC.;
    *IF FNSTATUS = 11;
RUN;

PROC SORT DATA=TEMP1;BY MPRID;RUN;

/*HEDIS: We only merge on the weights and FNSTATUS here, the XCATCH happens
later*/
DATA TEMP1 (DROP=NEWFNSTATUS)
    OUT.MERGEQ
    ;
LENGTH POSTCELL $5.;
MERGE TEMP1(IN=IN2 DROP= MIQCNTL COM_GEO authorized:
BRANCH:
CHILD:
DISTANCEMILES
DMIS_FACILITY_NAME
DMIS_PARENT_ID
FACILITY:
HEALTH:
INSTALLATION_NAME

```


MEPRS:
NPI_2:
PARENT_DMISID
PATCAT_GRP
REASSIGNED
SERVICE_AREA_CODE
US_FLAG_CODE

PCM_GRP
AFLAG
BFLAG
DFLAG
EFLAG
EFLAGD
FLAGRACE
SEX
AGE

)
 &DSNw(IN=IN1 KEEP=MPRID POSTCELL NEWFNSTATUS INHEDIS INHCSDB FWRWT
FWRWT1--FWRWT60

 RENAME=(fwrwt=FWRWT postcell=POSTCELL
 fwrwt1=FWRWT1 fwrwt2=FWRWT2 fwrwt3=FWRWT3
fwrwt4=FWRWT4 fwrwt5=FWRWT5
 fwrwt6=FWRWT6 fwrwt7=FWRWT7 fwrwt8=FWRWT8
fwrwt9=FWRWT9 fwrwt10=FWRWT10
 fwrwt11=FWRWT11 fwrwt12=FWRWT12
fwrwt13=FWRWT13 fwrwt14=FWRWT14 fwrwt15=FWRWT15
 fwrwt16=FWRWT16 fwrwt17=FWRWT17
fwrwt18=FWRWT18 fwrwt19=FWRWT19 fwrwt20=FWRWT20
 fwrwt21=FWRWT21 fwrwt22=FWRWT22
fwrwt23=FWRWT23 fwrwt24=FWRWT24 fwrwt25=FWRWT25
 fwrwt26=FWRWT26 fwrwt27=FWRWT27
fwrwt28=FWRWT28 fwrwt29=FWRWT29 fwrwt30=FWRWT30
 fwrwt31=FWRWT31 fwrwt32=FWRWT32
fwrwt33=FWRWT33 fwrwt34=FWRWT34 fwrwt35=FWRWT35
 fwrwt36=FWRWT36 fwrwt37=FWRWT37
fwrwt38=FWRWT38 fwrwt39=FWRWT39 fwrwt40=FWRWT40
 fwrwt41=FWRWT41 fwrwt42=FWRWT42
fwrwt43=FWRWT43 fwrwt44=FWRWT44 fwrwt45=FWRWT45
 fwrwt46=FWRWT46 fwrwt47=FWRWT47
fwrwt48=FWRWT48 fwrwt49=FWRWT49 fwrwt50=FWRWT50
 fwrwt51=FWRWT51 fwrwt52=FWRWT52
fwrwt53=FWRWT53 fwrwt54=FWRWT54 fwrwt55=FWRWT55
 fwrwt56=FWRWT56 fwrwt57=FWRWT57
fwrwt58=FWRWT58 fwrwt59=FWRWT59 fwrwt60=FWRWT60
));

BY MPRID;

RENAME DOMESTIC_INTL = DOM_INTL;
RENAME FLAG_LETTER_TYPE = FLTYPE;
RENAME LETTER_TYPE = LTR_TYPE;
RENAME REMINDER_FLAG = RMDR_FLG;

RENAME STRATUM_H=STRATUMH;

```

        RENAME STRATUM_O=STRATUMO;

IF NEWFNSTATUS = 99 THEN FNSTATUS=99;

OUTPUT OUT.MERGEQ;

    IF FNSTATUS = 11;

    IF NOT (IN1 AND IN2)
    THEN PUT "ERROR: NO MATCHING MPRID WITH MERGEQ..sas7bdat AND
&DSNw..sas7bdat";

    IF IN1 AND IN2;

    LABEL
    FL_TYPE = "Enrollment by beneficiary category"
    ;
    OUTPUT TEMP1;

RUN;

PROC SORT DATA=TEMP1;BY MPRID;RUN;

%INCLUDE
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.h/Programs/Weighting/XC
ATCH.INC"; * Requires input dataset called TEMP1;

PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

/*HEDIS: Only merge on XCATCH, and now limit by FNSTATUS*/
DATA OUT.&DSN1
    T_&DSN2(DROP=PRN DMIS_ID D_PAR )
        ;
LENGTH POSTCELL $5.;
MERGE TEMP1(IN=IN2)
    TMPXCTCH(IN=IN3)
;
    BY MPRID;

    IF FNSTATUS = 11;

    IF IN2 AND IN3;

FORMAT XCATCH CACR.;
OUTPUT OUT.&DSN1 T_&DSN2;
;

```

```

RUN;

*****
* Extract private-use variables from quarterly sample file.
*****
;
DATA SAMPLA02;
  SET IN2.SAMPLA02
      (KEEP=MPRID MASTCD MAPRZIP MAPRZIPX PNBRTHDT PGCD RANKCD MSA_ID)
      IN2H.SAMPLA02
      (KEEP=MPRID MASTCD MAPRZIP MAPRZIPX PNBRTHDT PGCD RANKCD MSA_ID);
RUN;
PROC SORT DATA=SAMPLA02; BY MPRID; RUN;

*****
* Append private-use variables to the public-use file.
*****
;
DATA OUT.&DSN2;
  MERGE T_&DSN2(IN=IN1) SAMPLA02(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2; *KEEP only eligible respondents;
  DROP INTTIME;
RUN;

/* The third file is the same as the one above, but with INTTIME included.
MT 3/26/2015 */

DATA OUT.&DSN3;
  MERGE T_&DSN2(IN=IN1) SAMPLA02(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2; *KEEP only eligible respondents;
RUN;

TITLE1 "DOD Quarterly Health Care Survey (6663-300)";
TITLE2 "Program Name: ADDWGTSAS.SAS";
TITLE3 "Program Inputs: Mergeq.sas7bdat -- &DSNw..sas7bdat";
TITLE4 "Program Outputs: &DSN1..sas7bdat/XPT";
PROC CONTENTS DATA=OUT.&DSN1; RUN;

*****
* Output the restricted use CONTENTS text file for delivery with the
* database CD.
*****
;
PROC PRINTTO PRINT="&DSN2..TXT" NEW; RUN;
OPTIONS PAGENO=1;
TITLE4 "Program Outputs: &DSN2..sas7bdat/XPT";
PROC CONTENTS DATA=OUT.&DSN2; RUN;
PROC PRINTTO; RUN;
*****
* Define and generate SAS Transport file.

```

```
*****
;
LIBNAME XFILE1 XPORT "&datapath./&DSN1..XPT";
PROC COPY IN=OUT OUT=XFILE1; * Converts input file to transport file;
      SELECT &DSN1;          * Selects sas7bdat file to copy;
RUN;

LIBNAME XFILE2 XPORT "&datapath./&DSN2..XPT";
PROC COPY IN=OUT OUT=XFILE2; * Converts input file to transport file;
      SELECT &DSN2;          * Selects sas7bdat file to copy;
RUN;

LIBNAME XFILE3 XPORT "&datapath./&DSN3..XPT";
PROC COPY IN=OUT OUT=XFILE3; * Converts input file to transport file;
      SELECT &DSN3;          * Selects sas7bdat file to copy;
RUN;
```

F.17 - WEIGHTING\CREPWT.SAS - Calculate combined replicate weights - Annual.

```
*****
* PROGRAM: CREPWT.SAS
* TASK: DOD QUARTERLY HEALTH CARE SURVEY (40309.31H)
* PURPOSE: CALCULATE COMBINED ANNUAL REPLICATE WEIGHTS FOR DOD SURVEY
* - New Weights REQUESTED BY DON JANG.
* CREATED: 12/19/2001 by Esther M Friedman
* UPDATED: 02/09/2006 by Haixia Xu for 2005 annual weighting - new weights
* 07/19/2013 by Sabrina R. for 2016 annual weighting - new weights

* INPUTS: framea.sas7bdat - Quarterly frame files
* REPWTP.sas7bdat - Quarterly new weights
*
* OUTPUTS: crepwt.sd2 - Combined annual replicates for new weights
*
* NOTES: Starting from FY 2013, Q3t and Q4 were not used in calculating of
* Annual Weights. Data for these two quarters were not collected for
* budget cuts.
*
* Updating Annual Weight Program for SAS GRID (FY2017)
*****;
options formdlim=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE
nocenter ls=150 ps=60
formchar="|----||---+|-\<>";

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/')));

%let
logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log)
); /*Grid is case sensitive*/
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst)
);

proc printto log="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let year=2017;

/*repwtp.sas7bdat*/

LIBNAME IN1 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY&year.t/Data/AFinal"
access=readonly;
LIBNAME IN2 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY&year.t/Data/AFinal"
access=readonly;
LIBNAME IN3 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Data/AFinal"
access=readonly;

/*framea.sas7bdat*/
LIBNAME INF1
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY&year.t/Data/AFinal"
access=readonly;
```

```

LIBNAME INF2
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY&year.t/Data/AFinal"
access=readonly;
LIBNAME INF3 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Data/AFinal"
access=readonly;

/* crepwt.sas7bdat */
LIBNAME OUT "/sasdata/Projects/40309_HCS/DATA/HCSDB/&year./Data";

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Programs/Weighting/NewWeights/design_effects_unequal_weights.sas";

OPTIONS PS=79 LS=132 COMPRESS=no errors=0 NOCENTER mlogic mprint symbolgen;

title1 "Program:CREPWT.SAS (YEAR=&year. , TaskNo: 40309.31H)";
title2 "PURPOSE: CREATES ANNUAL COMBINED WEIGHT AND COMBINED REPLICATED
WEIGHT - New weights";

*****
* MERGE THE NEW (with trickles) QUARTERLY WEIGHT FILES
*****;
%macro doqrt(qrt=);
data repwtq&qrt.;
set in&qrt..repwtp(keep=mprid fnstatus postcell bwt fwrwt fwrwt1-fwrwt60);
quarter=&qrt.;
label quarter = 'Dod quarter indicator';
format _all_;
run;

proc sort data=repwtq&qrt.;
by mprid;
run;

%mend doqrt;

%doqrt(qrt=1);
%doqrt(qrt=2);
%doqrt(qrt=3);

*merge the new quarterly files;
data repwt;
set repwtq1 repwtq2 repwtq3;
by mprid;
run;

*****
* CREATE THE ANNUAL WEIGHTS
*****;
* Use Equal Weighting Method: Divide each quarterly weight by 3;
data repwt;
set repwt;
cfwt=fwrwt/3;
label cfwt= 'combined annual NEW wt';
run;

```

```

*****
* CHECK NEW ANNUAL WEIGHTS
*****;
title3 "Combined replicate file";
proc freq data=repwt;
tables quarter fnstatus fnstatus*quarter/list missing;
run;

title3 "Weighted using fwrwt - quarterly new wt";
proc freq data=repwt;
tables quarter fnstatus fnstatus*quarter/list missing;
weight fwrwt;
run;

title3 "Weighted using cfwt - combined annual new wt";
proc freq data=repwt;
tables quarter fnstatus fnstatus*quarter/list missing;
weight cfwt;
run;

title3 'Checks for cfwt and fwrwt for fnstatus=11';
Proc print data=repwt (obs=200) noobs;
var quarter cfwt fwrwt;
where fnstatus=11;
run;

title3 'Checks for fwrwt by quarter for fnstatus=11';
proc sort data=repwt;
by quarter;
run;

proc means data=repwt n sum mean min max Q1 median Q3;
var fwrwt;
by quarter;
where fnstatus=11;
run;

title3 'Checks for cfwt for fnstatus=11';
proc univariate data=repwt;
var cfwt;
where fnstatus=11;
run;

options compress=yes;

*****
* CREATE THE REPLICATE WEIGHTS
*****;
data crepwt_newwt ( drop = rep );
set repwt;
array repwt[60] fwrwt1 - fwrwt60;
array annual_repwt[180] cfwt1 - cfwt180;
do rep = 1 to 180;
if 1 <= rep <= 60 then
do;
if quarter in ( 2, 3 ) then

```

```

        annual_repwt[rep] = fwrwt;
    else
        annual_repwt[rep] = repwt[rep];
    end;
else if 61 <= rep <= 120 then
    do;
        if quarter in ( 1, 3 ) then
            annual_repwt[rep] = fwrwt;
        else
            annual_repwt[rep] = repwt[rep - 60];
        end;
    else if 121 <= rep <= 180 then
        do;
            if quarter in ( 1, 2 ) then
                annual_repwt[rep] = fwrwt;
            else
                annual_repwt[rep] = repwt[rep - 120];
            end;
            annual_repwt[rep] = annual_repwt[rep]/3;
        end;*replicate loop;
run;

* Check the new cfwts;
title3 'Checks for the sum of the new cfwts';
PROC MEANS DATA=crepwt_newwt n sum;
VAR  cfwt cfwt1-cfwt180;
output out=sums sum(cfwt cfwt1-cfwt180) = cfwt cfwt1-cfwt180;
RUN;

proc transpose data=sums out=t_sums;
VAR  cfwt cfwt1-cfwt180;
run;

proc univariate data=t_sums normal ;
var coll;
run;

*****;
* Output the combined annual replicate weights - Old and New weights
*****;
* Label wts;
%MACRO LABWT;
    %DO J = 1 %TO 180;
        LABEL CFWT&J. = "Combined Replicated NEW Weight &J.";
    %END;
%MEND LABWT;

data out.crepwt;
set crepwt_newwt;
if _N_=1 then do;
    label CFWT = "Combined annual NEW Weight"
%LABWT;
end;
run;

title3 'Contents of crepwt.sd2';
proc contents data=out.crepwt ;

```



```

run;

*****
***
*** Calculate the Design Effects
*** As per Nancy and Sonya's requests, check the deff for the annual wts to
see
*** how the quarterly weight affects the annual estimates.
*****
***;

%macro mergefiles(qrt=);

data frame&qrt.;
set inf&qrt..framea(keep=mprid enbgsmpl tnexreg d_health com_geo servaff);

***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01','05') then TNEX_grp='N';
else if d_health in ('18','04') then TNEX_grp='S';
else if d_health in ('19','08','11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which
is the region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

if tnex_grp in ('N', 'S', 'W') then conus=1;
else if tnex_grp = 'O' then conus=0;

run;

title3 "Check the construction TNEX_grp, conus for quarter &qrt.";
proc freq data=frame&qrt.;
tables TNEX_grp*d_health conus*tnex_grp/missing list;
run;

proc sort data=in&qrt..repwtp(keep=mprid) out=repwt; by mprid; run;
proc sort data=frame&qrt.; by mprid; run;

data merged&qrt.;
merge repwt(in=A) frame&qrt.(in=B);
by mprid;
if a and b;
run;

%mend mergefiles;

%mergefiles(qrt=1);
%mergefiles(qrt=2);
%mergefiles(qrt=3);

```

```

data merged123;
set merged1 merged2 merged3;
by mprid;
run;

proc sort data=out.crepwt(keep=mprid fnstatus bwt fwrwt cfw) out=crepwt;
by mprid;
run;

data merged;
merge crepwt(in=A) merged123(in=B);
by mprid;
if a and b;
run;

**create dataset of completes only;
data postwt_fnl;
set merged;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, cfw, deff_overall,
deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, cfw, deff_overall,
deff_tnexreg );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, cfw, deff_overall,
deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus, cfw, deff_overall,
deff_conus );
%design_effects_unequal_weights ( postwt_fnl, servaff, cfw, deff_overall,
deff_servaff );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff, cfw,
deff_overall, deff_TNEXservaff );

*** For Overall ***;
title3 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

```

```
*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

*** For Service Affiliation for the facility ***;
title3 "Design Effects for Facility's Service Affiliation";
proc print data= deff_servaff;
sum _freq_;
run;

*** For TNEX_grp*Servaff ***;
title3 "Design Effects for TNEX_grp by Servaff";
proc print data= deff_TNEXservaff;
sum _freq_;
run;

proc printto;
run;

***** The End *****;
```

F.18 - WEIGHTING\FIX2015XCATCH.SAS - Fix catchment reporting variable (XCATCH) for 2015 - Annual

```

*****
*
* PROGRAM: Fix2014XCATCH.SAS
* PURPOSE: Fix catchment reporting variable (XCATCH) for 2013
* WRITTEN  November 6, 2007 BY Keith Rathbun
* TASK:    2012 DoD Database Development (6244-300)
*
* INPUTS:  1) FRAMEA.sas7bdat - 2013 Quarterly Sample Frames
*           2) HCS13A_1/2.sas7bdat - 2013 Combined Annual HCSDB dataset
*
* UPDATES: 1) September 17, 2009 by Emma Ernst for 2009 database
*           2) September 2, 2010 by Mike Rudacille for 2010 database
*           3) September 23, 2011 by Mike Rudacille for 2011 database
*           4) September 19, 2012 by Amanda Kudis for 2012 database
*           5) June 02, 2014 by Amanda Kudis for 2014 database
*           6) July 21, 2015 by Matt Turbyfill for 2015 database
*           7) July 11, 2017 by Matt Turbyfill for 2017 database
*
* OUTPUTS: 1) XCATCH13.sas7bdat - 2013 combined corrected Annual HCSDB
dataset
*           (output in the 2014 data area)
*
* NOTES:   1) XCATCH needed to be redefined with the 2014 definition
*           on the 2013 annual dataset
*
*****
;
%LET YR = 15;

OPTIONS NOFMterr NOCENTER LS=132 PS=80 COMPRESS=YES;
LIBNAME OUT      "..\..\DATA";
LIBNAME IN20&YR. "..\..\20&YR.\DATA" access=readonly;

*****
* Extract variables necessary to construct XCATCH by QUARTER.
*****
;
%MACRO GET_QTR(QTR=);
  PROC SORT DATA=IN20&YR..HCS&YR.A_2
    (KEEP=MPRID ENRID PCM DCATCH D_HEALTH D_FAC SERVAFF XREGION PATCAT
  QUARTER TNEXREG)
    OUT=TEMP1_&QTR;
    BY MPRID;
    WHERE QUARTER = "&QTR";
  RUN;
%MEND;

%GET_QTR(QTR=Q1FY20&YR.);
%GET_QTR(QTR=Q2FY20&YR.);
%GET_QTR(QTR=Q3FY20&YR.);
*%GET_QTR(QTR=Q4FY2013);

```

```

*****
* Extract D_PAR for use with creating XCATCH.
*****
;
%MACRO GETD_PAR(LOC=);
  LIBNAME IN "..\..\..\&LOC.\DATA\AFINAL";
  PROC SORT DATA=IN.FRAMEA(KEEP=MPRID D_PAR) OUT=&LOC.;
    BY MPRID;
  RUN;
%MEND;

%GETD_PAR(LOC=Q1FY20&YR.);
%GETD_PAR(LOC=Q2FY20&YR.);
%GETD_PAR(LOC=Q3FY20&YR.);
*%GETD_PAR(LOC=Q4FY2013);

DATA Q1;
  MERGE Q1FY20&YR.(IN=IN1) TEMP1_Q1FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;

DATA Q2;
  MERGE Q2FY20&YR.(IN=IN1) TEMP1_Q2FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;

DATA Q3;
  MERGE Q3FY20&YR.(IN=IN1) TEMP1_Q3FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;
/*
DATA Q4;
  MERGE Q4FY2013(IN=IN1) TEMP1_Q4FY2013(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;
*/
DATA TEMP1;
  SET Q1 Q2 Q3; *Q4;
  BY MPRID;

  IF      SERVAFF = 'A' THEN XSERVAFF = 1; * Army;
  ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; * Air Force;
  ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; * Navy;
  ELSE XSERVAFF = 4;                       * Other;

*****
* Assign XTNEXREG and XOCONUS using XREGION.
*****;
  IF XREGION IN (1,2,5) THEN XTNEXREG = 1;
  ELSE IF XREGION IN (3,4,6) THEN XTNEXREG = 2;
  ELSE IF XREGION IN (7,8,9,10,11,12,16) THEN XTNEXREG = 3;

```

```

ELSE IF XREGION IN (13,14,15) THEN XTNEXREG = 4;
ELSE IF XREGION = . THEN DO; /* MER 03/23/10 - If XREGION is missing, set
XTNEXREG = TNEXREG */
    IF TNEXREG = 'N' THEN XTNEXREG=1;
    ELSE IF TNEXREG = 'S' THEN XTNEXREG=2;
    ELSE IF TNEXREG = 'W' THEN XTNEXREG=3;
    ELSE IF TNEXREG = 'O' THEN XTNEXREG=4;
    ELSE XTNEXREG=.;
END;

IF XREGION      = 13 THEN XOCONUS = 1;
ELSE IF XREGION = 14 THEN XOCONUS = 2;
ELSE IF XREGION = 15 THEN XOCONUS = 3;
RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TMPXCTCH with XCATCH is created by this include file.
*****
;
%INCLUDE "XCATCH.INC"; * Requires input dataset called TEMPl;
PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

PROC SORT DATA=IN20&YR..HCS&YR.A_1(DROP=XCATCH) OUT=HCS&YR.A_1;
    BY MPRID;
RUN;

DATA OUT.XCATCH&YR.;
    MERGE HCS&YR.A_1(IN=IN1) TMPXCTCH(IN=IN2);
    BY MPRID;
    FORMAT _ALL_;
    KEEP MPRID XCATCH QUARTER;
RUN;

TITLE1 "Annual DOD Health Care Survey Database (6244-300)";
TITLE2 "Program Name: Fix20&YR.XCATCH.SAS By Keith Rathbun";
TITLE3 "Program Inputs: 20&YR. HCSDB sample and analysis files";
TITLE4 "Program Output: XCATCH&YR..sas7bdat - FY 20&YR. Combined XCATCH
dataset";

PROC FREQ;
    TABLES XCATCH /MISSING LIST;
RUN;

```

F.19 - WEIGHTING\FIX2016XCATCH.SAS - Fix catchment reporting variable (XCATCH) for 2016 - Annual.

```

*****
*
* PROGRAM: Fix2014XCATCH.SAS
* PURPOSE: Fix catchment reporting variable (XCATCH) for 2013
* WRITTEN November 6, 2007 BY Keith Rathbun
* TASK: 2012 DoD Database Development (6244-300)
*
* INPUTS: 1) FRAMEA.sas7bdat - 2013 Quarterly Sample Frames
*          2) HCS13A_1/2.sas7bdat - 2013 Combined Annual HCSDB dataset
*
* UPDATES: 1) September 17, 2009 by Emma Ernst for 2009 database
*           2) September 2, 2010 by Mike Rudacille for 2010 database
*           3) September 23, 2011 by Mike Rudacille for 2011 database
*           4) September 19, 2012 by Amanda Kudis for 2012 database
*           5) June 02, 2014 by Amanda Kudis for 2014 database
*           6) July 21, 2015 by Matt Turbyfill for 2015 database
*           7) July 11, 2017 by Matt Turbyfill for 2017 database
*
* OUTPUTS: 1) XCATCH13.sas7bdat - 2013 combined corrected Annual HCSDB
dataset
*           (output in the 2014 data area)
*
* NOTES: 1) XCATCH needed to be redefined with the 2014 definition
*          on the 2013 annual dataset
*
*****
;
%LET YR = 16;

OPTIONS NOFMterr NOCENTER LS=132 PS=80 COMPRESS=YES;
LIBNAME OUT "..\..\DATA";
LIBNAME IN20&YR. "..\..\20&YR.\DATA" access=readonly;

*****
* Extract variables necessary to construct XCATCH by QUARTER.
*****
;
%MACRO GET_QTR(QTR=);
  PROC SORT DATA=IN20&YR..HCS&YR.A_2
    (KEEP=MPRID ENRID PCM DCATCH D_HEALTH D_FAC SERVAFF XREGION PATCAT
  QUARTER TNEXREG)
    OUT=TEMP1_&QTR;
  BY MPRID;
  WHERE QUARTER = "&QTR";
  RUN;
%MEND;

%GET_QTR(QTR=Q1FY20&YR.);
%GET_QTR(QTR=Q2FY20&YR.);
%GET_QTR(QTR=Q3FY20&YR.);
*%GET_QTR(QTR=Q4FY2013);

```

```

*****
* Extract D_PAR for use with creating XCATCH.
*****
;
%MACRO GETD_PAR(LOC=);
  LIBNAME IN "..\..\..\&LOC.\DATA\AFINAL";
  PROC SORT DATA=IN.FRAMEA(KEEP=MPRID D_PAR) OUT=&LOC.;
    BY MPRID;
  RUN;
%MEND;

%GETD_PAR(LOC=Q1FY20&YR.);
%GETD_PAR(LOC=Q2FY20&YR.);
%GETD_PAR(LOC=Q3FY20&YR.);
*%GETD_PAR(LOC=Q4FY2013);

DATA Q1;
  MERGE Q1FY20&YR.(IN=IN1) TEMP1_Q1FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;

DATA Q2;
  MERGE Q2FY20&YR.(IN=IN1) TEMP1_Q2FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;

DATA Q3;
  MERGE Q3FY20&YR.(IN=IN1) TEMP1_Q3FY20&YR.(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;
/*
DATA Q4;
  MERGE Q4FY2013(IN=IN1) TEMP1_Q4FY2013(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;
*/
DATA TEMP1;
  SET Q1 Q2 Q3; *Q4;
  BY MPRID;

  IF      SERVAFF = 'A' THEN XSERVAFF = 1; * Army;
  ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; * Air Force;
  ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; * Navy;
  ELSE XSERVAFF = 4; * Other;

*****
* Assign XTNEXREG and XOCONUS using XREGION.
*****;
  IF XREGION IN (1,2,5) THEN XTNEXREG = 1;
  ELSE IF XREGION IN (3,4,6) THEN XTNEXREG = 2;
  ELSE IF XREGION IN (7,8,9,10,11,12,16) THEN XTNEXREG = 3;

```



```

ELSE IF XREGION IN (13,14,15) THEN XTNEXREG = 4;
ELSE IF XREGION = . THEN DO; /* MER 03/23/10 - If XREGION is missing, set
XTNEXREG = TNEXREG */
    IF TNEXREG = 'N' THEN XTNEXREG=1;
    ELSE IF TNEXREG = 'S' THEN XTNEXREG=2;
    ELSE IF TNEXREG = 'W' THEN XTNEXREG=3;
    ELSE IF TNEXREG = 'O' THEN XTNEXREG=4;
    ELSE XTNEXREG=.;
END;

IF XREGION      = 13 THEN XOCONUS = 1;
ELSE IF XREGION = 14 THEN XOCONUS = 2;
ELSE IF XREGION = 15 THEN XOCONUS = 3;
RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TMPXCTCH with XCATCH is created by this include file.
*****
;
%INCLUDE "XCATCH.INC"; * Requires input dataset called TEMPl;
PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

PROC SORT DATA=IN20&YR..HCS&YR.A_1(DROP=XCATCH) OUT=HCS&YR.A_1;
    BY MPRID;
RUN;

DATA OUT.XCATCH&YR.;
    MERGE HCS&YR.A_1(IN=IN1) TMPXCTCH(IN=IN2);
    BY MPRID;
    FORMAT _ALL_;
    KEEP MPRID XCATCH QUARTER;
RUN;

TITLE1 "Annual DOD Health Care Survey Database (6244-300)";
TITLE2 "Program Name: Fix20&YR.XCATCH.SAS By Keith Rathbun";
TITLE3 "Program Inputs: 20&YR. HCSDB sample and analysis files";
TITLE4 "Program Output: XCATCH&YR..sas7bdat - FY 20&YR. Combined XCATCH
dataset";

PROC FREQ;
    TABLES XCATCH /MISSING LIST;
RUN;

```

F.20 - WEIGHTING\FIXHEDISXCATCH.SAS - Fix catchment reporting variable (XCATCH) for HEDIS.

```

*****
*
* PROGRAM: FixHEDISXCATCH.SAS
* PURPOSE: Fix catchment reporting variable (XCATCH) for 2013
* WRITTEN November 6, 2007 BY Keith Rathbun
* TASK: 2012 DoD Database Development (6244-300)
*
* INPUTS: 1) FRAMEA.sas7bdat - 2013 Quarterly Sample Frames
*          2) HCS13A_1/2.sas7bdat - 2013 Combined Annual HCSDB dataset
*
* UPDATES: 1) September 17, 2009 by Emma Ernst for 2009 database
*           2) September 2, 2010 by Mike Rudacille for 2010 database
*           3) September 23, 2011 by Mike Rudacille for 2011 database
*           4) September 19, 2012 by Amanda Kudis for 2012 database
*           5) June 02, 2014 by Amanda Kudis for 2014 database
*           6) July 21, 2015 by Matt Turbyfill for 2015 database
*           7) July 11, 2017 by Matt Turbyfill for 2017 database
*
*           Adapted to run on HEDIS data
*
* OUTPUTS: 1) XCATCH13.sas7bdat - 2013 combined corrected Annual HCSDB
dataset
*           (output in the 2014 data area)
*
* NOTES: 1) XCATCH needed to be redefined with the 2014 definition
*           on the 2013 annual dataset
*
*****
;
%LET YR = 15;

OPTIONS NOFMterr NOCENTER LS=132 PS=80 COMPRESS=YES;
LIBNAME OUT "..\..\DATA";
LIBNAME INHEDIS "..\..\..\HCSDB_HEDIS\DATA\Afinal" access=readonly;

*****
* Extract variables necessary to construct XCATCH by QUARTER.
*****
;

PROC SORT DATA=INHEDIS.HCS172_2
(KEEP=MPRID ENRID PCM DCATCH D_HEALTH D_FAC SERVAFF XREGION PATCAT
QUARTER TNEXREG)
OUT=TEMP1_HED;
BY MPRID;
RUN;

*****

```

```

* Extract D_PAR for use with creating XCATCH.
*****
;

LIBNAME IN "..\..\..\..\HCSDB_HEDIS\DATA\AFINAL";
PROC SORT DATA=IN.FRAMEA(KEEP=MPRID D_PAR) OUT=HED_FRAME;
  BY MPRID;
RUN;

DATA HED;
  MERGE HED_FRAME(IN=IN1) TEMP1_HED(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;

/*
DATA Q4;
  MERGE Q4FY2013(IN=IN1) TEMP1_Q4FY2013(IN=IN2);
  BY MPRID;
  IF IN1 AND IN2;
RUN;
*/
DATA TEMP1;
  SET HED; *Q4;
  BY MPRID;

  IF      SERVAFF = 'A' THEN XSERVAFF = 1; * Army;
  ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; * Air Force;
  ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; * Navy;
  ELSE XSERVAFF = 4; * Other;

*****
* Assign XTNEXREG and XOCONUS using XREGION.
*****;

IF XREGION IN (1,2,5) THEN XTNEXREG = 1;
ELSE IF XREGION IN (3,4,6) THEN XTNEXREG = 2;
ELSE IF XREGION IN (7,8,9,10,11,12,16) THEN XTNEXREG = 3;
ELSE IF XREGION IN (13,14,15) THEN XTNEXREG = 4;
ELSE IF XREGION = . THEN DO; /* MER 03/23/10 - If XREGION is missing, set
XTNEXREG = TNEXREG */
  IF TNEXREG = 'N' THEN XTNEXREG=1;
  ELSE IF TNEXREG = 'S' THEN XTNEXREG=2;
  ELSE IF TNEXREG = 'W' THEN XTNEXREG=3;
  ELSE IF TNEXREG = 'O' THEN XTNEXREG=4;
  ELSE XTNEXREG=.;
END;

IF XREGION = 13 THEN XOCONUS = 1;
ELSE IF XREGION = 14 THEN XOCONUS = 2;
ELSE IF XREGION = 15 THEN XOCONUS = 3;
RUN;

```

```

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TMPXCTCH with XCATCH is created by this include file.
*****
;
%INCLUDE "XCATCH.INC"; * Requires input dataset called TEMP1;
PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

PROC SORT DATA=INHEDIS.HCS172_1(DROP=XCATCH) OUT=HCS17A_1;
  BY MPRID;
RUN;

DATA OUT.XCATCHHED;
  MERGE HCS17A_1(IN=IN1) TMPXCTCH(IN=IN2);
  BY MPRID;
  FORMAT _ALL_;
  KEEP MPRID XCATCH QUARTER;
RUN;

TITLE1 "Annual DOD Health Care Survey Database (6244-300)";
TITLE2 "Program Name: FixHEDISXCATCH.SAS By Keith Rathbun";
TITLE3 "Program Inputs: HCSDB HEDIS sample and analysis files";
TITLE4 "Program Output: XCATCHHED.sas7bdat - 2017 HEDIS Combined XCATCH
dataset";

PROC FREQ;
  TABLES XCATCH /MISSING LIST;
RUN;

```

F.21.A - WEIGHTING\COMB2017.SAS - Combine quarterly datasets into one annual file - Annual

```

*****
*
* PROGRAM: COMB2015.SAS
* TASK: ANNUAL DOD HEALTH CARE SURVEY ANALYSIS (6244-300)
* PURPOSE: Combine quarterly datasets into one annual file.
*
* WRITTEN: 12/23/2002 BY KEITH RATHBUN.
*
* INPUTS: 1) HCSyyq_2.sas7bdat - Q1-Q4 DOD HCS Analysis files
*          Where yy = Year (11)
*          q = Quarter Number (1-4)
*
* MODIFIED: 1) September 17, 2009 by Emma Ernst for 2009 database
*           2) October 12, 2010 by Mike Rudacille for 2010 database
*           Switched from HCSyyq_1 to HCSyyq_2, as some of the necessary
variables
*           are now only available in the restricted use dataset
*           3) September 23, 2011 by Mike Rudacille for 2011 database
*           4) September 20, 2012 by Amanda Kudis for 2012 database
*           5) July 24, 2013 by Amanda Kudis for 2013 datasets
*           6) June 02, 2014 by Amanda Kudis for 2014 datasets
*           7) July 21, 2015 by Matt Turbyfill for 2015 datasets
*           8) July 21, 2016 by Matt Turbyfill for 2016 datasets
*
* OUTPUT: 1) COMB2015.sas7bdat - Combined quarterly datasets in one
annual file
*
* NOTES: 1) The output dataset produced by this program contains all
*          of the original quarterly responses plus additional
*          responses that "trickled" in after the end of the
*          fielding period. The variable called QUARTER can be used
*          to identify which version of the quarterly survey is
*          applicable to the respondent.
*
* INCLUDES: 1) XCATCH.INC - Create catchment reporting variable
*
*****
* Assign data libraries and options
*****
;
%LET YR = 17;

LIBNAME INQ1      "..\..\..\Q1FY20&YR.t\DATA\AFINAL";
LIBNAME INQ2      "..\..\..\Q2FY20&YR.h\DATA\AFINAL";
LIBNAME INQ3      "..\..\..\Q3FY20&YR.\DATA\AFINAL"; *AMK NO TRICKLE FOR
2014;
*LIBNAME INQ4      "..\..\..\Q4FY2012\DATA\AFINAL"; /**AMK NO Q4 FOR 2014;
JMA 11/17/2011 -Unlike other years, In 2011, we used trickle Q4 data ***/
LIBNAME OUT       "..\..\DATA";
LIBNAME LIBRARY   "..\..\Data\fmtlib\WindowsVersionforDHA";
OPTIONS COMPRESS=YES LS=142 PS=79 NOCENTER NOFMterr;

```

```

*****
* Extract variable names for each quarter for overlap checking purposes.
*****
;
PROC CONTENTS DATA=INQ1.HCS&YR.1_2 OUT=Q1(KEEP=NAME) NOPRINT; RUN;
PROC SORT; BY NAME; RUN;

PROC CONTENTS DATA=INQ2.HCS&YR.2_2 OUT=Q2(KEEP=NAME) NOPRINT; RUN;
PROC SORT; BY NAME; RUN;

PROC CONTENTS DATA=INQ3.HCS&YR.3_2 OUT=Q3(KEEP=NAME) NOPRINT; RUN;
PROC SORT; BY NAME; RUN;
/*
PROC IMPORT DATAFILE =
'N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\Weighting\Var_Order.x
lsx'
OUT=VAR_ORDER DBMS=XLSX REPLACE;
GETNAMES=NO;
RUN;

PROC SQL;
SELECT A
INTO :VARORDER
SEPARATED BY ','
FROM VAR_ORDER
;
QUIT;
%PUT &VARORDER;
*/
/*PROC CONTENTS DATA=INQ4.HCS144_2 OUT=Q4(KEEP=NAME) NOPRINT; RUN;*AMK NO Q4
FOR 2014;
PROC SORT; BY NAME; RUN;*/

DATA VARIABLES;
MERGE Q1(IN=INQ1) Q2(IN=INQ2) Q3(IN=INQ3) /*Q4(IN=INQ4)*/;*AMK NO Q4 FOR
2014;
BY NAME;
LENGTH Q1-Q3 $3; *AMK NO Q4 FOR 2014;
IF INQ1 THEN Q1 = "YES"; ELSE Q1 = "NO";
IF INQ2 THEN Q2 = "YES"; ELSE Q2 = "NO";
IF INQ3 THEN Q3 = "YES"; ELSE Q3 = "NO";
/*IF INQ4 THEN Q4 = "YES"; ELSE Q4 = "NO";*AMK NO Q4 FOR 2014;*/
RUN;

TITLE1 "Annual DOD Health Care Survey Database (6244-300)";
TITLE2 "Program Name: COMB20&YR..SAS By Keith Rathbun";
TITLE3 "Program Inputs: HCSyyq_2.sas7bdat - Q1-Q3 DOD HCS Sample and
Analysis files"; *AMK NO Q4 FOR 2014;
TITLE4 "Program Output: COMB20&YR..sas7bdat - Combined quarterly datasets in
one annual file";

*****
* Print summary of variable name quarterly overlap.
*****
;
PROC PRINT; RUN;

```

```

*****
* Combine quarterly datasets with all of the "trickle" data into one file.
*****
;
DATA COMB20&YR.(DROP= XCATCH /*GEOCELLH2 /* Xcatch will be recreated based
on annual counts */);
SET INQ1.HCS&YR.1_2 /* MER 10/5/11 - MISS_3 was out of scope
in 2011 and was dropped */
INQ2.HCS&YR.2_2 /*(rename=(GEOCELLH=GEOCELLH2))*/ /* starting in
Q2. This DROP statement can be removed in COMB2012 */
INQ3.HCS&YR.3_2 /* AMK REMOVED (DROP=MISS_3) for 2012*/
/*INQ4.HCS124_2*/; *AMK NO Q4 FOR 2014;
BY MPRID;
LABEL FIELDAGE = "Age at start of fielding period"
DAGEQY = "Age at time of data collection"
S17BN01F = '[HEDIS only] Our records show that you are now in
TRICARE Prime. Is that right?';
;

format /*GEOCELLH cacr. */
X17003 HPLAN1_.
S17BN01 YN.
S17BN01F YN.
INHEDIS INHEDIS.
INHCSDB INHCSDB.
;
/*GEOCELLH=GEOCELLH2;*/

run;

*****
* Sort by MPRID and check for duplicates. There should not be duplicates.
*****
;
PROC SORT DATA=COMB20&YR. NODUPKEY OUT=TEMP1; BY MPRID; RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset TEMP with XCATCH is created by this include file.
*****
;
%INCLUDE "XCATCH2.INC"; * Requires input dataset called TEMP1;
PROC SORT DATA=TMPXCTCH; BY MPRID; RUN;

DATA OUT.COMB20&YR.
HCS&YR.1_2x(KEEP=MPRID XCATCH) HCS&YR.2_2x(KEEP=MPRID XCATCH)
HCS&YR.3_2x(KEEP=MPRID XCATCH)/*HCS124_2x(KEEP=MPRID XCATCH)*/ ; *AMK
NO Q4 FOR 2014;

MERGE TEMP1(IN=IN1) TMPXCTCH(IN=IN2);
BY MPRID;
IF IN1 AND IN2 THEN DO;

```

```

IF XCATCH = 1450 THEN XCATCH = 117; /* MER 11/&YR./08 Map new Lackland
*/
/* catchment area to old one
*/

IF XCATCH = 37 THEN XCATCH = 67; /* MER 11/7/12 Map old Walter Reed */
/* catchment area to new one */

OUTPUT OUT.COMB20&YR.;
IF QUARTER="Q1FY20&YR." THEN OUTPUT HCS&YR.1_2x;
IF QUARTER="Q2FY20&YR." THEN OUTPUT HCS&YR.2_2x;
IF QUARTER="Q3FY20&YR." THEN OUTPUT HCS&YR.3_2x;
*IF QUARTER="Q4FY2012" THEN OUTPUT HCS124_2x;*AMK NO Q4 FOR 2014;
END;

FORMAT GEOCELLH CACR. S&YR.BJ01 S&YR.BJ02 S&YR.BJ03 S&YR.BJ04 S_17BJ_.;

RUN;

```

```

/****For annual 2016 run, quarterly files XCATCH values are not updated****/

```

```

/* AMK 6/16/ Don't over write quaterly until after code review

```

```

DATA INQ1.HCS&YR.1_2;
  UPDATE INQ1.HCS&YR.1_2 HCS&YR.1_2x;
  BY MPRID;
RUN;

```

```

DATA INQ2.HCS&YR.2_2;
  UPDATE INQ2.HCS&YR.2_2 HCS&YR.2_2x;
  BY MPRID;
RUN;

```

```

DATA INQ3.HCS&YR.3_2;
  UPDATE INQ3.HCS&YR.3_2 HCS&YR.3_2x;
  BY MPRID;
RUN;

```

```

*/
/*DATA INQ4.HCS124_2;
  UPDATE INQ4.HCS124_2 HCS124_2x;
  BY MPRID;
RUN;*/ /*AMK NO Q4 FOR 2013*/

```

```

PROC CONTENTS; RUN;

```


F.21.B - WEIGHTING\XCATCH2.INC - Create detailed CACSMPL for annual report cards - Annual.

```

*****
*
* PROGRAM:      XCATCH.INC
* TASK:        DOD HEALTH CARE SURVEY ANALYSIS (6077-300)
* PURPOSE:     CREATE DETAILED CACSMPL FOR ANNUAL REPORT CARDS
*
* WRITTEN:     01/20/2004 BY KEITH RATHBUN
*
* MODIFIED:    1) 02/14/2005 BY LUCY LU. RENAME STEP1Q.INC TO XCATCH.INC
*              2) 03/10/2005 BY LUCY LU, REVISED PROGRAM TO RUN 2002 AND 2003
FILES
*              3) 01/06/2006 BY KEITH RATHBUN. Updated for 2006. Removed
*              PROCESS macro.
*
*
* INPUTS:      1) TEMP1.sas7bdat - Temporary SAS dataset
*              2) TMA.sas7bdat - TMA-provided catchment definitions
*
* OUTPUT:     1) TEMP.sas7bdat - Temporary SAS dataset
*
* NOTES:      1) This program is setup to run for all survey years as long
*              as the necessary variables are passed to it in TEMP1.
*              2) Required variables in TEMP1 dataset include the following:
*              MPRID, ENRID, PCM, DCATCH, D_PAR, D_HEALTH, and D_FAC.
*
* INCLUDES:   1) AssignGEOCELL.inc
*              2) AssignCOM_GEO.inc
*
*****
;
libname tma
"\\mathematica.Net\NDrive\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Data
\AFinal";
/*LIBNAME TMA V9
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Data\AFinal";*/
DATA TEMP(KEEP=MPRID GEOCELL GEOCELLH PCM ENRID XTNEXREG XSERVAFF XOCONUS
PATCAT );
    SET TEMP1;
    BY MPRID;
    if pcm = 'MTF' then do;
        %INCLUDE
"\\mathematica.Net\NDrive\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Prog
rams\Sampling\assigngeocell.inc";
        else if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' )
or
            ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
            ('7166' <= enrid <= '7195') or ('6700' <= enrid <= '6881') or
enrid='0000'
            then geocell=dcatch; *administrative assignment 1976-1980 added q4
2002, 6700-6881 added q1 2004,
                0000 added q1,2005;
        else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')

```

```

        then geocell = dcatch; *Managed care contractor assignment, added
in q1 2005; *8001-8036 added q2 2005;
        else if ('3031' <= enrid <= '3057')
            then geocell = dcatch; ***On board ship***;
            else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213',
'0235', '0585', '5208', '0250',
                '0449', '0626', '0012')
            then geocell = dcatch; ***Inactive***; *0626 added q2 2003, 0012
added q4 2003,
                0041, 0044, 0082, 0111,
0213, 0235, 0585 added q2 2005;
            else if enrid = ' ' then geocell = dcatch; ***enrolled, but missing
ENRID, added q2 2005***;
            *****;
            else if ('0190' <= enrid <='0199') then geocell = dcatch; **BYDON;
            *****;
            else geocell = enrid;
        end;
        else if patcat='ACTDTY' then geocell=dcatch; /*Added in qlfy2007, Put the
rest of ACTDTY in their dcatch for sampling purpose*/
        else geocell=dcatch;
RUN;

data TEMP;
set TEMP;
IF geocellh ne "" then geocell=geocellh;
if length(geocell)=1 then geocell="000" || geocell;
if length(geocell)=2 then geocell="00" || geocell;
if length(geocell)=3 then geocell="0" || geocell;
run;

PROC SORT DATA=TEMP; BY GEOCELL; RUN;

data TMA (keep = geocell d_par d_fac d_instal d_health d_dmis servaff);
set TMA.TMA;
rename facility_Type_Code =d_fac
installation_Name =d_instal
dmis_facility_Name =d_dmis
facility_Service_Code=servaff ;
length d_par $4.;
d_par = DMIS_PARENT_ID;
length geocell $4.;
geocell = DMIS_ID;
length d_health $2.;
d_health = HEALTH_Service_region;
run;

PROC SORT DATA=TMA; BY GEOCELL; RUN;

DATA TEMP;
MERGE TEMP(IN=IN1) TMA(IN=IN2);
BY GEOCELL;
LENGTH FLAG $15;
IF IN1 AND IN2 THEN FLAG = "BOTH";
ELSE IF IN1 THEN FLAG = "HCSDB ONLY";
ELSE FLAG = "TMA XLS ONLY";
IF IN1;

```

```

RUN;

PROC FREQ;
  TABLES FLAG /MISSING LIST;
RUN;

DATA TEMP(KEEP=MPRID XCATCH XTNEXREG XSERVAFF XOCONUS GEOCELL PCM GEOCELLH
COM_GEO D_FAC ENRID D_PAR);
  SET TEMP;
  LENGTH XCATCH 8;
  com_geo = geocell;
  if pcm = 'MTF' then do;
    %INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Programs\Sampling\assignco
m_geo.inc";
    else if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' )
or
    ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
    ('7166' <= enrid <= '7195') or ( '6700' <= enrid <= '6881' ) or
enrid = '0000' or
    ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919') or
    ('3031' <= enrid <= '3057') or
    enrid in ('0002', '0041', '0044', '0082', '0111', '0213', '0235',
'0585', '5208', '0250',
    '0449', '0626', '0012') or
    ('0190' <= enrid <='0199') then com_geo = geocell;
    else com_geo = d_par;
  end;
  else if patcat='ACTDTY' then com_geo=d_par;

  if d_fac='NONCAT' or d_fac='TGRO' or d_fac="TPR" then do;
    if d_health in ('01','02','05','17') then com_geo = '9901';
    else if d_health in ('03','04','06','18') then com_geo = '9902';
    else if d_health in ('07','08','09','10','11','12','19') then com_geo
= '9903';
    else if d_health in ('00','13','14','15') then com_geo = '9904';
  end;

*****
*****;
  ***d_fac="TPR" and d_health = '17', '18', '19' were added above for Q4,
2004, ***;
  ***since we got the new regions 17(North T_NEX),18(South T_NEX),19(West
T_NEX).***;

*****
*****;

  *** If the facility is unknown then set com_geo indicates unknown
facility ***;
  *** '0999' added 03/15 to account for id 6992;
  if com_geo in ('9900', '0999', '0998',' ') then com_geo = '9904';

*****;
  ***Made the following 9 Navy sites stand alone in q1,2005: ***;
  ***'0026','0068','0231','0378','0387','0405','0407','0508','6215'***;

```

```

*****;
if geocell in
('0026','0068','0231','0378','0387','0405','0407','0508','6215','0366') then
com_geo=geocell;

xcatch = INPUT(com_geo,8.);
label xcatch = "XCATCH - Catchment Area (Reporting)";
RUN;

PROC SORT DATA=TEMP; BY XCATCH; RUN;

PROC SUMMARY DATA=TEMP NWAY;
CLASS XCATCH;
OUTPUT OUT=TEMPCNT(DROP=_TYPE_ rename=_FREQ_=XCATCHno);
RUN;

PROC PRINT DATA=TEMPCNT;
RUN;

DATA TMPXCTCH(KEEP=MPRID XCATCH);
MERGE TEMPCNT TEMP;
BY XCATCH;

/** JMA 10/25/2006 Values of Xcatch which occur less than 20 times in
** the dataset will be updated
**/

IF XCATCHno < 20 THEN DO;
XCATCH=SUM(9000,100*XTNEXREG,XSERVAFF);

IF XOCONUS=1 THEN XCATCH=SUM(9400,XSERVAFF);
IF XOCONUS=2 THEN XCATCH=SUM(9500,XSERVAFF);
IF XOCONUS=3 THEN XCATCH=SUM(9600,XSERVAFF);
END;

RUN;

```

F.22 - WEIGHTING\ADDWGTS.SAS - Merge the combined annual weights with the final questionnaire/sample file - Annual

```

*****
*
* PROGRAM:   ADDWGTS.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (6244-300)
* PURPOSE:  MERGE THE FINAL WEIGHTS FILE WITH THE FINAL
*           QUESTIONNAIRE/SAMPLE FILE
*
* WRITTEN:  02/02/2001 BY KEITH RATHBUN
*
* MODIFIED: 1) 01/15/2002 BY KEITH RATHBUN: Updated to combine all quarterly
*           datasets including trickles with the annual weights file.
*           2) 12/30/2002 BY KEITH RATHBUN: Updated for 2002 survey.
*           3) 01/20/2004 BY LUCY LU: Updated for 2003 survey.
*           4) 02/10/2004 BY KEITH RATHBUN: Added catchment reporting
variable
*           (XCATCH) constructed in STEP1Q.
*           5) 03/03/05 BY LUCY LU: Updateed for 2004 annual survey.
*           -- Create macro variables and eliminate macro program,
*           -- update the length statement for year 2004.
*           6) 01/04/2006 BY KEITH RATHBUN: Updated for 2005 survey.
*           7) 09/18/2007 BY LUCY LU: Updated for 2007 survey.
*           8) 09/17/2009 BY Emma Ernst: Updated for 2009 survey.
*           9) 10/13/2010 BY MIKE RUDACILLE: Updated for 2010 survey.
*           Modified to produce both public and private use datasets.
*           10) 09/23/2011 BY MIKE RUDACILLE: Updated for 2011 survey.
*           11) 09/20/2012 by AMANDA KUDIS: Updated for 2012 survey.
*           12) 07/24/13 BY AMANDA KUDIS: Updates for 2013 survey.
*           13) 07/11/17 BY MATT TURBYFILL: Updates for 2017 survey.
*
* INPUTS:   1) CREPWT.sas7bdat - Final/Replicated Weights file - FORM A
*           2) COMB2014.sas7bdat - Combined Q1-Q3 FORM A
Questionnaire/Sample File *AMK NO Q4 FOR 2014;
*
* OUTPUTS:  1) HCSyyA_n.sas7bdat - Final FORM A Questionnaire/Sample File
*           combined with Final/Replicated Weights file - FORM A
*           where yy = Year
*                 A = Form A - Annual
*                 n = Final Dataset Suffix/Version Number
*           2) HCSyyA_n.XPT - Final Adult SAS XPORT Dataset
*           where yy = Year
*                 A = Form A - Annual
*                 n = Final Dataset Suffix/Version Number
*
* NOTES:   1) This program combines all of the quarterly input datasets
*           including trickles with the annual weights file.
*****
;

%LET YR = 17;

LIBNAME OUT      "..\..\DATA";
LIBNAME WTS     "N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Data\";

```

```

LIBNAME LIBRARY "..\..\Data\FMTLIB\WindowsVersionforDHA";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER NOFMterr;

%LET DSNI_1 = CREPWT;
%LET DSNI_2 = COMB20&YR.;
%LET DSNO_1 = HCS&YR.A_1;
%LET DSNO_2 = HCS&YR.A_2;

*****
* Merge the final weights file with the final Questionnaire/Sample file
*****
;
PROC SORT DATA=WTS.&DSNI_1 OUT=&DSNI_1; WHERE FNSTATUS EQ 11; BY MPRID; RUN;
PROC SORT DATA=OUT.&DSNI_2 OUT=&DSNI_2; BY MPRID; RUN;

DATA &DSNO_2(DROP= DRP_RND1 /* jma Oct 24 2008 */
AA AB AC AD AE AF DCW_ID DHP_CODE ALLCOUNT GEOCELLH

);

MERGE &DSNI_2(IN=IN2 )
      &DSNI_1(IN=IN1 KEEP=MPRID CFWT CFWT1-CFWT180 INHEDIS INHCSDB
FNSTATUS); /*HEDIS: Different fields merged in*/
BY MPRID;

IF FNSTATUS = 11;
IF IN1 AND IN2;
IF NOT (IN1 AND IN2) THEN PUT "ERROR: NO MATCHING MPRID WITH
&DSNI_1..sas7bdat AND &DSNI_2..sas7bdat";

FORMAT CACSMPL CACR. WEB WEB. /* MER 11/7/12 - changed from CAC to CACR
format */
/*TRICKDUP $trckdup. */

N1
N2 N3 N3_BC1 N3_BC2 N3_BC3 N3_BC4 N3_BC5 N3_BC6 N3_BC7 N3_BC8 N4 N5
N5_BI1 N5_BI2 N5_BI3 N5_BI4 N5H
N6 N7 N8 N8_01
N9 N10 N10_B1
N11 N12 N13 N14 N15 N16
N17
N18 N18_BF1 N18_BF2 N19A N19B N19H N20 N21 N21_BG1 N21_BG2 N21_BG3
N22 N23 N23_HT N23_WT N23_BE
N24 N25 N24H N25H N26H

N4H N6H N7H N9H N10H N12H N13H N14H N15H N16H N17H N18H N19H
notes.

XBMI xbmi.;

LABEL CFWT='Combined Annual NEW Weight';
LABEL STRATUMO='Original Stratum';

RUN;

```

```

DATA OUT.&DSNO_2 ;
*****
* Reorder file for documentation purposes.

*****;
LENGTH
  MPRID          $ 8          /* ID                      */
  SVCSMPL        8          /* sampling variable */
  SEXSMPL        8          /* sampling variable */
  STRATUM        $ 7          /* sampling variable */
  STRATUMH       $ 8          /* supplemental          */
  STRATUMO       $ 8          /* supplemental          */
  CACSMPL        8          /* sampling variable */
  ENBGSMPL       $ 2          /* sampling variable */
  MPCSMPL        8          /* sampling variable */
  NHFF           8          /* sampling variable */
  SERVAREA       $ 2          /* sampling variable */
  QUARTER        $ 8          /* sampling variable */
  /*PRN          8*/        /* sampling variable */
  DCATCH         $ 4          /* sampling variable */
  ENRID          $ 4          /* sampling variable */
  /*DMIS_ID     $ 9*/        /* sampling variable */
  MSM            $ 2          /* sampling variable */
  D_FAC          $ 9          /* sampling variable */
  /*D_PAR       $ 4*/        /* sampling variable */
  D_HEALTH       $ 2          /* sampling variable */
  TNEXREG        $ 1          /* sampling variable */
  SERVAFF        $ 1          /* sampling variable */
  /*COM_GEO     $ 4*/        /* sampling variable */ /* MER 7/20/10 -
Added to sampling vars so it won't be */
                                           /* at the end of the
proc contents by default anymore. */
                                           /* This variable gets
dropped in ADDWG TSA.sas.          */

  MRTLSTAT       $ 1          /* DEERS variable      */
  RACEETHN       $ 1          /* DEERS variable      */
  PNSEXCD        $ 1          /* DEERS variable      */
  DAGEQY         $ 3          /* DEERS variable      */
  RDAGEQY        3          /* DEERS variable      */
  FIELDAGE       $ 3          /* DEERS variable      */
  RFLDAGE        3          /* DEERS variable      */
  PCM            $ 3          /* DEERS variable      */
  ACV            $ 1          /* DEERS variable      */
  DBENCAT        $ 3          /* DEERS variable      */
  DMEDELG        $ 1          /* DEERS variable      */
  DSPONSV        $ 1          /* DEERS variable      */
  MBRRELCD       $ 1          /* DEERS variable      */
  MEDTYPE        $ 1          /* DEERS variable      */
  PATCAT         $ 7          /* DEERS variable      */
  PNTYPCD        $ 1          /* DEERS variable      */
  PNLCDATCD      $ 1          /* DEERS variable      */

```


SRRACEF	4	/* Questionnaire variable	*/
SRAGE	4	/* Questionnaire variable	*/
S&YR.009	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.010	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.011	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.014	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.B01	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.B02	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.B03	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.B04	4	/* Q1 & Q2 & Q3 Supplement	*/
S&YR.BI01	4	/* Q1 Supplemental	*/
S&YR.BI02A	4	/* Q1 Supplemental	*/
S&YR.BI02B	4	/* Q1 Supplemental	*/
S&YR.BI02C	4	/* Q1 Supplemental	*/
S&YR.BI02D	4	/* Q1 Supplemental	*/
S&YR.BI02E	4	/* Q1 Supplemental	*/
S&YR.BI03	4	/* Q1 Supplemental	*/
S&YR.BI04	4	/* Q1 Supplemental	*/
S&YR.BI05	4	/* Q1 Supplemental	*/
S&YR.BI06	4	/* Q1 Supplemental	*/
S&YR.BI07	4	/* Q1 Supplemental	*/
S&YR.BI08	4	/* Q1 Supplemental	*/
S&YR.BI09	4	/* Q1 Supplemental	*/
S&YR.BI10	4	/* Q1 Supplemental	*/
S&YR.BI11	4	/* Q1 Supplemental	*/
S&YR.BI12	4	/* Q1 Supplemental	*/
S&YR.BI13	4	/* Q1 Supplemental	*/
S&YR.BI14	4	/* Q1 Supplemental	*/
S&YR.BI15	4	/* Q1 Supplemental	*/
S&YR.BI16	4	/* Q1 Supplemental	*/
S&YR.BI17	4	/* Q1 Supplemental	*/
S&YR.BI18	4	/* Q1 Supplemental	*/
S&YR.BI19	4	/* Q1 Supplemental	*/
S&YR.BI20	4	/* Q1 Supplemental	*/
S&YR.BF1	4	/* Q2 Supplement	*/
S&YR.BF2	4	/* Q2 Supplement	*/
S&YR.BF3	4	/* Q2 Supplement	*/
S&YR.BF4	4	/* Q2 & Q3 Supplement	*/
S&YR.BF5	4	/* Q2 Supplement	*/
S&YR.BF6	4	/* Q2 Supplement	*/
S&YR.BC01A	4	/* Q2 Supplement	*/
S&YR.BC01B	4	/* Q2 Supplement	*/
S&YR.BC01C	4	/* Q2 Supplement	*/
S&YR.BC01D	4	/* Q2 Supplement	*/
S&YR.BC02A	4	/* Q2 Supplement	*/
S&YR.BC02B	4	/* Q2 Supplement	*/
S&YR.BC02C	4	/* Q2 Supplement	*/
S&YR.BC02D	4	/* Q2 Supplement	*/
S&YR.BC03A	4	/* Q2 Supplement	*/
S&YR.BC03B	4	/* Q2 Supplement	*/
S&YR.BC03C	4	/* Q2 Supplement	*/

S&YR.BC03D	4	/* Q2 Supplement	*/
S&YR.BC03E	4	/* Q2 Supplement	*/
S&YR.BC04A	4	/* Q2 Supplement	*/
S&YR.BC04B	4	/* Q2 Supplement	*/
S&YR.BC04C	4	/* Q2 Supplement	*/
S&YR.BC04D	4	/* Q2 Supplement	*/
S&YR.BC04E	4	/* Q2 Supplement	*/
S&YR.BC04F	4	/* Q2 Supplement	*/
S&YR.BC04G	4	/* Q2 Supplement	*/
S&YR.BC05A	4	/* Q2 Supplement	*/
S&YR.BC05B	4	/* Q2 Supplement	*/
S&YR.BC05C	4	/* Q2 Supplement	*/
S&YR.BC05D	4	/* Q2 Supplement	*/
S&YR.BC06A	4	/* Q2 Supplement	*/
S&YR.BC06B	4	/* Q2 Supplement	*/
S&YR.BC06C	4	/* Q2 Supplement	*/
S&YR.BC06D	4	/* Q2 Supplement	*/
S&YR.BC07A	4	/* Q2 Supplement	*/
S&YR.BC07B	4	/* Q2 Supplement	*/
S&YR.BC07C	4	/* Q2 Supplement	*/
S&YR.BC07D	4	/* Q2 Supplement	*/
S&YR.BC07E	4	/* Q2 Supplement	*/
S&YR.BC08A	4	/* Q2 Supplement	*/
S&YR.BC08B	4	/* Q2 Supplement	*/
S&YR.BC08C	4	/* Q2 Supplement	*/
S&YR.BC08D	4	/* Q2 Supplement	*/
S&YR.BC08E	4	/* Q2 Supplement	*/
S&YR.BC08F	4	/* Q2 Supplement	*/
S&YR.BC09	4	/* Q2 Supplement	*/
S&YR.BC10	4	/* Q2 Supplement	*/
S&YR.BG01	4	/* Q3 Supplement	*/
S&YR.BG02	4	/* Q3 Supplement	*/
S&YR.BG03	4	/* Q3 Supplement	*/
S&YR.BE01A	4	/* Q3 Supplement	*/
S&YR.BE01B	4	/* Q3 Supplement	*/
S&YR.BE01C	4	/* Q3 Supplement	*/
S&YR.BE01D	4	/* Q3 Supplement	*/
S&YR.BE01E	4	/* Q3 Supplement	*/
S&YR.BE01F	4	/* Q3 Supplement	*/
S&YR.BE01G	4	/* Q3 Supplement	*/
S&YR.BE01H	4	/* Q3 Supplement	*/
S&YR.BE01I	4	/* Q3 Supplement	*/
S&YR.BE01J	4	/* Q3 Supplement	*/
S&YR.BE01K	4	/* Q3 Supplement	*/
S&YR.BJ01	4	/* Q3 Supplemental	*/
S&YR.BJ02	4	/* Q3 Supplemental	*/
S&YR.BJ03	4	/* Q3 Supplemental	*/
S&YR.BJ04	4	/* Q3 Supplemental	*/

```

S&YR.BN01      4      /* supplemental */
  S&YR.BN01F    4      /* supplemental */
S&YR.BN02      $ 200  /* supplemental */

S&YR.BK01      4      /* supplemental */
S&YR.BK02      4      /* supplemental */
S&YR.BK03      4      /* supplemental */
S&YR.BK04      4      /* supplemental */

S&YR.BL01      4      /* supplemental */
S&YR.BL02      4      /* supplemental */
S&YR.BL03      4      /* supplemental */
S&YR.BL04A     4      /* supplemental */
S&YR.BL04B     4      /* supplemental */
S&YR.BL04C     4      /* supplemental */
S&YR.BL05A     4      /* supplemental */
S&YR.BL05B     4      /* supplemental */
S&YR.BL05C     4      /* supplemental */
S&YR.BL05D     4      /* supplemental */

S&YR.BM01      4      /* supplemental */
S&YR.BM02A     4      /* supplemental */
S&YR.BM02B     4      /* supplemental */
S&YR.BM02C     4      /* supplemental */
S&YR.BM02D     4      /* supplemental */
S&YR.BM02E     4      /* supplemental */
S&YR.BM05      4      /* supplemental */
S&YR.BM06      4      /* supplemental */
S&YR.BM07      4      /* supplemental */
S&YR.BM08      4      /* supplemental */

S&YR.BO01      4      /* supplemental */
S&YR.BP01      4      /* supplemental */

  X&YR.003      4      /* supplemental */
    INHCSDB     8      /* Survey fielding variable */
    INHEDIS     8      /* Survey fielding variable */

    ONTIME      $ 3    /* Survey fielding variable */
    FLAG_FIN    $ 5    /* Survey fielding variable */
    DUPFLAG     $ 3    /* Survey fielding variable */
    FNSTATUS    8      /* Survey fielding variable */
    KEYCOUNT   8      /* Survey fielding variable */
    WEB         8      /* Survey fielding variable */
    EMAILRES    $ 25   /* Survey fielding variable */

    SURVTYPE    8      /* Survey fielding variable */
    /** jma 11/17/11 MIQCNTL $ 12 ***/ /* Survey fielding
variable */

/* EXPFLAG      8      /* CS flag variable **/*AMK removed for
2013*/
  N1           8      /* CS flag variable */
  N2           8      /* CS flag variable */
  N3           8      /* CS flag variable */

```

N3_BC1	8	/* CS flag variable	*/
N3_BC2	8	/* CS flag variable	*/
N3_BC3	8	/* CS flag variable	*/
N3_BC4	8	/* CS flag variable	*/
N3_BC5	8	/* CS flag variable	*/
N3_BC6	8	/* CS flag variable	*/
N3_BC7	8	/* CS flag variable	*/
N3_BC8	8	/* CS flag variable	*/
N4	8	/* CS flag variable	*/
N4H	8	/* CS flag variable	*/
N5	8	/* CS flag variable	*/
N5_BI1	8	/* CS flag variable	*/
N5_BI2	8	/* CS flag variable	*/
N5_BI3	8	/* CS flag variable	*/
N5_BI4	8	/* CS flag variable	*/
N5H	8	/* CS flag variable	*/
N6	8	/* CS flag variable	*/
N6H	8	/* CS flag variable	*/
N7	8	/* CS flag variable	*/
N7H	8	/* CS flag variable	*/
N8	8	/* CS flag variable	*/
N8_01	8	/* CS flag variable	*/
N9	8	/* CS flag variable	*/
N9H	8	/* CS flag variable	*/
N10	8	/* CS flag variable	*/
N10_B1	8	/* CS flag variable	*/
N10H	8	/* CS flag variable	*/
N11	8	/* CS flag variable	*/
N12	8	/* CS flag variable	*/
N12H	8	/* CS flag variable	*/
N13	8	/* CS flag variable	*/
N13H	8	/* CS flag variable	*/
N14	8	/* CS flag variable	*/
N14H	8	/* CS flag variable	*/
N15	8	/* CS flag variable	*/
N15H	8	/* CS flag variable	*/
N16	8	/* CS flag variable	*/
N16H	8	/* CS flag variable	*/
N17	8	/* CS flag variable	*/
N17H	8	/* CS flag variable	*/
N18	8	/* CS flag variable	*/
N18_BF1	8	/* CS flag variable	*/
N18_BF2	8	/* CS flag variable	*/
N18H	8	/* CS flag variable	*/
N19A	8	/* CS flag variable	*/
N19B	8	/* CS flag variable	*/
N19H	8	/* CS flag variable	*/
N20	8	/* CS flag variable	*/
N21	8	/* CS flag variable	*/
N21_BG1	8	/* CS flag variable	*/
N21_BG2	8	/* CS flag variable	*/
N21_BG3	8	/* CS flag variable	*/
N22	8	/* CS flag variable	*/
N23	8	/* CS flag variable	*/
N23_BE	8	/* CS flag variable	*/
N23_HT	8	/* CS flag variable	*/

N23_WT	8	/* CS flag variable	*/
N24	8	/* CS flag variable	*/
N24H	8	/* CS flag variable	*/
N25	8	/* CS flag variable	*/
N25H	8	/* CS flag variable	*/
N26H	8	/* CS flag variable	*/
MISS_1	8	/* CS Count	*/
MISS_4	8	/* CS Count	*/
MISS_5	8	/* CS Count	*/
MISS_6	8	/* CS Count	*/
MISS_7	8	/* CS Count	*/
MISS_9	8	/* CS Count	*/
MISS_TOT	8	/* CS Count	*/
JSFLAG	8	/* constructed	*/
XENRLLMT	8	/* constructed	*/
XENR_PCM	8	/* constructed	*/
XINS_COV	8	/* constructed	*/
XBENCAT	8	/* constructed	*/
XENR_RSV	8	/* constructed	*/
XINS_RSV	8	/* constructed	*/
XREGION	3	/* constructed	*/
XTNEXREG	3	/* constructed	*/
XCATCH	8	/* constructed	*/
USA	3	/* constructed	*/
XOCONUS	3	/* constructed	*/
OUTCATCH	8	/* constructed	*/
XSEXA	8	/* constructed	*/
XBMI	8	/* constructed	*/
XBMICAT	3	/* constructed	*/
XBNFGRP	8	/* constructed	*/
XSERVAFF	3	/* constructed	*/
KMILOPQY	8	/* constructed	*/
KCIVOPQY	8	/* constructed	*/
KCIVINS	8	/* constructed	*/
HP_PRNTL	8	/* constructed	*/
HP_MAMOG	8	/* constructed	*/
HP_MAM50	8	/* constructed	*/
HP_PAP	8	/* constructed	*/
HP_BP	8	/* constructed	*/
HP_FLU	8	/* constructed	*/
HP_FLU_H	8	/* Survey fielding variable	*/
HP_OBESE	8	/* constructed	*/
HP_SMOKE	8	/* constructed	*/
HP_SMKH3	8	/* constructed	*/
HP_CESH3	8	/* constructed	*/
FLTYPE	8	/* constructed	*/
DOM_INTL	\$1	/* constructed	*/
LTR_TYPE	8	/* constructed	*/
RMDR_FLG	8	/* constructed	*/
QAIRE	8	/* constructed	*/
POSTCELL	\$5	/* Postratification Variables	*/
BWT	8	/* weights	*/

CFWT	8	/* weights	*/
CFWT1	8	/* weights	*/
CFWT2	8	/* weights	*/
CFWT3	8	/* weights	*/
CFWT4	8	/* weights	*/
CFWT5	8	/* weights	*/
CFWT6	8	/* weights	*/
CFWT7	8	/* weights	*/
CFWT8	8	/* weights	*/
CFWT9	8	/* weights	*/
CFWT10	8	/* weights	*/
CFWT11	8	/* weights	*/
CFWT12	8	/* weights	*/
CFWT13	8	/* weights	*/
CFWT14	8	/* weights	*/
CFWT15	8	/* weights	*/
CFWT16	8	/* weights	*/
CFWT17	8	/* weights	*/
CFWT18	8	/* weights	*/
CFWT19	8	/* weights	*/
CFWT20	8	/* weights	*/
CFWT21	8	/* weights	*/
CFWT22	8	/* weights	*/
CFWT23	8	/* weights	*/
CFWT24	8	/* weights	*/
CFWT25	8	/* weights	*/
CFWT26	8	/* weights	*/
CFWT27	8	/* weights	*/
CFWT28	8	/* weights	*/
CFWT29	8	/* weights	*/
CFWT30	8	/* weights	*/
CFWT31	8	/* weights	*/
CFWT32	8	/* weights	*/
CFWT33	8	/* weights	*/
CFWT34	8	/* weights	*/
CFWT35	8	/* weights	*/
CFWT36	8	/* weights	*/
CFWT37	8	/* weights	*/
CFWT38	8	/* weights	*/
CFWT39	8	/* weights	*/
CFWT40	8	/* weights	*/
CFWT41	8	/* weights	*/
CFWT42	8	/* weights	*/
CFWT43	8	/* weights	*/
CFWT44	8	/* weights	*/
CFWT45	8	/* weights	*/
CFWT46	8	/* weights	*/
CFWT47	8	/* weights	*/
CFWT48	8	/* weights	*/
CFWT49	8	/* weights	*/
CFWT50	8	/* weights	*/
CFWT51	8	/* weights	*/
CFWT52	8	/* weights	*/
CFWT53	8	/* weights	*/
CFWT54	8	/* weights	*/
CFWT55	8	/* weights	*/

CFWT56	8	/* weights	*/
CFWT57	8	/* weights	*/
CFWT58	8	/* weights	*/
CFWT59	8	/* weights	*/
CFWT60	8	/* weights	*/
CFWT61	8	/* weights	*/
CFWT62	8	/* weights	*/
CFWT63	8	/* weights	*/
CFWT64	8	/* weights	*/
CFWT65	8	/* weights	*/
CFWT66	8	/* weights	*/
CFWT67	8	/* weights	*/
CFWT68	8	/* weights	*/
CFWT69	8	/* weights	*/
CFWT70	8	/* weights	*/
CFWT71	8	/* weights	*/
CFWT72	8	/* weights	*/
CFWT73	8	/* weights	*/
CFWT74	8	/* weights	*/
CFWT75	8	/* weights	*/
CFWT76	8	/* weights	*/
CFWT77	8	/* weights	*/
CFWT78	8	/* weights	*/
CFWT79	8	/* weights	*/
CFWT80	8	/* weights	*/
CFWT81	8	/* weights	*/
CFWT82	8	/* weights	*/
CFWT83	8	/* weights	*/
CFWT84	8	/* weights	*/
CFWT85	8	/* weights	*/
CFWT86	8	/* weights	*/
CFWT87	8	/* weights	*/
CFWT88	8	/* weights	*/
CFWT89	8	/* weights	*/
CFWT90	8	/* weights	*/
CFWT91	8	/* weights	*/
CFWT92	8	/* weights	*/
CFWT93	8	/* weights	*/
CFWT94	8	/* weights	*/
CFWT95	8	/* weights	*/
CFWT96	8	/* weights	*/
CFWT97	8	/* weights	*/
CFWT98	8	/* weights	*/
CFWT99	8	/* weights	*/
CFWT100	8	/* weights	*/
CFWT101	8	/* weights	*/
CFWT102	8	/* weights	*/
CFWT103	8	/* weights	*/
CFWT104	8	/* weights	*/
CFWT105	8	/* weights	*/
CFWT106	8	/* weights	*/
CFWT107	8	/* weights	*/
CFWT108	8	/* weights	*/
CFWT109	8	/* weights	*/
CFWT110	8	/* weights	*/
CFWT111	8	/* weights	*/
CFWT112	8	/* weights	*/

CFWT113	8	/* weights	*/
CFWT114	8	/* weights	*/
CFWT115	8	/* weights	*/
CFWT116	8	/* weights	*/
CFWT117	8	/* weights	*/
CFWT118	8	/* weights	*/
CFWT119	8	/* weights	*/
CFWT120	8	/* weights	*/
CFWT121	8	/* weights	*/
CFWT122	8	/* weights	*/
CFWT123	8	/* weights	*/
CFWT124	8	/* weights	*/
CFWT125	8	/* weights	*/
CFWT126	8	/* weights	*/
CFWT127	8	/* weights	*/
CFWT128	8	/* weights	*/
CFWT129	8	/* weights	*/
CFWT130	8	/* weights	*/
CFWT131	8	/* weights	*/
CFWT132	8	/* weights	*/
CFWT133	8	/* weights	*/
CFWT134	8	/* weights	*/
CFWT135	8	/* weights	*/
CFWT136	8	/* weights	*/
CFWT137	8	/* weights	*/
CFWT138	8	/* weights	*/
CFWT139	8	/* weights	*/
CFWT140	8	/* weights	*/
CFWT141	8	/* weights	*/
CFWT142	8	/* weights	*/
CFWT143	8	/* weights	*/
CFWT144	8	/* weights	*/
CFWT145	8	/* weights	*/
CFWT146	8	/* weights	*/
CFWT147	8	/* weights	*/
CFWT148	8	/* weights	*/
CFWT149	8	/* weights	*/
CFWT150	8	/* weights	*/
CFWT151	8	/* weights	*/
CFWT152	8	/* weights	*/
CFWT153	8	/* weights	*/
CFWT154	8	/* weights	*/
CFWT155	8	/* weights	*/
CFWT156	8	/* weights	*/
CFWT157	8	/* weights	*/
CFWT158	8	/* weights	*/
CFWT159	8	/* weights	*/
CFWT160	8	/* weights	*/
CFWT161	8	/* weights	*/
CFWT162	8	/* weights	*/
CFWT163	8	/* weights	*/
CFWT164	8	/* weights	*/
CFWT165	8	/* weights	*/
CFWT166	8	/* weights	*/
CFWT167	8	/* weights	*/
CFWT168	8	/* weights	*/
CFWT169	8	/* weights	*/

```

CFWT170      8      /* weights      */
CFWT171      8      /* weights      */
CFWT172      8      /* weights      */
CFWT173      8      /* weights      */
CFWT174      8      /* weights      */
CFWT175      8      /* weights      */
CFWT176      8      /* weights      */
CFWT177      8      /* weights      */
CFWT178      8      /* weights      */
CFWT179      8      /* weights      */
CFWT180      8      /* weights      */

;

SET &DSNO_2;

LABEL XCATCH = "XCATCH - Catchment Area (Reporting) ";
FORMAT XCATCH CACR.;
BY MPRID;
RUN;

TITLE1 "DOD Annual Health Care Survey (0663-300)";
TITLE2 "Program Name: ADDWGTS.SAS";
TITLE3 "Program Inputs: &DSNI_1..sas7bdat -- &DSNI_2..sas7bdat";
TITLE4 "Program Outputs: &DSNO_1..sas7bdat -- &DSNO_2..sas7bdat";

PROC CONTENTS POSITION; RUN;

/* Create public-use dataset */
DATA OUT.&DSNO_1;
  SET OUT.&DSNO_2(DROP=MSA_ID /** jma 11/17/2011***/
    CACSMPL  SERVAREA  DCATCH  MSM
    D_FAC    DAGEQY    FIELDAGE PNLCATCD
    DMEDELG  MEDTYPE  MBRRELCD MRTLSTAT
    PNBRTHTD PGCD     MASTCD   MAPRZIP
    MAPRZIPX RANKCD   ENRID
    STRATUMO
  );
RUN;

PROC CONTENTS POSITION; RUN;

*****
* Output the restricted use CONTENTS text file for delivery with the
* database CD.
*****
;
PROC PRINTTO PRINT="&DSNO_2..TXT" NEW; RUN;
OPTIONS PAGENO=1;
TITLE4 "Program Outputs: &DSNO_2..sas7bdat/XPT";
PROC CONTENTS DATA=OUT.&DSNO_2; RUN;

*****
* Define and generate SAS Transport file.
*****
;

```

```
LIBNAME XFILE1 XPORT "..\..\data\&DSNO_1..XPT";
PROC COPY IN=OUT OUT=XFILE1; * Converts input file to transport file;
      SELECT &DSNO_1;      * Selects sas7bdat file to copy;
RUN;

LIBNAME XFILE2 XPORT "..\..\data\&DSNO_2..XPT";
PROC COPY IN=OUT OUT=XFILE2; * Converts input file to transport file;
      SELECT &DSNO_2;      * Selects sas7bdat file to copy;
RUN;
```

F.23 - Q3FY2017\PROGRAMS\HCSDB_Database_BatchProgram.SAS - Run all database creation programs as a single process

```
*-----
Program: HCSDB_Database_BatchProgram.sas
Programmer: Amanda Kudis
Date: 9/26/14
```

Notes: The following changes must still be made within the programs each quarter.

- 1) Macro variables in this program updated
- 2) Format library - Updated with new formats
- 3) MergeSyn - No updates
- 4) CschmYRq.sas
 - a) Program name with new YR
 - b) New note logic added, old note logic removed
- 5) CschmYRq.fmt
 - a) Program name with new YR
 - b) New variable formats and labels added, old removed
- 6) SelectQ.sas
 - a) Overlap_fnstatus.inc(called in selectq.sas) - Verify which TSS data each quarter overlaps with and update file. If there is no selectq to compare to, but there are overlap

cases

- then updated NOSELECTQ (below) to Y.
- 7) Convarq.sas - No updates
- 8) Mergeq.sas - Add new/remove old variables to length statement
- 9) Addwgtsa.sas - No updates
- 10) Database_QA.sas - Update note frequencies to match variables in the coding scheme document.

```
-----;
options source2 mprint nofmterr /*mlogic symbolgen */msglevel=i FORMCHAR='|'-
+++++++=Ã ¤/\<*>';
```

```
*-----
Set MACRO variables
-----;
```

```
%LET YR = 17;
%LET QT = 3;
```

```
/*FIELDDATE and FIELDLDBL are the date that the survey first goes into the field.
```

```
Q1: Oct. 1 of the previous year
Q2: Jan. 1 of the current year
Q3: Apr. 1 of the current year
Q4: Jul. 1 of the current year
*/
```

```
%LET FIELDDATE = 04012017; * mmdyyy;
%LET FIELDLDBL = Apr 1st 2017;
%LET NOSELECTQ = Y; /*UPDATE TO Y WHEN NO TSS SELECTQ AVAILABLE TO COMPARE TO OVERLAP CASES;*/
```

```

%LET EXPATH = /sasdata/Projects/40309_HCS_Restricted/DATA/Q&QT.FY20&YR.; /*
Ask for location of Extract dataset, currently Sabrina Rahman */ /****WAITING
ON RESPONSE FROM SABRINA--IMC***/
%LET INRLIB= /sasdata/Projects/40309_HCS_Restricted/DATA/Q&QT.FY20&YR.;
/*Location of SAMPLA02 dataset, should not change quarter to quarter*/
%LET TSS_LIB=/sasdata/Projects/40309_TSS/DATA/Beneficiary/2017/Data;

%LET PATH = /sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.; /* Ask for
location of Extract dataset, currently Sabrina Rahman */ /****WAITING ON
RESPONSE FROM SABRINA--IMC***/

%LET DATAPATH= &path./Data/AFinal;
%LET FMPATH= &path./Data/AFinal/fmtlib;
%LET EMAILPATH = SQL_Email_Data_Q&QT.FY20&YR..csv;

*Set last quarter based on current quarter;
%LET LSTQ=%SYSEVALF(&QT.-1);
%LET LSTYR = &YR.;
%MACRO M;
%IF &LSTQ=0 %then %DO;
    %LET LSTQ=3;
    %LET LSTYR = %EVAL(&YR - 1);
%end;
%MEND; %M;
%put &lstyr.;
%put &lstq.;

proc printto print = "&path./Programs/HCSDB_Database_BatchProgram.lst" log =
"&path./Programs/HCSDB_Database_BatchProgram.log" new;
run;

*Set trickle flag based on folder name;
%macro settrickle;
%global trickle path;
%let folder = %sysfunc(getoption(SYSIN));
%if %index("&folder.", Q&QT.FY20&YR.t)>0 %then %let trickle=1;
%else %let trickle=0;

/*data _null_*/
/*path=tranwrd("&folder.", "\Programs\HCSDB_Database_BatchProgram.sas",
"");*/
/*call symput('path',trim(path)); */
/*run; */
%mend; %settrickle;
%put &trickle;
%put &path;

*-----
Call programs
-----;

%macro runprog(dir, file);

/*Change the current directory. This is so the filepath references in each
program work correctly.*/

```

```

x "cd &dir.";

%include "&dir./&file..sas";

/*Clear all formats*/
proc datasets memtype=catalog;
delete formats;
run;
quit;

/*Clear all datasets form WORK library*/
proc datasets lib=work kill nolist memtype=data;
quit;

/*Clear all macro programs except for MACROVARS and RUNPROG.*/
proc catalog catalog=work.sasmacl force;
save RUNPROG /et=MACRO;
quit;
run;

%mend;

%runprog(dir=&path./Data/AFinal/fmtlib, file = Hafmt);
%runprog(dir=&path./Programs/Weighting, file = mergesyn);

%runprog(dir=&path./Programs/CodingScheme, file=Cschm&YR.q);
%runprog(dir=&path./Programs/Weighting, file = selectq);
%runprog(dir=&path./Programs/Construct, file = Convarq);

%runprog(dir=&path./Programs/Construct, file = Mergeq);

%runprog(dir=&path./Programs/Construct, file = Database_QA);

/*Addwgtsa.sas gets run separately from the other programs.*/

%runprog(dir=&path./Programs/Weighting, file =addwgtsa);

proc printto;run;

```

F.24.A - Response_Rate\ANNUAL_RR.SAS - Combine Q1-Q3, HEDIS, and annual Response Rates into one excel file.

```

*****
* PROGRAM: ANNUAL_RR.SAS
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (40309.31H)
* PURPOSE: Combine Q1-Q3 and Annual Response_Rates.xls files
*          into one file called Response_Rates_Annual.xls.
* WRITTEN: 03/15/2005 BY KEITH RATHBUN
*
* MODIFIED:
*
* INPUT:   1) RESPONSE_RATES.XLS files (Q1-Q3 and Annual)
*          2) EMPTY_ANNUAL.XLS file (empty template)
*
* OUTPUT:  1) RESPONSE_RATES_ANNUAL.XLS
*
* INCLUDES: None
*
* NOTES:
*
* 1) This program must be run in BATCH mode.  DO NOT modify the directory
*    references to be hard-wired to support interactive use.
* 2) For FY2012, dropping HAS_EMAIL
* 3) From FY2013: We donot receiving any Q3t and Q4 Weights. Annual Wt and
RR
*    are calculated using Q1t, Q2t and Q3 quarters.
* 3) We need to run programs in order of table02.sas, annual_rr.sas.
* 4) We can run table02_xcatch.sas anytime at this point, since it is
*    independent from other two above.
* 5) For FY2017, using Combining HCSDB and HEDIS for all domain except
CASSmpl
*****
*;
OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOXWAIT NOCENTER mprint mlogic
symbolgen NOXSYNC;

*****
***
* Assign Q1-Q3 and annual spreadsheet file names and year.
*****
***;
%LET YEAR = 2017;

%LET FILE1 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q1FY&YEAR.t\PROGRAMS\RESPONSE_RATE\R
ESPONSE_RATES.XLS;
%LET FILE2 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q2FY&YEAR.t\PROGRAMS\RESPONSE_RATE\R
ESPONSE_RATES.XLS;
%LET FILE3 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YEAR.\PROGRAMS\RESPONSE_RATE\RE
SPONSE_RATES.XLS;

```

```

%LET FILE4 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Programs\Response_Rate\RESPONSE_RATES.XLS;
%LET FILE5 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\Response_Rate\RESPONSE_RATES.XLS;

*LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YEAR.\Data\AFinal\fmtlib\WindowsVersionForDHA";
LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal\fmtlib\WindowsVersionForDHA";

TITLE1 "Program: ANNUAL_RR.SAS (FY=&YEAR.):";
TITLE2 "Purpose: Combine Q1-Q3, HEDIS and Annual Response Rate XLS files for FY2017(40309.31H)";

*****
***
* Assign sheetnames and establish global variables.
*****
***
* All of the response_rates.xls files must be populated with the following
* sheetnames (generated by TABLE02.SAS):
*****
***;

%LET DSN1 = TABLE02A;
*%LET DSN2 = XREGION;
*%LET DSN2 = HAS_EMAIL;
%LET DSN3 = XOCONUS;
%LET DSN4 = USA;
%LET DSN5 = SEXSMPL;
%LET DSN6 = ENBGSMPL;
%LET DSN7 = CACSMPL;
%LET DSN8 = PATCAT;
%LET DSN9 = SERVAFF;
%LET DSN10 = SVCSMPL;
%LET DSN11 = XTNEXREG;
%LET DSN12 = PATCATSVCSMPL;
%LET DSN13 = PATCATSEXSMPL;
%LET DSN14 = XTNEXREGCACSMPL;
*%LET DSN15 = PATCATHAS_EMAIL;
*%LET DSN16 = USAPATCATHAS_EMAIL;

*****
***
* Macro used to read Q1-Q3 and annual spreadsheet files.
*****
***;
%MACRO READXLS(DSN=, NUMDOM=);
  %IF &NUMDOM LE 1 %THEN %DO; * Read 3 columns in sheet;
    FILENAME INDATA DDE "excel|&DSN!r5c1:r9999c3";
  %END;
  %ELSE %IF &NUMDOM = 2 %THEN %DO; * Read 4 columns in sheet;
    FILENAME INDATA DDE "excel|&DSN!r5c1:r9999c4";
  %END;
%ENDMACRO;

```



```

%END;
%ELSE %IF &NUMDOM = 3 %THEN %DO; * Read 5 columns in sheet;
  FILENAME INDATA DDE "excel|&DSN!r5c1:r9999c5";
%END;
DATA &DSN.&I;
  INFILE INDATA DLM='09'X NOTAB LRECL=500 PAD MISSEVER DSD;
  /*LENGTH DOMAIN1-DOMAIN3 $40;*/
  LENGTH DSN $30;
  %IF &NUMDOM = 0 %THEN %DO;
    LENGTH DOMAIN1 $40;
    INPUT DOMAIN1 : $CHAR40.
      RR      : 4.1
      RRW     : 4.1;
    DOMAIN1 = "TABLE02A";
  %END;
  %IF &NUMDOM = 1 %THEN %DO;
    LENGTH DOMAIN1 $40;
    INPUT DOMAIN1 : $CHAR40.
      RR      : 4.1
      RRW     : 4.1;
  %END;
  %ELSE %IF &NUMDOM = 2 %THEN %DO;
    LENGTH DOMAIN1 DOMAIN2 $40;
    INPUT DOMAIN1 : $CHAR40.
      DOMAIN2 : $CHAR40.
      RR      : 4.1
      RRW     : 4.1;
  %END;
  %ELSE %IF &NUMDOM = 3 %THEN %DO;
    LENGTH DOMAIN1-DOMAIN3 $40;
    INPUT DOMAIN1 : $CHAR40.
      DOMAIN2 : $CHAR40.
      DOMAIN3 : $CHAR40.
      RR      : 4.1
      RRW     : 4.1;
  %END;
  NUMDOM = &NUMDOM;
  FNUM = &I;
  DSN = "&DSN";
  RUN;
%MEND READXLS;

*****
***
* Read Q1-Q3 and annual spreadsheet files.
*****
***;
%MACRO READIT;
  /*%GLOBAL I;*/
  %DO I = 1 %TO 5; /*FY2017 including HEDIS we have 5 files to combine, we
used 4 in FY16*/
    %PUT CHECK &&FILE&I;
    X "START &&FILE&I";
    DATA _NULL_;
      S=SLEEP(10);
    RUN;
    %READXLS(DSN=&DSN1, NUMDOM=0);

```

```

*%READXLS(DSN=&DSN2, NUMDOM=1);
%READXLS(DSN=&DSN3, NUMDOM=1);
%READXLS(DSN=&DSN4, NUMDOM=1);
%READXLS(DSN=&DSN5, NUMDOM=1);
%READXLS(DSN=&DSN6, NUMDOM=1);
%READXLS(DSN=&DSN7, NUMDOM=1);
%READXLS(DSN=&DSN8, NUMDOM=1);
%READXLS(DSN=&DSN9, NUMDOM=1);
%READXLS(DSN=&DSN10, NUMDOM=1);
%READXLS(DSN=&DSN11, NUMDOM=1);
%READXLS(DSN=&DSN12, NUMDOM=2);
  %READXLS(DSN=&DSN13, NUMDOM=2);
%READXLS(DSN=&DSN14, NUMDOM=2);
*%READXLS(DSN=&DSN15, NUMDOM=2);
  *%READXLS(DSN=&DSN16, NUMDOM=3);

*****
* Quit spreadsheet application.

*****;

FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
  FILE CMDS;
  PUT '[CLOSE]';
  PUT '[QUIT]';
RUN;
  DATA _NULL_;
  S=SLEEP(10);
  RUN;
%END;
%MEND READIT;

%READIT;

*****
***
* Macro used to merge the Q1-Q3 and annual spreadsheet files by DOMAIN(s).
*****
***;
%MACRO MERGEIT(DSN=, NUMDOM=);
  %IF &NUMDOM LE 1 %THEN %DO;
    PROC SORT DATA=&DSN.1; BY DOMAIN1; RUN;
    PROC SORT DATA=&DSN.2; BY DOMAIN1; RUN;
    PROC SORT DATA=&DSN.3; BY DOMAIN1; RUN;
    PROC SORT DATA=&DSN.4; BY DOMAIN1; RUN;
    PROC SORT DATA=&DSN.5; BY DOMAIN1; RUN;
  %END;
  %ELSE %IF &NUMDOM = 2 %THEN %DO;
    PROC SORT DATA=&DSN.1; BY DOMAIN1 DOMAIN2; RUN;
    PROC SORT DATA=&DSN.2; BY DOMAIN1 DOMAIN2; RUN;
    PROC SORT DATA=&DSN.3; BY DOMAIN1 DOMAIN2; RUN;
    PROC SORT DATA=&DSN.4; BY DOMAIN1 DOMAIN2; RUN;
    PROC SORT DATA=&DSN.5; BY DOMAIN1 DOMAIN2; RUN;
  %END;
  %ELSE %IF &NUMDOM = 3 %THEN %DO;

```

```

PROC SORT DATA=&DSN.1; BY DOMAIN1 DOMAIN2 DOMAIN3; RUN;
PROC SORT DATA=&DSN.2; BY DOMAIN1 DOMAIN2 DOMAIN3; RUN;
PROC SORT DATA=&DSN.3; BY DOMAIN1 DOMAIN2 DOMAIN3; RUN;
PROC SORT DATA=&DSN.4; BY DOMAIN1 DOMAIN2 DOMAIN3; RUN;
PROC SORT DATA=&DSN.5; BY DOMAIN1 DOMAIN2 DOMAIN3; RUN;
%END;
DATA MERGED_&DSN;
MERGE &DSN.1(RENAME=(RR=RR1 RRW=RRW1))
      &DSN.2(RENAME=(RR=RR2 RRW=RRW2))
      &DSN.3(RENAME=(RR=RR3 RRW=RRW3))
      &DSN.4(RENAME=(RR=RR4 RRW=RRW4))
      &DSN.5(RENAME=(RR=RR5 RRW=RRW5));
%IF &NUMDOM LE 1 %THEN %DO;
  BY DOMAIN1;
%END;
%ELSE %IF &NUMDOM = 2 %THEN %DO;
  BY DOMAIN1 DOMAIN2;
%END;
%ELSE %IF &NUMDOM = 3 %THEN %DO;
  BY DOMAIN1 DOMAIN2 DOMAIN3;
%END;
RUN;
%MEND MERGEIT;

*****
***
* Merge the Q1-Q3 and annual spreadsheet files by DOMAIN(s).
*****
***;
%MERGEIT(DSN=&DSN1, NUMDOM=0);
*%MERGEIT(DSN=&DSN2, NUMDOM=1);
%MERGEIT(DSN=&DSN3, NUMDOM=1);
%MERGEIT(DSN=&DSN4, NUMDOM=1);
%MERGEIT(DSN=&DSN5, NUMDOM=1);
%MERGEIT(DSN=&DSN6, NUMDOM=1);
%MERGEIT(DSN=&DSN7, NUMDOM=1);
%MERGEIT(DSN=&DSN8, NUMDOM=1);
%MERGEIT(DSN=&DSN9, NUMDOM=1);
%MERGEIT(DSN=&DSN10, NUMDOM=1);
%MERGEIT(DSN=&DSN11, NUMDOM=1);
%MERGEIT(DSN=&DSN12, NUMDOM=2);
%MERGEIT(DSN=&DSN13, NUMDOM=2);
%MERGEIT(DSN=&DSN14, NUMDOM=2);
*%MERGEIT(DSN=&DSN15, NUMDOM=2);
*%MERGEIT(DSN=&DSN16, NUMDOM=3);

*****
***
* Macro used to write the combined annual spreadsheet file for each
DOMAIN/DSN.
*****
***;
%MACRO WRITEXLS(DSN=, NUMDOM=);
  DATA _NULL_;
  SET MERGED_&DSN;

```

```
*****
* Add values for each DOMAIN to each sheet.
```

```
*****;
```

```
%IF &NUMDOM LE 1 %THEN %DO;
  FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c11";
  /*FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c9";*/
  FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  LENGTH OLINE $50;
  IF _N_ = 1 THEN DO;
    OLINE = "RESPONSE RATES FOR &YEAR";
    PUT OLINE;
    OLINE = "FOR DOMAIN = &DSN";
    PUT OLINE /;
    H1 = "DOMAIN";      H2 = "Q1 RR"; H3 = "Q1 RRW";
    H4 = "Q2 RR";      H5 = "Q2 RRW";
    H6 = "Q3 RR";      H7 = "Q3 RRW";
    H8 = "HE RR";      H9 = "HE RRW";
    H10 = "Annual RR"; H11 = "Annual RRW";
    PUT H1  : $CHAR50.
       H2  : $CHAR50.
       H3  : $CHAR50.
       H4  : $CHAR50.
       H5  : $CHAR50.
       H6  : $CHAR50.
       H7  : $CHAR50.
       H8  : $CHAR50.
       H9  : $CHAR50.
       H10 : $CHAR50.
       H11 : $CHAR50.
      ;
  END;
  PUT DOMAIN1: $CHAR40.
     RR1    : 4.1
     RRW1   : 4.1
     RR2    : 4.1
     RRW2   : 4.1
     RR3    : 4.1
     RRW3   : 4.1
     RR4    : 4.1
     RRW4   : 4.1
     RR5    : 4.1
     RRW5   : 4.1
    ;
%END;
%ELSE %IF &NUMDOM = 2 %THEN %DO;
  FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c12";
  /*FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c10";*/
  FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  LENGTH OLINE $50;
  IF _N_ = 1 THEN DO;
    OLINE = "RESPONSE RATES FOR &YEAR";
    PUT OLINE;
    OLINE = "FOR DOMAIN = &DSN";
    PUT OLINE /;
    H1 = "DOMAIN1";    H2 = "DOMAIN2";
    H3 = "Q1 RR";      H4 = "Q1 RRW";
```

```

H5 = "Q2 RR";      H6 = "Q2 RRW";
H7 = "Q3 RR";      H8 = "Q3 RRW";
H9 = "HE RR";      H10 = "HE RRW";
H11 = "Annual RR"; H12 = "Annual RRW";
PUT H1  : $CHAR50.
    H2  : $CHAR50.
    H3  : $CHAR50.
    H4  : $CHAR50.
    H5  : $CHAR50.
    H6  : $CHAR50.
    H7  : $CHAR50.
    H8  : $CHAR50.
    H9  : $CHAR50.
    H10 : $CHAR50.
    H11 : $CHAR50.
    H12 : $CHAR50.
;
END;
PUT DOMAIN1: $CHAR40.
    DOMAIN2: $CHAR40.
    RR1    : 4.1
    RRW1   : 4.1
    RR2    : 4.1
    RRW2   : 4.1
    RR3    : 4.1
    RRW3   : 4.1
    RR4    : 4.1
    RRW4   : 4.1
    RR5    : 4.1
    RRW5   : 4.1
;
%END;
%ELSE %IF &NUMDOM = 3 %THEN %DO;
    FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c13";
    /*FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c11";*/
    FILE OUTDATA DLM='09'X NOTAB LRECL=500;
    LENGTH OLINE $50;
    IF _N_ = 1 THEN DO;
        OLINE = "RESPONSE RATES FOR &YEAR";
        PUT OLINE;
        OLINE = "FOR DOMAIN = &DSN";
        PUT OLINE /;
        H1 = "DOMAIN1"; H2 = "DOMAIN2"; H3 = "DOMAIN3";
        H4 = "Q1 RR"; H5 = "Q1 RRW";
        H6 = "Q2 RR"; H7 = "Q2 RRW";
        H8 = "Q3 RR"; H9 = "Q3 RRW";
        H10 = "Q4 RR"; H11 = "Q4 RRW";
        H12 = "Annual RR"; H13 = "Annual RRW";
        PUT H1 : $CHAR50.
            H2 : $CHAR50.
            H3 : $CHAR50.
            H4 : $CHAR50.
            H5 : $CHAR50.
            H6 : $CHAR50.
            H7 : $CHAR50.
            H8 : $CHAR50.
            H9 : $CHAR50.

```

```

        H10 : $CHAR50.
        H11 : $CHAR50.
        H12 : $CHAR50.
        H13 : $CHAR50.
    ;
END;
PUT DOMAIN1: $CHAR40.
   DOMAIN2: $CHAR40.
   DOMAIN3: $CHAR40.
   RR1     : 4.1
   RRW1    : 4.1
   RR2     : 4.1
   RRW2    : 4.1
   RR3     : 4.1
   RRW3    : 4.1
   RR4     : 4.1
   RRW4    : 4.1
   RR5     : 4.1
   RRW5    : 4.1
;
%END;
RUN;
%MEND;

*****
* Copy empty template file to the combined annual response rate spreadsheet
* and start the XLS file.
*****
;
X "COPY EMPTY_ANNUAL.XLS RESPONSE_RATES_ANNUAL.XLS";
X "START RESPONSE_RATES_ANNUAL.XLS";

/*wait for a few seconds to allow Excel to come up */
/*adding sleep statement to avoid a log error saying
   ERROR: Physical file does not exist, excel|OVERALLA!r1c1:r9999c3*/
data _null_;
x=sleep(55);
run;

*****
***
* Write the combined annual spreadsheet file for each DOMAIN/DSN.
*****
***;
%WRITEEXLS(DSN=&DSN1,   NUMDOM=0);
%WRITEEXLS(DSN=&DSN2,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN3,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN4,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN5,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN6,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN7,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN8,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN9,   NUMDOM=1);
%WRITEEXLS(DSN=&DSN10,  NUMDOM=1);
%WRITEEXLS(DSN=&DSN11,  NUMDOM=1);

```

```
%WRITEEXLS(DSN=&DSN12, NUMDOM=2);
%WRITEEXLS(DSN=&DSN13, NUMDOM=2);
%WRITEEXLS(DSN=&DSN14, NUMDOM=2);
*%WRITEEXLS(DSN=&DSN15, NUMDOM=2);
*%WRITEEXLS(DSN=&DSN16, NUMDOM=3);

*****
* Quit spreadsheet application.
*****
;
FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
  FILE CMDS;
  PUT '[SAVE]';
  PUT '[QUIT]';
RUN;

***** End *****;
```

F.24.B - Response_Rate\TABLE02.SAS - Calculate the annual Response Rates.

```
*****
* PROGRAM: TABLE02.SAS
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (40309.31H)
* PURPOSE: BUILD TABLE 2: RESPONSE RATES BY DOMAIN FOR (HCSDB+HEDIS) COMBINE
FILE
* WRITTEN: 11/09/1999 BY KEITH RATHBUN
*
* MODIFIED:
* 1) 12/14/2000, Keith Rathbun - Added printing of weighted (WN) and
*   unweighted (SN) population sizes. Also, Update for quarterly survey
*   to use BWT instead of BWT99 (generalized variable name for ease of
*   maintenance).
* 2) 02/01/2001, Keith Rathbun - Added the PERIOD parameter.
* 3) 01/30/2002, Esther Friedman - added nested macro so it would run
*   for all 4 quarters trickle files.
* 4) 11/16/2004, Haixia Xu for Q3, 2004 RR
*       - Changed FNSTATUS from 30 to 31, SN3->SN31, WN3->WN31
*       - Use MERGEQ.SD2 as the input data
*       - Produce the RR for servaff and xtnexreg
* 5) 01/18/2005, Keith Rathbun - Added CREATXLS macro.
*
* LAST UPDATED:
*   07/15/2016, Sabrina R.- Updated for 2016 Annual RR
*
* INPUT:    1) MERGEQ.sas7bdat (All quarters)
*
* INCLUDES: 1) TABLE02.IN1
*           2) TABLE02.IN2
*
* NOTES:
*
* 1) This program must be run in BATCH mode. DO NOT modify the directory
*   references to be hard-wired to support interactive use.
* 2) If you add a new domain combination, you will need to update the
*   EMPTY.XLS file to have a new sheet with the same name as the domain
*   variable(s) combination.
* 3) We need to run programs in order of table02.sas, annual_rr.sas.
* 4) We can run table02_xcatch.sas anytime at this point, since it is
*   independent from other two above.
* 5) In FY2017, we will calculated a combine (HCSDB+HEDIS) RR for all except
'cacsmpl'
*   We will calculate RR for 'cacsmpl' using combine HCSDB and 'GEOCELLH'
for HEDIS only
*****;
OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOXWAIT NOCENTER NOFMterr;*
mprint mlogic symbolgen;
ods _ALL_ Close;
ODS Listing;

%let year = 2017;

LIBNAME inQ1t
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q1FY&year.t\Data\AFinal"; *Q1
mergeq with late response;
```



```

LIBNAME inQ2t
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q2FY&year.t\Data\AFinal"; *Q2
mergeq with late response;
LIBNAME inQ3
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&year.\Data\AFinal";
LIBNAME inH
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal";
libname inBWQ2H
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal\combine_HEDIS_Q2"
; *Breanna Q2+H Weights;

*LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&year.\Data\AFinal\fmtlib\Windo
wsVersionForDHA";

LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal\fmtlib\WindowsVer
sionForDHA";

TITLE1 "Program: TABLE02.SAS (40309.31H)";
TITLE2 "Purpose: Compute &year. Response Rates by DOMAIN";

%LET OFILES =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&year.\Data\Response_Rate\;
%LET QUARTER = &year. Combined Annual_;
%LET DATE = 07-24-2017;
%LET TASKNUM = 40309.31H;

proc format;
  VALUE $ENBGSm
    '01' = "01:Active duty"
    '02' = "02:Active duty fam,Prime,civ PCM"
    '03' = "03:Active duty fam,Prime,mil PCM"
    '04' = "04:Active duty fam,non-enrollee"
    '05' = "05:Retired,<65,civ PCM"
    '06' = "06:Retired,<65,mil PCM"
    '07' = "07:Retired,<65,non-enrollee"
    '08' = "08:Retired,65+,enrolled"
    '10' = "10:Retired,65+,non-enrollee"
    '11' = "11:TRICARE Reserve Select";
  VALUE TNEX
    . = "Missing Data"
    1 = "North"
    2 = "South"
    3 = "West"
    4 = "Overseas" ;
RUN;

*****
READING ALL HCSDB MERGEQ DATA FILES:
*****;
%macro create_ebg(qrt=, no=);
DATA File&qrt.;
format _ALL_;
SET in&qrt..MERGEQ;
flag&no.=1;

```

```

/*01/31/2007 by H.Xu.
As per Nancy's suggestion, collapse 09 with 08, since 09 has two few
beneficiaries*/
if enbgsmpl = '09' then enbgsmpl='08';
format enbgsmpl $enbgsm.;
RUN;

proc sort data=File&qrt.;
by mprid;
run;
%mend;

%create_ebg(qrt=Q1t, no=1);
%create_ebg(qrt=Q2t, no=2);
%create_ebg(qrt=Q3, no=3);

*****
*Reading HEDIS Only Data:
*****;
Data Hedis;
format _ALL_;
Set inH.MergeQ;
flagH=1;
if enbgsmpl = '09' then enbgsmpl='08';
format enbgsmpl $enbgsm.;
Run;

*****
*****
*Reading Breanna's Q2+HEDIS Combine Data for Updated FNSTATUS for 96 HEDIS
Cases:
*****;
data Breanna_Q2H(Keep=MPRID FNSTATUS flagBQ2H
Rename=(FNSTATUS=FNSTATUS_BQ2H));
Set inBWQ2H.postwt;
flagBQ2H=1;
run;

*****
*Combining ALL FY2017 HCSDB Quarters and HEDIS for RR Calculation:
*****;
DATA Q1tQ2tQ3H;
SET FILEQ1t FILEQ2t FILEQ3 Hedis;
RUN;

*****
Merging Combine Q2+HEDIS data Breanna created with the (Q1+Q2+Q3+H) data
*****;
Proc Sort Data=Q1tQ2tQ3H; By MPRID; RUN;
Proc Sort Data=Breanna_Q2H; By MPRID; RUN;

Data Mergerr;

```

```
Merge Q1tQ2tQ3H(In=A) Breanna_Q2H(IN=B);
If A;
By MPRID;
Run;
```

```
Title1 "Freq/CrossTab of Selected Variables (All Cases)";
PROC FREQ DATA=MERGERR;
  TABLES  PATCAT*FNSTATUS
           PATCAT RACEETHN PATCAT*RACEETHN PATCAT*SVCSMPL
           flag1*flag2*flag3*flagH*flagBQ2H  /MISSING LIST;
RUN;
```

```
Title1 "Freq/CrossTab of Selected Variables (All Cases)";
PROC FREQ DATA=MERGERR;
  TABLES  flag2*flagH*flagBQ2H
           flag2*flagH*FNSTATUS*FNSTATUS_BQ2H
           /MISSING LIST;
where (flag2=1 or flagH=1);
RUN;
```

*For FY2017 RR Calculation Only:
*Nancy: Cases that are 99 are eligible nonrespondents in the RR calculations.;

```
Data MERGERR2;
Set MERGERR;
FNSTATUS_OLD=FNSTATUS;
If FNSTATUS_BQ2H=99 Then FNSTATUS=20;
Else FNSTATUS=FNSTATUS_OLD;
Run;
```

```
Proc Freq Data=MERGERR2;
Tables flag2*flagH*FNSTATUS_BQ2H*FNSTATUS*FNSTATUS_OLD
       FNSTATUS/List missing nopercnt;
Run;
```

/*
Q1t and Q3 do not have any issue. FNSTATUS is same in weighting program and selectq/mergeq (old and new) run

HEDIS: for 96 cases, Breanna changed FNSTATUS in her combine file. Those had status 99. For RR, we need to assign them 'Cases that are 99 are eligible nonrespondents in the RR calculations.' HEDIS only Selectq/Mergeq do not have those 99. So reading FNSTATUS for those cases from Breanna's combine data.

For Q2t: In Matt's recent re-run, 22 cases has changed their FNSTATUS. Matt's new mergeq/selectq has updated FNSTATUS for those 22 cases (those cases had 41 in weighting program. Breanna read FNSTATUS from Q2t weighting so they are same in weighting and Breanna's output. Matt will check with Nancy about those cases. Using Matt's updated FNSTATUS for Q2t cases in this run.

Here, FNSTATUS_OLD is individual MergeQ data files .

Cumulative Flag2	FlagH	FNSTATUS_BQ2H Frequency	FNSTATUS Frequency	FNSTATUS
. .	. .	. .	. .	Elig, return complete
11 .	20901 .	20901 .	. .	Elig, return incomplete
12 .	780 .	21681 .	. .	Elig, no resp rec
20 .	39 .	21720 .	. .	Returned Ineligible
31 .	10 .	21730 .	. .	Ineligible at time of Altarum Update
32 .	697 .	22427 .	. .	Elig unknown, locatable
41 .	167259 .	189686 .	. .	Elig unknown, nonlocatable
42 .	10800 .	200486 .	. .	Elig, return complete
. .	1 .	211232 .	11 .	Elig, return incomplete
11 .	10746 .	211232 .	12 .	Elig, no resp rec
12 .	186 .	211418 .	20 .	Returned Ineligible
. .	1 .	211423 .	31 .	Ineligible at time of Altarum Update
20 .	5 .	211423 .	32 .	Elig unknown, locatable
31 .	1 .	211430 .	41 .	Elig unknown, nonlocatable
. .	7 .	211430 .	42 .	Elig, no resp rec
32 .	208 .	211638 .	99 .	Elig, return complete
. .	1 .	257403 .	11 .	Elig, return incomplete
41 .	45765 .	257403 .	12 .	Elig, no resp rec
. .	1 .	260584 .	20 .	Returned Ineligible
42 .	3181 .	260584 .	31 .	Ineligible at time of Altarum Update
. .	1 .	260680 .	32 .	Elig, no resp rec
11 .	96 .	260680 .	41 .	Elig unknown, locatable
1 .	. .	273251 .	42 .	Elig unknown, nonlocatable
11 .	12571 .	273251 .	99 .	Elig, return complete
1 .	. .	273870 .	11 .	Elig, return incomplete
12 .	619 .	273870 .	12 .	Elig, no resp rec
1 .	. .	273875 .	20 .	Returned Ineligible
20 .	5 .	273875 .	31 .	Ineligible at time of Altarum Update
1 .	. .	273887 .	32 .	Elig, no resp rec
31 .	12 .	273887 .	41 .	Elig unknown, locatable
1 .	. .	274211 .	41 .	Elig unknown, nonlocatable
32 .	324 .	274211 .	41 .	Elig unknown, nonlocatable
1 .	. .	274224 .	42 .	Elig unknown, nonlocatable
20 .	13 .	274224 .	42 .	Elig unknown, nonlocatable
1 .	. .	356496 .	42 .	Elig unknown, nonlocatable
41 .	82272 .	356496 .	42 .	Elig unknown, nonlocatable
1 .	. .	356505 .	42 .	Elig unknown, nonlocatable
42 .	9 .	356505 .	42 .	Elig unknown, nonlocatable
1 .	. .	361346 .	42 .	Elig unknown, nonlocatable
42 .	4841 .	361346 .	42 .	Elig unknown, nonlocatable

*/
%MACRO PROCESS(INPT=, FORM=);

```

*****
* Process OVERALL Summary of response rates
*****;
DATA _NULL_;
  SET &INPT END=FINISHED;
  IF _N_ = 1 THEN DO;
    SN      = 0;
    SN1     = 0;
    SN11    = 0;
    SN12    = 0;
    SN2     = 0;
    SN31    = 0;
    SN4     = 0;
    SN41    = 0;
    SN42    = 0;
    WN      = 0;
    WN1     = 0;
    WN11    = 0;
    WN12    = 0;
    WN2     = 0;
    WN31    = 0;
    WN4     = 0;
    WN41    = 0;
    WN42    = 0;
  END;
  *****
  * Accumulate group 1 weighted and unweighted counts.
  *****;
  SN + 1;
  WN + BWT;
  IF FNSTATUS IN(11,12) THEN DO;
    SN1 + 1;
    WN1 + BWT;
    IF FNSTATUS = 11 THEN DO;
      SN11 + 1;
      WN11 + BWT;
    END;
    ELSE DO;
      SN12 + 1;
      WN12 + BWT;
    END;
  END;
  *****
  * Accumulate group 2 weighted and unweighted counts.
  *****;
  ELSE IF FNSTATUS = 20 THEN DO;
    SN2 + 1;
    WN2 + BWT;
  END;
  *****
  * Accumulate group 3 weighted and unweighted counts.
  *****;
  ELSE IF FNSTATUS = 31 THEN DO;
    SN31 + 1;
    WN31 + BWT;
  END;
  *****

```

```

* Accumulate group 4 weighted and unweighted counts.
*****;
ELSE IF FNSTATUS IN(41,42) THEN DO;
  SN4 + 1;
  WN4 + BWT;
  IF FNSTATUS = 42 THEN DO;
    SN42 + 1;
    WN42 + BWT;
  END;
  ELSE DO;
    SN41 + 1;
    WN41 + BWT;
  END;
END;

DROP I;
RETAIN
  SN
  SN1
  SN11
  SN12
  SN2
  SN31
  SN4
  SN41
  SN42
  WN
  WN1
  WN11
  WN12
  WN2
  WN31
  WN4
  WN41
  WN42
;

IF FINISHED THEN GO TO FINISHED;
RETURN;

FINISHED:
FILE "&FILES.TABLE02&FORM..OUT" RECFM=V LRECL=9999;
PUT; PUT; PUT;
PUT @001 "TABLE 2: OVERALL RESPONSE RATES SUMMARY";
PUT @001 "&DATE., TASK: &TASKNUM.";
PUT;
PUT "SUMMARY OF GROUP COUNTS: FORM &FORM";
PUT;
PUT @131 "UNWEIGHTED COUNT"
  @181 "WEIGHTED COUNT"
;
PUT @121 'FLR'
  @131 'FCR'
  @141 'FRR'
  @151 'POP'
  @171 'FLR'
  @181 'FCR'

```

```

        @191 'FRR'
        @201 'POP'
    ;
    %INCLUDE "TABLE02.IN2";
    RUN;
%MEND PROCESS;

*****
* Process Single Domain where domain1 is the variable of interest.
*****;
%MACRO PROCESS1(DOMAIN1=, INPT=, FORM=);

    PROC SORT DATA=&INPT; BY &DOMAIN1; RUN;

    DATA _NULL_;
        SET &INPT;
        BY &DOMAIN1;
        FILE "&OFILES.&DOMAIN1..OUT" RECFM=V LRECL=9999;
        LENGTH VARNAME1 $8;
        LENGTH VARIABLE $30;
        CALL VNAME(&DOMAIN1,VARNAME1);
        VARIABLE = VARNAME1;
        %INCLUDE "TABLE02.IN1";
        IF LAST.&DOMAIN1 THEN DO;
            PUT @001 &DOMAIN1 @;
            %INCLUDE "TABLE02.IN2";
        END; * DOMAIN;
    RUN;
%MEND PROCESS1;

*****
* Process Double Domain where domain1/domain2 are the
* variables of interest.
*****;
%MACRO PROCESS2(DOMAIN1=, DOMAIN2=, INPT=, FORM=);

    PROC SORT DATA=&INPT; BY &DOMAIN1 &DOMAIN2; RUN;

    DATA _NULL_;
        SET &INPT;
        BY &DOMAIN1 &DOMAIN2;
        FILE "&OFILES.&DOMAIN1&DOMAIN2..OUT" RECFM=V LRECL=9999;
        LENGTH VARNAME1 $8;
        LENGTH VARNAME2 $8;
        LENGTH VARIABLE $30;
        CALL VNAME(&DOMAIN1,VARNAME1);
        CALL VNAME(&DOMAIN2,VARNAME2);
        VARIABLE = VARNAME1 || " " || VARNAME2;
        %INCLUDE "TABLE02.IN1";
        IF LAST.&DOMAIN2 THEN DO;
            PUT @001 &DOMAIN1 @;
            PUT @041 &DOMAIN2 @;
            %INCLUDE "TABLE02.IN2";
            SN      = 0;
            SN1     = 0;
            SN11    = 0;
        END;
    RUN;
%MEND PROCESS2;

```

```

        SN12 = 0;
        SN2   = 0;
        SN31  = 0;
        SN4   = 0;
        SN41  = 0;
        SN42  = 0;
        WN    = 0;
        WN1   = 0;
        WN11  = 0;
        WN12  = 0;
        WN2   = 0;
        WN31  = 0;
        WN4   = 0;
        WN41  = 0;
        WN42  = 0;
    END; * DOMAIN;
RUN;
%MEND PROCESS2;

```

```

*****
* Process Triple Domain where domain1-3 are the variables of interest.
*****
%MACRO PROCESS3(DOMAIN1=, DOMAIN2=, DOMAIN3=, INPT=, FORM=);

```

```

    PROC SORT DATA=&INPT; BY &DOMAIN1 &DOMAIN2 &DOMAIN3; RUN;

```

```

DATA _NULL_;
    SET &INPT;
    BY &DOMAIN1 &DOMAIN2 &DOMAIN3;
    FILE "&FILES.&DOMAIN1&DOMAIN2&DOMAIN3..OUT" RECFM=V LRECL=9999;
    LENGTH VARNAME1 $8;
    LENGTH VARNAME2 $8;
    LENGTH VARNAME3 $8;
    LENGTH VARIABLE $30;
    CALL VNAME(&DOMAIN1,VARNAME1);
    CALL VNAME(&DOMAIN2,VARNAME2);
    CALL VNAME(&DOMAIN3,VARNAME3);
    VARIABLE = VARNAME1 || " " || VARNAME2 || " " || VARNAME3;
    %INCLUDE "TABLE02.IN1";
    IF LAST.&DOMAIN3 THEN DO;
        PUT @001 &DOMAIN1 @;
        PUT @041 &DOMAIN2 @;
        PUT @081 &DOMAIN3 @;
        %INCLUDE "TABLE02.IN2";
        SN = 0;
        SN1 = 0;
        SN11 = 0;
        SN12 = 0;
        SN2 = 0;
        SN31 = 0;
        SN4 = 0;
        SN41 = 0;
        SN42 = 0;
        WN = 0;
        WN1 = 0;
        WN11 = 0;
    END;

```



```

        WN12 = 0;
        WN2  = 0;
        WN31 = 0;
        WN4  = 0;
        WN41 = 0;
        WN42 = 0;
    END; * DOMAIN;
    RUN;
%MEND PROCESS3;

```

Note that the ERROR message of division by zero may be printed out in the log file due to no complete in some domains;

```

*****
* PROCESS OVERALL RESPONSE RATE TABULATION - FORM A
*****;
%PROCESS(INPT=MERGERR, FORM=A);

*****
* PROCESS SINGLE DOMAIN RESPONSE RATE TABULATION - FORM A
*****;
*%PROCESS1(DOMAIN1=xregion, INPT=MERGERR, FORM="FORM A");
*%PROCESS1(DOMAIN1=QFLAG, INPT=MERGERR, FORM="FORM A");
*%PROCESS1(DOMAIN1=has_email, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=xoconus, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=USA, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=sexsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=enbgsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=cacsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=patcat, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=servaff, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=svcsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS1(DOMAIN1=xtnexreg, INPT=MERGERR, FORM="FORM A");

*****
* PROCESS DOUBLE DOMAIN RESPONSE RATE TABULATION - FORM A
*****;

%PROCESS2(DOMAIN1=patcat, DOMAIN2=svcsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS2(DOMAIN1=patcat, DOMAIN2=sexsmpl, INPT=MERGERR, FORM="FORM A");
%PROCESS2(DOMAIN1=xtnexreg, DOMAIN2=cacsmpl, INPT=MERGERR, FORM="FORM A");
*%PROCESS2(DOMAIN1=PATCAT, DOMAIN2=HAS_EMAIL, INPT=MERGERR, FORM="FORM A");

*****
* PROCESS TRIPLE DOMAIN RESPONSE RATE TABULATION - FORM A
*****;
*%PROCESS3(DOMAIN1=USA, DOMAIN2=patcat, DOMAIN3=has_email, INPT=MERGERR,
FORM="FORM A");

*****
* Copy empty template file to constructed variables spreadsheet and
* start the XLS file.
*****
;
X "COPY EMPTY.XLS RESPONSE_RATES.XLS";
X "START RESPONSE_RATES.XLS";

```

```

/*wait for a few seconds to allow Excel to come up */
/*adding sleep statement to avoid a log error saying
  ERROR: Physical file does not exist, excel|OVERALLA!r1c1:r9999c3*/
data _null_;
x=sleep(10);
run;

```

```

%MACRO CREATXLS(DSN=, NUMDOM=);
*****
  * Read text files with response rates for each DOMAIN .

*****;
DATA &DSN(KEEP=DOMAIN1 DOMAIN2 DOMAIN3 RR RRW);
  INFILE "&OFILES.&DSN..OUT" LRECL=9999 RECFM=V;
  INPUT LINEIN $100 @; DROP LINEIN; *Skip over header records;
  LENGTH DOMAIN1-DOMAIN3 $40;
  IF _N_ GE 7 THEN DO;
    INPUT
      @001 DOMAIN1 $CHAR40.
      @041 DOMAIN2 $CHAR40.
      @081 DOMAIN3 $CHAR40.
      @121 FLR1 4.3
      @131 FCR1 4.3
      @141 FRR1 4.3
      @147 SN 7.0
      @171 FLR2 4.3
      @181 FCR2 4.3
      @191 FRR2 4.3
      @197 WN 7.0
    ;
    RR = FRR1*100;
    RRW = FRR2*100;
    OUTPUT;
  END;
RUN;
*****
  * Add values for each DOMAIN to each sheet.

*****;
%IF &NUMDOM LE 1 %THEN %DO;
  FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c3";
  DATA _NULL_;
  SET &DSN;
  FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  LENGTH OLINE $50;
  IF _N_ = 1 THEN DO;
    OLINE = "RESPONSE RATES FOR &QUARTER";
    PUT OLINE;
    OLINE = "FOR DOMAIN = &DSN";
    PUT OLINE /;
    H1 = "DOMAIN"; H2 = "RR"; H3 = "RRW";
    PUT H1 : $CHAR50.
      H2 : $CHAR50.

```

```

                H3 : $CHAR50.
                ;
        END;
        PUT DOMAIN1: $CHAR40.
                RR      : 4.1
                RRW     : 4.1
                ;
        RUN;
%END;
%ELSE %IF &NUMDOM = 2 %THEN %DO;
        FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c4";
        DATA _NULL_;
                SET &DSN;
                FILE OUTDATA DLM='09'X NOTAB LRECL=500;
                LENGTH OLINE $50;
                IF _N_ = 1 THEN DO;
                        OLINE = "RESPONSE RATES FOR &QUARTER";
                        PUT OLINE;
                        OLINE = "FOR DOMAIN = &DSN";
                        PUT OLINE /;
                        H1 = "DOMAIN1"; H2 = "DOMAIN2"; H3 = "RR"; H4 = "RRW";
                        PUT H1 : $CHAR50.
                                H2 : $CHAR50.
                                H3 : $CHAR50.
                                H4 : $CHAR50.
                                ;
                END;
                PUT DOMAIN1: $CHAR40.
                        DOMAIN2: $CHAR40.
                                RR      : 4.1
                                RRW     : 4.1
                                ;
        RUN;
%END;
%ELSE %IF &NUMDOM = 3 %THEN %DO;
        FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c5";
        DATA _NULL_;
                SET &DSN;
                FILE OUTDATA DLM='09'X NOTAB LRECL=500;
                LENGTH OLINE $50;
                IF _N_ = 1 THEN DO;
                        OLINE = "RESPONSE RATES FOR &QUARTER";
                        PUT OLINE;
                        OLINE = "FOR DOMAIN = &DSN";
                        PUT OLINE /;
                        H1 = "DOMAIN1"; H2 = "DOMAIN2"; H3 = "DOMAIN3"; H4 = "RR"; H5 =
"RRW";
                        PUT H1 : $CHAR50.
                                H2 : $CHAR50.
                                H3 : $CHAR50.
                                H4 : $CHAR50.
                                H5 : $CHAR50.
                                ;
                END;
                PUT DOMAIN1 : $CHAR40.
                        DOMAIN2 : $CHAR40.
                        DOMAIN3 : $CHAR40.

```

```

                RR      : 4.1
                RRW     : 4.1
            ;
        RUN;
    %END;
%MEND CREATXLS;

%CREATXLS(DSN=TABLE02A, NUMDOM=0);
*CREATXLS(DSN=QFLAG, NUMDOM=1);
*%CREATXLS(DSN=HAS_EMAIL, NUMDOM=1);
%CREATXLS(DSN=XOCONUS, NUMDOM=1);
%CREATXLS(DSN=USA, NUMDOM=1);
%CREATXLS(DSN=SEXSMPL, NUMDOM=1);
%CREATXLS(DSN=enbgsmpl, NUMDOM=1);
%CREATXLS(DSN=cacsmpl, NUMDOM=1);
%CREATXLS(DSN=PATCAT, NUMDOM=1);
%CREATXLS(DSN=SERVAFF, NUMDOM=1);
%CREATXLS(DSN=SVCSMPL, NUMDOM=1);
%CREATXLS(DSN=XTNEXREG, NUMDOM=1);
%CREATXLS(DSN=PATCATSVCSMPL, NUMDOM=2);
%CREATXLS(DSN=PATCATSEXSMPL, NUMDOM=2);
%CREATXLS(DSN=XTNEXREGcacsmpl, NUMDOM=2);
*%CREATXLS(DSN=PATCATHAS_EMAIL, NUMDOM=2);
*%CREATXLS(DSN=USAPATCATHAS_EMAIL, NUMDOM=3);
*****
* Quit spreadsheet application.
*****
;
FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
    FILE CMDS;
    PUT '[SAVE]';
    PUT '[QUIT]';
RUN;

***** End *****;

```

F.24.C - Response_Rate\TABLE02.IN1 - Include file1 used to Calculate annual Response Rates.

```

*****
*
* PROGRAM: TABLE02.IN1
* TASK: 2002 DOD HEALTH CARE SURVEY ANALYSIS
* PURPOSE: COMMON CODE INCLUDE FILE USED TO BUILD
*          TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY
*          2002 DOD HEALTH CARE SURVEY FILE.
* WRITTEN: 01/08/99 BY KEITH RATHBUN
*
* MODIFIED:
* 1) 5/17/1999, Keith Rathbun - Removed printing of the final location rate
*   (FLR) and final completion rate (FCR).
* 2) 7/07/1999, Keith Rathbun - Added back printing of FLR
* 3) 12/14/2000, Keith Rathbun - Update for quarterly survey to use BWT
*   instead of BWT99 (generalized variable name for ease of maintenance).
* 4) 11/16/2004 by Haixia Xu - Update the coding of FNSTATUS from 30 to 31.
*                               SN3->SN31, WN3->WN31
* 5) 01/24/2005 by Keith Rathbun - Update PUT statements to accomodate up
*   to 3 CHAR*40 domains.
*
*****
*
IF _N_ = 1 THEN DO;
  PUT; PUT;
  PUT @001 "TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY";
  PUT @001 "&DATE., TASK: &TASKNUM.";
  PUT;
  PUT "SUMMARY OF GROUP COUNTS: " &FORM;
  PUT "VARIABLE = " VARIABLE;
  PUT;
  PUT @131 "UNWEIGHTED COUNT"
    @181 "WEIGHTED COUNT"
    ;
  PUT @121 'FLR'
    @131 'FCR'
    @141 'FRR'
    @151 'POP'
    @171 'FLR'
    @181 'FCR'
    @191 'FRR'
    @201 'POP'
    ;
END;
IF FIRST.&DOMAIN1 THEN DO;
  SN = 0;
  SN1 = 0;
  SN11 = 0;
  SN12 = 0;
  SN2 = 0;
  SN31 = 0;
  SN4 = 0;
  SN41 = 0;
  SN42 = 0;
  WN = 0;

```

```

WN1 = 0;
WN11 = 0;
WN12 = 0;
WN2 = 0;
WN31 = 0;
WN4 = 0;
WN41 = 0;
WN42 = 0;
END;
*****
* Accumulate group 1 weighted and unweighted counts
*****
;
SN + 1;
WN + BWT;
IF FNSTATUS IN(11,12) THEN DO;
  SN1 + 1;
  WN1 + BWT;
  IF FNSTATUS = 11 THEN DO;
    SN11 + 1;
    WN11 + BWT;
  END;
  ELSE DO;
    SN12 + 1;
    WN12 + BWT;
  END;
END;
*****
* Accumulate group 2 weighted and unweighted counts
*****
;
ELSE IF FNSTATUS = 20 THEN DO;
  SN2 + 1;
  WN2 + BWT;
END;
*****
* Accumulate group 3 weighted and unweighted counts
*****
;
ELSE IF FNSTATUS = 31 THEN DO;
  SN31 + 1;
  WN31 + BWT;
END;
*****
* Accumulate group 4 weighted and unweighted counts
*****
;
ELSE IF FNSTATUS IN(41,42) THEN DO;
  SN4 + 1;
  WN4 + BWT;
  IF FNSTATUS = 42 THEN DO;
    SN42 + 1;
    WN42 + BWT;
  END;
  ELSE DO;
    SN41 + 1;
    WN41 + BWT;
  END;
END;

```

```
END;  
END;
```

```
DROP I;  
RETAIN
```

```
SN  
SN1  
SN11  
SN12  
SN2  
SN31  
SN4  
SN41  
SN42  
WN  
WN1  
WN11  
WN12  
WN2  
WN31  
WN4  
WN41  
WN42  
;
```

F.24.D - Response_Rate\TABLE02.IN2 - Include file2 used to Calculate annual Response Rates.

```

*****
*
* PROGRAM: TABLE02.IN2
* TASK: QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS
* PURPOSE: COMMON CODE INCLUDE FILE USED TO BUILD
* TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY
* QUARTERLY DOD HEALTH CARE SURVEY FILE.
* WRITTEN: 01/08/99 BY KEITH RATHBUN
*
* MODIFIED:
* 1) 5/17/1999, Keith Rathbun - Removed printing of the final location rate
* (FLR) and final completion rate (FCR).
* 2) 7/07/1999, Keith Rathbun - Added back printing of FLR
* 3) 12/14/2000, Keith Rathbun - Added printing of weighted (WN) and
* unweighted (SN) population sizes.
* 4) 11/17/2004 BY Haixia Xu - Made changes due to the different coding of
FNSTATUS:
* -Rewrite the formula used to calculating FRR1,
FRR2
* -SN3->SN31, WN3->WN31
* 5) 01/24/2005 by Keith Rathbun - Update PUT statements to accomodate up
* to 3 CHAR*40 domains.
*
*****
*
*Final Response Rate;
FRR1 = SN11/(SN1 + SN2 + SN4*((SN1 + SN2)/(SN1 + SN2 + SN31)) );
FRR2 = WN11/(WN1 + WN2 + WN4*((WN1 + WN2)/(WN1 + WN2 + WN31)) );

*Final Location Rate;
L = ((SN1 + SN2)/(SN1 + SN2 + SN31))*SN41;
WL = ((WN1 + WN2)/(WN1 + WN2 + WN31))*WN41;
FLR1 = (SN1 + SN2 + L)/(SN1 + SN2 + SN4*((SN1 + SN2)/(SN1 + SN2 +
SN31)));
FLR2 = (WN1 + WN2 + WL)/(WN1 + WN2 + WN4*((WN1 + WN2)/(WN1 + WN2 +
WN31)));

*Final Completion Rate;
FCR1 = SN11/(SN1 + SN2 + L);
FCR2 = WN11/(WN1 + WN2 + WL);
PUT @121 FLR1 4.3
@131 FCR1 4.3
@141 FRR1 4.3
@147 SN 7.0
@171 FLR2 4.3
@181 FCR2 4.3
@191 FRR2 4.3
@197 WN 7.0
;

```


F.24.E - Response_Rate\TABLE02_XCATCH.SAS - Calculate Response Rates by catchment area

```

*****
* PROGRAM: TABLE02_xcatch.SAS
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (40309.31H)
* PURPOSE: BUILD TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY
*          Quarterly DOD HEALTH CARE SURVEY FILE.
* WRITTEN: 11/09/1999 BY KEITH RATHBUN
* MODIFIED: H. Xu on 11/21/2008 to produce the annual RR for xcatch
*           S. Ra.on 06/02/2014 to produce the annual RR for xcatch
*           S. Ra.on 07/15/2016 to produce the 2016 annual RR for xcatch
*
* INPUT:   1) MERGEQ.SD2 (All quarters)
*
* INCLUDES: 1) TABLE02.IN1
*           2) TABLE02.IN2
*
* NOTES: This program is modified from 325table02.sas in
F:\2004\Programs\Response_Rate
*         to produce the RR only for XCATCH
* NOTE : We need to run programs in order of table02.sas, annual_rr.sas.
*         We can run table02_xcatch.sas anytime at this point, since it is
*         independent from other two above.
*****
* ;
OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOXWAIT NOCENTER NOFMterr mprint
mlogic symbolgen;

%let YR=2017;

LIBNAME Q1t
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q1FY&YR.t\Data\AFinal"; * Q1t
mergeq with late response;
LIBNAME Q2t
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q2FY&YR.t\Data\AFinal"; * Q2t
mergeq with late response;
LIBNAME Q3
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YR.\Data\AFinal"; * Q3
mergeq with late response;
LIBNAME inH "N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal";
libname inBWQ2H
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal\combine_HEDIS_Q2"
; *Breanna Q2+H Weights;

*LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YR.\Data\AFinal\fmtlib\Windows
VersionForDHA";
LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB_HEDIS\Data\AFinal\fmtlib\WindowsVer
sionForDHA";

TITLE1 "Program: TABLE02_xcatch.SAS (FY=&YR., 40309.31H):";
TITLE2 "Purpose: Compute response rates by DOMAIN";

```

```

%LET OFILES =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YR.\Data\Response_Rate\xcatch\;
%LET QUARTER = &YR. Combined Annual;
%LET DATE = 09-27-2017;
%LET TASKNUM = 40309.31H;

```

```

*****
*Reading HEDIS Only Data:
*****;
Data Hedis;
format _ALL_;
Set inH.MergeQ;
if enbgempl = '09' then enbgempl='08';
Run;

```

```

*****
*****
*Reading Breanna's Q2+HEDIS Combine Data for Updated FNSTATUS for 96 HEDIS
Cases:
*****;
data Breanna_Q2H(Keep=MPRID FNSTATUS flagBQ2H
Rename=(FNSTATUS=FNSTATUS_BQ2H));
Set inBWQ2H.postwt;
run;

```

```

*****
Reading HCSDB files:
*****;
%macro create_ebg(qrt=, no=);
DATA File&qrt.;
format _ALL_;
SET &qrt..MERGEQ;
/*01/31/2007 by H.Xu.
As per Nancy's suggestion, collapse 09 with 08, since 09 has two few
beneficiaries*/
if enbgempl = '09' then enbgempl='08';
RUN;
%mend;

```

```

%create_ebg(qrt=Q1t, no=1);
%create_ebg(qrt=Q2t, no=2);
%create_ebg(qrt=Q3, no=3);

```

```

*****
*Combining ALL FY2017 HCSDB Quarters and HEDIS for RR Calculation:
*****;
DATA COMB&YR.;
SET FILEQ1t(in=InQ1) FILEQ2t(in=InQ2) FILEQ3(in=InQ3) Hedis(in=InHEDIS);
If inQ1 then flagQ1=1;
If inQ2 then flagQ2=1;
If inQ3 then flagQ3=1;

```

```

    If InHEDIS then flagH=1;
RUN;

Title1 "Checking HCSDB Quarterly Files Merging:";
PROC FREQ DATA=COMB&YR.;
Tables flagQ1*flagQ2*flagQ3*flagH/List missing;
RUN;

PROC SORT DATA=COMB&YR. OUT=TEMP1; BY MPRID; RUN;

*****
* Create and attach XCATCH (Catchment Reporting variable) to final dataset.
* Note that dataset tmpxctch with XCATCH is created by this include file.
*****
;

/***** READING INCLUDE FILE FROM ANNUAL-WT FOLDER OF THIS FY
*****/
/* Change xcatch2.inc to xcatch.inc next year (in YR2018)
*/
/*****
/
%include
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YR.\Programs\Weighting\xcatch2.inc
";
/*****
/

proc sort data=tmpxctch                      out=temp2; by mprid; run;
proc sort data=temp1(keep=mprid fnstatus bwt) out=temp3; by mprid;run;

data temp;
merge temp2(in=A) temp3(in=B);
by mprid;
if A and B;
format xcatch cacr.;
run;

*****
Fixing FNSTATUS for 95 cases:
*****;
Proc Sort Data=temp;                      By MPRID; RUN;
Proc Sort Data=Breanna_Q2H; By MPRID; RUN;

Data tempH;
Merge temp(In=Q123H) Breanna_Q2H(IN=Q2H);
If Q123H then flag_Q1tQ2tQ3H=1;
If Q2H then flag_Q2H=1;
If Q123H;
By MPRID;
Run;

Data tempH2;
Set tempH;
FNSTATUS_OLD=FNSTATUS;
If FNSTATUS_BQ2H=99 Then FNSTATUS=20;
Else FNSTATUS=FNSTATUS_OLD;

```

```

Run;

Title1 "Checks Crosstab of Selected variables";
Proc Freq Data=tempH2;
Tables flag_Q1tQ2tQ3H*flag_Q2H
       flag_Q1tQ2tQ3H*flag_Q2H*FNSTATUS_BQ2H*FNSTATUS*FNSTATUS_OLD
       FNSTATUS/List missing nopercnt;
Run;

Title1 "Frequency of Xcatch using final combine (Q1t+Q2t+Q3+H) file";
Proc Freq Data=tempH2;
Tables Xcatch/List Missing;
Run;

%MACRO PROCESS(INPT=, FORM=);
*****
* Process OVERALL Summary of response rates
*****;
DATA _NULL_;
  SET &INPT END=FINISHED;
  IF _N_ = 1 THEN DO;
    SN      = 0;
    SN1     = 0;
    SN11    = 0;
    SN12    = 0;
    SN2     = 0;
    SN31    = 0;
    SN4     = 0;
    SN41    = 0;
    SN42    = 0;
    WN      = 0;
    WN1     = 0;
    WN11    = 0;
    WN12    = 0;
    WN2     = 0;
    WN31    = 0;
    WN4     = 0;
    WN41    = 0;
    WN42    = 0;
  END;
*****
* Accumulate group 1 weighted and unweighted counts.
*****;
  SN + 1;
  WN + BWT;
  IF FNSTATUS IN(11,12) THEN DO;
    SN1 + 1;
    WN1 + BWT;
    IF FNSTATUS = 11 THEN DO;
      SN11 + 1;
      WN11 + BWT;
    END;
  ELSE DO;
    SN12 + 1;
    WN12 + BWT;
  END;
END;

```

```

END;
*****
* Accumulate group 2 weighted and unweighted counts.
*****;
ELSE IF FNSTATUS = 20 THEN DO;
    SN2 + 1;
    WN2 + BWT;
END;
*****
* Accumulate group 3 weighted and unweighted counts.
*****;
ELSE IF FNSTATUS = 31 THEN DO;
    SN31 + 1;
    WN31 + BWT;
END;
*****
* Accumulate group 4 weighted and unweighted counts.
*****;
ELSE IF FNSTATUS IN(41,42) THEN DO;
    SN4 + 1;
    WN4 + BWT;
    IF FNSTATUS = 42 THEN DO;
        SN42 + 1;
        WN42 + BWT;
    END;
    ELSE DO;
        SN41 + 1;
        WN41 + BWT;
    END;
END;
END;

DROP I;
RETAIN
    SN
    SN1
    SN11
    SN12
    SN2
    SN31
    SN4
    SN41
    SN42
    WN
    WN1
    WN11
    WN12
    WN2
    WN31
    WN4
    WN41
    WN42
;

IF FINISHED THEN GO TO FINISHED;
RETURN;

FINISHED:

```

```

FILE "&FILES.TABLE02&FORM..OUT" RECFM=V LRECL=9999;
PUT; PUT; PUT;
PUT @001 "TABLE 2: OVERALL RESPONSE RATES SUMMARY";
PUT @001 "12-05-2012, TASK: 06663.300";
PUT;
PUT "SUMMARY OF GROUP COUNTS: FORM &FORM";
PUT;
PUT @131 "UNWEIGHTED COUNT"
    @181 "WEIGHTED COUNT"
    ;
PUT @121 'FLR'
    @131 'FCR'
    @141 'FRR'
    @151 'POP'
    @171 'FLR'
    @181 'FCR'
    @191 'FRR'
    @201 'POP'
    ;
%INCLUDE "TABLE02.IN2";
RUN;
%MEND PROCESS;

*****
* Process Single Domain where domain1 is the variable of interest.
*****;
%MACRO PROCESS1(DOMAIN1=, INPT=, FORM=);

PROC SORT DATA=&INPT; BY &DOMAIN1; RUN;

DATA _NULL_;
SET &INPT;
BY &DOMAIN1;
FILE "&FILES.&DOMAIN1..OUT" RECFM=V LRECL=9999;
LENGTH VARNAME1 $8;
LENGTH VARIABLE $30;
CALL VNAME(&DOMAIN1,VARNAME1);
VARIABLE = VARNAME1;
%INCLUDE "TABLE02.IN1";
IF LAST.&DOMAIN1 THEN DO;
PUT @001 &DOMAIN1 @;
%INCLUDE "TABLE02.IN2";
END; * DOMAIN;
RUN;
%MEND PROCESS1;

***Note that the ERROR message of division by zero may be printed out
in the log file due to no complete in some domains***;

*****
* PROCESS OVERALL RESPONSE RATE TABULATION - FORM A
*****;
%PROCESS(INPT=tempH2, FORM=A);

*****
* PROCESS SINGLE DOMAIN RESPONSE RATE TABULATION - FORM A
*****;

```

```

%PROCESS1(DOMAIN1=XCATCH,    INPT=tempH2, FORM="FORM A");

*****
* Copy empty template file to constructed variables spreadsheet and
* start the XLS file.
*****
;
X "COPY EMPTY_xcatch.XLS RESPONSE_RATES_xcatch.XLS";
X "START RESPONSE_RATES_xcatch.XLS";

/*wait for a few seconds to allow Excel to come up */
/*adding sleep statement to avoid a log error saying
  ERROR: Physical file does not exist, excel|OVERALLA!r1c1:r9999c3*/
data _null_;
x=sleep(8);
run;

%MACRO CREATXLS(DSN=, NUMDOM=);
*****
  * Read text files with response rates for each DOMAIN .

*****;
  DATA &DSN(KEEP=DOMAIN1 DOMAIN2 DOMAIN3 RR RRW);
    INFILE "&FILES.&DSN..OUT" LRECL=9999 RECFM=V;
    INPUT LINEIN $100 @; DROP LINEIN; *Skip over header records;
    LENGTH DOMAIN1-DOMAIN3 $40;
    IF _N_ GE 7 THEN DO;
      INPUT
        @001 DOMAIN1 $CHAR40.
        @041 DOMAIN2 $CHAR40.
        @081 DOMAIN3 $CHAR40.
        @121 FLR1    4.3
        @131 FCR1    4.3
        @141 FRR1    4.3
        @147 SN      7.0
        @171 FLR2    4.3
        @181 FCR2    4.3
        @191 FRR2    4.3
        @197 WN      7.0
      ;
      RR  = FRR1*100;
      RRW = FRR2*100;
      OUTPUT;
    END;
  RUN;
*****
  * Add values for each DOMAIN to each sheet.

*****;
  %IF &NUMDOM LE 1 %THEN %DO;
    FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c3";
    DATA _NULL_;
      SET &DSN;
      FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  %END;

```

```

LENGTH OLINE $50;
IF _N_ = 1 THEN DO;
  OLINE = "RESPONSE RATES FOR &QUARTER";
  PUT OLINE;
  OLINE = "FOR DOMAIN = &DSN";
  PUT OLINE /;
  H1 = "DOMAIN"; H2 = "RR"; H3 = "RRW";
  PUT H1 : $CHAR50.
      H2 : $CHAR50.
      H3 : $CHAR50.
      ;
END;
PUT DOMAIN1: $CHAR40.
    RR      : 4.1
    RRW     : 4.1
    ;
RUN;
%END;
%ELSE %IF &NUMDOM = 2 %THEN %DO;
  FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c4";
  DATA _NULL_;
  SET &DSN;
  FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  LENGTH OLINE $50;
  IF _N_ = 1 THEN DO;
    OLINE = "RESPONSE RATES FOR &QUARTER";
    PUT OLINE;
    OLINE = "FOR DOMAIN = &DSN";
    PUT OLINE /;
    H1 = "DOMAIN1"; H2 = "DOMAIN2"; H3 = "RR"; H4 = "RRW";
    PUT H1 : $CHAR50.
        H2 : $CHAR50.
        H3 : $CHAR50.
        H4 : $CHAR50.
        ;
  END;
  PUT DOMAIN1: $CHAR40.
      DOMAIN2: $CHAR40.
      RR      : 4.1
      RRW     : 4.1
      ;
  RUN;
%END;
%ELSE %IF &NUMDOM = 3 %THEN %DO;
  FILENAME OUTDATA DDE "excel|&DSN!r1c1:r9999c5";
  DATA _NULL_;
  SET &DSN;
  FILE OUTDATA DLM='09'X NOTAB LRECL=500;
  LENGTH OLINE $50;
  IF _N_ = 1 THEN DO;
    OLINE = "RESPONSE RATES FOR &QUARTER";
    PUT OLINE;
    OLINE = "FOR DOMAIN = &DSN";
    PUT OLINE /;
    H1 = "DOMAIN1"; H2 = "DOMAIN2"; H3 = "DOMAIN3"; H4 = "RR"; H5 =
"RRW";
    PUT H1 : $CHAR50.

```



```

                H2 : $CHAR50.
                H3 : $CHAR50.
                H4 : $CHAR50.
                H5 : $CHAR50.
            ;
        END;
        PUT DOMAIN1 : $CHAR40.
           DOMAIN2 : $CHAR40.
           DOMAIN3 : $CHAR40.
           RR      : 4.1
           RRW     : 4.1
        ;
    RUN;
    %END;
%MEND CREATXLS;

%CREATXLS(DSN=TABLE02A, NUMDOM=0);
%CREATXLS(DSN=XCATCH,   NUMDOM=1);

*****
* Quit spreadsheet application.
*****
;
FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
    FILE CMDS;
    PUT '[SAVE]';
    PUT '[QUIT]';
RUN;

***** End *****;

```

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APPENDIX G

**SAS CODE FOR STATISTICAL AND WEB SPECIFICATIONS FOR THE 2017
TRICARE BENEFICIARY REPORTS AND PURCHASED CARE BENEFICIARY
REPORTS**

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G.1.A - Q3FY2017\PROGRAMS\ReportCards\CAHPS_AdultQ3FY2017\STEP1Q.SAS - Create and recode variables used in Adult Beneficiary Reports - Run Quarterly.

```

*****
*
* PROJECT: DoD - Quarterly Adult Report Cards
* PROGRAM: STEP1Q.SAS
* PURPOSE: Create Dummy and Recode Variables used in Adult Report Card
*          Create a Female dummy variable
*          Create an Education dummy variable
*          Create 15 region dummies combining regions.
*          7 & 8 into region 8. That is, there
*          isn't a region 7 dummy.
*          Create 7 age dummy variables.
*
*          We require the most desired code to be the highest value.
*          Recode the dependent variables into:
*          1 - the least desirable value
*          2 - the 2nd least desirable value
*          3 - the most desirable value
*          . - missing
*
*          Create 7 variables GROUP1 - GROUP7
*          IF (XINS_COV IN (1,2,6) AND H10004>=2) THEN GROUP1 = 1
*          IF (XENR_PCM IN (1,2,6) AND H10004>=2) THEN GROUP2 = 1
*          IF (XENR_PCM = 3,7 AND H10004>=2) THEN GROUP3 = 1
*          IF XINS_COV IN (3) THEN GROUP4 = 1
*          /*JSO 08/24/2006, Deleted 4,5*/
*          IF XBNFGRP = 1 THEN GROUP5 = 1
*          IF XBNFGRP = 2 THEN GROUP6 = 1
*          IF XBNFGRP IN (3,4) THEN GROUP7 = 1
*          GROUP8 is output for all beneficiaries
*
* MODIFIED:52) November 3, 2012 By Mike Rudacille, Updated for handling of Joint
Service facilities
*          53) December 27, 2012 By Aimee Valenzuela, Update program for
Q1FY2013.Updated Variable names
*          and input dataset.
*          54) March 23, 2013 By Mike Rudacille, Update program for Q2FY2013.
*          55) Sept 23, 2013 By Amanda Kudis, Update program for Q1FY2014.
*          56) Feb 27, 2013 By Amanda Kudis, now use xservaff from database
*          57) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*          Changed HCSyyq_2 to &DATAFILE.
*          Changed H14 and R14 to H&FY. And R&FY.
*          Replaced RCTYPE with &PC.ReportCards.
*          Changed CONVERT.SAS to
..\..\ReportCards\CAHPS_Adult&FOLDER.&FYYEAR.\CONVERT.SAS.
*          58) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*          Changed OUT filepath to "Data".
*          Changed IN1 filepath to "&DATAPATH.".
*          Changed IN2 filepath to "&FMTPATH.".
*          Backslashes changed to forward slashes.
*
* INPUTS: 1) HCSyyq_2 - DoD Quarterly HCS Database
*
* OUTPUTS: 1) GROUP1-8.sas7bdat - DoD Quarterly GROUP files as defined above
*
* INCLUDES: 1) CONVERT.SAS - Convert item responses to proportional

```

```

*                               values for consistency w/ TOPS
*
* NOTES:   1) Groups 1-3 modified 10/09/2000
*
*          2) In Q1_2002, S02S01 was renamed and recoded to H00077 (health
*             status variable for 2000). H02077 was the Hispanic/Latino
*             variable. In Q2_2002, H02077 is health status, and H02079
*             is the Hispanic/Latino variable. To make the Quarter 2 data
*             file (HSC022_1.sd2) more consistent with the Quarter 1 file,
*             the health status variable which was H02077 is now H04075,
*             and the Hispanic/Latino variable which was H02079 is now
*             H02077.
*
*

```

```

*****;

```

```

/*** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

```

```

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMterr NOOVP COMPRESS=YES;
LIBNAME OUT      "Data";
LIBNAME IN1      "&DATAPATH.";
LIBNAME LIBRARY  "&FMTPATH.";

```

```

TITLE1      'Program Saved as: STEP1Q.SAS';

```

```

%LET WGT = FWRWT;

```

```

proc format;
  value servreg 1 = 'North Army'
                2 = 'North Air Force'
                3 = 'North Navy'
                4 = 'North Other'
                5 = 'North Joint Service'
                6 = 'South Army'
                7 = 'South Air Force'
                8 = 'South Navy'
                9 = 'South Other'
                10 = 'South Joint Service'
                11 = 'West Army'
                12 = 'West Air Force'
                13 = 'West Navy'
                14 = 'West Other'
                15 = 'West Joint Service'
                16 = 'Europe Army'
                17 = 'Europe Air Force'
                18 = 'Europe Navy'
                19 = 'Europe Other'
                20 = 'Europe Joint Service'
                21 = 'Pacific Army'
                22 = 'Pacific Air Force'
                23 = 'Pacific Navy'
                24 = 'Pacific Other'
                25 = 'Pacific Joint Service'
                26 = 'Latin America Army'
                27 = 'Latin America Air Force'
                28 = 'Latin America Navy'
                29 = 'Latin America Other'
                30 = 'Latin America Joint Service';

```



```

DATA ENTIRE;
  SET IN1.&DATAFILE.(KEEP=
    MPRID
    XCATCH /*MER 11/03/12*/
    FIELDAGE /*MJS 01/26/04*/
    XTNEXREG
    SERVAFF /*KRR 04/09/04*/
    DBENCAT /*JSO 04/26/2007, added for reservists logic*/
    USA
    ENBGSMPL
    SREDA
    XSEXA
    XBNFGRP
    STRATUM /*KRR 04/03/2006, changed from ADJ_CELL*/
    XINS_COV
    XENR_PCM
    XOCONUS /*JSO 08/24/2006, Overseas Region Indicator*/
    &WGT.
    /* Getting Needed Care */
    H&FY.033
    H&FY.029
    /* Getting Care Quickly */
    H&FY.007
    H&FY.010
    /* How Well Doctors Communicate */
    H&FY.021
    H&FY.022
    H&FY.023
    H&FY.024
    /* Customer Service */
    H&FY.041
    H&FY.042
    /* Claims Processing */
    H&FY.046
    H&FY.047 /*******/
    H&FY.065 /* Health Status */
    H&FY.018 /* Health Care Rating */
    H&FY.048 /* Health Plan Rating */
    H&FY.027 /* Personal Doctor Rating */
    H&FY.031 /* Specialist Rating */
    H&FY.003 /* Health Plan Used */ /*JSO 04/26/2007, added for
reservists logic*/
    H&FY.004 /* How Long in Health Plan */
    /*******/
  );
  FORMAT _ALL_;

  IF SERVAFF='A' THEN XSERVAFF=1; /*Army;
  ELSE IF SERVAFF='F' THEN XSERVAFF=2; /*Air Force;
  ELSE IF SERVAFF='N' THEN XSERVAFF=3; /*Navy;
  ELSE XSERVAFF=4; /*Other;

  IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; /*Joint Service;

  IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

```

```

IF XTNEXREG = . THEN DELETE; /* RSG 02/2005 USE CACSMPL TO DELETE MISSING
FIELDS*/

IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*/
/*MER 07/12/11 Added 10,11*/
/*AMK 2/10/14 removed 11,
added 13/14*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;
/* Note: use tmp_cell in step2q.sas */
LENGTH TMP_CELL XSERVREG 8;
TMP_CELL = STRATUM; /*KRR 04/03/2006, changed from ADJ_CELL*/

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
    ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
    ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 11;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
    ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/24/2006, Changed Overseas Regions*/
    IF XOCONUS = 1 THEN DO;
        IF XSERVAFF = 1 THEN XSERVREG = 16;
        ELSE IF XSERVAFF = 2 THEN XSERVREG = 17;
        ELSE IF XSERVAFF = 3 THEN XSERVREG = 18;
        ELSE IF XSERVAFF = 4 THEN XSERVREG = 19;
        ELSE XSERVREG = 20;
    END;
    IF XOCONUS = 2 THEN DO;
        IF XSERVAFF = 1 THEN XSERVREG = 21;
        ELSE IF XSERVAFF = 2 THEN XSERVREG = 22;
        ELSE IF XSERVAFF = 3 THEN XSERVREG = 23;
        ELSE IF XSERVAFF = 4 THEN XSERVREG = 24;
        ELSE XSERVREG = 25;
    END;
END;

```

```

END;
IF XOCONUS = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 26;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 27;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 28;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 29;
  ELSE XSERVREG = 30;
END;
END;

RUN;

*****
* Create AGE, FEMALE and GROUP (Beneficiary/Enrollment)
* subsets. Create the region dummies. Recode region 7 to region 8.
*****;
DATA ENTIRE;
  SET ENTIRE;
  LENGTH DEFAULT = 4;
  IF FIELDAGE NE " " THEN DO; /*MJS 01/26/04*/
    AGE1824=0;
    AGE2534=0;
    AGE3544=0;
    AGE4554=0;
    AGE5564=0;
    AGE6574=0;
    AGE75UP=0;
    IF ( '018' <= FIELDAGE <= '024' ) THEN AGE1824=1; /*MJS 01/26/04*/
    ELSE IF ( '025' <= FIELDAGE <= '034' ) THEN AGE2534=1;
    ELSE IF ( '035' <= FIELDAGE <= '044' ) THEN AGE3544=1;
    ELSE IF ( '045' <= FIELDAGE <= '054' ) THEN AGE4554=1;
    ELSE IF ( '055' <= FIELDAGE <= '064' ) THEN AGE5564=1;
    ELSE IF ( '065' <= FIELDAGE <= '074' ) THEN AGE6574=1;
    ELSE IF ( FIELDAGE > '074' ) THEN AGE75UP=1;
  END;

*****
* Create the FEMALE dummy variable.
*****;
IF XSEXA = 2 THEN
  FEMALE = 1;
ELSE
  FEMALE = 0;

*****
* Create the beneficiary group/enrollment group subsets.
*****;
GROUP1 = 0;
GROUP2 = 0;
GROUP3 = 0;
GROUP4 = 0;
GROUP5 = 0;
GROUP6 = 0;
GROUP7 = 0;
GROUP8 = 1; * EVERYONE;

IF (NXNS_COV IN (1,2,6,13) AND H&FY.004>=2) THEN GROUP1 = 1; /*AMK 2/19/14 added
13*/

```

```

IF (XENR_PCM IN (1,2,6) AND H&FY.004>=2) THEN GROUP2 = 1;
/* JSO 04/05/2007 conditions to run RC type */
IF "&RCTYPE" = 'ReportCards' AND (XENR_PCM IN (3,7) AND H&FY.004>=2) THEN GROUP3 =
1;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND ((XENR_PCM IN (3,7) AND
H&FY.004>=2) OR NXNS_COV IN (3,9,10,14)) THEN GROUP3 = 1; /*AMK 2/13/14 added 14*/
IF NXNS_COV IN (3,9,10,14) THEN GROUP4 = 1; /*JSO 08/24/2006, Deleted
4,5*/ /*JSO 07/30/2007, Added 9*/ /*MER 07/12/11 Added 10*/
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN GROUP5 = 1;
/*JSO 07/30/2007, added DBENCAT
conditions*/
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN GROUP6 = 1;
/*JSO 07/30/2007, added DBENCAT
conditions*/
IF XBNFGRP IN (3,4) THEN GROUP7 = 1;

*****
* Recode variables with Never, Sometimes, Usually and Always:
* Recode Never & Sometimes (1 & 2) to 1.
* Recode Usually (3) to 2.
* Recode Always (4) to 3.
*****;

IF H&FY.007 = 1 THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 2 THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 3 THEN R&FY.007 = 2;
ELSE IF H&FY.007 = 4 THEN R&FY.007 = 3;
ELSE IF H&FY.007 < 0 THEN R&FY.007 = .;

IF H&FY.010 = 1 THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 2 THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 3 THEN R&FY.010 = 2;
ELSE IF H&FY.010 = 4 THEN R&FY.010 = 3;
ELSE IF H&FY.010 < 0 THEN R&FY.010 = .;

IF H&FY.021 = 1 THEN R&FY.021 = 1;
ELSE IF H&FY.021 = 2 THEN R&FY.021 = 1;
ELSE IF H&FY.021 = 3 THEN R&FY.021 = 2;
ELSE IF H&FY.021 = 4 THEN R&FY.021 = 3;
ELSE IF H&FY.021 < 0 THEN R&FY.021 = .;

IF H&FY.022 = 1 THEN R&FY.022 = 1;
ELSE IF H&FY.022 = 2 THEN R&FY.022 = 1;
ELSE IF H&FY.022 = 3 THEN R&FY.022 = 2;
ELSE IF H&FY.022 = 4 THEN R&FY.022 = 3;
ELSE IF H&FY.022 < 0 THEN R&FY.022 = .;

IF H&FY.023 = 1 THEN R&FY.023 = 1;
ELSE IF H&FY.023 = 2 THEN R&FY.023 = 1;
ELSE IF H&FY.023 = 3 THEN R&FY.023 = 2;
ELSE IF H&FY.023 = 4 THEN R&FY.023 = 3;
ELSE IF H&FY.023 < 0 THEN R&FY.023 = .;

IF H&FY.024 = 1 THEN R&FY.024 = 1;
ELSE IF H&FY.024 = 2 THEN R&FY.024 = 1;
ELSE IF H&FY.024 = 3 THEN R&FY.024 = 2;
ELSE IF H&FY.024 = 4 THEN R&FY.024 = 3;
ELSE IF H&FY.024 < 0 THEN R&FY.024 = .;

```

```
IF H&FY.029 = 1      THEN R&FY.029 = 1;
ELSE IF H&FY.029 = 2 THEN R&FY.029 = 1;
ELSE IF H&FY.029 = 3 THEN R&FY.029 = 2;
ELSE IF H&FY.029 = 4 THEN R&FY.029 = 3;
ELSE IF H&FY.029 < 0 THEN R&FY.029 = .;
```

```
IF H&FY.033 = 1      THEN R&FY.033 = 1;
ELSE IF H&FY.033 = 2 THEN R&FY.033 = 1;
ELSE IF H&FY.033 = 3 THEN R&FY.033 = 2;
ELSE IF H&FY.033 = 4 THEN R&FY.033 = 3;
ELSE IF H&FY.033 < 0 THEN R&FY.033 = .;
```

```
IF H&FY.041 = 1      THEN R&FY.041 = 1;
ELSE IF H&FY.041 = 2 THEN R&FY.041 = 1;
ELSE IF H&FY.041 = 3 THEN R&FY.041 = 2;
ELSE IF H&FY.041 = 4 THEN R&FY.041 = 3;
ELSE IF H&FY.041 < 0 THEN R&FY.041 = .;
```

```
IF H&FY.042 = 1      THEN R&FY.042 = 1;
ELSE IF H&FY.042 = 2 THEN R&FY.042 = 1;
ELSE IF H&FY.042 = 3 THEN R&FY.042 = 2;
ELSE IF H&FY.042 = 4 THEN R&FY.042 = 3;
ELSE IF H&FY.042 < 0 THEN R&FY.042 = .;
```

```
IF H&FY.046 = 1      THEN R&FY.046 = 1;
ELSE IF H&FY.046 = 2 THEN R&FY.046 = 1;
ELSE IF H&FY.046 = 3 THEN R&FY.046 = 2;
ELSE IF H&FY.046 = 4 THEN R&FY.046 = 3;
ELSE IF H&FY.046 < 0 THEN R&FY.046 = .;
```

```
IF H&FY.047 = 1      THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 2 THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 3 THEN R&FY.047 = 2;
ELSE IF H&FY.047 = 4 THEN R&FY.047 = 3;
ELSE IF H&FY.047 < 0 THEN R&FY.047 = .;
```

```
*****
* Recode variables to one missing condition ".".
* This also renames all the "Hyxxxx" to "Ryxxxx".
*****;
```

```
R&FY.027 = H&FY.027;  IF R&FY.027 < 0 THEN R&FY.027 = .;
R&FY.031 = H&FY.031;  IF R&FY.031 < 0 THEN R&FY.031 = .;
R&FY.018 = H&FY.018;  IF R&FY.018 < 0 THEN R&FY.018 = .;
R&FY.048 = H&FY.048;  IF R&FY.048 < 0 THEN R&FY.048 = .;
R&FY.065 = H&FY.065;  IF R&FY.065 < 0 THEN R&FY.065 = .;
```

```
*****
* Create region and service affiliation dummies.
*****;
```

```
IF XSERVREG NE . THEN DO; /*JSO 08/24/2006, Changed 16 to 24*/ /*MER 11/03/2012,
Changed 24 to 30*/
```

```
    ARRAY REGDUMS (30) REG01 REG02 REG03 REG04 REG05 REG06
                          REG07 REG08 REG09 REG10 REG11 REG12
                          REG13 REG14 REG15 REG16 REG17 REG18
                          REG19 REG20 REG21 REG22 REG23 REG24
                          REG25 REG26 REG27 REG28 REG29 REG30;
```

```
DO I = 1 TO 30;
```

```

        REGDUMS(I)=0;
END;
IF          XSERVREG= 1 THEN REG01  =1;
ELSE IF    XSERVREG= 2 THEN REG02  =1;
ELSE IF    XSERVREG= 3 THEN REG03  =1;
ELSE IF    XSERVREG= 4 THEN REG04  =1;
ELSE IF    XSERVREG= 5 THEN REG05  =1;
ELSE IF    XSERVREG= 6 THEN REG06  =1;
ELSE IF    XSERVREG= 7 THEN REG07  =1;
ELSE IF    XSERVREG= 8 THEN REG08  =1;
ELSE IF    XSERVREG= 9 THEN REG09  =1;
ELSE IF    XSERVREG= 10 THEN REG10 =1;
ELSE IF    XSERVREG= 11 THEN REG11 =1;
ELSE IF    XSERVREG= 12 THEN REG12 =1;
ELSE IF    XSERVREG= 13 THEN REG13 =1;
ELSE IF    XSERVREG= 14 THEN REG14 =1;
ELSE IF    XSERVREG= 15 THEN REG15 =1;
ELSE IF    XSERVREG= 16 THEN REG16 =1;
ELSE IF    XSERVREG= 17 THEN REG17 =1;
ELSE IF    XSERVREG= 18 THEN REG18 =1;
ELSE IF    XSERVREG= 19 THEN REG19 =1;
ELSE IF    XSERVREG= 20 THEN REG20 =1;
ELSE IF    XSERVREG= 21 THEN REG21 =1;
ELSE IF    XSERVREG= 22 THEN REG22 =1;
ELSE IF    XSERVREG= 23 THEN REG23 =1;
ELSE IF    XSERVREG= 24 THEN REG24 =1;
ELSE IF    XSERVREG= 25 THEN REG25 =1;
ELSE IF    XSERVREG= 26 THEN REG26 =1;
ELSE IF    XSERVREG= 27 THEN REG27 =1;
ELSE IF    XSERVREG= 28 THEN REG28 =1;
ELSE IF    XSERVREG= 29 THEN REG29 =1;
ELSE IF    XSERVREG= 30 THEN REG30 =1;

        ARRAY SRVDUMS (5) SRV01 SRV02 SRV03 SRV04 SRV05; /*MER 11/03/2012 Changed from
4 to 5*/
        DO I = 1 TO 5;      /*Needed for consumer watch ONLY */
                SRVDUMS(I)=0;
        END;

        IF          XSERVAFF = 1 THEN SRV01 = 1;
        ELSE IF    XSERVAFF = 2 THEN SRV02 = 1;
        ELSE IF    XSERVAFF = 3 THEN SRV03 = 1;
        ELSE IF    XSERVAFF = 4 THEN SRV04 = 1;
        ELSE IF    XSERVAFF = 5 THEN SRV05 = 1;

END;

RUN;

*****
* Recode item responses to proportional values using CONVERT.SAS.
*****;
%INCLUDE ".../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./CONVERT.sas";

%CONT2(DSN=ENTIRE, NUM=4, Y=R&FY.018 R&FY.048 R&FY.027 R&FY.031);
%CONT3(DSN=ENTIRE, NUM=12, Y=R&FY.007 R&FY.010 R&FY.029 R&FY.033
        R&FY.021 R&FY.022 R&FY.023 R&FY.024
        R&FY.041 R&FY.042 R&FY.046 R&FY.047);

```

```

*****
* Sort the main file to reorder it by MPRID.
*****;
PROC SORT DATA=ENTIRE; BY MPRID; RUN;

*****
* Print the contents of ENTIRE dataset.
*****;
PROC CONTENTS DATA=ENTIRE;
  TITLE2 'Contents of ENTIRE';
RUN;

*****
* Print some of the recoded records.
*****;
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of AGE and SEX dummies';
  VAR MPRID
      FIELDAGE /*MJS 01/26/04*/
      XTNEXREG
      XSERVAFF
      XSERVREG
      USA
      ENBGSMPL
      XSEXA
      STRATUM /*KRR 04/03/2006 Changed from ADJ_CELL*/
      XINS_COV
      NXNS_COV /*JSO 04/26/2007, added for reservists logic*/
      DBENCAT /*JSO 04/26/2007, added for reservists logic*/
      XENR_PCM
      &WGT.
  ;
RUN;

*****
* Print some of the recoded records.
*****;
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of AGE and SEX dummies';
  VAR FIELDAGE /*MJS 01/26/04*/
      AGE1824
      AGE2534
      AGE3544
      AGE4554
      AGE5564
      AGE6574
      AGE75UP

      XSEXA
      FEMALE

      ENBGSMPL
      XINS_COV
      NXNS_COV
      XENR_PCM
      XBNFGRP

```

```

GROUP1
GROUP2
GROUP3
GROUP4
GROUP5
GROUP6
GROUP7
;
RUN;

PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded question variables';
  VAR H&FY.007 R&FY.007
      H&FY.010 R&FY.010
      H&FY.021 R&FY.021
      H&FY.022 R&FY.022
      H&FY.023 R&FY.023
      H&FY.024 R&FY.024
      H&FY.029 R&FY.029
      H&FY.033 R&FY.033
      H&FY.041 R&FY.041
      H&FY.042 R&FY.042
      H&FY.046 R&FY.046
      H&FY.047 R&FY.047
      H&FY.018 R&FY.018
      H&FY.027 R&FY.027
      H&FY.031 R&FY.031
      H&FY.048 R&FY.048
      H&FY.065 R&FY.065
;
RUN;

/*JSO 08/24/2006, Changed 16 to 24*/
/*MER 11/03/2012, Changed 24 to 30*/
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded REGION variables';
  VAR XSERVREG
      REG01
      REG02
      REG03
      REG04
      REG05
      REG06
      REG07
      REG08
      REG09
      REG10
      REG11
      REG12
      REG13
      REG14
      REG15
      REG16
      REG17
      REG18
      REG19
      REG20

```



```

REG21
REG22
REG23
REG24
REG25
REG26
REG27
REG28
REG29
REG30;
RUN;

/*MER 11/03/2012 Changed 4 to 5*/
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded service affiliation variables';
  VAR XSERVREG
      XSERVAFF
      XOCONUS /*JSO 08/24/2006, Changed Overseas Regions*/
      SRV01
      SRV02
      SRV03
      SRV04
      SRV05
  ;
RUN;

*****
* Create the 7 subgroups for processing by STEP2.SAS.
*****;
DATA OUT.GROUP1
      OUT.GROUP2
      OUT.GROUP3
      OUT.GROUP4
      OUT.GROUP5
      OUT.GROUP6
      OUT.GROUP7
      OUT.GROUP8;

  SET ENTIRE;

  DROP
    H&FY.007
    H&FY.010
    H&FY.021
    H&FY.022
    H&FY.023
    H&FY.024
    H&FY.029
    H&FY.033
    H&FY.041
    H&FY.042
    H&FY.046
    H&FY.047
    H&FY.018
    H&FY.027
    H&FY.031
    H&FY.048
    H&FY.065

```

```
;  
IF GROUP1 = 1 THEN OUTPUT OUT.GROUP1;  
IF GROUP2 = 1 THEN OUTPUT OUT.GROUP2;  
IF GROUP3 = 1 THEN OUTPUT OUT.GROUP3;  
IF GROUP4 = 1 THEN OUTPUT OUT.GROUP4;  
IF GROUP5 = 1 THEN OUTPUT OUT.GROUP5;  
IF GROUP6 = 1 THEN OUTPUT OUT.GROUP6;  
IF GROUP7 = 1 THEN OUTPUT OUT.GROUP7;  
OUTPUT OUT.GROUP8;  
RUN;
```

G.1.B - Q3FY2017\PROGRAMS\ReportCards\CAHPS_AdultQ3FY2017\Convert.SAS - Convert Item Responses To Proportional Values.

```

*****
*
* PROGRAM:   CONVERT.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (8687-330)
* PURPOSE:  CONVERT ITEM RESPONSES TO PROPORTIONAL VALUES FOR CONSISTENCY
*           WITH THE TOPS SURVEY.
* WRITTEN:  October 2000 BY ERIC SCHONE
*
* MODIFIED: October 2000 BY KEITH RATHBUN, Added PROLOG.  Also, added DSN
*           to argument lists.
*
* INPUTS:   1) User-specified SAS Dataset
*
* OUTPUTS:  1) User-specified SAS Dataset with recoded values
*
* NOTES:
*
* 1) Arguments for the CONT1-CONT3 macros are as follows:
*   a) SAS dataset name (dsn)
*   b) Number of variables to be converted (num)
*   c) List of variables to be converted (y)
* 2) These macros assume that the response items have already been
*   converted/recoded to CAHPS scales.
*
*****
* CONT1 - Convert big problem, small problem, not a problem questions to
*         proportional values.
*****;
%macro cont1(dsn=, num=, y=);
data &dsn(drop=i);
  set &dsn;
  array vars &y;
  do i = 1 to &num;
    if vars(i) ne . and vars(i) ne 3 then vars(i) = 0;
    if vars(i) = 3 then vars(i) = 1;
  end;
run;
%mend cont1;

*****
* CONT2 - Convert rating questions to proportional values.
*****;
%macro cont2(dsn=, num=, y=);
data &dsn(drop=i);
  set &dsn;
  array vars &y;
  do i=1 to &num;
    if vars(i) ne . and vars(i) < 8 then vars(i) = 0;
    if vars(i) in (8,9,10) then vars(i) = 1;
  end;
run;
%mend cont2;

*****
* CONT3 - Convert Never, Sometimes, Usually, Always questions to

```

```
*           proportional values.
*****;
%macro cont3(dsn=, num=, y=);
data &dsn(drop=i);
  set &dsn;
  array vars &y;
  do i=1 to &num;
    if vars(i) ne . and vars(i) >= 2 then vars(i) = 2;
    vars(i) = vars(i) - 1;
  end;
run;
%mend cont3;
```

G.1.C - Q3FY2017\PROGRAMS\ReportCards\CAHPS_AdultQ3FY2017\STEP2Q.SAS - Calculate CAHPS Adjusted Scores - Run Quarterly.

```

*****
*
* Project: DoD - Quarterly Adult Report Cards
* Program: STEP2Q.SAS
* Purpose: Generate risk-adjusted CAHPS Scores for Adult Report Card.
*
* Requires: Program STEP1Q.SAS must be run prior to running this program.
*
* The adult report card contains a large number of risk-adjusted scores.
* Some scores are calculated from responses to individual survey questions.
* Composite scores are calculated by combining scores from individual
* questions. The scores then are compared with external civilian
* benchmarks. The programming tasks involved in building the report
* card are:
*
*     1) Preparing data for analyses
*     2) Estimating risk adjustment models
*     3) Calculating risk-adjusted values and variances
*     4) Calculating benchmarks
*     5) Comparing risk-adjusted values to benchmarks
*         and hypothesis testing
*
* Previous Program: STEP1Q.SAS
*
* Modified:19) November 3, 2012 by Mike Rudacille, updated for handling of
*           Joint Service facilities
*           20) December 27, 2012 by Aimee Valenzuela, updated variable names for
Q1FY2013
*           21) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*               Change R14 to R&FY.
*               Inserted ..\..\ReportCards\CAHPS_Adult&FOLDER.&FYYEAR.\
as the filepath for all INC files, including
*               REGRSREG, RISKARRY, RISKMEAN, REGARRAY, RISKVARS,
MEANFILE, RISKARRY, RISKMEAN. Also for the FILE statements.
*           22) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*               Changed filepaths to "Data".
*               Changed LIBRARY filepath to "&FMTPATH.".
*               Backslashes changed to forward slashes for INC files.
*
*****;
OPTIONS NOCENTER LS=132 PS=79 SOURCE NOOVP COMPRESS=YES;
LIBNAME IN1 "Data";
LIBNAME OUT "Data";
LIBNAME OUT2 "Data/ADULTTHATFILES";
LIBNAME LIBRARY "&FMTPATH.";

/* RSG 02/2005 hard coded skelreg so data does not have to be copied from quarter to
quarter*/
/* JSO 08/24/2006, Changed from 16 to 24 Regions */ /* MER 11/03/2012, Changed from
24 to 30 Regions */

DATA SKELREG (COMPRESS=NO);
INPUT XSERVREG;
DATALINES;

```

```

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
;
RUN;

*****
*****
* Set GLOBAL parameters here.
*****
*****;

*****
* Set the number of Dependent variables to process.
* One does not need to start at 1, but the max must be >= min.
*****;
%LET MIN_VAR = 1;
%LET MAX_VAR = 16;

*****
* Set the number of subgroups to process.
*****;
%LET MIN_GRP = 1;
%LET MAX_GRP = 8;

*****
* These are expected to remain the same for a particular dependent
* variable run.
*****;
%LET WGT          = FWRWT;
%LET IND_VAR1    = R&FY.065;

```

```
%LET IND_VAR2 = ; * FEMALE;
%LET IND_VAR3 = ; * SREDHIGH;
%LET DEBUGFLG = 0; * Set to 1 if you want extra printout;
```

```
%LET TITL1 = Prime Enrollees;
%LET TITL2 = Enrollees w/military PCM;
%LET TITL3 = Enrollees w/civilian PCM;
%LET TITL4 = Nonenrollees;
%LET TITL5 = Active Duty;
%LET TITL6 = Active Duty Dependents;
%LET TITL7 = Retirees and Dependents;
%LET TITL8 = All Beneficiaries;
```

```
*****
* GETTING NEEDED CARE.
*****;
%LET DEPVAR1 = R&FY.029;
%LET DEPVAR2 = R&FY.033;
```

```
*****
* GETTING NEEDED CARE QUICKLY.
*****;
%LET DEPVAR3 = R&FY.007;
%LET DEPVAR4 = R&FY.010;
```

```
*****
* HOW WELL DOCTORS COMMUNICATE.
*****;
%LET DEPVAR5 = R&FY.021;
%LET DEPVAR6 = R&FY.022;
%LET DEPVAR7 = R&FY.023;
%LET DEPVAR8 = R&FY.024;
```

```
*****
* CUSTOMER SERVICE.
*****;
%LET DEPVAR9 = R&FY.041;
%LET DEPVAR10 = R&FY.042;
```

```
*****
* CLAIMS PROCESSING.
*****;
%LET DEPVAR11 = R&FY.046;
%LET DEPVAR12 = R&FY.047;
```

```
*****
* RATING ALL HEALTH CARE: 0 - 10.
*****;
%LET DEPVAR13 = R&FY.018;
```

```
*****
* RATING OF HEALTH PLAN: 0 - 10.
*****;
%LET DEPVAR14 = R&FY.048;
```

```
*****
```

```

* RATING OF PERSONAL DR: 0 - 10.
*****;
%LET DEPVAR15 = R&FY.027;

*****
* SPECIALITY CARE: 0 - 10.
*****;
%LET DEPVAR16 = R&FY.031;

%MACRO SCORE;
*****;
* use this macro for all groups;
* super region variables are to be used      ;
*****;
%PUT *****;
%PUT STARTING MACRO SCORE;
%PUT "GROUP      = " GROUP&IGRP;
%PUT "TITLE      = " &&DEPVAR&IVAR &&TITL&IGRP;
%PUT "DEP_VAR    = " &&DEPVAR&IVAR;
%PUT "IND_VAR1   = " &IND_VAR1;
%PUT "IND_VAR2   = " &IND_VAR2;
%PUT "IND_VAR3   = " &IND_VAR3;
%PUT "WGT        = " &WGT;
%PUT *****;

*-----;
* If the current group is 1 use the skeleton files;
* else used the previous groups output file;
* The mrgfile is added to by each subgroup;
*-----;
%LET RMRGFILE = OUT.R_&&DEPVAR&IVAR;
%IF "&IGRP" = "1" %THEN %LET RMRGFILE = SKELREG;

* run regression using the region level variables;
* output a BETA file (1 record) and the subgroup;
* file with residuals attached (many records);
PROC REG DATA = GROUP&IGRP OUTEST=BETAS;
    TITLE2 "Regression Model for GROUP&igrp for regions";
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    WEIGHT &WGT;
    %INCLUDE "../ReportCards/CAHPS_Adult&FOLDER.&FYEAR./REGRSREG.INC";
    OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
        PRED&IGRP RESID&IGRP XSERVREG &&DEPVAR&IVAR)
        P = PRED&IGRP
        R = RESID&IGRP;

RUN;

* print of HCSDB file with the residuals and predicted values;
%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=OUT2.H&IGRP&&DEPVAR&IVAR (OBS=70);
        TITLE2 "OUT2.H&IGRP&&DEPVAR&IVAR:  file with predicted values and the
RESID&IGRP";
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
        VAR MPRID XSERVREG &&DEPVAR&IVAR RESID&IGRP PRED&IGRP;
    RUN;

PROC PRINT DATA=BETAS;

```



```

        TITLE2 "BETAS:  file with coefficients";
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;
%END;

*-----;
*----- get the standard err/variance -----;
*-----;
%LET DEP = &&DEPVAR&IVAR;
%R_SUDAAN(OUT2.H&IGRP&&DEPVAR&IVAR);

* calculate prelim adjusted scores for the risk-adjusters;
* merge adjuster means with the adjuster coefficients;
* then sum their products. Finally add in the intercept;
DATA ADJUST;
    SET MEANFILE;
    IF _N_ = 1 THEN SET BETAS(DROP = _TYPE_);
    %include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKARRY.INC";
    %include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKMEAN.INC";
    DO I = 1 TO DIM(COEFFS);
        IF COEFFS(I) = . THEN COEFFS(I) = 0;
        IF MEANS(I) = . THEN MEANS(I) = 0;
        ADJUST + ( COEFFS(I) * MEANS(I) );
    END;
    ADJUST = ADJUST + INTERCEPT;
RUN;

* add the region coefficients to the adjusted value from above;
* output one record per region with the region;
* level adjusted scores;
DATA COEFFREG(KEEP=XSERVREG NEWADJUST);
    SET ADJUST;
    %include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./REGARRAY.INC";
    LENGTH NAME $8;
    DO I=1 TO DIM(REGRHS);
        CALL VNAME(REGRHS(I),NAME);
        XSERVREG=INPUT(SUBSTR(NAME,4,2),2.);
        IF REGRHS(I) = . THEN REGRHS(I) = 0;
        NEWADJUST=ADJUST + REGRHS(I);
        OUTPUT;
    END;
RUN;

* sum of wgts for each region;
PROC MEANS DATA=GROUP&IGRP NWAY NOPRINT ;
    CLASS XSERVREG;
    VAR    &WGT;
    OUTPUT OUT=REG_WGTS (DROP = _TYPE_ _FREQ_) N=REGCNT&IGRP SUM=REGWGT&IGRP;
RUN;

* merge the COEFFREG file with the region;
* adjusted scores to the region level total weight;

```

```

* merge by the region.  Creates a region level;
* file with the total sample weight of the region;
DATA COEFFREG;
    MERGE COEFFREG(IN=IN1)
          REG_WGTS(IN=IN2  KEEP=XSERVREG  REGCNT&IGRP  REGWGT&IGRP);
    BY XSERVREG;
    IF IN1;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=MEANFILE;
        TITLE2 'Print of MEANFILE';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=ADJUST;
        TITLE2 'Print of ADJUST';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=COEFFREG;
        TITLE2 'Print of COEFFREG: Region Adjusted Scores';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=REG_WGTS;
        TITLE2 'Print of REG_WGTS: Region Area Sum of WGTS';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=COEFFREG;
        TITLE2 'Print of COEFFREG: Regions Adjusted Scores - with sum of wgts and
region';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;
%END;

* Calculate region level adjusted scores from the;
* region level adjusted scores in COEFFREG;
PROC MEANS DATA=COEFFREG NWAY NOPRINT;
    WEIGHT REGWGT&IGRP;
    CLASS XSERVREG;
    VAR    NEWADJST;
    OUTPUT OUT=REGFILE1 (DROP = _TYPE_ _FREQ_) MEAN=ADJ&IGRP;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=REGFILE1;
        TITLE2 'Print of REGFILE1: Region Scores';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;
%END;

* merge the previous groups region results (if any);
* with the region level std errs and the region;

```

```

* level results from catchment results collapsed to region;
DATA OUT.R_&&DEPVAR&IVAR;
    MERGE &RMRGFILE(IN=INS)
        R&IGRP&&DEPVAR&IVAR
        REG_WGTS(KEEP = REGCNT&IGRP REGWGT&IGRP XSERVREG)
        REGFILE1(KEEP = ADJ&IGRP XSERVREG);
    BY XSERVREG;
    DEPENDNT = "&&DEPVAR&IVAR";
    IF INS;
RUN;

* merge the previous groups regional results (if any);
* with the region level std err and the region;
* level results from the current group/dependent var;
DATA OUT.R_&&DEPVAR&IVAR;
    MERGE OUT.R_&&DEPVAR&IVAR(IN=INS)
        R&IGRP&&DEPVAR&IVAR /*KRR - removed perm dataset ref to OUT2 */
        REG_WGTS
        REGFILE1;
    BY XSERVREG;
    DEPENDNT = "&&DEPVAR&IVAR";
    IF INS;
RUN;

PROC PRINT DATA=OUT.R_&&DEPVAR&IVAR;
    TITLE2 "Print of XSERVREG variables in &&DEPVAR&IVAR";
    TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
RUN;
%MEND SCORE;

%MACRO MAKE_INC;
*****;
* creates include files for later Procs;
* Needs to be run each time. Called ;
* in the outer (beneficiary loop). ;
* I chose this method because it was ;
* clearer(to me at least). ;
* This macro needs to be run once per ;
* Dep var per subgroup. ;
*****;

* Drop records where the dependent var is missing;
* Drop records with missing catchment or region values;
DATA GROUP&IGRP;
    SET IN1.GROUP&IGRP;
    IF &&DEPVAR&IVAR NOT = .;
RUN;

DATA _NULL_;
    SET GROUP&IGRP END = EOF;
    IF &&DEPVAR&IVAR NOT = .;

    ARRAY AGE CNT(7) 8 aCNT1 - aCNT7;
    RETAIN AGE CNT 0;
    RETAIN CNT 0;
    ARRAY AGENAM(7) $8 AGENAM1 - AGENAM7;
    ARRAY AGENAMX(7) $8 AGENAMX1 - AGENAMX7;
    RETAIN AGENAM;

```

```

RETAIN AGENAMX;
ARRAY REGCNT(30) 8 REGCNT01- REGCNT30; /*JSO 08/24/2006, Changed from 16 to
24*/
                                         /*MER 11/03/2012, Changed from 24 to
30*/
RETAIN CATCNT 0;
RETAIN REGCNT 0;

* create a name array for the parent age dummies;
IF _N_ = 1 THEN DO;
  AGENAM(1) = "AGE1824";
  AGENAM(2) = "AGE2534";
  AGENAM(3) = "AGE3544";
  AGENAM(4) = "AGE4554";
  AGENAM(5) = "AGE5564";
  AGENAM(6) = "AGE6574";
  AGENAM(7) = "AGE75UP";
END;

* total record count;
CNT + 1;

* count records in each age group;
* we will use only age groups with more;
* than 2 obs;
IF AGE1824 = 1 THEN AGE CNT(1) + 1;
IF AGE2534 = 1 THEN AGE CNT(2) + 1;
IF AGE3544 = 1 THEN AGE CNT(3) + 1;
IF AGE4554 = 1 THEN AGE CNT(4) + 1;
IF AGE5564 = 1 THEN AGE CNT(5) + 1;
IF AGE6574 = 1 THEN AGE CNT(6) + 1;
IF AGE75UP = 1 THEN AGE CNT(7) + 1;

* count records in each XSERVREG group;
* we will only use XSERVREGs with more than 2 obs;
* I am using the region value as the subscript;
* to make the code simpler and more readable;
IF 1<= XSERVREG <=30 THEN DO; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER
11/3/12 24 to 30*/
  REGCNT(XSERVREG) = REGCNT(XSERVREG) + 1;
END;

IF EOF THEN GOTO ENDFILE;
RETURN;

ENDFILE:
* create a title common to all procs in the current group;
TITLE " &&DEPVAR&IVAR &&TITL&IGRP";

* display counts in the log;
%IF &DEBUGFLG > 0 %THEN %DO;
  PUT ' ';
  PUT 'AT EOF: ';
  PUT "TOTAL CNT = " CNT;
  PUT AGENAM(1) " " AGE CNT(1)=;
  PUT AGENAM(2) " " AGE CNT(2)=;
  PUT AGENAM(3) " " AGE CNT(3)=;
  PUT AGENAM(4) " " AGE CNT(4)=;

```

```

    PUT AGENAM(5) " " AGECNT(5)=;
    PUT AGENAM(6) " " AGECNT(6)=;
    PUT AGENAM(7) " " AGECNT(7)=;
    PUT " ";

DO I = 1 TO 30; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER 11/3/12 24
to 30*/
    IF(REGCNT(I) > 0) THEN DO;
        PUT 'REG' I Z2. REGCNT(I) 6.;
    END;
END;
PUT ' ';

%END;    *** of debug test;

*-----;
* This include is for the regression using regions;
* in this case we drop the last XSERVREG;
FILE "../..../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./REGRSREG.INC";
PUT @6 "MODEL &&DEPVAR&IVAR = ";
IF "&IND_VAR1" NE "" THEN PUT @12 "&IND_VAR1"; /* KRR - only output when present
*/
IF "&IND_VAR2" NE "" THEN PUT @12 "&IND_VAR2"; /* KRR - only output when present
*/
IF "&IND_VAR3" NE "" THEN PUT @12 "&IND_VAR3"; /* KRR - only output when present
*/

CNT2 = 0;
* setup an array of those age groups that have > 1 obs;
DO I = 1 TO 7;
    IF AGECNT(I) > 1 THEN DO;
        CNT2 + 1;
        AGENAMX(CNT2) = AGENAM(I);
    END;
END;

* now drop the last category to create;
* an omitted category which is required;
* to solve the regression properly;
DO I = 1 TO CNT2-1;
    PUT @12 AGENAMX(I);
END;

* ditto for the catchment areas with > 0 obs;
* in this case we drop the the first USABLE category;
* this is not consistent with the catchment area code;
* but this is the method that Portia used;
FIRST = 0; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER 11/3/12 24 to
30*/
DO I = 1 TO 30; * skip the 1st region with 1+ obs;
    IF REGCNT(I) > 0 THEN DO;
        IF FIRST = 1 THEN PUT @12 'REG' I Z2.;
        FIRST = 1;
    END;
END;
PUT @11 ' ';

```

```

*-----;
* now create the complete var statement;
* for the Proc MEANS used to replace the;
* independent variables missing values;
* we assume the age groups will always be used;
* These are also called the RISK FACTORS;
FILE "../..../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKVARS.INC";
PUT @10 "VAR";
DO I = 1 TO CNT2;
    PUT @12 AGENAMX(I);
END;

* not all the other dependent variables will be used;
* only write them out if they are not null;
CNT3 = 0;
IF "&IND_VAR1" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR1";
END;

IF "&IND_VAR2" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR2";
END;

IF "&IND_VAR3" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR3";
END;
PUT @11 ' ';

*-----;
* create an ARRAY statement of the desired risk factors;
* called adjusters in the specs and in the code;
FILE "../..../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKARRY.INC";
PUT @10 "ARRAY COEFFS(*) $8";
DO I = 1 TO CNT2;
    PUT @12 AGENAMX(I);
END;

CNT3 = 0;
IF "&IND_VAR1" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR1";
END;

IF "&IND_VAR2" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR2";
END;

IF "&IND_VAR3" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR3";
END;
PUT @11 ' ';

```

```

*-----;
* create an ARRAY of mean names for the output;
* from a proc MEANS of the Risk Factors in RISKARRY;
FILE "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKMEAN.INC";
IND_CNT = CNT2 + CNT3;
PUT @6 "ARRAY MEANS(*) $8";
DO I = 1 TO IND_CNT;
    PUT @12 "MEAN" I Z2.;
END;
PUT @11 ' ';

*-----;
* create the equivalent of the following statement;
* OUTPUT OUT=MEANFILE(DROP = _TYPE_) MEAN=MEAN1-MEAN&MEAN_CNT;
FILE "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./MEANFILE.INC";
PUT @6 "OUTPUT OUT=MEANFILE(DROP = _TYPE_) MEAN = ";
DO I = 1 TO IND_CNT;
    PUT @12 "MEAN" I Z2.;
END;
PUT @11 ' ';

*-----;
* create a super region area array;
* with at least ONE obs;
FILE "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./REGARRAY.INC";
PUT @10 "ARRAY REGRHS(*) $8";
DO I = 1 TO 30; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER
11/3/12 24 to 30*/
    IF REGCNT(I) > 0 THEN DO; *** ems 7/12/00 changed "> 1" to "> 0";
        PUT @16 'REG' I Z2.;
    END;
END;
PUT @11 ' ';
RUN;

* Create the means of the adjuster variables;
* They will be used to replace missing adjuster variables;
* calculate weighted means;
PROC MEANS DATA=GROUP&IGRP;
    WEIGHT &WGT;
    %include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKVARS.INC";
    %include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./MEANFILE.INC";
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=MEANFILE;
        TITLE2 "Print of MEANFILE for Risk Adjuster variables";
        TITLE3 "Beneficiary group&igrp: &TITL&IGRP";
    RUN;
%END;

DATA GROUP&IGRP;
    SET GROUP&IGRP;
    IF _N_ = 1 THEN SET MEANFILE;

```

```

%include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKARRY.INC";
%include "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./RISKMEAN.INC";
DO I = 1 TO DIM(COEFFS);
  IF COEFFS(I) = . THEN DO;
    COEFFS(I) = MEANS(I);
  END;
END;
RUN;
/* PROC MEANS DATA=out.group8;
  WEIGHT &WGT;
  %include "RISKVARS.INC";
  %include "MEANFILE.INC";
RUN;*/
%MEND MAKE_INC;

%MACRO R_SUDAAN(INFILE);
*****
* Use this macro to create standard err (variances)
* for XSERVREGs.
*****;
%PUT *****;
%PUT STARTING MACRO R_SUDAAN (XSERVREG);
%PUT *****;

DATA &INFILE;
  SET &INFILE;
  IF 1<= XSERVREG <= 30; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER 11/3/12 24
to 30*/
RUN;

* Sort data by TMP_CELL;
PROC SORT DATA=&INFILE;
  BY TMP_CELL;
RUN;

%IF &DEBUGFLG > 5 %THEN %DO;
  PROC PRINT DATA=&INFILE(OBS=5);
    TITLE2 'Print of the input file to SUDAAN (XSERVREG)';
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
  RUN;
%END;

* Calculate values for super regions;
PROC DESCRIPT DATA=&INFILE DESIGN=STRWR NOPRINT;
  WEIGHT &WGT;
  SETENV DECWIDTH=4;
  NEST TMP_CELL / missunit;
  VAR RESID&IGRP;
  TABLES XSERVREG;
  SUBGROUP XSERVREG;
  LEVELS 30; /*JSO 08/24/2006, Changed from 16 to 24*/ /*MER 11/3/12 24 to 30*/
  OUTPUT SEMEAN
    / REPLACE TABLECELL=DEFAULT
      FILENAME=RS&DEP;
RUN;

```



```

DATA R&IGRP&&DEPVAR&IVAR;
  SET RS&DEP;
  KEEP XSERVREG SEMEAN;
  IF SEMEAN NE .;
  RENAME SEMEAN = SEMEAN&IGRP;
RUN;

PROC PRINT DATA=R&IGRP&&DEPVAR&IVAR;
  TITLE2 "Print XSERVREG DESCRIPT DATA=R&IGRP&&DEPVAR&IVAR";
  TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%MEND  R_SUDAAN;

%*****;
%*   call the macros;
%*****;

%MACRO MAINLOOP(MIN_VAR,MAX_VAR,MIN_GRP,MAX_GRP);
  %* loop over the set of dependent variables;
  %DO IVAR = &MIN_VAR %TO &MAX_VAR;
    %DO IGRP = &MIN_GRP %TO &MAX_GRP;
      %MAKE_INC;
      %SCORE;
    %END;
  %END;

%MEND;

%MAINLOOP (&MIN_VAR, &MAX_VAR, &MIN_GRP, &MAX_GRP);

```

G.1.D - Q3FY2017\PROGRAMS\ReportCards\CAHPS_AdultQ3FY2017\COMPOSIT.SAS - Calculate CAHPS Composite Scores - Run Quarterly.

```

*****
* Project: DoD - Quarterly Adult Report Cards
* Program: COMPOSIT.SAS
* Purpose: Generate Quarterly Adult Report Card composite scores
* Requires: Programs STEP1Q.SAS and STEP2Q.SAS must be run prior
*           to this program.
*
* Modified: 1) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*           Changed FILES filepath to
*           ../../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./FILES.INC.
*           Change R14 to R&FY.
*           Added INFILE Data step removing BYVARs with only one
occurrence.
*           2) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*           Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*
*****;
OPTIONS NOCENTER LS=132 PS=78 SOURCE SOURCE2 MLOGIC MPRINT NOOVP COMPRESS=YES
NOFMTERR;
libname in          "Data";
libname in2         "Data/ADULTTHATFILES";
libname out         "Data";
LIBNAME LIBRARY "&FMTPATH.";

%LET WGT = FWRWT;

%MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,QCOUNT=);

DATA _NULL_;
  %IF "&TYPE" = "R" %THEN %DO;
    CALL SYMPUT ('BYVAR','XSERVREG');
  %END; %ELSE
  %IF "&TYPE" = "C" %THEN %DO;
    CALL SYMPUT ('BYVAR','CACSMPL');
  %END;

*****;
*   Create a Composite Score           ;
*****;
DATA _NULL_;
  FILE "../../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./FILES.INC";
  PUT @6 'SET';
  IF "&VAR1" NE '' THEN PUT @8 "IN.&TYPE._&VAR1";
  IF "&VAR2" NE '' THEN PUT @8 "IN.&TYPE._&VAR2";
  IF "&VAR3" NE '' THEN PUT @8 "IN.&TYPE._&VAR3";
  IF "&VAR4" NE '' THEN PUT @8 "IN.&TYPE._&VAR4";
  PUT @8 ' ';
RUN;

DATA COMPOS&COMPOS;
  LENGTH DEPENDNT $ 8;
  %INCLUDE "../../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./FILES.INC";
  DEPENDNT = "&TYPE.COMPOS&COMPOS";

```

```

RUN;

PROC SORT DATA=COMPOS&COMPOS;
  BY &BYVAR;
RUN;

PROC PRINT DATA=COMPOS&COMPOS(OBS=60);
  TITLE "Print of COMPOS&COMPOS after sort";
RUN;

DATA COMPOS&COMPOS;
  SET COMPOS&COMPOS;
  BY &BYVAR;
  %IF "&TYPE" = "R" %THEN %DO;
    ARRAY N(*) REGCNT1 - REGCNT8;
    ARRAY W(*) REGWGT1 - REGWGT8;
    ARRAY TN(*) TOTCNT1 - TOTCNT8;
    ARRAY TW(*) TOTWGT1 - TOTWGT8;
  %END; %ELSE
  %IF "&TYPE" = "C" %THEN %DO;
    ARRAY N(*) CATCNT1 - CATCNT8;
    ARRAY W(*) CATWGT1 - CATWGT8;
    ARRAY TN(*) TOTCNT1 - TOTCNT8;
    ARRAY TW(*) TOTWGT1 - TOTWGT8;
  %END;
  ARRAY ADJ(*) ADJ1 - ADJ8;
  ARRAY TOTADJ(*) TOTADJ1 - TOTADJ8;
  ARRAY AVGADJ(*) AVJADJ1 - AVJADJ8;
  RETAIN TOTADJ TN TW;
  RETAIN AVGADJ;

  IF FIRST.&BYVAR THEN DO;
    DO I = 1 TO DIM(TOTADJ);
      TOTADJ(I) = 0; TN(I)=0; TW(I)=0;
    END;
  END; DROP I;

  PUT ' ';
  PUT ' --- STARTING LOOP1: ' &BYVAR=;
  DO I = 1 TO DIM(TOTADJ);
    PUT I= ADJ(I)=;
    IF ADJ(I) NE . THEN DO;
      TOTADJ(I) = TOTADJ(I) + ADJ(I);
      TN(I)=TN(I)+N(I);
      TW(I)=TW(I)+W(I);
    END;
    PUT I= ADJ(I)= TOTADJ(I)=;
  END;

  PUT ' ';
  PUT ' --- STARTING LOOP2: ' &BYVAR=;
  IF LAST.&BYVAR THEN DO;
    DO I = 1 TO DIM(TOTADJ);
      PUT I= ADJ(I)= TOTADJ(I)= AVGADJ(I)=;
      AVGADJ(I) = TOTADJ(I)/&QCOUNT;
      adj(i)=avgadj(i);
      N(I)=TN(I)/&QCOUNT;
    END;
  END;

```

```

        W(I)=TW(I)/&QCOUNT;
    END;
    OUTPUT;
END;

```

```

RUN;

```

```

%do i=1 %to 8;
/* Collect Standard Errors and residuals from variables in composite */
  %if &type=R|(&i=1|&i=2|&i>4) %then %do;
    %if &var1~= %then %do;
      %let n=r_&var1;
      %let m=s_&var1;

      data s_&var1(rename=(semean&i=s_&var1));
        set in.&type._&var1(keep=semean&i &byvar);

      proc sort;
        by &byvar;

      data r_&var1;
        set in2.h&i.&var1(rename=(resid&i=r_&var1));

      proc sort data=r_&var1;
        by mprid;
    %end;

    %if &var2~= %then %do;
      %let n=%str(&n r_&var2);
      %let m=%str(&m s_&var2);

      data s_&var2(rename=(semean&i=s_&var2));
        set in.&type._&var2(keep=semean&i &byvar);

      proc sort;
        by &byvar;

      data r_&var2;
        set in2.h&i.&var2(rename=(resid&i=r_&var2));

      proc sort data=r_&var2;
        by mprid;
    %end;

    %if &var3~= %then %do;
      %let n=%str(&n r_&var3);

      data s_&var3(rename=(semean&i=s_&var3));
        set in.&type._&var3(keep=semean&i &byvar);

      proc sort;
        by &byvar;

      data r_&var3;
        set in2.h&i.&var3(rename=(resid&i=r_&var3));

      proc sort data=r_&var3;
        by mprid;
    %end;
  %end;
%end;

```

```

        %let m=%str(&m s_&var3);
%end;

%if &var4~= %then %do;
    %let n=%str(&n r_&var4);

    data s_&var4(rename=(semean&i=s_&var4));
        set in.&type._&var4(keep=semean&i &byvar);

    proc sort;
        by &byvar;

    data r_&var4;
        set in2.h&i.&var4(rename=(resid&i=r_&var4));

    %let m=%str(&m s_&var4);

    proc sort data=r_&var4;
        by mprid;
%end;

/* Merge residual files and estimate correlations */
data infile;
    merge &n;
    by mprid;

proc sort;
    by &byvar;

data infile;
    set infile;
    by &byvar.;
    if first.&byvar ne 1 or last.&byvar ne 1;
run;

proc corr outp=outf noprint;
    by &byvar;
    var &n;
    weight &WGT.;

data outf;
    set outf;
    by &byvar;
    where _type_='CORR';

/* sum standard error of a row variable times correlation times standard
error of each column variable, then sum sums and take square root, divide by number
of variables */
data final;
    merge &m outf;
    by &byvar;

data final;
    set final; by &byvar;

```

```

array r_val &n;
array s_val &m;
sde=0;

do i=1 to dim(s_val);
  %do j=1 %to &qcount;
    if upcase(_name_)=upcase("R_&&var&j") then
      sde=sum(sde,r_val(i)*s_&&var&j*s_val(i));
    %end;
  end;

data sefin&compos._&i ERROR;
set final;
by &byvar;
if first.&byvar then tv=0;
tv+sde;
if last.&byvar then do;
  if tv >= 0 then sde&i=(tv**.5)/&qcount; /* RSG 06/22/2004
change to only do the power calculation if the tv value is nonnegative*/
  else if tv < 0 then do; /* RSG 06/22/2004 those with
negative trend is set aside to print out*/
    output error; /* and determine
whether it is from nonmissing data of 30 or more*/
    sde&i=.;
  end;
  output sefin&compos._&i;
end;

run;
/* RSG 06/22/2004 - count how many nonmissing values are in the
trend data
to determine whether the negative trend in above datastep
(tv < 0) is something to be concerned about */
proc means data=infile noprint;
by &byvar;
var &n;
output out=miss (drop=_type_ _freq_) n=;

data error2;
merge error(in=a drop=&n) miss(in=b);
by &byvar;
if a;
run;

proc print data=error2; /* RSG 06/22/2004 print out negative trend data
and count of nonmissing data*/
var &byvar tv &n;
title "ERROR - NEGAVTIVE TREND FOR &N IN GROUP=&I. AND
COMPOSE=&COMPOS.";
run;

title ' '; /** RSG 06/22/2004 - BLANK OUT TITLE FOR NEXT LOOP **/

%if &i=1 %then %do;
data sefin&compos;
set sefin&compos._1(keep=&byvar sde&i);
by &byvar;
rename sde&i=semean&i;

```

```

        run;
    %end;
%else %do;
    data sefin&compos;
        merge sefin&compos sefin&compos._&i(keep=&byvar sde&i);
        by &byvar;
        rename sde&i=semean&i;
    run;
%end;

%end;

%end;

data out.&type.compos&compos;
merge compos&compos sefin&compos; by &byvar;
run;
PROC PRINT DATA=OUT.&TYPE.COMPOS&COMPOS;
    TITLE1 COMPTITL;
    RUN;
%MEND COMPOSIT;

*-----;
*-      set the parameters here      -;
*-----;
*****;
* Call the macro for each composite ;
*****;
%COMPOSIT (type=R,compos=1,var1=R&FY.029,var2=R&FY.033,qcount=2);
%COMPOSIT (type=R,compos=2,var1=R&FY.007,var2=R&FY.010,qcount=2);
%COMPOSIT
(type=R,compos=3,var1=R&FY.021,var2=R&FY.022,var3=R&FY.023,var4=R&FY.024,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R&FY.041,var2=R&FY.042,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R&FY.046,var2=R&FY.047,qcount=2);

```

G.2.A - Q3FY2017\PROGRAMS\LOADWEB\CAHPS_AdultQ3FY2017\LOADCAHQ.SAS - Convert CAHPS Scores into WEB layout - Run Quarterly.

```

*****
*
* PROGRAM:   LOADCAHQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Convert the CAHPS Scores Database into the WEB layout
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from LOADCAHP.SAS.
*
* INPUTS:   1) CAHPS Individual and Composite data sets with adjusted scores
*
* OUTPUT:   1) LOADCAHQ.sas7bdat - Combined CAHPS Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*             and composite data sets
*
* NOTES:
*
* 1) The following steps need to be run prior to this program:
*   - STEP1Q.SAS - Recode questions and generate group files
*   - STEP2Q.SAS - Calculate individual adjusted scores for group 1-7
*   - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
*
* 2) The output file (LOADCAHQ.sas7bdat) will be run through the
*   MAKEHTMQ.SAS program to generate the WEB pages.
*
* MODIFIED:
*
* 36) 3/5/2012 by Amanda Kudis - Changed libname IN and Year Macro Var for Q2.
* 37) 6/20/2012 by Amanda Kuis - Updated for Q3FY2012.
* 38) 8/23/2012 by Christine Cheu - Updated for Q4FY2012.
* 39) 12/27/2012 by Aimee Valenzuela - Updated for Q1FY2013.
* 40) 03/23/2013 by Mike Rudacille - Updated for Q2FY2013.
* 41) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*     Replaced RCTYPE with &PC.ReportCards.
*     Changed IN to "..\..\&RCTYPE\CAHPS_ADULT&FOLDER.&FYYEAR.DATA".
*     Changed LOADCAHQ.INC to ..\..\LoadWeb\LOADCAHQ.INC.
*     Changed YEAR to &CYEAR.
*     Changed R14 to R&FY.
* 42) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*     Corrected capitalization and backslashes in LIBNAME and INC filepaths.
*
*****
* Assign data libraries and options
*****;
/**** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ****/
%LET RCTYPE = &PC.ReportCards;

LIBNAME IN    "..../&RCTYPE/CAHPS_Adult&FOLDER.&FYYEAR./Data";
LIBNAME OUT  "DATA";
LIBNAME LIBRARY "&fmtpath.";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****
* Load Format definitions for CAHPS Individual and composite data sets.

```



```

*****;
%INCLUDE "..../LoadWeb/LOADCAHQ.INC";

*****
*****
*
* Process Macro Input Parameters:
*
* 1) QUESTION = Variable Question Name (DSN).
*   - For individual Questions it is the variable name
*   - For composite Questions it is called xCOMPOSn
*     where n = a predefined composite # and
*           x = R (Region) or C (Catchment)
* 2) TYPE = Type of Score (COMPOSITE or INDIVIDUAL)
* 3) REGCAT = Region/Catchment Area
*
*****
*****;
%MACRO PROCESS(QUESTION=,TYPE=);
*****
* Assign value for BENTYPE composite year
*****;
%LET YEAR = "&CYEAR."; * Note that this is based on Calendar Year here;

*****
* Assign prefix for weighted/unweighted count variables.
* Unweighted counts is REGCNTn where n=group number.
* Weighted counts is REGWGTn where n=group number.
*****;
%LET PREFIX = REG;

*****
*
* Convert the CAHPS individual Scores Record into WEB layout.
* There are 8 logical records (adjusted scores) per physical record
*
*****;
DATA &QUESTION;
  SET IN.&QUESTION;

  LENGTH MAJGRP $30;
  LENGTH REGION $30; **RSG 01/2005 - Changed format to be large enough to include
service affiliation;
  LENGTH REGCAT $30; **MER 11/07/2012 - Changed REGION and REGCAT to be large
enough for Joint Services;
  LENGTH BENTYPE $50;
  LENGTH BENEFIT $34;
  LENGTH TIMEPD $35; **MJS 07/03/03 Added line;

*****
* Assign Region
*****;
REGION = PUT(XSERVREG,SERVREGF.);
*****
* Assign benefit and benefit type
*****;
IF "&TYPE" = "INDIVIDUAL" THEN DO;
  IF DEPENDNT IN("R&FY.018","R&FY.048","R&FY.027","R&FY.031") THEN

```

```

        BENTYPE = "Composite";    ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPPF.);
    ELSE
        BENTYPE = PUT(DEPENDNT,$BENTYPPF.);
        BENEFIT = PUT(DEPENDNT,$BENEF.);
        TIMEPD = PUT(&YEAR,$BENTYPPF.);    ***MJS 07/03/03 Added line;
    END;
    ELSE IF "&TYPE" = "COMPOSITE" THEN DO;
        BENTYPE = "Composite";    ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPPF.);
        BENEFIT = PUT(DEPENDNT,$BENEF.);
        TIMEPD = PUT(&YEAR,$BENTYPPF.);    ***MJS 07/03/03 Added line;
    END;
    ELSE PUT "ERROR - Invalid TYPE = &TYPE";

*****
* For now, Initialize Significance test to zero.
*****;
SIG = 0;
*****
* Assign Region
*****;
REGCAT = PUT(XSERVREG,SERVREGF.);

*****
* 1 = Prime Enrollees
*****;
MAJGRP = PUT(1,MAJGRPF.);
SCORE = ADJ1;
SEMEAN = SEMEAN1;
N_OBS = &PREFIX.CNT1;
N_WGT = &PREFIX.WGT1;
OUTPUT;

*****
* 2 = Enrollees with Military PCM
*****;
MAJGRP = PUT(2,MAJGRPF.);
SCORE = ADJ2;
SEMEAN = SEMEAN2;
N_OBS = &PREFIX.CNT2;
N_WGT = &PREFIX.WGT2;
OUTPUT;

*****
* 3 = Enrollees with Civilian PCM
*****;
MAJGRP = PUT(3,MAJGRPF.);
SCORE = ADJ3;
SEMEAN = SEMEAN3;
N_OBS = &PREFIX.CNT3;
N_WGT = &PREFIX.WGT3;
OUTPUT;

*****
* 4 = Non-enrolled Beneficiaries
*****;
MAJGRP = PUT(4,MAJGRPF.);

```

```
SCORE = ADJ4;
SEMEAN = SEMEAN4;
N_OBS = &PREFIX.CNT4;
N_WGT = &PREFIX.WGT4;
OUTPUT;
```

```
*****
* 5 = Active Duty
*****;
MAJGRP = PUT(5,MAJGRPF.);
SCORE = ADJ5;
SEMEAN = SEMEAN5;
N_OBS = &PREFIX.CNT5;
N_WGT = &PREFIX.WGT5;
OUTPUT;
```

```
*****
* 6 = Active Duty Dependents
*****;
MAJGRP = PUT(6,MAJGRPF.);
SCORE = ADJ6;
SEMEAN = SEMEAN6;
N_OBS = &PREFIX.CNT6;
N_WGT = &PREFIX.WGT6;
OUTPUT;
```

```
*****
* 7 = Retirees and Dependents
*****;
MAJGRP = PUT(7,MAJGRPF.);
SCORE = ADJ7;
SEMEAN = SEMEAN7;
N_OBS = &PREFIX.CNT7;
N_WGT = &PREFIX.WGT7;
OUTPUT;
```

```
*****
* 8 = All Beneficiaries ALL Beneficiaries
*****;
MAJGRP = PUT(8,MAJGRPF.);
SCORE = ADJ8;
SEMEAN = SEMEAN8;
N_OBS = &PREFIX.CNT8;
N_WGT = &PREFIX.WGT8;
OUTPUT;
```

```
KEEP MAJGRP
REGION
REGCAT
BENTYPE
BENEFIT
TIMEPD /*MJS 07/03/03 Added*/
SCORE
SEMEAN
N_OBS
N_WGT
SIG
;
```

RUN;

%MEND;

```
*****
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****;
%PROCESS(QUESTION=RCOMPOS1,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R&FY.029,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.033,TYPE=INDIVIDUAL);

*****
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****;
%PROCESS(QUESTION=RCOMPOS2,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R&FY.007,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.010,TYPE=INDIVIDUAL);

*****
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****;
%PROCESS(QUESTION=RCOMPOS3,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R&FY.021,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.022,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.023,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.024,TYPE=INDIVIDUAL);

*****
* COMPOSITE # 4.
* CUSTOMER SERVICE.
*****;
%PROCESS(QUESTION=RCOMPOS4,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R&FY.041,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.042,TYPE=INDIVIDUAL);

*****
* COMPOSITE # 5.
* CLAIMS PROCESSING.
*****;
%PROCESS(QUESTION=RCOMPOS5,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R&FY.046,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R&FY.047,TYPE=INDIVIDUAL);

*****
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****;
%PROCESS(QUESTION=R_R&FY.018,TYPE=INDIVIDUAL);

*****
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****;
%PROCESS(QUESTION=R_R&FY.048,TYPE=INDIVIDUAL);
```

```

*****
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****;
%PROCESS(QUESTION=R_R&FY.027,TYPE=INDIVIDUAL);

*****
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****;
%PROCESS(QUESTION=R_R&FY.031,TYPE=INDIVIDUAL);

*****
*****
* STACK up all of the files into one final output dataset.
*****
*****;
DATA OUT.LOADCAHQ;
  SET R_R&FY.029
      R_R&FY.033
      R_R&FY.007
      R_R&FY.010
      R_R&FY.021
      R_R&FY.022
      R_R&FY.023
      R_R&FY.024
      R_R&FY.041
      R_R&FY.042
      R_R&FY.046
      R_R&FY.047
      R_R&FY.018
      R_R&FY.048
      R_R&FY.027
      R_R&FY.031
      RCOMPOS1
      RCOMPOS2
      RCOMPOS3
      RCOMPOS4
      RCOMPOS5
  ;
  IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (6663-410)";
TITLE2 "Program Name: LOADCAHQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: CAHPS Individual and Composite data sets with adjusted
scores";
TITLE4 "Program Outputs: LOADCAHQ.SAS7BDAT - Combined CAHPS Scores Database in WEB
layout";

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
      REGION*REGCAT
      /MISSING LIST;
RUN;

```

G.2.B - Q3FY2017\PROGRAMS\LOADWEB\LOADCAHQ.INC - Format definitions for converting the Scores Database into the WEB layout - Run Quarterly.

```
*****
*
* PROGRAM:   LOADCAHQ.INC
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Format definitions for converting the CAHPS Scores Database
*           into the WEB layout.
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from LOADCAHP.INC.
*
* MODIFIED: 1) 08/13/2001 BY KEITH RATHBUN, Added XSERVAFF format to
*           accommodate the short reports.
*           2) 01/24/2002 BY KEITH RATHBUN, Added BENTYPPF = 1998,1999,2000
*           added catchment composites.
*           3) 04/10/2002 BY KEITH RATHBUN, Added parameters for 2002 survey.
*           4) 04/03/2003 BY MIKE SCOTT, Added parameters for 2003 survey.
*           5) 07/08/2003 BY MIKE SCOTT, Added formats GETNCARE, GETCAREQ,
*           CRTSHELP, HOWWELL, CUSTSERV, CLMSPROC, and PREVCARE.
*           6) 03/22/2004 BY KEITH RATHBUN, Added parameters for 2004 survey.
*           Changed R04031 to be "Wait Less than 15 Minutes For Appointment".
*           7) 05/06/2004 BY MIKE SCOTT, Changed R04031 back to 2003 version of
*           the label ("Wait More than 15 Minutes Past Appointment") so that
*           the Q1 2004 version of the question is consistent with past
*           versions. The label will be changed to the new version ("Waiting
*           in the Doctor's Office") in Makehtmqs.sas.
*           8) 02/2006 BY REGINA GRAMSS, Changed date format to fielding dates.
*           9) 03/21/2006 BY KEITH RATHBUN, Added parameters for 2006 survey.
*           10) 08/22/2006 BY JUSTIN OH, Changed SERVREGF format for Overseas.
*           11) 12/15/2006 BY JUSTIN OH, Added parameters for 2007 survey.
*           12) 02/02/2007 BY JUSTIN OH, Added "s" in Healthy Behaviors in VALUE BEN.
*           13) 01/10/2008 BY KEITH RATHBUN, Added parameters for 2008 survey.
*           14) 01/09/2009 BY MIKE RUDACILLE, Added parameters for 2009 survey.
*           14) 01/16/2009 BY MIKE RUDACILLE, Changed CONUS to USA.
*           15) 04/11/2009 by Mike Rudacille - Changed formats to reflect
*           modifications to beneficiary reports necessary for V4
*           16) 12/17/09 by Emma Ernst, Added parameters for 2010 survey.
*           17) 12/02/10 by Mike Rudacille, Added parameters for 2011 survey.
*           Also removed 2000 parameters for space considerations.
*           18) 12/10/11 by Mike Rudacille, Added parameters for 2012 survey.
*           Also removed 2002 parameters for space considerations.
*           19) 11/03/12 by Mike Rudacille, Updated for handling of
*           Joint Service facilities
*           20) 12/27/12 by Aimee Valenzuela, Added parameters for 2013 survey.
*           21) 09/20/13 by Amanda Kudis, Added parameters for 2014 survey.
*
*
* INPUTS:   No direct input
*
* OUTPUT:   No direct output
*
* NOTES:    1) Under the new contract (8860), the survey year was changed
*           to be based on the year the survey is administered (2002)
*           as opposed to the questioning reference frame (2001). This
*           include file contains variable names for both the 2001
*           survey administration year and the the 2002 administration
*           year surveys.
```

```

*
*****
;
*****
* FORMAT Definitions
*****;
PROC FORMAT;
  VALUE MAJGRPF
    1 = "Prime Enrollees          "
    2 = "Enrollees with Military PCM"
    3 = "Enrollees with Civilian PCM"
    4 = "Non-enrolled Beneficiaries "
    5 = "Active Duty              "
    6 = "Active Duty Dependents    "
    7 = "Retirees and Dependents   "
    8 = "All Beneficiaries         "
;
  VALUE XSERVAFF
    1 = "ARMY"
    2 = "AIR FORCE"
    3 = "NAVY"
    4 = "OTHER"
    5 = "JOINT SERVICE"
;
  VALUE REGIONF
    0 = "USA MHS "
    1 = "North"
    2 = "South"
    3 = "West "
    4 = "Overseas"
;

/*JSO 08/24/2006, Changed Overseas to Service for Europe,Pacific,Latin*/
  VALUE SERVREGF
    1 = "North Army"
    2 = "North Air Force"
    3 = "North Navy"
    4 = "North Other"
    5 = "North Joint Service"
    6 = "South Army"
    7 = "South Air Force"
    8 = "South Navy"
    9 = "South Other"
    10 = "South Joint Service"
    11 = "West Army"
    12 = "West Air Force"
    13 = "West Navy"
    14 = "West Other"
    15 = "West Joint Service"
    16 = "Europe Army"
    17 = "Europe Air Force"
    18 = "Europe Navy"
    19 = "Europe Other"
    20 = "Europe Joint Service"
    21 = "Pacific Army"
    22 = "Pacific Air Force"
    23 = "Pacific Navy"
    24 = "Pacific Other"

```

25 = "Pacific Joint Service"
 26 = "Latin America Army"
 27 = "Latin America Air Force"
 28 = "Latin America Navy"
 29 = "Latin America Other"
 30 = "Latin America Joint Service"
 31 = "USA ARMY"
 32 = "USA AIR FORCE"
 33 = "USA NAVY"
 34 = "USA OTHER";

/*JSO 08/24/2006, Changed Overseas to Europe,Pacific,Latin*/

VALUE SERVREGO

1 = "North Army"
 2 = "North Air Force"
 3 = "North Navy"
 4 = "North Other"
 5 = "North Joint Service"
 6 = "South Army"
 7 = "South Air Force"
 8 = "South Navy"
 9 = "South Other"
 10 = "South Joint Service"
 11 = "West Army"
 12 = "West Air Force"
 13 = "West Navy"
 14 = "West Other"
 15 = "West Joint Service"
 16 = "Overseas Europe"
 17 = "Overseas Pacific"
 18 = "Overseas Latin America";

VALUE \$BENTYPPF

"2006 Q1 "	= "January, 2006	"
"2006 Q2 "	= "April, 2006	"
"2006 Q3 "	= "July, 2006	"
"2006 Q4 "	= "October, 2006	"
"2007 Q1 "	= "January, 2007	"
"2007 Q2 "	= "April, 2007	"
"2007 Q3 "	= "July, 2007	"
"2007 Q4 "	= "October, 2007	"
"2008 Q1 "	= "January, 2008	"
"2008 Q2 "	= "April, 2008	"
"2008 Q3 "	= "July, 2008	"
"2008 Q4 "	= "October, 2008	"
"2009 Q1 "	= "January, 2009	"
"2009 Q2 "	= "April, 2009	"
"2009 Q3 "	= "July, 2009	"
"2009 Q4 "	= "October, 2009	"
"2010 Q1 "	= "January, 2010	"
"2010 Q2 "	= "April, 2010	"
"2010 Q3 "	= "July, 2010	"
"2010 Q4 "	= "October, 2010	"
"2011 Q1 "	= "January, 2011	"
"2011 Q2 "	= "April, 2011	"
"2011 Q3 "	= "July, 2011	"
"2011 Q4 "	= "October, 2011	"
"2012 Q1 "	= "January, 2012	"


```

"2012 Q2 " = "April, 2012           "
"2012 Q3 " = "July, 2012            "
"2012 Q4 " = "October, 2012         "
"2013 Q1 " = "January, 2013         "
"2013 Q2 " = "April, 2013           "
"2013 Q3 " = "July, 2013            "
"2013 Q4 " = "October, 2013         "
"2014 Q1 " = "January, 2014         "
"2014 Q2 " = "April, 2014           "
"2014 Q3 " = "July, 2014            "
"2014 Q4 " = "October, 2014         "
"2015 Q1 " = "January, 2015         "
"2015 Q2 " = "April, 2015           "
"2015 Q3 " = "July, 2015            "
"2015 Q4 " = "October, 2015         "
"2016 Q1 " = "January, 2016         "
"2016 Q2 " = "April, 2016           "
"2016 Q3 " = "July, 2016            "
"2016 Q4 " = "October, 2016         "
"2017 Q1 " = "January, 2017         "
"2017 Q2 " = "April, 2017           "
"2017 Q3 " = "July, 2017            "
"2017 Q4 " = "October, 2017         "

```

```

/*****
*****/

```

```

/* Admin. Year Defn.
*/

```

```

/* 2007      2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      */

```

```

/*****
*****/

```

```

"R07013", "R08013", "R09029", "R10029", "R11029", "R12029", "R13029", "R14029",
"R15029", "R16029", "R17029" = "Getting to See a Specialist           "
"R07027", "R08027", "R09033", "R10033", "R11033", "R12033", "R13033", "R14033",
"R15033", "R16033", "R17033" = "Getting Treatment                       "
"R07019", "R08019", "R09007", "R10007", "R11007", "R12007", "R13007", "R14007",
"R15007", "R16007", "R17007" = "Wait for Urgent Care                     "
"R07022", "R08022", "R09010", "R10010", "R11010", "R12010", "R13010", "R14010",
"R15010", "R16010", "R17010" = "Wait for Routine Visit                 "
"R07033", "R08033", "R09021", "R10021", "R11021", "R12021", "R13021", "R14021",
"R15021", "R16021", "R17021" = "Listens Carefully                       "
"R07034", "R08034", "R09022", "R10022", "R11022", "R12022", "R13022", "R14022",
"R15022", "R16022", "R17022" = "Explains so You Can Understand         "
"R07035", "R08035", "R09023", "R10023", "R11023", "R12023", "R13023", "R14023",
"R15023", "R16023", "R17023" = "Shows Respect                           "
"R07036", "R08036", "R09024", "R10024", "R11024", "R12024", "R13024", "R14024",
"R15024", "R16024", "R17024" = "Spends Time with You                     "
"R07043", "R08043", "R09040", "R10040", "R11041", "R12041", "R13041", "R14041",
"R15041", "R16041", "R17041" = "Getting Information                       "
"R07045", "R08045", "R09041", "R10041", "R11042", "R12042", "R13042", "R14042",
"R15042", "R16042", "R17042" = "Courteous Customer Service             "
"R07040", "R08040", "R09045", "R10045", "R11046", "R12046", "R13046", "R14046",
"R15046", "R16046", "R17046" = "Claims Handled in a Reasonable Time     "
"R07041", "R08041", "R09046", "R10046", "R11047", "R12047", "R13047", "R14047",
"R15047", "R16047", "R17047" = "Claims Handled Correctly               "

```

```

    "R07037", "R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018" = "Health Care
    "R07048", "R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048" = "Health Plan
    "R07009", "R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027" = "Primary Care Manager
    "R07015", "R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031" = "Specialty Care
        "PHYSIC " = "Physical
"
        "MENTAL " = "Mental
"

```

```
;
```

```
VALUE $BENEF
```

```

"RCOMPOS1", "CCOMPOS1", "R07013", "R07027",
    "R08013", "R08027",
    "R09029", "R09033",
    "R10029", "R10033",
    "R11029", "R11033",
    "R12029", "R12033",
    "R13029", "R13033",
    "R14029", "R14033",
    "R15029", "R15033",
    "R16029", "R16033",
    "R17029", "R17033"

```

```
= "Getting Needed Care "
```

```

"RCOMPOS2", "CCOMPOS2", "R07019", "R07022",
    "R08019", "R08022",
    "R09007", "R09010",
    "R10007", "R10010",
    "R11007", "R11010",
    "R12007", "R12010",
    "R13007", "R13010",
    "R14007", "R14010",
    "R15007", "R15010",
    "R16007", "R16010",
    "R17007", "R17010"

```

```
= "Getting Care Quickly "
```

```

"RCOMPOS3", "CCOMPOS3", "R07033", "R07034", "R07035", "R07036",
    "R08033", "R08034", "R08035", "R08036",
    "R09021", "R09022", "R09023", "R09024",
    "R10021", "R10022", "R10023", "R10024",
    "R11021", "R11022", "R11023", "R11024",
    "R12021", "R12022", "R12023", "R12024",
    "R13021", "R13022", "R13023", "R13024",
    "R14021", "R14022", "R14023", "R14024",
    "R15021", "R15022", "R15023", "R15024",
    "R16021", "R16022", "R16023", "R16024",
    "R17021", "R17022", "R17023", "R17024"

```

```
= "How Well Doctors Communicate "
```

```

"RCOMPOS4", "CCOMPOS4", "R07043", "R07045",
    "R08043", "R08045",

```

```

        "R09040", "R09041",
        "R10040", "R10041",
        "R11041", "R11042",
        "R12041", "R12042",
        "R13041", "R13042",
        "R14041", "R14042",
        "R15041", "R15042",
        "R16041", "R16042",
        "R17041", "R17042"

= "Customer Service          "

"RCOMPOS5", "CCOMPOS5", "R07040", "R07041",
        "R08040", "R08041",
        "R09045", "R09046",
        "R10045", "R10046",
        "R11046", "R11047",
        "R12046", "R12047",
        "R13046", "R13047",
        "R14046", "R14047",
        "R15046", "R15047",
        "R16046", "R16047",
        "R17046", "R17047"

= "Claims Processing
  "
"RCOMPOS11", "COMPOS11", "MENTAL", "PHYS"
= "Health Status          "

/*****
*****/
/* Admin. Year Defn.
*/
/* 2007      2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      */

/*****
*****/
    "R07037", "R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018" = "Health Care          "
    "R07048", "R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048" = "Health Plan          "
    "R07009", "R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027" = "Primary Care Manager  "
    "R07015", "R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031" = "Specialty Care          "
;
VALUE BEN
/* 0 = 'Total'  deleted no longer calculating total 04/2005 RSG ***/
1 = 'Getting Needed Care'
2 = 'Getting Care Quickly'
3 = 'How Well Doctors Communicate'
4 = 'Customer Service'
5 = 'Claims Processing'
6 = 'Health Plan'
7 = 'Health Care'
8 = 'Primary Care Manager'
9 = 'Specialty Care'

```

10 = 'Preventive Care'
11 = 'Healthy Behaviors';

VALUE MAJOR

1 = "Prime Enrollees "
2 = "Enrollees with Military PCM"
3 = "Enrollees with Civilian PCM"
4 = "Non-enrolled Beneficiaries "
5 = "Active Duty "
6 = "Active Duty Dependents "
7 = "Retirees and Dependents "
8 = "All Beneficiaries ";

VALUE GETNCARE

1 = "Getting to See a Specialist"
2 = "Getting Treatment"
3 = "Composite";

VALUE GETCAREQ

1 = "Wait for Routine Visit"
2 = "Wait for Urgent Care"
3 = "Composite";

VALUE HOWWELL

1 = "Listens Carefully"
2 = "Explains so You Can Understand"
3 = "Shows Respect"
4 = "Spends Time with You"
5 = "Composite";

VALUE CUSTSERV

1 = "Getting Information"
2 = "Courteous Customer Service"
3 = "Composite";

VALUE CLMSPROC

1 = "Claims Handled in a Reasonable Time"
2 = "Claims Handled Correctly"
3 = "Composite";

VALUE PREVCARE

1 = "Mammography"
2 = "Pap Smear"
3 = "Hypertension"
4 = "Prenatal Care"
5 = "Composite";

VALUE SMOKEF

1 = "Non-Smoking Rate"
2 = "Counselled To Quit"
3 = "Percent Not Obese"
4 = "Composite";

RUN;

G.3.A - Q3FY2017\PROGRAMS\BENCHMARK\BENCHA01.SAS - Extract Adult CAHPS Questions from NCBD - Run Quarterly.

```

*****
*
* PROGRAM:  BENCHA01.SAS
* TASK:    Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE: Extract Adult CAHPS Questions
*
* WRITTEN: 06/02/2000 BY KEITH RATHBUN
*
* INPUTS:  1) AC2009DB.sas7bdat - 2009 Adult CAHPS Questions
*
* OUTPUT:  1) BENCHA01.sas7bdat - 2009 Adult CAHPS Questions Renamed to be
*           consistent with the 2009 MPR DOD Survey.
*
* MODIFIED:20) April 4, 2012 by Amanda Kudis, updated for 2011 benchmarks.
*           21) January 10, 2013 by Aimee Valenzuela, updated for 2013, commented out
*           lines 119-124, and removed model from keep statement.
*           22) September 20, 2013 by Amanda Kudis, updated for 20134.
*           23) July 8, 2014 by Hoa Le, Modified to use NCQA data.
*           Changed variable names to match NCQA variable names.
*           24) December 1, 2014 by Matt Turbyfill, revised for Macro Program.
*               Change IN library to &BENCHINPUT.
*               Change C13_ZAMV to &BENCHFILE.
*               Change H14 to H&FY.
*           25) December 27, 2016 by Matt Turbyfill, revised for SAS Grid.
*               Change Program Input title to &BENCHFILE.
*
* NOTES:
*
* 1) This program will generate the input for BENCHA02.SAS.
*
*****
* Assign data libraries and options
*****;
LIBNAME IN "&BENCHINPUT.";
LIBNAME OUT "data";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

DATA OUT.BENCHA01 ;
  SET IN.&BENCHFILE.;
  FORMAT _ALL_;
  H&FY.019 = S15;
  *****
  * Getting Needed Care
  *****;
  H&FY.029 = S25;
  H&FY.033 = S14;
  *****
  * Getting Care Quickly
  *****;
  H&FY.007 = S4;
  H&FY.010 = S6;
  *****
  * How Well Doctors Communicate
  *****;
  H&FY.021 = S18;

```

```

H&FY.022 = S17;
H&FY.023 = S19;
H&FY.024 = S20;
*****
* Customer Service
*****;
H&FY.035 = S29;
H&FY.041 = S35;
H&FY.042 = S36;
*****
* Claims Processing
*****;
H&FY.046 = S40;
H&FY.047 = S41;
*****
* Health Care Rating
*****;
H&FY.018 = S13;
*****
* Health Plan Rating
*****;
H&FY.048 = S42;
*****
* Personal Doctor Rating
*****;
H&FY.027 = S23;
*****
* Specialist Rating
*****;
H&FY.031 = S27;
*****
* Health Status
*****;
H&FY.065 = S43;
AGEGROUP = S59; *NEED TO USE USE THIS DIRECTLY (already grouped);
XSEXA = S60;
SREDHIGH = S61; /* MER 03/31/11 changed AC55_09 to AC60_10 */

```

```

LABEL H&FY.029 = "S25 - Got appointment with a specialist"
H&FY.033 = "S14 - Got necessary care"
H&FY.007 = "S4 - Got urgent care quickly"
H&FY.010 = "S6 - Got routine care quickly"
H&FY.021 = "S18 - Doctors/providers listened carefully"
H&FY.022 = "S17 - Doctors/providers explained things"
H&FY.023 = "S19 - Doctors/providers showed respect"
H&FY.024 = "S20 - Doctors/providers spent enough time"
H&FY.041 = "S35 - Customer service provided needed info"
H&FY.042 = "S36 - Customer services was courteous"
H&FY.046 = "S40 - Claims handled quickly"
H&FY.047 = "S41 - Claims handled correctly"
H&FY.018 = "S13 - Rating of health care"
H&FY.048 = "S42 - Rating of health plan"
H&FY.027 = "S23 - Rating of personal doctor or nurse"
H&FY.031 = "S27 - Rating of specialist seen most often"
H&FY.065 = "S43 - Rating of overall health"
AGEGROUP = "S59 - Imputed adult age"
XSEXA = "S60 - Gender"

```

```

        SREDHIGH = "S61 - Highest grade finished"
    ;
KEEP    H&FY.029
        H&FY.033
        H&FY.007
        H&FY.010
        H&FY.021
        H&FY.022
        H&FY.023
        H&FY.024
        H&FY.041
        H&FY.042
        H&FY.046
        H&FY.047
        H&FY.018
        H&FY.048
        H&FY.027
        H&FY.031
        H&FY.065
        H&FY.035
        AGEGROUP
        XSEXA
        SREDHIGH
        SUB_ID
        DISP
        H&FY.019
    ;
RUN;

TITLE1 "Extract Adult CAHPS Questions (DoD)";
TITLE2 "Program Name: BENCH01.SAS By Keith Rathbun";
TITLE3 "Program Input: &BENCHFILE..sas7bdat";
TITLE4 "Program Output: BENCH01.sas7bdat";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES _ALL_ /MISSING LIST;
RUN;

```

G.3.B - Q3FY2017\PROGRAMS\BENCHMARK\BENCHA02.SAS - Recode Adult CAHPS Questions from NCBD to be consistent with the HCSDB - Run Quarterly.

```

*****
*
* PROGRAM:  BENCHA02.SAS
* TASK:    Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE: Recode Adult CAHPS Questions
*
* WRITTEN: 06/02/2000 BY KEITH RATHBUN
*
* INPUT:   1) BENCHA01.sas7bdat - Adult CAHPS Questions Renamed to be
*           consistent with the MPR DOD Survey.
*
* OUTPUT:  1) BENCHA02.sas7bdat - Recoded Adult CAHPS Questions Renamed
*           to be consistent with the MPR DOD Survey.
*
* MODIFIED:19) January 10, 2013 by Aimee Valenzuela, update for Q1FY2013
*           20) September 20, 2013 by Amanda Kudis, update for Q1FY2014
*           21) July 8, 2014 by Hoa Le, Modified to use NCQA data.
*               Changed variable names to match NCQA variable names.
*               Modified last line of each recode.
*           22) December 1, 2014 by Matt Turbyfill, revised for Macro Program.
*               Changed H14 to H&FY.
*               Changed R14 to R&FY.
*           23) December 27, 2016 by Matt Turbyfill, revised for SAS Grid.
*               Backslashes changed to forward slashes.
*
* NOTES:
*
* 1) Run this program after BENCHA01.SAS.
* 2) This program will generate the input for BENCHA03.SAS.
*
*****
* Assign data libraries and options
*****;
LIBNAME IN      "data";
LIBNAME OUT     "../&PC.Benchmark/data";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

DATA OUT.BENCHA02;
  SET IN.BENCHA01;

*****
* Recode variables with Never, Sometimes, Usually and Always.
* Recode Never & Sometimes (1 & 2) to 1.
* Recode Usually (3) to 2.
* Recode Always (4) to 3.
*****;

IF H&FY.007 = 1      THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 2 THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 3 THEN R&FY.007 = 2;
ELSE IF H&FY.007 = 4 THEN R&FY.007 = 3;
ELSE R&FY.007 = .;

IF H&FY.010 = 1      THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 2 THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 3 THEN R&FY.010 = 2;

```



```
ELSE IF H&FY.010 = 4 THEN R&FY.010 = 3;  
ELSE R&FY.010 = .;
```

```
IF H&FY.021 = 1 THEN R&FY.021 = 1;  
ELSE IF H&FY.021 = 2 THEN R&FY.021 = 1;  
ELSE IF H&FY.021 = 3 THEN R&FY.021 = 2;  
ELSE IF H&FY.021 = 4 THEN R&FY.021 = 3;  
ELSE R&FY.021 = .;
```

```
IF H&FY.022 = 1 THEN R&FY.022 = 1;  
ELSE IF H&FY.022 = 2 THEN R&FY.022 = 1;  
ELSE IF H&FY.022 = 3 THEN R&FY.022 = 2;  
ELSE IF H&FY.022 = 4 THEN R&FY.022 = 3;  
ELSE R&FY.022 = .;
```

```
IF H&FY.023 = 1 THEN R&FY.023 = 1;  
ELSE IF H&FY.023 = 2 THEN R&FY.023 = 1;  
ELSE IF H&FY.023 = 3 THEN R&FY.023 = 2;  
ELSE IF H&FY.023 = 4 THEN R&FY.023 = 3;  
ELSE R&FY.023 = .;
```

```
IF H&FY.024 = 1 THEN R&FY.024 = 1;  
ELSE IF H&FY.024 = 2 THEN R&FY.024 = 1;  
ELSE IF H&FY.024 = 3 THEN R&FY.024 = 2;  
ELSE IF H&FY.024 = 4 THEN R&FY.024 = 3;  
ELSE R&FY.024 = .;
```

```
IF H&FY.029 = 1 THEN R&FY.029 = 1;  
ELSE IF H&FY.029 = 2 THEN R&FY.029 = 1;  
ELSE IF H&FY.029 = 3 THEN R&FY.029 = 2;  
ELSE IF H&FY.029 = 4 THEN R&FY.029 = 3;  
ELSE R&FY.029 = .;
```

```
IF H&FY.033 = 1 THEN R&FY.033 = 1;  
ELSE IF H&FY.033 = 2 THEN R&FY.033 = 1;  
ELSE IF H&FY.033 = 3 THEN R&FY.033 = 2;  
ELSE IF H&FY.033 = 4 THEN R&FY.033 = 3;  
ELSE R&FY.033 = .;
```

```
IF H&FY.035 = 1 THEN R&FY.035 = 1;  
ELSE IF H&FY.035 = 2 THEN R&FY.035 = 1;  
ELSE IF H&FY.035 = 3 THEN R&FY.035 = 2;  
ELSE IF H&FY.035 = 4 THEN R&FY.035 = 3;  
ELSE R&FY.035 = .;
```

```
IF H&FY.041 = 1 THEN R&FY.041 = 1;  
ELSE IF H&FY.041 = 2 THEN R&FY.041 = 1;  
ELSE IF H&FY.041 = 3 THEN R&FY.041 = 2;  
ELSE IF H&FY.041 = 4 THEN R&FY.041 = 3;  
ELSE R&FY.041 = .;
```

```
IF H&FY.042 = 1 THEN R&FY.042 = 1;  
ELSE IF H&FY.042 = 2 THEN R&FY.042 = 1;  
ELSE IF H&FY.042 = 3 THEN R&FY.042 = 2;  
ELSE IF H&FY.042 = 4 THEN R&FY.042 = 3;  
ELSE R&FY.042 = .;
```

```
IF H&FY.046 = 1 THEN R&FY.046 = 1;
```

```

ELSE IF H&FY.046 = 2 THEN R&FY.046 = 1;
ELSE IF H&FY.046 = 3 THEN R&FY.046 = 2;
ELSE IF H&FY.046 = 4 THEN R&FY.046 = 3;
ELSE R&FY.046 = .;

```

```

IF H&FY.047 = 1 THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 2 THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 3 THEN R&FY.047 = 2;
ELSE IF H&FY.047 = 4 THEN R&FY.047 = 3;
ELSE R&FY.047 = .;

```

```

IF H&FY.065 = 1 THEN R&FY.065 = 5;
ELSE IF H&FY.065 = 2 THEN R&FY.065 = 4;
ELSE IF H&FY.065 = 3 THEN R&FY.065 = 3;
ELSE IF H&FY.065 = 4 THEN R&FY.065 = 2;
ELSE IF H&FY.065 = 5 THEN R&FY.065 = 1;
ELSE R&FY.065 = .;

```

```

*****
* Recode variables to one missing condition "."
* This also makes all the "H000xx" to "R000xx".
*****;

```

```

R&FY.027 = H&FY.027; IF R&FY.027 < 0|R&FY.027>10 THEN R&FY.027 = .;
R&FY.031 = H&FY.031; IF R&FY.031 < 0|R&FY.031>10 THEN R&FY.031 = .;
R&FY.018 = H&FY.018; IF R&FY.018 < 0|R&FY.018>10 THEN R&FY.018 = .;
R&FY.048 = H&FY.048; IF R&FY.048 < 0|R&FY.048>10 THEN R&FY.048 = .;

```

```

LABEL R&FY.007 = "S4 - Got urgent care quickly"
R&FY.010 = "S6 - Got routine care quickly"
R&FY.021 = "S18 - Doctors/providers listened carefully"
R&FY.022 = "S17 - Doctors/providers explained things"
R&FY.023 = "S19 - Doctors/providers showed respect"
R&FY.024 = "S20 - Doctors/providers spent enough time"
R&FY.029 = "S25 - Got appointment with a specialist"
R&FY.033 = "S14 - Got necessary care"
R&FY.041 = "S35 - Customer service provided needed info"
R&FY.042 = "S36 - Customer services was courteous"
R&FY.046 = "S40 - Claims handled quickly"
R&FY.047 = "S41 - Claims handled correctly"
R&FY.018 = "S13 - Rating of health care"
R&FY.027 = "S23 - Rating of personal doctor or nurse"
R&FY.031 = "S27 - Rating of specialist seen most often"
R&FY.048 = "S42 - Rating of health plan"
R&FY.065 = "S43 - Rating of overall health"

```

```

SUB_ID = "Submission ID";

```

```

RUN;

```

```

TITLE1 "Recode Adult CAHPS Questions (6244-410)";
TITLE2 "Program Name: BENCHA02.SAS By Keith Rathbun";
TITLE3 "Program Input: BENCHA01.SAS7BDAT";
TITLE4 "Program Output: BENCHA02.SAS7BDAT";

```

```

PROC CONTENTS; RUN;

```

```

PROC FREQ;

```

```
TABLES  AGEGROUP
        XSEXA
        SREDHIGH
        R&FY.007 * H&FY.007
        R&FY.010 * H&FY.010
        R&FY.021 * H&FY.021
        R&FY.022 * H&FY.022
        R&FY.023 * H&FY.023
        R&FY.024 * H&FY.024
        R&FY.029 * H&FY.029
        R&FY.033 * H&FY.033
        R&FY.041 * H&FY.041
        R&FY.042 * H&FY.042
        R&FY.046 * H&FY.046
        R&FY.047 * H&FY.047
        R&FY.018 * H&FY.018
        R&FY.027 * H&FY.027
        R&FY.031 * H&FY.031
        R&FY.048 * H&FY.048
        R&FY.065 * H&FY.065
/MISSING LIST;
RUN;
```

G.3.C - Q3FY2017\PROGRAMS\BENCHMARK\BENCHA03.SAS - Calculate CAHPS Benchmark data for HCSDB - Run Quarterly.

```

*****
*
* PROGRAM:  BENCHA03.SAS
* TASK:    Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE: Adjust Adult CAHPS Benchmarks
*
* WRITTEN: June 2000 BY ERIC SCHONE
*
* INPUTS:  1) BENCHA02.sas7bdat - 2010 Adult CAHPS Questions Renamed to be
*           consistent with the 2011 MPR DOD Survey.
*           2) GROUP8.sas7bdat - CAHPS Group8 (all beneficiaries) Dataset
*
* OUTPUTS: 1) Benchmark Composite Scores Data Sets
*
* MODIFIED:39) March 5, 2012 by Amanda Kudis - Changed libname in2 and include
Convert.sas for Q2FY2012.
*           40) June 20, 2012 by Amanda Kudis - Updated for Q3FY2012.
*           41) August 23, 2012 by Christine Cheu - Updated for Q4FY2012.
*           42) December 27,2012 by Aimee Valenzuela - Changed libname in in2 for
Q1FY2013
*           and changed variable names.
*           43) March 23, 2013 by Mike Rudacille - Changed libname in2 and include
Convert.sas for Q2FY2013.
*           44) September 20, 2013 by Amanda Kudis - Updated for Q1FY2014.
*           45) July 8, 2014 by Hoa Le, Modified to use NCQA data.
*           46) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
                Replaced RCTYPE with &PC.ReportCards
                Changed IN2 to
                "..\&RCTYPE\CAHPS_Adult&FOLDER.&FYYEAR.\Data".
                Replaced MERGE statement in &Q._&L., OUT&COMPNO._&I.,
and OUT.COMP&COMPNO._&I DATA steps with SET statements.
                Added MERGE=1 to R_&X.
                Added BY MERGE to TEMP step.
                Changed R14 to R&FY.
                Changed CONVERT.SAS to
                ..\..\ReportCards\CAHPS_Adult&FOLDER.&FYYEAR.\CONVERT.SAS
*           47) August 24, 2016 by Matt Turbyfill, Now pulls benchmark data form the
folder specified in the macro program.
*           48) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*           Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*           Changed LIBRARY to &FMTPATH.
*
* NOTES:
*
* 1) Run this program after BENCHA01.SAS and BENCHA02.SAS.
* 2) This program will generate the input for BENCHA04.SAS.
*
*****
* Assign data libraries and options
*****;

/*** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

```

```

libname in      "&BENCHDATA."; /*Use BENCHA02.sas7bdat from Q3fy2014*/
libname in2     "../&RCTYPE/CAHPS_Adult&FOLDER.&FYYEAR./Data";
libname out     "data";
LIBNAME LIBRARY "&FMTPATH.";

```

```
%let wgt=FWRWT;
```

```
OPTIONS MLOGIC MPRINT NOCENTER MERGENOBY=WARN LS=132 PS=79;
```

```
%macro comb(f,t,q,l);
```

```

proc summary data=&f;
  var &t;
  where &q~=. ;
  weight &wgt;
  output out=temp mean=&t;
run;

```

```

data temp;
  set temp;
  array old &t;
  call symput('z',left(dim(old)));
run;

```

```

data temp(drop=_type_ &t);
  set temp;
  array old &t;
  array new var1-var&z;
  do i=1 to &z;
    new(i)=old(i);
  end;
run;

```

```

data &q._&l;
  set temp;
  set c_&q;
  array coeffs &t;
  array means var1-var&z;
  DO I = 1 TO DIM(COEFFS);
    IF COEFFS(I) = . THEN COEFFS(I) = 0;
    IF MEANS(I) = . THEN MEANS(I) = 0;
    ADJUST + ( COEFFS(I) * MEANS(I) );
  END;
  merge=1;
  ADJUST = ADJUST + intercept;
  &q._&l=adjust;

```

```
run;
```

```
%mend comb;
```

```
%macro adjust(x,y);
```

```

proc summary data=setup;
where &x>. ;

```

```

class SUB_ID;

output out=count;
run;

data count count2(rename=(_freq_=denom));
set count;
if _type_=0 then output count2;
else output count;
run;

data count(keep=pweight SUB_ID);
if _n_=1 then set count2;
set count;
pweight=denom/_freq_;
run;

data temp;
merge count setup; by SUB_ID;

run;
proc summary data=temp;
where &x>. ;
weight pweight;
var &y;
output out=temp2 mean=&y;
data temp2;
set temp2;
array old &y;
call symput('z',left(dim(old)));
run;
data temp2(keep=var1-var&z);
set temp2;
array old &y;
array new var1-var&z;
do i=1 to &z;
new(i)=old(i);
end;
run;
data temp;
set temp;
if _n_=1 then set temp2;
array old &y;
array new var1-var&z;
do i=1 to &z;
if old(i)=. then
old(i)=new(i);
end;
run;
proc reg data=temp outest=c_&x noprint;
model &x=&y;
weight pweight;
output out=r_&x r=r_&x;
run;

data r_&x;
set r_&x;
merge=1;

```

```

run;

proc sort data=r_&x; by SUB_ID;
run;

PROC DESCRIPT DATA=r_&x DESIGN=STRWR NOPRINT;
WEIGHT pweight;
SETENV DECWIDTH=4;
NEST SUB_ID / missunit;
VAR R_&x;
OUTPUT SEMEAN / TABLECELL=DEFAULT
FILENAME=s_&x;
RUN;

data s_&x(rename=(semean=s_&x));
set s_&x(keep=semean);
%do i=1 %to 8;
  %if &i=8 %then %do;

    data group8;
      set in2.group5 in2.group6 in2.group7;
    run;
    %comb(group8,&y,&x,8);
  %end;
  %else %do;
    %comb(in2.group&i,&y,&x,&i);
  %end;
%end;

%mend adjust;

/* adjust all the variables */

%macro comp(compno,a,b,c,d);
%if &a~= %then %do;
  %let n=r_&a;
  %let m=s_&a;
  %do i=1 %to 8;
    %let p&i=&a._&i;
  %end;
  %let grpnum=1;
  proc sort data=r_&a;
    by mpid;
  run;
%end;
%if &b~= %then %do;
  %let n=%str(&n r_&b);
  %let m=%str(&m s_&b);
  %do i=1 %to 8;
    %let p&i=%str(&p&i &b._&i);
  %end;
  %let grpnum=2;
  proc sort data=r_&b;
    by mpid;
  run;
%end;
%if &c~= %then %do;

```

```

proc sort data=r_&c;
  by mpid;
run;
%let grpnum=3;
%let n=%str(&n r_&c);
%do i=1 %to 8;
  %let p&i=%str(&&p&i &c._&i);
%end;
%let m=%str(&m s_&c); %end;

%if &d~= %then %do;
proc sort data=r_&d;
  by mpid;
run;
%let grpnum=4;
%let n=%str(&n r_&d);
%do i=1 %to 8;
  %let p&i=%str(&&p&i &d._&i);
%end;

  %let m=%str(&m s_&d);
%end;

data infile;
merge &n;
by mpid;
run;

proc corr outp=outf noprint;
var &n;
weight pweight;
run;

data final;
if _n_=1 then do;
  %if &a~= %then %do;
    set s_&a;
  %end;
  %if &b~= %then %do;
    set s_&b;
  %end;
  %if &c~= %then %do;
    set s_&c;
  %end;
  %if &d~= %then %do;
    set s_&d;
  %end;
end;
set outf;
call symput('s' || compress(_n_), substr(_name_, 3));
where _type_='CORR';
run;

data final;
set final;
array r_val &n;
array s_val &m;
sde=0;

```



```

do i=1 to dim(s_val);
  %do i=1 %to &grpnum;
    if _name_="r_&&s&i" then
      sde=sde+r_val(i)*s_&&s&i*s_val(i);
    %end;
  end;
run;

data sefin&compno;
  set final end=last;
  tv+sde;
  if last then do;
    sde=(tv**.5)/&grpnum;
    output;
  end;

%do i=1 %to 8;
  data temp(keep=&&p&i);
    merge &&p&i;
    by merge;
  run;

data output;
  set &&p&i;
  totadj+adjust;
run;

data output(keep=totadj);
  set output end=last;
  if last then do;
    totadj=totadj/&grpnum;
    output;
  end;
run;

data out&compno._&i;
  set output;
  set temp;
run;

data out.comp&compno._&i;
  set out&compno._&i;
  set sefin&compno;
run;

%end;

%mend comp;

/* create composites */
proc sort data=in.bencha02 out=setup;
  by SUB_ID;
run;
data setup;
  set setup;
  by SUB_ID;

if disp in ('M10','I10') ;

```

```

data setup;
  set setup; by SUB_ID;
  mpid=_n_;
  if agegroup ne . then do;
    age1824=0; age2534=0; age3544=0; age4554=0; age5564=0; age6574=0;

    if agegroup=1 then age1824=1;
    else if agegroup=2 then age2534=1;
    else if agegroup=3 then age3544=1;
    else if agegroup=4 then age4554=1;
    else if agegroup=5 then age5564=1;
    else if agegroup=6 then age6574=1;
  end;
  if agegroup<6;
run;
%INCLUDE "../ReportCards/CAHPS_Adult&FOLDER.&FYYEAR./CONVERT.sas";

%CONT2(DSN=SETUP, NUM=4, Y=R&FY.018 R&FY.048 R&FY.027 R&FY.031);
%CONT3(DSN=SETUP, NUM=12, Y=R&FY.007 R&FY.010 R&FY.029 R&FY.033
      R&FY.021 R&FY.022 R&FY.023 R&FY.024
      R&FY.041 R&FY.042 R&FY.046 R&FY.047);

/* GETTING NEEDED CARE */
%adjust(R&FY.029,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.033,age1824 age2534 age3544 age4554 R&FY.065);
%comp(1,R&FY.029,R&FY.033);

/* GETTING NEEDED CARE QUICKLY */
%adjust(R&FY.007,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.010,age1824 age2534 age3544 age4554 R&FY.065);
%comp(2,R&FY.007,R&FY.010);

/* HOW WELL DOCTORS COMMUNICATE */
%adjust(R&FY.021,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.022,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.023,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.024,age1824 age2534 age3544 age4554 R&FY.065);
%comp(3,R&FY.021,R&FY.022,R&FY.023,R&FY.024);

/* CUSTOMER SERVICE */
%adjust(R&FY.041,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.042,age1824 age2534 age3544 age4554 R&FY.065);
%comp(4,R&FY.041,R&FY.042);

/* CLAIMS PROCESSING */
%adjust(R&FY.046,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.047,age1824 age2534 age3544 age4554 R&FY.065);
%comp(5,R&FY.046,R&FY.047);

/* RATING ALL HEALTH CARE: 0 - 10 */
%adjust(R&FY.018,age1824 age2534 age3544 age4554 R&FY.065);
%comp(6,R&FY.018);

/* RATING OF HEALTH PLAN: 0 - 10 */
%adjust(R&FY.048,age1824 age2534 age3544 age4554 R&FY.065);
%comp(7,R&FY.048);

/* RATING OF PERSONAL DR: 0 - 10 */
%adjust(R&FY.027,age1824 age2534 age3544 age4554 R&FY.065);

```

```
%comp(8,R&FY.027);
```

```
/* SPECIALTY CARE */
```

```
%adjust(R&FY.031,age1824 age2534 age3544 age4554 R&FY.065);
```

```
%comp(9,R&FY.031);
```

G.3.D.1 - Q3FY2017\PROGRAMS\BENCHMARK\QPREDTEST\SAS2STATA_Grps.sas - Converts the groups datasets from SAS to STATA - Run Quarterly.

```

*****
*
* PROGRAM: SAS2STATA_Grps.SAS
* TASK: Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6401-904)
* PURPOSE: Convert the CAHPS BENCHA02 and GROUP1-8 Files to STATA format
*
* WRITTEN: 01/11/2008 BY KEITH RATHBUN
*
* INPUTS: 1) BENCHA02.sas7bdat - CAHPS Benchmark Scores Database
*          GROUPi.sas7bdat - Group Files created by STEP1.SAS
*          (where i = 1 -8 = group number)
*
* OUTPUTS: 1) BENCHA02.dta - CAHPS Benchmark Scores Database - STATA format
*          GROUPi.dta - Group Files created by STEP1.SAS - STATA format
*          (where i = 1 -8 = group number)
*
* MODIFIED: 1) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*           Changed QUARTER to &FOLDER.&FYYEAR.
*           Changed INBENCH to "&BENCHDATA."
*           Changed INGROUP to
..../&PC.ReportCards/cahps_adult&QUARTER./data.
*           2) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*           Corrected capitalization and backslashes on LIBNAME and EXPORT
filepaths.
*
* NOTES:
*
*****
* Assign data libraries and options
*****;
%LET QUARTER = &FOLDER.&FYYEAR.;
LIBNAME INBENCH "&BENCHDATA.;" /*Use BENCHA02.sas7bdat from Q1fy2014*/
LIBNAME INGROUP "..../&PC.ReportCards/CAHPS_Adult&QUARTER./Data";

*****
* Convert CAHPS BENCHA02 to STATA format.
*****;
PROC EXPORT
  DATA = INBENCH.BENCHA02
  OUTFILE = "..../&PC.Benchmark/&QA.predtest/BENCHA02.DTA"
  DBMS = DTA
  REPLACE;
RUN;

*****
* Convert SAS Group files to STATA format.
*****;
%MACRO CONVERT2STATA;
  %DO I = 1 %TO 8;
    PROC EXPORT
      DATA = INGROUP.GROUP&I
      OUTFILE = "GROUP&I..DTA"
      DBMS = DTA
      REPLACE;
    RUN;
  %END;

```

```
%END;  
%MEND CONVERT2STATA;  
  
%CONVERT2STATA;
```

G.3.D.2 - Q3FY2017\PROGRAMS\BENCHMARK\QPREDTEST\vartest.do - Calculates Predicted Errors - Run Quarterly.

```
/*
Program: vartest.do
Author: Eric Schone
Modified: 1) 11/15/2006 Justin Oh, Added global variable "path"
          for assigning folder directory.
          2) 06/22/2009 Keith Rathbun, Changed fwrwt_v4 back to fwrwt
          and updated path for q3fy2009.
          3) 12/02/2010 Mike Rudacille, updated vars for 2011
          4) 12/10/2011 Mike Rudacille, updated vars for 2012
          5) 12/28/2012 Aimee Valenzuela, updated vars for 2013
          6) 09/20/2013 Amanda Kudis, updated vars for 2014
          7) 02/28/2014 Amanda Kudis, changes for compatibility with stata13
          8) 02/26/2016 Matt Turbyfill, updated vars for 2016
          9) 01/09/2017 Irna May Connor, updated vars for 2017
WARNING - MUST EDIT THE GLOBAL PATH FOR EACH REPORTING PERIOD
*/

global path "N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Programs\Benchmark"

program define initial
version 7.0

local i=1
while `i'<9{

gen str8 var=" "
gen se=.
save "$path\Qpredtest\projerr`i'",replace
clear
local i=`i'+1
}
end
program define stdlist1
version 7.0
local varlist required existing
parse "`*' "
while "`1'"~=""{

use "$path\Qpredtest\bencha02",clear
keep if disp=="M10"|disp=="T10

gen ageund18=0 if agegroup~=.
gen age1824=0 if agegroup~=.
gen age2534=0 if agegroup~=.
gen age3544=0 if agegroup~=.
gen age4554=0 if agegroup~=.

```

```

gen age5564=0 if agegroup~=.
gen age6574=0 if agegroup~=.

replace ageund18 = 1          if agegroup==0
replace age1824  = 1 if agegroup==1
replace age2534  = 1 if agegroup==2
replace age3544  = 1 if agegroup==3
replace age4554  = 1 if agegroup==4
replace age5564  = 1 if agegroup==5
replace age6574  = 1 if agegroup==6
keep if agegroup<6
replace `1'=10  if 8<=`1' & `1'<=10
replace `1'=0  if `1'~=. & `1'<8
replace `1'=`1'/10
egen coun=count(`1'), by(sub_id)
gen wt=1/coun
svyset strata sub_id
svyset pweight coun

egen ct=count(`1'*age1824*r17065), by(sub_id)
keep if ct>1
drop ct

svyreg `1' age1824 age2534 age3544 age4554 age5564 r17065

local i=1
while `i'<9{
use "$path\Qpredtest\group`i'",clear
collapse (mean) age1824 age2534 age3544 age4554 age5564 r17065 [aw=fwrwt]
predict se, stdp
keep se
gen str8 var="`1'"
append using "$path\Qpredtest\projerr`i'"
save "$path\Qpredtest\projerr`i'",replace
local i=`i'+1
}
macro shift
}
end
program define stdlist2
version 7.0
local varlist required existing
parse "`*'

while "`1'~=""{

use "$path\Qpredtest\bencha02",clear
keep if disp=="M10"|disp=="T10"

gen ageund18=0 if agegroup~=.
gen age1824=0 if agegroup~=.

```

```

gen age2534=0 if agegroup~=.
gen age3544=0 if agegroup~=.
gen age4554=0 if agegroup~=.
  gen age5564=0 if agegroup~=.
gen age6574=0 if agegroup~=.

replace ageund18 = 1      if agegroup==0
replace age1824  = 1 if agegroup==1
replace age2534  = 1 if agegroup==2
replace age3544  = 1 if agegroup==3
replace age4554  = 1 if agegroup==4
replace age5564  = 1 if agegroup==5
replace age6574  = 1 if agegroup==6
keep if agegroup<6
replace `1'=0 if `1'~=. & `1'<3
replace `1'=1 if `1'>=2
egen coun=count(`1'), by(sub_id)
gen wt=1/coun
svyset strata sub_id
svyset pweight coun

egen ct=count(`1'*age1824*r17065), by(sub_id)
keep if ct>1
drop ct

svyreg `1' age1824 age2534 age3544 age4554 age5564 r17065
local i=1
while `i'<9{
use "$path\Qpredtest\group`i'",clear
collapse (mean) age1824 age2534 age3544 age4554 age5564 r17065 [aw=fwrwt]
predict se, stdp
keep se
gen str8 var=`1'"
append using "$path\Qpredtest\projerr`i'"
save "$path\Qpredtest\projerr`i'",replace
export delimited "$path\Qpredtest\projerr`i'",replace

local i=`i'+1
}
macro shift
}
end

set more 1

set mem 100m

log using "$path\Qpredtest\varlog",replace
initial

use "$path\Qpredtest\bencha02",clear
stdlist1 r17018 r17048 r17027 r17031
use "$path\Qpredtest\bencha02",clear
stdlist2 r17029 r17033 r17041 r17042 r17007 r17010 r17021 r17022 r17023 r17024 r17046
r17047

```


log close

G.3.D.3 - Q3FY2017\PROGRAMS\BENCHMARK\QPREDTEST\CSV2SAS_Proj.sas - Converts the Predicted Errors from STATA to SAS - Run Quarterly.

```
*****
*
* PROGRAM:   CSV2SAS_Proj.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6401-904)
* PURPOSE:  Convert the PROJERR1-8 Files to SAS format
*
* WRITTEN:  02/19/2014 BY AMANDA KUDIS
*
* INPUTS:   1) PROJERRi.CSV - PROJERR Files created by VARTEST.DO
*           (where i = 1 -8 = group number)
*
* OUTPUTS:  1) PROJERRi.sas7bdat - PROJERR Files created by VARTEST.DO - SAS format
*           (where i = 1 -8 = group number)
*
* MODIFIED:
*
* NOTES:
*
*****
* Assign data libraries and options
*****;
LIBNAME OUT ".";

*****
* Convert the PROJERR1-8 Files to SAS format
*****;
%MACRO CONVERT2SAS;
  %DO I = 1 %TO 8;
    PROC IMPORT
      DATAFILE="projerr&i..csv"
      OUT=OUT.projerr&i
      DBMS=CSV
      REPLACE;
    RUN;
  %END;
%MEND CONVERT2SAS;

%CONVERT2SAS;
```

G.3.D.4 - Q3FY2017\PROGRAMS\BENCHMARK\QPREDTEST\PREDCOMP.SAS - Compiles Predicted Composite Errors - Run Quarterly.

```

/*****
/*
/* Project: HCSDB Adult Report Cards
/* Program: PREDCOMP.SAS
/* Purpose: Adult Report Card
/* Requires programs STEP1Q and STEP2Q.SAS
/*
/* Modified: 1) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*              Changed R14 to R&FY.
/*
/*
/*****/
OPTIONS NOCENTER LS=132 PS=78 SOURCE SOURCE2 MLOGIC MPRINT NOOVP COMPRESS=NO;
libname in ".";

%MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,VAR5=,QCOUNT=);
%do i=1 %to 8;
  data temp&i(keep=x se);
    set in.projerr&i end=last;
    variance=se**2;
    %do j=1 %to &qcount;
      if upcase(var)="&&var&j" then t_var+variance;
    %end;
    if last then do;
      se=t_var**.5/&qcount;
      x=&i;
      output;
    end;
  %end;
data in.comp&compos;
  set temp1 temp2 temp3 temp4 temp5 temp6 temp7 temp8;
run;

%MEND COMPOSIT;

*-----;
*-      set the parameters here      -;
*-----;
*****;
* call the macro for each composite;
*****;
%COMPOSIT (type=R,compos=1,var1=R&FY.029,var2=R&FY.033,qcount=2);
%COMPOSIT (type=R,compos=2,var1=R&FY.007,var2=R&FY.010,qcount=2);
%COMPOSIT
(type=R,compos=3,var1=R&FY.021,var2=R&FY.022,var3=R&FY.023,var4=R&FY.024,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R&FY.041,var2=R&FY.042,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R&FY.046,var2=R&FY.047,qcount=2);

```

G.3.E - Q3FY2017\PROGRAMS\BENCHMARK\BENCHA04.SAS - Convert the Benchmark Scores Database into the WEB layout - Run Quarterly.

```

*****
*
* PROGRAM:   BENCHA04.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6401-904)
* PURPOSE:  Convert the Benchmark Scores Database into the WEB layout
*
* WRITTEN:  06/01/2000 BY KEITH RATHBUN
*
* INPUTS:   1) Benchmark data sets with adjusted scores
*           (COMPn_i.sas7bdat where n = composite number and i = group number)
*
* OUTPUT:   1) BENCHA04.sas7bdat - Combined Benchmark Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*           and composite data sets
*
* MODIFIED:38) 03/23/2013 by Mike Rudacille - Updated for Q2 FY 2013.
*           39) 09/20/2014 by Amanda Kudis - Updated for Q1 FY 2014.;
/*           40) December 1, 2014 by Matt Turbyfill, revised for the Macro Program.
*                   Change YEAR to &CYEAR.
*                   Add X = .; statement to initialize X.
*                   Change R14 to R&FY.
*/
*           48) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*                   Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*                   Changed LIBRARY to &FMTPATH.
* NOTES:
*
* 1) The following steps need to be run prior to this program:
*   - BENCHA01.SAS - Extract Benchmark variables
*   - BENCHA02.SAS - Recode Benchmark variables
*   - BENCHA03.SAS - Construct Scores and SEMEAN datasets
*
* 2) The output file (BENCHA04.SAS7BDAT) will be run through the
*   MAKEHTML.SAS program to generate the WEB pages.
*
*****
* Assign data libraries and options
*****;
LIBNAME IN "data";
LIBNAME IN2 "Qpredtest";
LIBNAME OUT "data";
LIBNAME LIBRARY "&fmtpath.";

OPTIONS PS=79 LS=132 COMPRESS=NO NOCENTER;

*****
* Load Format definitions for CAHPS Individual and composite data sets.
*****;
%INCLUDE "../LoadWeb/LOADCAHQ.INC";

*****
*****

```

```

*
* Process Macro Input Parameters:
*
* 1) CNUM = Composite or rating variable number (1-10)
* 2) GNUM = Group number (1-8)
* 3) NVAR = Number of variables in the composite
* 4) VARS = List of individual variables for composite
* 5) SE    = List of individual standard error variables
*****;
%MACRO PROCESS(CNUM=, GNUM=, NVAR=, VARS=, SE=);
*****
* Assign value for BENTYPE composite year
*****;
%LET YEAR = "&CYEAR."; * Note that this is based on Calendar Year here;

*****
* Convert benchmark scores datasets into WEB layout.
*****;
%IF &CNUM<6 %THEN %DO;

    DATA INP;
        SET IN2.COMP&CNUM;
        WHERE X=&GNUM;

    DATA INP;
        SET INP IN2.PROJERR&GNUM;
        RENAME SE=SESX;
RUN;
%END;
%ELSE %DO;

    DATA INP;
        SET IN2.PROJERR&GNUM;
        RENAME SE=SESX;

        X = .;
RUN;
%END;

DATA COMP&CNUM._&Gnum;
    SET INP;
    IF _N_=1 THEN
    SET IN.COMP&CNUM._&GNUM;
    LENGTH MAJGRP $30;
    LENGTH REGION $25;
    LENGTH REGCAT $26;
    LENGTH BENTYPE $50;
    LENGTH BENEFIT $34;
    LENGTH TIMEPD $35;    ***MJS 07/03/03 Added line;

*****
* For now, assign SIG = 0
*****;
SIG = 0;

```

```

*****
* Assign major group
*****;
MAJGRP = PUT(&Gnum,MAJGRP.);

*****
* Assign Region and Regcat
*****;
REGION = "Benchmark";
REGCAT = "Benchmark";

*****
* Assign benefit and benefit type
*****;
IF &CNUM = 1 THEN BENEFIT = "Getting Needed Care";
ELSE IF &CNUM = 2 THEN BENEFIT = "Getting Care Quickly";
ELSE IF &CNUM = 3 THEN BENEFIT = "How Well Doctors Communicate";
ELSE IF &CNUM = 4 THEN BENEFIT = "Customer Service";
ELSE IF &CNUM = 5 THEN BENEFIT = "Claims Processing";
ELSE IF &CNUM = 6 THEN BENEFIT = "Health Care";
ELSE IF &CNUM = 7 THEN BENEFIT = "Health Plan";
ELSE IF &CNUM = 8 THEN BENEFIT = "Primary Care Manager";
ELSE IF &CNUM = 9 THEN BENEFIT = "Specialty Care";

BENTYPE = "Composite"; ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPF.);
TIMEPD = PUT(&YEAR,$BENTYPF.); ***MJS 07/03/03 Added;
IF &CNUM<6 THEN DO;
IF X=&GNUM THEN DO;
*****
* Assign composite score and SEMEAN
*****;
SCORE = TOTADJ;
SEMEAN = SQRT(SDE**2+SESX**2);

*****
* Output composite score record for each REGION
*****;
OUTPUT;
END;
END;
*****
* Now, output the individual score records
*****;
IF &NVAR GT 1|&CNUM>5 THEN DO;
ARRAY ITEMS &VARS;
ARRAY SE &SE;
LENGTH NAME $8;
DO I = 1 TO DIM(ITEMS); DROP I;
CALL VNAME(ITEMS(I),NAME);
/*z = DIM(ITEMS);
z1=vname(items(1));*/
NAME = SUBSTR(NAME,1,6);
SCORE = ITEMS(I);
SEMEAN = SQRT(SE(I)**2+SESX**2);
IF &NVAR GT 1 THEN
BENTYPE = PUT(NAME,$BENTYPF.);

```

```
        TIMEPD = PUT(&YEAR,$BENTYPF.);    ***MJS 07/03/03 Added;
    IF COMPRESS(UPCASE(NAME))=COMPRESS(UPCASE(VAR)) THEN OUTPUT;
    END;
END;
```

```
KEEP MAJGRP
    REGION
    REGCAT
    BENTYPE
    BENEFIT
    TIMEPD    /*MJS 07/03/03 Added*/
    SEMEAN
    SCORE
    SIG
```

```
    ;
RUN;
```

```
%MEND;
```

```
*****
*****
* Process each of the 8 Groups.
*****
*****;
%MACRO DOIT;
%DO I = 1 %TO 8;
    *****
    * COMPOSITE # 1.
    * GETTING NEEDED CARE VARIABLES.
    *****;
%PROCESS(CNUM=1, GNUM=&I, NVAR=2, VARS=R&FY.029_&I R&FY.033_&I,
    SE=S_R&FY.029 S_R&FY.033);

    *****
    * COMPOSITE # 2.
    * GETTING CARE QUICKLY VARIABLES.
    *****;
%PROCESS(CNUM=2, GNUM=&I, NVAR=2, VARS=R&FY.007_&I R&FY.010_&I,
    SE=S_R&FY.007 S_R&FY.010);

    *****
    * COMPOSITE # 3.
    * HOW WELL DOCTORS COMMUNICATE.
    *****;
%PROCESS(CNUM=3, GNUM=&I, NVAR=4, VARS=R&FY.021_&I R&FY.022_&I R&FY.023_&I
R&FY.024_&I,
    SE=S_R&FY.021 S_R&FY.022 S_R&FY.023 S_R&FY.024);

    *****
    * COMPOSITE # 4.
    * CUSTOMER SERVICE.
    *****;
%PROCESS(CNUM=4, GNUM=&I, NVAR=2, VARS=R&FY.041_&I R&FY.042_&I,
    SE=S_R&FY.041 S_R&FY.042);

    *****
    * COMPOSITE # 5.
    * CLAIMS PROCESSING.
```

```

*****;
%PROCESS(CNUM=5, GNUM=&I, NVAR=2, VARS=R&FY.046_&I R&FY.047_&I,
        SE=S_R&FY.046 S_R&FY.047);

*****
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****;
%PROCESS(CNUM=6, GNUM=&I, NVAR=1, VARS=R&FY.018_&I, SE=S_R&FY.018);

*****
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****;
%PROCESS(CNUM=7, GNUM=&I, NVAR=1, VARS=R&FY.048_&I, SE=S_R&FY.048);

*****
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****;
%PROCESS(CNUM=8, GNUM=&I, NVAR=1, VARS=R&FY.027_&I, SE=S_R&FY.027);

*****
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****;
%PROCESS(CNUM=9, GNUM=&I, NVAR=1, VARS=R&FY.031_&I, SE=S_R&FY.031);
%END;
%MEND DOIT;
%DOIT;

*****
*****
* STACK up all of the files into one final output dataset.
*****
*****;
DATA OUT.BENCHA04;
  SET COMP1_1 COMP1_2 COMP1_3 COMP1_4 COMP1_5 COMP1_6 COMP1_7 COMP1_8
      COMP2_1 COMP2_2 COMP2_3 COMP2_4 COMP2_5 COMP2_6 COMP2_7 COMP2_8
      COMP3_1 COMP3_2 COMP3_3 COMP3_4 COMP3_5 COMP3_6 COMP3_7 COMP3_8
      COMP4_1 COMP4_2 COMP4_3 COMP4_4 COMP4_5 COMP4_6 COMP4_7 COMP4_8
      COMP5_1 COMP5_2 COMP5_3 COMP5_4 COMP5_5 COMP5_6 COMP5_7 COMP5_8
      COMP6_1 COMP6_2 COMP6_3 COMP6_4 COMP6_5 COMP6_6 COMP6_7 COMP6_8
      COMP7_1 COMP7_2 COMP7_3 COMP7_4 COMP7_5 COMP7_6 COMP7_7 COMP7_8
      COMP8_1 COMP8_2 COMP8_3 COMP8_4 COMP8_5 COMP8_6 COMP8_7 COMP8_8
      COMP9_1 COMP9_2 COMP9_3 COMP9_4 COMP9_5 COMP9_6 COMP9_7 COMP9_8
  ;
  IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (6663-410)";
TITLE2 "Program Name: BENCHA04.SAS By Keith Rathbun";
TITLE3 "Program Inputs: Benchmark Individual and Composite data sets with adjusted
scores";
TITLE4 "Program Outputs: BENCHA04.SAS7BDAT - Combined Benchmark Scores Database in
WEB layout";

PROC CONTENTS; RUN;

```



```
PROC FREQ;  
TABLES TIMEPD BENEFIT BENATYPE MAJGRP REGION REGCAT  
       REGION*REGCAT  
       /MISSING LIST;  
RUN;
```

G.4.A - Q3FY2017\PROGRAMS\REPORTCARDS\MPR_ADULTQ3FY2017\PRVCOMPQ.SAS - Calculate Preventive Care Composite Scores - Run Quarterly.

```

*****
* Project: DoD Reporting and Analysis 6077-410
* Program: PRVCOMPQ.SAS
* Author: Chris Rankin
* Date: 12/22/2000
* Modified: 4/19/2001 By Keith Rathbun: Restrict population to
* xins_cov in(1,2,3,6). Use POSTSTR instead of
* adj_cell.
* Modified: 03/05/2012 By Amanda Kudis Updated %LET INDATA and YRDATA HCS122_2.
* 06/20/2012 By Amanda Kudis Updated for Q3FY2012.
* 08/23/2012 By Christine Cheu Updated for Q4FY2012.
* 11/03/2012 By Mike Rudacille Updated for handling of
* Joint Service facilities
* 12/28/2012 By Aimee Valenzuela Updated for Q1FY2013
* 03/23/2013 By Mike Rudacille Updated %LET INDATA and YRDATA HCS132_2.
* 05/17/2013 By Mike Rudacille Modified coded to address SUDAAN V11
handling
* of PROC DESCRIPT without LEVELS. Now invoking PROC DESCRIPT
* for TABLEVAR=USA (i.e. CONUS cases) similarly to the other
cases,
* except using LEVELS 1.
* 9/23/2013 By Amanda Kudis Updated for Q1FY2014
* 2/27/2014 By Amanda Kudis changed xservaff to use version in database
* 12/1/2014 By Matt Turbyfill, revised for the Macro Program.
* Changed INNORM to "&NORMDATA."
* Replaced RCTYPE with &PC.ReportCards
* Changed NORMDAT to &NORMFILE.
* Changed INDATA and YRDATA to &DATAFILE.
* Changed first LIBRARY to "&NORMFMMLIB."
* Changed H11 to H&NY.
* Changed H14 to H&FY.
* Removed line referencing JOINTSRV in
the NORMDATA step.
* Added %DO loop declaring all values of
SEMV&I. equal to 0.*
* 12/27/2016 by Matt Turbyfill, revised for the SAS Grid.
* Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
* Changed LIBRARY to &FMTPATH.

* Purpose: Calculate MPR Preventive Care Composites
* Input: HCSyyq_2.sas7bdat
* Output: RFINAL.sas7bdat
* CFINAL.sas7bdat
* MFINAL.sas7bdat
* SFINAL.sas7bdat
*
* Include
* Files: LOADCAHPQ.INC
* Notes: Next program is Loadmprq.sas
*
* ***CHECK PARAMETER ASSIGNMENTS***
*****;

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 MLOGIC MPRINT

```

```

NOFMTERR COMPRESS=YES;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

LIBNAME IN           "&datapath.";
LIBNAME INNORM       "&NORMDATA.";
LIBNAME OUT          ".";
LIBNAME LIBRARY      "&fmtpath.";

%LET WGT=FWRWT;
%LET NORMWGT = CFWT;
%LET NORMDAT = &NORMFILE.;

%LET DEBUG=Y;        /** Set to Y for Debug print of datasets **/
%LET INDATA=&DATAFILE.;

%LET YRDATA=&DATAFILE.;

/***** The following parameters are used in the Variance *****/
/***** calcuation macro for region and catchment area *****/

%LET GRPNUM=8;        /** number of groups          **/
%LET COMPNUM=6;       /** number of variables       **/ /* RSG - 04/2005 changed from
8 to 7 (eliminate cholesterol)*/
                                                    /* MER - 12/21/11 changed from
7 to 6 (eliminate 15 min access var)*/
%LET REGNUM=18;       /** number of regions        **/ /* RSG - 01/2005 CHANGED TO
FIT THE 16 CATEGORIES OF XSERVREG */
                                                    /* JSO 08/24/2006 (16 TO 15)
Changed Overseas Regions*/
                                                    /* MER 11/03/2012 (15 TO 18)
Joint Service */
%LET CATCHNUM=9999;  /** number of catchment areas **/

%LET CMPNUM1=4;       /** number of variables in first composite **/ /*RSG 04/2005
Changed CMPNUM1 from 5 to 4*/
%LET CMPNUM2=2;       /** number of variables in second composite **/ /*MJS 04/30/03
Changed CMPNUM2 from 4 to 3*/
                                                    /*MER 12/27/11
Changed CMPNUM2 from 3 to 2*/

%LET COMPCNT=2;      /** number of composites          **/

**** set up benchmarks for preventive services ;
**** note -- these are the hp 2000 goals      ;
**** MER 3/31/11 - updated to hp 2020 goals   ;

%LET GOALVAR1= .78;   /** HP Goal for prenatal care          **/
%LET GOALVAR2= .81;   /** HP Goal for Mammography            **/
%LET GOALVAR3= .93;   /** HP Goal for Papsmear              **/
%LET GOALVAR4= .95;   /** HP Goal for Blood Pressure check    **/
%LET GOALVAR5= .90;   /** access goals                          **/ /*04/2005 - RSG:
DELETED CHOLESTEROLE GOAL*/
%LET GOALVAR6= .90;

%INCLUDE "../..//LoadWeb/LOADCAHQ.INC";

```

```

/**** note -- output all data to a single dataset for macro */
/**** call */
/**** MACROS are no longer called for catchment areas */

/* 08/24/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
LIBNAME LIBRARY "&NORMFMTLIB.";

DATA NORMDATA(KEEP=XTNEXREG XSERVREG &WGT PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
DENV1-DENV&COMPNUM XSERVAFF FIELDAGE);
/* 11/15/2006 JSO Added FIELDAGE in the keep statement */

SET INNORM.&NORMDAT(KEEP=MPRID XINS_COV HP_BP HP_MAMOG HP_PAP HP_PRNTL XTNEXREG
XENR_PCM XBNFGRP ENBGSMPL &NORMWGT DBENCAT
H&NY.010 H&NY.007 H&NY.003 SERVAFF XREGION FIELDAGE
XCATCH);
/* 08/24/2006 JSO Added XREGION in the keep statement to get
XOCONUS */
/* 11/15/2006 JSO Added FIELDAGE in the keep statement */
/* 05/10/2007 JSO Added H05006, DBENCAT in the keep statement
*/
/* 12/21/2011 MER For switch to 2011 norm data mapped the
following vars: */
/* H05006 -> H&NY.003
*/
/* H05007 -> H&NY.004 (subsequently taken out due to not being
necessary */
/* H05019 -> H&NY.007
*/
/* H05022 -> H&NY.010
*/
/* H05030 and ADJ_CELL were dropped
*/

*****
* For quarterly reports, catchment level reporting is not done
* so the value of cellp is set to 1.
* For annual reporting purposes, cellp will need to be assigned
* to geocell
*****;

/*RSG 02/2005 Added codes to define XTNEXREG & XSERVAFF*/

IF SERVAFF = 'A' THEN XSERVAFF = 1; /*Army;
ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; /*Air Force;
ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; /*Navy;
ELSE XSERVAFF = 4; /*Other/unknown;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

IF XINS_COV NOT IN(1,2,3,6,9,10,11) THEN DELETE; /*JSO 07/30/2007, Added 9*/ /*MER
07/12/11 added 10, 11*/

XNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/

```

/*JSO 07/30/2007, added DBENCAT, NXNS_COV

```
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&NY.003 = 3 THEN DO;
  NXNS_COV = 3;
  XENR_PCM = .;
END;
```

```
PRVVAR1=HP_PRNTL;      /** prenatal care **/
PRVVAR2=HP_MAMOG;     /** mammography **/
PRVVAR3=HP_PAP;       /** papsmear **/
PRVVAR4=HP_BP;        /** blood pressure **/
PRVVAR5=H&NY.010;     /** access var 1 **/
PRVVAR6=H&NY.007;     /** access var 2 **/
```

/***** set up numerator and denominator for proportions *****/

```
ARRAY PRVVAR(*) PRVVAR1-PRVVAR&COMPNUM;
ARRAY NUMER(*) NUMV1-NUMV&COMPNUM;
ARRAY DENOM(*) DENV1-DENV&COMPNUM;
```

```
DO I = 1 TO &COMPNUM;
  IF I LE &CMPNUM1 THEN DO;
    IF PRVVAR(I) = 1 THEN NUMER(I) = 1;
    ELSE NUMER(I)=0;
    IF PRVVAR(I) IN (1, 2) THEN DENOM(I)=1;
  END;
  ELSE IF I GT &CMPNUM1 THEN DO;
    IF PRVVAR(I) IN (1, 2) THEN NUMER(I)=1;
    ELSE NUMER(I)=0;
    IF PRVVAR(I) > 0 THEN DENOM(I)=1;
  END;
END;
DROP I;
DENV4=1;
```

```
/* 08/22/2006, JSO Create XOCONUS for 2005 data */
IF XREGION=13 THEN XOCONUS=1;
ELSE IF XREGION=14 THEN XOCONUS=2;
ELSE IF XREGION=15 THEN XOCONUS=3;
```

/*RSG 02/2005 Added codes to define XSERVREG CACSMPL*/

```
IF XTNEXREG = 1 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 1;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
  ELSE XSERVREG = 5;
END;
```

```
IF XTNEXREG = 2 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 6;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
  ELSE XSERVREG = 10;
END;
```

```

IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/22/2006, Changed Overseas Regions*/
  IF      XOCONUS = 1 THEN XSERVREG = 16;
  ELSE IF XOCONUS = 2 THEN XSERVREG = 17;
  ELSE IF XOCONUS = 3 THEN XSERVREG = 18;
END;

RENAME &NORMWGT = &WGT;
run;

/* 08/22/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
LIBNAME LIBRARY "&fmtpath.";

DATA &YRDATA(KEEP=BGROUP MHS USA XSERVAFF CACSMPL &WGT TMP_CELL
  PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
  DENV1-DENV&COMPNUM XTNEXREG XSERVREG FIELDAGE);
  /* 11/15/2006 JSO Added FIELDAGE in the keep statement */

  SET IN.&INDATA(KEEP=XINS_COV HP_BP XTNEXREG HP_MAMOG HP_PAP HP_PRNTL /*RSG
04/2005 DELETE HP_CHOL*/
  XREGION SERVAFF XENR_PCM XBNFGRP ENBGSMPL &WGT CACSMPL XCATCH
  STRATUM H&FY.010 H&FY.007 H&FY.004 H&FY.003 D_HEALTH FIELDAGE
DBENCAT);
  /* 11/15/2006 JSO Added FIELDAGE in the keep statement */
  /* 05/10/2007 JSO Added H07006, DBENCAT in the keep statement
*/

*****
* For quarterly reports, catchment level reporting is not done
* so the value of cellp is set to 1.
* For annual reporting purposes, cellp will need to be assigned
* to geocell
*****;
IF SERVAFF = 'A' THEN XSERVAFF = 1;      *Army;
ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; *Air Force;
ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; *Navy;
ELSE XSERVAFF = 4;                      *Other/unknown;

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

CELLP = 1;
LENGTH TMP_CELL 8;
TMP_CELL = STRATUM; /* Make STRATUM a numeric variable */

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

```

```

IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*/
/*MER 07/12/11 Added 10,11 */ /*AMK 2/13/14 removed 11 added 13/14*/

```

```

NXNS_COV = XINS_COV; /*JSO 05/14/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;

```

```

PRVVAR1=HP_PRNTL; /* prenatal care */
PRVVAR2=HP_MAMOG; /* mammography */
PRVVAR3=HP_PAP; /* papsmear */
PRVVAR4=HP_BP; /* blood pressure */
/*RSG 04/2005 - delete cholesterol, renumber PRVVAR below*/
PRVVAR5=H&FY.010; /* access var 1 */
PRVVAR6=H&FY.007; /* access var 2 */

```

```

/**** set up numerator and denominator for proportions ****/

```

```

ARRAY PRVVAR(*) PRVVAR1-PRVVAR&COMPNUM;
ARRAY NUMER(*) NUMV1-NUMV&COMPNUM;
ARRAY DENOM(*) DENV1-DENV&COMPNUM;

DO I = 1 TO &COMPNUM;
    IF I LE &CMPNUM1 THEN DO;
        IF PRVVAR(I) = 1 THEN NUMER(I) = 1;
        ELSE NUMER(I)=0;
        IF PRVVAR(I) IN (1, 2) THEN DENOM(I)=1;
    END;
    ELSE IF I GT &CMPNUM1 THEN DO;
        IF PRVVAR(I) IN (1, 2) THEN NUMER(I)=1;
        ELSE NUMER(I)=0;
        IF PRVVAR(I) > 0 THEN DENOM(I)=1;
    END;
END;
DROP I;
DENV4=1;

```

```

MHS= 1; /* set up dummy for MHS-- include all observations */

```

```

/* 08/22/2006, JSO Create XOCONUS for 2005 data */

```

```

IF XREGION=13 THEN XOCONUS=1;
ELSE IF XREGION=14 THEN XOCONUS=2;
ELSE IF XREGION=15 THEN XOCONUS=3;

```

```

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
    ELSE XSERVREG = 5;
END;

```

```

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;

```

```

ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/22/2006, Changed Overseas Regions*/
  IF XOCONUS = 1 THEN XSERVREG = 16;
  ELSE IF XOCONUS = 2 THEN XSERVREG = 17;
  ELSE IF XOCONUS = 3 THEN XSERVREG = 18;
END;

*****
* Assign indicator of CONUS based on XTNEXREG. CONUS stands for
* Contential United States it but includes both Alaska and Hawaii.
* 1/16/09 Changed CONUS to USA.
*****;
  IF XTNEXREG IN (1,2,3) THEN USA=1; /*RSG 01/2005
OVERALL CONUS*/

  ELSE IF XTNEXREG = 4 THEN USA=2;

* Prime enrollees      *;

IF (NXNS_COV IN (1,2,6,13) AND H&FY.004>=2) THEN DO; /*AMK 2/19/14 added 13*/
  BGROUP=1;
  OUTPUT;
END;

* Enrollees with military PCMs *; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
  (XENR_PCM IN (1,2,6) AND H&FY.004>=2) THEN DO;
  BGROUP=2;
  OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  (XENR_PCM IN (1,2) AND H&FY.004>=2) THEN DO;
  BGROUP=2;
  OUTPUT;
END;

* Enrollees with civilian PCMs *; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
  (XENR_PCM IN (3,7) AND H&FY.004>=2) THEN DO;
  BGROUP=3;
  OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  ((XENR_PCM IN (3) AND H&FY.004>=2) OR NXNS_COV IN (3,9,10,14)) THEN DO; /*JSO
07/30/2007, Added 9*/

```



```

        BGROUP=3;
07/12/11 Added 10*/ /*AMK 2/13/14 added 14*/
        OUTPUT;
        END;

* Nonenrollees *;

        IF NXNS_COV IN (3,9,10, 14) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
        BGROUP=4; /*JSO 07/30/2007, Added 9*/ /*MER 07/12/11 Added
10*/ /*AMK 2/13/14 added 14*/
        OUTPUT;
        END;

* Active duty *;

        IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
        BGROUP=5; /*JSO 07/30/2007, added DBENCAT conditions*/
        OUTPUT;
        END;

* Active duty dependents *;

        IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
        BGROUP=6; /*JSO 07/30/2007, added DBENCAT conditions*/
        OUTPUT;
        END;

* Retirees *;

        IF XBNFGRP IN (3,4) THEN DO;
        BGROUP=7;
        OUTPUT;
        END;

* All beneficiaries *;

        BGROUP=8;
        OUTPUT;
RUN;

DATA HCSDB;
SET &YRDATA;
RUN;

*****
*** First, calculate standard errors and create ***
*** a file for each analytical unit ***
*****;

PROC SORT DATA=HCSDB; BY TMP_CELL;
RUN;

*****
***** Sudaan macro to calculate standard errors *****
***** there are three output datasets created *****
***** (XTNEXREG, XSERVREG, MHS, XSERVAFF) *****
***** Note: 7/10/2000 use CONUS for MHS *****

```

```

***** Note:  there are 8 variables and 8 groups      *****
***** Note:  1/16/09 Changed CONUS to USA          *****
*****;

%MACRO A_SUDAAN(TABLEVAR);

*** set the number of levels in the proc descriptor ***;
*** for region or catchment                          ***;

%IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
  %LET ENDNUM=4;
  %LET PREF=S;          /** dataset prefix for service affiliation data   **/
%END;
%IF %UPCASE(&TABLEVAR)=XSERVREG %THEN %DO;
  %LET ENDNUM=&REGNUM;
  %LET PREF=R;          /** dataset prefix for region data               **/
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=USA %THEN %DO;
  %LET ENDNUM=1;
  %LET PREF=C;          /** dataset prefix for CONUS data                **/
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
  %LET ENDNUM=5;       /** MER 11/03/2012 Change from 4 to 5 for Joint Service **/
  %LET PREF=M;
%END;

%DO I=1 %TO &GRPNUM;    /** 8 groups      **/

  %DO J=1 %TO &COMPNUM;  /** 6 variables **/

    DATA INDATA&I.&J(KEEP=&WGT MHS USA XSERVAFF XTNEXREG XSERVREG CACSMPL
                      XSERVAFF NUMV&J DENV&J TMP_CELL);

    SET HCSDB;
    WHERE XSERVREG > 0 AND BGROUP=&I AND DENV&J > 0;
    %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
      IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /*MER 11/03/2012 Changed
from 4 to 5 for Joint Service */
    %END;
    %IF %UPCASE(&TABLEVAR)=USA %THEN %DO;
      IF USA NE 1 THEN DELETE;
    %END;
    %IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
      IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;
    %END;
  RUN;

*** Calculate values for regions, catchment areas *****;

PROC DESCRIPT DATA=INDATA&I.&J DESIGN=STRWR NOPRINT;
  WEIGHT &WGT;
  SETENV DECWIDTH=4;
  NEST TMP_CELL / MISSUNIT;
  VAR NUMV&J;
  TABLES &TABLEVAR;
  SUBGROUP &TABLEVAR;
  LEVELS &ENDNUM;
  OUTPUT SEMEAN/ TABLECELL=DEFAULT
  FILENAME=&PREF.GRP&I.V&J;

```

```

RUN;

***** first, put all variables into one dataset for each group *****;

DATA &PREF.GRP&I.V&J;
  SET &PREF.GRP&I.V&J;
  IF SEMEAN NE .;
  MHS=1;
RUN;

%IF &J=1 %THEN %DO;
  DATA &PREF.SEGRP&I;
    SET &PREF.GRP&I.V&J(KEEP=&TABLEVAR SEMEAN);
    GROUP=&I;
    IF SEMEAN NE .;
    RENAME SEMEAN = SERRV&J;
  RUN;
%END;
%ELSE %DO;
  DATA &PREF.SEGRP&I;
    MERGE &PREF.SEGRP&I &PREF.GRP&I.V&J(KEEP=&TABLEVAR SEMEAN);
    BY &TABLEVAR;
    GROUP=&I;
    RENAME SEMEAN = SERRV&J;
  RUN;
%END;
%END;

***** Put all data into one dataset *****
***** Note: changed output dataset *****
***** to include group *****;

%IF &I=1 %THEN %DO;

  DATA &PREF.SERR;
    SET &PREF.SEGRP&I;
    KEEP GROUP &TABLEVAR SERRV1-SERRV&COMPNUM;
  RUN;
%END;
%ELSE %DO;

  DATA &PREF.SERR;
    SET &PREF.SERR
      &PREF.SEGRP&I;
  RUN;
%END;

***** DEBUG PRINT *****;

%IF &DEBUG=Y %THEN %DO;
  %IF &I=&GRPNUM AND &PREF=R %THEN %DO;
    PROC PRINT DATA=&PREF.SERR;
      VAR &TABLEVAR GROUP SERRV1-SERRV&COMPNUM;
    RUN;
  %END;
%END;

```

```

%END;

%MEND A_SUDAAN;

%A_SUDAAN (USA);
%A_SUDAAN (XSERVAFF);
%A_SUDAAN (XSERVREG);
%A_SUDAAN (XTNEXREG);

*****
*** Next, calculate correlation coefficients          ***
*** and create a file for each analytical unit      ***
*****;

%MACRO GETCORR(BYVAR);

%IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PREF=S;
%ELSE %IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PREF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PREF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=M;

PROC SORT DATA=HCSDB; BY &BYVAR;
RUN;

%DO I = 1 %TO &GRPNUM;

    PROC CORR NOPRINT DATA=HCSDB OUTP=&PREF.CORRC&I;
        %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %DO;
            WHERE BGROUP=&I AND 1 <= XSERVAFF <= 5;    /** MER 11/03/2012 Changed 4 to
5 for Joint Service **/
        %END;
        %IF %UPCASE(&BYVAR)=USA %THEN %DO;
            WHERE BGROUP=&I AND USA = 1;
        %END;
        %ELSE %DO;
            WHERE BGROUP=&I;
        %END;
        BY &BYVAR;
        VAR PRVVAR1-PRVVAR&COMPNUM;
        WITH PRVVAR1-PRVVAR&COMPNUM;
        WEIGHT &WGT;
    RUN;

    DATA &PREF.CORRC&I;
        SET &PREF.CORRC&I;
        WHERE _TYPE_="CORR";
        GROUP=&I;
        ARRAY OLD PRVVAR1-PRVVAR&COMPNUM;
        ARRAY NEW CORV1-CORV&COMPNUM;
        DO J = 1 TO &COMPNUM;
            NEW(J)=OLD(J);
        END;
        DROP J PRVVAR1-PRVVAR&COMPNUM;
    RUN;

    %IF &I=1 %THEN %DO;

        DATA &PREF.CORRC;

```

```

        SET &PREF.CORRC&I;
    RUN;

%END;
%ELSE %DO;

    DATA &PREF.CORRC;
        SET &PREF.CORRC
            &PREF.CORRC&I;
    RUN;

%END;
%IF &DEBUG=Y %THEN %DO;
    %IF &I=&COMPNUM AND &PREF=R %THEN %DO;
        PROC PRINT DATA=&PREF.CORRC;
            WHERE GROUP=1;
        RUN;
    %END;
%END;
%END;

*** Flatten dataset(for each region, condense matrix to one row) ***;

%DO K=1 %TO &COMPNUM;

    DATA &PREF.CORR&K;
        SET &PREF.CORRC;
        WHERE _NAME_ = "PRVVAR&K";
        ARRAY CORR (&COMPNUM) CORV1-CORV&COMPNUM;
        ARRAY CORR&K (&COMPNUM) CORV&K.1-CORV&K.&COMPNUM;
        DO L=1 TO &COMPNUM;
            CORR&K(L)=CORR(L);
        END;
        KEEP GROUP &BYVAR CORV&K.1-CORV&K.&COMPNUM;
    RUN;
    %IF &K=1 %THEN %DO;
        DATA &PREF.CORR;
            SET &PREF.CORR&K;
        RUN;
    %END;
    %ELSE %DO;
        DATA &PREF.CORR;
            MERGE &PREF.CORR(IN=IN_1) &PREF.CORR&K(IN=IN_2);
            BY GROUP &BYVAR;
        RUN;
    %END;
    %IF &DEBUG=Y %THEN %DO;
        %IF &PREF=R %THEN %DO;
            PROC PRINT DATA=&PREF.CORR;
                WHERE GROUP=1;
            RUN;
        %END;
    %END;
%END;

%MEND GETCORR;

%GETCORR(USA);

```

```

%GETCORR(XSERVAFF);
%GETCORR(XSERVREG);
%GETCORR(XTNEXREG);

*****
*** Macro to derive composites for each *****
*** beneficiary group, level *****
*** output one dataset for each group *****
*****;

%MACRO GETPROP(BYVAR);

%LET START = %EVAL(&CMPNUM1+1);

%IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PREF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PREF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=M;
%ELSE %IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PREF=S;

PROC MEANS NWAY NOPRINT DATA=HCSDB;
  CLASS BGROUP &BYVAR;
  VAR NUMV1-NUMV&COMPNUM
      DENV1-DENV&COMPNUM;
  WEIGHT &WGT;
  OUTPUT OUT= &PREF.CMPSUM(DROP = _TYPE_)
  SUM = ;
RUN;
PROC MEANS NWAY NOPRINT DATA=normdata;
* CLASS &BYVAR;
  VAR
      DENV1-DENV&COMPNUM;
  WEIGHT &wgt.;
  OUTPUT OUT= &PREF.norms(DROP = _TYPE_)
  SUM = nrmv1-nrmv&compnum;
RUN;

PROC MEANS NWAY NOPRINT DATA=HCSDB;
  CLASS BGROUP &BYVAR;
  VAR DENV1-DENV&COMPNUM;
  OUTPUT OUT=&PREF.DGFR(DROP=_TYPE_ _FREQ_)
  SUM= NOBSV1-NOBSV&COMPNUM;
RUN;

data &pref.cmpsum;

if _n_=1 then set &pref.norms;
set &pref.cmpsum;
proc sort data=&pref.cmpsum; by bgroup &byvar;
  DATA &PREF.CMPSUM;
  MERGE &PREF.CMPSUM(RENAME=( _FREQ_=N_OBS))
  &PREF.DGFR;
  BY BGROUP &BYVAR;
  %IF &PREF=M %THEN %DO; /** added 7/10/2000 **/
  WHERE 1 <= XSERVAFF <= 5; /** MER 11/03/2012 Changed 4 to 5 for Joint
Service **/
  %END;
  %ELSE %IF &PREF=C %THEN %DO;

```

```

        WHERE USA = 1;
%END;

**** set up group variable **;

    RENAME BGROUP=GROUP;;

**** set up proportions, and composites **;

ARRAY PROPORT PROPV1-PROPV&COMPNUM;
ARRAY NUMER    NUMV1-NUMV&COMPNUM;
ARRAY DENOM    DENV1-DENV&COMPNUM;
array norm     nrmv1-nrmv&compnum;

DO J=1 TO DIM(PROPORT);
    PROPORT(J) = NUMER(J)/DENOM(J);
END;
DROP J;

**** composites **;

** added goalvars to datastep, 5/30/2000           ;
** taken out of temporary array for variance calculations;
** and used, kept as variables                     ;

GOALVAR1=&GOALVAR1;
GOALVAR2=&GOALVAR2;
GOALVAR3=&GOALVAR3;
GOALVAR4=&GOALVAR4;
GOALVAR5=&GOALVAR5;
GOALVAR6=&GOALVAR6;
/*RSG 04/2005 - delete goal8 since chol eliminated*/

** the weight for preventive service is defined as the           ;
** proportion of the denominator for that service to the       ;
;
** composite denominator                                       ;
** healthy people 2000 goals -- used as benchmarks            ;

ARRAY    SVCWGT(&COMPNUM) WGTV1-WGTV&COMPNUM;
ARRAY    BMARK(&COMPNUM) GOALVAR1-GOALVAR&COMPNUM;
ARRAY    WGTBMARK(&COMPNUM) WTDV1-WTDV&COMPNUM;
array comp(&compnum) cmpv1-cmpv&compnum;
cpden1=sum(of nrmv1-nrmv&compnum1);
cpden2=sum(of nrmv&start-nrmv&compnum);
DO K = 1 TO &COMPNUM;
    IF K < &START THEN SVCWGT(K)= norm(K)/CPDEN1;
    ELSE SVCWGT(K) = norm(K)/CPDEN2;
    WGTBMARK(K) = SVCWGT(K)*BMARK(K);
    comp(k)=svcwgt(k)*proport(k);
END;
DROP K;
CPBMK1=SUM(OF WTDV1-WTDV&CMPNUM1);
CPBMK2=SUM(OF WTDV&START-WTDV&COMPNUM);
comp1=sum(of cmpv1-cmpv&compnum1);
comp2=sum(of cmpv&start-cmpv&compnum);
DROP WGTV1-WGTV&COMPNUM WTDV1-WTDV&COMPNUM

```

```

        NUMV1-NUMV&COMPNUM;
RUN;

%IF &DEBUG=Y AND &PREF=R %THEN %DO;
    PROC PRINT DATA=&PREF.CMPSUM; /* print out final dataset */
    RUN;                          /* for region to check */
%END;

%MEND GETPROP;

%GETPROP(USA);
%GETPROP(XSERVAFF);
%GETprop(XSERVREG);
%GETPROP(XTNEXREG);

*****
** since MHS benchmarks will be displayed      ****
** set up adjustment factor to apply to        ****
** each analytical unit's composite benchmarks  ****
*****;

*****
*** Macro to merge 3 datasets for each          ****
*** called by analytical unit                  ****
*** output final dataset for                  ****
*** XSERVAFF, XSERVREG, XTNEXREG, MHS (USA)    ****
*****;

PROC FORMAT; /*RSG 02/2005 - hardcoded in prog to have caps vs format in
loadcahq.inc*/
    VALUE REGIONF
        0 = "USA MHS "
        1 = "NORTH"
        2 = "SOUTH"
        3 = "WEST"
        4 = "OVERSEAS"
    ;
%MACRO GETSIG(BYVAR);

%LET START = %EVAL(&CMPNUM1+1);
%LET NEXT  = %EVAL(&CMPNUM1+2);

%IF &BYVAR=XSERVREG %THEN %LET PREF=R;
%ELSE %IF &BYVAR=USA %THEN %LET PREF=C;
%ELSE %IF &BYVAR=XSERVAFF %THEN %LET PREF=M;
%ELSE %IF &BYVAR=XTNEXREG %THEN %LET PREF=S;

DATA OUT.&PREF.FINAL(KEEP= MAJGRP REGION REGCAT GOALVAR1-GOALVAR&COMPNUM
    SIGV1-SIGV&COMPNUM SCORV1-SCORV&COMPNUM
    CPSIG1-CPSIG&COMPNT CP1SE CP2SE
    CSCOR1-CSCOR&COMPNT CPBMK1-CPBMK&COMPNT
    SERRV1-SERRV&COMPNUM CP1SE CP2SE
    COMP1 COMP2 PROPV1-PROPV&COMPNUM
    DFSCR1-DFSCR&COMPNUM DF_CP1 DF_CP2
    NOBSV1-NOBSV&COMPNUM CPOBS1-CPOBS&COMPNT
    DENV1-DENV&COMPNUM CPDEN1-CPDEN&COMPNT);

```



```

FORMAT MAJGRP $30. REGION $30. REGCAT $30.; /* MER 11/11/12 - Updated
REGION/REGCAT for Joint Service facilities */
MERGE &PREF.CMPSUM(IN=IN_PROP) &PREF.CORR
&PREF.SERR;
BY GROUP &BYVAR;
IF IN_PROP;
%DO Z=1 %TO &COMPNT;

CSCOR&Z=COMP&Z.*100;

%END;
** MAJGRP -- text field for group **;
IF GROUP=1 THEN MAJGRP="Prime Enrollees ";
ELSE IF GROUP=2 THEN MAJGRP="Enrollees with Military PCM";
ELSE IF GROUP=3 THEN MAJGRP="Enrollees with Civilian PCM";
ELSE IF GROUP=4 THEN MAJGRP="Non-enrolled Beneficiaries ";
ELSE IF GROUP=5 THEN MAJGRP="Active Duty ";
ELSE IF GROUP=6 THEN MAJGRP="Active Duty Dependents ";
ELSE IF GROUP=7 THEN MAJGRP="Retirees and Dependents ";
ELSE IF GROUP=8 THEN MAJGRP="All Beneficiaries ";

*** REGION AND REGCAT SETUP **;
%IF &PREF=S %THEN %DO;
REGCAT=PUT(XTNEXREG,REGIONF.);
REGION=PUT(XTNEXREG,REGIONF.);
%END;
%else %IF &PREF=C %THEN %DO;
REGION="USA MHS";
REGCAT="USA MHS";
%END;
%ELSE %IF &PREF=R %THEN %DO;
REGION=PUT(XSERVREG, SERVREGO.);
REGCAT=PUT(XSERVREG, SERVREGO.);
%END;
%ELSE %IF &PREF=M %THEN %DO;
REGION=PUT(XSERVAFF,XSERVAFF.);
REGCAT=PUT(XSERVAFF,XSERVAFF.);
%END;
/** RSG 1/2005 Add codes for
service grouping **/

**** setup t statistics, degrees of freedom **;
ARRAY TSTAT{&COMPNUM} T_V1-T_V&COMPNUM;
ARRAY BMARK{&COMPNUM} GOALVAR1-GOALVAR&COMPNUM;
ARRAY STNDERR{&COMPNUM} SERRV1-SERRV&COMPNUM;
ARRAY SERRSQR{&COMPNUM} SESQV1-SESQV&COMPNUM;
ARRAY DEGF{&COMPNUM} DFSCR1-DFSCR&COMPNUM;
ARRAY DENOM{&COMPNUM} DENV1-DENV&COMPNUM;
ARRAY PROPORT{&COMPNUM} PROPV1-PROPV&COMPNUM;
ARRAY SCORE{&COMPNUM} SCORV1-SCORV&COMPNUM;
ARRAY PVALUE{&COMPNUM} PVALV1-PVALV&COMPNUM;
ARRAY SIG{&COMPNUM} SIGV1-SIGV&COMPNUM;
ARRAY NOBS{&COMPNUM} NOBSV1-NOBSV&COMPNUM;
array norm{&compnum} nrmv1-nrmv&compnum;

** get the item variance, t-statistics, df, p-values **;
** and whether significant **;
DO I=1 TO &COMPNUM;

```

```

SERRSQR{I}=STNDERR{I}**2; /* Item variance */
SCORE{I}=PROPORT{I}*100; /* Score (prop. * 100) */
IF STNDERR{I} > 0 THEN TSTAT{I}=(PROPORT{I}-BMARK{I})/STNDERR{I};
ELSE TSTAT{I}=.;
DEGF{I}=NOBS{I}-1;
PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
IF PVALUE{I} GE .05 THEN SIG{I}=0;
ELSE IF PVALUE{I} < .05 THEN DO;
    IF PROPORT{I} > BMARK{I} THEN SIG{I}=1;
    IF PROPORT{I} < BMARK{I} THEN SIG{I}=-1;
END;
END;
DROP I;

%DO I=1 %TO &COMPNUM.&COMPNUM.;
    SEMV&I. = 0;
%END;

** multiply each item pair std. errors and correlation coefficients **;
** preventive care composite **;
ARRAY SEwC1{&CMPNUM1} SEwV1-SEwV&CMPNUM1;

ARRAY SERRC1{&CMPNUM1} SERRV1-SERRV&CMPNUM1;
%DO J = 1 %TO &CMPNUM1;
    ARRAY SMEAN&J{&CMPNUM1} SEMV&J.1-SEMV&J.&CMPNUM1;
    ARRAY CORVAR&J{&CMPNUM1} CORV&J.1-CORV&J.&CMPNUM1;
    DO K=1 TO &CMPNUM1;
        SMEAN&J{K}=SERRV&J*SERRC1{K}*CORVAR&J{K}*norm{K}*nrmV&J;
    END;
    SEMV&J.&J=0;
    sewv&j= (nrmV&j**2)*SESQV&j;/** don't count in final standard error
calculation **/
%END;
DROP K;
** multiply each item pair std. errors and correlation coefficients **;
** access to care composite **;

ARRAY SERRC2{&CMPNUM2} SERRV&START-SERRV&COMPNUM;
%DO L = &START %TO &COMPNUM;
    ARRAY SMEAN&L{&CMPNUM2} SEMV&L.&START-SEMV&L.&COMPNUM;
    ARRAY CORVAR&L{&CMPNUM2} CORV&L.&START-CORV&L.&COMPNUM;
    DO M=1 TO &CMPNUM2;
        SMEAN&L{M}=SERRV&L*SERRC2{M}*CORVAR&L{M};
    END;
    SEMV&L.&L=0; /** don't coun't in final standard error calculation **/
%END;
DROP M;
** calculate composite t-statistic, pvalue, and whether significant **;
** for composites **;

%DO P=1 %TO &COMPCNT;

```

```

%IF &P=1 %THEN %DO;
** composite standard error comprised of two parts **;
  CP&P.SE1=SUM(OF SEwV1-SEwV&CMPNUM1);
  CP&P.SE2=SUM(OF SEMV11-SEM&CMPNUM1.&CMPNUM1.);
  cpobs&p=sum(of nobsv1-nobsv&cmpnum1);
%END;
%ELSE %DO;
  CP&P.SE1=SUM(OF SESQV&START-SESQV&COMPNUM);
  CP&P.SE2=SUM(OF SEMV&START.&START.-SEM&COMPNUM.&COMPNUM.);
  cpobs&p=sum(of nobsv&start-nobsv&compnum);
%END;
** add the two parts of the composite standard error **;
** calculate the composite t statistics and p-values **;
** determine whether differences are significant **;

  CP&P.SE=SQRT(CP&P.SE2+CP&P.SE1)/CPden&P;
  IF CP&P.SE > 0 THEN CP_T&P.=(COMP&P.-CPBMK&P.)/CP&P.SE;
  ELSE CP_T&P.= .;
  DF_CP&P.=CPOBS&P. - 1;
  CP_P&P.=(1-PROBT(ABS(CP_T&P.),DF_CP&P.))*2;
  IF CP_P&P GE .05 THEN CPSIG&P=0;
  ELSE IF CP_P&P < .05 THEN DO;
    IF COMP&P. > CPBMK&P THEN CPSIG&P= 1;
    ELSE IF COMP&P. < CPBMK&P THEN CPSIG&P=-1;
  END;
%END;

  OUTPUT OUT.&PREF.FINAL;
RUN;

%MEND GETSIG;

%GETSIG(USA);
%GETSIG(XTNEXREG);
%GETSIG(XSERVREG);
%GETSIG(XSERVAFF);

```

**G.4.B - Q3FY2017\PROGRAMS\REPORTCARDS\MPR_ADULTQ3FY2017\SMOKING_BMI.sas -
Calculates Healthy Behavior Composite Scores - Run Quarterly.**

```

*****
*
* Project:    DoD Reporting and Analysis 6077-410
* Program:    SMOKING_BMI.SAS
* Purpose:    Calculate Smoking Rate and Smoking Cessation
*             for each region-service affiliation and
*             conus-service affiliation groups.
*
* Date:       1/31/2005
* Author:     Regina Gramss
*
* Modified:   38) 11/03/2012 By Mike Rudacille Updated for handling of Joint Service
facilities
*             39) 12/28/2012 By Aimee Valenzuela Updated for Q1FY2013
*             40) 03/23/2013 By Mike Rudacille, Updated %LET DSN HCS132_2 and CURRENT
January, 2013.
*             41) 09/20/2014 By Amanda Kudis, Updated for Q1FY2014.
*             42) 02/27/2014 By Amanda Kudis, Use XSERVAFF from database
*             43) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
                    Replaced RCTYPE with &PC.ReportCards
                    Changed BENCH to "&BENCHINPUT."
                    Changed INNORM to "&NORMDATA."
                    Changed DSN to &DATAFILE.
                    Changed DSN_NORM to &NORMFILE.
                    Changed CURRENT to &PERIOD4.
                    Changed C13_ZAMV to &BENCHFILE.
                    Changed first LIBRARY to "&NORMFMMLIB."
                    Removed line referencing JOINTSRV in the NORMDATA step.
                    Changed H11 to H&NY.
                    Added NSUM = ROUND(NSUM,1)
*             44) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
                    Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*             Changed LIBRARY to &FMTPATH.
*
* Inputs:     1) HCS11A_2.sas7bdat - Annual 2011 Survey data
*             2) HCS141_2.sas7bdat - Q1 fy 2014 Survey data
*             3) AC2011DB.sas7bdat - 2011 CAHPS Benchmark Data
*
* Output:     1) SMOKE.sas7bdat
*
*****;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMterr;

/**** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ****/
%LET RCTYPE = &PC.ReportCards;

LIBNAME BENCH          "&BENCHINPUT.";
LIBNAME INDAT          "&datapath.";
LIBNAME INNORM         "&NORMDATA.";
LIBNAME OUT            ".";

%LET DSN=&DATAFILE.;

```

```

%LET DSN_NORM=&NORMFILE.;                               /*JSO 08/24/2006, Changed Regions, 16 to
15*/ /* MER 11/03/12 15 to 18 */
%LET REGNUM = 18;                                       /*RSG 01/2005 Number of Regions (with serv
affiliation)*/
%LET CONNUM = 4;                                        /*RSG 01/2005 Number of Conus level (with
serv affiliation)*/
%LET SRVNUM = 5;                                       /*MER 11/03/2012 Number of service
affiliations, including Joint Service */
%LET CURRENT = &PERIOD4.;
%LET WGT = FWRWT;
%LET NORMWGT = CFWT;
%LET CATCHNUM=9999;                                    /*RSG 02/2005 number of catchment areas */

DATA BENCHA01;
  SET BENCH.&BENCHFILE.;
  if rep_typ in ("HMO/PPO Combined", "PPO") then model = 1;
  else model = 2;
  if disp in ('M10','I10') ;
  if S46 in (1,2) & S47>=1 & S47<=4; /*02/2006 RSG - REMOVED REQUIREMENT FOR
ADDITIONAL VISIT (ACC22 FIELD)*/
  cessbnch=0;
  if S47>1 then cessbnch=1;

proc summary nway; class sub_id;
var cessbnch;
output out=tbench mean=;
proc print;
proc summary;
var cessbnch;
output out=tbench mean=;
proc print;
data _null_;
set tbench;
call symput('CNSLGOAL',cessbnch);
run;

%LET NSMKGOAL = 0.88;

%LET BMIGOAL = 0.69;

%INCLUDE "../..../LoadWeb/LOADCAHQ.INC";

PROC FORMAT;
VALUE AGEF
LOW - 34 = 1
 35 - 49 = 2
 50 - 64 = 3
 65 - HIGH = 4;

/* 08/22/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
LIBNAME LIBRARY "&NORMFMTLIB.";

DATA NORMDATA (KEEP=TMP_CELL AGE_GRP XTNEXREG XSERVREG XSERVAFF
SM_RATE SM_CESS SM_RTDN SM_CSDN BMI_DN BMI

```

```

TOTCON GROUP XSEXA &WGT. age_n MPCSMPL NXNS_COV);
/* 05/10/2007 JSO Added NXNS_COV in the keep statement */
SET INNORM.&DSN_NORM.(DROP=&WGT.); /* 4/4/2006, KRR added drop so CFWT can
renamed/used */

LENGTH AGE_N AGE_GRP TMP_CELL 8.;

IF XREGION=13 THEN XOCONUS=1; /* 08/24/2006, JSO Create XOCONUS for 2005 data */
ELSE IF XREGION=14 THEN XOCONUS=2;
ELSE IF XREGION=15 THEN XOCONUS=3;

TMP_CELL=STRATUM;

AGE_N = FIELDAGE;

AGE_GRP = PUT(AGE_N, AGEF.);
IF AGE_GRP < 4;

    IF SERVAFF = 'A' THEN XSERVAFF = 1;           *Army;
    ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2;     *Air Force;
    ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3;     *Navy;
    ELSE XSERVAFF = 4;                           *Other/unknown;

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
    ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
    ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 11;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
    ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/22/2006, Changed Overseas Regions*/
    IF XOCONUS = 1 THEN XSERVREG = 16;
    ELSE IF XOCONUS = 2 THEN XSERVREG = 17;
    ELSE IF XOCONUS = 3 THEN XSERVREG = 18;
END;

IF HP_SMKH3 IN (1,2) THEN DO;
    SM_RATE = 0;
    IF HP_SMKH3 = 2 THEN SM_RATE=1;

```

```

SM_RTDN=1;
END;

/* MER 3/31/11 Start using HP_CESH3 instead of re-creating work already done in
convarq */
IF HP_CESH3 IN (1,2) THEN DO;
    SM_CESS = 0;
    IF HP_CESH3 = 1 THEN SM_CESS=1;
    SM_CSDN=1;
END;

IF xbmicat > 0 THEN DO;
    BMI = 0;
    BMI_DN=1;
    IF xbmicat <=3 THEN BMI=1;
END;

IF XTNEXREG IN (1,2,3) THEN TOTCON=1;

ELSE IF XTNEXREG = 4 THEN TOTCON=2;

IF MPCSMPL = 3 THEN MPCSMPL = 2; /* RSG 02/2006 GROUP WARRANT OFFICER WITH OFFICER
*/

RENAME &NORMWGT = &WGT;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

IF XINS_COV NOT IN(1,2,3,6,9,10,11) THEN DELETE; /*JSO 07/30/2007, Added 9*/ /*MER
07/12/11 Added 10,11*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&NY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;

* prime enrollees;
IF NXNS_COV IN (1,2,6) AND H&NY.004>=2 THEN DO;
    GROUP=1;
    OUTPUT;
END;

* enrollees with military pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
    XENR_PCM IN (1,2,6) AND H&NY.004>=2 THEN DO;
    GROUP=2;
    OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
    XENR_PCM IN (1,2) AND H&NY.004>=2 THEN DO;
    GROUP=2;
    OUTPUT;

```

```

END;

* enrollees with civilian pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
  XENR_PCM = 3 AND H&NY.004>=2 THEN DO;
  GROUP=3;
  OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  ((XENR_PCM = 3 AND H&NY.004>=2) OR NXNS_COV IN (3,9,10)) THEN DO; /*JSO
07/30/2007, Added 9*/
  GROUP=3;
  Added 10*/
  OUTPUT;
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
  GROUP=4;
  Added 10*/ /*JSO 07/30/2007, Added 9*/ /*MER 07/12/11, Added
  OUTPUT;
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
  GROUP=5;
  Added 10*/ /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* active duty dependents;
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
  GROUP=6;
  Added 10*/ /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* retirees;
IF XBNFGRP IN (3,4) THEN DO;
  GROUP=7;
  OUTPUT;
END;

* all beneficiaries;
GROUP=8;
OUTPUT;

RUN;

/* 08/22/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
LIBNAME LIBRARY "&FMTPATH.";

DATA SMOKE (KEEP=TMP_CELL AGE_GRP XTNEXREG XSERVREG XSERVAFF TOTCON GROUP
  SM_RATE SM_CESS SM_RTDN SM_CSDN XSEXA &WGT BMI_DN BMI
  MPCSMPL NXNS_COV);/* 05/10/2007 JSO Added NXNS_COV in the keep
statement */
SET INDAT.&DSN.;
LENGTH AGE_N AGE_GRP TMP_CELL 8.;

```



```

/* MER 4/20/09 - Restrict dataset to just non-zero V4 weights */
IF &WGT <= 0 THEN DELETE;

TMP_CELL=STRATUM;

AGE_N = FIELDAGE;

AGE_GRP = PUT(AGE_N, AGEF.);

IF AGE_GRP < 4;
IF SERVAFF='A' THEN XSERVAFF=1;           *Army;
  ELSE IF SERVAFF='F' THEN XSERVAFF=2;     *Air Force;
  ELSE IF SERVAFF='N' THEN XSERVAFF=3;     *Navy;
  ELSE XSERVAFF=4;

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

IF XTNEXREG = 1 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 1;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
  ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 6;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
  ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/24/2006, Changed Overseas Regions*/
  IF XOCONUS = 1 THEN XSERVREG = 16;
  ELSE IF XOCONUS = 2 THEN XSERVREG = 17;
  ELSE IF XOCONUS = 3 THEN XSERVREG = 18;
END;

IF XTNEXREG IN (1,2,3) THEN TOTCON=1;

ELSE IF XTNEXREG=4 THEN TOTCON=2;

IF MPCSMPL = 3 THEN MPCSMPL = 2; /* RSG 02/2006 GROUP WARRANT OFFICER WITH OFFICER
*/

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

```

```

IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*/
/*MER 07/12/11, Added 10*/
/*AMK 2/10/14 removed 11, added
13/14*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;

IF HP_SMKH3 IN (1,2) THEN DO;
    SM_RATE = 0;
    IF HP_SMKH3 = 2 THEN SM_RATE=1;
    SM_RTDN=1;
END;

/* MER 3/31/11 Start using HP_CESH3 instead of re-creating work already done in
convarq */
IF HP_CESH3 IN (1,2) THEN DO;
    SM_CESS = 0;
    IF HP_CESH3 = 1 THEN SM_CESS=1;
    SM_CSDN=1;
END;

IF xbmicat > 0 THEN DO;
    BMI = 0;
    BMI_DN=1;
    IF xbmicat <=3 THEN BMI=1;
END;

* prime enrollees;
IF NXNS_COV IN (1,2,6,13) AND H&FY.004>=2 THEN DO; /*AMK 2/19/14 added 13*/
    GROUP=1;
    OUTPUT;
END;

* enrollees with military pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
    XENR_PCM IN (1,2,6) AND H&FY.004>=2 THEN DO;
    GROUP=2;
    OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
    XENR_PCM IN (1,2) AND H&FY.004>=2 THEN DO;
    GROUP=2;
    OUTPUT;
END;

* enrollees with civilian pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
    XENR_PCM = 3 AND H&FY.004>=2 THEN DO;
    GROUP=3;
    OUTPUT;
END;

```

```

ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  ((XENR_PCM = 3 AND H&FY.004>=2) OR NXNS_COV IN (3,9,10,14)) THEN DO; /*JSO
07/30/2007, Added 9*/
  GROUP=3; /*MER 07/12/11,
Added 10*//*AMK 2/13/14 added 14*/
  OUTPUT;
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10,14) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
  GROUP=4; /*JSO 07/30/2007, Added 9*/ /*MER 07/12/11, Added
10*//*AMK 2/13/14 added 14*/
  OUTPUT;
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
  GROUP=5; /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* active duty dependents;
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
  GROUP=6; /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* retirees;
IF XBNFGRP IN (3,4) THEN DO;
  GROUP=7;
  OUTPUT;
END;

* all beneficiaries;
GROUP=8;
OUTPUT;

RUN;

PROC SORT DATA=SMOKE;
BY TMP_CELL;
PROC SORT DATA=NORMDATA;
BY TMP_CELL;
RUN;

%MACRO A_SUDAAN(TABLEVAR, SMOKE, SMOKEVAR, DEN);

%IF %UPCASE(&TABLEVAR)=XSERVREG %THEN %DO;
  %LET ENDNUM=&REGNUM;
  %LET PREF=R;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
  %LET ENDNUM=&SRVNUM;
  %LET PREF=M;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
  %LET ENDNUM=&CONNUM;
  %LET PREF=S;

```

```

%END;

%ELSE %IF %UPCASE(&TABLEVAR)=TOTCON %THEN %LET PREF=C;

%DO I = 1 %TO 8;

    DATA INDAT&I.(KEEP=&WGT XSERVAFF XSERVREG AGE_GRP XSEXA MPCSMPL
                    &SMOKEVAR. &DEN. TMP_CELL XTNEXREG);

    SET SMOKE;
    WHERE XSERVREG > 0 AND GROUP=&I. AND &DEN. >= 0;
    %IF %UPCASE(&TABLEVAR) = XSERVAFF %THEN %DO;
        IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /* MER 11/3/12 - Changed 4 to
5 */
    %END;
    %IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
        IF TOTCON NE 1 THEN DELETE;
    %END;
    %IF %UPCASE(&TABLEVAR) = XTNEXREG %THEN %DO;
        IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;
    %END;
    RUN;

    DATA NORMDAT&I.(KEEP=&WGT XSERVAFF XSERVREG AGE_GRP XSEXA &SMOKEVAR. &DEN.
                    TMP_CELL XTNEXREG MPCSMPL);

    SET NORMDATA;
    WHERE XSERVREG > 0 AND GROUP=&I.;

    %IF %UPCASE(&TABLEVAR) = XSERVAFF %THEN %DO;
        IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /* MER 11/3/12 -
Changed 4 to 5 */
    %END;
    %IF %UPCASE(&TABLEVAR) = XTNEXREG %THEN %DO;
        IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;
    %END;

    RUN;

    %IF %UPCASE(&SMOKE) NE CS AND %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
        PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
        WEIGHT &WGT;
        SETENV DECWIDTH=4;
        NEST TMP_CELL / missunit;
        VAR &SMOKEVAR;
        TABLES AGE_GRP*XSEXA*MPCSMPL*&TABLEVAR.;
        SUBGROUP AGE_GRP XSEXA MPCSMPL &TABLEVAR.;
        LEVELS 8 2 2 &ENDNUM.;
        OUTPUT SEMEAN MEAN wsum nsum
            / TABLECELL=DEFAULT REPLACE
            FILENAME=&PREF.GRP&I.&SMOKE.;

        RUN;

    %END;
%ELSE %IF %UPCASE(&SMOKE) NE CS AND %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
    PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;

```

```

        TABLES AGE_GRP*XSEXA*MPCSMPL;
        SUBGROUP AGE_GRP XSEXA MPCSMPL;
        LEVELS 3 2 2;
        OUTPUT SEMEAN MEAN wsum nsum
              / TABLECELL=DEFAULT REPLACE
              FILENAME=&PREF.GRP&I.&SMOKE.;
    RUN;
%END;

%IF %UPCASE(&SMOKE) NE CS %THEN %DO;

    DATA &PREF.SER_&I.&SMOKE.;
    SET &PREF.GRP&I.&SMOKE.;
    GROUP=&I.;
    IF SEMEAN NE .;
    %IF %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
        KEEP &TABLEVAR. GROUP AGE_GRP XSEXA MPCSMPL SEMEAN MEAN wsum nsum;
    %END;
    %IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
        TOTCON=1;
        KEEP TOTCON GROUP AGE_GRP XSEXA MPCSMPL SEMEAN MEAN wsum nsum;
    %END;
    RUN;

    /* CREATE WEIGHTS FROM 2005 DATA*/
    proc summary data=normdat&i. nway;
        var &WGT;
        where &den>0;
        class age_grp xsex a MPCSMPL;
        output out=norm_&i. sum=normwt;

        proc sort data=&pref.ser_&i.&smoke.;
            by age_grp xsex a mpcsmpl;

            data &pref.ser_&i.&smoke.;
            merge &pref.ser_&i.&smoke.(in=gin) norm_&i.;
            by age_grp xsex a mpcsmpl;
            if gin;
            wsum=wsum/normwt;
            nsum=nsum/normwt;
            sesq=normwt*semean**2;
            run;

            proc summary data=&pref.ser_&i.&smoke. nway;
                var mean semean sesq wsum nsum;
                class &tablevar.;
                weight normwt;
                output out=&pref.sert&i.&smoke. mean(mean sesq)= sum(wsum nsum)=
sumwgt(semean)=;
                run;

            data &pref.sert&i.&smoke;
                set &pref.sert&i.&smoke;
                group=&i.;
                    semean=sqrt(sesq/semean);
                    NSUM = ROUND(NSUM,1);
                drop _type_ _freq_;
            run;

```

```

%IF &I. = 1 %THEN %DO;

    DATA &PREF._&SMOKE.;
    SET &PREF.SERT&I.&SMOKE.;
    RUN;
%END;
%ELSE %DO;

    DATA &PREF._&SMOKE.;
        SET &PREF._&SMOKE. &PREF.SERT&I.&SMOKE.;
    RUN;

    PROC SORT DATA=&PREF._&SMOKE.;
    BY GROUP;
    RUN;

%END;

%END;
%IF %UPCASE(&SMOKE) = CS AND %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
    PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;
    TABLES AGE_GRP*XSEXA*&TABLEVAR.;
    SUBGROUP AGE_GRP XSEXA &TABLEVAR.;
    LEVELS 3 2 &ENDNUM.;
    OUTPUT SEMEAN MEAN wsum nsum
        / TABLECELL=DEFAULT REPLACE
        FILENAME=&PREF.GRP&I.&SMOKE.;
    RUN;
%END;
%ELSE %IF %UPCASE(&SMOKE) = CS AND %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
    PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;
    TABLES AGE_GRP*XSEXA;
    SUBGROUP AGE_GRP XSEXA;
    LEVELS 3 2 ;
    OUTPUT SEMEAN MEAN wsum nsum
        / TABLECELL=DEFAULT REPLACE
        FILENAME=&PREF.GRP&I.&SMOKE.;
    RUN;
%END;

%IF %UPCASE(&SMOKE) = CS %THEN %DO;

    DATA &PREF.SER_&I.&SMOKE.;
    SET &PREF.GRP&I.&SMOKE.;
    GROUP=&I.;
    IF SEMEAN NE .;
    %IF %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
        KEEP &TABLEVAR. GROUP AGE_GRP XSEXA SEMEAN MEAN wsum nsum;
    %END;

```

```

%IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
    TOTCON=1;
    KEEP TOTCON GROUP AGE_GRP XSEXA SEMEAN MEAN wsum nsum;
%END;
RUN;

/* CREATE WEIGHTS FROM 2005 DATA*/
proc summary data=normdat&i. nway;
    var &WGT;
    where &den>0;
    class age_grp xsex;
    output out=norm_&i. sum=normwt;

    proc sort data=&pref.ser_&i.&smoke.;
        by age_grp xsex;

    data &pref.ser_&i.&smoke.;
    merge &pref.ser_&i.&smoke.(in=gin) norm_&i.;
    by age_grp xsex;
    if gin;
    wsum=wsum/normwt;
    nsum=nsum/normwt;
    sesq=normwt*semean**2;
    run;

    proc summary data=&pref.ser_&i.&smoke. nway;
    var mean semean sesq wsum nsum;
    class &tablevar.;
    weight normwt;
    output out=&pref.sert&i.&smoke. mean(mean sesq)= sum(wsum nsum)=
sumwgt(semean)=;
    run;

data &pref.sert&i.&smoke;
    set &pref.sert&i.&smoke;
    group=&i.;
        semean=sqrt(sesq/semean);
    drop _type_ _freq_;
run;

%IF &I. = 1 %THEN %DO;

DATA &PREF._CESS;
SET &PREF.SERT&I.&SMOKE.;
RUN;
%END;
%ELSE %DO;

DATA &PREF._CESS;
    SET &PREF._CESS &PREF.SERT&I.&SMOKE.;
    RUN;

```

```

PROC SORT DATA=&PREF._CESS;
BY GROUP;
RUN;

%END;

%END;
%END;

%MEND;

%A_SUDAAN(XSERVAFF,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XSERVAFF,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XSERVAFF,BM,BMI,BMI_DN);
%A_SUDAAN(XSERVREG,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XSERVREG,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XSERVREG,BM,BMI,BMI_DN);
%A_SUDAAN(XTNEXREG,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XTNEXREG,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XTNEXREG,BM,BMI,BMI_DN);
%A_SUDAAN(TOTCON,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(TOTCON,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(TOTCON,BM,BMI,BMI_DN);

%MACRO ADDIT(PREF, TYPE);

DATA &PREF._&TYPE;
SET &PREF._&TYPE;
LENGTH BENEFIT $34. BENTYPE $50.;

BENEFIT="Healthy Behaviors";
%IF &TYPE=RT %THEN %DO;
    BENTYPE="Non-Smoking Rate";
%END;
%IF &TYPE=CESS %THEN %DO;
    BENTYPE="Counselled To Quit";
%END;
%IF &TYPE = BM %THEN %DO;
    BENTYPE = "Percent Not Obese";
%END;
RUN;

%MEND;

%ADDIT(C,RT);
%ADDIT(C,CESS);
%ADDIT(C,BM);
%ADDIT(M,RT);
%ADDIT(M,CESS);
%ADDIT(M,BM);
%ADDIT(R,RT);
%ADDIT(R,CESS);
%ADDIT(R,BM);
%ADDIT(S,RT);
%ADDIT(S,CESS);
%ADDIT(S,BM);

```



```

%MACRO MAKEDATA(PREF, TABLEVAR);
  DATA &PREF._SMOKE;
  SET &PREF._RT
      &PREF._CESS
      &PREF._BM
;

  LENGTH MAJGRP $30. REGION REGCAT $30.; /* MER 11/11/12 - Updated REGION/REGCAT for
Joint Service facilities */

  IF      GROUP=1 THEN MAJGRP="Prime Enrollees           ";
  ELSE IF GROUP=2 THEN MAJGRP="Enrollees with Military PCM";
  ELSE IF GROUP=3 THEN MAJGRP="Enrollees with Civilian PCM";
  ELSE IF GROUP=4 THEN MAJGRP="Non-enrolled Beneficiaries ";
  ELSE IF GROUP=5 THEN MAJGRP="Active Duty               ";
  ELSE IF GROUP=6 THEN MAJGRP="Active Duty Dependents   ";
  ELSE IF GROUP=7 THEN MAJGRP="Retirees and Dependents   ";
  ELSE IF GROUP=8 THEN MAJGRP="All Beneficiaries         ";

  %IF &TABLEVAR = XSERVAFF %THEN %DO;
    IF XSERVAFF = 1 THEN REGION = 'ARMY';
    IF XSERVAFF = 2 THEN REGION = 'AIR FORCE';
    IF XSERVAFF = 3 THEN REGION = 'NAVY';
    IF XSERVAFF = 4 THEN REGION = 'OTHER';
    IF XSERVAFF = 5 THEN REGION = 'JOINT SERVICE'; /* MER 11/3/12 - Added for
Joint Service facilities */
  %END;

  %IF &TABLEVAR = XSERVREG %THEN %DO;
    REGION = PUT(XSERVREG,SERVREGO.); /*JSO 08/24/2006, Create new format for
Overseas*/
  %END;

  %IF &TABLEVAR = XTNEXREG %THEN %DO;
    IF XTNEXREG=1 THEN REGION="NORTH";
    ELSE IF XTNEXREG=2 THEN REGION="SOUTH";
    ELSE IF XTNEXREG=3 THEN REGION="WEST";
    ELSE IF XTNEXREG=4 THEN REGION="OVERSEAS";
  %END;

  %IF &TABLEVAR = TOTCON %THEN %DO;
    REGION = "USA MHS";
  %END;

  REGCAT=REGION;
  DROP GROUP &TABLEVAR;

  IF &TABLEVAR NE 0;

  RUN;

%MEND MAKEDATA;

%MAKEDATA(M,XSERVAFF);
%MAKEDATA(C,TOTCON);
%MAKEDATA(R,XSERVREG);

```

```

%MAKEDATA(S,XTNEXREG);

DATA SMOKE;
SET M_SMOKE R_SMOKE S_SMOKE C_SMOKE;
SESQ = SEMEAN**2;
RENAME MEAN=SCORE wsum=n_wgt nsum=n_obs;
RUN;

/* CALCULATE COMPOSITE SCORE - AVERAGE RATE AND CESSATION*/

PROC SORT DATA=SMOKE;
BY MAJGRP REGION REGCAT;
RUN;

PROC SUMMARY DATA=SMOKE SUM;
BY MAJGRP REGION REGCAT;
VAR SCORE SESQ N_WGT N_OBS;
OUTPUT SUM= OUT=PRECOMP;
RUN;

DATA COMP(RENAME=(S_MEAN=SCORE S_SE=SEMEAN));
SET PRECOMP;
IF _FREQ_ = 3 THEN DO;
    S_MEAN=SCORE/3;
    S_SE=SQRT(SESQ)/3;
    N_OBS=round(N_OBS/3);
END;
ELSE DO;
    S_MEAN=.;
    S_SE=.;
END;
BENTYPE="Composite";
BENEFIT="Healthy Behaviors";
DROP _TYPE_ _FREQ_ SCORE SESQ;
RUN;

PROC SORT DATA=SMOKE;
BY MAJGRP BENTYPE;
RUN;

DATA BENCH;
SET SMOKE;
BY MAJGRP BENTYPE;
IF LAST.BENTYPE AND BENTYPE="Counselled To Quit" THEN DO;
    SCORE=&CNSLGOAL;
    SEMEAN=.;
    REGION="Benchmark";
    REGCAT="Benchmark";
    DROP N_WGT N_OBS;
    OUTPUT;
END;
ELSE IF LAST.BENTYPE AND BENTYPE="Non-Smoking Rate" THEN DO;
    SCORE=&NSMKGOAL;
    SEMEAN=.;
    REGION="Benchmark";
    REGCAT="Benchmark";
    DROP N_WGT N_OBS;

```

```

OUTPUT;
END;
ELSE IF LAST.BENTYPE AND BENTYPE="Percent Not Obese" THEN DO;
  SCORE=&BMIGOAL;
  SEMEAN=. ;
  REGION="Benchmark";
  REGCAT="Benchmark";
  DROP N_WGT N_OBS;
  OUTPUT;
  SCORE=(SUM(&NSMKGOAL, &CNSLGOAL, &BMIGOAL))/3;
  SEMEAN=. ;
  REGION="Benchmark";
  REGCAT="Benchmark";
  BENTYPE="Composite";
  DROP N_WGT;
  OUTPUT;
END;
RUN;

PROC SORT DATA=SMOKE;
BY REGION BENTYPE;
RUN;

DATA BENCH2;
SET SMOKE;
BY REGION BENTYPE;
IF LAST.BENTYPE AND BENTYPE="Counselled To Quit" THEN DO;
  SCORE=&CNSLGOAL;
  SEMEAN=. ;
  MAJGRP="Benchmark";
  DROP N_WGT N_OBS;
  OUTPUT;
END;
IF LAST.BENTYPE AND BENTYPE="Non-Smoking Rate" THEN DO;
  SCORE=&NSMKGOAL;
  SEMEAN=. ;
  MAJGRP="Benchmark";
  DROP N_WGT;
  OUTPUT;
END;
IF LAST.BENTYPE AND BENTYPE="Percent Not Obese" THEN DO;
  SCORE=&BMIGOAL;
  SEMEAN=. ;
  MAJGRP="Benchmark";
  DROP N_WGT;
  OUTPUT;
  SCORE=(SUM(&CNSLGOAL, &NSMKGOAL, &BMIGOAL))/3;
  SEMEAN=. ;
  MAJGRP="Benchmark";
  BENTYPE="Composite";
  DROP N_WGT N_OBS;
  OUTPUT;
END;
RUN;

DATA SIG1;
SET SMOKE COMP;
IF BENTYPE='Non-Smoking Rate' THEN DO;

```

```

IF SEMEAN > 0 THEN TSTAT=(SCORE-&NSMKGOAL)/SEMEAN;
ELSE TSTAT=.;
IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
ELSE PVAL=.;

IF PVAL GE 0.05 THEN SIG=0;
ELSE IF PVAL < 0.05 THEN DO;
    IF SCORE > &NSMKGOAL THEN SIG = 1;
    ELSE IF SCORE < &NSMKGOAL THEN SIG = -1;
END;
END;
IF BENTYPE='Counselled To Quit' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&CNLSLGOAL)/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > &CNLSLGOAL THEN SIG = 1;
        ELSE IF SCORE < &CNLSLGOAL THEN SIG = -1;
    END;
END;
END;
IF BENTYPE='Percent Not Obese' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&BMIGOAL)/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > &BMIGOAL THEN SIG = 1;
        ELSE IF SCORE < &BMIGOAL THEN SIG = -1;
    END;
END;
END;
IF BENTYPE='Composite' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3))/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > ((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3) THEN SIG = 1;
        ELSE IF SCORE < ((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3) THEN SIG = -1;
    END;
END;
END;

DROP TSTAT PVAL;
RUN;

DATA SMOKE_ALL;
SET SIG1 BENCH BENCH2;
TIMEPD="&CURRENT.";
RUN;

PROC SORT DATA=SMOKE_ALL OUT=OUT.SMOKE;
BY MAJGRP REGION REGCAT BENTYPE;
RUN;

```

G.4.C - Q3FY2017\PROGRAMS\REPORTCARDS\MPR_ADULTQ3FY2017\LOADMPRQ.SAS - Convert the MPR Scores Database into the WEB layout - Run Quarterly.

```

*****
*
* Project:    DoD Reporting and Analysis 6077-410
* Program:    LOADMPRQ.SAS
* Purpose:    Calculate MPR Preventive Care Composites
* Date:       4/07/2000
* Author:     Chris Rankin
*
* Modified:  40) 11/03/2012 By Mike Rudacille, Updated for handling of
*             Joint Service facilities
*             41) 12/28/2012 By Aimee Valenzuela, Updated for Q1FY2013
*             42) 03/23/2013 By Mike Rudacille, Updated %LET PERIOD January, 2013.
*             43) 09/23/2013 By Amanda Kudis, Updated Q1FY2014.
*             44) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*                    Changed PERIOD to &PERIOD4
*
* Input:      1) RFINAL.sas7bdat
*             2) CFINAL.sas7bdat
*             3) MFINAL.sas7bdat
*             4) SFINAL.sas7bdat
*             5) SMOKE.sas7bdat
*
* Output:     loadmprq.sas7bdat
*
* Note:       ***CHECK COMPNUM AND CMPNUM1 ASSIGNMENTS AND UPPER LIMIT OF DO LOOPS***
*
*****;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2;

LIBNAME INLIB  ".";
LIBNAME OUT    ".";
LIBNAME LIBRARY "&FMTPATH.";

%LET CMPNUM1=4; /** number of questions in first composite **/ /*RSG 04/2005
Changed 5 to 4*/

%LET PERIOD = &PERIOD4.;
%INCLUDE "..../LoadWeb/LOADCAHQ.INC";

*****;
*** Note -- take out access to care questions and composite ***;
*****;

data mfinal(keep=cpbmk1 compress=no);
  set inlib.mfinal(keep=majgrp cpbmk1) INLIB.CFINAL (KEEP=MAJGRP CPBMK1);
  where majgrp="All Beneficiaries";    /*RSG 02/2005 Include CONUS MHS data*/
run;

data mfinal;
  if _n_=1 then set mfinal;
  set inlib.mfinal(drop=cpbmk1) INLIB.CFINAL(DROP=CPBMK1) ;
run;

```

```

proc sort data=mfinal;          /*RSG 01/2005 - Added code to select only 1 record per
majgrp */
by majgrp;                    /*using xservreg, there are now 4 conus areas which
caused duplicate benchmark calcs */
data mfinal;
set mfinal;
by majgrp;
if first.majgrp;
run;

*****;
***** Benchmarks          **;
*****;

DATA BENCHMKS(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SIG);
  FORMAT  MAJGRP $30. REGION $30. REGCAT $30.    /** RSG 01/2005 Increase
region format to accommodate service affiliation **/
          BENEFIT $34. BENTYPE $50. TIMEPD $35.;  ***MJS 06/23/03 Added TIMEPD;
/* MER 11/08/12 Increase region/regcat formats */
  SET MFINAL;

  ARRAY BENCHMK{*} GOALVAR1-GOALVAR&CMPNUM1 CPBMK1;
  DO I = 1 TO 5;    ***RSG 04/2005 Changed 6 to 5;
    SCORE  = BENCHMK{I}*100;
    SIG    = .;
    REGION = "Benchmark";
    REGCAT = "Benchmark";
    BENEFIT = "Preventive Care";
    IF     I = 1 THEN BENTYPE = "Prenatal Care";
    ELSE IF I = 2 THEN BENTYPE = "Mammography";
    ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
    ELSE IF I = 4 THEN BENTYPE = "Hypertension";
    /*RSG 04/2005 DELETED CHOLESTEROL*/
    ELSE IF I = 5 THEN BENTYPE = "Composite";  ***MJS 06/23/03 Changed &PERIOD to
Composite;
    TIMEPD = "&PERIOD";  ***MJS 06/23/03 Added line;
    OUTPUT;
  END;
  DROP I;
RUN;

DATA BENCHMKS;
  SET BENCHMKS;
  OUTPUT;
  IF MAJGRP = "All Beneficiaries" THEN DO;
    DO REG = 1 TO 18; DROP REG; /*JJSO 08/24/2006, Changed Regions, 16 to 15*/ /* MER
11/3/12 15 to 18 */
      MAJGRP = "Benchmark";
      REGION = PUT(REG,SERVREGO.);
      REGCAT = PUT(REG,SERVREGO.);
      OUTPUT;
    END;
    DO SERV = 1 TO 5; DROP SERV; /* MER 11/03/2012 Changed 4 to 5 for Joint Service
facilities */
      MAJGRP = "Benchmark";
      REGION = PUT(SERV,XSERVAFF.);
      REGCAT = PUT(SERV,XSERVAFF.);
      OUTPUT;

```

```

END;

MAJGRP = "Benchmark";
REGION = 'USA MHS';
REGCAT = 'USA MHS';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'NORTH';
REGCAT = 'NORTH';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'SOUTH';
REGCAT = 'SOUTH';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'WEST';
REGCAT = 'WEST';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'OVERSEAS';
REGCAT = 'OVERSEAS';
OUTPUT;
END;
RUN;

PROC FREQ DATA=BENCHKMS;
  TABLES MAJGRP/MISSING LIST;
RUN;

*****;
***** Scores          **;
*****;

DATA SCORES(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SEMEAN SIG N_OBS
N_WGT);
  FORMAT MAJGRP $30. REGION $30. REGCAT $30.          /** RSG 01/2005 Increase region
format to accommodate service affiliation **/
          BENEFIT $34. BENTYPE $50. TIMEPD $35.;      ***MJS 06/23/03 Added TIMEPD; /*
MER 11/08/12 Increase region/regcat formats */
  SET INLIB.MFINAL INLIB.CFINAL
      INLIB.RFINAL INLIB.SFINAL;

  ARRAY SEMEANS{*} SERRV1-SERRV&CMPNUM1. CP1SE ;
  ARRAY SCORES{*} SCORV1-SCORV&CMPNUM1. CSCOR1;
  ARRAY SIGNIF{*} SIGV1-SIGV&CMPNUM1. CPSIG1;
  ARRAY NOBS  {*} NOBSV1-NOBSV&CMPNUM1. CPOBS1;
  ARRAY NWGT  {*} DENV1-DENV&CMPNUM1   CPDEN1;

DO I = 1 TO 5;   ***RSG 04/2005 Changed 6 to 5;
  SCORE = SCORES{I};
  SEMEAN = SEMEANS{I};
  SIG = SIGNIF{I};
  N_OBS = NOBS{I};
  N_WGT = NWGT{I};
  BENEFIT = "Preventive Care";
  IF I = 1 THEN BENTYPE = "Prenatal Care";
  ELSE IF I = 2 THEN BENTYPE = "Mammography";

```

```
ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
ELSE IF I = 4 THEN BENTYPE = "Hypertension";
/*RSG 04/2005 DELETED CHOLESTEROL*/
ELSE IF I = 5 THEN BENTYPE = "Composite";    ***MJS 06/23/03 Changed &PERIOD to
Composite;
TIMEPD = "&PERIOD";    ***MJS 06/23/03 Added line;
OUTPUT;
END;
RUN;

DATA LOADMPRQ (KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SEMEAN SIG
              N_OBS N_WGT);
SET BENCHMKS SCORES INLIB.SMOKE;
RUN;

PROC SORT DATA=LOADMPRQ OUT=OUT.LOADMPRQ;
BY MAJGRP REGION;
RUN;
```


G.5.A - Q3FY2017\PROGRAMS\LOADWEB\FAKEQ.SAS - Generate the WEB layout/template file - Run Quarterly.

```

*****
* PROJECT:   DOD Quarterly Survey, Consumer Reports (6077-410)
* PROGRAM:   FAKEQ.SAS
* PURPOSE:   Generate Fake Data for Report Cards
* AUTHOR:    Mark A. Brinkley
*
* MODIFIED:48) 11/03/2012 By Mike Rudacille - Updated for handling of
*             Joint Service facilities
*             49) 12/28/2012 By Aimee Valenzuela - Changed %LET PERIOD1 - PERIOD4
*             Changed input data HCS124_2 to HCS131_2 for Q1FY2013 reports
*             50) 03/23/2013 By Mike Rudacille - Changed %LET PERIOD1 - PERIOD4
*             Changed input data HCS131_2 to HCS132_2 for Q2FY2013 reports
*             51) 09/23/2013 By Amanda Kudis - Updated for Q1 2014
*             52) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*                 Changed PERIOD1-4 to &PERIOD1-4
*                 Changed HCSyyq_2 to &DATAFILE.
*                 Removed line referencing CATREP in the TEMP2 step.
*                 Set CAFMT to "BLANK".
*                 Changed LOADCAHQ to ..\LoadWeb\LOADCAHQ.INC
*             48) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*                 Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*                 Changed LIBRARY to &FMTPATH.
*                 Changed IN to &DATAPATH.
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*             and composite data sets
*
*****;
%LET NUMQTR = 5;    ***MJS 06/18/03 Changed 4 to 5;

%LET PERIOD1 = &PERIOD1;
%LET PERIOD2 = &PERIOD2;
%LET PERIOD3 = &PERIOD3;
%LET PERIOD4 = &PERIOD4;

%LET PERIOD5 = Trend;    ***MJS 06/18/03 Added line;

%INCLUDE "../LoadWeb/LOADCAHQ.INC";    ***MJS 07/07/03 Added;

LIBNAME OUT      ".";
LIBNAME IN       "&DATAPATH.";
LIBNAME LIBRARY  "&FMTPATH.";

OPTIONS COMPRESS=YES NOFMterr;

*****
* CREATE TEMPORARY DATASET FOR RECODING CACSMPL TO BE COLLAPSED FOR
* REPORT CARD PURPOSES
* FOR QUARTERLY REPORTS CATCHMENT LEVEL REPORTING IS NOT DONE
* AND THEREFORE THE VALUE OF CELLP IS SET TO 1
* FOR ANNUAL REPORTING PURPOSES
* CELLP WILL NEED TO BE ASSIGNED TO GEOCELL (KEEP GEOCELL ON INPUT)
*****;

```

```

DATA TEMP;
SET IN.&DATAFILE.;
CELLP=1;
*****
* CODE FOR XSERVREG FROM XTNEXREG
*****;
IF SERVAFF='A' THEN XSERVAFF=1;           *Army;
  ELSE IF SERVAFF='F' THEN XSERVAFF=2;     *Air Force;
  ELSE IF SERVAFF='N' THEN XSERVAFF=3;     *Navy;
  ELSE XSERVAFF=4;

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

IF XTNEXREG = 1 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 1;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
  ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 6;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
  ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;

IF XTNEXREG = . THEN DELETE;

RUN;

proc freq;
table xservreg*cacsmpl/ noprint out=temp;
run;

data temp2;
length cafmt $30;
set temp end=last;
by xservreg;
  caf=0;
where cacsmpl ne 9999;
  if first.xservreg then do; /* took out condition for xregion= 8 since using
xservreg now */
    cafmt=put(xservreg,servregf.);
    output;
  end;
cafmt = "BLANK";
caf=1;

```

```

if count>60 & cafmt ne 'INV' then output;
if last then do;
  xservreg=0;
  caf=0;
  cafmt='Benchmark';
output;
  /** RSG 01/2005 Add in codes for service affiliation categories **/

caf=1;

xservreg=16;
cafmt='Overseas Europe';
output;
xservreg=17;
cafmt='Overseas Pacific';
output;
xservreg=18;
cafmt='Overseas Latin America';
output;
xservreg=19;
cafmt = 'ARMY';
output;
xservreg=20;
cafmt = 'AIR FORCE';
output;
xservreg=21;
cafmt = 'NAVY';
output;
xservreg=22;
cafmt = 'OTHER';
output;
xservreg=23;
cafmt = 'JOINT SERVICE';
output;
xservreg=24;
cafmt = 'NORTH';
output;
xservreg=25;
cafmt = 'SOUTH';
output;
xservreg=26;
cafmt = 'WEST';
output;
xservreg=27;
cafmt = 'OVERSEAS';
output;
xservreg=28;
cafmt = 'USA MHS';
output;
xservreg=29;
cafmt = 'Europe Army';
output;
xservreg=30;
cafmt = 'Europe Air Force';
output;
xservreg=31;

```

```

cafmt = 'Europe Navy';
output;
xservreg=32;
cafmt = 'Europe Other';
output;
xservreg=33;
cafmt = 'Europe Joint Service';
output;
xservreg=34;
cafmt = 'Pacific Army';
output;
xservreg=35;
cafmt = 'Pacific Air Force';
output;
xservreg=36;
cafmt = 'Pacific Navy';
output;
xservreg=37;
cafmt = 'Pacific Other';
output;
xservreg=38;
cafmt = 'Pacific Joint Service';
output;
xservreg=39;
cafmt = 'Latin America Army';
output;
xservreg=40;
cafmt = 'Latin America Air Force';
output;
xservreg=41;
cafmt = 'Latin America Navy';
output;
xservreg=42;
cafmt = 'Latin America Other';
output;
xservreg=43;
cafmt = 'Latin America Joint Service';
output;
end;
run;

/*RSG 04/2005 order region groups the way it should appear in reports*/
data temp3 (rename=(temp_r=xservreg));
set temp2;
if xservreg=0 then temp_r=1;
else if xservreg=28 then temp_r=2;
else if xservreg=19 then temp_r=3;
else if xservreg=21 then temp_r=4;
else if xservreg=20 then temp_r=5;
else if xservreg=22 then temp_r=6;
else if xservreg=23 then temp_r=7;
else if xservreg=24 then temp_r=8;
else if xservreg=1 then temp_r=9;
else if xservreg=3 then temp_r=10;
else if xservreg=2 then temp_r=11;
else if xservreg=4 then temp_r=12;
else if xservreg=5 then temp_r=13;
else if xservreg=25 then temp_r=14;

```

```

else if xservreg=6 then temp_r=15;
else if xservreg=8 then temp_r=16;
else if xservreg=7 then temp_r=17;
else if xservreg=9 then temp_r=18;
else if xservreg=10 then temp_r=19;
else if xservreg=26 then temp_r=20;
else if xservreg=11 then temp_r=21;
else if xservreg=13 then temp_r=22;
else if xservreg=12 then temp_r=23;
else if xservreg=14 then temp_r=24;
else if xservreg=15 then temp_r=25;
else if xservreg=27 then temp_r=26;
else if xservreg=16 then temp_r=27;
else if xservreg=17 then temp_r=28;
else if xservreg=18 then temp_r=29;
else if xservreg=29 then temp_r=30;
else if xservreg=31 then temp_r=31;
else if xservreg=30 then temp_r=32;
else if xservreg=32 then temp_r=33;
else if xservreg=33 then temp_r=34;
else if xservreg=34 then temp_r=35;
else if xservreg=36 then temp_r=36;
else if xservreg=35 then temp_r=37;
else if xservreg=37 then temp_r=38;
else if xservreg=38 then temp_r=39;
else if xservreg=39 then temp_r=40;
else if xservreg=41 then temp_r=41;
else if xservreg=40 then temp_r=42;
else if xservreg=42 then temp_r=43;
else if xservreg=43 then temp_r=44;
drop xservreg;
run;

```

```

proc sort;
by xservreg caf cafmt;
run;

```

```

data temp4;
set temp3 end=last;

```

```

start=_n_;
label=cafmt;
type='N';
fmtname='ROWMAT';
if last then call symput('x',_n_);

```

```
run;
```

```
proc format cntlin=temp4;
```

```
proc print data=temp4;
run;
```

```
%MACRO FAKE;
DATA FAKE;
```

```
KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD I K; ***MJS 06/18/03 Added
TIMEPD;
```

```

LENGTH MAJGRP $ 30
REGION $ 30 /*RSG 01/2005 lengthen format to fit service affiliation*/
REGCAT $ 30 /*MER 11/08/2012 length format for region/regcat for Joint
Service facilities */
BENTYPE $ 50
TIMEPD $ 35; ***MJS 06/18/03 Added TIMEPD;

DO I=1 TO 8; ** 8 Major groups **;

MAJGRP=PUT(I,MAJOR.);

DO J=1 TO &x; ** Region/catchment **;

REGCAT=PUT(J,ROWMAT.);
RETAIN REGION;

**RSG 01/2005 Change code to fit XSERVREG values**;
IF SUBSTR(REGCAT,1,8) IN ('Benchmar','Overseas','OVERSEAS') OR
SUBSTR(REGCAT,1,5) IN ('Pacif','Europ','Latin','North','South','West
','NORTH','SOUTH','WEST') OR
REGCAT IN ('ARMY','AIR FORCE','NAVY','OTHER','JOINT SERVICE','USA MHS')
THEN REGION=REGCAT;

DO K=1 TO 11; ** 11 Benefits **; /*** 04-11-09 MER ***/

BENEFIT=PUT(K,BEN.);

IF K=1 THEN DO;
DO L=1 TO 3; ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
BENTYPE=PUT(L,GETNCARE.); ***that replaced BENTYPE hard
assignment;
%DO Q = 1 %TO &NUMQTR; ***MJS 06/18/03 Moved loop inside L loop
and changed BENTYPE to TIMEPD;
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
%END; ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
END;
END;
ELSE IF K=2 THEN DO;
DO L=1 TO 3; ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
BENTYPE=PUT(L,GETCAREQ.); ***that replaced BENTYPE hard
assignment;
%DO Q = 1 %TO &NUMQTR; ***MJS 06/18/03 Moved loop inside L loop
and changed BENTYPE to TIMEPD;
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
%END; ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
END;
END;
ELSE IF K=3 THEN DO;
DO L=1 TO 5; ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
BENTYPE=PUT(L,HOWWELL.); ***that replaced BENTYPE hard
assignment;

```

```

        %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop
and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
END;
ELSE IF K=4 THEN DO;
    DO L=1 TO 3;                ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,CUSTSERV.);    ***that replaced BENTYPE hard
assignment;
        %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop
and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
END;
ELSE IF K=5 THEN DO;
    DO L=1 TO 3;                ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,CLMSPROC.);    ***that replaced BENTYPE hard
assignment;
        %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop
and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
END;
ELSE IF K=6 THEN DO;
    %DO Q = 1 %TO &NUMQTR;
        BENTYPE = "Composite";    ***MJS 07/07/03 Added;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
    %END;                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
    END;
ELSE IF K=7 THEN DO;
    %DO Q = 1 %TO &NUMQTR;
        BENTYPE = "Composite";    ***MJS 07/07/03 Added;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
    %END;                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
    END;
ELSE IF K=8 THEN DO;
    %DO Q = 1 %TO &NUMQTR;
        BENTYPE = "Composite";    ***MJS 07/07/03 Added;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
    %END;                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
    END;
ELSE IF K=9 THEN DO;
    %DO Q = 1 %TO &NUMQTR;
        BENTYPE = "Composite";    ***MJS 07/07/03 Added;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;

```



```
*IF I IN(3,4,6,7) AND REGION^=REGCAT THEN DELETE;      /*** 12-13 MAB ***/  
DROP I K;  
  
RUN;  
  
PROC FREQ;  
  TABLES MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD SIG;  ***MJS 07/21/03 Added  
TIMEPD;  
RUN;
```

G.5.B - Q3FY2017\PROGRAMS\LOADWEB\MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases into the WEB layout - Run Quarterly.

```

*****
*
* PROGRAM:   MERGFINQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6077-410)
* PURPOSE:  Merge the final CAHPS and MPR Scores Databases
*           into the WEB layout preserving the order of the FAKEQ.SD2.
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from MERGFINL.SAS.
*
* INPUTS:   1) MPR and CAHPS Individual and Composite data sets with adjusted
*           scores, and benchmark data for quarterly DoD HCS.
*           - LOADMPRQ.sas7bdat - MPR Scores Database
*           - LOADCAHQ.sas7bdat - CAHPS Scores Database
*           - BENCHAO4.sas7bdat - CAHPS Benchmark Database
*           - FAKEQ.sas7bdat    - WEB Layout in Column order
*
* OUTPUT:   1) MERGFINQ.sas7bdat - Combined Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*           and composite data sets
*
* MODIFIED:42) 11/03/2012 by Mike Rudacille - Updated for handling of
*           Joint Service facilities
*           43) 12/28/2012 by Aimee Valenzuela - Changed libname in2 and in3 for
Q1FY2013.
*           44) 03/23/2013 by Mike Rudacille - Changed libname in2 and in3 for
Q2FY2013.
*           45) 09/23/2013 by Amanda Kudis - Changed libname in2 and in3 for Q1FY2014.
*           46) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*               Replaced RCTYPE with &PC.ReportCards
*               Replaced BCTYPE with &PC.Benchmark
*               Changed IN2 to "CAHPS_ADULT&FOLDER.\Data"
*               Changed IN3 to "..\&RCTYPE\MPR_Adult&FOLDER.&FYYEAR."
*               Changed LOADCAHQ to ..\LoadWeb\LOADCAHQ.INC
*           47) December 27, 2016 by Matt Turbyfill, revised for the SAS Grid.
*               Corrected capitalization and backslashes on LIBNAME and
INC filepaths.
*               Changed LIBRARY to &FMTPATH.
*
* NOTES:
*
* 1) The following steps need to be run prior to this program:
* - STEP1Q.SAS      - Recode questions and generate CAHPS group files
* - STEP2Q.SAS      - Calculate CAHPS individual adjusted scores for groups 1-7
* - COMPOSIT.SAS    - Calculate composite adjusted scores for group 1-8
* - PRVCOMPQ.SAS    - Calculate MPR individual and composite scores
* - BENCHAO1-04.SAS - Convert Benchmark Scores into WEB layout
* - LOADCAHQ.SAS    - Convert Quarterly CAHPS Scores Database into WEB layout
* - LOADMPRQ.SAS    - Convert Quarterly MPR Scores Database into WEB layout
*
* 2) The output file (MERGFINQ.SD2) will be run through the
* MAKEHTMQ.SAS program to generate the WEB pages.
*
*****
* Assign data libraries and options

```

```

*****;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

/** SELECT PROGRAM - Benchmark OR PurchasedBenchmark              ***/
%LET BCTYPE = &PC.Benchmark;

LIBNAME IN1  ".";
LIBNAME IN2  "CAHPS_ADULT&FOLDER.&FYYEAR./DATA";
LIBNAME IN3  "../&RCTYPE/MPR_Adult&FOLDER.&FYYEAR.";
LIBNAME IN4  "../&BCTYPE/data";
LIBNAME OUT  ".";
LIBNAME LIBRARY "&FMTPATH.";

OPTIONS PS=79 LS=232 COMPRESS=YES NOCENTER;    ***MJS 07/23/03 Changed LS from 132;

%INCLUDE "../LoadWeb/LOADCAHQ.INC";

*****
* Construct ORDERing variable from WEB layout
*****;
DATA ORDER;
  SET IN1.FAKEQ;
  ORDER = _N_;
  LENGTH KEY $200;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/09/03 Added
TIMEPD;
  KEEP KEY ORDER;
RUN;

PROC SORT DATA=ORDER; BY KEY; RUN;

*****
* Merge the Scores Databases
*****;
DATA MERGFINQ;
  SET IN2.LOADCAHQ(IN=INCAHPQ)
      IN3.LOADMPRQ(IN=INMPRQ )
      IN4.BENCHA04(IN=INBENQ );
  SVCAHPQ = INCAHPQ;
  SVMPRQ  = INMPRQ;
  SVBENQ  = INBENQ;
  LENGTH KEY $200;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/09/03 Added
TIMEPD;
  KEYLEN=LENGTH(KEY);

KEYTEST=LENGTH(BENEFIT)+LENGTH(BENTYPE)+LENGTH(MAJGRP)+LENGTH(REGION)+LENGTH(TIMEPD);
OUTPUT;
  IF INBENQ THEN DO;
    IF MAJGRP = "All Beneficiaries" THEN DO;
      DO REG = 1 TO 30; DROP REG; /*JSO 08/24/2006, Changed Regions, 16 to 24*/
/*MER 11/03/12 24 to 30*/

```

```

        MAJGRP = "Benchmark";
        REGION = PUT(REG,SERVREGF.);
        REGCAT = PUT(REG,SERVREGF.);
        KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
              UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
              UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/09/03
Added TIMEPD;
        OUTPUT;
    END;
    DO SERV = 1 TO 5; DROP SERV; /*RSG 02/2005 Add in serv affiliation*/ /*MER
11/03/12 4 to 5*/
        MAJGRP = "Benchmark";
        REGION = PUT(SERV,XSERVAFF.);
        REGCAT = PUT(SERV,XSERVAFF.);
        KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
              UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
              UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
        OUTPUT;
    END;

MAJGRP = "Benchmark";
REGION = 'NORTH';
REGCAT = 'NORTH';
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
    OUTPUT;

MAJGRP = "Benchmark";
REGION = 'Overseas Europe';
REGCAT = 'Overseas Europe';
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
    OUTPUT;

MAJGRP = "Benchmark";
REGION = 'Overseas Pacific';
REGCAT = 'Overseas Pacific';
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
    OUTPUT;

MAJGRP = "Benchmark";
REGION = 'Overseas Latin America';
REGCAT = 'Overseas Latin America';
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
    OUTPUT;

MAJGRP = "Benchmark";
REGION = 'SOUTH';
REGCAT = 'SOUTH';
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));

```

```

OUTPUT;

MAJGRP = "Benchmark";
REGION = 'WEST';
REGCAT = 'WEST';
KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
OUTPUT;

MAJGRP = "Benchmark";
REGION = 'OVERSEAS';
REGCAT = 'OVERSEAS';
KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
OUTPUT;

MAJGRP = "Benchmark";
REGION = 'USA MHS';
REGCAT = 'USA MHS';
KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
OUTPUT;

END;
END;
IF SCORE = . THEN DELETE;

RUN;

PROC SORT DATA=MERGFINQ; BY KEY; RUN;

*****
* Append ORDERing variable to the merged Scores database file
*****;
DATA MERGFINQ MISSING;
MERGE MERGFINQ(IN=IN1) ORDER(IN=IN2);
BY KEY;

LENGTH FLAG $30;
IF IN1 AND IN2 THEN FLAG = "IN SCORES DB AND LAYOUT";
ELSE IF IN1 THEN FLAG = "IN SCORES DB ONLY";
ELSE IF IN2 THEN FLAG = "IN LAYOUT ONLY";

LENGTH SOURCE $30;
IF SVCAHPQ = 1 THEN SOURCE = "CAHPS ";
IF SVMPRQ = 1 THEN SOURCE = "MPR ";
IF SVBENQ = 1 THEN SOURCE = "BENCHMARK ";

IF IN1 AND NOT IN2 THEN OUTPUT MISSING; *Missing from layout;
IF IN1 THEN OUTPUT MERGFINQ;

RUN;

*****
* Reorder file according to WEB layout
*****;

```

```

PROC SORT DATA=MERGFINQ OUT=OUT.MERGFINQ; BY ORDER; RUN;

DATA FAKEQ;
  SET IN1.FAKEQ;
  ORDER = _N_;
RUN;

DATA LAYONLY;
  MERGE FAKEQ(IN=IN1) OUT.MERGFINQ(IN=IN2 KEEP=ORDER);
  BY ORDER;
  IF IN1 AND NOT IN2;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (6663-410)";
TITLE2 "Program Name: MERGFINQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS Combined Scores data sets and WEB Layout";
TITLE4 "Program Outputs: MERGFINQ.sas7bdat - Merged Final Scores Database for input
to MAKEHTML.SAS";

TITLE5 "MERGFINQ.sas7bdat Data source counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES SOURCE FLAG SVCAHPQ SVMPRQ SVBENQ
      SVCAHPQ*SVMPRQ*SVBENQ
      /MISSING LIST;
RUN;

TITLE5 "MERGFINQ.sas7bdat Data attribute counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT TIMEPD /*MJS 07/23/03 Added TIMEPD*/
      REGION*REGCAT
      /MISSING LIST;
RUN;

TITLE5 "LAYONLY Data attribute counts";
PROC FREQ DATA=LAYONLY;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT TIMEPD /*MJS 07/23/03 Added TIMEPD*/
      REGION*REGCAT
      /MISSING LIST;
RUN;

TITLE5 "No matching record found in LAYOUT file (FAKEQ.sas7bdat)";
PROC PRINT DATA=MISSING;
VAR MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD; ***MJS 07/23/03 Added TIMEPD;
RUN;

```

G.6 - Q3FY2017\PROGRAMS\LOADWEB\CONUS_Q.SAS - Generate CAHPS CONUS scores and perform significance tests - Run Quarterly.

```

*****
*
* PROGRAM: CONUS_Q.SAS
* TASK: Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6077-410)
* PURPOSE: Generate CAHPS CONUS scores and perform significance tests.
*
* WRITTEN: 11/13/2000 BY KEITH RATHBUN, Adapted from CONUS_A.SAS.
* Merged SIGNIF_A.SAS functionality.
*
* MODIFIED:47) 11/03/2012 By Mike Rudacille - Updated for handling of
* Joint Service facilities
* 48) 12/28/2012 By Aimee Valenzuela - Changed %LET PERIOD1 - PERIOD4
* Changed %LET LSTCONUS for Q1FY2013
* 49) 03/23/2013 By Mike Rudacille - Changed %LET PERIOD1 - PERIOD4
* Changed %LET LSTCONUS for Q2FY2013
* 50) 09/23/2013 By Amanda Kudis - Changed %LET PERIOD1 - PERIOD4
* Changed %LET LSTCONUS for fake version of Q4FY2013, and removed
period 3 (Q4FY2013)
* from being used to in trend calculations.
* 51) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
* Changed LSTCONUS to &LSTCONUS
* Changed PERIOD1-4 to &PERIOD1-4
* Changed EMPTY_PERIOD to &EMPTY_PERIOD
* In IN2.CONUS_Q step, rename BENEFIT to BENEFIT2, set
BENEFIT to the first 28 characters of BENEFIT2, and drop BENEFIT2.
* Set KEY to format $200. in IN2.CONUS_Q and FAKEQ steps.
* Dropped KEY on the last two PROC PRINT steps.
*
* INPUTS: 1) MERGFINQ.sas7bdat - Scores Database in WEB Layout
* 2) FAKEQ.sas7bdat - Scores Database WEB Layout
* 3) CONUS_Q.sas7bdat - Previous Quarters Combined CAHPS/MPR Scores
Database in WEB layout
*
* OUTPUT: 1) TOTAL_Q.sas7bdat - Combined CAHPS/MPR Scores Database in WEB layout
* 2) LT30Q.sas7bdat - Records with <= 30 observations
* 3) CONUS_Q.sas7bdat - Current Quarters Combined CAHPS/MPR Scores
Database in WEB layout
*
*
* NOTES:
*
* 1) The following steps need to be run prior to this program:
* - STEP1Q.SAS - Recode questions and generate group files
* - STEP2Q.SAS - Calculate individual adjusted scores for group 1-7
* - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
* - LOADCAHPQ.SAS - Combine all questionnaire (CAHPS) scores together
* - PRVCOMPQ.SAS - Calculate preventative measure scores for group1-8
* - SMOKING_BMI.SAS - Calculate healthy behaviors scores for group1-8
* - LOADMPRQ.SAS - Combined preventative and healthy behaviors scores
* - MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases
*
*****
* Assign data libraries and options
*****;

```

```

LIBNAME IN1  ".";
LIBNAME OUT  ".";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER MPRINT MLOGIC;

*****;
* Define GLOBAL parameters for last CONUSQ.sas7bdat, rolling quarters, and
* input dataset name.
*
* IMPORTANT: Update these GLOBALS each quarter prior to rerunning program.
*****;

%LET LSTCONUS = &LSTCONUS;

%LET PERIOD1 = &PERIOD1;
%LET PERIOD2 = &PERIOD2;
%LET PERIOD3 = &PERIOD3;
%LET PERIOD4 = &PERIOD4;

%LET DSN      = MERGFINQ;

%LET EMPTY_PERIOD = &EMPTY_PERIOD.; *AMK 9/23/13 to handle quarter with no data,
should be 0 if data available for all 4 quarters;

*****;
* Set up empty template file for data merge purposes and set first time flag
*****;
DATA INIT;
    SET IN1.&DSN;
    DELETE;
RUN;
%LET FLAG = 0;
*****
*
* Process Macro Input Parameters:
*
* 1) BENATYPE = Benefit Type
* 2) MAJGRP = Major Group
* 3) TYPE = INDIVIDUAL or COMPOSITE
* 4) BENEFIT = COMPOSITE Benefit Type
*
*****;
%MACRO PROCESS(BENATYPE=,MAJGRP=,TYPE=,BENEFIT=);
DATA TEMP;
    SET IN1.&DSN END=FINISHED;
    %IF "&TYPE" = "INDIVIDUAL" %THEN %DO;
        WHERE BENATYPE = "&BENATYPE" AND "&MAJGRP" = MAJGRP AND REGION = REGCAT AND
            /*SUBSTR(REGION,1,5) NOT IN("Bench","USA") AND*/
            /*SUBSTR(REGCAT,1,5) NOT IN("Bench","USA") AND*/
            SUBSTR(REGION,1,5) NE "Bench" AND SUBSTR(REGION,1,3) NE "USA" AND
            SUBSTR(REGCAT,1,5) NE "Bench" AND SUBSTR(REGCAT,1,3) NE "USA" AND
            REGION NOT IN ("ARMY","AIR FORCE","NAVY","OTHER","JOINT SERVICE");
    %END;
    %ELSE %IF "&TYPE" = "COMPOSITE" %THEN %DO;
        WHERE BENATYPE = &BENATYPE AND "&MAJGRP" = MAJGRP AND REGION = REGCAT AND
            BENEFIT = "&BENEFIT" AND
            /*SUBSTR(REGION,1,5) NOT IN("Bench","USA") AND*/
            /*SUBSTR(REGCAT,1,5) NOT IN("Bench","USA") AND*/

```



```

        SUBSTR(REGION,1,5) NE "Bench" AND SUBSTR(REGION,1,3) NE "USA" AND
        SUBSTR(REGCAT,1,5) NE "Bench" AND SUBSTR(REGCAT,1,3) NE "USA" AND
        REGION NOT IN ("ARMY","AIR FORCE","NAVY","OTHER","JOINT SERVICE");
%END;
%ELSE %DO;
    PUT "ERROR - Invalid Type = &TYPE";
%END;

IF SUBSTR(REGION,1,5) IN ('North','South') THEN DO;
    IF SUBSTR(REGION,1,5)='North' THEN REGCON=1;
    ELSE IF SUBSTR(REGION,1,5)='South' THEN REGCON=2;
    TOTCON=1;
    IF SUBSTR(REGION,7,4)='Army' THEN SERVICE=1;
    ELSE IF SUBSTR(REGION,7,9)='Air Force' THEN SERVICE=2;
    ELSE IF SUBSTR(REGION,7,4)='Navy' THEN SERVICE=3;
    ELSE IF SUBSTR(REGION,7,5)='Joint' THEN SERVICE=5;
    ELSE SERVICE=4;
END;
ELSE IF SUBSTR(REGION,1,4)='West' THEN DO;
    REGCON=3;
    TOTCON=1;
    IF SUBSTR(REGION,6,4)='Army' THEN SERVICE=1;
    ELSE IF SUBSTR(REGION,6,9)='Air Force' THEN SERVICE=2;
    ELSE IF SUBSTR(REGION,6,4)='Navy' THEN SERVICE=3;
    ELSE IF SUBSTR(REGION,6,5)='Joint' THEN SERVICE=5;
    ELSE SERVICE=4;
END;
ELSE IF SUBSTR(REGION,1,6)='Europe' THEN DO;
    REGCON=4;
    TOTCON=2;
    IF SUBSTR(REGION,8,4)='Army' THEN SERVICE=1;
    ELSE IF SUBSTR(REGION,8,9)='Air Force' THEN SERVICE=2;
    ELSE IF SUBSTR(REGION,8,4)='Navy' THEN SERVICE=3;
    ELSE IF SUBSTR(REGION,8,5)='Joint' THEN SERVICE=5;
    ELSE SERVICE=4;
END;
ELSE IF SUBSTR(REGION,1,7)='Pacific' THEN DO;
    REGCON=5;
    TOTCON=2;
    IF SUBSTR(REGION,9,4)='Army' THEN SERVICE=1;
    ELSE IF SUBSTR(REGION,9,9)='Air Force' THEN SERVICE=2;
    ELSE IF SUBSTR(REGION,9,4)='Navy' THEN SERVICE=3;
    ELSE IF SUBSTR(REGION,9,5)='Joint' THEN SERVICE=5;
    ELSE SERVICE=4;
END;
ELSE IF SUBSTR(REGION,1,13)='Latin America' THEN DO;
    REGCON=6;
    TOTCON=2;
    IF SUBSTR(REGION,15,4)='Army' THEN SERVICE=1;
    ELSE IF SUBSTR(REGION,15,9)='Air Force' THEN SERVICE=2;
    ELSE IF SUBSTR(REGION,15,4)='Navy' THEN SERVICE=3;
    ELSE IF SUBSTR(REGION,15,5)='Joint' THEN SERVICE=5;
    ELSE SERVICE=4;
END;

```

RUN;

```

*****;
* RSG 01/2005 Calc. total Service Affiliation Scores          *;
*****;
PROC SORT DATA=TEMP;
BY SERVICE;

DATA TEMP2;
  SET TEMP;
  BY SERVICE;
  length key $200;
  IF FIRST.SERVICE THEN DO;
    SUMSCOR1 = 0;      RETAIN SUMSCOR1;
    SUMWGT1 = 0;      RETAIN SUMWGT1;
    SUMSE2 = 0;      RETAIN SUMSE2;
    SUMWGT2 = 0;      RETAIN SUMWGT2;
    N_OBS1 = 0;      RETAIN N_OBS1;
  END;

  IF SCORE NE . AND N_WGT NE . THEN SUMSCOR1 = SUMSCOR1 + (SCORE*N_WGT);
  IF N_WGT NE . THEN SUMWGT1 = SUMWGT1 + N_WGT;
  IF SEMEAN NE . AND N_WGT NE . THEN SUMSE2 = SUMSE2 + (SEMEAN*N_WGT)**2;
  IF N_OBS NE . THEN N_OBS1 + N_OBS;

KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD SIG SCORE SEMEAN N_OBS N_WGT
  FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;    ***MJS 07/08/03 Added TIMEPD;

  IF LAST.SERVICE THEN DO;

    IF SUMWGT1 NOTIN (.,0) THEN DO;
      SCORE = SUMSCOR1/SUMWGT1;
      SEMEAN = SQRT(SUMSE2)/SUMWGT1;
    END;
    ELSE DO;
      SCORE = .;
      SEMEAN = .;
    END;

    N_OBS = N_OBS1;
    N_WGT = SUMWGT1;
    SOURCE = "USA";
    FLAG = "USA";
    IF SERVICE=1 THEN REGION = "ARMY";
    IF SERVICE=2 THEN REGION = "AIR FORCE";
    IF SERVICE=3 THEN REGION = "NAVY";
    IF SERVICE=4 THEN REGION = "OTHER";
    IF SERVICE=5 THEN REGION = "JOINT SERVICE";
    REGCAT = REGION;
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
          UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/08/03 Added
TIMEPD;
  OUTPUT;
  END;
RUN;

*****;
* RSG 01/2005 Calc. Total Region scores                      *;

```

```

*****;
PROC SORT DATA=TEMP;
BY REGCON;
DATA TEMP3;
  SET TEMP;
  BY REGCON;
  length key $200;
  IF FIRST.REGCON THEN DO;
    SUMSCOR1 = 0;    RETAIN SUMSCOR1;
    SUMWGT1 = 0;    RETAIN SUMWGT1;
    SUMSE2 = 0;    RETAIN SUMSE2;
    SUMWGT2 = 0;    RETAIN SUMWGT2;
    N_OBS1 = 0;    RETAIN N_OBS1;
  END;

  IF SCORE NE . AND N_WGT NE . THEN SUMSCOR1 = SUMSCOR1 + (SCORE*N_WGT);
  IF N_WGT NE . THEN SUMWGT1 = SUMWGT1 + N_WGT;
  IF SEMEAN NE . AND N_WGT NE . THEN SUMSE2 = SUMSE2 + (SEMEAN*N_WGT)**2;
  IF N_OBS NE . THEN N_OBS1 + N_OBS;

KEEP MAJGRP REGION REGCAT BENFYPE BENEFIT TIMEPD SIG SCORE SEMEAN N_OBS N_WGT
  FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;    ***MJS 07/08/03 Added TIMEPD;

  IF LAST.REGCON THEN DO;

    IF SUMWGT1 NOTIN (.,0) THEN DO;
      SCORE = SUMSCOR1/SUMWGT1;
      SEMEAN = SQRT(SUMSE2)/SUMWGT1;
    END;
    ELSE DO;
      SCORE = .;
      SEMEAN = .;
    END;
    N_OBS = N_OBS1;
    N_WGT = SUMWGT1;
    SOURCE = "REGION";
    FLAG = "REGION";
    IF REGCON=1 THEN REGION = "NORTH";
    IF REGCON=2 THEN REGION = "SOUTH";
    IF REGCON=3 THEN REGION = "WEST";
    IF REGCON=4 THEN REGION = "Overseas Europe";
    IF REGCON=5 THEN REGION = "Overseas Pacific";
    IF REGCON=6 THEN REGION = "Overseas Latin America";

    REGCAT = REGION;
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENFYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/08/03 Added
TIMEPD;
  OUTPUT;
  END;
RUN;

*****;
* RSG 01/2005 Calc. Total CONUS Scores *;
* MER 01/2009 Changed CONUS to USA *;
*****;
PROC SORT DATA=TEMP;

```

```

BY TOTCON;
DATA TEMP4;
  SET TEMP END=FINISHED;
BY TOTCON;
  length key $200;
IF FIRST.TOTCON THEN DO;
  SUMSCOR1 = 0;      RETAIN SUMSCOR1;
  SUMWGT1 = 0;      RETAIN SUMWGT1;
  SUMSE2 = 0;      RETAIN SUMSE2;
  SUMWGT2 = 0;      RETAIN SUMWGT2;
  N_OBS1 = 0;      RETAIN N_OBS1;
END;

  IF SCORE NE . AND N_WGT NE . THEN SUMSCOR1 = SUMSCOR1 + (SCORE*N_WGT);
  IF N_WGT NE . THEN SUMWGT1 = SUMWGT1 + N_WGT;
  IF SEMEAN NE . AND N_WGT NE . THEN SUMSE2 = SUMSE2 + (SEMEAN*N_WGT)**2;
  IF N_OBS NE . THEN N_OBS1 + N_OBS;

IF LAST.TOTCON THEN DO;

  IF SUMWGT1 NOTIN (.,0) THEN DO;
    SCORE = SUMSCOR1/SUMWGT1;
    SEMEAN = SQRT(SUMSE2)/SUMWGT1;
  END;
  ELSE DO;
    SCORE = .;
    SEMEAN = .;
  END;
  N_OBS = N_OBS1;
  N_WGT = SUMWGT1;
  SOURCE = "USA";
  FLAG = "USA";
IF TOTCON=1 THEN REGION = "USA MHS";
IF TOTCON=2 THEN REGION = "OVERSEAS";
  REGCAT = REGION;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD)); ***MJS 07/08/03 Added
TIMEPD;
  OUTPUT;
END;
KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD SIG SCORE SEMEAN N_OBS N_WGT
  FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY; ***MJS 07/08/03 Added TIMEPD;

RUN;

%IF &FLAG = 0 %THEN %DO;
  DATA FINAL;
    SET INIT TEMP2 TEMP3 TEMP4;
  RUN;
%END;
%ELSE %DO;
  DATA FINAL;
    SET FINAL TEMP2 TEMP3 TEMP4;

```

```
RUN;
%END;
%LET FLAG = 1;

%MEND;
```

```
*****
* Create CONUS for Active Duty - Individual
*****;
```

```
%PROCESS(BENTYPE=Claims Handled Correctly           ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service         ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information                 ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist        ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment                 ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                  ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You              ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit             ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care               ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
```

```
*****
* Create CONUS for Active Duty Dependents - Individual
*****;
```

```
%PROCESS(BENTYPE=Claims Handled Correctly           ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service         ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information                 ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist        ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment                 ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                  ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                      ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You              ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
```

```
*****
```

```
* Create CONUS for Enrollees with Civilian PCM - Individual
```

```
*****;
```

```
%PROCESS(BENTYPE=Claims Handled Correctly ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
```

```
*****
```

```
* Create CONUS for Enrollees with Military PCM - Individual
```

```
*****;
```

```
%PROCESS(BENTYPE=Claims Handled Correctly ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
```

```
*****
* Create CONUS for Non-enrolled Beneficiaries - Individual
*****;
%PROCESS(BENTYPE=Claims Handled Correctly ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
```

```
*****
* Create CONUS for Prime Enrollees - Individual
*****;
%PROCESS(BENTYPE=Claims Handled Correctly ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
```

```

*****
* Create CONUS for Retirees and Dependents - Individual
*****;
%PROCESS(BENTYPE=Claims Handled Correctly           ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service         ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information                 ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist        ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment                  ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                   ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You                ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit              ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care                 ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);

```

```

*****
* Create CONUS for All Beneficiaries - Individual
*****;
%PROCESS(BENTYPE=Claims Handled Correctly           ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service         ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand     ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information                 ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment                  ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                   ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                       ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You                ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit              ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care                 ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);

```

```

*****

```



```

* Process Quarterly CONUS Composites
*****
*****
* Create CONUS for Claims Processing - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
,
TYPE=COMPOSITE,BENEFIT=Claims Processing); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
,
TYPE=COMPOSITE,BENEFIT=Claims Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Claims Processing);

*****
* Create CONUS for Customer Service - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
,
TYPE=COMPOSITE,BENEFIT=Customer Service); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
,
TYPE=COMPOSITE,BENEFIT=Customer Service);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Customer Service);

*****
* Create CONUS for Getting Care Quickly - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
,
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
,
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);

```

```

%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
TYPE=COMPOSITE,BENEFIT=Getting Care Quickly);

*****
* Create CONUS for Getting Needed Care - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
TYPE=COMPOSITE,BENEFIT=Getting Needed Care); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
TYPE=COMPOSITE,BENEFIT=Getting Needed Care);

*****
* Create CONUS for Health Care - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
TYPE=COMPOSITE,BENEFIT=Health Care); ***MJS 07/08/03 Changed BENTYPE="&PERIOD4" to
BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
TYPE=COMPOSITE,BENEFIT=Health Care);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
TYPE=COMPOSITE,BENEFIT=Health Care);

*****
* Create CONUS for Health Plan - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
TYPE=COMPOSITE,BENEFIT=Health Plan); ***MJS 07/08/03 Changed BENTYPE="&PERIOD4" to
BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
TYPE=COMPOSITE,BENEFIT=Health Plan);

```

```

%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Health Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Health Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=Health Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees ,
TYPE=COMPOSITE,BENEFIT=Health Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents ,
TYPE=COMPOSITE,BENEFIT=Health Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=Health Plan);

*****
* Create CONUS for How Well Doctors Communicate - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=How Well Doctors Communicate);

*****
* Create CONUS for Primary Care Manager - Quarterly
*****;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager); ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=Primary Care Manager);

*****
* Create CONUS for Specialty Care - Quarterly
*****;

```

```

%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty
,
TYPE=COMPOSITE,BENEFIT=Specialty Care); ***MJS 07/08/03 Changed BENTYPE="&PERIOD4"
to BENTYPE="Composite";
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents
,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees
,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents
,
TYPE=COMPOSITE,BENEFIT=Specialty Care);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries
,
TYPE=COMPOSITE,BENEFIT=Specialty Care);

*****
* Extract ORDER and KEY from the WEB Layout file. TEMPQ will be used
* as place holders for missing records. FAKEQ will be used for adding
* new records.
*****;
DATA FAKEQ;
  SET IN1.FAKEQ;
  length key $200;
  SIG = .;
  SCORE = .;
  ORDER = _N_;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD)); ***MJS 07/08/03 Added
TIMEPD;

RUN;
PROC SORT DATA=FAKEQ OUT=TEMPQ; BY KEY; RUN;
PROC SORT DATA=FAKEQ(KEEP=ORDER KEY); BY KEY; RUN;

*****
* Append BENCHMARK records to CAHPS records and perform significance tests
*****;
DATA BENCHMRK(KEEP=MAJGRP BENEFIT BENTYPE SEMEAN SCORE);
  SET IN1.&DSN;
  WHERE SUBSTR(REGION,1,5) = "Bench" AND SVMPRQ = 0;
RUN;
Data abnchmrk(keep=benefit bentye ascore);
set benchmrk;
where upcase(majgrp)='ALL BENEFICIARIES';
rename score=ascore;
run;
proc sort; by benefit bentye;
proc sort data=benchmrk; by benefit bentye;
data benchmrk;
merge benchmrk abnchmrk; by benefit bentye;run;
PROC SORT DATA=BENCHMRK; BY MAJGRP BENEFIT BENTYPE; RUN;

PROC SORT DATA=FINAL; BY KEY; RUN;

```

```

DATA CONUS_Q;
  MERGE FINAL(IN=IN1) FAKEQ(IN=IN2);
  BY KEY;
  IF IN1;
RUN;
PROC SORT DATA=CONUS_Q; BY MAJGRP BENEFIT BENTYPE; RUN;

*****
* Perform significance tests for CONUS scores
*****;
DATA SIGTEST1;
  MERGE CONUS_Q(IN=SIN) BENCHMRK(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
  BY MAJGRP BENEFIT BENTYPE;
  length key $200;
  TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
  IF N_OBS > 1 THEN TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1)); /** RSG 06/22/2004 - PUT
CONDITION TO AVOID DF=0 WHICH CAUSES ERROR FOR PROBT FUNCTION **/
  ELSE TEST = .; /** RSG 06/22/2004 - ADDED FOR CASES WITH N_OBS = 1 OR LESS SINCE
PROBT CAN'T BE PERFORMED AND WOULD RESULT IN TEST = MISSING ANYWAY **/
  SIG = 0;
  IF TEST < 0.05 AND TEST NE . THEN SIG = 1; /** RSG 06/22/2004 - ADDED CONDITION
"TEST NE ." IN CASE MISSING IS CONSIDERED LESS THAN 0.05 **/
  IF SCORE < BSCORE THEN SIG = -SIG;

  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/08/03 Added
TIMEPD;
  SOURCE = "USA_Q";
  FLAG = "USA_Q";
  IF SIN;
  score=score+ascore-bscore;
RUN;
PROC SORT DATA=SIGTEST1; BY KEY; RUN;

*****
* Extract CAHPS scores to perform significance tests
*****;
DATA CAHPS MPR bench;
  SET IN1.&DSN;
  *****
  * Significance tests have already been performed for MPR scores,
  * so remove from file.
  *****;
  IF SVMPRQ = 1 THEN OUTPUT MPR;
  IF SVMPRQ = 0 THEN do;
    if majgrp ne 'Benchmark' then OUTPUT CAHPS;
    else output bench; end;
RUN;

PROC SORT DATA=CAHPS;
  BY MAJGRP BENEFIT BENTYPE;
RUN;

*****
* Perform significance tests for CAHPS scores

```

```

*****;
DATA SIGTEST2;
  MERGE CAHPS(IN=SIN) BENCHMRK(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
  BY MAJGRP BENEFIT BENTYPE;
  TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
  IF N_OBS > 1 THEN TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1)); /** RSG 06/22/2004 PUT
N_OBS > 1 CONDITION TO AVOID ERRORS BECAUSE PROBT CAN NOT HANDLE DF=0 **/
  ELSE TEST = .;
  SIG = 0;
  IF N_OBS >= 30 AND TEST < 0.05 THEN SIG = 1;
  IF SCORE < BSCORE THEN SIG = -SIG;
  IF SIN;
  score=score+ascore-bscore;
  RUN;
proc sort data=bench; by majgrp benefit bentype;
data sigtest2;
set sigtest2 bench; by majgrp benefit bentype;
PROC SORT DATA=SIGTEST2; BY KEY; RUN;

*****
* When NOT 1st quarter: Get records from previous quarters
*****;
%MACRO LASTQTR;
  *****
  * Input composite records from previous quarters.
  *****;

  LIBNAME IN2 "&LSTCONUS";
  DATA LASTQTR (drop=key2 BENEFIT2); /*RSG 10/2005 - KEY2 WAS CREATED AT END OF PROG
TO HELP
  SET TREND TO MISSING FOR SCORES MISSING IN ANY
QUARTERS
  THIS SHOULD BE DROPPED AND RESET AT THE END OF PROG*/
  SET IN2.CONUS_Q (RENAME = (BENEFIT = BENEFIT2) DROP=KEY);
  FORMAT BENEFIT $28.;/*The longest entry in BENEFIT is "How Well Doctors
Communicate", which is 28 characters long.*/
  FORMAT KEY $200.;
  BENEFIT = BENEFIT2;

  /** Change BENEFIT "Heathly Behavior" to Healthy "Behaviors" JSO 02/16/2007 ***/
  IF BENEFIT = 'Healthy Behavior' THEN BENEFIT = 'Healthy Behaviors';

  /** Change SOURCE and FLAG from "CONUS_Q" to "USA_Q" MER 01/29/2009 ***/
  /** Change REGION and REGCAT from "CONUS MHS to USA MHS" MER 01/29/2009 ***/
  IF SOURCE = 'CONUS_Q' THEN SOURCE = 'USA_Q';
  IF FLAG = 'CONUS_Q' THEN FLAG = 'USA_Q';
  IF REGION = 'CONUS MHS' THEN REGION = 'USA MHS';
  IF REGCAT = 'CONUS MHS' THEN REGCAT = 'USA MHS';

  IF timepd IN ("&PERIOD1",&PERIOD2",&PERIOD3") AND
  (REGION = REGCAT) AND
  BENEFIT IN ("Getting Needed Care",
  "Getting Care Quickly",
  "How Well Doctors Communicate",
  "Customer Service",
  "Claims Processing",
  "Health Care",

```

```

"Health Plan",
"Primary Care Manager",
"Specialty Care",
"Preventive Care",
"Healthy Behaviors") & TIMEPD NE "Trend";

```

```

KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));

```

```

RUN;
%MEND LASTQTR;
%LASTQTR;

```

```

PROC SORT DATA=LASTQTR(DROP=ORDER); BY KEY; RUN;

```

```

DATA LASTQTR;
MERGE TEMPQ(IN=IN1) LASTQTR(IN=IN2);
BY KEY;
IF IN1 AND IN2;
RUN;

```

```

PROC SORT DATA=MPR; BY KEY; RUN;

```

```

*****
* Combine previously created records with the new file
*****;

```

```

DATA COMBINE OUT.LT30Q;
SET SIGTEST1 SIGTEST2 LASTQTR MPR;
BY KEY;
if timepd="&period1" then period=1; ***MJS 07/08/03 Changed from
bentype="&period1";
if timepd="&period2" then period=2; ***MJS 07/08/03 Changed from
bentype="&period2";
if timepd="&period3" then period=3; ***MJS 07/08/03 Changed from
bentype="&period3";
if timepd="&period4" then period=4; ***MJS 07/08/03 Changed from
bentype="&period4";
*****
* Remove N_OBS < 30 OR N_WGT < 200
*****;
IF (N_OBS < 30 OR N_WGT < 200) AND (MAJGRP NE "Benchmark") AND
(REGION NE "Benchmark")
THEN OUTPUT OUT.LT30Q;
ELSE OUTPUT COMBINE;
RUN;

```

```

data trend;
set combine;
where period notin (.,&EMPTY_PERIOD.) ; *AMK 9/23/13 ADDED EMPTY PERIOD;
if period<4|benefit="Preventive Care" then score=score/100;

```

```

proc sort data=trend;
by majgrp region regcat benefit bentype period;

```

```

run;

data avg(keep=majgrp region regcat benefit t_obs a_period a_score twgt bentye) ;
set trend;  by majgrp region regcat benefit bentye period;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit|first.bentye then do;
t_obs=0;
t_score=0;
twgt=0;
t_period=0;
end;
t_obs+n_obs;
t_Score+n_wgt*score;
twgt+n_wgt;
t_period+period*n_wgt;
if last.majgrp|last.region|last.regcat|last.benefit|last.bentye then do;
if twgt notin (.,0) then do;
a_score=t_score/twgt;
a_period=t_period/twgt;
end;
else do;
a_score=.;
a_period=.;
end;
output;
end;
RUN;

data trend2(drop=score) btrend(keep=majgrp benefit bentye trend serr);
merge trend avg;  by majgrp region regcat benefit bentye;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit|first.bentye then do;
t_score=0;
t_se=0;
t_period=0;
end;
t_se+((n_wgt**2)*(semean**2));
t_score+n_wgt*(score-a_score)*(period-a_period);
t_period+n_wgt*(period-a_period)**2;
if last.majgrp|last.region|last.regcat|last.benefit|last.bentye then do;
if t_period ne 0 then do; /* RSG 06/22/2004 Added to avoid division by zero*/
trend=t_score/t_period;
serr=sqrt(t_se/(t_period*twgt));
end;
else do;
trend=.;
serr=.;
end;
if region="Benchmark"|majgrp="Benchmark" then output btrend;
output trend2;
end;
proc sort data=trend2; by majgrp benefit bentye;RUN;
proc sort data=btrend; by majgrp benefit bentye;
data trend3(rename=(trend=score));
merge trend2 btrend(rename=(trend=btrend serr=bserr));
by majgrp benefit bentye;
length key $200;
if ^(region="Benchmark"|majgrp="Benchmark") then do;

```



```

ttrend=trend-btrend;
serr=sqrt((serr**2)+(bserr**2));
sig=0;
if serr > 0 and t_obs notin (.,0) then test= 2*(1-probt(abs(ttrend/serr),t_obs)); /*
RSG 06/22/2004 Added to avoid division by zero*/
else test = .;
if test<.05 & test ne . then sig=1;
if sig=1 & ttrend<0 then sig=-1;
end;
timepd="Trend";
KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD)); ***MJS 07/08/03 Added
TIMEPD;
run;

proc sort data=trend3(drop=t_obs twgt a_score a_period t_score t_se t_period serr
bserr btrend ttrend order); by key;
data trend4 ;
merge trend3(in=din) fakeq(in=cin); by key;
if din;
RUN;

data combine2;
set combine trend4;RUN;

proc sort; by key;
data combine3 dupe;
set combine2; by key;
if ^(first.key & last.key) then output dupe;
output combine3;
proc print data=dupe;run;

/* RSG 06/2005 - set trend to missing for component/composite
scores with missing scores in any of the quarter*/
/*AMK 9/23/13 - keep trends if missing data for an entire quarter*/
data misses (keep=key2) all;
set combine3;
length key2 $200.;
KEY2 = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION));
if score = . and period ne &EMPTY_PERIOD. then output misses; *AMK 9/23/13 ADDED
EMPTY PERIOD;
output all;
run;
proc sort data=misses;
by key2;
proc sort data=all;
by key2;
run;

data combine4;
merge all (in=a) misses (in=b);
by key2;
if a and b then do;
if timepd = "Trend" then score = .;

```

```

end;
run;

*****
* Create place holders for missing records
*****;
DATA FAKEONLY;
  MERGE COMBINE4(IN=IN1) TEMPQ(IN=IN2);
  BY KEY;
  SOURCE = "FAKE ONLY";
  FLAG   = "FAKE ONLY";
  IF IN2 AND NOT IN1;

RUN;

*****
* Combine all of the missing records with the existing records to generate
* the complete WEB layout file.
*****;
DATA CONUS_Q;
  SET FAKEONLY COMBINE4;
  BY KEY;
  *****
  * Convert CAHPS Composites and Individual to 1-100 scale
  *****;
  IF timepd="Trend" OR (timepd="&PERIOD4" & benefit ne "Preventive Care")
  then
    SCORE = SCORE*100;

    IF TIMEPD = "&&PERIOD&EMPTY_PERIOD" THEN DO;
      SCORE = .S;
      N_OBS = 30;
      N_WGT = 200;
    END;

RUN;

PROC SORT DATA=CONUS_Q; BY ORDER; RUN;

DATA FAKEQ;
  length key $200;
  SET IN1.FAKEQ;
  SIG = .;
  SCORE = .;
  ORDER = _N_;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));    ***MJS 07/31/03 Added
TIMEPD;

RUN;
PROC SORT DATA=FAKEQ OUT=TEMPQ;          BY KEY; RUN;
PROC SORT DATA=FAKEQ(KEEP=ORDER KEY); BY KEY; RUN;

PROC SORT DATA=CONUS_Q out=OUT.CONUS_Q;
BY KEY;
RUN;

DATA FAKEONLY;

```

```

MERGE OUT.CONUS_Q(IN=IN1) TEMPQ(IN=IN2);
BY KEY;
SOURCE = "FAKE ONLY";
FLAG   = "FAKE ONLY";
IF IN2 AND NOT IN1;
RUN;

DATA TOTAL_Q;
  SET FAKEONLY OUT.CONUS_Q;
  BY KEY;
  IF MAJGRP="All Beneficiaries" then MAJGRP="All Users";
  IF MAJGRP="Non-enrolled Beneficiaries" then MAJGRP="Standard/Extra Users";
  IF BENEFIT="Primary Care Manager" THEN BENEFIT="Personal Doctor"; /*MJS
02/05/2003*/
  /* 11/14/2005 RSG - ADDED IN THESE CODE TO CAPITALIZE ALL WORDS IN TITLE */
  /*IF BENTYPE = "Problems Getting Referral to Specialist      "
    THEN BENTYPE = "Problems Getting Referral To Specialist  ";
  IF BENTYPE = "Delays in Care while Awaiting Approval      "
    THEN BENTYPE = "Delays In Care While Awaiting Approval  ";
  IF BENTYPE = "Advice over Telephone                       "
    THEN BENTYPE = "Advice Over Telephone                   ";
  IF BENTYPE = "Wait for Routine Visit                      "
    THEN BENTYPE = "Wait For Routine Visit                  ";
  IF BENTYPE = "Wait for Urgent Care                       "
    THEN BENTYPE = "Wait For Urgent Care                    ";
  IF BENTYPE = "Wait More than 15 Minutes Past Appointment  "
    THEN BENTYPE = "Wait More Than 15 Minutes Past Appointment";
  IF BENTYPE = "Explains so You can Understand             "
    THEN BENTYPE = "Explains So You Can Understand         ";
  IF BENTYPE = "Spends Time with You                      "
    THEN BENTYPE = "Spends Time With You                   ";
  IF BENTYPE = "Courteous and Respectful                   "
    THEN BENTYPE = "Courteous And Respectful                ";
  IF BENTYPE = "Problem Getting Help from Customer Service  "
    THEN BENTYPE = "Problem Getting Help From Customer Service";
  IF BENTYPE = "Problem with Paperwork                     "
    THEN BENTYPE = "Problem With Paperwork                 ";
  IF BENTYPE = "Claims Handled in a Reasonable Time        "
    THEN BENTYPE = "Claims Handled In A Reasonable Time    ";*/
  IF substr(region,1,5) in ('Latin','Europ','Pacif')|Region='Overseas Latin America'
    then delete;
  IF REGION IN ("South Joint Service","West Joint Service","Europe Joint Service",
    "Pacific Joint Service","Latin America Joint Service") THEN DELETE;

RUN;

PROC SORT DATA=TOTAL_Q OUT=OUT.TOTAL_Q; BY ORDER; RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (6401-904)";
TITLE2 "Program Name: CONUS_Q.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MERGFINQ.sas7bdat - Scores Database in WEB Layout";
TITLE4 "Program Outputs: TOTAL_Q.sas7bdat - USA Scores Database in WEB layout";

PROC FREQ;
TABLES SIG FLAG SOURCE BENEFIT BENTYPE MAJGRP REGION REGCAT TIMEPD /*MJS 07/08/03
Added TIMEPD*/
  REGION*REGCAT
  /MISSING LIST;

```

```
RUN;  
  
*AMK - check empty dataset and trend;  
PROC PRINT DATA=TOTAL_Q (DROP = KEY OBS=30);  
WHERE TIMEPD="Trend";  
RUN;  
PROC PRINT DATA=TOTAL_Q (DROP = KEY OBS=30);  
WHERE TIMEPD="&PERIOD3.";  
RUN;
```

G.7 - Q3FY2017\PROGRAMS\LOADWEB\CreateTotal_qp4.sas - Combines the regular totalq and purchase totalq into one dataset - Run Quarterly.

```

/*****
/
/**** Project: 6244 DOD
****/
/**** Program: CreateTotal_qp&PERIOD.sas
****/
/**** Purpose: Add from Purchase Care's Totalq data, Enrollees with Civilian PCM
****/
/****           to the Adult Beneficiary's Totalq data.  New data will be use to
****/
/****           populate the Purchase Care's section of the html reports.
****/
/**** Author : Justin Oh 08/06/2008
****/
/**** Input  : ..currentPeriod\PurchasedLoadweb\total_q
****/
/****           ..currentPeriod\Loadweb\total_q
****/
/**** Output : .\total_q
****/
/**** Modify : 12/27/2016 by Matt Turbyfill - Corrected backslash for SAS Grid
****/
/****
****/
/**** B-4-Run: Change the %LET statements at the top of the program.
****/
/*****
/
OPTIONS COMPRESS=YES;

/**** Reference quarter's period
****/
%LET PERIOD = 4;

/**** Adult Beneficiary and Purchase Care total_q.sas7bdat locations
****/
LIBNAME TOTQ_P '..\PurchasedLoadWeb';
LIBNAME TOTQ_A '.';
LIBNAME TOTQ_X '.';

/**** Keep only Enrollees with Civilian PCM, used for the Purchased Care group
****/
DATA total_pc;
    SET TOTQ_P.total_q;
    IF MAJGRP = 'Enrollees with Civilian PCM';
    IF MAJGRP = 'Enrollees with Civilian PCM' THEN MAJGRP = 'Purchased Care Users';
RUN;
/**** Add Purchase Care's renamed MAJGRP to create a final total_q file
****/
DATA TOTQ_X.total_qp&PERIOD;
    SET TOTQ_A.total_q total_pc;
RUN;

/***** END OF PROGRAM
*****/

```

G.8.A - ReportCards\CAHPS_Adult2017\STEP1Q.SAS - Create and recode variables used in Adult Beneficiary Reports - Annual.

```

*****
*
* PROJECT: DoD - Quarterly Adult Report Cards
* PROGRAM: STEP1Q.SAS
* PURPOSE: Create Dummy and Recode Variables used in Adult Report Card
*          Create a Female dummy variable
*          Create an Education dummy variable
*          Create 15 region dummies combining regions.
*          7 & 8 into region 8. That is, there
*          isn't a region 7 dummy.
*          Create 7 age dummy variables.
*
*          We require the most desired code to be the highest value.
*          Recode the dependent variables into:
*          1 - the least desirable value
*          2 - the 2nd least desirable value
*          3 - the most desirable value
*          . - missing
*
*          Create 7 variables GROUP1 - GROUP7
*          IF (XINS_COV IN (1,2,6) AND H09004>=2) THEN GROUP1 = 1
*          IF (XENR_PCM IN (1,2,6) AND H09004>=2) THEN GROUP2 = 1
*          IF (XENR_PCM = 3,7 AND H09004>=2) THEN GROUP3 = 1
*          IF XINS_COV IN (3) THEN GROUP4 = 1
*          /*JSO 08/24/2006, Deleted 4,5*/
*          IF XBNFGRP = 1 THEN GROUP5 = 1
*          IF XBNFGRP = 2 THEN GROUP6 = 1
*          IF XBNFGRP IN (3,4) THEN GROUP7 = 1
*          GROUP8 is output for all beneficiaries
*
* MODIFIED:45) November 11, 2012 By Mike Rudacille, Updated for handling of Joint
Service facilities
*          46) December 1, 2014 By Matt Turbyfill, revised for the Macro Program.
          Replaced RCTYPE with &PC.ReportCards
          Changed HCSyyq_2 to &DATAFILE.
          Changed H14 and R14 to H&FY. And R&FY.
          Changed numerous INCLUDE and FILE references to
..\..\ReportCards\CAHPS_Adult&FYYEAR.
*
* INPUTS: 1) HCSyyq_1 - DoD Quarterly HCS Database
*
* OUTPUTS: 1) GROUP1-8.sas7bdat - DoD Quarterly GROUP files as defined above
*
* INCLUDES: 1) CONVERT.SAS - Convert item responses to proportional
          values for consistency w/ TOPS
*
* NOTES: 1) Groups 1-3 modified 10/09/2000
*
*          2) In Q1_2002, S02S01 was renamed and recoded to H00077 (health
          status variable for 2000). H02077 was the Hispanic/Latino
          variable. In Q2_2002, H02077 is health status, and H02079
          is the Hispanic/Latino variable. To make the Quarter 2 data
          file (HSC022_1.sd2) more consistent with the Quarter 1 file,
          the health status variable which was H02077 is now H04075,
          and the Hispanic/Latino variable which was H02079 is now

```

```

*           H02077.
*
*****;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMterr NOOVP COMPRESS=YES;
LIBNAME OUT "Data";
LIBNAME IN1  "../.../Data";
LIBNAME LIBRARY  "../.../Data/fmtlib";

%LET WGT= CFWT;

TITLE1      'Program Saved as: STEP1Q.SAS';

proc format;
  value servreg 1 = 'North Army'
                2 = 'North Air Force'
                3 = 'North Navy'
                4 = 'North Other'
                5 = 'North Joint Service'
                6 = 'South Army'
                7 = 'South Air Force'
                8 = 'South Navy'
                9 = 'South Other'
               10 = 'South Joint Service'
               11 = 'West Army'
               12 = 'West Air Force'
               13 = 'West Navy'
               14 = 'West Other'
               15 = 'West Joint Service'
               16 = 'Europe Army'
               17 = 'Europe Air Force'
               18 = 'Europe Navy'
               19 = 'Europe Other'
               20 = 'Europe Joint Service'
               21 = 'Pacific Army'
               22 = 'Pacific Air Force'
               23 = 'Pacific Navy'
               24 = 'Pacific Other'
               25 = 'Pacific Joint Service'
               26 = 'Latin America Army'
               27 = 'Latin America Air Force'
               28 = 'Latin America Navy'
               29 = 'Latin America Other'
               30 = 'Latin America Joint Service';

DATA ENTIRE;
  SET IN1.&DATAFILE.(KEEP=
    MPRID
    FIELDAGE /*MJS 01/26/04*/
    XTNEXREG
    SERVAFF /*KRR 04/09/04*/
    DBENCAT /*JSO 04/26/2007, added for reservists logic*/
    USA
    ENBGSMPL

```

```

SREDA
XSEXA
  XCATCH
XBNFGRP
STRATUM      /*KRR 04/03/2006, changed from ADJ_CELL*/
XINS_COV
XENR_PCM
XOCONUS      /*JSO 08/24/2006, Overseas Region Indicator*/
&WGT
QUARTER
/* Getting Needed Care */
H&FY.033
H&FY.029
/* Getting Care Quickly */
H&FY.007
H&FY.010
/* How Well Doctors Communicate */
H&FY.021
H&FY.022
H&FY.023
H&FY.024
/* Customer Service */
H&FY.041
H&FY.042
/* Claims Processing */
H&FY.046
H&FY.047 /*******/
H&FY.065 /* Health Status */
H&FY.018 /* Health Care Rating */
H&FY.048 /* Health Plan Rating */
H&FY.027 /* Personal Doctor Rating */
H&FY.031 /* Specialist Rating */
H&FY.003 /* Health Plan Used */ /*JSO 04/26/2007, added for
reservists logic*/
      X&FY.003 /* Health Plan Used - HEDIS */
H&FY.004 /* How Long in Health Plan */
      /*******/

      INHEDIS
      INHCSDB
    );
FORMAT _ALL_;

*   IF INHEDIS=1 THEN XCATCH=GEOCELLH;

      *Use HEDIS Insurance;
      IF INHEDIS=1 THEN H&FY.003 = X&FY.003;

IF SERVAFF='A' THEN XSERVAFF=1;      *Army;
  ELSE IF SERVAFF='F' THEN XSERVAFF=2;  *Air Force;
  ELSE IF SERVAFF='N' THEN XSERVAFF=3;  *Navy;
  ELSE XSERVAFF=4;                    *Other;

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

```



```

IF XTNEXREG = . THEN DELETE; /* RSG 02/2005 USE CACSMPL TO DELETE MISSING
FIELDS*/

IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*/
/*MER 10/07/11 Added 10 and 11 */
/*AMK 6/17/14 removed 11, added
13/14*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;
/* Note: use tmp_cell in step2q.sas */
LENGTH TMP_CELL XSERVREG 8;
TMP_CELL = STRATUM; /*KRR 04/03/2006, changed from ADJ_CELL*/

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
    ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
    ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 11;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
    ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/24/2006, Changed Overseas Regions*/
    IF XOCONUS = 1 THEN DO;
        IF XSERVAFF = 1 THEN XSERVREG = 16;
        ELSE IF XSERVAFF = 2 THEN XSERVREG = 17;
        ELSE IF XSERVAFF = 3 THEN XSERVREG = 18;
        ELSE IF XSERVAFF = 4 THEN XSERVREG = 19;
        ELSE XSERVREG = 20;
    END;
    IF XOCONUS = 2 THEN DO;
        IF XSERVAFF = 1 THEN XSERVREG = 21;
        ELSE IF XSERVAFF = 2 THEN XSERVREG = 22;
        ELSE IF XSERVAFF = 3 THEN XSERVREG = 23;
        ELSE IF XSERVAFF = 4 THEN XSERVREG = 24;
        ELSE XSERVREG = 25;
    END;
END;

```

```

END;
IF XOCONUS = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 26;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 27;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 28;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 29;
  ELSE XSERVREG = 30;
END;
END;

IF XSERVREG = . THEN DELETE; /* MER 11/10/10 - Deletes records with imputed
TNEXREG = 'O' */
/* and missing XOCONUS. (Only applies to CACSMPL =
9904) */

/* MER 7/27/12 - New logic for handling out of catchment OCONUS */
IF XCATCH = 9904 THEN DO;
  IF XSERVREG <=5 THEN XCATCH=9901;
  ELSE IF XSERVREG <=10 THEN XCATCH=9902;
  ELSE IF XSERVREG <=15 THEN XCATCH=9903;
  ELSE IF XSERVREG <=20 THEN XCATCH=9905;
  ELSE IF XSERVREG <=25 THEN XCATCH=9906;
  ELSE IF XSERVREG <=30 THEN XCATCH=9907;
END;

RENAME XCATCH=CACSMPL;
WRWT=&WGT;

RUN;

TITLE "Initial catchments";
proc freq data=entire;
table cacsmpl * inhedis / missing;
run;
title;
data out.entire;
set entire;
run;

*-----;
* create variable names for catchment area dummies ;
*-----;

* create a file of catchment areas (UNIQUE) using the sort to drop;
* all duplicate catchment areas leaving one record per;
* unique catctment area code;
PROC SORT DATA=ENTIRE OUT=UNIQUE(KEEP=CACSMPL) NODUPKEY;
BY CACSMPL;
RUN;

* create a file (FILEA) with catchment areas codes and a catchment;
* name consisting of "CAT" concatenated with a 4 digit number;
* created by ting of "CAT" concatenated with a 4 digit number;
DATA FILEA (RENAME=(CACSMPL=START SERIAL=LABEL));
SET UNIQUE;
SERIAL+1;
LENGTH FMTNAME $7 DUMNAME $7;

```

```

    FMTNAME='CACLOOK';
    DUMNAME= 'CAT' || PUT(CACSMPL, Z4.);
RUN;

PROC PRINT DATA=FILEA;
    TITLE2 '1 record per catchment area (use this file to create a format)';
RUN;

* create a format statement to be used to create CATINDX;
PROC FORMAT CNTLIN=FILEA; RUN;

* create an include file for a complete set of catchment areas.
* Write out to a file (CDUMFILE.INC) of the catchment dummy variables;
DATA _NULL_;
    SET FILEA END=EOF;
    FILE "../ReportCards/CAHPS_Adult&fyyear./CDUMFILE.INC";
    IF _N_ = 1 THEN DO;
        PUT @10 "ARRAY CATDUMS(*) 4";
    END;
    PUT @15 DUMNAME $7.;

    IF EOF THEN PUT @10 ";";
RUN;

*****
* Create AGE, FEMALE and GROUP (Beneficiary/Enrollment)
* subsets. Create the region dummies. Recode region 7 to region 8.
*****;
DATA ENTIRE;
    SET ENTIRE;
    LENGTH DEFAULT = 4;
    IF FIELDAGE NE " " THEN DO; /*MJS 01/26/04*/
        AGE1824=0;
        AGE2534=0;
        AGE3544=0;
        AGE4554=0;
        AGE5564=0;
        AGE6574=0;
        AGE75UP=0;
        IF ( '018' <= FIELDAGE <= '024' ) THEN AGE1824=1; /*MJS 01/26/04*/
        ELSE IF ( '025' <= FIELDAGE <= '034' ) THEN AGE2534=1;
        ELSE IF ( '035' <= FIELDAGE <= '044' ) THEN AGE3544=1;
        ELSE IF ( '045' <= FIELDAGE <= '054' ) THEN AGE4554=1;
        ELSE IF ( '055' <= FIELDAGE <= '064' ) THEN AGE5564=1;
        ELSE IF ( '065' <= FIELDAGE <= '074' ) THEN AGE6574=1;
        ELSE IF ( FIELDAGE > '074' ) THEN AGE75UP=1;
    END;

*****
* Create the FEMALE dummy variable.
*****;
IF XSEXA = 2 THEN
    FEMALE = 1;
ELSE
    FEMALE = 0;

```

```

*****
* Create the beneficiary group/enrollment group subsets.
*****;
GROUP1 = 0;
GROUP2 = 0;
GROUP3 = 0;
GROUP4 = 0;
GROUP5 = 0;
GROUP6 = 0;
GROUP7 = 0;
GROUP8 = 1;      * EVERYONE;

IF (NXNS_COV IN (1,2,6,13) AND (H&FY.004>=2 OR INHEDIS=1)) THEN GROUP1 = 1;/*AMK
6/17/14 added 13*/
IF (XENR_PCM IN (1,2,6) AND (H&FY.004>=2 OR INHEDIS=1)) THEN GROUP2 = 1;
/* JSO 04/05/2007 conditions to run RC type */
IF "&RCTYPE" = 'ReportCards' AND (XENR_PCM IN (3,7) AND (H&FY.004>=2 OR
INHEDIS=1)) THEN GROUP3 = 1;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND ((XENR_PCM IN (3,7) AND
(H&FY.004>=2 OR INHEDIS=1)) OR NXNS_COV IN (3,9,10,14)) THEN GROUP3 = 1;/*AMK 6/17/14
added 14*/
IF NXNS_COV IN (3,9,10,14) THEN GROUP4 = 1; /*JSO 08/24/2006, Deleted
4,5*//*JSO 07/30/2007, Added 9*/ /* MER 10/07/11 Added 10 */
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN GROUP5 = 1;
/*JSO 07/30/2007, added DBENCAT
conditions*/
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN GROUP6 = 1;
/*JSO 07/30/2007, added DBENCAT
conditions*/
IF XBNFGRP IN (3,4) THEN GROUP7 = 1;

*****
* Recode variables with Never, Sometimes, Usually and Always:
* Recode Never & Sometimes (1 & 2) to 1.
* Recode Usually (3) to 2.
* Recode Always (4) to 3.
*****;

IF H&FY.007 = 1 THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 2 THEN R&FY.007 = 1;
ELSE IF H&FY.007 = 3 THEN R&FY.007 = 2;
ELSE IF H&FY.007 = 4 THEN R&FY.007 = 3;
ELSE IF H&FY.007 < 0 THEN R&FY.007 = .;

IF H&FY.010 = 1 THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 2 THEN R&FY.010 = 1;
ELSE IF H&FY.010 = 3 THEN R&FY.010 = 2;
ELSE IF H&FY.010 = 4 THEN R&FY.010 = 3;
ELSE IF H&FY.010 < 0 THEN R&FY.010 = .;

IF H&FY.021 = 1 THEN R&FY.021 = 1;
ELSE IF H&FY.021 = 2 THEN R&FY.021 = 1;
ELSE IF H&FY.021 = 3 THEN R&FY.021 = 2;
ELSE IF H&FY.021 = 4 THEN R&FY.021 = 3;
ELSE IF H&FY.021 < 0 THEN R&FY.021 = .;

IF H&FY.022 = 1 THEN R&FY.022 = 1;
ELSE IF H&FY.022 = 2 THEN R&FY.022 = 1;

```

```
ELSE IF H&FY.022 = 3 THEN R&FY.022 = 2;
ELSE IF H&FY.022 = 4 THEN R&FY.022 = 3;
ELSE IF H&FY.022 < 0 THEN R&FY.022 = .;
```

```
IF H&FY.023 = 1 THEN R&FY.023 = 1;
ELSE IF H&FY.023 = 2 THEN R&FY.023 = 1;
ELSE IF H&FY.023 = 3 THEN R&FY.023 = 2;
ELSE IF H&FY.023 = 4 THEN R&FY.023 = 3;
ELSE IF H&FY.023 < 0 THEN R&FY.023 = .;
```

```
IF H&FY.024 = 1 THEN R&FY.024 = 1;
ELSE IF H&FY.024 = 2 THEN R&FY.024 = 1;
ELSE IF H&FY.024 = 3 THEN R&FY.024 = 2;
ELSE IF H&FY.024 = 4 THEN R&FY.024 = 3;
ELSE IF H&FY.024 < 0 THEN R&FY.024 = .;
```

```
IF H&FY.029 = 1 THEN R&FY.029 = 1;
ELSE IF H&FY.029 = 2 THEN R&FY.029 = 1;
ELSE IF H&FY.029 = 3 THEN R&FY.029 = 2;
ELSE IF H&FY.029 = 4 THEN R&FY.029 = 3;
ELSE IF H&FY.029 < 0 THEN R&FY.029 = .;
```

```
IF H&FY.033 = 1 THEN R&FY.033 = 1;
ELSE IF H&FY.033 = 2 THEN R&FY.033 = 1;
ELSE IF H&FY.033 = 3 THEN R&FY.033 = 2;
ELSE IF H&FY.033 = 4 THEN R&FY.033 = 3;
ELSE IF H&FY.033 < 0 THEN R&FY.033 = .;
```

```
IF H&FY.041 = 1 THEN R&FY.041 = 1;
ELSE IF H&FY.041 = 2 THEN R&FY.041 = 1;
ELSE IF H&FY.041 = 3 THEN R&FY.041 = 2;
ELSE IF H&FY.041 = 4 THEN R&FY.041 = 3;
ELSE IF H&FY.041 < 0 THEN R&FY.041 = .;
```

```
IF H&FY.042 = 1 THEN R&FY.042 = 1;
ELSE IF H&FY.042 = 2 THEN R&FY.042 = 1;
ELSE IF H&FY.042 = 3 THEN R&FY.042 = 2;
ELSE IF H&FY.042 = 4 THEN R&FY.042 = 3;
ELSE IF H&FY.042 < 0 THEN R&FY.042 = .;
```

```
IF H&FY.046 = 1 THEN R&FY.046 = 1;
ELSE IF H&FY.046 = 2 THEN R&FY.046 = 1;
ELSE IF H&FY.046 = 3 THEN R&FY.046 = 2;
ELSE IF H&FY.046 = 4 THEN R&FY.046 = 3;
ELSE IF H&FY.046 < 0 THEN R&FY.046 = .;
```

```
IF H&FY.047 = 1 THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 2 THEN R&FY.047 = 1;
ELSE IF H&FY.047 = 3 THEN R&FY.047 = 2;
ELSE IF H&FY.047 = 4 THEN R&FY.047 = 3;
ELSE IF H&FY.047 < 0 THEN R&FY.047 = .;
```

```
*****
* Recode variables to one missing condition ".".
* This also renames all the "H0xxxx" to "R0xxxx".
*****;
R&FY.027 = H&FY.027; IF R&FY.027 < 0 THEN R&FY.027 = .;
R&FY.031 = H&FY.031; IF R&FY.031 < 0 THEN R&FY.031 = .;
```

```

R&FY.018 = H&FY.018; IF R&FY.018 < 0 THEN R&FY.018 = .;
R&FY.048 = H&FY.048; IF R&FY.048 < 0 THEN R&FY.048 = .;
R&FY.065 = H&FY.065; IF R&FY.065 < 0 THEN R&FY.065 = .;

```

```

*****

```

```

* Create region and service affiliation dummies.

```

```

*****;

```

```

IF XSERVREG NE . THEN DO; /*JSO 08/24/2006, Changed 16 to 24*/ /*MER 11/11/2012,
Changed 24 to 30*/

```

```

    ARRAY REGDUMS (30) REG01 REG02 REG03 REG04 REG05 REG06
                          REG07 REG08 REG09 REG10 REG11 REG12
                          REG13 REG14 REG15 REG16 REG17 REG18
                          REG19 REG20 REG21 REG22 REG23 REG24
                          REG25 REG26 REG27 REG28 REG29 REG30;

```

```

DO I = 1 TO 30;
    REGDUMS(I)=0;

```

```

END;

```

```

IF XSERVREG= 1 THEN REG01 =1;
ELSE IF XSERVREG= 2 THEN REG02 =1;
ELSE IF XSERVREG= 3 THEN REG03 =1;
ELSE IF XSERVREG= 4 THEN REG04 =1;
ELSE IF XSERVREG= 5 THEN REG05 =1;
ELSE IF XSERVREG= 6 THEN REG06 =1;
ELSE IF XSERVREG= 7 THEN REG07 =1;
ELSE IF XSERVREG= 8 THEN REG08 =1;
ELSE IF XSERVREG= 9 THEN REG09 =1;
ELSE IF XSERVREG= 10 THEN REG10 =1;
ELSE IF XSERVREG= 11 THEN REG11 =1;
ELSE IF XSERVREG= 12 THEN REG12 =1;
ELSE IF XSERVREG= 13 THEN REG13 =1;
ELSE IF XSERVREG= 14 THEN REG14 =1;
ELSE IF XSERVREG= 15 THEN REG15 =1;
ELSE IF XSERVREG= 16 THEN REG16 =1;
ELSE IF XSERVREG= 17 THEN REG17 =1;
ELSE IF XSERVREG= 18 THEN REG18 =1;
ELSE IF XSERVREG= 19 THEN REG19 =1;
ELSE IF XSERVREG= 20 THEN REG20 =1;
ELSE IF XSERVREG= 21 THEN REG21 =1;
ELSE IF XSERVREG= 22 THEN REG22 =1;
ELSE IF XSERVREG= 23 THEN REG23 =1;
ELSE IF XSERVREG= 24 THEN REG24 =1;
ELSE IF XSERVREG= 25 THEN REG25 =1;
ELSE IF XSERVREG= 26 THEN REG26 =1;
ELSE IF XSERVREG= 27 THEN REG27 =1;
ELSE IF XSERVREG= 28 THEN REG28 =1;
ELSE IF XSERVREG= 29 THEN REG29 =1;
ELSE IF XSERVREG= 30 THEN REG30 =1;

```

```

    ARRAY SRVDUMS (5) SRV01 SRV02 SRV03 SRV04 SRV05; /*MER 11/11/2012 Changed from
4 to 5*/

```

```

DO I = 1 TO 5; /*Needed for consumer watch ONLY */
    SRVDUMS(I)=0;

```

```

END;

```

```

IF XSERVAFF = 1 THEN SRV01 = 1;
ELSE IF XSERVAFF = 2 THEN SRV02 = 1;
ELSE IF XSERVAFF = 3 THEN SRV03 = 1;
ELSE IF XSERVAFF = 4 THEN SRV04 = 1;
ELSE IF XSERVAFF = 5 THEN SRV05 = 1;

```

```

END;
*-----;
* Create catchment dummies;
*-----;
%INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./CDUMFILE.INC"; * this is array
statement;
CATINDX = INPUT(PUT(CACSMPL, CACLOOK.), 3.);
DO I = 1 TO DIM(CATDUMS);
    CATDUMS(I) = 0;
END;
CATDUMS(CATINDX)=1;

```

RUN;

```

*****
* Recode item responses to proportional values using CONVERT.SAS.
*****;
%INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./CONVERT.SAS";

```

```

%CONT2(DSN=ENTIRE, NUM=4, Y=R&FY.018 R&FY.048 R&FY.027 R&FY.031);
%CONT3(DSN=ENTIRE, NUM=12, Y=R&FY.007 R&FY.010 R&FY.029 R&FY.033
                                R&FY.021 R&FY.022 R&FY.023 R&FY.024
                                R&FY.041 R&FY.042 R&FY.046 R&FY.047);

```

```

*****
* Sort the main file to reorder it by MPRID.
*****;
PROC SORT DATA=ENTIRE; BY MPRID; RUN;

```

```

*****
* Print the contents of ENTIRE dataset.
*****;
PROC CONTENTS DATA=ENTIRE;
    TITLE2 'Contents of ENTIRE';
RUN;

```

```

*****
* Print some of the recoded records.
*****;
PROC PRINT DATA=ENTIRE(OBS=60);
    TITLE2 'Print of AGE and SEX dummies';
    VAR MPRID

```

```

        FIELDAGE /*MJS 01/26/04*/
        XTNEXREG
        XSERVAFF
        XSERVREG
        USA
        ENBGSMP
        XSEXA
        STRATUM /*KRR 04/03/2006 Changed from ADJ_CELL*/
        XINS_COV
        NXNS_COV /*JSO 04/26/2007, added for reservists logic*/
        DBENCAT /*JSO 04/26/2007, added for reservists logic*/
        XENR_PCM
        &WGT.
;

```

RUN;

* Print some of the recoded records.
*****;

```
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of AGE and SEX dummies';
  VAR FIELDAGE /*MJS 01/26/04*/
    AGE1824
    AGE2534
    AGE3544
    AGE4554
    AGE5564
    AGE6574
    AGE75UP

    XSEXA
    FEMALE

    ENBGSMPL
    XINS_COV
    NXNS_COV
    XENR_PCM
    XBNFGRP
    GROUP1
    GROUP2
    GROUP3
    GROUP4
    GROUP5
    GROUP6
    GROUP7
  ;
```

RUN;

```
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded question variables';
  VAR H&FY.007 R&FY.007
    H&FY.010 R&FY.010
    H&FY.021 R&FY.021
    H&FY.022 R&FY.022
    H&FY.023 R&FY.023
    H&FY.024 R&FY.024
    H&FY.029 R&FY.029
    H&FY.033 R&FY.033
    H&FY.041 R&FY.041
    H&FY.042 R&FY.042
    H&FY.046 R&FY.046
    H&FY.047 R&FY.047
    H&FY.018 R&FY.018
    H&FY.027 R&FY.027
    H&FY.031 R&FY.031
    H&FY.048 R&FY.048
    H&FY.065 R&FY.065
  ;
```

RUN;

/*JSO 08/24/2006, Changed 16 to 24*/


```

/*MER 11/11/2012, Changed 24 to 30*/
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded REGION variables';
  VAR XSERVREG
    REG01
    REG02
    REG03
    REG04
    REG05
    REG06
    REG07
    REG08
    REG09
    REG10
    REG11
    REG12
    REG13
    REG14
    REG15
    REG16
    REG17
    REG18
    REG19
    REG20
    REG21
    REG22
    REG23
    REG24
    REG25
    REG26
    REG27
    REG28
    REG29
    REG30;
RUN;

/*MER 11/03/2012 Changed 4 to 5*/
PROC PRINT DATA=ENTIRE(OBS=60);
  TITLE2 'Print of recoded service affiliation variables';
  VAR XSERVREG
    XSERVAFF
    XOCONUS /*JSO 08/24/2006, Changed Overseas Regions*/
    SRV01
    SRV02
    SRV03
    SRV04
    SRV05
  ;
RUN;
proc freq data=entire;
table xservreg*cacsmpl/noprint out=temp;
proc sort; by cacsmpl count;
data out.xservind(keep=cacsmpl xservind);
set temp; by cacsmpl;
if last.cacsmpl;
if xservreg in (16,17,18,19,20) then xservreg=16;
else if xservreg in (21,22,23,24,25) then xservreg=17;
else if xservreg in (26,27,28,29,30) then xservreg=18;

```

```

rename xservreg=xservind;
proc sort data=entire;
by cacsmpl;
data entire;
merge entire out.xservind; by cacsmpl;

*****
* Create the 7 subgroups for processing by STEP2.SAS.
*****;
DATA OUT.GROUP1
  OUT.GROUP2
  OUT.GROUP3
  OUT.GROUP4
  OUT.GROUP5
  OUT.GROUP6
  OUT.GROUP7
  OUT.GROUP8;

  SET ENTIRE;

  DROP
    H&FY.007
    H&FY.010
    H&FY.021
    H&FY.022
    H&FY.023
    H&FY.024
    H&FY.029
    H&FY.033
    H&FY.041
    H&FY.042
    H&FY.046
    H&FY.047
    H&FY.018
    H&FY.027
    H&FY.031
    H&FY.048
    H&FY.065
    ;
  IF GROUP1 = 1 THEN OUTPUT OUT.GROUP1;
  IF GROUP2 = 1 THEN OUTPUT OUT.GROUP2;
  IF GROUP3 = 1 THEN OUTPUT OUT.GROUP3;
  IF GROUP4 = 1 THEN OUTPUT OUT.GROUP4;
  IF GROUP5 = 1 THEN OUTPUT OUT.GROUP5;
  IF GROUP6 = 1 THEN OUTPUT OUT.GROUP6;
  IF GROUP7 = 1 THEN OUTPUT OUT.GROUP7;
  OUTPUT OUT.GROUP8;

RUN;

```

G.8.B - ReportCards\CAHPS_Adult2017\Convert.SAS - Convert Item Responses To Proportional Values.

```
*****
*
* PROGRAM:   CONVERT.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (8687-330)
* PURPOSE:  CONVERT ITEM RESPONSES TO PROPORTIONAL VALUES FOR CONSISTENCY
*           WITH THE TOPS SURVEY.
* WRITTEN:  October 2000 BY ERIC SCHONE
*
* MODIFIED: October 2000 BY KEITH RATHBUN, Added PROLOG.  Also, added DSN
*           to argument lists.
*
* INPUTS:   1) User-specified SAS Dataset
*
* OUTPUTS:  1) User-specified SAS Dataset with recoded values
*
* NOTES:
*
* 1) Arguments for the CONT1-CONT3 macros are as follows:
*   a) SAS dataset name (dsn)
*   b) Number of variables to be converted (num)
*   c) List of variables to be converted (y)
* 2) These macros assume that the response items have already been
*   converted/recoded to CAHPS scales.
*
*****
* CONT1 - Convert big problem, small problem, not a problem questions to
*         proportional values.
*****;
%macro cont1(dsn=, num=, y=);
data &dsn(drop=i);
  set &dsn;
  array vars &y;
  do i = 1 to &num;
    if vars(i) ne . and vars(i) ne 3 then vars(i) = 0;
    if vars(i) = 3 then vars(i) = 1;
  end;
run;
%mend cont1;

*****
* CONT2 - Convert rating questions to proportional values.
*****;
%macro cont2(dsn=, num=, y=);
data &dsn(drop=i);
  set &dsn;
  array vars &y;
  do i=1 to &num;
    if vars(i) ne . and vars(i) < 8 then vars(i) = 0;
    if vars(i) in (8,9,10) then vars(i) = 1;
  end;
run;
%mend cont2;

*****
* CONT3 - Convert Never, Sometimes, Usually, Always questions to
*         proportional values.
```

```
*****;  
%macro cont3(dsn=, num=, y=);  
data &dsn(drop=i);  
  set &dsn;  
  array vars &y;  
  do i=1 to &num;  
    if vars(i) ne . and vars(i) >= 2 then vars(i) = 2;  
    vars(i) = vars(i) - 1;  
  end;  
run;  
%mend cont3;
```

G.8.C - ReportCards\CAHPS_Adult2017\STEP2.SAS - Calculate CAHPS Adjusted Scores - Annual.

```

/*****
***
/* Project: DoD - 2004 Adult Report Cards
/* Program: STEP2Q.SAS
/* Purpose: Draft Adult Report Card
/* Requires program STEP1.SAS to have been run
/* Programming specifications for adult report card
/* The adult report card contains a large number of
/* risk-adjusted scores. Some scores are
/* calculated from responses to individual survey questions.
/* Composite scores are calculated by
/* combining scores from individual questions.
/* The scores then are compared with external civilian
/* benchmarks. The programming tasks involved in building
/* the report card are:
/*     1) preparing data for analyses
/*     2) estimating risk adjustment models
/*     3) calculating risk-adjusted values and variances
/*     4) calculating benchmarks
/*     5) comparing risk-adjusted values to benchmarks
/*         and hypothesis testing
/*
/* Modified:13) November 11, 2012 by Mike Rudacille, updated for handling of
/*             Joint Service facilities
/*             14) December 1, 2014 By Matt Turbyfill, revised for the Macro Program.
/*                   Changed R14 to R&FY.
/*                   Inserted ..\..\ReportCards\CAHPS_Adult&FOLDER.&FYYEAR.\
as the filepath for all INC files,
/*                   including REGRSREG, RISKARRY, RISKMEAN, REGARRAY,
RISKVARS, MEANFILE, RISKARRY, RISKMEAN. Also for the three FILE statements./*

/* SUBGROUPS
/*
-----
/* Seven subgroups           Definitions           Reg or Catch
Macro
/*
-----
/* 1. Prime enrollees       XINS_COV IN(1,2,6) AND H08007>=4   Catchment
SCORE1
/* 2. Enrollees w/mil PCM   XENR_PCM IN(1,2,6) AND H08007>=4   Catchment
SCORE1
/* 3. Enrollees w/civ PCM   XENR_PCM = 3           AND H08007>=4   Region
SCORE2
/* 4. Nonenrollees         XINS_COV IN(3)           Region
SCORE2
/* 5. Active duty           XBNFGRP=1               Catchment
SCORE1
/* 6. Active duty dependents XBNFGRP=2               Region
SCORE2
/* 7. Retirees and dependents XBNFGRP IN (3,4)       Region
SCORE2
/*
/* PREV PGM: STEP1.SAS
/* NEXT PGM: COMPOSIT.SAS

```

```

/*****
**/
OPTIONS NOCENTER LS=132 PS=78 SOURCE NOOVP STIMER COMPRESS=YES;
LIBNAME IN1 "Data";
LIBNAME OUT "Data";
LIBNAME OUT2 "Data/AdultHatFiles";

*-----;
*-      set the parameters here      -;
*-----;
* set the number of Dependent variables to process;
* One does not need to start at 1, but the max must be >= min;
%LET MIN_VAR = 1;
%LET MAX_VAR = 16;

* set the number of subgroups to process;
%LET MIN_GRP = 1;
%LET MAX_GRP = 8;

*****
* These are expected to remain the same for a particular dependent
* variable run.
*****;
%LET WGT          = CFWT;
%LET IND_VAR1    = R&FY.065;
%LET IND_VAR2    = ; * FEMALE;
%LET IND_VAR3    = ; * SREDHIGH;
%LET DEBUGFLG   = 0; * Set to 1 if you want extra printout;

%LET TITL1 = Prime Enrollees;
%LET TITL2 = Enrollees w/military PCM;
%LET TITL3 = Enrollees w/civilian PCM;
%LET TITL4 = Nonenrollees;
%LET TITL5 = Active Duty;
%LET TITL6 = Active Duty Dependents;
%LET TITL7 = Retirees and Dependents;
%LET TITL8 = All Beneficiaries;

*****
* GETTING NEEDED CARE.
*****;
/*10/6/09 ERE not using 2008 version of question 11 and 29 anymore*/
%LET DEPVAR1 = R&FY.029;
%LET DEPVAR2 = R&FY.033;

*****
* GETTING NEEDED CARE QUICKLY.
*****;
/*10/6/09 ERE not using 2008 version of question 17 and 30 anymore*/
%LET DEPVAR3 = R&FY.010;
%LET DEPVAR4 = R&FY.007;

*****
* HOW WELL DOCTORS COMMUNICATE.
*****;
%LET DEPVAR5 = R&FY.021;

```

```

%LET DEPVAR6= R&FY.022;
%LET DEPVAR7= R&FY.023;
%LET DEPVAR8= R&FY.024;

*****
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****;
/*10/6/09 ERE this section is not in the 2009 v4 questionnaire*/

*****
* CUSTOMER SERVICE.
*****;
%LET DEPVAR9 = R&FY.041;
%LET DEPVAR10 = R&FY.042;

*****
* CLAIMS PROCESSING.
*****;
%LET DEPVAR11 = R&FY.046;
%LET DEPVAR12 = R&FY.047;

*****
* RATING ALL HEALTH CARE: 0 - 10.
*****;
%LET DEPVAR13 = R&FY.018;

*****
* RATING OF HEALTH PLAN: 0 - 10.
*****;
%LET DEPVAR14 = R&FY.048;

*****
* RATING OF PERSONAL DR: 0 - 10.
*****;
%LET DEPVAR15 = R&FY.027;

*****
* SPECIALITY CARE: 0 - 10.
*****;
%LET DEPVAR16 = R&FY.031;

proc freq data=in1.group8; /*MJS 01/23/04 Changed data set*/
  tables cacsmpl /missing list out=skelcat(keep=cacsmpl);
run;
data skelcat;
  set skelcat;
  if cacsmpl = " " then delete;
run;

/*RSG 02/2005 - put in hard code for skelreg vs. doing freq on data
  since xservreg is not in data and must be coded*/

/* MER 11/11/2012, Changed from 24 to 30 Regions */
DATA SKELREG;
  INPUT XSERVREG;
  DATALINES;
  1

```

```

2
3
4
5
6
7
8
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;
RUN;

```

```

%MACRO SCORE1;
*****;
*   use this macro for groups 1, 2 & 5   *;
*   catchment variables are to be used   *;
*****;
%PUT *****;
%PUT STARTING MACRO SCORE1;
%PUT "GROUP      = " GROUP&IGRP;
%PUT "TITLE      = " &&DEPVAR&IVAR  &&TITL&IGRP;
%PUT "DEP_VAR    = " &&DEPVAR&IVAR;
%PUT "IND_VAR1   = " &IND_VAR1;
%PUT "IND_VAR2   = " &IND_VAR2;
%PUT "IND_VAR3   = " &IND_VAR3;
%PUT "WGT        = " &WGT;
%PUT *****;

```

```

*-----;
* If the current group is 1 use the skeleton files;
* else used the previous groups output file;
* The mrgfile is added to by each subgroup;
*-----;
%LET CMRGFILE = OUT.C_&&DEPVAR&IVAR;
%IF "&IGRP" = "1" %THEN %LET CMRGFILE = SKELCAT;

```



```

* run regression using the catchment level variables;
* output a BETA file (1 record) and the subgroup;
* file with residuals attached (many records);
PROC REG DATA = GROUP&IGRP OUTEST=BETAS;
    TITLE2 "Regression Model on catchment areas";
    TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
    WEIGHT &WGT;
    %INCLUDE ".../ReportCards/CAHPS_Adult&fyyear./REGRSCAT.INC";
    OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
        PRED&IGRP RESID&IGRP CACSMPL XSERVREG &&DEPVAR&IVAR)
        P = PRED&IGRP
        R = RESID&IGRP;
RUN;

* print of HCSDB file with the residuals and predicted values;
%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=OUT2.H&IGRP&&DEPVAR&IVAR (OBS=70);
        TITLE2 "OUT2.H&IGRP&&DEPVAR&IVAR: file with PRED&IGRP and RESID&IGRP";
        TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
        VAR MPRID XSERVREG CACSMPL &&DEPVAR&IVAR RESID&IGRP PRED&IGRP;
    RUN;

    PROC PRINT DATA=BETAS;
        TITLE2 "BETAS: file with coefficients";
        TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
    RUN;
%END;

*-----;
*-- get the standard err/variance;
*-----;
%LET DEP = &&DEPVAR&IVAR;
%C_SUDAAN(OUT2.H&IGRP&&DEPVAR&IVAR);

* calculate prelim adjusted scores for the risk-adjusters;
* merge adjuster means with the adjuster coefficients;
* then sum their products. Finally add in the intercept;
DATA ADJUST;
    SET MEANFILE;      * CREATED IN THE MACRO MAKE_DAT;
    IF _N_ = 1 THEN SET BETAS(DROP = _TYPE_);
    %INCLUDE ".../ReportCards/CAHPS_Adult&fyyear./RISKARRY.INC";
    %INCLUDE ".../ReportCards/CAHPS_Adult&fyyear./RISKMEAN.INC";
    DO I = 1 TO DIM(COEFFS);
        IF COEFFS(I) = . THEN COEFFS(I) = 0;
        IF MEANS(I) = . THEN MEANS(I) = 0;
        ADJUST + ( COEFFS(I) * MEANS(I) );
    END;
    ADJUST = ADJUST + INTERCEPT;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=ADJUST;
        TITLE2 'Print of ADJUST';
        TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";

```

```

RUN;
%END;

* add the catchment coefficients to the adjusted value from above;
* output one record per catchment area with the catchment;
* level adjusted scores;
DATA COEFFCAC(KEEP=CATAREA NEWADJST);
  SET ADJUST;
  %INCLUDE "../ReportCards/CAHPS_Adult&fyyear./CATARRAY.INC";
  LENGTH NAME $8;
  DO I=1 TO DIM(CATRHS);
    CALL VNAME(CATRHS(I),NAME);
    CATAREA=INPUT(SUBSTR(NAME,4,4),4.);
    IF CATRHS(I) = . THEN CATRHS(I) = 0;
    NEWADJST=ADJUST + CATRHS(I);
    OUTPUT;
  END;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
  PROC PRINT DATA=COEFFCAC;
    TITLE2 'COEFFCAC: Catchment Area Adjusted Scores';
    TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
  RUN;
%END;

* sum of wgts per catchment areas;
* attach the region id to the output file so;
* so we can create wgts for each region later;
PROC MEANS DATA=GROUP&IGRP NWAY NOPRINT ;
  ID XSERVind ; * important ;
  CLASS CACSMPL ;
  VAR &WGT;
  OUTPUT OUT=CAT_WGTS(RENAME=(CACSMPL=CATAREA)) N=CATCNT SUM=CATWGT;
RUN;

* merge the Coeffcac file with the catchment;
* adjusted scores to the catchment level weight;
* merge by the catchment area. creates a;
* catchment level file with catchment weights;
DATA COEFFCAC;
  MERGE COEFFCAC(IN=IN1)
        CAT_WGTS(IN=IN2 KEEP=CATAREA XSERVind CATWGT CATCNT);
  BY CATAREA;
  IF IN1;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
  PROC PRINT DATA=CAT_WGTS(OBS=70);
    TITLE2 'CAT_WGTS: Catchment Area Sum of WGTS';
    TITLE3 "Beneficiary group&igrp: &&TITL&IGRP";
  RUN;

```

```

PROC PRINT DATA=COEFFCAC(OBS=70);
    TITLE2 'Catchment Area Adjusted Scores - with sum of wgts and region';
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%END;

* merge the previous groups catchment results (if any);
* with the catchment level std err and the catchment;
* level results from the current groups and dependent var;
%PUT "&CMRGFILE: " &CMRGFILE;
DATA OUT.C_&&DEPVAR&IVAR(RENAME=(NEWADJST=ADJ&IGRP));
    MERGE &CMRGFILE(IN=INS)
          C&IGRP&&DEPVAR&IVAR
          COEFFCAC(RENAME=(CATAREA=CACSMPL CATWGT=CATWGT&IGRP CATCNT=CATCNT&IGRP));
    BY CACSMPL;
    DEPENDNT = "&&DEPVAR&IVAR";
    IF INS;
RUN;

PROC PRINT DATA=OUT.C_&&DEPVAR&IVAR;
    TITLE2 "Print of Catchment variables in C_&&DEPVAR&IVAR";
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%MEND SCORE1;

%MACRO SCORE2;
*****;
* use this macro for groups 3, 4, 6, 7;
* region variables are to be used      ;
*****;
%PUT *****;
%PUT STARTING MACRO SCORE2;
%PUT "GROUP      = " GROUP&IGRP;
%PUT "TITLE      = " &&DEPVAR&IVAR  &&TITL&IGRP;
%PUT "DEP_VAR    = " &&DEPVAR&IVAR;
%PUT "IND_VAR1   = " &IND_VAR1;
%PUT "IND_VAR2   = " &IND_VAR2;
%PUT "IND_VAR3   = " &IND_VAR3;
%PUT "WGT        = " &WGT;
%PUT *****;

%LET RMRGFILE = OUT.R_&&DEPVAR&IVAR;
%IF "&IGRP" = "1" %THEN %LET RMRGFILE = SKELREG;

* run regression using the region level variables;
* output a BETA file (1 record) and the subgroup;
* file with residuals attached (many records);
PROC REG DATA = GROUP&IGRP OUTEST=BETAS;
    TITLE2 "Regression Model for GROUP&igrp for regions";

```

```

TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
WEIGHT &WGT;
%INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./REGRSREG.INC";
OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
      PRED&IGRP RESID&IGRP CACSMPL XSERVREG &&DEPVAR&IVAR)
      P = PRED&IGRP
      R = RESID&IGRP;

RUN;

* print of HCSDB file with the residuals and predicted values;
%IF &DEBUGFLG > 0 %THEN %DO;
  PROC PRINT DATA=OUT2.H&IGRP&&DEPVAR&IVAR (OBS=70);
    TITLE2 "OUT2.H&IGRP&&DEPVAR&IVAR:  file with predicted values and the
RESID&IGRP";
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    VAR MPRID XSERVREG CACSMPL &&DEPVAR&IVAR RESID&IGRP PRED&IGRP;
  RUN;

  PROC PRINT DATA=BETAS;
    TITLE2 "BETAS:  file with coefficients";
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
  RUN;
%END;

*-----;
*----- get the standard err/variance -----;
*-----;
%LET DEP = &&DEPVAR&IVAR;
%R_SUDAAN(OUT2.H&IGRP&&DEPVAR&IVAR);

* calculate prelim adjusted scores for the risk-adjusters;
* merge adjuster means with the adjuster coefficients;
* then sum their products. Finally add in the intercept;
DATA ADJUST;
  SET MEANFILE;
  IF _N_ = 1 THEN SET BETAS(DROP = _TYPE_);
  %INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./RISKARRY.INC";
  %INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./RISKMEAN.INC";
  DO I = 1 TO DIM(COEFFS);
    IF COEFFS(I) = . THEN COEFFS(I) = 0;
    IF MEANS(I) = . THEN MEANS(I) = 0;
    ADJUST + ( COEFFS(I) * MEANS(I) );
  END;
  ADJUST = ADJUST + INTERCEPT;
RUN;

* add the region coefficients to the adjusted value from above;
* output one record per region with the region;
* level adjusted scores;
DATA COEFFREG(KEEP=XSERVREG NEWADJUST);
  SET ADJUST;
  %INCLUDE "../..//ReportCards/CAHPS_Adult&fyyear./REGARRAY.INC";
  LENGTH NAME $8;
  DO I=1 TO DIM(REGRHS);

```

```

        CALL VNAME( REGRHS(I),NAME );
        XSERVREG=INPUT(SUBSTR(NAME,4,2),2.);
        IF REGRHS(I) = . THEN REGRHS(I) = 0;
        NEWADJUST=ADJUST + REGRHS(I);
        OUTPUT;
    END;
RUN;

* sum of wgts for each region;
PROC MEANS DATA=GROUP&IGRP NWAY NOPRINT ;
    CLASS XSERVREG;
    VAR    &WGT;
    OUTPUT OUT=REG_WGTS (DROP = _TYPE_ _FREQ_) N=REGCNT SUM=REGWGT;
RUN;

* merge the COEFFREG file with the region;
* adjusted scores to the region level total weight;
* merge by the region.  Creates a region level;
* file with the total sample weight of the region;
DATA COEFFREG;
    MERGE COEFFREG(IN=IN1)
          REG_WGTS(IN=IN2   KEEP=XSERVREG REGCNT REGWGT);
    BY XSERVREG;
    IF IN1;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
    PROC PRINT DATA=MEANFILE;
        TITLE2 'Print of MEANFILE';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=ADJUST;
        TITLE2 'Print of ADJUST';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=COEFFREG;
        TITLE2 'Print of COEFFREG: Region Adjusted Scores';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=REG_WGTS;
        TITLE2 'Print of REG_WGTS: Region Area Sum of WGTS';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=COEFFREG;
        TITLE2 'Print of COEFFREG: Regions Adjusted Scores - with sum of wgts and
region';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;
%END;

```

```

* Calculate region level adjusted scores from the;
* region level adjusted scores in COEFFREG;
/*PROC MEANS DATA=COEFFREG NWAY NOPRINT;
  WEIGHT REGWGT;
  CLASS  XSERVREG;
  VAR    NEWADJST;
  OUTPUT OUT=REGFILE1 (DROP = _TYPE_ _FREQ_) MEAN=ADJ&IGRP;
RUN;
*/

%IF &DEBUGFLG > 0 %THEN %DO;
  PROC PRINT DATA=REGFILE1;
    TITLE2 'Print of REGFILE1: Region Scores';
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
  RUN;
%END;

* merge the previous groups regional results (if any);
* with the region level std err and the region;
* level results from the current group/dependent var;
%PUT "&RMRGFILE: " &RMRGFILE;
DATA OUT.R_&&DEPVAR&IVAR;
  MERGE &RMRGFILE(IN=INS)
        R&IGRP&&DEPVAR&IVAR /*KRR - removed perm dataset ref to OUT2 */
        coeffreg(rename=(newadjst=adj&igrp));
  BY XSERVREG;
  RENAME REGCNT = REGCNT&IGRP;
  RENAME REGWGT = REGWGT&IGRP;
  DEPENDNT = "&&DEPVAR&IVAR";
  IF INS;
RUN;

PROC PRINT DATA=OUT.R_&&DEPVAR&IVAR;
  TITLE2 "Print of REGION variables in &&DEPVAR&IVAR";
  TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%MEND SCORE2;

*
;
%MACRO MAKE_INC;
*****;
* creates include files for later Procs;
* Needs to be run each time. Called ;
* in the outer (beneficiary loop). ;
* I chose this method because it was ;
* clearer(to me at least). ;
* This macro needs to be run once per ;
* Dep var per subgroup. ;
*****;

* Drop records where the dependent var is missing;
* Drop records with missing catchment or region values;

```

```

DATA GROUP&IGRP;
  SET IN1.GROUP&IGRP;
  IF &&DEPVAR&IVAR NOT = .;

RUN;

DATA _NULL_;
  SET GROUP&IGRP END = EOF;
  IF &&DEPVAR&IVAR NOT = .;

  ARRAY AGEcnt(7) 8 aCNT1 - aCNT7;
  RETAIN AGEcnt 0;
  RETAIN CNT 0;
  ARRAY AGENAM(7) $8 AGENAM1 - AGENAM7;
  ARRAY AGENAMX(7) $8 AGENAMX1 - AGENAMX7;
  RETAIN AGENAM;
  RETAIN AGENAMX;
  ARRAY CATCNT(9998) 8 CCNT0001 - CCNT9998;
  ARRAY REGCNT(30) 8 REGCNT01 - REGCNT30; *KRR 10/24/2006 - Changed from 16 to
24; *MER 11/11/2012, Changed from 24 to 30;
  RETAIN CATCNT 0;
  RETAIN REGCNT 0;

  * create a name array for the age dummies;
  IF _N_ = 1 THEN DO;
    AGENAM(1) = "AGE1824";
    AGENAM(2) = "AGE2534";
    AGENAM(3) = "AGE3544";
    AGENAM(4) = "AGE4554";
    AGENAM(5) = "AGE5564";
    AGENAM(6) = "AGE6574";
    AGENAM(7) = "AGE75UP";
  END;

  * total record count;
  CNT + 1;

  * count records in each age group;
  * we will use only age groups with more;
  * than 2 obs;
  IF AGE1824 = 1 THEN AGEcnt(1) + 1;
  IF AGE2534 = 1 THEN AGEcnt(2) + 1;
  IF AGE3544 = 1 THEN AGEcnt(3) + 1;
  IF AGE4554 = 1 THEN AGEcnt(4) + 1;
  IF AGE5564 = 1 THEN AGEcnt(5) + 1;
  IF AGE6574 = 1 THEN AGEcnt(6) + 1;
  IF AGE75UP = 1 THEN AGEcnt(7) + 1;

  * count records in each catchment group;
  * we will only use catchment areas ;
  * with more than than 2 obs;
  * I am using the catchment area as the subscript;
  * to make the code simpler and more readable;
  IF CACSMPL >= 1 AND CACSMPL <= 9998 THEN DO;
    CATCNT(CACSMPL) = CATCNT(CACSMPL) + 1;
  END;

```

```

END;

* count records in each REGION group;
* we will only use REGIONS ;
* with more than than 2 obs;
* I am using the region value as the subscript;
* to make the code simpler and more readable;
IF XSERVREG >= 1 AND XSERVREG <=30 THEN DO; *KRR 10/24/2006 - Changed from 16
to 24; *MER 11/11/12 24 to 30;
    REGCNT(XSERVREG) = REGCNT(XSERVREG) + 1;
END;

IF EOF THEN GOTO ENDFILE;
RETURN;

ENDFILE:
* create a title common to all procs in the current group;
TITLE " &&DEPVAR&IVAR &&TITL&IGRP";

* display counts in the log;
%IF &DEBUGFLG > 0 %THEN %DO;
    PUT ' ';
    PUT 'AT EOF: ';
    PUT "TOTAL CNT = " CNT;
    PUT AGENAM(1) " " AGECNT(1)=;
    PUT AGENAM(2) " " AGECNT(2)=;
    PUT AGENAM(3) " " AGECNT(3)=;
    PUT AGENAM(4) " " AGECNT(4)=;
    PUT AGENAM(5) " " AGECNT(5)=;
    PUT AGENAM(6) " " AGECNT(6)=;
    PUT AGENAM(7) " " AGECNT(7)=;
    PUT " ";

DO I = 1 TO 30; *KRR 10/24/2006 - Changed from 16 to 24; *MER 11/11/12 24 to
30;
    IF(REGCNT(I) > 0) THEN DO;
        PUT 'REG' I Z2. REGCNT(I) 6.;
    END;
END;
PUT ' ';

DO I = 1 TO 9998;
    IF(CATCNT(I) > 0) THEN DO;
        PUT 'CAT' I Z4. CATCNT(I) 6.;
    END;
END;
PUT ' ';
%END; *** of debug test;

*-----;
* create an include file for the regression model;
* it is inconvenient, but SAS requires that the;
* include file start after a complete statement;
* i.e. after a semicolon;
* This include is for the regression using catchment areas;
FILE "../ReportCards/CAHPS_Adult&fyyear./REGRSCAT.INC";

```



```

PUT @6  "MODEL  &&DEPVAR&IVAR = ";
IF "&IND_VAR1" NE "" THEN PUT @12 "&IND_VAR1"; /* KRR - only output when present
*/
IF "&IND_VAR2" NE "" THEN PUT @12 "&IND_VAR2"; /* KRR - only output when present
*/
IF "&IND_VAR3" NE "" THEN PUT @12 "&IND_VAR3"; /* KRR - only output when present
*/

CNT2 = 0;
* setup an array of those age groups that have > 1 obs;
DO I = 1 TO 7;
  IF AGECNT(I) > 1 THEN DO;
    CNT2 +1;
    AGENAMX(CNT2) = AGENAM(I);
  END;
END;
* drop the last category to create;
* an omitted category which is required;
* to solve the regression properly;
DO I = 1 TO CNT2-1;
  PUT @12 AGENAMX(I);
END;

* ditto for the catchment areas with > 0 obs;
* in this case we drop the last non-zero cnt;
* this is not consistent with Portias code which;
* unintentionally omitted several catchment area codes;
LAST_REC = 0;
DO I = 1 TO 9998;
  IF CATCNT(I) > 0 THEN LAST_REC = I;
END;

* skip the last cacsmp1 with > 1 obs;
DO I = 1 TO LAST_REC-1;
  IF CATCNT(I) > 0 THEN DO;
    PUT @12 'CAT' I Z4.;
  END;
END;
PUT @11 ' ';

*-----;
* This include is for the regression using regions;
* in this case we drop the last REGION;
FILE ".../ReportCards/CAHPS_Adult&fyyear./REGRSREG.INC";
PUT @6  "MODEL  &&DEPVAR&IVAR = ";
IF "&IND_VAR1" NE "" THEN PUT @12 "&IND_VAR1"; /* KRR - only output when present
*/
IF "&IND_VAR2" NE "" THEN PUT @12 "&IND_VAR2"; /* KRR - only output when present
*/
IF "&IND_VAR3" NE "" THEN PUT @12 "&IND_VAR3"; /* KRR - only output when present
*/

CNT2 = 0;
* setup an array of those age groups that have > 1 obs;
DO I = 1 TO 7;
  IF AGECNT(I) > 1 THEN DO;

```

```

        CNT2 +1;
        AGENAMX(CNT2) = AGENAM(I);
    END;
END;

* now drop the last category to create;
* an omitted category which is required;
* to solve the regression properly;
DO I = 1 TO CNT2-1;
    PUT @12 AGENAMX(I);
END;

* ditto for the catchment areas with > 0 obs;
* in this case we drop the the first USABLE category;
* this is not consistent with the catchment area code;
* but this is the method that Portia used;
FIRST = 0;          *KRR 10/24/2006 - Changed from 16 to 24; *MER 11/11/12 - 24 to
30;
DO I = 1 TO 30;    * skip the 1st region with 1+ obs;
    IF REGCNT(I) > 0 THEN DO;
        IF FIRST = 1 THEN PUT @12 'REG' I Z2.;
        FIRST = 1;
    END;
END;
PUT @11 ' ';

*-----;
* now create the complete var statement;
* for the Proc MEANS used to replace the;
* independent variables missing values;
* we assume the age groups will always be used;
* These are also called the RISK FACTORS;
FILE ".../ReportCards/CAHPS_Adult&fyyear./RISKVARS.INC";
PUT @10 "VAR";
DO I = 1 TO CNT2;
    PUT @12 AGENAMX(I);
END;

* not all the other dependent variables will be used;
* only write them out if they are not null;
CNT3 = 0;
IF "&IND_VAR1" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR1";
END;

IF "&IND_VAR2" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR2";
END;

IF "&IND_VAR3" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR3";
END;
PUT @11 ' ';

```

```

*-----;
* create an ARRAY statement of the desired risk factors;
* called adjusters in the specs and in the code;
FILE ".../ReportCards/CAHPS_Adult&fyyear./RISKARRY.INC";
PUT @10 "ARRAY COEFFS(*) $8";
DO I = 1 TO CNT2;
    PUT @12 AGENAMX(I);
END;

```

```

CNT3 = 0;
IF "&IND_VAR1" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR1";
END;

```

```

IF "&IND_VAR2" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR2";
END;

```

```

IF "&IND_VAR3" NE "" THEN DO;
    CNT3 + 1;
    PUT @12 "&IND_VAR3";
END;
PUT @11 ' ';

```

```

*-----;
* create an ARRAY of mean names for the output;
* from a proc MEANS of the Risk Factors in RISKARRY;
FILE ".../ReportCards/CAHPS_Adult&fyyear./RISKMEAN.INC";
IND_CNT = CNT2 + CNT3;
PUT @6 "ARRAY MEANS(*) $8";
DO I = 1 TO IND_CNT;
    PUT @12 "MEAN" I Z2.;
END;
PUT @11 ' ';

```

```

*-----;
* create the equivalent of the following statement;
* OUTPUT OUT=MEANFILE(DROP = _TYPE_) MEAN=MEAN1-MEAN&MEAN_CNT;
FILE ".../ReportCards/CAHPS_Adult&fyyear./MEANFILE.INC";
PUT @6 "OUTPUT OUT=MEANFILE(DROP = _TYPE_) MEAN = ";
DO I = 1 TO IND_CNT;
    PUT @12 "MEAN" I Z2.;
END;
PUT @11 ' ';

```

```

*-----;
* create a catchment area array for all catchment areas;
* with 1+ obs.
* the missing value = 9999 was dropped in STEP1; ** rlc 4/29/00;
FILE ".../ReportCards/CAHPS_Adult&fyyear./CATARRAY.INC";
PUT @10 "ARRAY CATRHS(*) $8";
DO I = 1 TO 9998;
    IF CATCNT(I) > 0 THEN DO; *** rlc 4/29/00 changed "9999" to "9998";
        PUT @16 'CAT' I Z4.; *** ems 7/12/00 changed "> 1" to "> 0";
    END;
END;

```

```

        END;
    END;
    PUT @11 ' ';

*-----;
* create a region area array;
* with at least ONE obs;
FILE ".../ReportCards/CAHPS_Adult&fyear./REGARRAY.INC";
PUT @10 "ARRAY REGRHS(*) $8";
DO I = 1 TO 30; *KRR 10/24/2006 - Changed from 16 to 24; *MER 11/11/12 24 to 30;
    IF REGCNT(I) > 0 THEN DO; *** ems 7/12/00 changed "> 1" to "> 0";
        PUT @16 'REG' I Z2.;
    END;
END;
PUT @11 ' ';
file print;
RUN;

* Create the means of the adjuster variables;
* They will be used to replace missing adjuster variables;
* calculate weighted means;
PROC MEANS DATA=group&igrp;

WEIGHT &WGT;
%INCLUDE ".../ReportCards/CAHPS_Adult&fyear./RISKVARS.INC";
%INCLUDE ".../ReportCards/CAHPS_Adult&fyear./MEANFILE.INC";
RUN;

DATA GROUP&IGRP;
SET GROUP&IGRP;
IF _N_ = 1 THEN SET MEANFILE;
%INCLUDE ".../ReportCards/CAHPS_Adult&fyear./RISKARRY.INC";
%INCLUDE ".../ReportCards/CAHPS_Adult&fyear./RISKMEAN.INC";
DO I = 1 TO DIM(COEFFS);
    IF COEFFS(I) = . THEN DO;
        COEFFS(I) = MEANS(I);
    END;
END;
RUN;

%IF &DEBUGFLG > 0 %THEN %DO;
PROC PRINT DATA=MEANFILE;
    TITLE2 "Print of MEANFILE for Risk Adjuster variables";
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;
%END;

%MEND MAKE_INC;

*
;
%MACRO R_SUDAAN(INFILE);
*****;

```

```

* use this macro to create standard err (variances);
* FOR: REGIONS ;
*****;
%PUT *****;
%PUT STARTING MACRO R_SUDAAN (REGIONS);
%PUT *****;

DATA &INFILE;
  SET &INFILE;
  IF XSERVREG > 0;
RUN;

* Sort data by TMP_CELL;
PROC SORT DATA=&INFILE;
  BY TMP_CELL;
RUN;

%IF &DEBUGFLG > 5 %THEN %DO;
  PROC PRINT DATA=&INFILE(OBS=5);
    TITLE2 'Print of the input file to SUDAAN (REGION)';
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
  RUN;
%END;

* Calculate values for regions;
PROC DESCRIPT DATA=&INFILE DESIGN=STRWR NOPRINT;
  WEIGHT &WGT;
  SETENV DECWIDTH=4;
  NEST TMP_CELL / missunit;
  VAR RESID&IGRP;
  TABLES XSERVREG;
  SUBGROUP XSERVREG;
  LEVELS 30; *KRR 10/24/2006 - Changed from 16 to 24; *MER 11/11/12 24 to 30;
  OUTPUT SEMEAN
    / TABLECELL=DEFAULT REPLACE
    FILENAME=RS&DEP;
RUN;

DATA R&IGRP&&DEPVAR&IVAR;
  SET RS&DEP;
  KEEP XSERVREG SEMEAN;
  IF SEMEAN NE .;
  RENAME SEMEAN = SEMEAN&IGRP;
RUN;

PROC PRINT DATA=R&IGRP&&DEPVAR&IVAR;
  TITLE2 "Print REGION DESCRIPT DATA=R&IGRP&&DEPVAR&IVAR";
  TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%MEND R_SUDAAN;

```

```

%MACRO C_SUDAAN(INFILE);
*****;
* use this macro to create standard err (variances);
* FOR: CATCHMENT AREAS ;
*****;
%PUT *****;
%PUT STARTING MACRO C_SUDAAN (CATCHMENT);
%PUT *****;

DATA &INFILE;
  SET &INFILE;
  IF CACSMPL > 0;
RUN;

* Sort data by TMP_CELL;
PROC SORT DATA=&INFILE;
  BY TMP_CELL;
RUN;

%IF &DEBUGFLG > 5 %THEN %DO;
  PROC PRINT DATA=&INFILE(OBS=5);
    TITLE2 'Print of the input file to SUDAAN for CATCHMENT';
    TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
  RUN;
%END;

* Calculate values for regions;
PROC DESCRIPT DATA=&INFILE DESIGN=STRWR NOPRINT;
  WEIGHT &WGT;
  SETENV DECWIDTH=4;
  NEST TMP_CELL / missunit;
  VAR RESID&IGRP;
  TABLES CACSMPL;
  SUBGROUP CACSMPL;
  LEVELS 9998;
  OUTPUT SEMEAN
    / TABLECELL=DEFAULT REPLACE
    FILENAME=CS&DEP;
RUN;

DATA C&IGRP&&DEPVAR&IVAR;
  SET CS&DEP;
  IF SEMEAN NE .;
  KEEP CACSMPL SEMEAN;
  RENAME SEMEAN = SEMEAN&IGRP;
RUN;

PROC PRINT DATA=C&IGRP&&DEPVAR&IVAR;
  TITLE2 "Print CATCHMENT DESCRIPT DATA=C&IGRP&&DEPVAR&IVAR";
  TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
RUN;

%MEND C_SUDAAN;

```

```

*
;
%*****;
%* call the macros;
%*****;

%MACRO MAINLOOP(MIN_VAR,MAX_VAR,MIN_GRP,MAX_GRP);
  %* loop over the set of dependent variables;
  %DO IVAR = &MIN_VAR %TO &MAX_VAR;
    %DO IGRP = &MIN_GRP %TO &MAX_GRP;
      %MAKE_INC;
      %IF &IGRP = 1 OR &IGRP = 2 OR &IGRP = 5 or &igrp = 8 %THEN %do;
        %SCORE1;
        %SCORE2; %end;
      %ELSE
        %SCORE2;
      %END;
    %END;
  %END;

%MEND;

%MAINLOOP (&MIN_VAR, &MAX_VAR, &MIN_GRP, &MAX_GRP);

```

G.8.D - ReportCards\CAHPS_Adult2017\COMPOSIT.SAS - Calculate CAHPS Composite Scores - Annual.

```
*****
* Project:   DoD - Quarterly Adult Report Cards
* Program:   COMPOSIT.SAS
* Purpose:   Generate Quarterly Adult Report Card composite scores
* Requires:  Programs STEP1Q.SAS and STEP2Q.SAS must be run prior
*           to this program.
*
* Modified: 12) 08/01/13 by Amanda Kudis, updated for 2013 database.
*           13) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*                   Changed all FILE and INCLUDE filepaths to
*                   ..\..\ReportCards\CAHPS_Adult&FOLDER.&FYYEAR.\FILES.INC
*                   Changed R14 to R&FY.
*                   Added INFILE Data step removing BYVARs with only one
occurrence.
*****;
OPTIONS NOCENTER NOFMterr LS=132 PS=78 SOURCE SOURCE2 NOOVP COMPRESS=YES;
LIBNAME IN "Data";
LIBNAME IN2 "Data/AdultHatFiles";
LIBNAME OUT "Data";

%MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,QCOUNT=);

DATA _NULL_;
  %IF "&TYPE" = "R" %THEN %DO;
    CALL SYMPUT ('BYVAR','XSERVREG');
  %END; %ELSE
  %IF "&TYPE" = "C" %THEN %DO;
    CALL SYMPUT ('BYVAR','CACSMPL');
  %END;

*****;
* Create a Composite Score ;
*****;
DATA _NULL_;
  FILE "..../&PC.ReportCards/CAHPS_Adult&fyyear./FILES.INC";
  PUT @6 'SET';
  IF "&VAR1" NE '' THEN PUT @8 "IN.&TYPE._&VAR1";
  IF "&VAR2" NE '' THEN PUT @8 "IN.&TYPE._&VAR2";
  IF "&VAR3" NE '' THEN PUT @8 "IN.&TYPE._&VAR3";
  IF "&VAR4" NE '' THEN PUT @8 "IN.&TYPE._&VAR4";
  PUT @8 ';;';
RUN;

DATA COMPOS&COMPOS;
  LENGTH DEPENDNT $ 8;
  %INCLUDE "..../&PC.ReportCards/CAHPS_Adult&fyyear./FILES.INC";
  DEPENDNT = "&TYPE.COMPOS&COMPOS";
RUN;

PROC SORT DATA=COMPOS&COMPOS;
  BY &BYVAR;
RUN;

PROC PRINT DATA=COMPOS&COMPOS(OBS=60);
```



```

TITLE "Print of COMPOS&COMPOS after sort";
RUN;

DATA COMPOS&COMPOS;
  SET COMPOS&COMPOS;
  BY &BYVAR;
  %IF "&TYPE" = "R" %THEN %DO;
    ARRAY N(*) REGCNT1 - REGCNT8;
    ARRAY W(*) REGWGT1 - REGWGT8;
    ARRAY TN(*) TOTCNT1 - TOTCNT8;
    ARRAY TW(*) TOTWGT1 - TOTWGT8;
  %END; %ELSE
  %IF "&TYPE" = "C" %THEN %DO;
    ARRAY N(*) CATCNT1 - CATCNT8;
    ARRAY W(*) CATWGT1 - CATWGT8;
    ARRAY TN(*) TOTCNT1 - TOTCNT8;
    ARRAY TW(*) TOTWGT1 - TOTWGT8;
  %END;

  ARRAY ADJ(*) ADJ1 - ADJ8;
  ARRAY TOTADJ(*) TOTADJ1 - TOTADJ8;
  ARRAY AVGADJ(*) AVJADJ1 - AVJADJ8;
  RETAIN TOTADJ TN TW;
  RETAIN AVGADJ;

  IF FIRST.&BYVAR THEN DO;
    DO I = 1 TO DIM(TOTADJ);
      TOTADJ(I) = 0; TN(I)=0; TW(I)=0;
    END;
  END; DROP I;

  PUT ' ';
  PUT ' --- STARTING LOOP1: ' &BYVAR=;
  DO I = 1 TO DIM(TOTADJ);
    PUT I= ADJ(I)=;
    IF ADJ(I) NE . THEN DO;
      TOTADJ(I) = TOTADJ(I) + ADJ(I);
      TN(I)=TN(I)+N(I);
      TW(I)=TW(I)+W(I);
    END;
    PUT I= ADJ(I)= TOTADJ(I)=;
  END;

  PUT ' ';
  PUT ' --- STARTING LOOP2: ' &BYVAR=;
  IF LAST.&BYVAR THEN DO;
    DO I = 1 TO DIM(TOTADJ);
      PUT I= ADJ(I)= TOTADJ(I)= AVGADJ(I)=;
      AVGADJ(I) = TOTADJ(I)/&QCOUNT;
      adj(i)=avgadj(i);
      N(I)=TN(I)/&QCOUNT;
      W(I)=TW(I)/&QCOUNT;
    END;
    OUTPUT;
  END;
END;

RUN;

```

```

%do i=1 %to 8;
/* Collect Standard Errors and residuals from variables in composite */
  %if &type=R|(&i=1|&i=2|&i=5|&i=8) %then %do;
    %if &var1~= %then %do;
      %let n=r_&var1;
      %let m=s_&var1;

      data s_&var1(rename=(semean&i=s_&var1));
      set in.&type._&var1(keep=semean&i &byvar);
      proc sort; by &byvar;
      data r_&var1;

      set in2.h&i.&var1(rename=(resid&i=r_&var1));

      proc sort data=r_&var1; by mprid;
    %end;
    %if &var2~= %then %do;
      %let n=%str(&n r_&var2);
      %let m=%str(&m s_&var2);
      data s_&var2(rename=(semean&i=s_&var2));
      set in.&type._&var2(keep=semean&i &byvar);

      proc sort; by &byvar;

      data r_&var2;
      set in2.h&i.&var2(rename=(resid&i=r_&var2));

      proc sort data=r_&var2; by mprid;
    %end;
    %if &var3~= %then %do;
      %let n=%str(&n r_&var3);

      data s_&var3(rename=(semean&i=s_&var3));
      set in.&type._&var3(keep=semean&i &byvar);

      proc sort; by &byvar;

      data r_&var3;
      set in2.h&i.&var3(rename=(resid&i=r_&var3));

      proc sort data=r_&var3; by mprid;
      %let m=%str(&m s_&var3);
    %end;
    %if &var4~= %then %do;
      %let n=%str(&n r_&var4);
      data s_&var4(rename=(semean&i=s_&var4));
      set in.&type._&var4(keep=semean&i &byvar);

      proc sort; by &byvar;

      data r_&var4;
      set in2.h&i.&var4(rename=(resid&i=r_&var4));

      %let m=%str(&m s_&var4);
      proc sort data=r_&var4; by mprid;
    %end;

```

```

/* Merge residual files and estimate correlations */
data infile;
  merge &n; by mprid;

proc sort; by &byvar;

data infile;
  set infile;
  by &byvar.;
  if first.&byvar ne 1 or last.&byvar ne 1;
run;

proc corr outp=outf noprint;
  by &byvar;
  var &n;
  weight CFWT;

data outf;
  set outf; by &byvar;
  where _type_='CORR';

/* sum standard error of a row variable times correlation times standard
error of each column variable, then sum sums and take square root, divide by number
of variables */
data final;
  merge &m outf; by &byvar;

data final;
  set final; by &byvar;
  array r_val &n;
  array s_val &m;
  sde=0;
  do i=1 to dim(s_val);
    %do j=1 %to &qcount;
      if upcase(_name_)=upcase("R_&var&j") then
        sde=sum(sde,r_val(i)*s_&var&j*s_val(i));
    %end;
  end;
run;

data sefin&compos._&i errd;
  set final; by &byvar;
  if first.&byvar then tv=0;
  tv+sde;
  if last.&byvar then do;
/**RSG 02/2005 Changed to only do exponential if tv value is non-negative
-
  those with negative trend is set aside to print out and determine
whether from
  nonmissing data of 30 or more*/
  if tv >= 0 then sde&i=(tv**.5)/&qcount;
  else if tv <= 0 then do;
  output errd;
  sde&i=.;

```

```

        end;
        output sefin&compos._&i;
    end;
run;
/**RSG 02/2005 Count how many nonmissing values are in the trend dataa
to determine if negative trend is something to be concerned about*/

proc means data=infile noprint;
    by &byvar;
    var &n;
    output out=missing (drop=_type_ _freq_) n=;

data errd2;
    merge errd(in=a drop=&n) missing (in=b);
    by &byvar;
    if a;
run;

proc print data=errd2;
    var &byvar tv &n;
    title "ERROR: NEGATIVE TREND FOR &N IN GROUP=&I. AND COMPOSE=&COMPOS";
run;
title ' '; /*RSG 02/2005 blank out title for next loop*/

%if &i=1 %then %do;
    data sefin&compos;
        set sefin&compos._1(keep=&byvar sde&i); by &byvar;
        rename sde&i=semean&i;
    run;
%end;
%else %do;
    data sefin&compos;
        merge sefin&compos sefin&compos._&i(keep=&byvar sde&i); by
&byvar;
        rename sde&i=semean&i;
    run;
%end;

%end;
%end;

data out.&type.compos&compos;
merge compos&compos sefin&compos; by &byvar;
run;
PROC PRINT DATA=OUT.&TYPE.COMPOS&COMPOS;
    TITLE1 COMPTITL;
RUN;
%MEND COMPOSIT;

*-----;
*-          set the parameters here          -;
*-----;
*****;
* call the macro for each composite;
*****; /*MJS 02/04/04*/
%COMPOSIT (type=R,compos=1,var1=R&FY.029,var2=R&FY.033,qcount=2);
%COMPOSIT (type=R,compos=2,var1=R&FY.007,var2=R&FY.010,qcount=2);

```

```
%COMPOSIT
(type=R,compos=3,var1=R&FY.021,var2=R&FY.022,var3=R&FY.023,var4=R&FY.024,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R&FY.041,var2=R&FY.042,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R&FY.046,var2=R&FY.047,qcount=2);

%COMPOSIT (type=C,compos=1,var1=R&FY.029,var2=R&FY.033,qcount=2);
%COMPOSIT (type=C,compos=2,var1=R&FY.007,var2=R&FY.010,qcount=2);
%COMPOSIT
(type=C,compos=3,var1=R&FY.021,var2=R&FY.022,var3=R&FY.023,var4=R&FY.024,qcount=4);
%COMPOSIT (type=C,compos=4,var1=R&FY.041,var2=R&FY.042,qcount=2);
%COMPOSIT (type=C,compos=5,var1=R&FY.046,var2=R&FY.047,qcount=2);
```

G.9.A - LOADWEB\LOADCAHP.SAS - Convert CAHPS Scores into WEB layout - Annual.

```
*****
*
* PROGRAM:   LOADCAHP.SAS
* TASK:     2007 DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Convert the CAHPS Scores Database into the WEB layout
*
* WRITTEN:  06/01/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
              Changed IN to "..\&PC.REPORTCARDS\CAHPS_ADULT&FYYEAR.\DATA".
              Changed LOADCAHQ to "..\LOADWEB\LOADCAHQ.INC"
              Changed YEAR to &FYYEAR.
              Changed R14 to R&FY.
              Inserted &FYYEAR. into TITLE1
*
* INPUTS:   1) CAHPS Individual and Composite data sets with adjusted scores
*
* OUTPUT:   1) LOADCAHP.sas7bdat - Combined CAHPS Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
              and composite data sets
*
* NOTES:
*
* 1) The following steps need to be run prior to this program:
*   - STEP1.SAS - Recode questions and generate group files
*   - STEP2.SAS - Calculate individual adjusted scores for group 1-8
*   - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
*
* 2) The output file (LOADCAHP.sas7bdat) will be run through the
*   MAKEHTML.SAS program to generate the WEB pages.
*
*****
* Assign data libraries and options
*****;
LIBNAME IN  "..\&PC.ReportCards\CAHPS_Adult&FYYEAR./Data";
LIBNAME OUT ".";
LIBNAME LIBRARY "..\../Data/fmtlib";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER NOFMterr;

*****
* Load Format definitions for CAHPS Individual and composite data sets.
*****;
%INCLUDE "..\LoadWeb\LOADCAHQ.INC";

*****
*****
* Process Macro Input Parameters:
*
* 1) QUESTION = Variable Question Name (DSN).
*   - For individual Questions it is the variable name
*   - For composite Questions it is called xCOMPOSn
*     where n = a predefined composite # and
*     x = R (Region) or C (Catchment)
```

```

* 2) TYPE = Type of Score (COMPOSITE or INDIVIDUAL)
* 3) REGCAT = Region/Catchment Area
*
*****
*****;
%MACRO PROCESS(QUESTION=,TYPE=,REGCAT=);
*****
* Assign value for BENTYPE composite year
*****;
%LET YEAR = &FYEAR.;

*****
* Assign prefix for weighted/unweighted count variables.
* Unweighted counts are REGCNTn or CATCNTn where n=group number.
* Weighted counts are REGWGTn or CATWGTn where n=group number.
*****;
%IF "&REGCAT" = "Region" %THEN %DO;
    %LET PREFIX = REG;
%END;
%ELSE %IF "&REGCAT" = "Catchment" %THEN %DO;
    %LET PREFIX = CAT;
%END;
%ELSE %DO;
    %PUT "ERROR: Invalid Type = &TYPE";
%END;

*****
*
* Convert the CAHPS individual Scores Record into WEB layout.
* There are 8 logical records (adjusted scores) per physical record:
*
*
* -----
* Adjusted Score          Definitions
* Group Number
* -----
* 1. Prime enrollees      XINS_COV IN (1,2,6) AND H08007>=2
* 2. Enrollees w/mil PCM  XENR_PCM IN (1,2,6) AND H08007>=2
* 3. Enrollees w/civ PCM  XENR_PCM = 3  AND H08007>=2
* 4. Nonenrollees        XINS_COV IN (3)
* 5. Active duty          BFGROUPP=1
* 6. Active duty dependents BFGROUPP=2
* 7. Retirees and dependents BFGROUPP IN (3,4)
* 8. All beneficiaries    All beneficiaries
*
*****;
DATA &QUESTION;
    SET IN.&QUESTION;

    LENGTH MAJGRP $30;
    LENGTH REGION $30; /*RSG 02/2005 Increased length to accommodate new region*/
    LENGTH REGCAT $42; **MER 11/11/2012 - Changed REGION to be large enough for
Joint Services;
    LENGTH BENTYPE $50;
    LENGTH BENEFIT $34;
    LENGTH TIMEPD $5; /*RSG 02/2005*/
*****;
* Assign Region;
*****;

```

```

%IF &REGCAT = Region %THEN %DO;
    REGION = PUT(XSERVREG,SERVREGF.);
%END;
%ELSE %IF &REGCAT = Catchment %THEN %DO;
    REGION = PUT(XSERVIND,SERVREGo.);
%END;
*****;
* Assign benefit and benefit type;
*****;
IF "&TYPE" = "INDIVIDUAL" THEN DO;
    IF DEPENDNT IN("R&FY.018", "R&FY.048", "R&FY.027", "R&FY.031") THEN
        BENTYPE = "Composite";
    ELSE
        BENTYPE = PUT(DEPENDNT,$BENTYPF.);
    BENEFIT = PUT(DEPENDNT,$BENEF.);
    TIMEPD = "&YEAR";
END;
ELSE IF "&TYPE" = "COMPOSITE" THEN DO;
    BENTYPE = "Composite";    ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPF.);
    BENEFIT = PUT(DEPENDNT,$BENEF.);
    TIMEPD = "&YEAR";
END;
ELSE PUT "ERROR: Invalid TYPE = &TYPE";
*****;
* For now, Initialize Significance test to zero.;
*****;
SIG = 0;
*****;
* Assign Region/Catchment Area;
*****;
%IF &REGCAT = Region %THEN %DO;
    REGCAT = PUT(XSERVREG,SERVREGF.);
%END;
%ELSE %IF &REGCAT = Catchment %THEN %DO;
    REGCAT = PUT(CACSMPL,CACR.);
%END;
%ELSE %DO;
    PUT "ERROR: Invalid REGCAT = &REGCAT";
%END;
*****;
* 1 = Prime Enrollees ;
*****;
MAJGRP = PUT(1,MAJGRPF.);
SCORE = ADJ1;
SEMEAN = SEMEAN1;
N_OBS = &PREFIX.CNT1;
N_WGT = &PREFIX.WGT1;
OUTPUT;
*****;
* 2 = Enrollees with military PCM ;
*****;
MAJGRP = PUT(2,MAJGRPF.);
SCORE = ADJ2;
SEMEAN = SEMEAN2;
N_OBS = &PREFIX.CNT2;
N_WGT = &PREFIX.WGT2;
OUTPUT;

```



```

*****;
* 3 = Enrollees with civilian PCM ;
*****;
%IF &REGCAT = Region %THEN %DO;
    MAJGRP = PUT(3,MAJGRP.F.);
    SCORE = ADJ3;
    SEMEAN = SEMEAN3;
    N_OBS = &PREFIX.CNT3;
    N_WGT = &PREFIX.WGT3;
    OUTPUT;
%END;
*****;
* 4 = Non-enrolled beneficiaries ;
*****;
%IF &REGCAT = Region %THEN %DO;
    MAJGRP = PUT(4,MAJGRP.F.);
    SCORE = ADJ4;
    SEMEAN = SEMEAN4;
    N_OBS = &PREFIX.CNT4;
    N_WGT = &PREFIX.WGT4;
    OUTPUT;
%END;
*****;
* 5 = Active duty;
*****;
MAJGRP = PUT(5,MAJGRP.F.);
SCORE = ADJ5;
SEMEAN = SEMEAN5;
N_OBS = &PREFIX.CNT5;
N_WGT = &PREFIX.WGT5;
OUTPUT;
*****;
* 6 = Active duty dependents;
*****;
%IF &REGCAT = Region %THEN %DO;
    MAJGRP = PUT(6,MAJGRP.F.);
    SCORE = ADJ6;
    SEMEAN = SEMEAN6;
    N_OBS = &PREFIX.CNT6;
    N_WGT = &PREFIX.WGT6;
    OUTPUT;
%END;
*****;
* 7 = Retirees and dependents;
*****;
%IF &REGCAT = Region %THEN %DO;
    MAJGRP = PUT(7,MAJGRP.F.);
    SCORE = ADJ7;
    SEMEAN = SEMEAN7;
    N_OBS = &PREFIX.CNT7;
    N_WGT = &PREFIX.WGT7;
    OUTPUT;
%END;
*****;
* 8 = All Beneficiaries ;
*****;
MAJGRP = PUT(8,MAJGRP.F.);
SCORE = ADJ8;

```

```

SEMEAN = SEMEAN8;
N_OBS = &PREFIX.CNT8;
N_WGT = &PREFIX.WGT8;
OUTPUT;

KEEP MAJGRP
    REGION
    REGCAT
    BENTYPE
    BENEFIT
    TIMEPD
    SCORE
    SEMEAN
    N_OBS
    N_WGT
    SIG
;
RUN;

%MEND;

*****;
* COMPOSITE # 1.;
* GETTING NEEDED CARE VARIABLES.;
*****;
%PROCESS(QUESTION=RCOMPOS1,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.029,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.033,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS1,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.029,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.033,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* COMPOSITE # 2.;
* GETTING CARE QUICKLY VARIABLES.;
*****;
%PROCESS(QUESTION=RCOMPOS2,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.007,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.010,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS2,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.007,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.010,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* COMPOSITE # 3.;
* HOW WELL DOCTORS COMMUNICATE.;
*****;
%PROCESS(QUESTION=RCOMPOS3,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.021,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.022,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.023,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.024,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS3,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.021,TYPE=INDIVIDUAL,REGCAT=Catchment);

```

```

%PROCESS(QUESTION=C_R&FY.022,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.023,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.024,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* COMPOSITE # .;
* COURTEOUS AND HELPFUL OFFICE STAFF.;
*****;

*****;
* COMPOSITE # 4.;
* CUSTOMER SERVICE.;
*****;
%PROCESS(QUESTION=RCOMPOS4,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.041,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.042,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS4,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.041,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.042,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* COMPOSITE # 5.;
* CLAIMS PROCESSING.;
*****;
%PROCESS(QUESTION=RCOMPOS5,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.046,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R&FY.047,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS5,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.046,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R&FY.047,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* INDIVIDUAL # 1.;
* RATING OF ALL HEALTH CARE: 0 - 10.;
*****;
%PROCESS(QUESTION=R_R&FY.018,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R&FY.018,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* INDIVIDUAL # 2.;
* RATING OF HEALTH PLAN: 0 - 10.;
*****;
%PROCESS(QUESTION=R_R&FY.048,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R&FY.048,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* INDIVIDUAL # 3.;
* RATING OF PERSONAL DOCTOR: 0 - 10.;
*****;
%PROCESS(QUESTION=R_R&FY.027,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R&FY.027,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
* INDIVIDUAL # 4.;
* SPECIALTY CARE: 0 - 10.;

```

```

*****;
%PROCESS(QUESTION=R_R&FY.031,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R&FY.031,TYPE=INDIVIDUAL,REGCAT=Catchment);

*****;
*****;
* STACK up all of the files into one final output dataset.;
*****;
*****;
DATA OUT.LOADCAHP;
  SET R_R&FY.029 C_R&FY.029
      R_R&FY.033 C_R&FY.033
      R_R&FY.007 C_R&FY.007
      R_R&FY.010 C_R&FY.010
      R_R&FY.021 C_R&FY.021
      R_R&FY.022 C_R&FY.022
      R_R&FY.023 C_R&FY.023
      R_R&FY.024 C_R&FY.024
      R_R&FY.041 C_R&FY.041
      R_R&FY.042 C_R&FY.042
      R_R&FY.046 C_R&FY.046
      R_R&FY.047 C_R&FY.047
      R_R&FY.018 C_R&FY.018
      R_R&FY.048 C_R&FY.048
      R_R&FY.027 C_R&FY.027
      R_R&FY.031 C_R&FY.031
      RCOMPOS1 CCOMPOS1
      RCOMPOS2 CCOMPOS2
      RCOMPOS3 CCOMPOS3
      RCOMPOS4 CCOMPOS4
      RCOMPOS5 CCOMPOS5

;
  IF SCORE = . THEN DELETE;
RUN;

TITLE1 "&FYYEAR. DOD Health Survey Scores/Report Cards";
TITLE2 "Program Name: LOADCAHP.SAS By Keith Rathbun";
TITLE3 "Program Inputs: CAHPS Individual and Composite data sets with adjusted
scores";
TITLE4 "Program Outputs: LOADCAHP.sas7bdat - Combined CAHPS Scores Database in WEB
layout";

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
      REGION*REGCAT
      /MISSING LIST;
RUN;

```

G.9.B - LOADWEB\LOADCAHQ.INC - Format definitions for converting the Scores Database into the WEB layout - Annual.

```
*****
*
* PROGRAM:   LOADCAHQ.INC
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Format definitions for converting the CAHPS Scores Database
*           into the WEB layout.
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from LOADCAHP.INC.
*
* MODIFIED: 1) 08/13/2001 BY KEITH RATHBUN, Added XSERVAFF format to
*           accommodate the short reports.
*           2) 01/24/2002 BY KEITH RATHBUN, Added BENTYPPF = 1998,1999,2000
*           added catchment composites.
*           3) 04/10/2002 BY KEITH RATHBUN, Added parameters for 2002 survey.
*           4) 04/03/2003 BY MIKE SCOTT, Added parameters for 2003 survey.
*           5) 07/08/2003 BY MIKE SCOTT, Added formats GETNCARE, GETCAREQ,
*           CRTSHELP, HOWWELL, CUSTSERV, CLMSPROC, and PREVCARE.
*           6) 03/22/2004 BY KEITH RATHBUN, Added parameters for 2004 survey.
*           Changed R04031 to be "Wait Less than 15 Minutes For Appointment".
*           7) 05/06/2004 BY MIKE SCOTT, Changed R04031 back to 2003 version of
*           the label ("Wait More than 15 Minutes Past Appointment") so that
*           the Q1 2004 version of the question is consistent with past
*           versions. The label will be changed to the new version ("Waiting
*           in the Doctor's Office") in Makehtmqs.sas.
*           8) 02/2006 BY REGINA GRAMSS, Changed date format to fielding dates.
*           9) 03/21/2006 BY KEITH RATHBUN, Added parameters for 2006 survey.
*           10) 08/22/2006 BY JUSTIN OH, Changed SERVREGF format for Overseas.
*           11) 12/15/2006 BY JUSTIN OH, Added parameters for 2007 survey.
*           12) 02/02/2007 BY JUSTIN OH, Added "s" in Healthy Behaviors in VALUE BEN.
*           13) 01/10/2008 BY KEITH RATHBUN, Added parameters for 2008 survey.
*           14) 01/09/2009 BY MIKE RUDACILLE, Added parameters for 2009 survey.
*           14) 01/16/2009 BY MIKE RUDACILLE, Changed CONUS to USA.
*           15) 04/11/2009 by Mike Rudacille - Changed formats to reflect
*           modifications to beneficiary reports necessary for V4
*           16) 12/17/09 by Emma Ernst, Added parameters for 2010 survey.
*           17) 12/02/10 by Mike Rudacille, Added parameters for 2011 survey.
*           Also removed 2000 parameters for space considerations.
*           18) 12/10/11 by Mike Rudacille, Added parameters for 2012 survey.
*           Also removed 2002 parameters for space considerations.
*           19) 11/03/12 by Mike Rudacille, Updated for handling of
*           Joint Service facilities
*           20) 12/27/12 by Aimee Valenzuela, Added parameters for 2013 survey.
*           21) 09/20/13 by Amanda Kudis, Added parameters for 2014 survey.
*
*
* INPUTS:   No direct input
*
* OUTPUT:   No direct output
*
* NOTES:    1) Under the new contract (8860), the survey year was changed
*           to be based on the year the survey is administered (2002)
*           as opposed to the questioning reference frame (2001). This
*           include file contains variable names for both the 2001
*           survey administration year and the the 2002 administration
*           year surveys.
```

```

*
*****
;
*****
* FORMAT Definitions
*****;
PROC FORMAT;
  VALUE MAJGRPF
    1 = "Prime Enrollees          "
    2 = "Enrollees with Military PCM"
    3 = "Enrollees with Civilian PCM"
    4 = "Non-enrolled Beneficiaries "
    5 = "Active Duty              "
    6 = "Active Duty Dependents    "
    7 = "Retirees and Dependents   "
    8 = "All Beneficiaries        "
;
  VALUE XSERVAFF
    1 = "ARMY"
    2 = "AIR FORCE"
    3 = "NAVY"
    4 = "OTHER"
    5 = "JOINT SERVICE"
;
  VALUE REGIONF
    0 = "USA MHS "
    1 = "North"
    2 = "South"
    3 = "West "
    4 = "Overseas"
;

/*JSO 08/24/2006, Changed Overseas to Service for Europe,Pacific,Latin*/
  VALUE SERVREGF
    1 = "North Army"
    2 = "North Air Force"
    3 = "North Navy"
    4 = "North Other"
    5 = "North Joint Service"
    6 = "South Army"
    7 = "South Air Force"
    8 = "South Navy"
    9 = "South Other"
    10 = "South Joint Service"
    11 = "West Army"
    12 = "West Air Force"
    13 = "West Navy"
    14 = "West Other"
    15 = "West Joint Service"
    16 = "Europe Army"
    17 = "Europe Air Force"
    18 = "Europe Navy"
    19 = "Europe Other"
    20 = "Europe Joint Service"
    21 = "Pacific Army"
    22 = "Pacific Air Force"
    23 = "Pacific Navy"
    24 = "Pacific Other"

```

25 = "Pacific Joint Service"
 26 = "Latin America Army"
 27 = "Latin America Air Force"
 28 = "Latin America Navy"
 29 = "Latin America Other"
 30 = "Latin America Joint Service"
 31 = "USA ARMY"
 32 = "USA AIR FORCE"
 33 = "USA NAVY"
 34 = "USA OTHER";

/*JSO 08/24/2006, Changed Overseas to Europe,Pacific,Latin*/

VALUE SERVREGO

1 = "North Army"
 2 = "North Air Force"
 3 = "North Navy"
 4 = "North Other"
 5 = "North Joint Service"
 6 = "South Army"
 7 = "South Air Force"
 8 = "South Navy"
 9 = "South Other"
 10 = "South Joint Service"
 11 = "West Army"
 12 = "West Air Force"
 13 = "West Navy"
 14 = "West Other"
 15 = "West Joint Service"
 16 = "Overseas Europe"
 17 = "Overseas Pacific"
 18 = "Overseas Latin America";

VALUE \$BENTYPPF

"2006 Q1 "	= "January, 2006	"
"2006 Q2 "	= "April, 2006	"
"2006 Q3 "	= "July, 2006	"
"2006 Q4 "	= "October, 2006	"
"2007 Q1 "	= "January, 2007	"
"2007 Q2 "	= "April, 2007	"
"2007 Q3 "	= "July, 2007	"
"2007 Q4 "	= "October, 2007	"
"2008 Q1 "	= "January, 2008	"
"2008 Q2 "	= "April, 2008	"
"2008 Q3 "	= "July, 2008	"
"2008 Q4 "	= "October, 2008	"
"2009 Q1 "	= "January, 2009	"
"2009 Q2 "	= "April, 2009	"
"2009 Q3 "	= "July, 2009	"
"2009 Q4 "	= "October, 2009	"
"2010 Q1 "	= "January, 2010	"
"2010 Q2 "	= "April, 2010	"
"2010 Q3 "	= "July, 2010	"
"2010 Q4 "	= "October, 2010	"
"2011 Q1 "	= "January, 2011	"
"2011 Q2 "	= "April, 2011	"
"2011 Q3 "	= "July, 2011	"
"2011 Q4 "	= "October, 2011	"
"2012 Q1 "	= "January, 2012	"

```

"2012 Q2 " = "April, 2012           "
"2012 Q3 " = "July, 2012            "
"2012 Q4 " = "October, 2012         "
"2013 Q1 " = "January, 2013         "
"2013 Q2 " = "April, 2013           "
"2013 Q3 " = "July, 2013            "
"2013 Q4 " = "October, 2013         "
"2014 Q1 " = "January, 2014         "
"2014 Q2 " = "April, 2014           "
"2014 Q3 " = "July, 2014            "
"2014 Q4 " = "October, 2014         "
"2015 Q1 " = "January, 2015         "
"2015 Q2 " = "April, 2015           "
"2015 Q3 " = "July, 2015            "
"2015 Q4 " = "October, 2015         "
"2016 Q1 " = "January, 2016         "
"2016 Q2 " = "April, 2016           "
    "2016 Q3 " = "July, 2016         "
    "2016 Q4 " = "October, 2016      "
"2017 Q1 " = "January, 2017         "
"2017 Q2 " = "April, 2017           "
"2017 Q3 " = "July, 2017            "
"2017 Q4 " = "October, 2017         "

```

```

/*****
*****/

```

```

/* Admin. Year Defn.
*/

```

```

/* 2007      2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      */

```

```

/*****
*****/

```

```

"R07013", "R08013", "R09029", "R10029", "R11029", "R12029", "R13029", "R14029",
"R15029", "R16029", "R17029" = "Getting to See a Specialist           "
    "R07027", "R08027", "R09033", "R10033", "R11033", "R12033", "R13033", "R14033",
"R15033", "R16033", "R17033" = "Getting Treatment                       "
    "R07019", "R08019", "R09007", "R10007", "R11007", "R12007", "R13007", "R14007",
"R15007", "R16007", "R17007" = "Wait for Urgent Care                   "
    "R07022", "R08022", "R09010", "R10010", "R11010", "R12010", "R13010", "R14010",
"R15010", "R16010", "R17010" = "Wait for Routine Visit                 "
    "R07033", "R08033", "R09021", "R10021", "R11021", "R12021", "R13021", "R14021",
"R15021", "R16021", "R17021" = "Listens Carefully                     "
    "R07034", "R08034", "R09022", "R10022", "R11022", "R12022", "R13022", "R14022",
"R15022", "R16022", "R17022" = "Explains so You Can Understand        "
    "R07035", "R08035", "R09023", "R10023", "R11023", "R12023", "R13023", "R14023",
"R15023", "R16023", "R17023" = "Shows Respect                          "
    "R07036", "R08036", "R09024", "R10024", "R11024", "R12024", "R13024", "R14024",
"R15024", "R16024", "R17024" = "Spends Time with You                   "
    "R07043", "R08043", "R09040", "R10040", "R11041", "R12041", "R13041", "R14041",
"R15041", "R16041", "R17041" = "Getting Information                     "
    "R07045", "R08045", "R09041", "R10041", "R11042", "R12042", "R13042", "R14042",
"R15042", "R16042", "R17042" = "Courteous Customer Service            "
    "R07040", "R08040", "R09045", "R10045", "R11046", "R12046", "R13046", "R14046",
"R15046", "R16046", "R17046" = "Claims Handled in a Reasonable Time    "
    "R07041", "R08041", "R09046", "R10046", "R11047", "R12047", "R13047", "R14047",
"R15047", "R16047", "R17047" = "Claims Handled Correctly              "

```



```

    "R07037", "R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018" = "Health Care
    "R07048", "R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048" = "Health Plan
    "R07009", "R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027" = "Primary Care Manager
    "R07015", "R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031" = "Specialty Care
        "PHYSIC " = "Physical
"
        "MENTAL " = "Mental
"

```

```
;
```

```
VALUE $BENEF
```

```

"RCOMPOS1", "CCOMPOS1", "R07013", "R07027",
    "R08013", "R08027",
    "R09029", "R09033",
    "R10029", "R10033",
    "R11029", "R11033",
    "R12029", "R12033",
    "R13029", "R13033",
    "R14029", "R14033",
    "R15029", "R15033",
    "R16029", "R16033",
    "R17029", "R17033"

```

```
= "Getting Needed Care "
```

```

"RCOMPOS2", "CCOMPOS2", "R07019", "R07022",
    "R08019", "R08022",
    "R09007", "R09010",
    "R10007", "R10010",
    "R11007", "R11010",
    "R12007", "R12010",
    "R13007", "R13010",
    "R14007", "R14010",
    "R15007", "R15010",
    "R16007", "R16010",
    "R17007", "R17010"

```

```
= "Getting Care Quickly "
```

```

"RCOMPOS3", "CCOMPOS3", "R07033", "R07034", "R07035", "R07036",
    "R08033", "R08034", "R08035", "R08036",
    "R09021", "R09022", "R09023", "R09024",
    "R10021", "R10022", "R10023", "R10024",
    "R11021", "R11022", "R11023", "R11024",
    "R12021", "R12022", "R12023", "R12024",
    "R13021", "R13022", "R13023", "R13024",
    "R14021", "R14022", "R14023", "R14024",
    "R15021", "R15022", "R15023", "R15024",
    "R16021", "R16022", "R16023", "R16024",
    "R17021", "R17022", "R17023", "R17024"

```

```
= "How Well Doctors Communicate "
```

```

"RCOMPOS4", "CCOMPOS4", "R07043", "R07045",
    "R08043", "R08045",

```

```

        "R09040", "R09041",
        "R10040", "R10041",
        "R11041", "R11042",
        "R12041", "R12042",
        "R13041", "R13042",
        "R14041", "R14042",
        "R15041", "R15042",
        "R16041", "R16042",
        "R17041", "R17042"

= "Customer Service          "

"RCOMPOS5", "CCOMPOS5", "R07040", "R07041",
        "R08040", "R08041",
        "R09045", "R09046",
        "R10045", "R10046",
        "R11046", "R11047",
        "R12046", "R12047",
        "R13046", "R13047",
        "R14046", "R14047",
        "R15046", "R15047",
        "R16046", "R16047",
        "R17046", "R17047"

= "Claims Processing
  "
"RCOMPOS11", "COMPOS11", "MENTAL", "PHYS"
= "Health Status          "

/*****
*****/
/* Admin. Year Defn.
*/
/* 2007      2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      */

/*****
*****/
    "R07037", "R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018" = "Health Care          "
    "R07048", "R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048" = "Health Plan          "
    "R07009", "R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027" = "Primary Care Manager  "
    "R07015", "R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031" = "Specialty Care          "
;
VALUE BEN
/* 0 = 'Total'  deleted no longer calculating total 04/2005 RSG ***/
1 = 'Getting Needed Care'
2 = 'Getting Care Quickly'
3 = 'How Well Doctors Communicate'
4 = 'Customer Service'
5 = 'Claims Processing'
6 = 'Health Plan'
7 = 'Health Care'
8 = 'Primary Care Manager'
9 = 'Specialty Care'

```

10 = 'Preventive Care'
11 = 'Healthy Behaviors';

VALUE MAJOR

1 = "Prime Enrollees "
2 = "Enrollees with Military PCM"
3 = "Enrollees with Civilian PCM"
4 = "Non-enrolled Beneficiaries "
5 = "Active Duty "
6 = "Active Duty Dependents "
7 = "Retirees and Dependents "
8 = "All Beneficiaries ";

VALUE GETNCARE

1 = "Getting to See a Specialist"
2 = "Getting Treatment"
3 = "Composite";

VALUE GETCAREQ

1 = "Wait for Routine Visit"
2 = "Wait for Urgent Care"
3 = "Composite";

VALUE HOWWELL

1 = "Listens Carefully"
2 = "Explains so You Can Understand"
3 = "Shows Respect"
4 = "Spends Time with You"
5 = "Composite";

VALUE CUSTSERV

1 = "Getting Information"
2 = "Courteous Customer Service"
3 = "Composite";

VALUE CLMSPROC

1 = "Claims Handled in a Reasonable Time"
2 = "Claims Handled Correctly"
3 = "Composite";

VALUE PREVCARE

1 = "Mammography"
2 = "Pap Smear"
3 = "Hypertension"
4 = "Prenatal Care"
5 = "Composite";

VALUE SMOKEF

1 = "Non-Smoking Rate"
2 = "Counselled To Quit"
3 = "Percent Not Obese"
4 = "Composite";

RUN;

G.10.A - Benchmark\BENCHA03.SAS - Calculate CAHPS Benchmark data for HCSDB - Annual.

```
*****
*
* PROGRAM:   BENCHA03.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Adjust Adult CAHPS Benchmarks
*
* WRITTEN:  June 2000 BY ERIC SCHONE
*
* INPUTS:   1) BENCHA02.SD2 - 2005 Adult CAHPS Questions Renamed to be
*           consistent with the 2006 MPR DOD Survey.
*           2) GROUP8.SD2 - CAHPS Group8 (all beneficiaries) Dataset
*
* OUTPUTS:  1) Benchmark Composite Scores Data Sets
*
* MODIFIED:34) Aug 2, 2012 by Amanda Kudis - Updated for 2012 and removed insurnace
restriction.
*           35) Aug 1, 2013 by Amanda Kudis - Updated for 2013.
*           36) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
                Replaced RCTYPE with &PC.ReportCards
                Changed IN to &BENCHDATA.
                Changed IN2 to "../&RCTYPE/CAHPS_Adult&FYYEAR./Data".
                Changed LIBRARY to ../../DATA/FMTLIB
                Replaced MERGE statement in &Q._&L., OUT&COMPNO._&I., and
OUT.COMP&COMPNO._&I DATA steps with SET statements.
                Added MERGE=1 to R_&X.
                Added BY MERGE to TEMP step.
                Changed R14 to R&FY.
                Changed CONVERT.SAS to
../ReportCards/CAHPS_Adult&FYYEAR./CONVERT.SAS*
* NOTES:
*
* 1) Run this program after BENCHA01.SAS and BENCHA02.SAS.
* 2) This program will generate the input for BENCHA04.SAS.
*
*****
* Assign data libraries and options
*****;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

libname in      "&BENCHDATA.";
libname in2     "../&RCTYPE/CAHPS_Adult&FYYEAR./Data";
libname out     "data";
LIBNAME LIBRARY "../..Data/fmtlib";

%let wgt=CFWT;

OPTIONS MLOGIC MPRINT NOCENTER MERGENOBY=WARN LS=132 PS=79;

%macro comb(f,t,q,l);

proc summary data=&f;
  var &t;
  where &q~=. ;
```

```

weight &wgt;
output out=temp mean=&t;
run;

data temp;
set temp;
array old &t;
call symput('z',left(dim(old)));
run;

data temp(drop=_type_ &t);
set temp;
array old &t;
array new var1-var&z;
do i=1 to &z;
    new(i)=old(i);
end;
run;

data &q._&l;
set temp;
set c_&q;
array coeffs &t;
array means var1-var&z;
DO I = 1 TO DIM(COEFFS);
    IF COEFFS(I) = . THEN COEFFS(I) = 0;
    IF MEANS(I) = . THEN MEANS(I) = 0;
    ADJUST + ( COEFFS(I) * MEANS(I) );
END;
merge=1;

ADJUST = ADJUST + intercept;
&q._&l=adjust;

run;

%mend comb;

%macro adjust(x,y);

proc summary data=setup;
where &x>.;
class SUB_ID;

output out=count;
run;

data count count2(rename=( _freq_ =denom));
set count;
if _type_=0 then output count2;
else output count;
run;

data count(keep=pweight SUB_ID);
if _n_=1 then set count2;
set count;

```

```

    pweight=denom/_freq_;
run;

data temp;
  merge count  setup; by SUB_ID;

run;
proc summary data=temp;
  where &x>.;
  weight pweight;
  var &y;
  output out=temp2 mean=&y;
data temp2;
  set temp2;
  array old &y;
  call symput('z',left(dim(old)));
run;
data temp2(keep=var1-var&z);
  set temp2;
  array old &y;
  array new var1-var&z;
  do i=1 to &z;
    new(i)=old(i);
  end;
run;
data temp;
  set temp;
  if _n_=1 then set temp2;
  array old &y;
  array new var1-var&z;
  do i=1 to &z;
    if old(i)=. then
      old(i)=new(i);
  end;
run;
proc reg data=temp outest=c_&x noprint;
  model &x=&y;
  weight pweight;
  output out=r_&x r=r_&x;
run;

data r_&x;
  set r_&x;
  merge=1;
run;

proc sort data=r_&x; by SUB_ID;
run;

PROC DESCRIPT DATA=r_&x DESIGN=STRWR NOPRINT;
  WEIGHT pweight;
  SETENV DECWIDTH=4;
  NEST SUB_ID / missunit;
  VAR R_&x;
  OUTPUT SEMEAN / TABLECELL=DEFAULT
  FILENAME=s_&x;
RUN;

```

```

data s_&x(rename=(semear=s_&x));
set s_&x(keep=semear);
%do i=1 %to 8;
  %if &i=8 %then %do;

    data group8;
      set in2.group5 in2.group6 in2.group7;
    run;
    %comb(group8,&y,&x,8);
  %end;
  %else %do;
    %comb(in2.group&i,&y,&x,&i);
  %end;
%end;

%mend adjust;

/* adjust all the variables */

%macro comp(compno,a,b,c,d);
%if &a~= %then %do;
  %let n=r_&a;
  %let m=s_&a;
  %do i=1 %to 8;
    %let p&i=&a._&i;
  %end;
  %let grpnum=1;
  proc sort data=r_&a;
    by mpid;
  run;
%end;
%if &b~= %then %do;
  %let n=%str(&n r_&b);
  %let m=%str(&m s_&b);
  %do i=1 %to 8;
    %let p&i=%str(&p&i &b._&i);
  %end;
  %let grpnum=2;
  proc sort data=r_&b;
    by mpid;
  run;
%end;
%if &c~= %then %do;
  proc sort data=r_&c;
    by mpid;
  run;
  %let grpnum=3;
  %let n=%str(&n r_&c);
  %do i=1 %to 8;
    %let p&i=%str(&p&i &c._&i);
  %end;
  %let m=%str(&m s_&c); %end;

%if &d~= %then %do;
  proc sort data=r_&d;
    by mpid;
  run;

```

```

%let grpnum=4;
%let n=%str(&n r_&d);
%do i=1 %to 8;
  %let p&i=%str(&p&i &d._&i);
%end;

%let m=%str(&m s_&d);
%end;

data infile;
merge &n;
by mpid;
run;

proc corr outp=outf noprint;
var &n;
weight pweight;
run;

data final;
if _n_=1 then do;
  %if &a~= %then %do;
    set s_&a;
  %end;
  %if &b~= %then %do;
    set s_&b;
  %end;
  %if &c~= %then %do;
    set s_&c;
  %end;
  %if &d~= %then %do;
    set s_&d;
  %end;
end;
set outf;
call symput('s' || compress(_n_), substr(_name_, 3));
where _type_='CORR';
run;

data final;
set final;
array r_val &n;
array s_val &m;
sde=0;
do i=1 to dim(s_val);
  %do i=1 %to &grpnum;
    if _name_="r_&s&i" then
      sde=sde+r_val(i)*s_&s&i*s_val(i);
  %end;
end;
run;

data sefin&compno;
set final end=last;
tv+sde;
if last then do;
sde=(tv**.5)/&grpnum;
output;

```



```

end;

%do i=1 %to 8;
  data temp(keep=&&p&i);
    merge &&p&i;
    by merge;
  run;

data output;
  set &&p&i;
  totadj+adjust;
run;

data output(keep=totadj);
  set output end=last;
  if last then do;
    totadj=totadj/&grpnum;
    output;
  end;
run;

data out&compno._&i;
  set output;
  set temp;
run;

data out.comp&compno._&i;
  set out&compno._&i;
  set sefin&compno;
run;

%end;

%mend comp;

/* create composites */
proc sort data=in.bencha02 out=setup;
  by SUB_ID;
run;
data setup;
set setup;
/*if ^(model in (2,4)); */ **AMK removed restriction 9/20/12;
if disp in ('M10','I10') ; ***KRR 04/19/04 Changed _02 to _03;
RUN;

data setup;
  set setup; by SUB_ID;
  mpid=_n_;
  if agegroup ne . then do;
    age1824=0; age2534=0; age3544=0; age4554=0; age5564=0; age6574=0;

    if agegroup=1 then age1824=1;
    else if agegroup=2 then age2534=1;
    else if agegroup=3 then age3544=1;
    else if agegroup=4 then age4554=1;
    else if agegroup=5 then age5564=1;
    else if agegroup=6 then age6574=1;
  end;

```

```

if agegroup<6;

run;
%INCLUDE "..\ReportCards\CAHPS_Adult&FYYEAR.\CONVERT.SAS";

%CONT2(DSN=SETUP, NUM=4, Y=R&FY.018 R&FY.048 R&FY.027 R&FY.031);
%CONT3(DSN=SETUP, NUM=12, Y=R&FY.007 R&FY.010 R&FY.029 R&FY.033
      R&FY.021 R&FY.022 R&FY.023 R&FY.024
      R&FY.041 R&FY.042 R&FY.046 R&FY.047);

/* GETTING NEEDED CARE */
%adjust(R&FY.029,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.033,age1824 age2534 age3544 age4554 R&FY.065);
%comp(1,R&FY.029,R&FY.033);

/* GETTING NEEDED CARE QUICKLY */
%adjust(R&FY.007,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.010,age1824 age2534 age3544 age4554 R&FY.065);
%comp(2,R&FY.007,R&FY.010);

/* HOW WELL DOCTORS COMMUNICATE */
%adjust(R&FY.021,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.022,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.023,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.024,age1824 age2534 age3544 age4554 R&FY.065);
%comp(3,R&FY.021,R&FY.022,R&FY.023,R&FY.024);

/* CUSTOMER SERVICE */
%adjust(R&FY.041,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.042,age1824 age2534 age3544 age4554 R&FY.065);
%comp(4,R&FY.041,R&FY.042);

/* CLAIMS PROCESSING */
%adjust(R&FY.046,age1824 age2534 age3544 age4554 R&FY.065);
%adjust(R&FY.047,age1824 age2534 age3544 age4554 R&FY.065);
%comp(5,R&FY.046,R&FY.047);

/* RATING ALL HEALTH CARE: 0 - 10 */
%adjust(R&FY.018,age1824 age2534 age3544 age4554 R&FY.065);
%comp(6,R&FY.018);

/* RATING OF HEALTH PLAN: 0 - 10 */
%adjust(R&FY.048,age1824 age2534 age3544 age4554 R&FY.065);
%comp(7,R&FY.048);

/* RATING OF PERSONAL DR: 0 - 10 */
%adjust(R&FY.027,age1824 age2534 age3544 age4554 R&FY.065);
%comp(8,R&FY.027);

/* SPECIALTY CARE */
%adjust(R&FY.031,age1824 age2534 age3544 age4554 R&FY.065);
%comp(9,R&FY.031);

```

G.10.B - Benchmark\BENCHA04.SAS - Convert the Benchmark Scores Database into the WEB layout - Annual.

```
*****
*
* PROGRAM:  BENCHA04.SAS
* TASK:    Quarterly DOD HEALTH CARE SURVEY ANALYSIS (6401-904)
* PURPOSE: Convert the Benchmark Scores Database into the WEB layout
*
* WRITTEN: 06/01/2000 BY KEITH RATHBUN
*
* INPUTS:  1) Benchmark data sets with adjusted scores
*           (COMPn_i.SD2 where n = composite number and i = group number)
*
* OUTPUT:  1) BENCHA04.SD2 - Combined Benchmark Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*             and composite data sets
*
* MODIFIED:
*
* NOTES:
*
* 1) The following steps need to be run prior to this program:
*   - BENCHA01.SAS - Extract Benchmark variables
*   - BENCHA02.SAS - Recode Benchmark variables
*   - BENCHA03.SAS - Construct Scores and SEMEAN datasets
*
* 2) The output file (BENCHA04.SAS7BDAT) will be run through the
*   MAKEHTML.SAS program to generate the WEB pages.
*
* MODIFIED: 1) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*           Changed LIBRARY to "..\..\DATA\FMTLIB".
*           Changed YEAR to &FYEAR.;
/*           Added X = .; statement to initialize X.
*           Changed R14 to R&FY.
*/
*/
*****
* Assign data libraries and options
*****;
LIBNAME IN "data";
LIBNAME IN2 "apredtest";
LIBNAME OUT "data";
LIBNAME LIBRARY "../..Data/fmtlib";

OPTIONS PS=79 LS=132 COMPRESS=NO NOCENTER;

*****
* Load Format definitions for CAHPS Individual and composite data sets.
*****;
%INCLUDE "../LoadWeb/LOADCAHQ.INC";

*****
*****
* Process Macro Input Parameters:
*
```

- * 1) CNUM = Composite or rating variable number (1-10)
- * 2) GNUM = Group number (1-8)
- * 3) NVAR = Number of variables in the composite
- * 4) VARS = List of individual variables for composite
- * 5) SE = List of individual standard error variables

*
*

Adjusted Score	Definitions
Group Number	
* 1. Prime enrollees	XINS_COV IN (1,2,6) AND H09004_R>=7
* 2. Enrollees w/mil PCM	XENR_PCM IN (1,2,6) AND H09004_R>=7
* 3. Enrollees w/civ PCM	XENR_PCM = 3 AND H09004_R>=7
* 4. Nonenrollees	XINS_COV IN (3,4,5)
* 5. Active duty	BFGROUPP = 1
* 6. Active duty dependents	BFGROUPP = 2
* 7. Retirees and dependents	BFGROUPP IN (3,4)
* 8. All Beneficiaries	

*

*****;

```
%MACRO PROCESS(CNUM=, GNUM=, NVAR=, VARS=, SE=);
```

```
* Assign value for BENTYPE composite year
```

*****;

```
%LET YEAR = "&FYYEAR."; * Note that this is based on Calendar Year here;
```

```
* Convert benchmark scores datasets into WEB layout.
```

*****;

```
%IF &CNUM<6 %THEN %DO;
```

```
DATA INP;
```

```
SET IN2.COMP&CNUM;
```

```
WHERE X=&GNUM;
```

```
DATA INP;
```

```
SET INP IN2.PROJERR&GNUM;
```

```
RENAME SE=SESX;
```

```
RUN;
```

```
%END;
```

```
%ELSE %DO;
```

```
DATA INP;
```

```
SET IN2.PROJERR&GNUM;
```

```
RENAME SE=SESX;
```

```
X = .;
```

```
RUN;
```

```
%END;
```

```
DATA COMP&CNUM._&Gnum;
```

```
SET INP;
```

```
IF _N_=1 THEN
```

```
SET IN.COMP&CNUM._&GNUM;
```

```

LENGTH MAJGRP  $30;
LENGTH REGION  $25;
LENGTH REGCAT  $26;
LENGTH BENTYPE $50;
LENGTH BENEFIT $34;
LENGTH TIMEPD  $35;   ***MJS 07/03/03 Added line;

*****
* For now, assign SIG = 0
*****;
SIG = 0;

*****
* Assign major group
*****;
MAJGRP = PUT(&Gnum,MAJGRP.);

*****
* Assign Region and Regcat
*****;
REGION = "Benchmark";
REGCAT = "Benchmark";

*****
* Assign benefit and benefit type
*****;
IF      &CNUM = 1 THEN BENEFIT = "Getting Needed Care";
ELSE IF &CNUM = 2 THEN BENEFIT = "Getting Care Quickly";
ELSE IF &CNUM = 3 THEN BENEFIT = "How Well Doctors Communicate";
ELSE IF &CNUM = 4 THEN BENEFIT = "Customer Service";
ELSE IF &CNUM = 5 THEN BENEFIT = "Claims Processing";
ELSE IF &CNUM = 6 THEN BENEFIT = "Health Care";
ELSE IF &CNUM = 7 THEN BENEFIT = "Health Plan";
ELSE IF &CNUM = 8 THEN BENEFIT = "Primary Care Manager";
ELSE IF &CNUM = 9 THEN BENEFIT = "Specialty Care";

BENTYPE = "Composite";   ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPF.);
TIMEPD = PUT(&YEAR,$BENTYPF.);   ***MJS 07/03/03 Added;
IF &CNUM<6 THEN DO;
  IF X=&GNUM THEN DO;
*****
* Assign composite score and SEMEAN
*****;
  SCORE = TOTADJ;
  SEMEAN = SQRT(SDE**2+SESX**2);

*****
* Output composite score record for each REGION
*****;
  OUTPUT;
  END;
END;
*****
* Now, output the individual score records
*****;
IF &NVAR GT 1|&CNUM>5 THEN DO;
  ARRAY ITEMS &VARS;

```

```

ARRAY SE      &SE;
LENGTH NAME  $8;
DO I = 1 TO DIM(ITEMS); DROP I;
  CALL VNAME(ITEMS(I),NAME);
  NAME = SUBSTR(NAME,1,6);
  SCORE = ITEMS(I);
  SEMEAN = SQRT(SE(I)**2+SESX**2);
  IF &NVAR GT 1 THEN
    BENTYPE = PUT(NAME,$BENTYPPF.);
    TIMEPD = PUT(&YEAR,$BENTYPPF.);    ***MJS 07/03/03 Added;
    IF COMPRESS(UPCASE(NAME))=COMPRESS(UPCASE(VAR)) THEN OUTPUT;
  END;
END;

```

```

KEEP MAJGRP
REGION
REGCAT
BENTYPE
BENEFIT
TIMEPD /*MJS 07/03/03 Added*/
SEMEAN
SCORE
SIG
;
RUN;

```

```
%MEND;
```

```

*****
*****
* Process each of the 8 Groups.
*****
*****;
%MACRO DOIT;
%DO I = 1 %TO 8;
  *****
  * COMPOSITE # 1.
  * GETTING NEEDED CARE VARIABLES.
  *****;
  %PROCESS(CNUM=1, GNUM=&I, NVAR=2, VARS=R&FY.029_&I R&FY.033_&I,
    SE=S_R&FY.029 S_R&FY.033);

  *****
  * COMPOSITE # 2.
  * GETTING CARE QUICKLY VARIABLES.
  *****;
  %PROCESS(CNUM=2, GNUM=&I, NVAR=2, VARS=R&FY.007_&I R&FY.010_&I,
    SE=S_R&FY.007 S_R&FY.010);

  *****
  * COMPOSITE # 3.
  * HOW WELL DOCTORS COMMUNICATE.
  *****;
  %PROCESS(CNUM=3, GNUM=&I, NVAR=4, VARS=R&FY.021_&I R&FY.022_&I R&FY.023_&I
    R&FY.024_&I,
    SE=S_R&FY.021 S_R&FY.022 S_R&FY.023 S_R&FY.024);

  *****

```

```

* COMPOSITE # 4.
* CUSTOMER SERVICE.
*****;
%PROCESS(CNUM=4, GNUM=&I, NVAR=2, VARS=R&FY.041_&I R&FY.042_&I,
        SE=S_R&FY.041 S_R&FY.042);

*****
* COMPOSITE # 5.
* CLAIMS PROCESSING.
*****;
%PROCESS(CNUM=5, GNUM=&I, NVAR=2, VARS=R&FY.046_&I R&FY.047_&I,
        SE=S_R&FY.046 S_R&FY.047);

*****
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****;
%PROCESS(CNUM=6, GNUM=&I, NVAR=1, VARS=R&FY.018_&I, SE=S_R&FY.018);

*****
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****;
%PROCESS(CNUM=7, GNUM=&I, NVAR=1, VARS=R&FY.048_&I, SE=S_R&FY.048);

*****
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****;
%PROCESS(CNUM=8, GNUM=&I, NVAR=1, VARS=R&FY.027_&I, SE=S_R&FY.027);

*****
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****;
%PROCESS(CNUM=9, GNUM=&I, NVAR=1, VARS=R&FY.031_&I, SE=S_R&FY.031);
%END;
%MEND DOIT;
%DOIT;

*****
*****
* STACK up all of the files into one final output dataset.
*****;
/*Comp4 was from questions 40 and 41 and there is no 2007 equivalent*/
DATA OUT.BENCHA04;
  SET COMP1_1  COMP1_2  COMP1_3  COMP1_4  COMP1_5  COMP1_6  COMP1_7  COMP1_8
      COMP2_1  COMP2_2  COMP2_3  COMP2_4  COMP2_5  COMP2_6  COMP2_7  COMP2_8
      COMP3_1  COMP3_2  COMP3_3  COMP3_4  COMP3_5  COMP3_6  COMP3_7  COMP3_8
      COMP4_1  COMP4_2  COMP4_3  COMP4_4  COMP4_5  COMP4_6  COMP4_7  COMP4_8
      COMP5_1  COMP5_2  COMP5_3  COMP5_4  COMP5_5  COMP5_6  COMP5_7  COMP5_8
      COMP6_1  COMP6_2  COMP6_3  COMP6_4  COMP6_5  COMP6_6  COMP6_7  COMP6_8
      COMP7_1  COMP7_2  COMP7_3  COMP7_4  COMP7_5  COMP7_6  COMP7_7  COMP7_8
      COMP8_1  COMP8_2  COMP8_3  COMP8_4  COMP8_5  COMP8_6  COMP8_7  COMP8_8
      COMP9_1  COMP9_2  COMP9_3  COMP9_4  COMP9_5  COMP9_6  COMP9_7  COMP9_8
  ;
  IF SCORE = . THEN DELETE;

```

```
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (6663-410)";
TITLE2 "Program Name: BENCH04.SAS By Keith Rathbun";
TITLE3 "Program Inputs: Benchmark Individual and Composite data sets with adjusted
scores";
TITLE4 "Program Outputs: BENCH04.SAS7BDAT - Combined Benchmark Scores Database in
WEB layout";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES TIMEPD BENEFIT BENTYPE MAJGRP REGION REGCAT
      REGION*REGCAT
      /MISSING LIST;
RUN;
```


G.11.A - ReportCards\MPR_Adult2017\PRVCOMP.SAS - Calculate Preventive Care Composite Scores - Annual.

```

*****
*   Project:   DoD Reporting and Analysis 6077-410
*   Program:   PRVCOMPQ.SAS
*   Author:    Chris Rankin
*   Date:      12/22/2000
*   Modified:  4/19/2001 By Keith Rathbun: Restrict population to
*              xins_cov in(1,2,3,6).  Use POSTSTR instead of
*              adj_cell.
*   Modified:  1) 11/11/2012 By Mike Rudacille Updated for handling of
*              Joint Service facilities
*              2) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*              Replaced RCTYPE with &PC.ReportCards
*              Changed INNORM to "&NORMDATA."
*              Changed CACLIB to ..\CAHPS_Adult&FYYEAR.\Data
*              Changed NORMDAT to &NORMFILE.
*              Changed INDATA to &DATAFILE.
*              Changed YRDATA to HCS&FY.
*              Changed YR to &FY.
*              Changed H11 to H&NY.
*              Changed H14 to H&FY.;
/*              Added lines for "cp&yr.obs&p=." and "cp&yr.den&p=."
*              Included DATA step in GETCORR to remove groupings with
only one obs.*
*/
*   Purpose:   Calculate MPR Preventive Care Composites
*   Input:     HCSyyq_1.sas7bdat
*   Output:    RFINAL.sas7bdat
*              CFINAL.sas7bdat
*              MFINAL.sas7bdat
*              SFINAL.sas7bdat
*
*   Include
*   Files:     LOADCAHPQ.INC
*   Notes:     Next program is Loadmprq.sas
*
*              ***CHECK PARAMETER ASSIGNMENTS***
*****;

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 MLOGIC MPRINT
        NOFMterr COMPRESS=YES;

/**** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ****/
%LET RCTYPE = &PC.ReportCards;

LIBNAME IN          "..../../Data";
LIBNAME INNORM      "&NORMDATA.";
LIBNAME CACLIB      "../CAHPS_Adult&FYYEAR./Data";
LIBNAME OUT         ".";
LIBNAME LIBRARY     "..../../Data/fmtlib";

%LET WGT=CFWT;
%LET NORMWGT = CFWT;
%LET NORMDAT = &NORMFILE.;

%LET DEBUG=N;      /** Set to Y for Debug print of datasets **/

```

```

%LET INDATA=&DATAFILE.;

%LET YRDATA=HCS&FY.;
%LET YR=&FY.;

/***** The following parameters are used in the Variance *****/
/***** calculation macro for region and catchment area *****/

%LET GRPNUM=8;          /** number of groups          **/
%LET COMPNUM=6;        /** number of variables        **/ /* RSG - 04/2005 changed from
8 to 7 (eliminate cholesterol*/
%LET REGNUM=18;        /** number of regions          **/ /* RSG - 01/2005 CHANGED TO
FIT THE 16 CATEGORIES OF XSERVREG */
Changed Overseas Regions*/
/* JSO 08/24/2006 (16 TO 15)
/* MER 11/11/2012 (15 TO 18)

Joint Service */
%LET CATCHNUM=9999; /** number of catchment areas **/

%LET CMPNUM1=4;        /** number of variables in first composite **/ /*RSG 04/2005
Changed CMPNUM1 from 5 to 4*/
%LET CMPNUM2=2;        /** number of variables in second composite **/ /*MJS 04/30/03
Changed CMPNUM2 from 4 to 3*/

%LET COMPCNT=2;        /** number of composites          **/

**** set up benchmarks for preventive services ;
**** MER 3/31/11 - updated to hp 2020 goals ;

%LET GOALVAR1= .78;    /** HP Goal for prenatal care          **/
%LET GOALVAR2= .81;    /** HP Goal for Mammography          **/
%LET GOALVAR3= .93;    /** HP Goal for Papsmear          **/
%LET GOALVAR4= .95;    /** HP Goal for Blood Pressure check **/
%LET GOALVAR5= .90;    /** access goals          **/ /*04/2005 - RSG:
DELETED CHOLESTEROLE GOAL*/
%LET GOALVAR6= .90;

%INCLUDE "../..//LoadWeb/LOADCAHQ.INC";

*****;
* Beneficiary group note
*   Eight groups          Definitions
* _____;
* 1. Prime enrollees      XINS_COV IN (1,2,6) AND H09004>=2
* 2. Enrollees w/mil PCM  XENR_PCM IN (1,2,6) AND H09004>=2
* 3. Enrollees w/civ PCM  XENR_PCM IN (3,7) AND H09004>=2
* 4. Nonenrollees        XINS_COV IN (3) /*JSO 08/24/2006, Deleted 4,5*/
* 5. Active duty         XBNFGRP = 1
* 6. Active duty dependents XBNFGRP = 2
* 7. Retirees            XBNFGRP IN (3,4)
* 8. All beneficiaries   ALL
*****;

*-----
* Add cacsmpl from group8.sd2 dataset - CDR 2/05/2004
*-----;

PROC SORT DATA=CACLIB.GROUP8 OUT=GROUP8(KEEP=MPRID CACSMPL XSERVIND);

```

```

    BY MPRID;
RUN;

PROC SORT DATA=IN.&INDATA(KEEP=MPRID XINS_COV HP_BP HP_MAMOG
                        HP_PAP HP_PRNTL /*ES 02/04/04*/
                        XTNEXREG XENR_PCM XBNFGRP ENBGSMPL &WGT FIELDAGE
DBENCAT
                        STRATUM H&FY.010 H&FY.007 H&FY.004 H&FY.003 SERVAFF
XREGION)
    OUT= &YRDATA; BY MPRID;
RUN;

/**** note -- output all data to a single dataset for macro */
/**** call */
/**** MACROS are no longer called for catchment areas */

/* 08/24/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
*LIBNAME LIBRARY '..\..\..\..\2005\Data\fmtlib';

DATA NORMDATA(KEEP=XTNEXREG XSERVREG &WGT PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
                DENV1-DENV&COMPNUM XSERVAFF FIELDAGE);
/* 11/15/2006 JSO Added FIELDAGE in the keep statement */

    set INNORM.&NORMDAT(KEEP=MPRID XINS_COV HP_BP HP_MAMOG HP_PAP HP_PRNTL XTNEXREG
                        XENR_PCM XBNFGRP ENBGSMPL &NORMWGT DBENCAT
                        H&NY.010 H&NY.007 H&NY.003 SERVAFF XREGION FIELDAGE
XCATCH);
/* 08/24/2006 JSO Added XREGION in the keep statement to get
XOCONUS */
/* 11/15/2006 JSO Added FIELDAGE in the keep statement */
/* 05/10/2007 JSO Added H05006, DBENCAT in the keep statement
*/
/* 12/21/2011 MER For switch to 2011 norm data mapped the
following vars: */
/* H05006 -> H&NY.003
*/
/* H05007 -> H&NY.004 (subsequently taken out due to not being
necessary */
/* H05019 -> H&NY.007
*/
/* H05022 -> H&NY.010
*/
/* H05030 and ADJ_CELL were dropped
*/

*****
* For quarterly reports, catchment level reporting is not done
* so the value of cellp is set to 1.
* For annual reporting purposes, cellp will need to be assigned
* to geocell
*****;

/*RSG 02/2005 Added codes to define XTNEXREG & XSERVAFF*/

    IF SERVAFF = 'A' THEN XSERVAFF = 1;      *Army;
    ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2; *Air Force;
    ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3; *Navy;

```

```

ELSE XSERVAFF = 4;                                *Other/unknown;

IF XCATCH = 37 THEN XCATCH = 67; /* Recode for combining of Walter Reed facilities
*/

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

IF XINS_COV NOT IN(1,2,3,6,9,10,11) THEN DELETE; /*JSO 07/30/2007, Added 9*/

NXNS_COV = XINS_COV;                               /*JSO 04/26/2007 added for reservists logic*/
                                                    /*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&NY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;

PRVVAR1=HP_PRNTL;          /** prenatal care **/
PRVVAR2=HP_MAMOG;         /** mammography **/
PRVVAR3=HP_PAP;           /** papsmear **/
PRVVAR4=HP_BP;            /** blood pressure **/
PRVVAR5=H&NY.010;         /** access var 1 **/
PRVVAR6=H&NY.007;         /** access var 2 **/

/**** set up numerator and denominator for proportions ****/

ARRAY PRVVAR(*) PRVVAR1-PRVVAR&COMPNUM;
ARRAY NUMER(*) NUMV1-NUMV&COMPNUM;
ARRAY DENOM(*) DENV1-DENV&COMPNUM;

DO I = 1 TO &COMPNUM;
    IF I LE &CMPNUM1 THEN DO;
        IF PRVVAR(I) = 1 THEN NUMER(I) = 1;
        ELSE NUMER(I)=0;
        IF PRVVAR(I) IN (1, 2) THEN DENOM(I)=1;
    END;
    ELSE IF I GT &CMPNUM1 THEN DO;
        IF PRVVAR(I) IN (1, 2) THEN NUMER(I)=1;
        ELSE NUMER(I)=0;
        IF PRVVAR(I) > 0 THEN DENOM(I)=1;
    END;
END;
DROP I;
DENV4=1;

/*RSG 02/2005 Added codes to define XSERVREG CACSMPL*/

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;

```

```

        ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
    ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 11;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
    ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/22/2006, Changed Overseas Regions*/
    IF XREGION = 13 THEN XSERVREG = 16;
    ELSE IF XREGION = 14 THEN XSERVREG = 17;
    ELSE IF XREGION = 15 THEN XSERVREG = 18;
END;

/* AMK 8/02/12 - New logic for handling out of catchment OCONUS */
IF XCATCH = 9904 THEN DO;
    IF XSERVREG <=5 THEN XCATCH=9901;
    ELSE IF XSERVREG <=10 THEN XCATCH=9902;
    ELSE IF XSERVREG <=15 THEN XCATCH=9903;
    ELSE IF XSERVREG = 16 THEN XCATCH=9905;
    ELSE IF XSERVREG = 17 THEN XCATCH=9906;
    ELSE IF XSERVREG = 18 THEN XCATCH=9907;
END;

RENAME XCATCH=CACSMPL &NORMWGT = &WGT;
run;

PROC SORT DATA=CACLIB.GROUP8 OUT=GROUP8(KEEP=MPRID CACSMPL XSERVIND);
    BY MPRID;
RUN;

/* 08/22/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
*LIBNAME LIBRARY "..\..\..\Data\Afinal\fmtlib";

DATA &YRDATA(KEEP=BGROUP MHS USA XSERVAFF CACSMPL &WGT. TMP_CELL
    PRVVAR1-PRVVAR&COMPNUM. NUM&YR.V1-NUM&YR.V&COMPNUM.
    DEN&YR.V1-DEN&YR.V&COMPNUM IN_GROUP8
    XTNEXREG XSERVREG XSERVIND);
    /* 11/15/2006 JSO Added FIELDAGE in the keep statement */

    MERGE &YRDATA.(IN=IN_1) GROUP8(IN=IN_2); /*CDR 2/05/2004 */
BY MPRID;
IF IN_1;
IF IN_2=1 THEN IN_GROUP8=1;
ELSE IN_GROUP8=0;

```

```

*****
* For quarterly reports, catchment level reporting is not done
* so the value of cellp is set to 1.
* For annual reporting purposes, cellp will need to be assigned
* to geocell
*****;
  IF SERVAFF = 'A' THEN XSERVAFF = 1;          *Army;
  ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2;    *Air Force;
  ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3;    *Navy;
  ELSE XSERVAFF = 4;                          *Other/unknown;

  IF PUT(CACSMPL, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

  CELLP = 1;
  LENGTH TMP_CELL 8;
  TMP_CELL = STRATUM; /* Make STRATUM a numeric variable */

  IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

  IF XTNEXREG = . THEN DELETE;

  IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*/
/*AMK 6/17/14 removed 11 added 13/14*/

  NXNS_COV = XINS_COV; /*JSO 05/14/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV conditions*/
  IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
  IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
  END;

  PRVVAR1=HP_PRNTL; /*** prenatal care **/
  PRVVAR2=HP_MAMOG; /*** mammography **/
  PRVVAR3=HP_PAP; /*** papsmear **/
  PRVVAR4=HP_BP; /*** blood pressure **/
/*RSG 04/2005 - delete cholesterol, renumber PRVVAR below*/
  PRVVAR5=H&FY.010; /*** access var 1 **/
  PRVVAR6=H&FY.007; /*** access var 2 **/

  /**** set up numerator and denominator for proportions ****/

  ARRAY PRVVAR(*) PRVVAR1-PRVVAR&COMPNUM;
  ARRAY NUMER(*) NUM&YR.V1-NUM&YR.V&COMPNUM;
  ARRAY DENOM(*) DEN&YR.V1-DEN&YR.V&COMPNUM;

  DO I = 1 TO &COMPNUM;
    IF I LE &CMPNUM1 THEN DO;
      IF PRVVAR(I) = 1 THEN NUMER(I) = 1;
      ELSE NUMER(I)=0;
      IF PRVVAR(I) IN (1, 2) THEN DENOM(I)=1;
    END;
    ELSE IF I GT &CMPNUM1 THEN DO;
      IF PRVVAR(I) IN (1, 2) THEN NUMER(I)=1;
    END;
  END;

```

```

        ELSE NUMER(I)=0;
        IF PRVVAR(I) > 0 THEN DENOM(I)=1;
    END;
END;
DROP I;
DENV4=1;

MHS= 1; /* set up dummy for MHS-- include all observations */

/* 08/22/2006, JSO Create XOUSA for 2005 data */

IF XTNEXREG = 1 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 1;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
    ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 6;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
    ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
    IF XSERVAFF = 1 THEN XSERVREG = 11;
    ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
    ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
    ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
    ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO;
    IF XREGION = 13 THEN XSERVREG = 16;
    ELSE IF XREGION = 14 THEN XSERVREG = 17;
    ELSE IF XREGION = 15 THEN XSERVREG = 18;

END;

IF XSERVREG = . THEN DELETE; /* MER 11/10/10 - Deletes records with imputed
TNEXREG = 'O' */
/* and missing XOCONUS. (Only applies to CACSMPL =
9904) */

/* AMK 8/02/12 - New logic for handling out of catchment OCONUS
USING CACSMPL INSTEAD OF XCATCH B/C NO RENAME STATEMENT AFTERWARD, AS IN
SMK_BMI AND STEP1*/

IF CACSMPL = 9904 THEN DO;
    IF XSERVREG <=5 THEN CACSMPL=9901;
    ELSE IF XSERVREG <=10 THEN CACSMPL=9902;
    ELSE IF XSERVREG <=15 THEN CACSMPL=9903;
    ELSE IF XSERVREG = 16 THEN CACSMPL=9905;
    ELSE IF XSERVREG = 17 THEN CACSMPL=9906;

```

```

ELSE IF XSERVREG = 18 THEN CACSMPL=9907;
END;

*****
* Assign indicator of USA based on XTNEXREG. USA stands for
* Contential United States it but includes both Alaska and Hawaii.
* 1/16/09 Changed USA to USA.
*****;
IF XTNEXREG IN (1,2,3) THEN USA=1; /*RSG 01/2005
OVERALL USA*/

ELSE IF XTNEXREG = 4 THEN USA=2;

* Prime enrollees *;

IF (NXNS_COV IN (1,2,6,13) AND H&FY.004>=2) THEN DO; /*AMK 6/17/14 added 13*/
  BGROUP=1;
  OUTPUT;
END;

* Enrollees with military PCMs *;
IF (XENR_PCM IN (1,2,6) AND H&FY.004>=2) THEN DO; /*ES 02/04/04*/
  BGROUP=2;
  OUTPUT;
END;

* Enrollees with civilian PCMs *; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
  (XENR_PCM IN (3,7) AND H&FY.004>=2) THEN DO;
  BGROUP=3;
  OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  ((XENR_PCM IN (3) AND H&FY.004>=2) OR NXNS_COV IN (3,9,10,14)) THEN DO; /*JSO
07/30/2007, Added 9*//*AMK 6/17/14 added 14*/
  BGROUP=3;
  OUTPUT;
END;

* Nonenrollees *;

IF NXNS_COV IN (3,9,10,14) THEN DO; /*JSO 08/24/2006, Deleted 4,5*//*AMK 6/17/14
added 14*/
  BGROUP=4; /*JSO 07/30/2007, Added 9*/
  OUTPUT;
END;

* Active duty *;

IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
  BGROUP=5; /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* Active duty dependents *;

IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;

```



```

        BGROUP=6;          /*JSO 07/30/2007, added DBENCAT conditions*/
        OUTPUT;
    END;

* Retirees *;

    IF XBNFGRP IN (3,4) THEN DO;
        BGROUP=7;
        OUTPUT;
    END;

* All beneficiaries *;

    BGROUP=8;
    OUTPUT;
RUN;

PROC FREQ DATA=&YRDATA;
    TABLES IN_GROUP8/MISSING LIST;
    TITLE "OVERLAP BETWEEN &INDATA AND GROUP8 DATA";
RUN;

**** Next, check catchment areas for requisite number of observations ;
**** for the macro calls (exclude cacsmpl w/ <2 obs) ;
**** also, keep list of region/catchment area combinations ;

PROC FREQ DATA=&YRDATA;
    TABLE BGROUP*MHS*USA*XSERVind*CACSMPL/MISSING LIST
    OUT=OBSCNT(DROP=PERCENT);
RUN;

PROC SORT DATA=&YRDATA; BY BGROUP MHS USA XSERVind CACSMPL;
RUN;

DATA HCSDB /*FAILED*/;
    MERGE &YRDATA(IN=IN_ALL) OBSCNT(IN=IN_OBS);
    BY BGROUP MHS USA XSERVind CACSMPL;
    IF COUNT < 2 THEN DO;
        PUT "Failed obs # criterion: XSERVREG=" XSERVREG "CACSMPL=" CACSMPL;
        *OUTPUT FAILED;
    END;
* ELSE OUTPUT HCSDB;
RUN;

DATA OBSCNT;
    SET OBSCNT;
    RENAME BGROUP=GROUP;
RUN;

PROC SORT NODUPKEY DATA=OBSCNT; BY GROUP CACSMPL;
RUN;

```

```

*****
*** First, calculate standard errors and create      ***
*** a file for each analytical unit                 ***
*****;

PROC SORT DATA=HCSDB; BY TMP_CELL;
RUN;

*****
***** Sudaan macro to calculate standard errors    *****
***** there are three output datasets created      *****
***** (XTNEXREG, XSERVREG, MHS, XSERVAFF)          *****
***** Note: 7/10/2000 use USA for MHS              *****
***** Note: there are 8 variables and 8 groups     *****
***** Note: 1/16/09 Changed USA to USA            *****
*****;

%MACRO A_SUDAAN(TABLEVAR);

*** set the number of levels in the proc descript ***;
*** for region or catchment                        ***;

%IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
  %LET ENDNUM=4;
  %LET PREF=S;          /** dataset prefix for service affiliation data **/
%END;
%IF %UPCASE(&TABLEVAR)=XSERVREG %THEN %DO;
  %LET ENDNUM=&REGNUM;
  %LET PREF=R;          /** dataset prefix for region data **/
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=USA %THEN %DO;
  %LET ENDNUM=1;
  %LET PREF=C;          /** dataset prefix for catchment area data **/
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
  %LET ENDNUM=5;        /** RSG 01/2005 Change level of USA to 4 **/
  %LET PREF=M;          /** MER 11/11/2012 Change from 4 to 5 for Joint Service **/
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=CACSMPL %THEN %DO;
  %LET ENDNUM=&CATCHNUM;
  %LET PREF=D;          /** dataset prefix for catchment area data **/
%END;

%DO I=1 %TO &GRPNUM;    /** 8 groups **/

  %DO J=1 %TO &COMPNUM;  /** 6 variables **/

    DATA INDATA&I.&J(KEEP=&WGT MHS USA XTNEXREG XSERVREG XSERVAFF
                      CACSMPL NUM&YR.V&J DEN&YR.V&J TMP_CELL);

    SET HCSDB;
    WHERE XSERVREG > 0 AND BGROUP=&I AND DEN&YR.V&J > 0;
    %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
      IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /*RSG 01/2005 Delete USA
greater than 4 which are not USA */
    %END;
    /*MER 11/11/2012 Changed
from 4 to 5 for Joint Service */
    %IF %UPCASE(&TABLEVAR)=USA %THEN %DO;
      IF USA NE 1 THEN DELETE;

```

```

%END;
%IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
    IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;
%END;
RUN;

```

*** Calculate values for regions, catchment areas ***;

```

PROC DESCRIPT DATA=INDATA&I.&J DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / MISSUNIT;
    VAR NUM&YR.V&J;
    TABLES &TABLEVAR;
    SUBGROUP &TABLEVAR;
    LEVELS &ENDNUM;
    OUTPUT SEMEAN/ TABLECELL=DEFAULT REPLACE
    FILENAME=&PREF.GRP&I.V&J;
RUN;

```

***** first, put all variables into one dataset for each group *****;

```

DATA &PREF.GRP&I.V&J;
    SET &PREF.GRP&I.V&J;
    IF SEMEAN NE .;
    MHS=1;
RUN;

```

```

%IF &J=1 %THEN %DO;
    DATA &PREF.SEGRP&I;
        SET &PREF.GRP&I.V&J(KEEP=&TABLEVAR SEMEAN);
        GROUP=&I;
        IF SEMEAN NE .;
        RENAME SEMEAN = SERR&YR.V&J;
    RUN;
%END;

```

```

%ELSE %DO;
    DATA &PREF.SEGRP&I;
        MERGE &PREF.SEGRP&I &PREF.GRP&I.V&J(KEEP=&TABLEVAR SEMEAN);
        BY &TABLEVAR;
        GROUP=&I;
        RENAME SEMEAN = SERR&YR.V&J;
    RUN;
%END;

```

```

%END;

```

```

***** Put all data into one dataset *****
***** Note: changed output dataset *****
***** to include group *****;

```

```

%IF &I=1 %THEN %DO;

```

```

    DATA &PREF.SERR;
        SET &PREF.SEGRP&I;
        KEEP GROUP &TABLEVAR SERR&YR.V1-SERR&YR.V&COMPNUM;
    RUN;

```

```

%END;
%ELSE %DO;

    DATA &PREF.SERR;
        SET &PREF.SERR
            &PREF.SEGRP&I;
    RUN;
%END;

***** DEBUG PRINT *****;

%IF &DEBUG=Y %THEN %DO;
    %IF &I=&GRPNUM AND &PREF=R %THEN %DO;
        PROC PRINT DATA=&PREF.SERR;
            VAR &TABLEVAR GROUP SERR&YR.V1-SERR&YR.V&COMPNUM;
        RUN;
    %END;
%END;

%END;

%MEND A_SUDAAN;

%A_SUDAAN (USA);
%A_SUDAAN (XSERVAFF);
%A_SUDAAN (XSERVREG);
%A_SUDAAN (XTNEXREG);
%A_SUDAAN (CACSMPL);

*****
*** Next, calculate correlation coefficients ***
*** and create a file for each analytical unit ***
*****;

%MACRO GETCORR(BYVAR);

%IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PREF=S;
%ELSE %IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PREF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PREF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=M;
%ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=D;

PROC SORT DATA=HCSDB; BY &BYVAR BGROUP;
RUN;

DATA HCSDB1;
    SET HCSDB;
    BY &BYVAR. BGROUP;
    IF FIRST.BGROUP NE 1 OR LAST.BGROUP NE 1;
RUN;

%DO I = 1 %TO &GRPNUM;

    PROC CORR NOPRINT DATA=HCSDB1 OUTP=&PREF.CORRC&I;

```

```

        %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %DO;
            WHERE BGROUP=&I AND 1 <= XSERVAFF <= 5;          /** RSG 0/2005 Change USA
values to keep to be between 1-4 **/
        %END;                                               /*MER 11/11/2012 Changed from 4
to 5 for Joint Service */
        %IF %UPCASE(&BYVAR)=USA %THEN %DO;
            WHERE BGROUP=&I AND USA = 1;
        %END;
        %ELSE %DO;
            WHERE BGROUP=&I;
        %END;
        BY &BYVAR;
        VAR PRVVAR1-PRVVAR&COMPNUM;
        WITH PRVVAR1-PRVVAR&COMPNUM;
        WEIGHT &WGT;
RUN;

DATA &PREF.CORRC&I;
SET &PREF.CORRC&I;
WHERE _TYPE_="CORR";
GROUP=&I;
ARRAY OLD PRVVAR1-PRVVAR&COMPNUM;
ARRAY NEW COR&YR.V1-COR&YR.V&COMPNUM;
DO J = 1 TO &COMPNUM;
    NEW(J)=OLD(J);
END;
DROP J PRVVAR1-PRVVAR&COMPNUM;
RUN;

%IF &I=1 %THEN %DO;

    DATA &PREF.CORRC;
        SET &PREF.CORRC&I;
    RUN;

%END;
%ELSE %DO;

    DATA &PREF.CORRC;
        SET &PREF.CORRC
            &PREF.CORRC&I;
    RUN;

%END;
%IF &DEBUG=Y %THEN %DO;
    %IF &I=&COMPNUM AND &PREF=R %THEN %DO;
        PROC PRINT DATA=&PREF.CORRC;
            WHERE GROUP=1;
        RUN;
    %END;
%END;
%END;

*** Flatten dataset(for each region, condense matrix to one row) ***;

%DO K=1 %TO &COMPNUM;

    DATA &PREF.CORR&K;

```

```

SET &PREF.CORRC;
WHERE _NAME_ = "PRVVAR&K";
ARRAY CORR (&COMPNUM) COR&YR.V1-COR&YR.V&COMPNUM;
ARRAY CORR&K (&COMPNUM) COR&YR.V&K.1-COR&YR.V&K.&COMPNUM;
DO L=1 TO &COMPNUM;
    CORR&K(L)=CORR(L);
END;
KEEP GROUP &BYVAR COR&YR.V&K.1-COR&YR.V&K.&COMPNUM;
RUN;
%IF &K=1 %THEN %DO;
    DATA &PREF.CORR;
    SET &PREF.CORR&K;
    RUN;
%END;
%ELSE %DO;
    DATA &PREF.CORR;
    MERGE &PREF.CORR(IN=IN_1) &PREF.CORR&K(IN=IN_2);
    BY GROUP &BYVAR;
    RUN;
%END;
%IF &DEBUG=Y %THEN %DO;
    %IF &PREF=R %THEN %DO;
        PROC PRINT DATA=&PREF.CORR;
        WHERE GROUP=1;
        RUN;
    %END;
%END;
%END;

%MEND GETCORR;

%GETCORR(USA);
%GETCORR(XSERVAFF);
%GETCORR(XSERVREG);
%GETCORR(XTNEXREG);
%GETCORR(CACSMPL);

*****
*** Macro to derive composites for each          *****
*** beneficiary group, level                      *****
*** output one dataset for each group            *****
*****;

%MACRO GETPROP(BYVAR);

%LET START = %EVAL(&COMPNUM1+1);

%IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PREF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PREF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=M;
%ELSE %IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PREF=S;
%ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=D;

PROC MEANS NWAY NOPRINT DATA=HCSDB;
CLASS BGROUP &BYVAR;
VAR NUM&YR.V1-NUM&YR.V&COMPNUM
    DEN&YR.V1-DEN&YR.V&COMPNUM;
WEIGHT &WGT;

```

```

        OUTPUT OUT= &PREF.CMPSUM(DROP = _TYPE_)
        SUM = ;
RUN;
PROC MEANS NWAY NOPRINT DATA=normdata;
*   CLASS &BYVAR;
    VAR
        DENV1-DENV&COMPNUM;
    WEIGHT &wgt.;
    OUTPUT OUT= &PREF.norms(DROP = _TYPE_)
    SUM = nrmv1-nrmv&compnum;
RUN;

PROC MEANS NWAY NOPRINT DATA=HCSDB;
    CLASS BGROUP &BYVAR;
    VAR DEN&YR.V1-DEN&YR.V&COMPNUM;
    OUTPUT OUT=&PREF.DGFR(DROP=_TYPE_ _FREQ_)
    SUM= NOBS&YR.V1-NOBS&YR.V&COMPNUM;
RUN;

data &pref.cmpsum;

if _n_=1 then set &pref.norms;
set &pref.cmpsum;
proc sort data=&pref.cmpsum; by bgroup &byvar;
    DATA &PREF.CMPSUM;
        MERGE &PREF.CMPSUM(RENAME=( _FREQ_=N_OBS&YR.))
            &PREF.DGFR;
        BY BGROUP &BYVAR;
        %IF &PREF=M %THEN %DO; /** added 7/10/2000 **/
            WHERE 1 <= XSERVAFF <= 5; /** RSG 01/2005 Change USA values to keep
to be between 1-4 **/
        %END; /**MER 11/11/2012 Changed from 4 to 5 for
Joint Service */
        %ELSE %IF &PREF=C %THEN %DO;
            WHERE USA = 1;
        %END;

**** set up group variable **;

    RENAME BGROUP=GROUP;;

**** set up proportions, and composites **;

    ARRAY PROPORT PROP&YR.V1-PROP&YR.V&COMPNUM;
    ARRAY NUMER NUM&YR.V1-NUM&YR.V&COMPNUM;
    ARRAY DENOM DEN&YR.V1-DEN&YR.V&COMPNUM;
    array norm nrmv1-nrmv&compnum;

    DO J=1 TO DIM(PROPORT);
        PROPORT(J) = NUMER(J)/DENOM(J);
    END;
    DROP J;

**** composites **;

** added goalvars to datastep, 5/30/2000 ;
** taken out of temporary array for variance calculations;

```

```

** and used, kept as variables ;

GOALVAR1=&GOALVAR1;
GOALVAR2=&GOALVAR2;
GOALVAR3=&GOALVAR3;
GOALVAR4=&GOALVAR4;
GOALVAR5=&GOALVAR5;
GOALVAR6=&GOALVAR6;
/*RSG 04/2005 - delete goal8 since chol eliminated*/

** the weight for preventive service is defined as the ;
** proportion of the denominator for that service to the ;
;
** composite denominator ;
** healthy people 2000 goals -- used as benchmarks ;

ARRAY SVCWGT(&COMPNUM) WGT&YR.V1-WGT&YR.V&COMPNUM;
ARRAY BMARK(&COMPNUM) GOALVAR1-GOALVAR&COMPNUM;
ARRAY WGTBMARK(&COMPNUM) WTD&YR.V1-WTD&YR.V&COMPNUM;
array comp(&compnum) cmp&yr.v1-cmp&yr.v&compnum;
cpden1=sum(of nrmv1-nrmv&compnum1);
cpden2=sum(of nrmv&start-nrmv&compnum);
DO K = 1 TO &COMPNUM;
  IF K < &START THEN SVCWGT(K)= norm(K)/CPDEN1;
  ELSE SVCWGT(K) = norm(K)/CPDEN2;
  WGTBMARK(K) = SVCWGT(K)*BMARK(K);
  comp(k)=svcwgt(k)*proport(k);
END;
DROP K;
CP&YR.BMK1=SUM(OF WTD&YR.V1-WTD&YR.V&COMPNUM1);
CP&YR.BMK2=SUM(OF WTD&YR.V&START-WTD&YR.V&COMPNUM);
comp&yr.1=sum(of cmp&yr.v1-cmp&yr.v&compnum1);
comp&yr.2=sum(of cmp&yr.v&start-cmp&yr.v&compnum);
DROP WGT&YR.V1-WGT&YR.V&COMPNUM WTD&YR.V1-WTD&YR.V&COMPNUM
NUM&YR.V1-NUM&YR.V&COMPNUM;

RUN;

%IF &DEBUG=Y AND &PREF=R %THEN %DO;
  PROC PRINT DATA=&PREF.CMPSUM; /* print out final dataset */
  RUN; /* for region to check */
%END;

%MEND GETPROP;

%GETPROP(USA);
%GETPROP(XSERVAFF);
%GETprop(XSERVREG);
%GETPROP(XTNEXREG);
%GETProp(CACSMPL);

*****
** since MHS benchmarks will be displayed ****
** set up adjustment factor to apply to ****
** each analytical unit's composite benchmarks ****
*****;

```



```

DATA ADJUST;
  SET MCMPSUM(KEEP=GROUP CP&YR.BMK1 CP&YR.BMK2);
  WHERE GROUP=8;          /** use all beneficiaries **/
  RENAME CP&YR.BMK1=MHS&YR.BM1;
  RENAME CP&YR.BMK2=MHS&YR.BM2;
  DROP GROUP;
RUN;

*****
*** Macro to merge 3 datasets for each          *****
*** called by analytical unit                   *****
*** output final dataset for                   *****
*** XSERVAFF, XSERVREG, XTNEXREG, MHS (USA)    *****
*****;

PROC FORMAT; /*RSG 02/2005 - hardcoded in prog to have caps vs format in
loadcahq.inc*/
  VALUE REGIONF
    0 = "USA MHS "
    1 = "NORTH"
    2 = "SOUTH"
    3 = "WEST"
    4 = "OVERSEAS"
;
%MACRO GETSIG(BYVAR);

%LET START = %EVAL(&CMPNUM1+1);
%LET NEXT  = %EVAL(&CMPNUM1+2);

%IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PREF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PREF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=M;
%ELSE %IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PREF=S;
%ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=D;

DATA OUT.&PREF.FINAL (KEEP= MAJGRP REGION REGCAT GOALVAR1-GOALVAR&COMPNUM
  SIG&YR.V1-SIG&YR.V&COMPNUM SCOR&YR.V1-SCOR&YR.V&COMPNUM
  CP&YR.SIG1-CP&YR.SIG&COMPNT CP&YR.1SE CP&YR.2SE
  CP&YR.BMK1-CP&YR.BMK&COMPNT
  SERR&YR.V1-SERR&YR.V&COMPNUM CP&YR.1SE CP&YR.2SE
  COMP&YR.1 COMP&YR.2 PROP&YR.V1-PROP&YR.V&COMPNUM
  DF&YR.SCR1-DF&YR.SCR&COMPNUM DF&YR._CP1 DF&YR._CP2
  NOBS&YR.V1-NOBS&YR.V&COMPNUM CP&YR.OBS1-CP&YR.OBS&COMPNT
  DEN&YR.V1-DEN&YR.V&COMPNUM CP&YR.DEN1-CP&YR.DEN&COMPNT);

/** output a dataset to check **/

/* OUT.&PREF.CHECK(DROP=DROP=SESQ&YR.V1-SESQ&YR.V&COMPNUM
  PROP&YR.V1-PROP&YR.V&COMPNUM
  SEM&YR.V11-SEM&YR.V&COMPNUM.&COMPNUM);*/

FORMAT MAJGRP $30. REGION $30. REGCAT $42.; /* MER 11/11/12 - Updated REGION for
Joint Service facilities */

%IF &PREF=D %THEN %DO;

```

```

MERGE OBSCNT(IN=IN_OBS) &PREF.CMPSUM(IN=IN_PROP) &PREF.CORR
      &PREF.SERR;
BY GROUP &BYVAR;
IF IN_OBS;

%END;
%ELSE %DO;

MERGE &PREF.CMPSUM(IN=IN_PROP) &PREF.CORR
      &PREF.SERR;
BY GROUP &BYVAR;
IF IN_PROP;

%END;

/** MAJGRP -- text field for group **/

IF GROUP=1 THEN MAJGRP="Prime Enrollees           ";
ELSE IF GROUP=2 THEN MAJGRP="Enrollees with Military PCM";
ELSE IF GROUP=3 THEN MAJGRP="Enrollees with Civilian PCM";
ELSE IF GROUP=4 THEN MAJGRP="Non-enrolled Beneficiaries ";
ELSE IF GROUP=5 THEN MAJGRP="Active Duty           ";
ELSE IF GROUP=6 THEN MAJGRP="Active Duty Dependents ";
ELSE IF GROUP=7 THEN MAJGRP="Retirees and Dependents ";
ELSE IF GROUP=8 THEN MAJGRP="All Beneficiaries       ";

/**** REGION AND REGCAT SETUP          **/

%IF &PREF=D %THEN %DO;
  REGCAT=PUT(CACSMPL, CACR.);
  REGION=PUT(XSERVIND, SERVREGO.);
%END;
%IF &PREF=S %THEN %DO;
  REGCAT=PUT(XTNEXREG, REGIONF.);
  REGION=PUT(XTNEXREG, REGIONF.);
%END;
%else %IF &PREF=C %THEN %DO;
  REGION="USA MHS";
  REGCAT="USA MHS";
%END;
%ELSE %IF &PREF=R %THEN %DO;
  REGION=PUT(XSERVREG, SERVREGO.);
  REGCAT=PUT(XSERVREG, SERVREGO.);
%END;
%ELSE %IF &PREF=M %THEN %DO;
  REGION=PUT(XSERVAFF, XSERVAFF.);
  REGCAT=PUT(XSERVAFF, XSERVAFF.);
%END;
service grouping **/

/**** setup t statistics, degrees of freedom **/

ARRAY  TSTAT{&COMPNUM} T_&YR.V1-T_&YR.V&COMPNUM;
ARRAY  BMARK{&COMPNUM} GOALVAR1-GOALVAR&COMPNUM;
ARRAY  STNDERR{&COMPNUM} SERR&YR.V1-SERR&YR.V&COMPNUM;
ARRAY  SERRSQR{&COMPNUM} SESQ&YR.V1-SESQ&YR.V&COMPNUM;

```

```

ARRAY      DEGF{&COMPNUM} DF&YR.SCR1-DF&YR.SCR&COMPNUM;
ARRAY      DENOM{&COMPNUM} DEN&YR.V1-DEN&YR.V&COMPNUM;
ARRAY      PROPORT{&COMPNUM} PROP&YR.V1-PROP&YR.V&COMPNUM;
ARRAY      SCORE{&COMPNUM} SCOR&YR.V1-SCOR&YR.V&COMPNUM;
ARRAY      PVALUE{&COMPNUM} PVAL&YR.V1-PVAL&YR.V&COMPNUM;
ARRAY      SIG{&COMPNUM} SIG&YR.V1-SIG&YR.V&COMPNUM;
ARRAY      N_OBS{&COMPNUM} NOBS&YR.V1-NOBS&YR.V&COMPNUM;
array      norm{&compnum} nrmv1-nrmv&compnum;
/** get the item variance, t-statistics, df, p-values **/
/** and whether significant **/

DO I=1 TO &COMPNUM;
  SERRSQR{I}=STNDERR{I}**2; /* Item variance */
  SCORE{I}=PROPORT{I}*100; /* Score (prop. * 100) */
  IF STNDERR{I} > 0 THEN TSTAT{I}=(PROPORT{I}-BMARK{I})/STNDERR{I};
  ELSE TSTAT{I}=.;
  DEGF{I}=N_OBS{I}-1;
  PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
  IF PVALUE{I} GE .05 THEN SIG{I}=0;
  ELSE IF PVALUE{I} < .05 THEN DO;
    IF PROPORT{I} > BMARK{I} THEN SIG{I}=1;
    IF PROPORT{I} < BMARK{I} THEN SIG{I}=-1;
  END;
END;
DROP I;

%DO I=1 %TO &COMPNUM.&COMPNUM.;
  SEM&YR.V&I. = 0;
%END;

/** multiply each item pair std. errors and correlation coefficients **/
/** preventive care composite **/

ARRAY SERRC1{&CMPNUM1} SERR&YR.V1-SERR&YR.V&CMPNUM1;
ARRAY SEwC1{&CMPNUM1} SEw&YR.V1-SEw&YR.V&CMPNUM1;
%DO J = 1 %TO &CMPNUM1;
  ARRAY SMEAN&J{&CMPNUM1} SEM&YR.V&J.1-SEM&YR.V&J.&CMPNUM1;
  ARRAY CORVAR&J{&CMPNUM1} COR&YR.V&J.1-COR&YR.V&J.&CMPNUM1;
  DO K=1 TO &CMPNUM1;
    SMEAN&J{K}=SERR&YR.V&J*SERRC1{K}*CORVAR&J{K}*norm{K}*nrmV&J;
  END;
  SEM&YR.V&J.&J=0; /** don't count in final standard error calculation **/
  sew&yr.v&j=(nrmV&j**2)*SESQ&YR.V&j;
%END;
DROP K;
/** multiply each item pair std. errors and correlation coefficients **/
/** access to care composite **/

ARRAY SERRC2{&CMPNUM2} SERR&YR.V&START-SERR&YR.V&COMPNUM;

%DO L = &START %TO &COMPNUM;
  ARRAY SMEAN&L{&CMPNUM2} SEM&YR.V&L.&START-SEM&YR.V&L.&COMPNUM;
  ARRAY CORVAR&L{&CMPNUM2} COR&YR.V&L.&START-COR&YR.V&L.&COMPNUM;
  DO M=1 TO &CMPNUM2;

```

```

        SMEAN&L{M}=SERR&YR.V&L*SERRC2{M}*CORVAR&L{M};
    END;
    SEM&YR.V&L.&L=0;  /** don't coun't in final standard error calculation **/
%END;
DROP M;
/** calculate composite t-statistic, pvalue, and whether significant **/
/** for composites **/

%DO P=1 %TO &COMPCNT;
    %IF &P=1 %THEN %DO;

        /** composite standard error comprised of two parts **/
        CP&YR.&P.SE1=SUM(OF SEW&YR.V1-SEW&YR.V&CMPNUM1);
        CP&YR.&P.SE2=SUM(OF SEM&YR.V11-SEM&YR.V&CMPNUM1.&CMPNUM1.);
        cp&yr.obs&p=sum(of nob&yr.v1-nob&yr.v&cmpnum1);
        cp&yr.den&p=sum(of nrmv1-nrmv&cmpnum1);
    %END;
    %ELSE %DO;
        CP&YR.&P.SE1=SUM(OF SESQ&YR.V&START-SESQ&YR.V&COMPNUM);
        CP&YR.&P.SE2=SUM(OF SEM&YR.V&START.&START.-SEM&YR.V&COMPNUM.&COMPNUM.);
        cp&yr.obs&p=.;
        cp&yr.den&p=.;
    %END;

    /** add the two parts of the composite standard error **/
    /** calculate the composite t statistics and p-values **/
    /** determine whether differences re significant **/

    /**RSG - 02/2005 Some of the following codes will produce some
        "error" (e.g., fields that are not initialized) - these
        are "leftover" codes from previous versions of the survey
        where 2 composite scores were produced. Now since we only
        use 1 composite score, these are basically calculations that
        are not used...but kept in "just in case"*/
    IF CP&YR.DEN&P > 0 THEN
CP&YR.&P.SE=SQRT(CP&YR.&P.SE2+CP&YR.&P.SE1)/cp&yr.den&p;  /**RSG 02/2005 prevent
division by zero*/
    ELSE CP&YR.&P.SE = .;
    IF CP&YR.&P.SE > 0 THEN CP&YR._T&P.=(COMP&YR.&P.-CP&YR.BMK&P.)/CP&YR.&P.SE;
    ELSE CP&YR._T&P.= .;
    DF&YR._CP&P.=CP&YR.OBS&P. - 1;
    CP&YR._P&P.=(1-PROBT(ABS(CP&YR._T&P.),DF&YR._CP&P.))*2;
    IF CP&YR._P&P GE .05 THEN CP&YR.SIG&P=0;
    ELSE IF CP&YR._P&P < .05 THEN DO;
        IF COMP&YR.&P. > CP&YR.BMK&P THEN CP&YR.SIG&P= 1;
        ELSE IF COMP&YR.&P. < CP&YR.BMK&P THEN CP&YR.SIG&P=-1;
    END;

%END;

OUTPUT OUT.&PREF.FINAL;

/**%IF &PREF=M %THEN %DO;
    OUTPUT OUT.&PREF.CHECK;
%END; */

RUN;

```

```
PROC SORT DATA = OUT.&PREF.FINAL;BY MAJGRP REGION REGCAT;RUN;
```

```
%MEND GETSIG;
```

```
/** RSG 02/2005 - Any errors relating to uninitialized fields such as  
cp&yr.den2 or cp&yr.obs2 can be ignored - these (as well as field  
that uses these fields for calculations, e.g. df&yr._cp2, are not  
used **/
```

```
%GETSIG(USA);
```

```
%GETSIG(XTNEXREG);
```

```
%GETSIG(XSERVREG);
```

```
%GETSIG(XSERVAFF);
```

```
%GETSIG(CACSMPL);
```

G.11.B - ReportCards\MPR_Adult2017\smoking_BMI.sas - Calculate Healthy Behavior Composite Scores - Annual.

```

*****
*
* Project:    DoD Reporting and Analysis 6077-410
* Program:    SMOKING_BMI.SAS
* Purpose:    Calculate Smoking Rate and Smoking Cessation
*             for each region-service affiliation and
*             conus-service affiliation groups.
*
* Date:       1/31/2005
* Author:     Regina Gramss
*
* Modified:   27) 11/11/2012 By Mike Rudacille Updated for handling of Joint Service
facilities
*             28) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
                    Replaced RCTYPE with &PC.ReportCards
                    Changed BENCH to "&BENCHINPUT."
                    Changed INNORM to "&NORMDATA."
                    Changed INGP to ..\CAHPS_ADULT&FYYEAR.\DATA
                    Changed DSN to &DATAFILE.
                    Changed DSN_NORM to &NORMFILE.
                    Changed CURRENT to &FYYEAR.
                    Changed C13_ZAMV to &BENCHFILE.
                    Added LIBRARY "&NORMFMTLIB."
                    Removed line referencing JOINTSRV in the NORMDATA step.
                    Changed LOADCAHQ to "..\..\LOADWEB\LOADCAHQ.INC"
                    Changed H11 to H&NY.
                    Changed H14 to H&FY.
                    Added LIBRARY '..\..\Data\fmtlib'.
                    Added NSUM = ROUND(NSUM,1)
*
* Inputs:     1) HCS11A_2.sas7bdat - Annual 2011 Survey data
*             2) HCS13A_2.sas7bdat - Annual 2013 Survey data
*             3) AC2011DB.sas7bdat - 2011 CAHPS Benchmark Data
*
* Output:     1) SMOKE.sas7bdat
*
*****;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMterr;

/**** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ****/
%LET RCTYPE = &PC.ReportCards;

LIBNAME BENCH          "&BENCHINPUT.";
LIBNAME INDAT          "..\..\Data";
LIBNAME INNORM         "&NORMDATA.";
LIBNAME OUT            ".";
LIBNAME LIBRARY        '..\..\Data\fmtlib';
LIBNAME INGP           "..\CAHPS_Adult&FYYEAR.\Data";

%LET DSN=&DATAFILE.;
%LET DSN_NORM=&NORMFILE.;                               /*JSO 08/24/2006, Changed Regions, 16 to
15*/ /* MER 11/03/12 15 to 18 */

```

```

%LET REGNUM = 18; /*RSG 01/2005 Number of Regions (with serv
affiliation)*/
%LET CONNUM = 4; /*RSG 01/2005 Number of Conus level (with
serv affiliation)*/
%LET SRVNUM = 5; /*MER 11/03/2012 Number of service
affiliations, including Joint Service */
%LET CURRENT = &FYYEAR.;
%LET WGT = CFWT;
%LET NORMWGT = CFWT;
%LET CATCHNUM=9999; /*RSG 02/2005 number of catchment areas **/

DATA BENCHA01;
  SET BENCH.&BENCHFILE. ;
  if rep_typ in ("HMO/PPO Combined", "PPO") then model = 1;
  else model = 2;
  if disp in ('M10','I10') ;
  if S46 in (1,2) & S47>=1 & S47<=4; /*02/2006 RSG - REMOVED REQUIREMENT FOR
ADDITIONAL VISIT (ACC22 FIELD)*/
  cessbnch=0;
  if S47>1 then cessbnch=1;

proc summary nway; class sub_id;
var cessbnch;
output out=tbench mean=;
proc print;
proc summary;
var cessbnch;
output out=tbench mean=;
proc print;
data _null_;
set tbench;
call symput('CNSLGOAL',cessbnch);
run;

%LET NSMKGOAL = 0.88;

%LET BMIGOAL = 0.69;

%INCLUDE "../..../LoadWeb/LOADCAHQ.INC";

PROC FORMAT;
VALUE AGEF
LOW - 34 = 1
 35 - 49 = 2
 50 - 64 = 3
 65 - HIGH = 4;

/* 08/22/2006 JSO Moved from the top of program for using Quarter vs. Annual Formats
*/
LIBNAME LIBRARY "&NORMFMTLIB.";

DATA NORMDATA (KEEP=TMP_CELL AGE_GRP XTNEXREG XSERVREG XSERVAFF
SM_RATE SM_CESS SM_RTDN SM_CSDN BMI_DN BMI
TOTCON GROUP XSEXA &WGT. age_n MPCSMPL CACSMPL NXNS_COV);
/* 05/10/2007 JSO Added NXNS_COV in the keep statement */

```

```
SET INNORM.&DSN_NORM. (DROP=CACSMPL) ;
LENGTH AGE_N AGE_GRP TMP_CELL 8.;
```

```
TMP_CELL=STRATUM;
```

```
AGE_N = FIELDAGE;
```

```
AGE_GRP = PUT(AGE_N, AGEF.);
IF AGE_GRP < 4;
```

```
IF SERVAFF = 'A' THEN XSERVAFF = 1;           *Army;
ELSE IF SERVAFF = 'F' THEN XSERVAFF = 2;      *Air Force;
ELSE IF SERVAFF = 'N' THEN XSERVAFF = 3;      *Navy;
ELSE XSERVAFF = 4;                             *Other/unknown;
```

```
IF XCATCH = 37 THEN XCATCH = 67; /* Recode for combining of Walter Reed facilities */
```

```
IF XTNEXREG = 1 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 1;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
  ELSE XSERVREG = 5;
END;
```

```
IF XTNEXREG = 2 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 6;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
  ELSE XSERVREG = 10;
END;
```

```
IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;
```

```
IF XTNEXREG = 4 THEN DO; /*JSO 08/22/2006, Changed Overseas Regions*/
  IF XREGION = 13 THEN XSERVREG = 16;
  ELSE IF XREGION = 14 THEN XSERVREG = 17;
  ELSE IF XREGION = 15 THEN XSERVREG = 18;
END;
```

```
IF HP_SMKH3 IN (1,2) THEN DO;
  SM_RATE = 0;
  IF HP_SMKH3 = 2 THEN SM_RATE=1;
  SM_RTDN=1;
END;
```



```

/* MER 3/31/11 Start using HP_CESH3 instead of re-creating work already done in
convarq */
IF HP_CESH3 IN (1,2) THEN DO;
    SM_CESS = 0;
    IF HP_CESH3 = 1 THEN SM_CESS=1;
    SM_CSDN=1;
END;

IF xbmicat > 0 THEN DO;
    BMI = 0;
    BMI_DN=1;
    IF xbmicat <=3 THEN BMI=1;
END;

IF XTNEXREG IN (1,2,3) THEN TOTCON=1;

ELSE IF XTNEXREG = 4 THEN TOTCON=2;

IF MPCSMPL = 3 THEN MPCSMPL = 2; /* RSG 02/2006 GROUP WARRANT OFFICER WITH OFFICER
*/

/* AMK 8/02/12 - New logic for handling out of catchment OCONUS */
IF XCATCH = 9904 THEN DO;
    IF XSERVREG <=5 THEN XCATCH=9901;
    ELSE IF XSERVREG <=10 THEN XCATCH=9902;
    ELSE IF XSERVREG <=15 THEN XCATCH=9903;
    ELSE IF XSERVREG = 16 THEN XCATCH=9905;
    ELSE IF XSERVREG = 17 THEN XCATCH=9906;
    ELSE IF XSERVREG = 18 THEN XCATCH=9907;
END;

RENAME XCATCH=CACSMPL /*&NORMWGT = &WGT Renaming not needed in HEDIS*/;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

IF XINS_COV NOT IN(1,2,3,6,9,10,11) THEN DELETE; /*JSO 07/30/2007, Added 9*/ /*MER
07/12/11 Added 10,11*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&NY.003 = 3 THEN DO;
    NXNS_COV = 3;
    XENR_PCM = .;
END;

* prime enrollees;
IF NXNS_COV IN (1,2,6) AND H&NY.004>=2 THEN DO;
    GROUP=1;
    OUTPUT;
END;

```

```

* enrollees with military pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF XENR_PCM IN (1,2,6) AND H&NY.004>=2 THEN DO;
    GROUP=2;
    OUTPUT;
END;

* enrollees with civilian pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
    XENR_PCM = 3 AND H&NY.004>=2 THEN DO;
    GROUP=3;
    OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
    ((XENR_PCM = 3 AND H&NY.004>=2) OR NXNS_COV IN (3,9,10)) THEN DO; /*JSO
07/30/2007, Added 9*/
    GROUP=3;
    OUTPUT;
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
    GROUP=4; /*JSO 07/30/2007, Added 9*/
    OUTPUT;
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
    GROUP=5; /*JSO 07/30/2007, added DBENCAT conditions*/
    OUTPUT;
END;

* active duty dependents;
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
    GROUP=6; /*JSO 07/30/2007, added DBENCAT conditions*/
    OUTPUT;
END;

* retirees;
IF XBNFGRP IN (3,4) THEN DO;
    GROUP=7;
    OUTPUT;
END;

* all beneficiaries;
GROUP=8;
OUTPUT;

RUN;

LIBNAME LIBRARY '..../Data/fmtlib';

DATA SMOKE (KEEP=TMP_CELL AGE_GRP XTNEEXREG XSERVREG XSERVAFF TOTCON GROUP
    SM_RATE SM_CESS SM_RTDN SM_CSDN XSEXA &WGT BMI_DN BMI
    CACSMPL MPCSMPL NXNS_COV);/* 05/10/2007 JSO Added NXNS_COV in the
keep statement */

```

```

SET INDAT.&DSN. (DROP=CACSMPL);
LENGTH AGE_N AGE_GRP TMP_CELL 8.;

/* MER 4/20/09 - Restrict dataset to just non-zero V4 weights */
*IF &WGT <= 0 THEN DELETE;

TMP_CELL=STRATUM;

AGE_N = FIELDAGE;

AGE_GRP = PUT(AGE_N, AGEF.);

IF AGE_GRP < 4;
IF SERVAFF='A' THEN XSERVAFF=1;           *Army;
  ELSE IF SERVAFF='F' THEN XSERVAFF=2;     *Air Force;
  ELSE IF SERVAFF='N' THEN XSERVAFF=3;     *Navy;
  ELSE XSERVAFF=4;

IF XCATCH = 37 THEN XCATCH = 67; /* Recode for combining of Walter Reed facilities */

IF PUT(XCATCH, JOINTSRV.)='1' THEN XSERVAFF=5; *Joint Service;

IF XTNEXREG = 1 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 1;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 2;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 3;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 4;
  ELSE XSERVREG = 5;
END;

IF XTNEXREG = 2 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 6;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 7;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 8;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 9;
  ELSE XSERVREG = 10;
END;

IF XTNEXREG = 3 THEN DO;
  IF XSERVAFF = 1 THEN XSERVREG = 11;
  ELSE IF XSERVAFF = 2 THEN XSERVREG = 12;
  ELSE IF XSERVAFF = 3 THEN XSERVREG = 13;
  ELSE IF XSERVAFF = 4 THEN XSERVREG = 14;
  ELSE XSERVREG = 15;
END;

IF XTNEXREG = 4 THEN DO; /*JSO 08/24/2006, Changed Overseas Regions*/
  IF XREGION = 13 THEN XSERVREG = 16;
  ELSE IF XREGION = 14 THEN XSERVREG = 17;
  ELSE IF XREGION = 15 THEN XSERVREG = 18;
END;

IF XSERVREG = . THEN DELETE; /* MER 11/10/10 - Deletes records with imputed TNEXREG
= '0' */
/* and missing XOCONUS. (Only applies to CACSMPL =
9904) */

IF XTNEXREG IN (1,2,3) THEN TOTCON=1;

```

```

ELSE IF XTNEXREG=4 THEN TOTCON=2;

IF MPCSMPL = 3 THEN MPCSMPL = 2; /* RSG 02/2006 GROUP WARRANT OFFICER WITH OFFICER
*/

/* AMK 8/02/12 - New logic for handling out of catchment OCONUS */
IF XCATCH = 9904 THEN DO;
  IF XSERVREG <=5 THEN XCATCH=9901;
  ELSE IF XSERVREG <=10 THEN XCATCH=9902;
  ELSE IF XSERVREG <=15 THEN XCATCH=9903;
  ELSE IF XSERVREG = 16 THEN XCATCH=9905;
  ELSE IF XSERVREG = 17 THEN XCATCH=9906;
  ELSE IF XSERVREG = 18 THEN XCATCH=9907;
END;

RENAME XCATCH=CACSMPL;

IF FIELDAGE >= '065' THEN DELETE; /*JSO added 11/10/2006*/

IF XTNEXREG = . THEN DELETE;

IF XINS_COV NOT IN(1,2,3,6,9,10,13,14) THEN DELETE; /*JSO 07/30/2007, Added 9*//AMK
6/17/14 removed 11, added 13/14*/

NXNS_COV = XINS_COV; /*JSO 04/26/2007 added for reservists logic*/
/*JSO 07/30/2007, added DBENCAT, NXNS_COV
conditions*/
IF DBENCAT NOT IN('IGR','GRD','IDG','DGR') AND NXNS_COV = 9 THEN DELETE;
IF DBENCAT IN('GRD','IGR') AND H&FY.003 = 3 THEN DO;
  NXNS_COV = 3;
  XENR_PCM = .;
END;

IF HP_SMKH3 IN (1,2) THEN DO;
  SM_RATE = 0;
  IF HP_SMKH3 = 2 THEN SM_RATE=1;
  SM_RTDN=1;
END;

/* MER 10/07/11 Start using HP_CESH3 instead of re-creating work already done in
convarq */
IF HP_CESH3 IN (1,2) THEN DO;
  SM_CESS = 0;
  IF HP_CESH3 = 1 THEN SM_CESS=1;
  SM_CSDN=1;
END;

IF xbmicat > 0 THEN DO;
  BMI = 0;
  BMI_DN=1;
  IF xbmicat <=3 THEN BMI=1;
END;

* prime enrollees;
IF NXNS_COV IN (1,2,6,13) AND H&FY.004>=2 THEN DO; /*AMK 6/17/14 added 13*/
  GROUP=1;

```

```

OUTPUT;
END;

* enrollees with military pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF XENR_PCM IN (1,2,6) AND H&FY.004>=2 THEN DO;
  GROUP=2;
  OUTPUT;
END;

* enrollees with civilian pcms; /*JSO 04/05/2007, added conditions for RC type*/
IF "&RCTYPE" = 'ReportCards' AND
  XENR_PCM = 3 AND H&FY.004>=2 THEN DO;
  GROUP=3;
  OUTPUT;
END;
ELSE IF "&RCTYPE" = 'PurchasedReportCards' AND
  ((XENR_PCM = 3 AND H&FY.004>=2) OR NXNS_COV IN (3,9,10,14)) THEN DO; /*JSO
07/30/2007, Added 9*/ /*AMK 6/17/14 added 14*/
  GROUP=3;
  OUTPUT;
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10,14) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/ /*AMK 6/17/14
added 14*/
  GROUP=4; /*JSO 07/30/2007, Added 9*/
  OUTPUT;
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
  GROUP=5; /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* active duty dependents;
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
  GROUP=6; /*JSO 07/30/2007, added DBENCAT conditions*/
  OUTPUT;
END;

* retirees;
IF XBNFGRP IN (3,4) THEN DO;
  GROUP=7;
  OUTPUT;
END;

* all beneficiaries;
GROUP=8;
OUTPUT;

RUN;

proc freq;
table xservreg*cacsmpl/list;
run;

```

```

PROC SORT DATA=SMOKE;
BY TMP_CELL;
PROC SORT DATA=NORMDATA;
BY TMP_CELL;
RUN;

%MACRO A_SUDAAN(TABLEVAR, SMOKE, SMOKEVAR, DEN);

%IF %UPCASE(&TABLEVAR)=XSERVREG %THEN %DO;
    %LET ENDNUM=&REGNUM;
    %LET PREF=R;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
    %LET ENDNUM=&SRVNUM;
    %LET PREF=M;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=XTNEXREG %THEN %DO;
    %LET ENDNUM=&CONNUM;
    %LET PREF=S;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=CACSMPL %THEN %DO;    /**RSG 02/2005 add code to calc by
CACSMPL**/
    %LET ENDNUM=&CATCHNUM;
    %LET PREF=D;
%END;
%ELSE %IF %UPCASE(&TABLEVAR)=TOTCON %THEN %LET PREF=C;

%DO I = 1 %TO 8;

    DATA INDAT&I.(KEEP=&WGT XSERVAFF XSERVREG AGE_GRP XSEXA CACSMPL MPCSMPL
                    &SMOKEVAR. &DEN. TMP_CELL XTNEXREG);
    SET SMOKE;
    WHERE XSERVREG > 0 AND GROUP=&I. AND &DEN. >= 0;
        %IF %UPCASE(&TABLEVAR) = XSERVAFF %THEN %DO;
            IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /* MER 11/11/12 - Changed 4
to 5 */
        %END;
        %IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
            IF TOTCON NE 1 THEN DELETE;
        %END;
        %IF %UPCASE(&TABLEVAR) = XTNEXREG %THEN %DO;
            IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;
        %END;
    RUN;

    DATA NORMDAT&I.(KEEP=&WGT XSERVAFF XSERVREG AGE_GRP XSEXA &SMOKEVAR. &DEN.
                    TMP_CELL XTNEXREG MPCSMPL);
    SET NORMDATA;
    WHERE XSERVREG > 0 AND GROUP=&I.;

    %IF %UPCASE(&TABLEVAR) = XSERVAFF %THEN %DO;
        IF XSERVAFF > 5 OR XSERVAFF = . THEN DELETE; /* MER 11/11/12 - Changed 4
to 5 */
    %END;
    %IF %UPCASE(&TABLEVAR) = XTNEXREG %THEN %DO;
        IF XTNEXREG NOTIN (1,2,3,4) THEN DELETE;

```

```

%END;
RUN;

%IF %UPCASE(&SMOKE) NE CS AND %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
  PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;
    TABLES AGE_GRP*XSEXA*MPCSMPL*&TABLEVAR.;
    SUBGROUP AGE_GRP XSEXA MPCSMPL &TABLEVAR.;
    LEVELS 8 2 2 &ENDNUM.;
    OUTPUT SEMEAN MEAN wsum nsum
      / TABLECELL=DEFAULT REPLACE
      FILENAME=&PREF.GRP&I.&SMOKE.;
  RUN;
%END;

%ELSE %IF %UPCASE(&SMOKE) NE CS AND %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
  PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;
    TABLES AGE_GRP*XSEXA*MPCSMPL;
    SUBGROUP AGE_GRP XSEXA MPCSMPL;
    LEVELS 3 2 2;
    OUTPUT SEMEAN MEAN wsum nsum
      / TABLECELL=DEFAULT REPLACE
      FILENAME=&PREF.GRP&I.&SMOKE.;
  RUN;
%END;

%IF %UPCASE(&SMOKE) NE CS %THEN %DO;

  DATA &PREF.SER_&I.&SMOKE.;
  SET &PREF.GRP&I.&SMOKE.;
  GROUP=&I.;
  IF SEMEAN NE .;
  %IF %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
    KEEP &TABLEVAR. GROUP AGE_GRP XSEXA MPCSMPL SEMEAN MEAN wsum nsum;
  %END;
  %IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
    TOTCON=1;
    KEEP TOTCON GROUP AGE_GRP XSEXA MPCSMPL SEMEAN MEAN wsum nsum;
  %END;
  RUN;

  /* CREATE WEIGHTS FROM 2005 DATA*/
  proc summary data=normdat&i. nway;
    var &WGT;
    where &den>0;
    class age_grp xsexa MPCSMPL;
    output out=norm_&i. sum=normwt;

  proc sort data=&pref.ser_&i.&smoke.;
    by age_grp xsexa mpcsmpl;

  data &pref.ser_&i.&smoke.;

```

```

merge &pref.ser_&i.&smoke.(in=gin) norm_&i.;
by age_grp xsexa mpcsmpl;
if gin;
wsum=wsum/normwt;
nsum=nsum/normwt;
sesq=normwt*semean**2;

run;

proc summary data=&pref.ser_&i.&smoke. nway;
var mean semean sesq wsum nsum;
class &tablevar.;
weight normwt;
output out=&pref.sert&i.&smoke. mean(mean sesq)= sum(wsum nsum)=
sumwgt(semean)=;
run;

data &pref.sert&i.&smoke;
set &pref.sert&i.&smoke;
group=&i.;
semean=sqrt(sesq/semean);
NSUM = ROUND(NSUM,1);
drop _type_ _freq_;
run;

%IF &I. = 1 %THEN %DO;

DATA &PREF._&SMOKE.;
SET &PREF.SERT&I.&SMOKE.;
RUN;
%END;
%ELSE %DO;

DATA &PREF._&SMOKE.;
SET &PREF._&SMOKE. &PREF.SERT&I.&SMOKE.;
RUN;

PROC SORT DATA=&PREF._&SMOKE.;
BY GROUP;
RUN;

%END;

%END;
%IF %UPCASE(&SMOKE) = CS AND %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
WEIGHT &WGT;
SETENV DECWIDTH=4;
NEST TMP_CELL / missunit;
VAR &SMOKEVAR;
TABLES AGE_GRP*XSEXA*&TABLEVAR.;
SUBGROUP AGE_GRP XSEXA &TABLEVAR.;
LEVELS 3 2 &ENDNUM.;
OUTPUT SEMEAN MEAN wsum nsum
/ TABLECELL=DEFAULT REPLACE
FILENAME=&PREF.GRP&I.&SMOKE.;
RUN;
%END;
%ELSE %IF %UPCASE(&SMOKE) = CS AND %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;

```



```

PROC DESCRIPT DATA=INDAT&I. DESIGN=STRWR NOPRINT;
    WEIGHT &WGT;
    SETENV DECWIDTH=4;
    NEST TMP_CELL / missunit;
    VAR &SMOKEVAR;
    TABLES AGE_GRP*XSEX;
    SUBGROUP AGE_GRP XSEX;
    LEVELS 3 2 ;
    OUTPUT SEMEAN MEAN wsum nsum
        / TABLECELL=DEFAULT REPLACE
        FILENAME=&PREF.GRP&I.&SMOKE.;

    RUN;
%END;

%IF %UPCASE(&SMOKE) = CS %THEN %DO;

DATA &PREF.SER_&I.&SMOKE.;
    SET &PREF.GRP&I.&SMOKE.;
    GROUP=&I.;
    IF SEMEAN NE .;
    %IF %UPCASE(&TABLEVAR) NE TOTCON %THEN %DO;
        KEEP &TABLEVAR. GROUP AGE_GRP XSEX SEMEAN MEAN wsum nsum;
    %END;
    %IF %UPCASE(&TABLEVAR) = TOTCON %THEN %DO;
        TOTCON=1;
        KEEP TOTCON GROUP AGE_GRP XSEX SEMEAN MEAN wsum nsum;
    %END;

RUN;

/* CREATE WEIGHTS FROM 2005 DATA*/
proc summary data=normdat&i. nway;
    var &WGT;
    where &den>0;
    class age_grp xsex;
    output out=norm_&i. sum=normwt;

proc sort data=&pref.ser_&i.&smoke.;
    by age_grp xsex;

data &pref.ser_&i.&smoke.;
    merge &pref.ser_&i.&smoke.(in=gin) norm_&i.;
    by age_grp xsex;
    if gin;
    wsum=wsum/normwt;
    nsum=nsum/normwt;
    sesq=normwt*semean**2;

run;

proc summary data=&pref.ser_&i.&smoke. nway;
    var mean semean sesq wsum nsum;
    class &tablevar.;
    weight normwt;
    output out=&pref.sert&i.&smoke. mean(mean sesq)= sum(wsum nsum)=
sumwgt(semean)=;
run;

data &pref.sert&i.&smoke;
    set &pref.sert&i.&smoke;

```

```

        group=&i.;
            semean=sqrt(sesq/semean);
        drop _type_ _freq_;
run;

%IF &I. = 1 %THEN %DO;

    DATA &PREF._CESS;
        SET &PREF.SERT&I.&SMOKE.;
    RUN;
%END;
%ELSE %DO;

    DATA &PREF._CESS;
        SET &PREF._CESS &PREF.SERT&I.&SMOKE.;
    RUN;

    PROC SORT DATA=&PREF._CESS;
        BY GROUP;
    RUN;

%END;

%END;

%MEND;

%A_SUDAAN(XSERVAFF,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XSERVAFF,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XSERVAFF,BM,BMI,BMI_DN);
%A_SUDAAN(XSERVREG,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XSERVREG,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XSERVREG,BM,BMI,BMI_DN);
%A_SUDAAN(XTNEXREG,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(XTNEXREG,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(XTNEXREG,BM,BMI,BMI_DN);
%A_SUDAAN(TOTCON,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(TOTCON,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(TOTCON,BM,BMI,BMI_DN);
%A_SUDAAN(CACSMPL,RT,SM_RATE,SM_RTDN);
%A_SUDAAN(CACSMPL,CS,SM_CESS,SM_CSDN);
%A_SUDAAN(CACSMPL,BM,BMI,BMI_DN);

%MACRO ADDIT(PREF, TYPE);

DATA &PREF.&TYPE;
SET &PREF.&TYPE;
LENGTH BENEFIT $34. BENTYPE $50.;

BENEFIT="Healthy Behaviors";
%IF &TYPE=RT %THEN %DO;
    BENTYPE="Non-Smoking Rate";
%END;
%IF &TYPE=CESS %THEN %DO;
    BENTYPE="Counselled To Quit";
%END;

```

```

%IF &TYPE = BM %THEN %DO;
    BENTYPE = "Percent Not Obese";
%END;
RUN;

%MEND;

%ADDIT(C,RT);
%ADDIT(C,CESS);
%ADDIT(C,BM);
%ADDIT(M,RT);
%ADDIT(M,CESS);
%ADDIT(M,BM);
%ADDIT(R,RT);
%ADDIT(R,CESS);
%ADDIT(R,BM);
%ADDIT(S,RT);
%ADDIT(S,CESS);
%ADDIT(S,BM);
%ADDIT(D,RT);
%ADDIT(D,CESS);
%ADDIT(D,BM);

proc freq data=ingp.group8 noprint;
tables cacsmp1*xservind / list out=cacformat(drop=count percent);
run;

%MACRO MAKEDATA(PREF, TABLEVAR);
    DATA &PREF._SMOKE;
    SET &PREF._RT
        &PREF._CESS
        &PREF._BM
    ;

    LENGTH MAJGRP $30. REGION $30. REGCAT $42.; /* MER 11/11/2012 - Updated REGION for
Joint Service facilities */

    IF      GROUP=1 THEN MAJGRP="Prime Enrollees           ";
    ELSE IF GROUP=2 THEN MAJGRP="Enrollees with Military PCM";
    ELSE IF GROUP=3 THEN MAJGRP="Enrollees with Civilian PCM";
    ELSE IF GROUP=4 THEN MAJGRP="Non-enrolled Beneficiaries ";
    ELSE IF GROUP=5 THEN MAJGRP="Active Duty               ";
    ELSE IF GROUP=6 THEN MAJGRP="Active Duty Dependents    ";
    ELSE IF GROUP=7 THEN MAJGRP="Retirees and Dependents    ";
    ELSE IF GROUP=8 THEN MAJGRP="All Beneficiaries          ";

%IF &TABLEVAR = XSERVAFF %THEN %DO;
    IF XSERVAFF = 1 THEN REGION = 'ARMY';
    IF XSERVAFF = 2 THEN REGION = 'AIR FORCE';
    IF XSERVAFF = 3 THEN REGION = 'NAVY';
    IF XSERVAFF = 4 THEN REGION = 'OTHER';
    IF XSERVAFF = 5 THEN REGION = 'JOINT SERVICE'; /* MER 11/11/12 - Added
for Joint Service facilities */
%END;

%IF &TABLEVAR = XSERVREG %THEN %DO;
    REGION = PUT(XSERVREG,SERVREGO.); /*JSO 08/24/2006, Create new format for
Overseas*/

```

```

%END;

%IF &TABLEVAR = XTNEXREG %THEN %DO;
  IF XTNEXREG=1 THEN REGION="NORTH";
  ELSE IF XTNEXREG=2 THEN REGION="SOUTH";
  ELSE IF XTNEXREG=3 THEN REGION="WEST";
  ELSE IF XTNEXREG=4 THEN REGION="OVERSEAS";
%END;

%IF &TABLEVAR = TOTCON %THEN %DO;
  REGION = "USA MHS";
%END;

%IF &TABLEVAR = CACSMPL %THEN %DO; /*RSG 02/2005 Add CACSMPL**/
  REGCAT = PUT(CACSMPL, CACR.);
  REGION = ' ';
%END;

%IF &TABLEVAR NE CACSMPL %THEN %DO;
  REGCAT=REGION;
  DROP GROUP &TABLEVAR;
%END;

%IF &TABLEVAR = CACSMPL %THEN %DO; /*RSG 02/2005 Add CACSMPL**/
  REGCAT = PUT(CACSMPL, CACR.);
  REGION = ' ';
%END;

%IF &TABLEVAR NE CACSMPL %THEN %DO;
  REGCAT=REGION;
  DROP GROUP &TABLEVAR;
%END;

IF &TABLEVAR NE 0;

RUN;

%IF &TABLEVAR = CACSMPL %THEN %DO;

  PROC SORT DATA=&PREF._SMOKE;
  BY CACSMPL;

  DATA &PREF._SMOKE;
  MERGE &PREF._SMOKE (IN=A) CACFORMAT (IN=B);
  BY CACSMPL;
  IF A;
  REGION=PUT(XSERVind,SERVREGO.);
  DROP GROUP &TABLEVAR;
  RUN;
%END;

%MEND MAKEDATA;

%MAKEDATA(M,XSERVAFF);
%MAKEDATA(C,TOTCON);

```

```

%MAKEDATA(R,XSERVREG);
%MAKEDATA(S,XTNEXREG);
%MAKEDATA(D,CACSMPL);

DATA SMOKE;
SET M_SMOKE R_SMOKE S_SMOKE C_SMOKE D_SMOKE;
SESQ = SEMEAN**2;
RENAME MEAN=SCORE wsum=n_wgt nsum=n_obs;
RUN;

/* CALCULATE COMPOSITE SCORE - AVERAGE RATE AND CESSATION*/

PROC SORT DATA=SMOKE;
BY MAJGRP REGION REGCAT;
RUN;

PROC SUMMARY DATA=SMOKE SUM;
BY MAJGRP REGION REGCAT;
VAR SCORE SESQ N_WGT N_OBS;
OUTPUT SUM= OUT=PRECOMP;
RUN;

DATA COMP(RENAME=(S_MEAN=SCORE S_SE=SEMEAN));
SET PRECOMP;
IF _FREQ_ = 3 THEN DO;
    S_MEAN=SCORE/3;
    S_SE=SQRT(SESQ)/3;
    N_OBS=round(N_OBS/3);
END;
ELSE DO;
    S_MEAN=.;
    S_SE=.;
END;
BENTYPE="Composite";
BENEFIT="Healthy Behaviors";
DROP _TYPE_ _FREQ_ SCORE SESQ;
RUN;

PROC SORT DATA=SMOKE;
BY MAJGRP BENTYPE;
RUN;

DATA BENCH;
SET SMOKE;
BY MAJGRP BENTYPE;
IF LAST.BENTYPE AND BENTYPE="Counselled To Quit" THEN DO;
    SCORE=&CNSLGOAL;
    SEMEAN=.;
    REGION="Benchmark";
    REGCAT="Benchmark";
    DROP N_WGT N_OBS;
    OUTPUT;
END;
ELSE IF LAST.BENTYPE AND BENTYPE="Non-Smoking Rate" THEN DO;
    SCORE=&NSMKGOAL;
    SEMEAN=.;
    REGION="Benchmark";
    REGCAT="Benchmark";

```

```

DROP N_WGT N_OBS;
OUTPUT;
END;
ELSE IF LAST.BENTYPE AND BENTYPE="Percent Not Obese" THEN DO;
SCORE=&BMIGOAL;
SEMEAN=.;
REGION="Benchmark";
REGCAT="Benchmark";
DROP N_WGT N_OBS;
OUTPUT;
SCORE=(SUM(&NSMKGOAL, &CNSLGOAL, &BMIGOAL))/3;
SEMEAN=.;
REGION="Benchmark";
REGCAT="Benchmark";
BENTYPE="Composite";
DROP N_WGT;
OUTPUT;
END;
RUN;

PROC SORT DATA=SMOKE;
BY REGION BENTYPE;
RUN;

DATA TEMP;
SET SMOKE;
IF REGION=REGCAT;
RUN;

PROC SORT DATA=TEMP;
BY REGION BENTYPE;
RUN;

DATA BENCH2;
SET TEMP;
BY REGION BENTYPE;
IF LAST.BENTYPE AND BENTYPE="Counselled To Quit" THEN DO;
SCORE=&CNSLGOAL;
SEMEAN=.;
MAJGRP="Benchmark";
DROP N_WGT N_OBS;
OUTPUT;
END;
IF LAST.BENTYPE AND BENTYPE="Non-Smoking Rate" THEN DO;
SCORE=&NSMKGOAL;
SEMEAN=.;
MAJGRP="Benchmark";
DROP N_WGT;
OUTPUT;
END;
IF LAST.BENTYPE AND BENTYPE="Percent Not Obese" THEN DO;
SCORE=&BMIGOAL;
SEMEAN=.;
MAJGRP="Benchmark";
DROP N_WGT;
OUTPUT;
SCORE=(SUM(&CNSLGOAL, &NSMKGOAL, &BMIGOAL))/3;
SEMEAN=.;

```

```

    MAJGRP="Benchmark";
    BENTYPE="Composite";
    DROP N_WGT N_OBS;
    OUTPUT;
END;
RUN;

DATA SIG1;
SET SMOKE COMP;
IF BENTYPE='Non-Smoking Rate' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&NSMKGOAL)/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;

    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > &NSMKGOAL THEN SIG = 1;
        ELSE IF SCORE < &NSMKGOAL THEN SIG = -1;
    END;
END;
IF BENTYPE='Counselled To Quit' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&CNLSLGOAL)/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > &CNLSLGOAL THEN SIG = 1;
        ELSE IF SCORE < &CNLSLGOAL THEN SIG = -1;
    END;
END;
IF BENTYPE='Percent Not Obese' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&BMIGOAL)/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > &BMIGOAL THEN SIG = 1;
        ELSE IF SCORE < &BMIGOAL THEN SIG = -1;
    END;
END;
IF BENTYPE='Composite' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3))/SEMEAN;
    ELSE TSTAT=.;
    IF N_OBS > 1 THEN PVAL=(1-PROBT(ABS(TSTAT),(N_OBS-1)))*2;
    ELSE PVAL=.;
    IF PVAL GE 0.05 THEN SIG=0;
    ELSE IF PVAL < 0.05 THEN DO;
        IF SCORE > ((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3) THEN SIG = 1;
        ELSE IF SCORE < ((SUM(&NSMKGOAL, &CNLSLGOAL, &BMIGOAL))/3) THEN SIG = -1;
    END;
END;
DROP TSTAT PVAL;
RUN;

```

```
DATA SMOKE_ALL;  
SET SIG1 BENCH BENCH2;  
TIMEPD="&CURRENT.";  
RUN;
```

```
PROC SORT DATA=SMOKE_ALL OUT=OUT.SMOKE;  
BY MAJGRP REGION REGCAT BENTYPE;  
RUN;
```

```
DATA OUT.CGRP5RT;  
SET CGRP5RT;  
RUN;
```

```
DATA OUT.CSER_5RT;  
SET CSER_5RT;  
RUN;
```

```
DATA OUT.CSERT5RT;  
SET CSERT5RT;  
RUN;
```

```
DATA OUT.c_smoke;  
SET c_smoke;  
RUN;
```

```
DATA OUT.normdat5;  
SET normdat5;  
RUN;
```

```
DATA OUT.norm_5;  
SET norm_5;  
RUN;
```


G.11.C - ReportCards\MPR_Adult2017\LOADMPR.SAS - Convert the MPR Scores Database into the WEB layout - Annual.

```

*****;
*   Project:    DoD Reporting and Analysis 6244-410
*   Program:    LOADMPR.SAS
*   Author:     Chris Rankin
*   Date:       4/07/2000
*   Modified:   1) 11/11/2012 By Mike Rudacille, Updated for handling of
*               Joint Service facilities
*               2) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*                   Changed YR to &FY.
*                   Changed YEAR to &FYYEAR.
*                   Changed EYR to %EVAL(&FY.-2)
*
*   Purpose:    Calculate MPR Preventive Care Composites
*
*   Input:      RFINAL.sas7bdat
*               CFINAL.sas7bdat
*               MFINAL.sas7bdat
*               DFINAL.sas7bdat
*               SFINAL.sas7bdat
*               SMOKE.sas7bdat
*   Output:     loadmpr.sas7bdat
*****;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2;

LIBNAME  INLIB  ".";
LIBNAME  OUT    ".";
LIBNAME  LIBRARY  "..../Data/fmtlib"; /*MJS 02/05/04*/

%LET COMPNUM=7; /** number of questions in both composites **/
%LET CMPNUM1=4; /** number of questions in first composite **/ /*MJS 02/05/04*/

%LET YR=&FY.;
%LET YEAR=&FYYEAR.;
%LET EYR=%EVAL(&FY.-2);

%INCLUDE "..../LoadWeb/LOADCAHQ.INC";

*****;
*** Note -- take out access to care questions and composite ***;
*****;

DATA BENCHMKS(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SIG);
  FORMAT MAJGRP $30. REGION $30. REGCAT $42. /* MER 11/11/2012 - Updated REGION for
  Joint Service facilities */
  BENEFIT $34. BENTYPE $50. TIMEPD $35.;

SET inlib.CFINAL;

/***** Benchmarks      *****/

ARRAY BENCHMK{*} GOALVAR1-GOALVAR&CMPNUM1 CP&yr.BMK1;
DO I = 1 TO 5; /*MJS 02/05/04*/
  SCORE = BENCHMK{I}*100;
  SIG = .;

```

```

REGION = "Benchmark";
REGCAT = "Benchmark";
BENEFIT = "Preventive Care";
IF I = 1 THEN BENTYPE = "Prenatal Care";
ELSE IF I = 2 THEN BENTYPE = "Mammography";
ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
ELSE IF I = 4 THEN BENTYPE = "Hypertension";
/*ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";*/ /*RSG 01/27/06*/
ELSE IF I = 5 THEN BENTYPE = "Composite";
TIMEPD = "&YEAR"; /*RSG 02/2005*/
OUTPUT;
END;
DROP I;
RUN;

DATA BENCHMKS;
SET BENCHMKS;
OUTPUT;
IF MAJGRP = "All Beneficiaries" THEN DO;
DO REG = 1 TO 18; DROP REG; /* MER 11/11/2012 Changed 15 to 18 for Joint Service
facilities */
MAJGRP = "Benchmark";
REGION = PUT(REG,SERVREGO.);
REGCAT = PUT(REG,SERVREGO.);
OUTPUT;
END;
DO SERV = 1 TO 5; DROP SERV; /* MER 11/11/2012 Changed 4 to 5 for Joint Service
facilities */
MAJGRP = "Benchmark";
REGION = PUT(SERV,XSERVAFF.);
REGCAT = PUT(SERV,XSERVAFF.);
OUTPUT;
END;
MAJGRP = "Benchmark";
REGION = 'CONUS MHS';
REGCAT = 'CONUS MHS';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'NORTH';
REGCAT = 'NORTH';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'SOUTH';
REGCAT = 'SOUTH';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'WEST';
REGCAT = 'WEST';
OUTPUT;
MAJGRP = "Benchmark";
REGION = 'OVERSEAS';
REGCAT = 'OVERSEAS';
OUTPUT;
END;
RUN;

PROC FREQ DATA=BENCHMKS;
TABLES MAJGRP/MISSING LIST;

```

```

RUN;

*****;
**** Scores **;
*****;

DATA DFINAL;
  SET INLIB.DFINAL;
  WHERE UPCASE(TRIM(MAJGRP)) IN ("PRIME ENROLLEES", "ENROLLEES WITH MILITARY PCM",
                                "ACTIVE DUTY", "ALL BENEFICIARIES");

RUN;

DATA SCORES(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SEMEAN SIG N_OBS
N_WGT);
  FORMAT MAJGRP $30. REGION $30. REGCAT $42. /* MER 11/11/2012 - Updated REGION for
Joint Service facilities */
          BENEFIT $34. BENTYPE $50. TIMEPD $35.;
  SET INLIB.MFINAL
      INLIB.RFINAL
      DFINAL
      INLIB.SFINAL
      INLIB.CFINAL;
  IF REGCAT='Out of Catchment Region 01' then REGCAT='Out of Catchment North Region';
  IF REGCAT='Out of Catchment Region 02' then REGCAT='Out of Catchment South Region';
  IF REGCAT='Out of Catchment Region 03' then REGCAT='Out of Catchment West Region';
  IF REGCAT='Out of Catchment Region 04' then REGCAT='Out of Catchment OCONUS Region';

  ARRAY SEMEANS{*} SERR&YR.V1-SERR&YR.V&CMPNUM1. CP&YR.1SE ;
  ARRAY SCORES{*} SCOR&YR.V1-SCOR&YR.V&CMPNUM1. Comp&YR.1;
  ARRAY SIGNIF{*} SIG&YR.V1-SIG&YR.V&CMPNUM1. CP&YR.SIG1;
  ARRAY NOBS{*} NOBS&YR.V1-NOBS&YR.V&CMPNUM1. CP&YR.OBS1;
  ARRAY NWGT{*} DEN&YR.V1-DEN&YR.V&CMPNUM1 CP&YR.DEN1;
  cp&YR.den1=0;
  DO I = 1 TO 5; /*MJS 02/05/04*/
    SCORE = SCORES{I};
    SEMEAN = SEMEANS{I};
    SIG = SIGNIF{I};
    N_OBS = NOBS{I};
    N_WGT = NWGT{I};
    if i<5 then cp&YR.den1+nwgt[i];
    BENEFIT = "Preventive Care";
    IF I = 1 THEN BENTYPE = "Prenatal Care";
    ELSE IF I = 2 THEN BENTYPE = "Mammography";
    ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
    ELSE IF I = 4 THEN BENTYPE = "Hypertension";
    /*ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";*/ /*RSG 01/27/06*/
    ELSE IF I = 5 THEN DO;
      BENTYPE = "Composite"; /*RSG 02/2005*/
      score=score*100;
    END;;
    TIMEPD = "&YEAR";
    OUTPUT;
  END;
RUN;

PROC FREQ DATA=SCORES;
  WHERE UPCASE(TRIM(MAJGRP)) IN ("PRIME ENROLLEES", "ENROLLEES WITH MILITARY PCM",
                                "ACTIVE DUTY", "ALL BENEFICIARIES");

```

```

TABLES MAJGRP*REGCAT;
RUN;

DATA DTREND;
  SET INLIB.DTREND; by majgrp;
  WHERE UPCASE(TRIM(MAJGRP)) IN ("PRIME ENROLLEES", "ENROLLEES WITH MILITARY PCM",
                                "ACTIVE DUTY", "ALL BENEFICIARIES");
RUN;

/*
proc sort data=inlib.mtrend out=mtrend; by descending majgrp;
data mtrend;
set mtrend;
retain adj1 adj2 0;
if upcase(majgrp)="ALL BENEFICIARIES" then do;
adj1=cp&YR.bmk1; adj2=cp&EYR.bmk1; end;
proc print;
proc sort data=mtrend; by majgrp;
data mtrend(drop=adj1 adj2);
set mtrend;
retain tadj1 tadj2 0;
if _n_=1 then do;
tadj1=adj1;
tadj2=adj2;
end;
*/

DATA TREND1 (KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE semean TIMEPD SCORE SIG N_OBS
N_WGT);
  FORMAT MAJGRP $30. REGION $30. REGCAT $42. /* MER 11/11/2012 - Updated REGION for
Joint Service facilities */
          BENEFIT $34. BENTYPE $50. TIMEPD $35.;

  SET inlib.CTREND
      DTREND
      INLIB.RTREND
      INLIB.STREND
      INLIB.MTREND;by majgrp;
/*
  if _n_=1 then do;
    adj1=tadj1;
    adj2=tadj2;
  end;
  retain adj1 adj2;
  score=100*((comp031*adj1/cp03bmk1)-(comp011*adj2/cp01bmk1));*/

/*RSG 02/2005 following code no longer needed - need trend for all
benefit level, not just composite*/
/*  score=cmptrnd1;
  SIG= SIGCPT1;
  N_OBS=DF_COM1;
  N_WGT=NWGT1;
  BENTYPE="Trend";
  BENEFIT="Preventive Care";
  OUTPUT;
*/
IF REGCAT='Out of Catchment Region 01' then REGCAT='Out of Catchment North Region';
IF REGCAT='Out of Catchment Region 02' then REGCAT='Out of Catchment South Region';

```

```

IF REGCAT='Out of Catchment Region 03' then REGCAT='Out of Catchment West Region';
IF REGCAT='Out of Catchment Region 04' then REGCAT='Out of Catchment OCONUS Region';

```

```

ARRAY SCORES{*} TRENDV1-TRENDV&CMPNUM1. CMPTRND1;
ARRAY SIGNIF{*} SIGTRND1-SIGTRND&CMPNUM1. SIGCPTR1;
ARRAY NOBS {*} DFSCOR1-DFSCOR&CMPNUM1. DF_COMPL;
ARRAY NWGT {*} NWGT1-NWGT&CMPNUM1. NWGTC1;
DO I = 1 TO 5; /*MJS 02/05/04*/
    SCORE = SCORES{I};
    SEMEAN=.;
    SIG = SIGNIF{I};
    N_OBS = NOBS{I};
    N_WGT = NWGT{I};
    BENEFIT = "Preventive Care";
    IF I = 1 THEN BENTYPE = "Prenatal Care";
    ELSE IF I = 2 THEN BENTYPE = "Mammography";
    ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
    ELSE IF I = 4 THEN BENTYPE = "Hypertension";
    /*ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";*/ /*RSG 01/27/06*/
    ELSE IF I = 5 THEN DO;
        BENTYPE = "Composite"; /*RSG 02/2005*/
    *       score=score*100;
    END;;
    TIMEPD = "Trend";
    OUTPUT;
END;
RUN;

```

```

DATA TREND2(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SIG TIMEPD);
    FORMAT MAJGRP $30. REGION $30. REGCAT $42. /* MER 11/11/2012 - Updated REGION for
Joint Service facilities */
        BENEFIT $34. BENTYPE $50. TIMEPD $35.;

```

```

SET INLIB.CTREND;

/*RSG 02/2005 hard code in benchmark trends for each measure -
comment out code for just composite trend benchmark*/
/* SCORE= TRNDBMK1;
SIG=.;
SEMEAN=.;
REGION="Benchmark";
REGCAT="Benchmark";
BENTYPE="Trend";
BENEFIT="Preventive Care";
OUTPUT;
*/

```

```

DO I = 1 TO 5; /*MJS 02/05/04*/
    SCORE = 0;
    SIG = .;
    REGION = "Benchmark";
    REGCAT = "Benchmark";
    BENEFIT = "Preventive Care";
    IF I = 1 THEN BENTYPE = "Prenatal Care";
    ELSE IF I = 2 THEN BENTYPE = "Mammography";
    ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
    ELSE IF I = 4 THEN BENTYPE = "Hypertension";
    /*ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";*/ /*RSG 01/27/06*/

```

```
ELSE IF I = 5 THEN BENTYPE = "Composite";
TIMEPD = "Trend"; /*RSG 02/2005*/
OUTPUT;
END;
DROP I;
RUN;

DATA OUT.LOADMPR(KEEP=MAJGRP REGION REGCAT BENEFIT semean BENTYPE SCORE SIG
                N_OBS N_WGT TIMEPD);
SET BENCHMKS TREND1 TREND2 SCORES INLIB.SMOKE;
RUN;

PROC FREQ DATA=OUT.LOADMPR;
WHERE TIMEPD='Trend';
TABLES BENTYPE*REGION/MISSING LIST;
RUN;
```

G.12 - ReportCards\MPR_Adult2017\TRENDMPR.SAS - Calculate Trend and Perform Significance tests on MPR Scores - Annual.

```

*****
*
* Project:    DoD Reporting and Analysis 6244-410
* Program:    TRENDMPR.SAS
* Author:     Chris Rankin
* Date:       6/19/2000
*
* Modified:  1) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
              Changed YR to &FY.
              Changed EYR to %EVAL(&FY.-2)
              Changed IN&EYR to
..\.\.\.\.Programs\20&EYR.\&PC.ReportCards\MPR_Adult20&EYR.
              Renamed IN14 and IN12 to IN&FY. And IN&EYR.
*
* Purpose:    Calculate trends from 2012 to 2014.
*
* Outputs:    RTREND.sas7bdat
              MTREND.sas7bdat
              CTREND.sas7bdat
              STREND.sas7bdat
              DTREND.sas7bdat
*
* Inputs:     RFINAL.sas7bdat
              CFINAL.sas7bdat
              MFINAL.sas7bdat
              SFINAL.sas7bdat
              DFINAL.sas7bdat
*
* Notes:      1) Next program is loadmpr.sas.
*
*****;
OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2;

%LET YR = &FY.;
%LET EYR = %EVAL(&FY.-2);

LIBNAME IN&YR    ".";
LIBNAME IN&EYR. "..\.\.\.\.Programs/20&EYR./&PC.ReportCards/MPR_Adult20&EYR.";
LIBNAME OUT      ".";
LIBNAME LIBRARY  "..\.\.\.\.Data/fmtlib";

%LET COMPNUM=7;    /** number of variables - 02/2006 RSG - changed from 8 to 7
because cholesterol dropped    **/

**** Note:  groups changed 6/16/2000 to correspond with ;
**** definition of CAHPS groups                               ;

*****;
* Beneficiary group note
*   Eight groups           Definitions
* _____;
* 1. Prime enrollees      XINSCOV IN (1,2,6) AND H08007>=2
* 2. Enrollees w/mil PCM  XENR_PCM IN (2,6)  AND H08007>=2
* 3. Enrollees w/civ PCM  XENR_PCM=3      AND H08007>=2
* 4. Nonenrollees        XINSCOV IN (3)

```

```

* 5. Active duty                BFGROUPP=1
* 6. Active duty dependents    BFGROUPP=2
* 7. Retirees                  BFGROUPP IN (3,4)
* 8. All beneficiaries        ALL
*****;

/**** macro to merge final datasets together and calculate trends ****/

%MACRO TRENDS(INDATA, OUTDATA);

PROC SORT DATA=IN&EYR..&INDATA;
  BY MAJGRP REGION REGCAT;
RUN;

PROC SORT DATA=IN&YR..&INDATA;
  BY MAJGRP REGION REGCAT;
RUN;

DATA OUT.&OUTDATA;
  MERGE IN&YR..&INDATA(IN=IN_&YR.) IN&EYR..&INDATA(IN=IN_&EYR.);
  BY MAJGRP REGION REGCAT;
  IF IN_&YR. & IN_&EYR.;

  /**** calculate trends in the composite benchmarks ****/
  ARRAY  BMK&YR.{*} CP&YR.BMK1 CP&YR.BMK2;
  ARRAY  BMK&EYR.{*} CP&EYR.BMK1 CP&EYR.BMK2;
  ARRAY  BMKTRND{*} TRNDBMK1 TRNDBMK2;

  DO J=1 TO 2;
    IF BMK&EYR.{J} > 0 THEN BMKTRND{J}=100*(BMK&YR.{J}-BMK&EYR.{J});
    ELSE BMKTRND{J}=.;
  END;
  DROP J;

  /**** note-- don't use adjusted scores ****/
  ARRAY  SCORE&YR.{*} PROP&YR.V1-PROP&YR.V&COMPNUM COMP&YR.1 COMP&YR.2;
  ARRAY  SCORE&EYR.{*} PROP&EYR.V1-PROP&EYR.V&COMPNUM COMP&EYR.1 COMP&EYR.2;
  ARRAY  SERR&YR.{*} SERR&YR.V1-SERR&YR.V&COMPNUM CP&YR.1SE CP&YR.2SE;
  ARRAY  SERR&EYR.{*} SERR&EYR.V1-SERR&EYR.V&COMPNUM CP&EYR.1SE CP&EYR.2SE;
  ARRAY  TREND{*} TRENDV1-TRENDV&COMPNUM CMPTRND1 CMPTRND2;
  ARRAY  TSTAT{*} T_TRNDV1-T_TRNDV&COMPNUM T_CTRND1 T_CTRND2;
  ARRAY  PVALUE{*} P_TRNDV1-P_TRNDV&COMPNUM P_CTRND1 P_CTRND2;
  ARRAY  SIG{*} SIGTRND1-SIGTRND&COMPNUM SIGCPTR1 SIGCPTR2;
  ARRAY  DEGFR&YR.{*} DF&YR.SCR1-DF&YR.SCR&COMPNUM DF&YR._CP1 DF&YR._CP2;
  ARRAY  DEGFR&EYR.{*} DF&EYR.SCR1-DF&EYR.SCR&COMPNUM DF&EYR._CP1 DF&EYR._CP2;
  ARRAY  DEGF{*} DFSCOR1-DFSCOR&COMPNUM DF_COMP1 DF_COMP2;
  ARRAY  DENOM{*} DENOMT1-DENOMT&COMPNUM DENOMTC1 DENOMTC2;
  ARRAY  DEN&EYR.{*} DEN&EYR.V1-DEN&EYR.V&COMPNUM CP&EYR.DEN1 CP&EYR.DEN2;
  ARRAY  DEN&YR.{*} DEN&YR.V1-DEN&YR.V&COMPNUM CP&YR.DEN1 CP&YR.DEN2;
  ARRAY  NWGT{*} NWGT1-NWGT&COMPNUM NWGTC1 NWGTC2;

  /**** setup t statistics, degrees of freedom ****/
  DO I=1 TO 9;
    IF SCORE&EYR.{I} GE 0 AND SCORE&YR.{I} GE 0 THEN DO;
      IF SCORE&EYR.{I} > 0 THEN TREND{I}=100*(SCORE&YR.{I}-SCORE&EYR.{I});
      ELSE TREND{I}=.;
      DENOM{I}= SERR&EYR.{I}**2+SERR&YR.{I}**2;
      IF DENOM{I} > 0 THEN

```



```

        TSTAT{I}=(SCORE&YR.{I}-SCORE&EYR.{I})/SQRT(DENOM{I});
ELSE TSTAT{I}=.;
DEGF{I}=MIN(DEGFR&YR.{I},DEGFR&EYR.{I});
NWGT{I}=MIN(DEN&YR.{I},DEN&EYR.{I});
IF DEGF{I}=0 THEN DEGF{I}=1;
IF DEGF{I}IN (0, .) THEN
PUT "MAJGRP=" MAJGRP "REGCAT=" REGCAT "REGION=" REGION
"DEGFR&EYR.=" DEGFR&EYR.{I} "DEGFR&YR.=" DEGFR&YR.{I};
PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
IF TREND{I}= . THEN SIG{I}=.;
ELSE IF TREND{I} NE . THEN DO;
    IF PVALUE{I} GE .05 THEN SIG{I}=0;
    IF PVALUE{I} < .05 THEN DO;
        IF TSTAT{I} > 0 THEN SIG{I}=1;
        IF TSTAT{I} < 0 & TSTAT{I} ne . THEN SIG{I}=-1;
    END;
END;
END;
END;
DROP I;
RUN;

%MEND TRENDS;

%TRENDS(MFINAL, MTREND);
%TRENDS(RFINAL, RTREND);
%TRENDS(CFINAL, CTREND);
%TRENDS(SFINAL, STREND);
%TRENDS(DFINAL, DTREND);

```

G.13.A - LOADWEB\FAKE.SAS - Generate the WEB layout/template file - Annual.

```

/*****
/* PROJECT: 6244-410 - 2006 Annual Beneficiary Reports
   */
/* PROGRAM: FAKE.SAS
   */
/* PURPOSE: Generate Fake Data for Report Cards
   */
/* AUTHOR: Mark A. Brinkley
   */
/*
   */
/* MODIFIED: 1) November 12, 2012 By Mike Rudacille - Updated for
   */
/*           handling of Joint Service facilities
   */
/*           2) December 1, 2014 By Matt Turbyfill,
   */
/*           Revised for the Macro Program.
   */
/*           Changed IN to
   ..\&PC.ReportCards\CAHPS_Adult&FYYEAR.\Data   */
/*           Changed LOADCAHQ to ..\LoadWeb\LOADCAHQ.INC
   */
/*           Changed PERIOD1 to &YEAR2.
   */
/*           Changed PERIOD2 to &YEAR1.
   */
/*           Changed PERIOD3 to &FYYEAR.
   */
/*           Changed HCSyyq_2 to &DATAFILE.
   */
   */
/*****/

LIBNAME OUT '.';
LIBNAME IN "..\&PC.ReportCards\CAHPS_Adult&FYYEAR.\Data";  /*** Changed to group8
location for revised cacsmp1 KRR 02-05-2004 ***/
LIBNAME LIBRARY '..\..\Data\fmtlib';

OPTIONS COMPRESS=YES NOFMterr;

%include "..\LoadWeb\LOADCAHQ.INC";

/*RSG 02/2005 added to make fake.sd2 with macros*/
%LET NUMQTR = 4; /*RSG 02/2005 - Numbering based off quarterly program*/
%LET PERIOD1 = &YEAR2.;
%LET PERIOD2 = &YEAR1.;
%LET PERIOD3 = &FYYEAR.;
%LET PERIOD4 = Trend;

DATA TEMP;
  SET IN.GROUP8(KEEP=XSERVind XSERVAFF XTNEXREG USA CACSMPL); /*KRR 02/05/04*/
RUN;

*****
```

```

* CACSMPL FORMAT DEFINITIONS FOR REPORT CARD USE FACILITY NAME
* RSG - 02/2005 - USE CACR FORMAT FROM LIBRARY
*****;

```

```

proc freq data=temp;
  table xservind*cacsmpl/ noprint out=temp2;
run;

```

```

data temp3;
  length cafmt $42;
  set temp2 end=last; by xservind;
  caf=0;
  where cacsmpl ne 9999;
  if first.xservind then do;
    cafmt=put(xservind,servrego.);
    output;
  end;
  cafmt=put(cacsmpl,cacr.);
  caf=1;
  if count>1 & cafmt ne 'INV' then output;
  if last then do;
    xservind=0;
    caf=0;
    cafmt='Benchmark';
    output;

    caf=1;

    xservind=19;
    cafmt = 'ARMY';
    output;

    xservind=20;
    cafmt = 'AIR FORCE';
    output;

    xservind=21;
    cafmt = 'NAVY';
    output;

    xservind=22;
    cafmt = 'OTHER';
    output;

    xservind=23;
    cafmt = 'JOINT SERVICE';
    output;

    xservind=24;
    cafmt = 'NORTH';
    output;

    xservind=25;
    cafmt = 'SOUTH';
    output;

    xservind=26;

```

```
cafmt = 'WEST';
output;

xservind=27;
cafmt = 'OVERSEAS';
output;

xservind=28;
cafmt = 'Europe Army';
output;

xservind=29;
cafmt = 'Europe Air Force';
output;

xservind=30;
cafmt = 'Europe Navy';
output;

xservind=31;
cafmt = 'Europe Other';
output;

xservind=32;
cafmt = 'Europe Joint Service';
output;

xservind=33;
cafmt = 'Pacific Army';
output;

xservind=34;
cafmt = 'Pacific Air Force';
output;

xservind=35;
cafmt = 'Pacific Navy';
output;

xservind=36;
cafmt = 'Pacific Other';
output;

xservind=37;
cafmt = 'Pacific Joint Service';
output;

xservind=38;
cafmt = 'Latin America Army';
output;

xservind=39;
cafmt = 'Latin America Air Force';
output;

xservind=40;
cafmt = 'Latin America Navy';
output;
```

```

xservind=41;
cafmt = 'Latin America Other';
output;

xservind=42;
cafmt = 'Latin America Joint Service';
output;

xservind=43;
cafmt = 'USA MHS';
output;
end;
run;

proc sort; by xservind caf cafmt; run;

data temp4;
  set temp3 end=last;
  start=_n_; label=cafmt; type='N'; fmtname='ROWMAT';
  if last then call symput('x',_n_);
run;

proc format cntlin=temp4;
proc print data=temp4;

RUN;

%MACRO FAKE;
DATA FAKE;

  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD I K;   ***MJS 06/18/03 Added
TIMEPD;

  LENGTH MAJGRP $ 30
  REGION $ 30 /*RSG 01/2005 lengthen format to fit service affiliation*/
  REGCAT $ 42 /*MER 11/08/2012 length format for REGION for Joint Service
facilities */
  BENTYPE $ 50
  TIMEPD $ 5;   ***MJS 06/18/03 Added TIMEPD;

DO I=1 TO 8;          ** 8 Major groups **;

  MAJGRP=PUT(I,MAJGRPF.);

DO J=1 TO &x;        ** Region/catchment **;

  REGCAT=PUT(J,ROWMAT.);
  RETAIN REGION;

  **RSG 01/2005 Change code to fit XSERVREG values**;
  IF REGCAT IN ('ARMY','NAVY','AIR FORCE','OTHER','JOINT SERVICE',
  'NORTH','SOUTH','WEST','OVERSEAS','USA MHS',
  'Overseas Europe','Overseas Pacific','Overseas Latin America',

```

```

'North Army','North Navy','North Air Force','North Other','North
Joint Service',
'South Army','South Navy','South Air Force','South Other','South
Joint Service',
'West Army','West Navy','West Air Force','West Other','West Joint
Service',
'Europe Army', 'Europe Navy', 'Europe Air Force', 'Europe
Other','Europe Joint Service',
'Pacific Army', 'Pacific Navy', 'Pacific Air Force', 'Pacific
Other','Pacific Joint Service',
'Latin America Army', 'Latin America Navy', 'Latin America Air
Force',
'Latin America Other', 'Latin America Joint Service')
THEN REGION=REGCAT;

DO K=1 TO 11;      ** 11 Benefits **;  /*** 12-13 MAB ***/

    BENEFIT=PUT(K,BEN.);

    IF K=1 THEN DO;
        DO L=1 TO 3;          ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,GETNCARE.);  ***that replaced BENTYPE hard
assignment;
        %DO Q = 1 %TO &NUMQTR;  ***RSG 02/2005 Changed start point to 2
for annual - only go back 2 years;
            TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;  ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
    END;
    ELSE IF K=2 THEN DO;
        DO L=1 TO 3;          ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,GETCAREQ.);  ***that replaced BENTYPE hard
assignment;
        %DO Q = 1 %TO &NUMQTR;  ***RSG 02/2005 Changed start point to 2
for annual - only go back 2 years;
            TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;  ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
    END;
    ELSE IF K=3 THEN DO;
        DO L=1 TO 5;          ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,HOWWELL.);  ***that replaced BENTYPE hard
assignment;
        %DO Q = 1 %TO &NUMQTR;  ***RSG 02/2005 Changed start point to 2
for annual - only go back 2 years;
            TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
        %END;  ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
    END;
    END;
    ELSE IF K=4 THEN DO;
        DO L=1 TO 3;          ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
        BENTYPE=PUT(L,CUSTSERV.);  ***that replaced BENTYPE hard
assignment;

```

```

                %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2
for annual - only go back 2 years;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
            END;
        END;
    ELSE IF K=5 THEN DO;
        DO L=1 TO 3;                                ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
                BENTYPE=PUT(L,CLMSPROC.);    ***that replaced BENTYPE hard
assignment;
                %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2
for annual - only go back 2 years;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
            END;
        END;
    ELSE IF K=6 THEN DO;
        %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2 for
annual - only go back 2 years;
                BENTYPE = "Composite";    ***MJS 07/07/03 Added;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
                %END;                                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
            END;
        ELSE IF K=7 THEN DO;
            %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2 for
annual - only go back 2 years;
                BENTYPE = "Composite";    ***MJS 07/07/03 Added;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
                %END;                                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
            END;
        ELSE IF K=8 THEN DO;
            %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2 for
annual - only go back 2 years;
                BENTYPE = "Composite";    ***MJS 07/07/03 Added;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
                %END;                                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
            END;
        ELSE IF K=9 THEN DO;
            %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start point to 2 for
annual - only go back 2 years;
                BENTYPE = "Composite";    ***MJS 07/07/03 Added;
                TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/    ***MJS
07/07/03 Changed BENTYPE to TIMEPD;
                %END;                                ***MJS 07/07/03 Deleted BENTYPE="Trend"
OUTPUT after this line;
            END;
        ELSE IF K=10 THEN DO;
            DO L=1 TO 5;                                ***MJS 06/18/03 Added L loop and BENTYPE
PUT;
                BENTYPE=PUT(L,PREVCARE.);    ***that replaced BENTYPE hard
assignment;

```



```

IF MAJGRP = "Enrollees with Civilian PCM" THEN LINEUP=3;
IF MAJGRP = "Standard/Extra Users" THEN LINEUP=4;
IF MAJGRP = "Active Duty" THEN LINEUP=5;
IF MAJGRP = "Active Duty Dependents" THEN LINEUP=6;
IF MAJGRP = "Retirees and Dependents" THEN LINEUP=7;
IF MAJGRP = "All Users" THEN LINEUP=8;

IF REGION = "Benchmark" THEN LINEUP1=1;
ELSE IF UPCASE(REGION) = 'USA MHS' THEN LINEUP1=2;

ELSE IF UPCASE(REGION) = 'ARMY' THEN LINEUP1=3;
ELSE IF UPCASE(REGION) = 'NAVY' THEN LINEUP1=4;
ELSE IF UPCASE(REGION) = 'AIR FORCE' THEN LINEUP1=5;
ELSE IF UPCASE(REGION) = 'OTHER' THEN LINEUP1=6;
ELSE IF UPCASE(REGION) = 'JOINT SERVICE' THEN LINEUP1=7;

ELSE IF UPCASE(REGION) = 'NORTH' THEN LINEUP1=8;
ELSE IF UPCASE(REGION) = 'NORTH ARMY' THEN LINEUP1=9;
ELSE IF UPCASE(REGION) = 'NORTH NAVY' THEN LINEUP1=10;
ELSE IF UPCASE(REGION) = 'NORTH AIR FORCE' THEN LINEUP1=11;
ELSE IF UPCASE(REGION) = 'NORTH OTHER' THEN LINEUP1=12;
ELSE IF UPCASE(REGION) = 'NORTH JOINT SERVICE' THEN LINEUP1=13;

ELSE IF UPCASE(REGION) = 'SOUTH' THEN LINEUP1=14;
ELSE IF UPCASE(REGION) = 'SOUTH ARMY' THEN LINEUP1=15;
ELSE IF UPCASE(REGION) = 'SOUTH NAVY' THEN LINEUP1=16;
ELSE IF UPCASE(REGION) = 'SOUTH AIR FORCE' THEN LINEUP1=17;
ELSE IF UPCASE(REGION) = 'SOUTH OTHER' THEN LINEUP1=18;
ELSE IF UPCASE(REGION) = 'SOUTH JOINT SERVICE' THEN LINEUP1=19;

ELSE IF UPCASE(REGION) = 'WEST' THEN LINEUP1=20;
ELSE IF UPCASE(REGION) = 'WEST ARMY' THEN LINEUP1=21;
ELSE IF UPCASE(REGION) = 'WEST NAVY' THEN LINEUP1=22;
ELSE IF UPCASE(REGION) = 'WEST AIR FORCE' THEN LINEUP1=23;
ELSE IF UPCASE(REGION) = 'WEST OTHER' THEN LINEUP1=24;
ELSE IF UPCASE(REGION) = 'WEST JOINT SERVICE' THEN LINEUP1=25;

ELSE IF UPCASE(REGION) = 'OVERSEAS' THEN LINEUP1=26;

ELSE IF UPCASE(REGION) = 'OVERSEAS EUROPE' THEN LINEUP1=27;
ELSE IF UPCASE(REGION) = 'EUROPE ARMY' THEN LINEUP1=28;
ELSE IF UPCASE(REGION) = 'EUROPE NAVY' THEN LINEUP1=29;
ELSE IF UPCASE(REGION) = 'EUROPE AIR FORCE' THEN LINEUP1=30;
ELSE IF UPCASE(REGION) = 'EUROPE OTHER' THEN LINEUP1=31;
ELSE IF UPCASE(REGION) = 'EUROPE JOINT SERVICE' THEN LINEUP1=32;

ELSE IF UPCASE(REGION) = 'OVERSEAS PACIFIC' THEN LINEUP1=33;
ELSE IF UPCASE(REGION) = 'PACIFIC ARMY' THEN LINEUP1=34;
ELSE IF UPCASE(REGION) = 'PACIFIC NAVY' THEN LINEUP1=35;
ELSE IF UPCASE(REGION) = 'PACIFIC AIR FORCE' THEN LINEUP1=36;
ELSE IF UPCASE(REGION) = 'PACIFIC OTHER' THEN LINEUP1=37;
ELSE IF UPCASE(REGION) = 'PACIFIC JOINT SERVICE' THEN LINEUP1=38;

ELSE IF UPCASE(REGION) = 'OVERSEAS LATIN AMERICA' THEN LINEUP1=39;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA ARMY' THEN LINEUP1=40;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA NAVY' THEN LINEUP1=41;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA AIR FORCE' THEN LINEUP1=42;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA OTHER' THEN LINEUP1=43;

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```
ELSE IF UPCASE(REGION) = 'LATIN AMERICA JOINT SERVICE' THEN LINEUP1=44;

ELSE LINEUP1=45;

IF REGION=REGCAT THEN LINEUP2=1;
ELSE LINEUP2=2;

RUN;    ***MJS 07/03/03 Changed BENTYPE to TIMEPD;

PROC SORT DATA=ORDER1 OUT=OUT.FAKE (DROP=LINEUP LINEUP1 LINEUP2);
BY LINEUP LINEUP1 LINEUP2 REGCAT;
RUN;

PROC FREQ;
    TABLES MAJGRP REGION REGCAT BENTYPE BENEFIT;
RUN;
```

G.13.B - LOADWEB\MERGFINL.SAS - Merge the final CAHPS and MPR Scores Databases into the WEB layout - Annual.

```
*****
*
* PROGRAM:  MERGFINL.SAS
* TASK:    2007 DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE: Merge the final CAHPS and MPR Scores Databases
*          into the WEB layout preserving the order of the FAKE.SD2.
*
* WRITTEN: 06/07/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 08/01/2013 BY AMANDA KUDIS: Updated to support the 2013
*          annual HCSDB.
*          2) 08/01/2014 BY AMANDA KUDIS: Updated to support the 2014
*          annual HCSDB.
*          3) December 1, 2014 By Matt Turbyfill, Revised for the Macro Program.
*              Replaced RCTYPE with &PC.ReportCards
*              Replaced BCTYPE with &PC.Benchmark
*              Changed IN03 to ..\..\Programs\&YEAR2.\&PC.LoadWeb
*              Changed IN04 to ..\..\Programs\&YEAR1.\&PC.LoadWeb
*              Changed IN05 to ..\&RCTYPE\MPR_Adult&FYYEAR.
*              Changed IN06 to
..\..\Programs\&YEAR2.\&RCTYPE\MPR_Adult&YEAR2.
*              Changed IN07 to
..\..\Programs\&YEAR1.\&RCTYPE\MPR_Adult&YEAR1.
*              Changed IN09 to ..\..\Programs\&YEAR2.\&BCTYPE\data
*              Changed IN10 to ..\..\Programs\&YEAR1.\&BCTYPE\data
*              Changed PERIOD2 to &YEAR2.
*              Changed PERIOD1 to &YEAR1.
*              Changed PERIOD to &FYYEAR.
*              Renamed all all variables inding in 12, 13, or 14 to
&FY2., &FY1., or &FY., respectively
*              Inserted &FYYEAR into TITLE1
*
* INPUTS:  1) MPR and CAHPS Individual and Composite data sets with adjusted
*          scores, and benchmark data for DoD HCS.
*          - LOADMPR.sas7bdat - MPR Scores Databases
*          - LOADCAHP.sas7bdat - CAHPS Scores Databases
*          - BENCHA04.sas7bdat - CAHPS Benchmark Databases
*          - FAKE.sas7bdat - WEB Layout in Column order
*
* OUTPUT:  1) MERGFINL.sas7bdat - Combined Scores Database in WEB layout
*
* NOTES:
*
* 1) The following steps need to be run prior to this
*    program (2005,2006,2007):
*    - STEP1.SAS - Recode questions and generate CAHPS group files
*    - STEP2.SAS - Calculate CAHPS individual adjusted scores for groups 1-8
*    - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
*    - PRVCOMP.SAS - Calculate MPR individual and composite scores
*    - SMOKING_BMI.SAS - Calculate MPR smoking and BMI scores
*    - BENCHA01-04.SAS - Convert Benchmark Scores into WEB layout
*    - LOADCAHP.SAS - Convert CAHPS Scores Database into WEB layout
*
* 2) The output file (MERGFINL.SD2) will be run through the
*    MAKEHTML.SAS program to generate the WEB pages.
```

```

*
*****
* Assign data libraries and options
*****;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards          ***/
%LET RCTYPE = &PC.ReportCards;

/** SELECT PROGRAM - Benchmark OR PurchasedBenchmark              ***/
%LET BCTYPE = &PC.Benchmark;

LIBNAME IN01  ".";
LIBNAME IN02  ".";
LIBNAME IN03  "..../Programs/&YEAR2./&PC.LoadWeb";
LIBNAME IN04  "..../Programs/&YEAR1./&PC.LoadWeb";
LIBNAME IN05  "..../&RCTYPE/MPR_Adult&FYYEAR.";
LIBNAME IN06  "..../Programs/&YEAR2./&RCTYPE/MPR_Adult&YEAR2.";
LIBNAME IN07  "..../Programs/&YEAR1./&RCTYPE/MPR_Adult&YEAR1.";
LIBNAME IN08  "..../&BCTYPE/data";
LIBNAME IN09  "..../Programs/&YEAR2./&BCTYPE/data";
LIBNAME IN10  "..../Programs/&YEAR1./&BCTYPE/data";
LIBNAME OUT   ".";

OPTIONS PS=79 LS=142 COMPRESS=YES NOCENTER;

%LET PERIOD2 = &YEAR2.;
%LET PERIOD1 = &YEAR1.;
%LET PERIOD  = &FYYEAR.;

*****
* Construct ORDERing variable from WEB layout
*****;
DATA ORDER;
  SET IN01.FAKE;
  ORDER = _N_;
  LENGTH KEY $200;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP))  || UPCASE(TRIM(REGCAT))  ||
        UPCASE(TRIM(REGION))  || UPCASE(TRIM(TIMEPD));
  KEEP KEY ORDER;
RUN;

PROC SORT DATA=ORDER; BY KEY; RUN;

*****
* Merge the Scores Databases
*****;
DATA MERGFNL;
  LENGTH TIMEPD $35.;
  SET IN02.LOADCAHP (IN=INCAHP&FY.)
      IN03.LOADCAHP (IN=INCAHP&FY2.)
      IN04.LOADCAHP (IN=INCAHP&FY1.)
      IN05.LOADMPR  (IN=INMPR&FY.)
      IN06.LOADMPR  (IN=INMPR&FY2.)
      IN07.LOADMPR  (IN=INMPR&FY1.)
      IN08.BENCHA04 (IN=INBEN&FY.)
      IN09.BENCHA04 (IN=INBEN&FY2.);

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```

        IN10.BENCHA04 (IN=INBEN&FY1.);
SVC AHP&FY. = INCAHP&FY.;
SVC AHP&FY2. = INCAHP&FY2.;
SVC AHP&FY1. = INCAHP&FY1.;
SVM PR&FY. = INM PR&FY. ;
SVM PR&FY2. = INM PR&FY2. ;
SVM PR&FY1. = INM PR&FY1. ;
SV BEN&FY. = INBEN&FY. ;
SV BEN&FY2. = INBEN&FY2. ;
SV BEN&FY1. = INBEN&FY1. ;
LENGTH KEY $200;

KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
IF SCORE = . THEN DELETE;
IF TRIM(REGCAT) = "INV" THEN DELETE;
IF (INM PR&FY2. OR INM PR&FY1.) AND TIMEPD = 'Trend' THEN DELETE; *AMK 9/27/&FY1.;
RUN;

PROC SORT DATA=MERGFINL; BY KEY; RUN;

*****
* Append ORDERing variable to the merged Scores database file
*****;
DATA MERGFINL2 out.MISSING;
  MERGE MERGFINL(IN=IN1) ORDER(IN=IN2);
  BY KEY;

  LENGTH FLAG $30;
  IF IN1 AND IN2 THEN FLAG = "IN SCORES DB AND LAYOUT";
  ELSE IF IN1 THEN FLAG = "IN SCORES DB ONLY";
  ELSE IF IN2 THEN FLAG = "IN LAYOUT ONLY";

  LENGTH SOURCE $30;
  IF SVC AHP&FY. = 1 THEN SOURCE = "CAHPS &PERIOD.";
  IF SVC AHP&FY1. = 1 THEN SOURCE = "CAHPS &PERIOD1.";
  IF SVC AHP&FY2. = 1 THEN SOURCE = "CAHPS &PERIOD2.";
  IF SVM PR&FY. = 1 THEN SOURCE = "MPR &PERIOD. ";
  IF SVM PR&FY1. = 1 THEN SOURCE = "MPR &PERIOD1. ";
  IF SVM PR&FY2. = 1 THEN SOURCE = "MPR &PERIOD2. ";
  IF SV BEN&FY. = 1 THEN SOURCE = "BENCHMARK &PERIOD.";
  IF SV BEN&FY1. = 1 THEN SOURCE = "BENCHMARK &PERIOD1.";
  IF SV BEN&FY2. = 1 THEN SOURCE = "BENCHMARK &PERIOD2.";

  IF IN1 AND NOT IN2 THEN OUTPUT out.MISSING; *Missing from layout;
  IF IN1 AND ORDER NE . THEN OUTPUT MERGFINL2;
RUN;

*****
* Reorder file according to WEB layout
*****;
PROC SORT DATA=MERGFINL2 OUT=OUT.MERGFINL; BY ORDER; RUN;

DATA FAKE;
SET IN01.FAKE;
  ORDER = _N_;
RUN;

```

```

DATA LAYONLY;
  MERGE FAKE(IN=IN1) OUT.MERGFINL(IN=IN2 KEEP=ORDER);
  BY ORDER;
  IF IN1 AND NOT IN2;
RUN;

TITLE1 "&FYYEAR. DOD Health Survey Scores/Report Cards";
TITLE2 "Program Name: MERGFINL.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS Combined Scores data sets and WEB Layout";
TITLE4 "Program Outputs: MERGFINL.sas7bdat - Merged Final Scores Database for input
to MAKEHTML.SAS";

TITLE5 "MERGFINL.sas7bdat Data source counts";
PROC FREQ DATA=OUT.MERGFINL;
  TABLES SOURCE FLAG

  SVCAHP&FY. SVCAHP&FY1. SVCAHP&FY2.
  SVMPR&FY. SVMPR&FY1. SVMPR&FY2.
  SVBEN&FY. SVBEN&FY1. SVBEN&FY2.

  SVCAHP&FY. * SVCAHP&FY1. * SVCAHP&FY2. *
  SVMPR&FY. * SVMPR&FY1. * SVMPR&FY2. *
  SVBEN&FY. * SVBEN&FY1. * SVBEN&FY2.

  /MISSING LIST;
RUN;

TITLE5 "MERGFINL.sas7bdat Data attribute counts";
PROC FREQ DATA=OUT.MERGFINL;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
  REGION*REGCAT
  /MISSING LIST;
RUN;

TITLE5 "LAYONLY.sas7bdat Data attribute counts";
PROC FREQ DATA=LAYONLY;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
  REGION*REGCAT
  /MISSING LIST;
RUN;

TITLE5 "No matching record found in LAYOUT file (FAKE.sas7bdat)";
PROC PRINT DATA=OUT.MISSING;
VAR MAJGRP REGION REGCAT BENTYPE BENEFIT;
RUN;

```

G.14 - LOADWEB\TREND_A.SAS - Calculate Trends for CAHPS scores - Annual.

```
*****
*
* PROGRAM:   TREND_A.SAS
* TASK:     2007 DOD HEALTH CARE SURVEY ANALYSIS (6244-410)
* PURPOSE:  Add TREND records to Scores database.
*
* WRITTEN:  07/28/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 08/01/2013 BY AMANDA KUDIS -- updated for 2013 survey.
*           2) 12/01/2014 By Matt Turbyfill, revised for the Macro Program.
*                   Changed first TIMEPD limitation to "&FYYEAR."
*                   Changed second TIMEPD limitation to WHERE TIMEPD IN
(&YEAR2.,"&FYYEAR.")
*                   Renamed all all variables ending in 12, 13, or 14 to
&FY2., &FY1., or &FY., respectively
*                   Inserted &FYYEAR into TITLE1
*                   Changed TEMP12 and 14 to TEMP&FY2. and &FY. Also
change limitations on datasets respectively to &YEAR2. and &FYYEAR.
*
* INPUTS:   1) CONUS_Q.sas7bdat - MPR and CAHPS Scores Database in WEB layout
*           2) FAKE.sas7bdat - Scores Database WEB Layout
*
* OUTPUT:   1) TREND_A.sas7bdat - Combined Scores Database in WEB layout
*
* NOTES:
*
* 1) All of the scores DB programs must be run and MERGFINL.SAS prior to
*    running this program. All report card records must be merged prior
*    to the trend calculations (MERGFINL.SAS,CONUS_Q.SAS,TOTAL_A.SAS).
*
* 2) The output file (TREND_A.sas7bdat) will be run through the
*    MAKEHTML.SAS program to generate the HTML consumer reports.
*
*****
* Assign data libraries and options
*****;

LIBNAME IN   ".";
LIBNAME OUT  ".";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER ERRORS=10000;
/*RSG 02/2005 code copied from 2003 TOTAL_Ar.SAS - eliminate all records
with semean>.05 or missing and delete all records for that region/regcat
this will reduce the number of missing data*/

/* MER 11/17/08 semean threshold was changed to .07 */

data fakecut(keep=region regcat);
set in.conus_q;
where majgrp='Prime Enrollees' & region ne regcat
& benefit='Health Plan' & timepd="&FYYEAR."; *AMK 08/01/2012 changed timepd to 2012;
if semean>.07|semean=.;

proc sort; by region regcat;
data fake;
set in.fake;
```

```

oorder=_n_;
proc sort data=fake; by region regcat;
data newfake;
merge fakecut(in=fin) fake; by region regcat;
if fin then delete;
proc sort data=newfake out=out.newfake; by oorder;
run;

*****
* Extract records to calculate TRENDS. Keep only 2001/2003 pairs for CAHPS
* records. Trends have already been calculated for MPR scores.
*****;

DATA TRENDS;
  SET IN.CONUS_Q (drop=key);          * AMK 08/01/2013, changed 2010, 2012 ;
  WHERE TIMEPD IN ("%YEAR2.", "%FYYEAR."); * to 2011,2013;
  *****
  * Trends already calculated for MPR scores, so remove from file
  * (RSG 02/2005) EXCEPT Healthy Behavior scores whose trend need to be calculated
  *****;

  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));

  *AMK 08/01/2014, changed to svmpr12/13/14;
  IF (SVMPR&FY2. = 1 or SVMPR&FY1. = 1 or SVMPR&FY. = 1)
    AND BENEFIT NE 'Healthy Behaviors' THEN DELETE;

RUN;

DATA TEMP&FY2.;
  SET TRENDS;
  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE ;
  IF TIMEPD = "%YEAR2.";
RUN;
PROC SORT DATA=TEMP&FY2.; BY MAJGRP REGION REGCAT BENEFIT BENTYPE; RUN;

DATA TEMP&FY.;
  SET TRENDS;
  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE;
  IF TIMEPD = "%FYYEAR.";
RUN;
PROC SORT DATA=TEMP&FY.; BY MAJGRP REGION REGCAT BENEFIT BENTYPE; RUN;

DATA PAIR&FY2.&FY.(keep=majgrp region regcat benefit bentype);
  MERGE TEMP&FY2.(IN=IN&FY2.) TEMP&FY.(IN=IN&FY.);
  BY MAJGRP REGION REGCAT BENEFIT BENTYPE;
  IF IN&FY2. AND IN&FY.;
RUN;

PROC SORT DATA=TRENDS;
  BY MAJGRP REGION REGCAT BENEFIT BENTYPE;
RUN;

DATA TRENDS2;
  MERGE TRENDS(IN=INTREND) PAIR&FY2.&FY.(IN=INPAIR);
  BY MAJGRP REGION REGCAT BENEFIT BENTYPE;

```



```

    IF INTREND AND INPAIR;
RUN;

PROC SORT DATA=TRENDS;
    BY MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD;
RUN;
    proc print data=trends(obs=100);
*****
* Calculate TRENDS keeping only the TREND records
*****;

DATA TRENDS bench;
    SET TRENDS(drop=bscore bsemean);
    BY MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD;
    IF TIMEPD = "&YEAR2." THEN DO;
        SCORE&FY2. = SCORE/100;
        SE&FY2.     = SEMEAN;
        N&FY2.      = N_OBS;
        W&FY2.      = N_WGT;
    END;
    RETAIN SCORE&FY2. SE&FY2. N&FY2. W&FY2.;
    IF TIMEPD = "&FYYEAR." THEN DO;
        SCORE&FY. = SCORE/100;
        SE&FY.    = SEMEAN;
        N&FY.     = N_OBS;
        W&FY.     = N_WGT;
    END;
    RETAIN SCORE&FY. SE&FY. N&FY. W&FY.;
    IF TIMEPD = "&FYYEAR" THEN DO;
        TIMEPD = "Trend";
        KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
              UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
              UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
        SOURCE = "TREND";
        SEMEAN = SQRT(SE&FY2.**2+SE&FY.**2);
        N_OBS  = MIN(N&FY2.,N&FY.);
        N_WGT  = MIN(W&FY2.,W&FY.);
        SCORE  = SCORE&FY.-SCORE&FY2.;
        DSCORE = 100*(SCORE&FY.-SCORE&FY2.);
        if region='Benchmark' then OUTPUT bench;
        else output trends;
    END;
    DROP ORDER SCORE&FY2. SCORE&FY. SE&FY2. SE&FY. N&FY2. N&FY.;
RUN;

PROC SORT DATA=trends;
    BY MAJGRP BENEFIT BENTYPE TIMEPD;
RUN;
proc sort data=bench out=benchs(keep=majgrp benefit bentype timepd score semean);
by majgrp benefit bentype timepd;
run;

*****
* Perform significance tests for CAHPS scores
*****;

DATA trends;
    MERGE trends(IN=SIN) BENCHs(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));

```

```

BY MAJGRP BENEFIT BENTYPE;
if bsemean=. then bsemean=0;
TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
SIG = 0;
IF N_OBS >= 30 AND TEST < 0.05 THEN SIG = 1;
IF SCORE < BSCORE THEN SIG = -SIG;
IF SIN;
RUN;

data trends;
set trends bench;
score=dscore;
PROC SORT DATA=TRENDS; BY KEY; RUN;

*****
* Construct ORDERing variable from WEB layout
* (RSG 02/2005 add fix to order it properly
*****;
DATA ORDER;
  LENGTH KEY $200;
  SET IN.newFAKE;
  ORDER = _N_;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
  KEEP KEY ORDER;
RUN;

PROC SORT DATA=ORDER; BY KEY; RUN;

DATA MERGTRND;
  MERGE TRENDS(IN=IN1) ORDER(IN=IN2);
  BY KEY;
  IF IN1 and in2;
RUN;

PROC SORT DATA=IN.CONUS_Q OUT=CONUS_Q;
by key;run;
data conus_q;
  merge conus_q order(in=gin); by key;
  if gin;
proc sort data=CONUS_Q; by order;
PROC SORT DATA=MERGTRND; BY ORDER; RUN;

DATA OUT.TREND_A;
  update MERGTRND CONUS_Q;
  BY ORDER;

  IF BENEFIT = "Primary Care Manager" THEN BENEFIT = "Personal Doctor"; /*MJS
02/14/2003*/

  IF REGCAT = "5th Med Grp-Minot" THEN REGION = "West Air Force";
  IF substr(region,1,5) in ('Latin','Europ','Pacif') then delete;
  IF REGION IN ("South Joint Service","West Joint Service","Europe Joint Service",
               "Pacific Joint Service","Latin America Joint Service") THEN DELETE;

RUN;

```

```
TITLE1 "&FYYEAR. DOD Health Survey Scores/Report Cards";
TITLE2 "Program Name: TREND_A.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS data records in WEB Layout";
TITLE4 "Program Outputs: TREND_A.sas7bdat - Merged Final Scores Database with TRENDS
for input to SIGNIF_A.SAS";
```

```
TITLE5 "FREQs of TREND_A.sas7bdat";
PROC FREQ;
    TABLES SOURCE FLAG MAJGRP REGION BENEFIT BENTYPE
    /MISSING LIST;
RUN;
```

```
TITLE5 "FREQs of newFAKE.sas7bdat";
PROC FREQ DATA=IN.newFAKE;
    TABLES MAJGRP REGION BENEFIT BENTYPE
    /MISSING LIST;
RUN;
```

G.15 - PROGRAMS\HCSDB_Bene_Report_Macro_Batch_Program.SAS - Run all beneficiary report programs as a single process, including purchased care

```
options msglevel = i;
options nosource;
%symdel x / nowarn;

/*%LET PC = /*LEAVE THIS BLANK! DUMMY ONLY!*/;
/*%LET FOLDER = /*LEAVE THIS BLANK! DUMMY ONLY!*/;
/*First, set the type of run.
If for Purchased Care, set PC = Purchased. Otherwise, PC is blank.
If run is quarterly, set QA = Q. If annual, set QA = A.
*/
%LET QA = A;

/*Set the Fiscal Year and Quarter here.*/
%LET FYYEAR = 2017;
%LET FYQTR = A;
/*This is always the last two digits of FYYEAR.*/
%LET FY = 17; /*This also gets used to change the HYY and RYY variables. Should
those be separate? Do different fiscal years sometimes get used?*/
/*This is the last two digits of the year used for the norms.*/
%LET NY = 11;

/*RUNBENCH = 1 if the benchmark needs to be run, 0 if not. The benchmark is never run
during annual run. If it is Q1, the benchmark needs to be run to update the field
names.*/
%LET RUNBENCH = 0;

/*This is the location of the base Benchmark data file, C13_ZAMV.*/
%LET BENCHINPUT = /sasdata/Projects/40309_HCS/DATA/HCSDB/2015AdultNCQA;
/*This is the location of the Benchmark data as processed by Bench1 and Bench2.
Should be quarterly.*/
%LET BENCHDATA =
/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY2017/Programs/Benchmark/data;

%LET BENCHFILE = C15_ZAMV;
/*This is the location of the Norm data.*/
%LET NORMDATA = /sasdata/Projects/40309_HCS/DATA/HCSDB/20&NY./Data;
%LET NORMFMTLIB = &NORMDATA./Fmtlib;
%LET NORMFILE = HCS&NY.A_2;

/*This is the base folder containing all programs for this run.*/
%LET PROGRAMS = /sasdata/Projects/40309_HCS/DATA/HCSDB/&FOLDER.&FYYEAR./Programs;
%PUT PROGRAMS = &PROGRAMS.;

proc printto print = "&Programs./HCSDB_Bene_Report_Macro_Batch_Program.lst" log =
"&Programs./HCSDB_Bene_Report_Macro_Batch_Program.log" new;
run;

/*This block will change a number of settings depending on QA.*/

/*DO NOT CHANGE ANY MACROS BELOW THIS COMMENT!!*/

%LET YEAR1 = %EVAL(&FYYEAR.-1);
%LET YEAR2 = %EVAL(&FYYEAR.-2);
```

```

%LET FY1 = %EVAL(&FY.-1);
%LET FY2 = %EVAL(&FY.-2);

%LET Q = ;
%LET A = ;
%LET FOLDER = ;
%LET LOADD = ;
%LET LOADF = ;
%LET MERGE = ;
%LET QEDIT = ;
%LET AEDIT = ;
%LET DATAFILE = ;
%MACRO MACROVARS;
%IF (&QA = Q) %THEN %DO;
%LET Q = Q;
%LET A = %STR();
%LET FOLDER = Q&FYQTR.FY;
%LET LOADD = CAHPS_Adult&FOLDER.&FYYEAR.;
%LET LOADF = LOADCAHQ;
%LET MERGE = MERGFINQ;
%LET QEDIT = _EDIT;
%LET AEDIT = ;
%LET DATAFILE = HCS&FY.&FYQTR._2;
%END;
%ELSE %DO;
%LET Q = %STR();
%LET A = A;
%LET FOLDER = %STR();
%LET LOADD = %STR();
%LET LOADF = LOADCAHP;
%LET MERGE = MERGFINL;
%LET QEDIT = ;
%LET AEDIT = _EDIT;
%LET DATAFILE = HCS&FY.A_2;
%LET RUNBENCH = 0;
%END;
%MEND;
%macrovars;
%PUT FOLDER = &FOLDER;
%PUT PROGRAMS2 = &PROGRAMS.;
options source;

/*This macro corrects all settings for each program, then clears the memory after
running the program.*/
%macro runprog(dir, file, i);
%macrovars;

%PUT FOLDER = &FOLDER.;
%PUT PROGRAMS3 = &PROGRAMS.;

%PUT DIR = &DIR.;
/*Set the path for the log file.*/
/*proc printto log = "&dir./&file..log" new
lst = "&dir./&file..lst" new;
run;*/
/*Change the current directory. This is so the filepath references in each program
work correctly.*/
x "cd &dir.";

```

```

/*The program that gets run should always be in the regular care directory.*/
%let dir2 = %sysfunc(compress(%sysfunc(tranwrd(&dir.,Purchased,)),%str( )));

%include "&dir2./&file..sas";

/*After the program is finished running, all other notes get written to the log files
in the root Programs directory.*/
/*proc printto log = "&PROGRAMS./Null&PC.&file..log" new;
run;
proc printto print = "&PROGRAMS./Null&PC.&file..lst" new;
run;*/
%PUT DIR = &DIR.;

/*Clear all formats*/
proc datasets memtype=catalog;
delete formats;
run;
quit;

/*Clear all datasets form WORK library*/
proc datasets lib=work kill nolist memtype=data;
quit;

/*Clear all macro programs except for MACROVARS and RUNPROG.*/
proc catalog catalog=work.sasmacl force;
save MACROVARS /et=MACRO;
save RUNPROG /et=MACRO;
save RUNPROGS /et=MACRO;
quit;
run;

/*Clear all macro variables except those declared above.*/
/*Actually, this is not necessary, because the INCLUDE statement is being run in a
macro, so all macro variables that get declared are local instead of global.*/
/*data _null_;
    set sashelp.vmacro;
    if scope = 'GLOBAL' then
        call execute('%syndel '||trim(left(name))||' ');
run;*/

%mend;
%put &programs.;

%MACRO RUNPROGS();

%LET I = 0;
%DO %UNTIL (&I = 2);

%IF &I = 0 %THEN %LET PC = %str();
%IF &I > 0 %THEN %LET PC = Purchased;
%LET I = %EVAL(&I+1);
%LET LSTCONUS = &LSTCONUSA;
/*
%IF &RUNBENCH = 1 %THEN %DO;

```

```

%runprog(dir=&PROGRAMS./&PC.Benchmark, file = BENCHA01);
%runprog(dir=&PROGRAMS./&PC.Benchmark, file = BENCHA02);
%END;

%runprog(dir=/sasdata/Projects/40309_HCS/DATA/HCSDB/&FOLDER.&FYYEAR./Data/fmtlib,
file =Hafmt);
%runprog(dir=&PROGRAMS./&PC.ReportCards/CAHPS_Adult&FOLDER.&FYYEAR., file =STEP1Q);

%runprog(dir=&PROGRAMS./&PC.ReportCards/CAHPS_Adult&FOLDER.&FYYEAR., file =STEP2&Q.);
%runprog(dir=&PROGRAMS./&PC.ReportCards/CAHPS_Adult&FOLDER.&FYYEAR., file
=COMPOSIT,i=&i);
%runprog(dir=&PROGRAMS./&PC.LoadWeb/&LOADD., file =&LOADF.,i=&i);

%runprog(dir=&PROGRAMS./&PC.Benchmark, file =BENCHA03);
%runprog(dir=&PROGRAMS./&PC.Benchmark/apredtest, file =SAS2STATA_Grps);

x "cd &PROGRAMS./&PC.Benchmark";

/**  CHANGE HERE!!!!  **/*

%if &PC = %str() %then %do;
  x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/SASGRID/DATA/HCSDB/2017/Programs/Benchmark/apredtest/vartest.do
";
  *x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/DC1/HCSDB/2014/Test_Programs/Benchmark/apredtest/vartest.do";
%end;
%if &PC = Purchased %then %do;
  x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/SASGRID/DATA/HCSDB/2017/Programs/PurchasedBenchmark/apredtest/v
artest.do";
  *x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/DC1/HCSDB/2014/Test_Programs/PurchasedBenchmark/apredtest/varte
st.do";
%end;
*/

%runprog(dir=&PROGRAMS./&PC.Benchmark/apredtest, file =CSV2SAS_Proj);
%runprog(dir=&PROGRAMS./&PC.Benchmark/apredtest, file =PREDCOMP);
%runprog(dir=&PROGRAMS./&PC.Benchmark, file =BENCHA04);

%runprog(dir=&PROGRAMS./&PC.ReportCards/MPR_Adult&FOLDER.&FYYEAR., file =PRVCOMP&Q.);

%runprog(dir=&PROGRAMS./&PC.ReportCards/MPR_Adult&FOLDER.&FYYEAR., file
=SMOKING_BMI);

%IF &QA = A %THEN %DO;
  %runprog(dir=&PROGRAMS./&PC.ReportCards/MPR_Adult&FOLDER.&FYYEAR., file
=trendmpr);

```

%END;

%runprog(dir=&PROGRAMS./&PC.ReportCards/MPR_Adult&FOLDER.&FYYEAR., file =LOADMPR&Q.);

%runprog(dir=&PROGRAMS./&PC.LoadWeb, file =FAKE);

%runprog(dir=&PROGRAMS./&PC.LoadWeb, file =&MERGE.);

%runprog(dir=&PROGRAMS./&PC.LoadWeb, file =CONUS_&QA.);

%IF &QA = A %THEN %DO;

 %runprog(dir=&PROGRAMS./&PC.LoadWeb, file =TREND_A);

%END;

%END;

%MEND;

%RUNPROGS;

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APPENDIX H

SAS CODE FOR 2017 HEDIS SAMPLING AND WEIGHTING

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H.1 - HCSDB_HEDIS\Programs\Sampling\xwalk_hedis.sas - create crosswalk retaining MSA_ID

```
dm 'clear output;clear log';
*****
* PROGRAM:   XWALK.SAS
* TASK:     DOD Health Care Survey, Adult Sampling (40309.31H)
* PURPOSE:  Build SAS Extract/Cross-walk file for the DOD sample
*           and assign permanent random numbers (PRN).
*           For HCSDB-HEDIS sample, keep MSA_ID
* WRITTEN:  01/17/2001 BY KEITH RATHBUN
*
* MODIFIED:
* 1) 02/08/2001 BY KEITH RATHBUN for Q3 processing. Also, added
*     specific family exclusion criteria as include file.
* 2) 07/09/2001 BY KEITH RATHBUN for Q4 processing. Removed Q3-specific
*     processing.
* 3) 10/10/2003 BY DAWN FERRAGAMO for Q1 2004 processing.
* 4) 06/29/2004 BY KEITH RATHBUN for q4 2004 processing.
*     Added PTNT_ID to XWALK file.
* 5) 07/13/2005 BY REGINA GRAMSS for Q4 2005 processing: point to use
*     STI files (1-4) from Q3 that was used for Child resampling.
* 6) 07/19/2005 BY REGINA GRAMSS for Q4 2005 processing: exclude ptnt_id
*     that are in death file (received from STI 7/19/2005).
* 7) 10/14/2005 BY KEITH RATHBUN for Q1 2006 processing: Removed code
*     relating to death file provided in previous quarter.
* 8) 11/09/2005 BY REGINA GRAMSS for Q1 2006 - needed to add in KATRINA hit
*     areas that was left out of the original frame file sent in Oct 2005.
*     KATRINA file was created in LAYOUT_KATRINA.SAS, producing STI005.SD2 file.
* 9) 04/14/2006 BY KEITH RATHBUN for Q4FY2006 processing.
*     Added COMPRESS=YES option.
* 10) 10/18/2006 BY SKY ANDRECHECK for Q2 2007 processing.
*     Changed input files to DEERS instead of old contractor name (STI).
* 11) 05/04/2007 By H Xu for Q4FY2007 sampling.
*     Since legddscd is no longer available, we will use PTNT_ID alone as
*     merging ID in xwalk. Q3 xwalk will be deduped by ptnt_id, and eligibility
*     indicators E1-E26 will be consolidated.
* 12) 07/23/2007 for qlfy2008 sampling.
*     From qlfy2008, put all active duty in the adult sample regardless of their age.
* 13) 12/06/2007 By Keith Rathbun for Collateral Access Analysis project.
*     Added survey to keep track of which new records are added for which survey.
* 14) 10/27/2009 by H. Xu for Q2FY2010 Adult sampling
*     Removed outputting of permanent dataset containing the random number
*     seed (seed.sas7bdat). From now on the period no.(PD macro variable) will be
*     used to seed the random no. generator. This will prevent different results
*     from being generated if the program is accidentally rerun and it will also
*     make it easier to replicate results if output files are lost/corrupted.
* 15) 11/16/2009 By Keith Rathbun, added EXCLUDE_FtHood.SAS.
* 16) The following changes have been made for Q2FY2011 on 10/21/2010 by H.Xu:
*     a)Removed EXCLUDE_FtHood.SAS
*     b)Changed the value of SURVEY from HCSDB to HCSDB/SR
*     c)Xwalk.sas7bdat file now includes eligible adult beneficiaries as usual
*        plus the eligible select reserve
*     d)ESR&PD. is created to indicate the TRS study population
*     e)All Adults with checked values of RSVCC are eligible Select Reserve,
*        but The TRS study population just includes Select Reserve not in the HCSDB
*        population (DELGIND =0) plus those enrolled in TRS (ACV=R).
* 17) On 1/21/2011, add a part to populate delgind, rsvcc, acv for PID_NEW for
*     q2fy2011 xwalk.
```

```

*
* LAST UPDATED: 11/25/2014 Breanna Miller for HCSDB Adult Sampling
*
* INPUTS:
* 1) DEERS001.sas7bdat - DEERS Population SAS data set (Part 1)
* 2) DEERS002.sas7bdat - DEERS Population SAS data set (Part 2)
* 3) DEERS003.sas7bdat - DEERS Population SAS data set (Part 3)
* 4) DEERS004.sas7bdat - DEERS Population SAS data set (Part 4)
* 5) XWALK.sas7bdat - Previous DEERS Population XWALK SAS data set
*
* OUTPUTS:
* 1) XWALK.sas7bdat - Current DEERS Population XWALK SAS data set
*
* INCLUDES:
* 1) EXCLUDE.SAS - Exclude specific family by SPONSSN and PTNT_ID.
*
* NOTES:
* 1) Under the new contract (8860), the survey year was changed
* to be based on the year the survey is administered (2002)
* as opposed to the questioning reference frame (2001). This program
* references folders named according to the new convention [i.e.
* the survey administration year (2002 for project 8860)].
* 2) Q4FY2011: For Q4FY2011 HCSDB, we will need to point to the XWALK file
* we create for TSS bene in the K:\TSS\DEERS_mmdd2011_for711_2011 area.
* 3) Q1FY2014: For Q1FY2014 HCSDB, we will need to point to the XWALK file
* we create for TSS bene in the K:\TSS\DEERS_mmdd2013_for711_2013 area.
* 4) Q3FY2015: Starting from Q3FY2015, reading single DEERS data file
* instead of four separate parts of DEERS data.
* 5) Q2FY2017: Running Programs in SAS GRID (Grid is case sensitive)
* Starting from Q2FY2017, we will now Exclude foreign nationals
* from sampling frame
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/xwalk_hedis.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/xwalk_hedis.lst" new;

%LET QUARTER=Q2FY2017;

LIBNAME IN1 "/sasdata/Projects/40309_HCS/DATA/Q1FY2017"; * Previous XWALK for
Q2FY2017;
LIBNAME IN2 "/sasdata/Projects/40309_HCS/DATA/&QUARTER."; * Current Contractor
DEERS Files;
LIBNAME OUT "/sasdata/Projects/40309_HCS/DATA/HCSDB-HEDIS"; * Q2FY2017 changed for
HCSDB-HEDIS sample;

%INCLUDE
"/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/f2rsvcc.inc";

TITLE1 "DOD Health Care Survey, Sampling (40309.31H)";

```

```

TITLE2 "Program Name: XWALK.SAS (&QUARTER.)";
TITLE3 "Generate XWALK from DOD DEERS Pop/Assign PRN, MPRID to Newly Added";

*****
* Set period number as global variable.
*****;
%LET PD = 61; *Q2FY2017 <Increase by 1 every quarter> ;

*****
* Set survey as global variable.
* Change to HCSDB or CollateralAccess.
*****;
* Starting from Q2fy2011, changed from HCSDB to HCSDB/SR (SR stands for Select
Reserve);
%LET SURVEY = HCSDB/SR;

*****
* Formats
*****;
PROC FORMAT;
  VALUE $FDAGEQY ' ' = ' '
                '000'-'017' = '<18'
                '018' - HIGH = '18 and older';
  VALUE $FRSVCC 'FX','MA','S9','SA','SB','SC','SD','SG','SM','ST',
               'TA','TB','TC','TD','TR','TW',
               'UA','UF','UL','UP','UQ','US','UT','UU','UX' = "Checked SR values"
               ' '= ' '
               Other="Other";

RUN;
*****
* Assign LASTID from previous XWALK file as global variable. This will later
* be used as the starting point for assigning new MPRIDs.
*****;
DATA _NULL_;
  SET IN1.XWALK END=FINISHED;
  LENGTH MPRIDX 8; RETAIN MPRIDX;
  IF MPRID > MPRIDX THEN MPRIDX = MPRID;
  IF FINISHED THEN CALL SYMPUT("LASTID",MPRIDX);
RUN;

*****
* Get PTNT_ID from current quarter file.
*****;
*HCSDB_HEDIS: keep MSA_ID;
  PROC SORT DATA=IN2.DEERS
    (KEEP=SPONSSN RSVCC DELGIND ACV PNTYPCD PATCAT DBENCAT MBRRELCD DAGEQY PNBRTHTD
PTNT_ID SVCCD MSA_ID ENRID)
    OUT=DEERS;
  BY PTNT_ID;
RUN;

*****
*
* Since Q2FY2011, DEERS file contains HCSDB population and Select Reserve population
* Include all the active duty regardless of age for HCSDB Adult Population
* Remove children (<18) prior to assigning permanent random number (PRN).
* Since Q2FY2017, we want to exclude foreign nationals from sampling frame
* Note:

```

```

*   DELGIND=1 cases are 'Eligible for health care benefits
*   SVCCD=(1,2,3,4) are (Foreign Army/Navy/Marine Corp/Air Force) respectively.
*****
;
TITLE4 "Check the variables before excluding anything";
PROC FREQ DATA=DEERS;
    TABLES DELGIND*PATCAT*DAGEQY*PNTYPCD*MBRRELCD*RSVCC*ACV
            SVCCD/MISSING LIST;
            FORMAT DAGEQY $FDAGEQY. RSVCC $FRSVCC.;
RUN;

DATA PID_Q;
    SET DEERS;
    IF (DELGIND = '1' AND PATCAT = 'ACTDTY') OR
        (DAGEQY GE "018" OR (DAGEQY = " " AND NOT (PNTYPCD ='D' AND MBRRELCD in
('C', 'D', 'E')))) AND
        (SVCCD NOT IN ('1', '2', '3', '4')));
*****
* Update EXCLUDE.SAS if contractor failed to remove all duplicates.
* Exclude specific families from survey.
*****;
%INCLUDE
"/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/exclude.sas";
RUN;

TITLE4 "Check the criteria after excluding the duplicates and non-eligible cases";
PROC FREQ DATA=PID_Q;
    TABLES DELGIND*PATCAT*DAGEQY*PNTYPCD*MBRRELCD
            SVCCD/MISSING LIST;
            FORMAT DAGEQY $FDAGEQY.;
RUN;

PROC SORT DATA=IN1.XWALK OUT=XWALK; BY PTNT_ID;RUN;

*****
* Combine Qn PTNT_ID with previous XWALK, keeping only the
* new eligibles (PID_NEW).
* Note: In xwalk.log, we don't need to modify the xwalk.sas to get rid of the
  overwritten message, since we do want these variables from most recent DEERS
  files instead of the old xwalk file for the overlapped cases.
*****;
*HCSDB_HEDIS: keep MSA_ID;
DATA PID_NEW OLDXWALK;
    MERGE XWALK(IN=IN2) PID_Q(IN=IN1 KEEP=PTNT_ID ACV DELGIND RSVCC MSA_ID);
    BY PTNT_ID;

*****
* Assign eligibility indicator for new eligibles.
*****;
/*This part below is changed by H Xu for q2fy2011 to take ESR&PD. into account*/
LENGTH E&PD $1 ESR&PD. $1;

FLAG_NEWDEERS=0;
FLAG_OLDXWALK=0;
IF IN1 THEN FLAG_NEWDEERS=1;
IF IN2 THEN FLAG_OLDXWALK=1;

IF IN1 THEN DO;

```



```

IF DELGIND = '1' THEN DO;
  E&PD = "Y";
  ESR&PD. = "N";
  IF ACV = "R" THEN ESR&PD. = "Y";
END;
ELSE IF DELGIND = '0' THEN DO;
  E&PD. = "N";
  ESR&PD. = "Y";
END;
END;
ELSE IF IN2 THEN DO;
  E&PD = "N";
  ESR&PD. = "N";
END;

LENGTH SURVEY $25; * KRR Added SURVEY 12/06/2007;
IF IN1 AND NOT IN2 THEN DO;
  SURVEY = "&SURVEY";
  OUTPUT PID_NEW;
END;

IF IN2 THEN OUTPUT OLDXWALK;
RUN;

title4 "PID_NEW";
PROC FREQ DATA=PID_NEW;
  TABLES FLAG_NEWDEERS*FLAG_OLDXWALK*DELGIND*E&PD.*ESR&PD.*ACV SURVEY/MISSING LIST;
RUN;
title4 "OLDXWALK";
PROC FREQ DATA=OLDXWALK;
  TABLES FLAG_NEWDEERS*FLAG_OLDXWALK*DELGIND*E&PD.*ESR&PD.*ACV SURVEY/MISSING LIST;
RUN;

*****
* Assign PRN for all new eligibles.
*****;
*HCSDB_HEDIS: keep MSA_ID;
DATA NEWXWALK (KEEP=MPRID PRN PTNT_ID E&PD ESR&PD. SURVEY DELGIND RSVCC ACV MSA_ID);
  SET PID_NEW;
  LENGTH MPRID $8;
  *****
  * Assign PRN for new eligibles.
  * 10/27/2009: Using PD as the seed for generating PRN;
  *****;
  PRN = RANUNI(&PD.);
  LABEL PRN = "Permanent Random Number";
  *****
  * Assign MPRID starting with previous XWALKs LASTID+1.
  *****;
  IF _N_ = 1 THEN MPRIDX = %EVAL(&LASTID+1);
  ELSE MPRIDX + 1; RETAIN MPRIDX;
  MPRID = PUT(MPRIDX,Z8.);
RUN;

%MACRO XWALK;
DATA OUT.XWALK;
  SET NEWXWALK OLDXWALK(DROP=FLAG_NEWDEERS FLAG_OLDXWALK);

```

```

BY PTNT_ID;
*****
* Recode missing values to Not eligible.
*****;
%DO I = 1 %TO &PD;
  IF E&I = " " THEN E&I = "N";
  IF ESR&I = " " THEN ESR&I = "N";
  LABEL E&I = "Eligibility indicator for period = &I"
         ESR&I. = "TRS Study Population indicator for period = &I";
%END;
RUN;
%MEND XWALK;
%XWALK;

TITLE3 "Proc Contents of XWALK.sas7bdat";
PROC CONTENTS; RUN;

Title3 "Proc freq of Xwalk data";
PROC FREQ; *PD=E61, Q2FY2017;
  TABLES SURVEY
         E1-E&PD
         ESR&PD.
         E&PD.*ESR&PD.
         E55*E56*E57*E58*E59*E60*E&PD.*ESR&PD.
  /MISSING LIST;
RUN;

proc printto;
run;

***** End *****;

```

H.2.A - HCSDB_HEDIS\Programs\Sampling\framea_prelim_hedis.sas - count number of eligible beneficiaries per facility

```
*****
*** Program: framea_prelim_hedis.sas
*** Project: Health Care Survey of DoD Beneficiaries - Adult (40309.31H)
*** Purpose: Create the Preliminary Sampling Frame for the Adult Survey.
***           Identify the 50 largest facilities
***
*** Inputs:  extract.sas7bdat: Extracted DoD data set used to create the
***           adult sampling frame.
***           tma.sas7bdat      : DMIS information
***           frame.inc        : Include file

*** Outputs: framea_Prelim.sas7bdat : Preliminary adult sampling frame created
***           from the extracted DoD data set.
***           TMA.sas7bdat
***           (TMA spreadsheet/csv file is downloaded from
***           http://health.mil/Military-Health-Topics/Technology/Support-Areas/
***           Geographic-Reference-Information/DMIS-ID-Tables)
***           bene_count.sas7bdat and bene_count.xlsx : count of beneficiaries
***           under 65 to identify largest facilities
***
*** Written: Haixia Xu on 08/15/2006
*** Last Updated: 01/03/2017 by Breanna Wakar for HCSDB_HEDIS Adult Sampling
***
*** Note:  1)The stratification is changed in Q1FY2007.
***        2)LISTDMIS: Need to check if there is any updated file available
***           (Current ListDmis file using from Q3FY2009)
***        3)TMA.sas7bdat: We Download the latest excel from website for TMA file
***        4)Starting from Q2FY2011, extract.sas7bdat includes both Adult
***           HCSDB Beneficiaries and TRS study population so make sure to only
***           include HCSDB Adult Beneficiaries when reading extract.sas7bdat
***        5)For Q1FY2015 we are pointing to the 2014 TSS-B folder since that
***           is the location of the last extract.
***        6)Starting from Q2FY2017, running programs in SASGRID
***        7)We have created TMA.sas7bdat data in b4r_framea_prelim.sas
*****;
options formdlm='=' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-\<>";
*import blanks as underscores in variable names;
options validvarname=V7;

* comment in for final run;
proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/framea_prelim_h
edis.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/framea_prelim
_hedis.lst" new;

%LET QUARTER=Q2FY2017;

libname in1  "/sasdata/Projects/40309_HCS/DATA/&QUARTER." access=readonly;
libname in2  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Data/AFinal"
access=readonly;
```

```

libname in3  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS";
libname out  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname out2 "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data";
libname out3 "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS";

TITLE1 "DOD Health Care Survey, Sampling (40309.31H)";
title2 "Program: FRAMEA_PRELIM_HEDIS.SAS (HCSDB HEDIS Jan 2017)";
title3 "Purpose: Construct the Preliminary Adult Sampling Frame";

%let Folder      = /sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling;
%let TMAfolder   =
/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Data/AFinal/DMIS_201611; *reading
downloaded excle file;
%let TMAfilename = 201611_dmisid.xlsx;

proc format;
value $FMTage ' '= 'Missing'
              '001'-'064' = '<65'
              '065'-high  = '>=65'
              other= 'other';
value FMTprn  0    - 0.25 = '[0,0.25]'
              0.25 <- 0.50 = '(0.25-0.50]'
              0.50 <- 0.75 = '(0.50-0.75]'
              0.75 <- 1    = '(0.75-1.00]';
run;

*****
*   TMA DATA:
*****;
Proc import datafile="&TMAfolder./&TMAfilename."
            dbms=xlsx
            out=out.TMA
            replace;
run;

title4 "Proc Contents of TMA Data:";
Proc Contents data=out.TMA;
Run;

*
-----
Check some variables in the Extract file
-----;

data frame;
  set in1.extract(keep=mprid prn DELGIND enrid dcatch MSA_ID pcm patcat dageqy acv
                 pntypcd MBRRELCD pnlcatcd pnsexcd svccd TNEXREG PPRECFLG);
  /*This conditioned is added by H. Xu starting from Q2fy2011 to include only HCSDB
  population*/
  if DELGIND='1';
run;

title4 "Freq of the variables in the frame";
proc freq data=frame;
  tables PPRECFLG PATCAT DAGEQY DAGEQY*PNTYPCD*MBRRELCD ACV
         patcat*pcm patcat*pcm*acv patcat*dageqy pcm*patcat*dageqy*acv/missing list;
  format dageqy $FMTage.;

```

```

run;

*
Assign com_geo
_____
_____

data TMA (keep = geocell d_par d_fac d_instal d_health d_dmis servaff);
  set in2.TMA;
  rename facility_type_code=d_fac installation_name=d_instal
dmis_facility_name=d_dmis facility_service_code=servaff ;
  length d_par $4.;
  d_par = DMIS_PARENT_ID;
  length geocell $4.;
  geocell = DMIS_ID;
  length d_health $2.;
  d_health = HEALTH_SERVICE_REGION;
run;

title4 "Freq of servaff, d_fac in TMA Spreadsheet";
proc freq data=TMA;
tables servaff d_fac/missing list;
run;

proc sort nodupkey data=TMA;
  by geocell;
run;

***** BEGIN HEDIS-SPECIFIC SECTION *****;

*****
*      HCSDB_HEDIS: check for special ENRID
*****;

data frame_enrid_check;
  set frame;
  if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' ) or
    ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
    ('7166' <= enrid <= '7195') or ( '6700' <= enrid <= '6881' ) or enrid='0000'
  then enrid_check=1; *administrative assignment 1976-1980 added q4 2002,
6700-6881 added q1 2004,
                                0000 added q1,2005;
  else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')
  then enrid_check=2; *Managed care contractor assignment, added in q1 2005;
*8001-8036 added q2 2005;
  else if ('3031' <= enrid <= '3057')
  then enrid_check=3; ***On board ship***;
  else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213', '0235', '0585',
'5208', '0250',
                                '0449', '0626', '0012')
  then enrid_check=4; ***Inactive***; *0626 added q2 2003, 0012 added q4
2003,
                                0041, 0044, 0082, 0111, 0213, 0235,
0585 added q2 2005;
  else if enrid = ' ' then enrid_check=5; ***enrolled, but missing ENRID, added
q2 2005***;
*****;

```

```

else if ('0190' <= enrid <='0199') then enrid_check=6;**BYDON;
*****;

*these cases use MSA_ID based on frame_hedis.inc and are listed in
assigngeocell_hedis.inc;
*****;
*** Administration assignment ***;
*****;
else if enrid in ('0149' '0150' '0151' '0152' '0153' '0154' '0155' '0156'
'0157'
'0161' '0162' '0164' '0165' '0166' '0169' '0170' '0171' '0172' '0173' '0175'
'0176' '0177' '0178' '0179' '0374' '0482' '1320' '5002' '5003' '5201' '5202'
'5210' '5216' '5224' '5268' '5271' '5273' '5274' '5275' '5283' '5286' '5287'
'5288' '5289' '5290' '5291' '5293' '5409' '5500' '5501' '5502' '5503' '5504'
'5505' '5506' '5507' '5508' '5509' '5510' '5511' '5513' '5514' '5515' '5516'
'5517' '5518' '5519' '5520' '5521' '5522' '5523' '5524' '5525' '5526' '5527'
'5528' '5529' '5530' '5531' '5532' '5533' '5534' '5535' '5591' '6001' '6002'
'6003' '6005' '6007' '6008' '6009' '6010' '6011' '6012' '6020' '6021' '6022'
'6024' '6301' '6302' '6303' '6304' '6305' '6306' '6307' '6308' '6309' '6310'
'6311' '6312' '6313' '6314' '6315' '6316' '6317' '6318' '6319' '6320' '6321'
'6322' '6323' '6335' '6336' '6337' '6338' '6339' '6340' '6341' '6342' '6501'
'6502' '6503' '6504' '6507' '6509' '6512' '6849' '6890' '7038' '7148' '7221'
'7285' '7383' '7384' '7386' '7387' '7389' '7390' '7391' '7393' '7394' '7395'
'7397' '7398' '7399' '7400' '7448' '9990' '9991') then enrid_check=6;
*****;
*** Dental assignment ***;
*****;
else if enrid in ('0455' '0457' '0492' '0816' '0892' '1023' '1025' '1037'
'1074'
'1076' '1078' '1081' '1086' '1091' '1092' '1093' '1100' '1101' '1105' '1106'
'1107' '1110' '1111' '1113' '1117' '1118' '1119' '1120' '1121' '1238' '1246'
'1249' '1250' '1252' '1254' '1258' '1260' '1275' '1331' '1351' '1353' '1354'
'1386' '1394' '1417' '1418' '1419' '1420' '1421' '1422' '1423' '1424' '1425'
'1426' '1432' '1438' '1439' '1440' '1482' '1484' '1658' '1675' '1676' '1697'
'1717' '1718' '1719' '1741' '1747' '1748' '1749' '1750' '1752' '1755' '1758'
'1759' '1760' '1761' '1763' '1764' '1765' '1767' '1770' '1772' '1774' '1776'
'1777' '1778' '1780' '1782' '1783' '1784' '1785' '1786' '1787' '1789' '1792'
'1793' '1817' '1818' '1825' '1826' '1827' '1828' '1829' '1830' '1833' '1835'
'1836' '1841' '1843' '1844' '1848' '1850' '1851' '1852' '1853' '1854' '1864'
'1866' '1870' '1875' '1879' '1880' '1881' '1882' '1883' '1886' '1887' '1888'
'1889' '1890' '1891' '1892' '1893' '1894' '1895' '1897' '1898' '1899' '1900'
'1901' '1902' '1906' '1907' '1909' '1914' '1916' '1917' '1918' '1921' '1924'
'1948' '1951' '1952' '1953' '1954' '1956' '1965' '1966' '1968' '5536' '6026'
'6027' '6028' '6032' '6035' '7041' '7064' '7065' '7069' '7072' '7076' '7078'
'7080' '7089' '7095' '7096' '7115' '7116' '7117' '7135' '7136' '7165' '7203'
'7205' '7210' '7241' '7246' '7247' '7249' '7251' '7252' '7253' '7255' '7256'
'7258' '7259' '7261' '7262' '7263' '7264' '7265' '7267' '7269' '7272' '7273'
'7274' '7275' '7276' '7277' '7280' '7281' '7282' '7283' '7284' '7290' '7291'
'7295' '7296' '7305' '7311' '7313' '7315' '7317' '7318' '7319' '7320' '7323'
'7324' '7325' '7326' '7327' '7328' '7329' '7330' '7333' '7334' '7339' '7340'
'7342' '7343' '7348' '8922' '8952' '8961' '8967' '8970' '8973' '8974'
'8975') then enrid_check=7;
*****;
*** Inactive assignment ***;
*****;
else if enrid in ('0000' '0002' '0007' '0011' '0012' '0016' '0017' '0020'
'0021' '0022' '0023' '0025' '0027' '0031' '0037' '0040' '0041' '0044' '0054'
'0063' '0065' '0070' '0071' '0072' '0080' '0081' '0082' '0087' '0088' '0099'

```

'0102' '0111' '0115' '0116' '0167' '0168' '0174' '0189' '0195' '0196' '0197'
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*** On board ship assignment ***;  
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*** Managed care contractor assignment ***;
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*** Uniformed Services Family Health Plan assignment ***;
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*conclusion: over 20% of the frame does fall into these special cases;
/*
DOD Health Care Survey, Sampling (40309.31H)
12:42 Friday, January 6, 2017 10
Program: FRAMEA_PRELIM.SAS (HCSDB_HEDIS)
Proc Contents of TMA Data:
Frequency of ENRIDs that will be replaced by MSA_ID

```

The FREQ Procedure

PCM	enrid_check	Frequency	Percent	Cumulative Frequency	Cumulative Percent
CIV	.	116254	3.14	116254	3.14
CIV	2	645031	17.42	761285	20.56
CIV	6	116354	3.14	877639	23.71
CIV	8	80	0.00	877719	23.71
MTF	.	2500833	67.55	3378552	91.26
MTF	1	150188	4.06	3528740	95.32
MTF	3	5	0.00	3528745	95.32
MTF	4	5470	0.15	3534215	95.47
MTF	5	151776	4.10	3685991	99.57
MTF	6	15346	0.41	3701337	99.98
MTF	8	597	0.02	3701934	100.00

```
*/
```

```

*****
* merge in MSA_ID so that we can use MSA_ID as the geocell for these special cases;
*****;
data xwalk;
set in3.xwalk;
run;

```

```

proc sort data=xwalk;
  by mprid;
run;

proc sort data=frame_enrid_check;
  by mprid;
run;

*restrict to only benes that are in the frame;
data frame_MSA_ID;
  merge frame_enrid_check (in=in_frame) xwalk;
  by mprid;
  if in_frame then output;
run;

*create indicator variable to show when MSA_ID is missing;
data MSA_missing;
  set frame_MSA_ID;

  if MSA_ID = "" then MSA_ID_missing = 1;
  else MSA_ID_missing =0;
run;

title4 "Check for missing MSA_ID when it would be used";
proc freq data=MSA_missing;
  table MSA_ID_missing*PCM*enrid_check /list missing;
run;

*conclusion: in cases where MSA_ID will be used, MSA_ID is nonmissing;
/*
DOD Health Care Survey, Sampling (40309.31H)
12:42 Friday, January 6, 2017 11
Program: FRAMEA_PRELIM.SAS (HCSDB_HEDIS)
Proc Contents of TMA Data:
Check for missing MSA_ID when it would be used

```

The FREQ Procedure

Cumulative MSA_ID_missing Percent	PCM	enrid_check	Frequency	Percent	Cumulative Frequency
59.46	0	CIV	2	645031	59.46
70.18	0	CIV	6	116354	70.18
70.19	0	CIV	8	80	70.19
84.04	0	MTF	1	150188	84.04
84.04	0	MTF	3	5	84.04
84.54	0	MTF	4	5470	84.54
98.53	0	MTF	5	151776	98.53

99.94	0	MTF	6	15346	1.41	1084250
100.00	0	MTF	8	597	0.06	1084847

*/

```
*use include file to assign MSA_ID as geocell
  - same ENRID list as HCSDB sampling, but dcatch is used in that case instead of
MSA_ID;
%include "&folder./frame_hedis.inc"; *Include file;
```

```
*****
* Child facilities that are geographically close to parent as part of parent geocell
*****;
```

```
*import Altarum's sheet of parent/child distances;
proc import
datafile="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/Dec2016XY_ParChild_2017
0105_v2.xlsx"
  DBMS=XLSX OUT=parent_child REPLACE;
run;
```

```
title4 "distances between parents and children of those parents - sorted by parent
dmisid";
proc freq data=parent_child;
  table parent_dmisid*child_dmisid*distancemiles /list missing
out=parent_child_distance;
run;
```

```
title4 "distances between parents and children of those parents - sorted by
distance";
proc freq data=parent_child;
  table distancemiles*parent_dmisid*child_dmisid /list missing;
run;
```

```
*count number of children per parent;
title4 "number of children per parent";
proc sql;
  create table children_per_parent as select parent_dmisid, count(parent_dmisid)
as n_children
  from parent_child_distance where distancemiles ne . group by parent_dmisid;
quit;
```

```
proc print data=children_per_parent;
  var parent_dmisid n_children;
  sum n_children;
run;
```

```
*merge parent/child distances onto frame, by child ID;
proc sort data=parent_child;
  by child_dmisid;
run;
```

```
*t_frame is output of frame_hedis.inc;
```

```

proc sort data=t_frame;
    by geocell;
run;

*select maximum distance where child should be assigned to parent;
%let buffer = 40;

data child_reassigned;
    merge parent_child(rename=child_dmisid=geocell) t_frame(in=in_frame);
    *retain distances only if geocell is in frame;
    if in_frame;
    by geocell;

    *create original child_dmisid for comparison after reassignment;
    child_dmisid_o=geocell;

    if distancemiles < &buffer. and distancemiles ne .
        then do;
            geocell=parent_dmisid;
            reassigned=1;
        end;
run;

title4 "check reassignment of child facilities";
proc freq data=child_reassigned;
    table distancemiles*geocell*parent_DMISID*child_dmisid_o /list missing;
run;

*****
*   merge in info about facilities;
*****;

*import most recent TMA file;
proc import datafile= "&TMAfolder./&TMAfilename." DBMS=XL SX
    replace out=DMISID;
run;

proc sort data=DMISID;
    by DMIS_ID;
run;

proc sort data=child_reassigned;
    by geocell;
run;

data child_reassigned_dmisid;
    merge child_reassigned(in=in_frame) dmisid (rename=dms_id=geocell);
    by geocell;
    if in_frame;
run;

*****
*   restrict to eligible benes
*****;

```

```

*create sample frame as benes meeting the following criteria:
  eligible benes exclude the following ACV:
    - US Family Health Plan (ACV="U")
    - TRICARE Global Remote Overseas Prime Act (ACV="B")
    - AD not reported as enrolled (ACV="M")
    - TRICARE Plus (CHAMPUS/TFL Eligible)(ACV="G")
    - TRICARE Plus (w/o civilian healthcare)(ACV="L")
    - TRICARE Retired Reserve(ACV="V")
    - TRICARE Global Remote Overseas Prime ADFM (ACV="F")
  - younger than 65
  - Prime enrollees;
*exclude benes from facilities that are non-catchment areas;
*exclude benes from overseas facilities (TGRO or blank facility_state_code);
proc sql;
  create table eligible_benes as select * from child_reassigned_dmisid where
    ACV not in ("B" "U" "M" "G" "L" "V" "F")
    and PCM in ("MTF" "CIV") and dageqy < "065"
    and facility_type_code ne "NONCAT" and facility_type_code ne "TGRO"
    and facility_state_code ne " "
  ;
quit;

*look at proportion of benes from parent vs child after reassignment;
proc sort data=eligible_benes;
  by geocell;
run;

title4 "proportion of sampled benes from parent vs child facility";
proc freq data=eligible_benes noprint;
  by geocell;
  table child_dmisid_o /list missing out=prop_parent_child;
run;

proc print data=prop_parent_child;
run;

proc export
file="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Documents/proportion_parent_child.xlsx"
  data=prop_parent_child DBMS=XLSX replace;

*count of benes reassigned;
title4 "benes in final frame (all facilities) that are reassigned to parent facility";
proc freq data=eligible_benes;
  table reassigned /list missing;
run;

*****
*   Count by facility
*****;

*to count by facility, use assigned geocell, which combines MSA_ID and ENRID
*also include some TMA variables for sending the list to Rich;
proc sql;
  create table bene_count as select geocell, count(geocell) as bene_count,

```

```

        facility_service_code, facility_type_code, facility_name,
installation_name, facility_state_code,
        facility_city_name, facility_5_digit_zip_code, dmis_parent_id from
eligible_benes
        group by geocell, facility_service_code, facility_type_code,
        facility_name, installation_name, facility_state_code,
        facility_city_name, facility_5_digit_zip_code, dmis_parent_id ;
quit;

```

```

*****
*       output facility counts
*****;

```

```

proc sort data=bene_count;
        by descending bene_count;
run;

```

```

data out2.bene_count;
        set bene_count;
run;

```

```

proc export
file="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/bene_count.xlsx"
data=out2.bene_count DBMS=XLSX REPLACE;
run;

```

```

***** END HEDIS-SPECIFIC SECTION *****;

```

```

*_____
Create the reporting MTFs
_____;

```

```

*listdmis is from Eric. It contains the reporting MTFs;
/*Copy data in in2. from previous quarter*/
title4 "Contents of Listdmis.sas7bdat";
proc contents data=in2.listdmis; run;

```

```

title4 "Freq of Dmis (Listdmis.sas7bdat)";
proc freq data=in2.listdmis;
tables dmis/missing list;
run;

```

```

data listdmis;
set in2.listdmis(keep=dmis);
com_geo=put(dmis, z4.);
run;

```

```

title4 "Freq of com_geo*dmis (Data=Listdmis)";
proc freq data=listdmis;
table com_geo*dmis/missing list;
run;

```

```

*HCSDB HEDIS: use eligible_benes rather than t_frame, as this is t_frame after above
manipulation;
proc sort data=listdmis; by com_geo; run;

```

```

proc sort data=eligible_benes; by com_geo; run;

data merged both only1 only2 problem;
merge eligible_benes(in=A) listdmis(in=B);
by com_geo;
R_MTF=0;
if A and B then R_MTF=1;      *Reporting MTF;
if A then output merged;
if A and B then output both;
else if A and not B then output only1;
else if B and not A then output only2;
else output problem;
run;

title4 "Dmis/Com_geo in 'Reporting MTF' list (Listdmis), but not in 'Frame'";
proc print data=only2;
var com_geo;
run;

*Add this piece below to remind us to carefully check the printout above;
%MACRO CHK_LISTDMIS;
data _null_;
  set only2 end=eof;
  if eof then call symput('N',_N_);
RUN;
%IF &N.>0 %THEN %DO;
  %PUT WARNING!!!: Check why these places are on the MTF list, but not on the
frame!!!;
%END;
%MEND CHK_LISTDMIS;
%CHK_LISTDMIS;
*End of the new piece of the code;

title4 "List of Reporting MTFs (in Preliminary Adult Sampling Frame)";
title5 " (where R_MTF=1)";
proc freq data=merged;
tables com_geo/missing list;
where R_MTF=1;
run;

title4 "Checks R_MTF ";
title5 " (If, in both 't_frame' and 'listdmis' then R_MTF=1)";
proc freq data=merged;
tables R_MTF/missing list;
run;

*
_____
Create enbgsmpl
_____

data merged;
set merged;
select (patcat);
  when ('ACTDTY') enbgsmpl='01';
  when ('DEPACT') do;
    select (pcm);
      when ('CIV') enbgsmpl='02';
      when ('MTF') enbgsmpl='03';
  end;
end;

```



```

        when ( ' ' )   enbgsmpl='04';
        otherwise enbgsmpl='c';
    end;
end;
when ( 'NADD<65' ) do;
    select (pcm);
        when ( 'CIV' ) enbgsmpl='05';
        when ( 'MTF' ) enbgsmpl='06';
        when ( ' ' )   enbgsmpl='07';
        otherwise enbgsmpl='d';
    end;
end;
when ( 'NADD65+' ) do;
    select (pcm);
        when ( 'CIV' ) enbgsmpl='08';
        when ( 'MTF' ) enbgsmpl='09';
        when ( ' ' )   enbgsmpl='10';
        otherwise enbgsmpl='e';
    end;
end;
when ( 'UNKNOWN' ) do;
    if pntypcd='S' then do;
        if pnlcatcd in ( 'A','J','N','V' ) then enbgsmpl='01';
        else if dageqy = ' ' then enbgsmpl='f';
        else if dageqy <= '064' then do;
            select (pcm);
                when ( 'CIV' ) enbgsmpl='05';
                when ( 'MTF' ) enbgsmpl='06';
                when ( ' ' )   enbgsmpl='07';
                otherwise   enbgsmpl='g';
            end;
        end;
        else if dageqy > '064' then do;
            select (pcm);
                when ( 'CIV' ) enbgsmpl='08';
                when ( 'MTF' ) enbgsmpl='09';
                when ( ' ' )   enbgsmpl='10';
                otherwise   enbgsmpl='h';
            end;
        end;
    end;
else if pntypcd='D' then do;
    if pnlcatcd in ( 'A','J','N','V' ) then do;
        select (pcm);
            when ( 'CIV' ) enbgsmpl='02';
            when ( 'MTF' ) enbgsmpl='03';
            when ( ' ' )   enbgsmpl='04';
            otherwise   enbgsmpl='i';
        end;
    end;
    else if dageqy = ' ' then enbgsmpl='j';
    else if dageqy <= '064' then do;
        select (pcm);
            when ( 'CIV' ) enbgsmpl='05';
            when ( 'MTF' ) enbgsmpl='06';
            when ( ' ' )   enbgsmpl='07';
            otherwise   enbgsmpl='k';
        end;
    end;
end;

```

```

        end;
        else if dageqy > '064' then do;
            select (pcm);
                when ('CIV') enbgsmpl='08';
                when ('MTF') enbgsmpl='09';
                when (' ')   enbgsmpl='10';
                otherwise   enbgsmpl='11';
            end;
        end;
    end;
    else enbgsmpl='m';
end;
otherwise enbgsmpl='n';
end;

if acv = 'R' then enbgsmpl='11';
run;

title4 "Checks the ENBGSMPL Construction:";
title5 "Proc Freq of Enbgsmpl:";
proc freq data=merged;
tables enbgsmpl/missing list;
run;

title4 "Checks the ENBGSMPL Construction:";
proc freq data=merged;
tables patcat enbgsmpl*patcat*pcm*acv /missing list;
run;

title4 "Checks the ENBGSMPL Construction:";
title5 " (where, PATCAT=UNKNOWN)";
proc freq data=merged;
tables enbgsmpl*patcat*pntypcd*pnlcatcd*dageqy*PCM/missing list;
where PATCAT='UNKNOWN';
run;

* _____
Create Stratum
_____

data merged;
set merged;
length group $1 stratum $7;

if acv='R' or NOT ( (PATCAT='ACTDTY' or (dageqy<'065' and PCM='MTF')) and R_MTF=1 )
then do;
    if TNEXREG='N' then com_geo='9001';
    else if TNEXREG='S' then com_geo='9002';
    else if TNEXREG='W' then com_geo='9003';
    else if TNEXREG='O' then com_geo='9004';
end;

if acv = 'R' then do; /*TRICRAE Reserve Select*/
    group='0';
    stratum=group||com_geo||enbgsmpl;
end;

```

```

else if PATCAT='ACTDTY' or (dageqy<'065' and PCM='MTF') then do; /*MTF enrolled,
<65*/
    group='1';
    stratum=group||com_geo||enbgsmpl;
end;
else if dageqy<'065' and PCM='CIV' then do; /*CIV enrolled, <65*/
    group='2';
    stratum=group||com_geo||enbgsmpl;
end;
else if dageqy<'065' and PCM=' ' then do; /*non-enrolled, <65*/
    group='3';
    stratum=group||com_geo||enbgsmpl;
end;
else if dageqy >='065' then do;
    if ACV in ('L', 'G') then do; /*TRICARE-plus, >65*/
        group='4';
        stratum=group||com_geo||'99';
    end;
    else do; /*All other(Nonenrolled), >65*/
        group='5';
        stratum=group||com_geo||'99';
    end;
end;

run;

title4 "Check Com_geo";
proc freq data=merged;
tables com_geo*R_MTF*tnexreg*patcat*dageqy*pcm*ACV/missing list;
format dageqy $FMPage.;
run;

title4 "Proc Freq Checking";
proc freq data=merged;
tables group
        group*enbgsmpl
        group*acv*patcat*dageqy*pcm
        stratum*group*com_geo*enbgsmpl/missing list;
format dageqy $FMPage.;
run;

title4 "TRICARE Reserve Select";
proc freq data=merged;
where group='0';
tables group*stratum*TNEXREG*enbgsmpl/missing list;
run;

title4 "MTF-enrolled, <65 ";
proc freq data=merged;
where group='1';
tables group*R_MTF*stratum*com_geo*enbgsmpl*TNEXREG/missing list;
run;

title4 "CIV-enrolled, <65 ";
proc freq data=merged;
where group='2';
tables group*stratum*TNEXREG*enbgsmpl/missing list;
run;

```

```

title4 "non-enrolled, <65 ";
proc freq data=merged;
where group='3' ;
tables group*stratum*TNEXREG*enbgsmpl/missing list;
run;

title4 "TRICARE-plus, >65 ";
proc freq data=merged;
where group='4' ;
tables group*stratum*acv*TNEXREG/missing list;
run;

title4 "The other(nonenrolled), >65 ";
proc freq data=merged;
where group='5' ;
tables group*stratum*acv*TNEXREG*enbgsmpl/missing list;
run;

*Switch the zone definition to be consisitent with the fiscal year;
data out.framea_prelim;
set merged;
if 0.75 < prn <= 1 then do;
    zone1=1;
    zone=1;
end;
else if 0.00 <= prn <= 0.25 then do;
    zone2=1;
    zone=2;
end;
else if 0.25 < prn <= 0.50 then do;
    zone3=1;
    zone=3;
end;
else if 0.50 < prn <= 0.75 then do;
    zone4=1;
    zone=4;
end;
run;

title4 "Checks Zone Assignment in Preliminary Adult Sampling Frame:";
proc freq data=out.framea_prelim;
tables zone*zone1*zone2*zone3*zone4*prn/missing list;
format prn FMTprn.;
run;

title4 "Contents for the Preliminary Adult Sampling Frame:";
proc contents data = out.framea_prelim;
run;

proc printto;
run;

***** The End *****;

```

H.2.B - HCSDB_HEDIS\Programs\Samplingframe_hedis.inc - include file for framea_prelim_hedis.sas

```
*****
*****
*** Project:           Health Care Survey of DoD Beneficiaries - Quarterly/Annual Adult
Dataset
*** Program:           Frame_hedis.inc -- include file used in adjwt.sas and
cacempl.sas
*** Purpose:           Geographic collapsements from q4 framea to be run on all
quarters
***
*** Modified:          1) 01/07/2003 by Esther M Friedman
***                    2) 01/15/2003 by Keith Rathbun:  Moved collapsement parts of the
***                    CACSMPL.SAS program into this include file.
***                    3) 01/28/03 by Esther Friedman: additional collapsements for q2
2003
***                    4) 11/11/2004 by Haixia Xu: Made 9 Navy sites stand alone.
Collapsed 9 Air Force sites.
***                    Cleaned the codes by removing the commented codes
***                    5)04/26/2005 by Haixia Xu for Q3, 2005 sampling
***                    Added a macro assigngeocell.sas and assigncom_geo to assign
the needed assignments automatically
***                    6)01/23/2006 by X.Lin for q2,2006 sampling.
***
*** 1) Com_geo = Cacempl
*** 2) This include file was originally used in adjwt.sas.  It was adapted with macro
***    to accomodate the reprocessing of the 2000.
*** 3) Beginning with q2 2003, this include file has been run in framea.sas
*** 4) Just added a comment "assign parent id to child clinic" below in the line:
com_geo=d_par;
*****
*****;

/**NOTE added on 05/06/2005 by Haixia Xu: In q3, 2005 sampling, Nancy, Sonya, and I
decided on the following assignments in frame.inc:
1) For PCM='MTF' and d_fac in (ADMIN, DENTAL, INACT, SHIP, TSCPCM), servaff= T, and
enrid=' ',
we assign geocell=dcatch.
2) For PCM='MTF' and d_fac in (ADMIN, INACT, SHIP, TSCPCM), we assign
com_geo=geocell.
All others: PCM='MTF' and d_fac=DENTAL, servaff=T, and enrid=' ', we assign
com_geo=d_par.

We haven't found why we assigned com_geo=geocell only for those with PCM='MTF' and
d_fac in (ADMIN, INACT, SHIP, TSCPCM),
We'll try to find out the reason behind that, and do something accordingly from
q1,2006. ***/

/**NOTE added on 05/11/2005 by Haixia Xu: After we used the macros for the
assignments as described above,
we found there is one small cacempl=6992 which we need to collapse(see the
old_framea01_chk.lst).
When Sonya and I tried to figure out how to collpase 6992, we noticed that in
frame.inc in the previous quarters,
we actually put 6992 in the administrative assignments, so we decided that we will
put both the old assignments and the macros in frame.inc so we
can catch those special cells as many as possible. I think the macros should come
before the old assignments ***/
```

```

/****NOTE for HCSDB HEDIS sampling,
3) For PCM='MTF' and d_fac in (ADMIN, DENTAL, INACT, SHIP, TSCPCM), servaff= T, and
enrid=' ',
    we assign geocell=MSA_ID. (versus dcatch in usual HCSDB sampling as in note 1
above)
4) For PCM='MTF' and d_fac in (ADMIN, INACT, SHIP, TSCPCM), we assign
com_geo=geocell.
    All others: PCM='MTF' and d_fac=DENTAL, servaff=T, and enrid=' ', we assign
com_geo=d_par.
****/

```

```

*****;
*** Define the macros: assigngeocell, assigncom_geo ***;
*****;

```

```

***Macro assigngeocell does the assignments describe in NOTE 1) above;
%macro assigngeocell;

```

```

%do i = 1 %to &loopnum.;

```

```

%let category_name=%scan(&category_list., &i.);
%let var_name=%scan(&var_list., 1);

```

```

%if &i. = &loopnum. %then %do;
    %let var_name=%scan(&var_list., 2);
%end;

```

```

title4 "Freq of &var_name.*geocell for cases with &var_name.=&category_name.";
proc freq data=TMA NOPRINT;
where &var_name.="&category_name.";
tables &var_name.*geocell/missing list out=&category_name.;
run;

```

```

    data &category_name.(keep=&var_name. dmis_id);
    set &category_name.;
    rename geocell=dmis_id; /*rename geocell as dmis_id */
run;

```

```

data _null_;
set &category_name.;

```

```

%if &i. = 1 %then %do; /*open a new file*/
    file "&listout..inc" LRECL=9999 RECFM=v;
%end;
%else %do; /*modify the existing file */
    file "&listout..inc" LRECL=9999 RECFM=v mod;
%end;

```

```

if _N_=1 then do;
    if &var_name.='ADMIN' then do;
        put "*****";
        put "*** Administration assignment ***";
        put "*****";
    end;
    else if &var_name.='DENTAL' then do;
        put "*****";
        put "*** Dental assignment ***";
    end;
end;

```

```

        put "*****";
        end;
    else if &var_name. = 'INACT' then do;
        put "*****";
        put "*** Inactive assignment ***";
        put "*****";
        end;
    else if &var_name. = 'SHIP' then do;
        put "*****";
        put "*** On board ship assignment ***";
        put "*****";
        end;
    else if &var_name. = 'TSCPCM' then do;
        put "*****";
        put "*** Managed care contractor assignment ***";
        put "*****";
        end;
    else if &var_name. = 'T' then do;
        put "*****";
        put "*** Uniformed Services Family Health Plan assignment ***";
        put "*****";
    end;

    if &i. = 1 then do;
        put "if enrid = " dmis_id +(-1) " ' then &fromvar.=&tovar.>";
    end;
    else do;
        put "else if enrid = " dmis_id +(-1)" ' then &fromvar.=&tovar.>";
    end;
end;
else do;
    put "else if enrid = " dmis_id +(-1)" ' then &fromvar.=&tovar.>";
end;

run; /*end of the data-set step */

%end; /*end of do loop*/

%mend assigngeocell;

***Macro assigncom_geo does the assignments describe in NOTE 2) above;
%macro assigncom_geo;

%do i = 1 %to &loopnum.;

%let category_name=%scan(&category_list., &i.);
%let var_name=%scan(&var_list., 1);

title4 "Freq of &var_name.*geocell for cases with &var_name.=&category_name.";
proc freq data=TMA NOPRINT;
where &var_name.="&category_name.";
tables &var_name.*geocell/missing list out=&category_name.;
run;

data &category_name.(keep=&var_name. dmis_id);
set &category_name.;
rename geocell=dmis_id; /*rename geocell as dmis_id */
run;

```

```

data _null_;
set &category_name.;

%if &i. = 1 %then %do; /*open a new file*/
  file "&listout..inc" LRECL=9999 RECFM=v;
%end;
%else %do; /*modify the existing file */
  file "&listout..inc" LRECL=9999 RECFM=v mod;
%end;

if _N_=1 then do;
  if &var_name.='ADMIN' then do;
    put "*****";
    put "*** Administration assignment ***";
    put "*****";
  end;
  else if &var_name. = 'INACT' then do;
    put "*****";
    put "*** Inactive assignment ***";
    put "*****";
  end;
  else if &var_name. = 'SHIP' then do;
    put "*****";
    put "*** On board ship assignment ***";
    put "*****";
  end;
  else if &var_name. = 'TSCPCM' then do;
    put "*****";
    put "*** Managed care contractor assignment ***";
    put "*****";
  end;

  if &i. = 1 then do;
    put "if enrid = " dmis_id +(-1)" then &fromvar.=&tovar.;" ;
  end;
  else do;
    put "else if enrid = " dmis_id +(-1)" then &fromvar.=&tovar.;" ;
  end;
end;
else do;
  put "else if enrid = " dmis_id +(-1)" then &fromvar.=&tovar.;" ;
end;

run; /*end of the data-set step */

%end; /*end of do loop*/

%mend assigncom_geo;

*****;
*** Invoke the macro assigngeocell ***;
*****;

%let category_list = ADMIN DENTAL INACT SHIP TSCPCM T;
%let var_list = d_fac servaff;
%let loopnum =6;

```



```

%let listout = &folder./assigngeocell_hedis;
%let fromvar=geocell;
%let tovar=MSA_ID/*dcatch*/;

%assigngeocell;

***** HEDIS-SPECIFIC : USE MSA_ID AS GEOCELL *****;

DATA FRAME_geocell;
  SET FRAME;
  if pcm='MTF' then do;
    /* Use the list produced by the macro */

    %include "&listout..inc" ;

    /* all the old assignments from frame.inc for q2, 2005 */

    else if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' ) or
      ('6991' <= enrid <= '6994') or ('6501' <=enrid <='6512') or
      ('7166' <= enrid <= '7195') or ( '6700' <= enrid <= '6881' ) or enrid='0000'
      then geocell=MSA_ID; *administrative assignment 1976-1980 added q4 2002,
6700-6881 added q1 2004,
                                0000 added q1,2005;
      else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')
      then geocell = MSA_ID; *Managed care contractor assignment, added in q1
2005; *8001-8036 added q2 2005;
      else if ('3031' <= enrid <= '3057')
      then geocell = MSA_ID; ***On board ship***;
      else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213', '0235',
'0585', '5208', '0250',
                                '0449', '0626', '0012')
      then geocell = MSA_ID; ***Inactive***; *0626 added q2 2003, 0012 added q4
2003,
                                0041, 0044, 0082, 0111, 0213, 0235,
0585 added q2 2005;
      else if enrid = ' ' then geocell = MSA_ID; ***enrolled, but missing ENRID,
added q2 2005***;
      *****;
      else if ('0190' <= enrid <='0199') then geocell = MSA_ID;***BYDON;
      *****;
      else geocell = enrid;
    end;
    else if patcat='ACTDTY' then geocell=MSA_ID; /*Added in qlfy2007, Put the rest of
ACTDTY in their dcatch for sampling purpose*/
    else geocell=MSA_ID;

    *for HCSDB_HEDIS, we want to use MSA_ID as geocell for non-catchment areas
(ENRID=09XXX);
    if substr(ENRID,1,2)="09" then geocell=MSA_ID;

RUN;

***** END HEDIS-SPECIFIC : USE MSA_ID AS GEOCELL *****;

proc sort data=frame_geocell;

```

```

    by geocell;
run;

data frame2 both fr_only fy_only;
    merge frame_geocell (in=infr) TMA (in=infy);
    by geocell;
if infr=1 then output frame2;
if infr=1 and infy=1 then output both;
else if infr=1 and infy=0 then output fr_only;
else if infr=0 and infy=1 then output fy_only;
run;

title4 "The records in framea but not in TMA spreadsheet";
proc print data=fr_only;
run;

title4 "Freq of PCM*d_fac in the frame - Everybody";
proc freq data=frame2;
tables pcm*d_fac/missing list;
run;

*****;
*** Invoke the macro assigncom_geo ***;
*****;
%let category_list = ADMIN INACT SHIP TSCPCM;
%let var_list = d_fac;
%let loopnum =4;

%let listout = &folder./assigncom_geo;
%let fromvar=com_geo;
%let tovar=geocell;

%assigncom_geo;

data t_frame ;
    set frame2;
    *****;
    com_geo=geocell;
    *****;

    if pcm='MTF' then do;

        /* Use the list produced by the macro */

        %include "&listout..inc" ;

        /* all the old assignments from frame.inc for q2, 2005
        For HCSDB_HEDIS, this does not need to change, since geocell assigned above
        using MSA_ID where necessary */

        else if ('1976' <= enrid <= '1980') or ('6301' <= enrid <= '6323') or
            ('6991' <= enrid <= '6994') or ('6501' <= enrid <= '6512') or
            ('7166' <= enrid <= '7195') or ('6700' <= enrid <= '6881') or enrid='0000'
            then com_geo = geocell; *Administrative assignment--1976-1980 added q4 2002.
0000 added q1,2005;
            else if ('8001' <= enrid <= '8036') or ('6901' <= enrid <= '6919')
            then com_geo = geocell; *Managed care contractor assignment, added in q1,
2005;*8001-8036 added q2 2005;

```

```

else if ('3031' <= enrid <= '3057')
  then com_geo = geocell; ***On board ship***;
else if enrid in ('0002', '0041', '0044', '0082', '0111', '0213', '0235',
'0585', '5208', '0250',
                '0449', '0626', '0012')
  then com_geo = geocell; ***Inactive***; *'0626' added q2 2003, 0012 added q4
2003,
                                0041, 0044, 0082, 0111, 0213, 0235,
0585 added q2 2005;

else com_geo = d_par;
end;
else if patcat='ACTDTY' then com_geo=d_par; *assign parent id to child clinic;

*****;
***Made the following 9 Navy sites stand alone in q1,2005:      ***;
***'0026','0068','0231','0378','0387','0405','0407','0508','6215'***;
*****;
/*NOTE in qlfy2007: All thest 9 sites are in listdmis.sd2 that Eric provides,
which makes sense.

Note in q2fy2015: Put 0366 here as a separate strata.
since it is on the MTF list, and historically is a separate strata(that is, DMIS
parent ID is itself),
though now its DMIS pareant ID is 0117, but it is a huge clinic with a lot of
enrollees(16507 in q2fy2015),
so we want to have a separate strata for it*/

if geocell in
('0026','0068','0231','0378','0387','0405','0407','0508','6215','0366') then
com_geo=geocell;

RUN;

title4 "Everybody";
proc freq data=t_frame;
tables com_geo*geocell/missing list;
run;

title4 "pcm='MTF' ";
proc freq data=t_frame;
tables com_geo*geocell*d_par/missing list;
where pcm='MTF';
run;

title4 "Check the beneficiaries with enrid = ' '";
proc freq data=t_frame ;
tables pcm*pnlcatcd/missing list;
where enrid=' ' ;
run;

***** The end *****;

```

H.3 - HCSDB_HEDIS\Programs\Sampling\framea_hedis.sas - restrict frame to only 50 largest facilities, collapse small strata

```
*****
*** Program : framea_hedis.sas
*** Project : Health Care Survey of DoD Beneficiaries - Adult (40309.31H)
*** Purpose : Finalize the frame by creating Geosmpl, Ebsmpl and Grop_Geo from
Stratum
***
***                               Collapse small strata
*** Input   : framea_prelim.sas7bdat
*** Output  : framea.sas7bdat
*** Notes   : Data quality issue with April 2011 enrollment counts reported in
***           DEERS Eligibility. There are smaller cell counts than usual
***           (see e-mail Impacts HCSDB,TSS,and other Surveys-DEERS Enrollment Data)
***           Jul 27,2011 A.Borgen for Q1FY2012 Adult Sampling
***           - Walter Reed closing, merged to Bethesda Naval Hospital
*** Last
*** Updated : Breanna Wakar 1/3/17 HEDIS Adult Sampling
*** Note    : Sample size if 60,000, so select 1204 per facility (some will have bad
addresses)
***           We decided to collapse all stratum <200
*****;

*** Set up options. ***;
options formdlim=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-\<>*" ;

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/framea_hedis.lo
g" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/framea_hedis.
lst" new;

*** Set up the titles. ***;
title1 "Program: FRAMEA_HEDIS.sas (HCSDB HEDIS Jan 2017)";
title2 "Finalize the frame";

*** Set up the input and output paths. ***;
libname in  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
/*framea_prelim.sas7bdat*/
libname in2 "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data";
libname out "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
/*framea.sas7bdat*/

***** BEGIN HEDIS-SPECIFIC SECTION *****;

*import preliminary frame;
data framea_prelim;
set in.framea_prelim;
run;

*For HCSDB_HEDIS, filter to only selected facilities here;
data bene_count;
```

```

        set in2.bene_count;
run;

proc sort data=bene_count;
    by descending bene_count;
run;

*****
*       count by service affiliation in top 50
*****;

*retain top 50 CONUS;
data bene_count_top_50;
    set bene_count;
    if _n_ <=50;
run;

title3 "service branch affiliation for top 50 facilities";
proc freq data=bene_count_top_50;
    table facility_service_code /list missing;
run;

title3 "total eligible benes - all facilities";
proc freq data=framea_prelim;
    table geocell /list missing;
run;

*filter to eligible benes at top 50 facilities, (framea_prelim already filtered to
eligible benes only);
proc sql;
    create table framea_prelim_top_50 as select * from framea_prelim where
        geocell in (select geocell from bene_count_top_50);
quit;

*count eligible benes at top 50 facilities;
title3 "total eligible benes - top 50 facilities";
proc freq data=framea_prelim_top_50;
    table geocell /list missing;
run;

*create hedis strata variable;
data framea;
    set framea_prelim_top_50;

    if patcat="ACTDTY" then patcat_grp="01";
    else if patcat="DEPACT" then patcat_grp="02";
    else if patcat="NADD<65" then patcat_grp="03";

    if pcm="CIV" then pcm_grp="01";
    else if pcm="MTF" then pcm_grp="02";

    if pcm="MTF" then stratum_h = geocell || pcm_grp || patcat_grp;
    else stratum_h = geocell || pcm_grp || "04";
run;

```

```

TITLE3 "Check construction of stratum_h";
proc freq data=framea;
    table patcat*patcat_grp pcm*pcm_grp
        geocell*pcm_grp*patcat_grp*stratum_h/list missing;
run;

*****
*      proportional allocation by PCM, PATCAT before collapsing
*****;

proc sort data=framea;
    by geocell;
run;

*create data set of counts by geocell, PCM;
proc freq data=framea noprint;
    by geocell;
    table PCM /list missing out=count_by_geocell_pcm;
run;

*create data set of counts by geocell, PCM, patcat;
proc freq data=framea noprint;
    by geocell;
    table stratum_h/list missing out=count_by_strata;
run;

*retain strata with low counts;
data small_strata;
    set count_by_strata;
    where count < 200;
run;

*potential_collapse contains all strata from geocells with any small strata;
proc sql;
    create table potential_collapse as select * from count_by_strata where geocell
in (select geocell from small_strata);
quit;

proc export data=count_by_strata
outfile="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Documents/by_pcm_patcat.xlsx"
    replace DBMS=XLSX;
run;

proc export data=count_by_geocell_pcm
outfile="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Documents/by_pcm.xlsx"
    replace DBMS=XLSX;
run;

proc export data=potential_collapse
outfile="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Documents/potential_collapse.
xlsx"
    replace DBMS=XLSX;
run;

*****

```

```

*      collapse small strata
*****;

data framea_collapsed;
  set framea;

  *save original stratum;
  stratum_o = stratum_h;

  *collapse across ACTDTY and NADD<65 within MTF;
  if stratum_h in ("03700203") then stratum_h="03700201";

  *for CIV strata with small sample selected, try combining across PCM;
  else if stratum_h in ("00060104") and patcat_grp = "01" then
stratum_h="00060201";
  else if stratum_h in ("00060104") and patcat_grp = "02" then
stratum_h="00060202";
  else if stratum_h in ("00060104") and patcat_grp = "03" then
stratum_h="00060203";

  else if stratum_h in ("00320104") and patcat_grp = "01" then
stratum_h="00320201";
  else if stratum_h in ("00320104") and patcat_grp = "02" then
stratum_h="00320202";
  else if stratum_h in ("00320104") and patcat_grp = "03" then
stratum_h="00320203";

  else if stratum_h in ("00330104") and patcat_grp = "01" then
stratum_h="00330201";
  else if stratum_h in ("00330104") and patcat_grp = "02" then
stratum_h="00330202";
  else if stratum_h in ("00330104") and patcat_grp = "03" then
stratum_h="00330203";

  else if stratum_h in ("00420104") and patcat_grp = "01" then
stratum_h="00420201";
  else if stratum_h in ("00420104") and patcat_grp = "02" then
stratum_h="00420202";
  else if stratum_h in ("00420104") and patcat_grp = "03" then
stratum_h="00420203";

  else if stratum_h in ("00470104") and patcat_grp = "01" then
stratum_h="00470201";
  else if stratum_h in ("00470104") and patcat_grp = "02" then
stratum_h="00470202";
  else if stratum_h in ("00470104") and patcat_grp = "03" then
stratum_h="00470203";

  else if stratum_h in ("00480104") and patcat_grp = "01" then
stratum_h="00480201";
  else if stratum_h in ("00480104") and patcat_grp = "02" then
stratum_h="00480202";
  else if stratum_h in ("00480104") and patcat_grp = "03" then
stratum_h="00480203";

  else if stratum_h in ("00520104") and patcat_grp = "01" then
stratum_h="00520201";

```

```

    else if stratum_h in ("00520104") and patcat_grp = "02" then
stratum_h="00520202";
    else if stratum_h in ("00520104") and patcat_grp = "03" then
stratum_h="00520203";

    else if stratum_h in ("00570104") and patcat_grp = "01" then
stratum_h="00570201";
    else if stratum_h in ("00570104") and patcat_grp = "02" then
stratum_h="00570202";
    else if stratum_h in ("00570104") and patcat_grp = "03" then
stratum_h="00570203";

    else if stratum_h in ("00660104") and patcat_grp = "01" then
stratum_h="00660201";
    else if stratum_h in ("00660104") and patcat_grp = "02" then
stratum_h="00660202";
    else if stratum_h in ("00660104") and patcat_grp = "03" then
stratum_h="00660203";

    else if stratum_h in ("00670104") and patcat_grp = "01" then
stratum_h="00670201";
    else if stratum_h in ("00670104") and patcat_grp = "02" then
stratum_h="00670202";
    else if stratum_h in ("00670104") and patcat_grp = "03" then
stratum_h="00670203";

    else if stratum_h in ("00690104") and patcat_grp = "01" then
stratum_h="00690201";
    else if stratum_h in ("00690104") and patcat_grp = "02" then
stratum_h="00690202";
    else if stratum_h in ("00690104") and patcat_grp = "03" then
stratum_h="00690203";

    else if stratum_h in ("00790104") and patcat_grp = "01" then
stratum_h="00790201";
    else if stratum_h in ("00790104") and patcat_grp = "02" then
stratum_h="00790202";
    else if stratum_h in ("00790104") and patcat_grp = "03" then
stratum_h="00790203";

    else if stratum_h in ("00950104") and patcat_grp = "01" then
stratum_h="00950201";
    else if stratum_h in ("00950104") and patcat_grp = "02" then
stratum_h="00950202";
    else if stratum_h in ("00950104") and patcat_grp = "03" then
stratum_h="00950203";

    else if stratum_h in ("00980104") and patcat_grp = "01" then
stratum_h="00980201";
    else if stratum_h in ("00980104") and patcat_grp = "02" then
stratum_h="00980202";
    else if stratum_h in ("00980104") and patcat_grp = "03" then
stratum_h="00980203";

    else if stratum_h in ("01080104") and patcat_grp = "01" then
stratum_h="01080201";
    else if stratum_h in ("01080104") and patcat_grp = "02" then
stratum_h="01080202";

```



```
    else if stratum_h in ("01080104") and patcat_grp = "03" then
stratum_h="01080203";

    else if stratum_h in ("01090104") and patcat_grp = "01" then
stratum_h="01090201";
    else if stratum_h in ("01090104") and patcat_grp = "02" then
stratum_h="01090202";
    else if stratum_h in ("01090104") and patcat_grp = "03" then
stratum_h="01090203";

    else if stratum_h in ("01170104") and patcat_grp = "01" then
stratum_h="01170201";
    else if stratum_h in ("01170104") and patcat_grp = "02" then
stratum_h="01170202";
    else if stratum_h in ("01170104") and patcat_grp = "03" then
stratum_h="01170203";

    else if stratum_h in ("01200104") and patcat_grp = "01" then
stratum_h="01200201";
    else if stratum_h in ("01200104") and patcat_grp = "02" then
stratum_h="01200202";
    else if stratum_h in ("01200104") and patcat_grp = "03" then
stratum_h="01200203";

    else if stratum_h in ("01210104") and patcat_grp = "01" then
stratum_h="01210201";
    else if stratum_h in ("01210104") and patcat_grp = "02" then
stratum_h="01210202";
    else if stratum_h in ("01210104") and patcat_grp = "03" then
stratum_h="01210203";

    else if stratum_h in ("01250104") and patcat_grp = "01" then
stratum_h="01250201";
    else if stratum_h in ("01250104") and patcat_grp = "02" then
stratum_h="01250202";
    else if stratum_h in ("01250104") and patcat_grp = "03" then
stratum_h="01250203";

    else if stratum_h in ("02520104") and patcat_grp = "01" then
stratum_h="02520201";
    else if stratum_h in ("02520104") and patcat_grp = "02" then
stratum_h="02520202";
    else if stratum_h in ("02520104") and patcat_grp = "03" then
stratum_h="02520203";

    else if stratum_h in ("02800104") and patcat_grp = "01" then
stratum_h="02800201";
    else if stratum_h in ("02800104") and patcat_grp = "02" then
stratum_h="02800202";
    else if stratum_h in ("02800104") and patcat_grp = "03" then
stratum_h="02800203";

    else if stratum_h in ("03300104") and patcat_grp = "01" then
stratum_h="03300201";
    else if stratum_h in ("03300104") and patcat_grp = "02" then
stratum_h="03300202";
    else if stratum_h in ("03300104") and patcat_grp = "03" then
stratum_h="03300203";
```

```

*within 0280, collapse further - combine DEPACT and NADD<65 because 02800203
still small;
if stratum_h = "02800203" then stratum_h = "02800202";

```

```
run;
```

```

/*
sample size before collapsing based on small samples - output from samsizea_hedis

```

Obs	STRAT UM_H	POPSIZE	NHFF	
1	0060104	463		29
25	0320104	2587	65	
29	0330104	1247	82	
41	0420104	520		28
49	0470104	1758	77	
53	0480104	2138	80	
65	0520104	451		13
73	0570104	1058	53	
85	0660104	553		36
89	0670104	625		26
93	0690104	1367	56	
101	0790104	2276	90	
113	0950104	1947	99	
121	0980104	1413	91	
133	1080104	1902	47	
137	1090104	3689	94	
145	1170104	3969	91	
149	1200104	887		46
153	1210104	888		64
169	1250104	3619	65	
177	2520104	1400	90	
181	2800104	661		28
184	2800203	1723	73	
189	3300104	1031	57	
192	3300203	1657	92	

```
*/
```

```

title3 "check that strata were collapsed correctly";
proc freq data=framea_collapsed;
    table stratum_o*patcat_grp*stratum_h/list missing;
run;

```

```

title3 "count by stratum after collapsing";
proc freq data=framea_collapsed ;
    by geocell;
    table stratum_h/list missing out=count_by_strata_collapsed;
run;

```

```

title3 "small strata, after collapsing";
proc print data=count_by_strata_collapsed;
    where count < 500;
run;

```

***** END HEDIS-SPECIFIC SECTION *****;

*

Construction of Geosmpl, Ebsmpl and Grop_Geo from Stratum
-----;

```
data out.framea;
set framea_collapsed;
geosmpl=substr(stratum, 2, 4);
ebsmpl=substr(stratum, 6, 2);
grp_geo=substr(stratum, 1, 5);
run;
```

```
title3 "Check the Construction of geosmpl, ebsmpl, grp_geo";
proc freq data=out.framea;
tables stratum*geosmpl/missing list;
tables stratum*ebsmpl /missing list;
tables stratum*grp_geo/missing list;
run;
```

```
TITLE3 "CROSS FREQ: Check the ebsmpl";
proc freq data=out.framea;
tables group*enbgsmpl*ebsmpl/missing list;
run;
```

```
Title3 "CROSS FREQ : (where, enbgsmpl ~= ebsmpl):";
Title4 "    Note: the (ENBGSMPL ne EBSMPL) are because of two things";
Title5 "    - Collapsment of Strata,";
Title6 "    - In Group 4 and 5 EBSMPL is always 99";
proc freq data=out.framea;
tables stratum*enbgsmpl*ebsmpl/missing list;
where enbgsmpl ne ebsmpl ;
run;
```

```
title3 'Freq of group grp_geo stratum in the Final Frame';
proc freq data=out.framea;
tables group /missing list;
tables grp_geo/missing list;
tables stratum/missing list;
run;
```

```
title3 'Freq of Stratum*Zone in the Final Frame';
proc freq data=out.framea;
tables stratum*zone/missing list;
run;
```

```
title3 'Contents of the Final Frame (framea)';
proc contents data=out.framea;
run;
```

```
proc printto;
run;
```

/*****The End *****/

H.4 - HCSDB_HEDIS\Programs\Sampling\samsizea_hedis.sas - determine sample size per stratum

```
*****
*****
* Project       : Health Care Survey of DoD Beneficiaries - Adult (40309.31H)
* PROGRAM      : SAMSIZEA_hedis.SAS
* Purpose      : Sample size determination for the HCSDB HEDIS Adult Survey
* Programmer   : Breanna Wakar
* Last Updated : 01/03/2017 Breanna Wakar for HCSDB_HEDIS Adult Sampling
* INPUTS      : Frame, filtered to largest facilities (FRAMEA.sas7bdat)
* OUTPUTS     : FINAL SAMPLE SIZES (SAMSIZEA.sas7bdat)
*****
*****;
*** Set up options. ***;
options formdlim='' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
  formchar="|----||----+|-\<>";

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/samsizea_hedis.
log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/samsizea_hedi
s.lst" new;

libname in   "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname out  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";

title1 "Sample Size Determination for DOD HEDIS Survey";
title2 "PROGRAM: SAMSIZEA_HEDIS.SAS (HCSDB HEDIS Jan 2017)";

data framea;
  set in.framea;
run;

*look at stratum size after collapsing;
proc sort data=framea;
  by geocell;
run;

title3 "count by stratum after collapsing";
proc freq data=framea noprint;
  by geocell;
  table stratum_h/list missing out=count_by_strata_collapsed;
run;

proc print data=count_by_strata_collapsed;
run;

title3 "small strata, after collapsing";
proc print data=count_by_strata_collapsed;
  where count < 300;
run;
```

```

*****
*       CREATE THE DATA SET CONTAINING THE FINAL SAMPLE SIZES
*****;

data samsize;
    set count_by_strata_collapsed;
    samsize=1204*percent/100;
    NHFF = round(1204*percent/100, 1);
    rename count=popsize;
run;

*check total sample size per facility;
proc sql;
    create table samsize_per_facility as select geocell, sum(NHFF) as total_sample
from samsize group by geocell;
run;

title3 "sample size per facility";
proc freq data=samsize_per_facility;
    table total_sample /list missing;
run;

DATA out.samsizea;
    SET samsize;
    KEEP STRATUM_H popsize NHFF;
run;

Proc print data=out.samsizea;
where NHFF<150;
TITLE3 "Check for Sample Size less than 150";
run;

proc printto;
run;

/*****The End *****/

```

H.5 - HCSDB_HEDIS\Programs\Sampling\sampla01_hedis.sas - select sample from zone 4

```
*****
*
* PROGRAM: SAMPLA01_hedis.SAS (40309.31H)
*
* TASK:    DOD ADULT Health Care Survey, Quarterly Sampling
*
* PURPOSE: Draw Sampling for DOD Quarterly Adult Survey Form A
*
*
* PROGRAMMER: Darryl V. Creel
*
* LAST MODIFIED:
*
*          2)11/15/2004  by Haixia Xu for q1,2005 sampling
*
*          3)05/12/2004  by Haixia Xu for q3,2005 sampling
*
*          4)01/23/2006  by X. Lin for q2 2006 sampling
*
*          5)04/18/2006  by H. Xu for Q4FY2006 sampling
*
*          6)08/17/2005  by H. Xu for q1fy2007 sampling
*
*          7)05/01/2008  by S. Rahman for Q4FY2008
*
*          8)08/06/2008  by S. Rahman for Q1FY2009 Adult Sampling
*
*          9)10/22/2008  by S. Rahman for Q2FY2009 sampling (Adult). (6401-902)
*
*          10)04/30/2009 by S. Rahman for Q4FY2009 Sampling (Adult). (6401-902)
*
*          11)11/16/2009 by S. Rahman for Q2FY2010 Sampling (Adult). (6663-200)
*
*          12)01/22/2010 by S. Rahman for Q3FY2010 Sampling (Adult). (6663-200)
*
*          13)02/01/2011 by S. Rahman for Q3FY2011 Sampling (Adult). (6663-200)
*
*          14)02/01/2011 by K. Roland for Q1FY2014 Sampling (Adult). (40309-H20)
*
*          14)12/10/2013 by K. Roland for Q2FY2014 Sampling (Adult). (40309-H20)
*
*          14)02/04/2014 by K. Roland for Q3FY2014 Sampling (Adult). (40309-H20)
*
*          14)09/29/2014 by K. Roland for Q1FY2015 Sampling (Adult). (40309-H20)
*
*          15)11/26/2014 by Breanna Miller for Q2FY2015 (Adult). (40309-H21)
*
*          16)02/19/2015 by Breanna Miller for Q3FY2015 (Adult). (40309-H21)
*
*          17)09/01/2015 by Breanna Miller Wakar for Q3FY2015 (Adult). (40309-
H21)*
*
*
* INPUTS:  FRAMEA.sas7bdat   - Frame for Quarterly DOD Survey
*
```

```

*          SAMSIZEA.sas7bdat - Sample Sizes by Stratum for Quarterly DOD Survey
*
*
*
* OUTPUTS: SAMPLA01.sas7bdat - Sampling Frame for this Quarter DOD Survey
*
*          SAMPLA.sas7bdat   - Create the Internal Sampling File
*
*          SAMPLE.sas7bdat   - Sample Data Set
*
* NOTE    : Check N:\Project\40309_HCS\DC1\HCSDB\Q2FY2016\Programs\Sampling\Check\
*
*          Combine_SAMPLA01_COMPARE.sas about PRN Selection detail
*
*****
;

*** Set up options. ***;
options formdlm=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-\<>";

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/sampla01_hedis.
log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/sampla01_hedi
s.lst" new;

*** Set up the input and output paths. ***;
libname in  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname in1 "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname out "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";

title1 "Program: SAMPLA01_HEDIS.SAS (HCSDB HEDIS Jan 2017)";
title2 "Draw the Sample from Adult Frame";

title3 "contents of samsize file";
proc contents data=in.samsizea;

*** Sort the data sets by stratum. ***;
proc sort data=in.framea out=framea;
  by stratum_h;
run;

proc sort data=in.samsizea(keep=stratum_h NHFF popsize) out=samsizea;
  by stratum_h;
run;

*** Keep this in to check the match of the data sets. ***;
*** Create the f_framea data set to draw the sample. ***;

data both fr_only s_only problem;

```

```

merge framea (in=infr) samsizea (in=ins);
by stratum_h;
if infr=1 and ins=1 then output both;
else if infr=1 and ins=0 then output fr_only;
else if infr=0 and ins=1 then output s_only;
else output problem;
run;

*
Update for ZONE/ PRN Info:
*** Sort f_framea by stratum and permanent random number, prn. ***;

/*HCSDB_HEDIS*/
proc sort data=both out=r_framea;
where zone4=1;
*note: usually this step includes specific PRN ranges to minimize overlap
      but using zone 4 already ensures zero overlap with HCSDB in prior 2 years;
by stratum_h prn ;
run;

/*
title1 "Freq of Zone using final frame after restricting to zone and prn:";
Proc Freq data=r_framea;
Tables zone/list missing;
run;
*/

*** Draw the sample from the r_framea file. ***;
*** Create a variable called count to keep track of the number ***;
*** drawn is less than or equal to the sample size for each stratum. ***;
***;
*** Since the data set was sorted in descending order by permanent ***;
*** random number, we have the sample size of the largest permanent ***;
*** random numbers from each stratum. ***;

data out.sample;
set r_framea;
by stratum_h;
retain count;
if first.stratum_h = 1 then count = 1;
else count = count + 1;
if count <= NHFF then output out.sample;
run;

/*
title1 "Freq of Zone using sample file";
Proc Freq data=sample;
Tables zone/list missing;
run;
*/

***** Check the distribution of permanent random numbers. *****;
proc sort data=out.sample out=sample;
by stratum_h;
run;

proc means data=sample noprint;

```



```

by stratum_h;
var prn;
output out=m_prn(keep=stratum_h min_prn max_prn) min=min_prn max=max_prn;
run;

proc means data=sample noprint;
by stratum_h;
id popsize NHFF;
var zone1 zone2 zone3 zone4;
output out=sampdiag(drop=_type_ _freq_)
      sum(zone1 zone2 zone3 zone4 )=
      s_zone1 s_zone2 s_zone3 s_zone4;
run;

proc sort data=m_prn;
by stratum_h;
run;

proc sort data=sampdiag;
by stratum_h;
run;

data zone_tab;
merge sampdiag(in=A) m_prn(in=B);
by stratum_h;
if A and B;
diff =s_zone4-NHFF;    *For HCSDB_HEDIS, Zone4=1;
run;

title3 'Information for the Zones';
title4 ' Checks if we have enough samples to draw';
proc print data=zone_tab;
sum popsize NHFF s_zone1 s_zone2 s_zone3 s_zone4 diff;
run;

title3 'Univariate of the Difference';
title4 '(where, diff=zone*-nhff)';
proc univariate data=zone_tab;
var diff;
run;

* Added by Amang 2/6/07: comparing # cases, min and max prn, in the zone (population)
and in the sample ;
proc sort data=r_framea;
by stratum_h;
run;
proc sort data=out.sample out=sample;
by stratum_h;
run;
proc means data=r_framea noprint;
by stratum_h ;
var prn ;
output out=f n=size_pop min=min_prn_pop max=max_prn_pop ;
run ;
proc means data=sample noprint;
by stratum_h ;

```

```

var prn ;
output out=s n=size_samp min=min_prn_samp max=max_prn_samp ;
run ;
data fs ;
merge f s ;
by stratum_h ;
run ;

title3 'Proc Print: Stratum, Pop size, Sample size, Max-Min Prn: ';
proc print data=fs ;
var stratum_h size_pop size_samp min_prn_pop min_prn_samp max_prn_pop max_prn_samp;
sum size_pop size_samp;
run ;

***newly added in Q3fy2012 ****;
/*
*When choosing prn Ascending in sampling ;
Proc sort data=fs; by min_prn_samp;
run;
*/

*BW: does ascending/descending matter in zone 4?;
*When choosing prn descending in sampling (Q3FY2016);
Proc sort data=fs; by descending max_prn_samp;
run;

*HCSDB_HEDIS use 300 as small stratum;
title3 'Potential Problem Strata, POPSIZE < 300';
proc print data=zone_tab noobs;
where popsize < 300;
sum popsize NHFF s_zone1 s_zone2 s_zone3 s_zone4;
run;

title3 'Information about PRNs';
proc univariate data = out.sample;
var prn;
run;

***** Create the *internal* sampling file. *****;
data out.sampla;
set in.sample (drop =count popsize zone zone1-zone4);
label /*cacsmpl = 'Catchment Area'*/
      geosmpl = 'Geographic Area'
      group='Stratification group'
      grp_geo = 'group||geosmpl'
      enbgsmpl = 'Enrollee/Beneficiary Group'
      /*ebg_com = 'Enrollee/Beneficiary Group Prime Combined'*/
      ebsmpl = 'Enrollee/Beneficiary Group Collapsed'
      NHFF = 'Stratum Sample Size'
      stratum_h = 'Stratum';
run;

***** Create the *client* sampling file. *****;
data out.sampla01 (keep = mprid stratum /*cacsmpl*/ enbgsmpl /*ebg_com*/ NHFF
PRRECLG);

```

```

set in.sampla;
run;

Title3 'Proc Contents of Client Sampling File';
proc contents data=in.sampla01;
run;

* _____
Checking the sample
_____
title3 'Freq of STRATUM in Frame';
proc freq data=in.framea noprint;
table STRATUM_h / list missing out=denom(rename=(count=frmcnt percent=framepct));
run;

title3 'Freq of STRATUM in Sample';
proc freq data=in.sample noprint;
table STRATUM_h / list missing out=numer(rename=(count=samcnt percent=samplpct));
run;

data bwt;
merge numer(in=A) denom(in=B);
by STRATUM_h;
if A and B;
sam_rat=samcnt/frmcnt;
bwt=frmcnt/samcnt;
run;

title5 'Sample count, Frame count, Sampling Ratio for STRATUM';
proc print data=bwt;
sum samcnt frmcnt framepct samplpct;
run;

/*****The End*****/

```

H.6 - HCSDB_HEDIS\Programs\Sampling\bwt_hedis.sas - calculate the base weights

```
*****
* PROGRAM: BWT_HEDIS.SAS (40309.31H)
* TASK:    DoD Health Care Survey, Quarterly Sampling
* PURPOSE: Construct Sampling Weight for DOD (HCSDB) Quarterly Survey
*
* INPUTS:  FRAMEA.sas7bdat - Frame for current quarter DoD Survey
*          SAMPLA.sas7bdat - Internal Sample file for current quarter DoD Survey
*
* OUTPUTS: BWT.sas7bdat - Sampling Weight for current quarter DOD Survey
*
* LAST UPDATED:
*          Sabrina R. on 12/14/2016 for Q2FY2017 Adult Sampling
*****;

*** Set up options. ***;
options formdlim='=' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-/\<>*";

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/bwt_hedis.log"
new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/bwt_hedis.lst"
" new;

*Update Macro Variable Quarter with current Quarter;
%let quarter=Q2FY2017;

libname in    "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname out   "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";
libname inv8  "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";

%include
"/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/design_effects_
unequal_weights.sas";

title1 "Program: BWT_HEDIS.SAS (HCSDB HEDIS Jan 2017)";
title2 "Construct the Sampling Weight (BWT) from FRAMEA and SAMPLA";

*
_____
Calculate the bwt
_____

title5 'Information from the Frame';
proc freq data=in.framea noprint;
table stratum_h / list missing out=frame(keep = stratum_h count rename = (count =
Fcnt_str) );
run;

title5 'Information from the Sample';
proc freq data=in.sampla noprint;
```

```

table stratum_h / list missing out=sample(keep = stratum_h count rename = (count =
Scnt_str) );
run;

proc sort data=frame;
by stratum_h;
run;

proc sort data=sample;
by stratum_h;
run;

data weight;
merge frame sample;
by stratum_h;
bwt = Fcnt_str/ Scnt_str;
run;

title5 'Information for the Sampling Weight';
proc print data=weight;
var stratum_h Fcnt_str Scnt_str bwt;
sum Fcnt_str Scnt_str;
run;

***Append the bwt to the sample;
data wt;
set weight (keep = stratum_h bwt);
run;

proc sort data=wt;
by stratum_h;
run;

proc sort data=in.sampla out=sample;
by stratum_h;
run;

data bwt wonly sonly problem;
merge wt (in=inw) sample (in=ins);
by stratum_h;

if pnsexcd = "M" then sexsmpl = 1;
  else if pnsexcd = "F" then sexsmpl = 2;
  else if pnsexcd in ("Z"," ") then sexsmpl = 1;
  else sexsmpl = 3;

if svccd = "A" then svcsmpl = 1;
  else if svccd = "N" then svcsmpl = 2;
  else if svccd = "M" then svcsmpl = 3;
  else if svccd = "F" then svcsmpl = 4;
  else if svccd = "C" then svcsmpl = 5;
  else svcsmpl = 6;

if inw = 1 and ins = 1 then output bwt;
  else if inw = 1 and ins = 0 then output wonly;
  else if inw = 0 and ins = 1 then output sonly;
  else output problem;

```

```

run;

title5 'Check the Constructed Variables';
proc freq data=bwt;
tables pnsexcd*sexsmpl svccd*svcsmpl / list missing;
run;

title5 'Information for the Sampling Weight';
proc univariate data=bwt normal plot;
var bwt;
run;

* Added by Amang 2/6/07: comparing weights across strata ;
proc sort data=bwt ;
by stratum_h ;
run ;
proc means data=bwt noprint ;
by stratum_h ;
var bwt ;
output out=w n=sampsize min=min_bwt max=max_bwt mean=mean_bwt ;
run ;
proc print data=w ;
var stratum_h sampsize min_bwt max_bwt mean_bwt ;
run ;
*****;

data inv8.bwt;
set bwt;
geosmpl=substr(stratum_h,2,4);
ebsmpl=substr(stratum_h,6,2);
label bwt = 'Sampling Weight';
run;

title5 'Checks for BWT Data Set';
proc means data=inv8.bwt n sum;
var bwt;
run;

title5 'Contents of the Sampling Weight Data Set';
proc contents data=inv8.bwt;
run;

*
_____
Check the bwt
_____

%macro checkvar(input_data, sorting_variable, weighting_variable);

data framea;
set in.framea;
geosmpl=substr(stratum_h,2,4);
ebsmpl=substr(stratum_h,6,2);
run;

title5 'Freq of &sorting_variable. from the Frame';
proc freq data=framea noprint;
table &sorting_variable.

```

```

/ list missing out=frame(keep = &sorting_variable. count rename = (count = pop) );
run;

proc means data=&input_data. n sum noprint;
class &sorting_variable.;
var &weighting_variable.;
output out=bwtchk n = sampcnt sum = bwtsum;
run;

data bwtchk;
set bwtchk;
where _type_ = 1;
run;

proc sort data=bwtchk;
by &sorting_variable.;
run;

data finalchk;
merge bwtchk frame;
by &sorting_variable.;
diff = pop - bwtsum;
run;

title5 "Final Checks for the Sampling Weight by &sorting_variable.";
proc print data=finalchk;
var &sorting_variable. sampcnt bwtsum pop diff;
sum sampcnt bwtsum pop diff;
run;

proc univariate data=finalchk;
var diff;
run;

%mend checkvar;

/*
%checkvar(inv8.bwt, group, bwt);
%checkvar(inv8.bwt, geosmpl, bwt);
%checkvar(inv8.bwt, ebsmpl, bwt);
%checkvar(inv8.bwt, enbgsmpl, bwt);
%checkvar(inv8.bwt, grp_geo, bwt);
*/
*HCSDB_HEDIS - check by geocell and patcat group;
title5 "HEDIS-specific checks";
%checkvar(inv8.bwt, stratum_h, bwt);
%checkvar(inv8.bwt, geocell, bwt);
%checkvar(inv8.bwt, patcat_grp, bwt);

*****;
*** Calculate the Design Effects ***;
*****;
/*
title5 "";
%design_effects_unequal_weights ( inv8.bwt, group, bwt, deff_overall, deff_group );
%design_effects_unequal_weights ( inv8.bwt, geosmpl, bwt, deff_overall, deff_geosmpl
);

```

```

%design_effects_unequal_weights ( inv8.bwt, ebsmpl, bwt, deff_overall, deff_ebsmpl);
%design_effects_unequal_weights ( inv8.bwt, enbgsmpl, bwt, deff_overall,
deff_enbgsmpl);
%design_effects_unequal_weights ( inv8.bwt, grp_geo, bwt, deff_overall, deff_grp_geo
);
%design_effects_unequal_weights ( inv8.bwt, tnexreg, bwt, deff_overall, deff_tnexreg
);
%design_effects_unequal_weights ( inv8.bwt, servaff, bwt, deff_overall, deff_servaff
);
*/

*HCSDB_HEDIS - check by geocell (patcat group already included in HCSDB code);
title5 "HEDIS-specific checks";
%design_effects_unequal_weights ( inv8.bwt, stratum_h, bwt, deff_overall,
deff_stratum_h );
%design_effects_unequal_weights ( inv8.bwt, geocell, bwt, deff_overall, deff_geocell
);
%design_effects_unequal_weights ( inv8.bwt, patcat, bwt, deff_overall, deff_patcat );

proc print data = deff_overall;
title5 "design effect overall";
run;

proc print data= deff_stratum_h;
title5 "design effect by stratum_h";
run;

proc print data= deff_geocell;
title5 "design effect by geocell";
run;

proc print data= deff_patcat;
title5 "design effect by PATCAT";
run;

/*
proc print data= deff_group;
title5 "design effect by group";
run;

proc print data= deff_geosmpl;
title5 "design effect by geosmpl";
run;

proc print data= deff_ebsmpl;
title5 "design effect by ebsmpl";
run;

proc print data= deff_enbgsmpl;
title5 "design effect by enbgsmpl";
run;

proc print data= deff_grp_geo;
title5 "design effect by geosmpl";
run;

proc print data= deff_tnexreg;

```



```
title5 "design effect by TNEXREG";  
run;
```

```
proc print data= deff_servaff;  
title5 "design effect by SERVAFF";  
run;  
*/
```

```
***** The End *****;
```

H.7 - HCSDB_HEDIS\Programs\Sampling\compare_hedis.sas - examine overlap with TSS

```
/*dm 'clear output;clear log';*/
*****
*** Project : DoD Adult Sampling-Compare Sample with Previous Quarters Samples
*** PROGRAM : Compare_HEDIS.SAS (40309.31H)
*** TASK : DOD HEALTH CARE SURVEY ANALYSIS
*** PURPOSE : COMPARE CURRENT SAMPLE WITH RECENT HCSDB AND OTHER DOD SAMPLES
*** INPUT : SAMPLE files from Current and Previous HCSDB
*** quarter and other recent studies
*** OUTPUT : NONE
*** UPDATED : 1) 5/1/2008 by Sabrina R.Q4FY2008-Added in6.trrs_sample_03102008)
*** 2) 8/1/2008 by Sabrina R.(Q1FY2009-Added in7.sample_711_060608)
*** 3) 7/27/2011 by A. Borgen (Q1FY2012-Added in8.totalsample 2011
*** TSS beneficiary study and removed in8.totalsample 2009 TSS
*** beneficiary study from Other recent studies;
*** 4) 7/27/2011 by A. Borgen merged postwt and sample data files
*** from Q1FY2011 to include prn and fnstatus variables needed
*** for previous yr comparison
*** MODIFIED: Sabrina Rahman 08/09/2011 (Re-write program using Macro)
*** NOTES: 1) For Q1FY2015, the TSS-B 2014 sample was not yet finished by the
*** time the HCSDB sample for Q1FY2015 was due. Therefore, the two
*** samples could not be compared for overlaps.
*** NOTE : 2) Someone Requested to drop her from Survey (selected in Q3FY2015)
*** Best way to do it, keep her in frame and check in Compare program
*** if person is selected. If selected, we can drop from final
*** delivary sample and add as 'InEligible' for Weighting.
*** For detail check:
*** N:\Project\40309_HCS\DC1\HCSDB\Q1FY2016\Programs\Sampling\
*** Read_for_Q1FY2016_Scanned from a Xerox Multifunction Printer.msg
*** Output with PTNT_ID: N:\Project\40309_HCS\Restricted\DC1\Q1FY2016
*** Checking_ptnt_id.sas
*** Name PTNT_ID MPRID PRN Zone
*** MARY R MAIKER 1148278357 07187042 0.24972 2
*****;

*** Set up options. ***;
options formdlm=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||----+|-\<>*";

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/compare_hedis.l
og" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/compare_hedis
.lst" new;

TITLE1 "Program: COMPARE_HEDIS.SAS (HCSDB HEDIS Jan 2017)";
TITLE2 "Purpose: Check the Sample Overlap Situation:";

*This Quarter;
LIBNAME HEDIS "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal";

*Compare with other study;
```

```
LIBNAME TSS16          "/sasdata/Projects/40309_TSS/DATA/DEERS_07312016_for711_2016"
access=readonly;
```

```
*
```

```
Checks for MPRID=07187042
```

```
PROC SORT DATA=HEDIS.SAMPLE OUT=BDATA;
  BY PRN;
RUN;
PROC PRINT DATA=BDATA NOOBS;
TITLE1 "If we find MPRID=07187042 check with Nancy (See Note above)";
WHERE (MPRID='07187042');
RUN;
```

```
*
```

```
Check the overlaps
```

```
%MACRO CHK(INDATA, LABEL, TXT);
TITLE3 "Compare Overlaps with &TXT.";
PROC SORT DATA=&INDATA. OUT=&LABEL.;
  BY PRN;
RUN;
```

```
proc compare
  base = BDATA
  compare = &LABEL. /*allobs*/;
  id prn;
  var dageqy /*stratum*/;
run;
```

```
data Overlap;
  merge Bdata(in=a) &LABEL.(in=b keep=prn /*stratum rename=(stratum=stratumC)*/);
  by prn;
  if a and b;
run;
```

```
proc freq data=overlap;
tables PATCAT/list missing;
run;
```

```
%MEND CHK;
```

```
%CHK(tss16.totalsample, TSS2016, TSS2016 Sample); *RECENT TSSB SAMPLE;
```

```
***** End of Compare Program *****;
```

H.8.A - HCSDB_HEDIS\Programs\Sampling\sampla02_hedis.sas - create delivery file

```
*****
* PROGRAM:  SAMPLA02_HEDIS.SAS
* TASK:    DOD Health Care Survey, Sampling
* Task#:   40309.31H
* PURPOSE: Attach DEERS variables to FORM A Sample, Step 2
*
* WRITTEN: 10/23/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 06/29/2004 BY KEITH RATHBUN, Removed references to PNARSNCD,
*             PNMMIDNM, SPTNUMCD, and TNUMCD since they are no longer
*             available on the STI-provided DEERS extract. Added
*             PTNT_ID to sorting and mergeing to utilize the revised
*             XWALK file.
*             2) 08/01/2005 BY REGINA GRAMSS, Reassigned PCM value based on
*             ACV code - to mimic what was done in EXTRACT.SAS. This was
*             done specifically for Q4 2005, should check with STI to
*             see if this should be repeated for subsequent quarters.
*             3) 11/15/2005 BY REGINA GRAMSS, updated PCM value assignment
*             to reflect changes in EXTRACT.SAS. Added STI005.SD2 (ONLY
*             FOR THIS QUARTER) to include the Katrina supplement file.
*             4) 10/18/2006 BY SKY ANDRECHECK for Q2 2007 processing. Changed input
files to
*             DEERS instead of old contractor name (STI).
*             5) 02/18/2008 BY KEITH RATHBUN, dropped unnecessary sampling variables.
*             6) 05/06/2008 by Sabrina Rahman for Q4FY2008 (Adult Sampling)
*             7) 08/07/2008 by Sabrina Rahman for Q1FY2009 (Adult Sampling)
*             8) 10/22/2008 By S. Rahman for Q2FY2009 sampling (Adult). (6401-902)
*             9) 04/30/2009 By S. Rahman for Q4FY2009 sampling (Adult). (6401-902)
*             10) 01/29/2010 By S. Rahman for Q3FY2010 Sampling (Adult). (6663-200)
*             11) 07/29/2011 By A. Borgen for Q1FY2011 Adult Sampling - Removed 42
overlap cases with TSS2011.
*             12) 11/13/2012 By S. Rahman for Q2FY2013 Adult Sampling
*             13) 10/18/2013 By K. Roland for Q1FY2014 Adult Sampling
*             14) 12/17/2013 By K. Roland for Q2FY2014 Adult Sampling
*             15) 02/05/2014 By K. Roland for Q3FY2014 Adult Sampling
*             16) 09/29/2014 By K. Roland for Q1FY2015 Adult Sampling
*             17) 12/02/2014 By Breanna Miller for Q2FY2015 Adult Sampling
*             18) 03/09/2015 by Breanna Miller for Q3FY2015 Adult Sampling
*             18) 09/04/2015 by Breanna Miller Wakar for Q1FY2016 Adult Sampling
* INPUTS:
* 1) SAMPLA01.sas7bdat - DOD FORM A Sample from SIS
* 2) XWALK.sas7bdat
* 3) DOD DEERS Extract File
*   a) DEERS001.sas7bdat - DEERS Population Extract File (Part 1)
*   b) DEERS002.sas7bdat - DEERS Population Extract File (Part 2)
*   c) DEERS003.sas7bdat - DEERS Population Extract File (Part 3)
*   d) DEERS004.sas7bdat - DEERS Population Extract File (Part 4)
*
* OUTPUTS:
* 1) SAMPLA02.sas7bdat - DOD FORM A Sample combined with DEERS extract
* 2) Sampla02_AD_email.xls - All active duty file to be sent to DMDC by Rich for
email address
*
*****
*****;
*** Set up options. ***;
```

```

options formdlm=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||----+|-\<>*" ;

proc printto
log="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/sampla02_hedis.
log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/sampla02_hedi
s.lst" new;

%LET QUARTER=Q2FY2017;

LIBNAME INr "/sasdata/Projects/40309_HCS/DATA/&QUARTER."; /* DEERS &
xwalk.sas7dat - use from 2Q FY2017 for HCSDB_HEDIS */
LIBNAME IN "/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Data/AFinal"; /*
sampla01.sas7dat */
LIBNAME OUT "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS"; /*
sampla02.sas7dat */

*Update the path for the include file/Delete if not needed;
%LET pathoverlap=/sasdata/Projects/40309_HCS_P/DATA/HCSDB_HEDIS/Programs/Sampling/;

*****
* Attach PTNT_ID variable and keep only the sampled records.
*****;
PROC SORT DATA=INr.XWALK OUT=XWALK; BY MPRID; RUN;
PROC SORT DATA=IN.SAMPLA01 OUT=SAMPLA01; BY MPRID; RUN;

*****
*****;
*UPDATE OVERLAP PROGRAM EACH QUARTER TO EXCLUDE ANY
OVERLAP CASES WE WANT TO DROP FROM FINAL DELIVERY SAMPLE
OR COMMENTED IT OUT IF NOT NEEDED;

*HCSDB HEDIS: DROPPING 10 Overlaps with TSSB2016;
%INCLUDE "&pathoverlap./include_sampla02_to_drop_overlap.sas";
*****
*****;

TITLE1 "DOD Health Care Survey Sampling (HCSDB HEDIS Jan 2017)";
TITLE2 "PROGRAM: SAMPLA02_HEDIS.SAS";

DATA SAMPLA02;
MERGE XWALK(IN=IN1) SAMPLA01(IN=IN2);
BY MPRID;
IF IN1 AND IN2;
RUN;

PROC SORT DATA=SAMPLA02; BY PTNT_ID;
RUN;

*****

```

```

* COMBINE each part (1-4) of the address/extract information file with
* sample file information.  DROP sampling variables (already on the file).
*****;
PROC SORT DATA=INr.DEERS (DROP=MDCABRSN MDCAEFDT MDCAEXDT)
    OUT=TEMP (DROP=ACV PRRECFLG RSVCC DELGIND);
    BY PTNT_ID;
RUN;

*****
* MERGE the DEERS extract file information with the Form A Sample by PTNT_ID.
*****;
DATA DEERS;
    MERGE TEMP(IN=IN1) SAMPLA02(IN=IN2);
    BY PTNT_ID;
    IF IN1 AND IN2;
RUN;

*****
* DELETE temporary dataset to conserve disk space.
*****;
PROC DATASETS; DELETE TEMP; RUN;

*****
* STACK the combined DEERS extract/sample file information into one dataset.
*****;
DATA SAMPLA02;
    SET DEERS;
    BY PTNT_ID;
    * 02/18/2008 - KRR added the following to clean up the file;
    DROP SURVEY TNEXREG_OLD ZIP_TEMP grp_temp north oconus randomnum south;
RUN;

*****
* SORT the combined DEERS extract/sample file information by PTNT_ID
* to check for duplicates.
*****;
PROC SORT DATA=SAMPLA02 NODUPKEY; by PTNT_ID;
RUN;

*****
* SORT the combined DEERS extract/sample file information by MPRID.
*****;
*note: need to update E* for each quarter, Q2FY2017=E61;
PROC SORT DATA=SAMPLA02 OUT=OUT.SAMPLA02 (DROP = E1-E61 ESR1-ESR61 DELGIND RSVCC
DAGEQY_OLD);
BY MPRID;
RUN;

PROC CONTENTS;
RUN;

PROC FREQ DATA=OUT.SAMPLA02
    (DROP=

```

```

DMDCSPON
PTNT_ID
MALN1TX
MALN2TX
MACITYNM
MAPRZIP
MAPRZIPX
TNUMCD
MPRID
PN1STNM
PNBRTHDT
PNID
PNLSTNM
PRN
SPCITYNM
SPLN1TX
SPLN2TX
SPONSSN
SPPRZIP
SPPRZIPX
SPTNUMCD
UICADD1
UICADD2
UICCITY
UICZIP
D_UPDT
C_ADDR1
C_ADDR2
C_ADDR3
C_CITY
C_HMFON
C_NAME1
C_NAME2
C_STATE
C_UPDT
C_ZIP
);
TABLES _ALL_ /MISSING LIST;
RUN;

/*Output all active duty to an excel with sponssn attached.
This will be sent to Rich, who will send it to DMDC for the email address.
Once we create the excel file, we manually rename the sheet name*/
proc freq data=OUT.sampla02;
tables patcat/missing list;
run;

data Sampla02_AD_email(keep=sponssn mprid
                      rename=sponssn=ID);

set OUT.sampla02;
if patcat='ACTDTY';
run;

*Q2FY2017: rename sheet to 'hcsdb17q2' manually;
proc export data=Sampla02_AD_email
            outfile =
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Sampla02_AD_email.xlsx"

```

```
                dbms=xlsv
                replace;
run;
***** End *****;
```


H.8.B - HCSDB_HEDIS\Programs\Sampling\include_sampla02_to_drop_overlap.sas - include file for samplea02_hedis.sas

```
*****
* PROJECT:  DOD Health Care Survey, Sampling (40309.31H)
* PROGRAM:  Drop_Overlap_Q2_and_TSSB16.sas
* PURPOSE:  Include program for Sampla02.sas to drop overlap cases
* INPUT:    x
* OUTPUT:   x
*****;
PROC FORMAT;
  VALUE CSTRTFMT 1 = '1-Not Standard/Extra'
                2 = '2-Not or Somewhat expected S/E'
                3 = '3-Expected S/E';

*Updated for TSSB2016;
  VALUE PRNFMT 0.00 - 0.25 = '[0.00, 0.25]'
              0.25 <- 0.50 = '(0.25, 0.50]'
              0.50 <- 0.75 = '(0.50, 0.75]'
              0.75 <- 1.00 = '(0.75, 1.00]'
              OTHER='5: OTHER';
  VALUE MISSFMT .='.'
              OTHER='Nonmissing';
RUN;

*For Overlap Checking;;
LIBNAME TSS16      "/sasdata/Projects/40309_TSS/DATA/DEERS_07312016_for711_2016"
access=readonly;

PROC SORT DATA=IN.SAMPLE OUT=BDATA;
BY PRN;
RUN;

%MACRO CHKOVERLAP(INDATA, LABEL, TXT);
TITLE3 "Compare Overlaps with &TXT.";
PROC SORT DATA=&INDATA. OUT=&LABEL.;
  BY PRN;
RUN;

proc compare
  base      = BDATA
  compare = &LABEL. noprint;
  id prn;
  *var dageqy;
run;

DATA OVERLAP;
  MERGE BDATA(IN=A) &LABEL.(IN=B KEEP=PRN);
  BY PRN;
  IF A AND B;
RUN;
%MEND CHKOVERLAP;

%CHKOVERLAP(TSS16.totalsample, TSS2016, TSS2016 Sample); *RECENT TSSB SAMPLE;

*Output Overlaps in Excel file;
```

```

Data OUT_OVERLAP;
  SET OVERLAP(Keep=MPRID PRN);
RUN;

proc export
  data = OUT_OVERLAP
  outfile =
"/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/OVERLAP_MPRID_P
RN_TO_DROP.XLSX"
  dbms = xlsx
  replace;
run;
/*
ODS HTML
FILE="/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/OVERLAP_MP
RID_PRN_TO_DROP.XLS";*Target for CSV file;
PROC PRINT DATA=OUT_OVERLAP NOOBS;
RUN;
ODS HTML CLOSE;
*/

PROC SORT DATA=OVERLAP OUT=DROP_OVERLAP(KEEP=MPRID);
BY MPRID;
RUN;

PROC SORT DATA=SAMPLA01;
BY MPRID;
RUN;

DATA SAMPLA01;
MERGE SAMPLA01(IN=A) DROP_OVERLAP(IN=B);
BY MPRID;
IF A AND NOT B;
RUN;

*****;

```

H.9 - HCSDB_HEDIS\Programs\Weighting\NewWeights\smplA1A2.sas - Define the data sets and create the variables

```
*****
*****
*** Program: smplA1A2.sas
*** Task   : (40309.31H)
*** Purpose: Define the data sets and construct the variables to be used in the
propensity model
***
*** Written: Haixia Xu 12/18/2006 for Q1FY2007 Weighting
***
*** Inputs:  extract.sas7bdat   : Extract file
***          selectq.sas7bdat   : Survey file with CAHPS4.0 questionnaires
***          deers001-004.sas7bat
***
*** Outputs: smplA1A2.sas7bdat
***          smplA1.sas7bdat: Dataset to be used to calculate the unknown eligibility
factor A1
***          smplA2.sas7bdat: Dataset to be used to calculate the nonresponse
adjustment A2
***          conusA1.sas7bdat, oconusA1.sas7bdat, conusA2.sas7bdat, oconusA2.sas7bdat
***
*** Note:    1)Modified for Q1FY2007 weighting:
***           a) Two more variables are added in CHAID tree analysis to capture the
new
***           sample design in qlfy2007
***           b) Uncollapse PCM to differentiate CIV and MTF.
***           2)Modified for Q1FY2009 weighting:
***           a) Email notification sent to all Active duty whose email address is
available
***           Looks like the variable name in Answer Tree has to be no longer
than 8.
***           b) Define patc_grp based on patcat & Has_email, it has 4 categories
instead of 3.
***           3)Q1fy2012 had 42 overlap with TSS 2011. We dropped 42 cases from sample.
***           For weigthing purpose, we need to make there status as Non-
Respondense.
***           4)Q2FY2012 We do not create data 'sampla03_2' and 'Has-Email' variable
any more.
***           5)Q1FY2014: Starting from Q1FY2014, Sample Size increased to 100,000 and
it's WebOnly
*****
*****;
options formdlim='=' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-/\<>*";

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/smplA
1A2.log" new;
ods listing;
```

```

proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/smp
lA1A2.lst" new;

%let quarter=Q2FY2017;

libname inr "/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER." access=readonly;
*extract, deers;
libname in "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; *selectq;
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal";
*smp1a1a1,smp1a1,smp1a2,conusa1;

libname library v9 "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/fmtlib"
access=readonly;
%let outpath =
/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/AnswerTree
/;

title1 "Program: smp1A1A2.SAS (HEDIS)";
title2 "Purpose: Define the data sets and construct the variables";

*****
Put the data together;
*****;
data selectq;
  set inr.selectq (keep=BWT COM_GEO D_HEALTH D_FAC dageqy ENBGSMPL FNSTATUS MPCSMPPL
MPRID
                PATCAT PCM PNLCATCD PNSEXCD SERVAFF SEXSMPL STRATUM STRATUM_H
SVCSMPPL WEB TNEXREG
                GROUP DBENCAT ENRID);
run;

*****
Get the variables PGCD, PTNT_ID from extract data
*****;
proc sort data=selectq; by mprid;
run;

proc sort data=inr.extract(keep=mprid pgcd ptnt_id PAYPLNCD) out=extract;
by mprid;
run;

data selectq;
  merge selectq(in=a)  extract(in=b);
  by mprid;
  if a and b;
run;

*****
Merge the selectq with DEERS to get the address variable c_addr1
*****;
data deers;
set inr.DEERS(keep=ptnt_id c_addr1);
if c_addr1=' ' then CHCSAddr=0;
if c_addr1~=' ' then CHCSAddr=1;

```

```

run;

proc sort data=selectq; by ptnt_id; run;
proc sort data=deers; by ptnt_id; run;

data selectq;
merge selectq (in=A) deers;
by ptnt_id;
if A=1;
run;

*****
Construct the new variables
*****;
data smpl;
set selectq;

***age***;
age=input(dageqy, 3.);

*Define the age group with 5 categories, which will be used in CHAID;
length AGE_GRP4 $1;
if age <= 24 then AGE_GRP4 = '1';
else if 24 < age <= 34 then AGE_GRP4 = '2';
else if 34 < age <= 44 then AGE_GRP4 = '3';
else if age > 44 then AGE_GRP4 = '4';
if age=. then AGE_GRP4='4';

***PATCAT***;
***Define PATCAT this way so it won't be associated with the age ***;
length PATC_grp $15;
if PATCAT = 'UNKNOWN' then do;
  if ENBGSMP1 in ('01') then PATC_grp='ACTDTY';
  else if ENBGSMP1 in ('02', '03', '04') then PATC_grp='DEPACT';
  else if ENBGSMP1 in ('05', '06', '07', '10') then PATC_grp='NADD';
end;
else if PATCAT in ('NADD<65', 'NADD65+') then PATC_grp = 'NADD';
else PATC_grp = PATCAT;

***PCM***;
length PCM_grp $3;
if PCM = ' ' then PCM_grp='NON';
else if PCM in ('CIV', 'MTF') then PCM_grp = PCM;

***PNLCATCD***;
length PNLC_grp $8;
if PNLCATCD in ('N', 'V') then PNLC_grp='Grd/Resv';
else PNLC_grp= 'Other';

***RANKPAY***;
length RankPay $3;
if MPCSMPL=1 then do;
  if PGCD in (' ', '00', '99', 'WW', 'NS') then RankPay = 'E01';
  else RankPay = 'E' || PGCD;
end;
else if MPCSMPL=2 then do;
  if PGCD in (' ', '00', '99' ) then RankPay = '001';

```

```

else RankPay = 'O' || PGCD;
end;
else if MPCSMPL=3 then do;
if PGCD in (' ', '00', '99') then RankPay = 'W01';
else RankPay = 'W' || PGCD;
end;

length RANK_grp $15;
if RankPay in ('E01', 'E02', 'E03', 'E04') then RANK_grp = 'E1234';
else if RankPay in ('E05', 'E06', 'E07', 'E08', 'E09', 'E10',
'E11', 'E12', 'E13', 'E14', 'E15') then RANK_grp = 'E56789101112';
else if RankPay in ('EZZ') then Rank_grp = 'E56789101112'; *In Q2FY15, 1 person is in
RankPay EZZ. Per Nancy and Eric's recomendation, we assign EZZ to largest Rank_grp;
else if Rankpay in ('W01', 'W02', 'W03', 'O01', 'O02', 'O03') then RANK_grp =
'W1230123';
else if RankPay in ('W04', 'W05', 'O04', 'O05', 'O06', 'O07', 'O08', 'O09', 'O10')
then RANK_grp = 'W45045678910';

***sex***;
*Put the missing sex with male;
length SEX_grp $1;
if SEXSMPL in (1, 3) then SEX_grp = '1';
else if SEXSMPL=2 then SEX_grp='2';

***service***;
length SVC_grp $16;
if SVCSMPL = 1 then SVC_grp='Army';
else if SVCSMPL in (2,3,5,6) then SVC_grp='N/M/C/O/U';
else if SVCSMPL = 4 then SVC_grp='Air Force';

***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01', '05') then TNEX_grp='N';
else if d_health in ('18', '04') then TNEX_grp='S';
else if d_health in ('19', '08', '11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which is the
region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

***CONUS region***;
length conus $1;
if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('N', 'S', 'W') then conus='1';

***Catchment areaindicator***;
length in_catch $1;
if d_fac='NONCAT' or d_fac='TGRO' or d_fac="TPR" then in_catch='0';
else in_catch = '1';

if group='0' then TRS=1;
else TRS=2;

```

```

label in_catch='In-catchment area indicator'
      TRS='TRICARE Reserve Select indicator';
run;

title3 'Checking the Coding after Constructing New Variables';
proc freq data=smpl;
tables CHCSAddr AGE_GRP4 AGE_GRP4*AGE*dageqy
      PATC_grp PATC_grp*PATCAT*ENBGSMPL
      PCM_grp PCM_grp*PCM
      PNL_C_grp PNL_C_grp*PNLCATCD
      RANKPAY*MPCSMPL*PGCD
      RANK_grp RANK_grp*RANKPAY
      SEX_grp SEX_grp*SEXSMPL*PNSEXCD
      SVC_grp SVC_grp*SVCSMPL
      TNEX_grp TNEX_grp*d_health TNEX_grp*d_health*com_geo
      CONUS CONUS*TNEX_grp
      in_catch in_catch*d_fac
      TRS*group
      com_geo*TNEX_grp
      COM_GEO*PCM*PATCAT*STRATUM_H
/mmissing list;
run;

title3 'Checking location of OCONUS';
proc freq data=smpl;
tables conus*ENRID / missing list;
where conus = '0';
run;
* Location of Conus = 0 facilities
0326 = MCGuire AFB, NJ
6301 = Camp Pendleton, CA
6303 = NMC San Diego, CA
6304 = Twentynine Palms, CA
6306 = Pensacola, FL
6311 = Camp Lejeune, NC
6317 = Portsmouth, VA
6320 = Hawaii
6336 = Rota, Spain
6339 = Fleet Hospital
6341 = Fleet Hospital
6917 = Facility FIPS country US
6918 = Facility FIPS country US;

* For the HCSDB-HEDIS survey reassign the 41 oconus cases to conus;
data smpl;
  set smpl;

  if conus = '0' then conus = '1';
  else conus = '1';

run;

title3 'Check the Coding after Reassigning Oconus to Conus';
proc freq data=smpl;
tables CONUS CONUS*TNEX_grp
/mmissing list;
run;

```

```

*****
Output the data sets
*****;
data OUT.smplA1A2 OUT.smplA1 OUT.smplA2 OUT.conusA1 OUT.oconusA1 OUT.conusA2
OUT.oconusA2; *oconusA1 and oconusA2 should be empty;
set smpl(drop=DAGEQY PNSEXCD MPCSMPL PGCD PTNT_ID);
*Rename has_email=HasEmail;
if fnstatus in (11, 12, 20, 31, 32, 41, 42) then output OUT.smplA1A2;

if fnstatus in (11, 12, 20, 31, 41, 42) then do;
  if fnstatus in (11, 12, 20, 31) then eligkwn=1; else eligkwn=0;
  label eligkwn = 'Eligibility known indicator';
  output OUT.smplA1;

  if conus = '1' then output OUT.conusA1;
  else if conus='0' then output OUT.oconusA1;
end;

if fnstatus in (11, 12, 20) then do;
  if fnstatus = 11 then complete = 1; else complete =0;
  label complete = 'Eligible respondent/complete indicator';
  output OUT.smplA2;

  if conus = '1' then output OUT.conusA2;
  else if conus='0' then output OUT.oconusA2;
end;
run;

options compress=no;
title3 'Freq of conus*fnstatus for 100,000 beneficiaries';
proc freq data=OUT.smplA1A2;
tables conus*fnstatus / missing list;
run;

title3 'Freq of fnstatus*eligkwn for 100,000 benes except fnstatus=32';
proc freq data=OUT.smplA1;
tables conus*fnstatus*eligkwn/ missing list;
run;

title3 'Freq of fnstatus*complete for fnstatus=11,12,20';
proc freq data=OUT.smplA2;
tables conus*fnstatus*complete/ missing list;
run;

/*****/
/* Proc Export to convert SAS dataset to SPSS file for the Answer Tree*/
/*****/
%MACRO SASToSAV(FNAME);
  PROC EXPORT DATA=OUT.&FNAME.
    OUTFILE= "&outpath./&FNAME..sav" REPLACE;
  RUN;
%MEND SASToSAV;

%SASToSAV(conusA1);
%SASToSAV(oconusA1);
%SASToSAV(conusA2);

```



```
%SASToSAV(oconusA2);
```

```
proc printto;
```

```
run;
```

```
***** The End *****;
```

H.10.A - HCSDB_HEDIS\Programs\Weighting\NewWeights\logmdA1.sas - Predict the response propensity score for the unknown eligibility adjustment

```
*****
*****
*** Program: logmdA1.sas (40309.31H)
*** Purpose: Use the SUDAAN model to predict the response propensity
***           score for the unknown eligibility adjustment step
*** Inputs  : conusA1.sas7bdat, oconusA1.sas7bdat, smplA1A2.sas7bdat
*** Outputs: logmdA1.sas7bdat
***
*** Written: Haixia Xu 12/27/2006 Q4fy2007 weighting
***
*** Note   : 1) We need to carefully check log for Sudaan Warning and review to make
sure it's not
***           falls warning (Sudaan Bug we identified couple of years ago). If we
notice Singularity
***           warning, we need to check how to avoid it.
***           See note: L:\Q4FY2010\Programs\Weighting\NewWeights\SUDAAN
Warning_Proc RLOGIST.msg
***
***           2) Starting from Q3FY2011:
***           a) Active duty 'with and without' email has been collapsed, since
these cases are
***           involved in so many zero cell.
***           b) has_email is no longer used in the model since most of the time it
is not included
***           in the final model.For Detail:
***           See note:
L:\Q3FY2011\Programs\Weighting\NewWeights\ImportantNote_PleaseCheck
***
***           3) Starting from Q1FY2015, instead of 3-level interactions, we will use
2-level
***           (Dept=2 option) for Chaid AnswerTree.
***
***           4) Starting from Q3FY2015, using /NORM option in SAS Stepwise.
***           Otherwise standard errors will be way too small.
***
***           5) Starting from Q3FY2015, we selected a sample from Non-Respondent for
a paper
***           followup. Only 'CONUS and non-AD' non-respondents are eligible for
paper survey.
***           We created three flag variables to use in model: Flag_NR, Flag_NADD,
Flag_ADFM
***           Flag_NR is main effect and (Flag_NADD and Flag_ADFM) are interactions
here.
***
***           6) Starting from Q2FY2016t, we decided to use all decisions we took in
regular quarter
***           for the corresponding Trickle Quarter. We historically noticed, with
few hundred extra
***           responses decisions hardly change in trickle quarter than regular
quarter, so we want
***           to keep code as is to reduce extra afford.
***
***           7) We decided to always collapse AgeGroup='5'(age65+) with AgeGroup='4'
for both CONUS
```

```

***          and OCONUS since it always causes problems (zerocell, smallcell,
singularity warning)
***
***          8) Review for updates and Update Common Weighting README file with
suggestions, QA Comments
***          N:\Project\40309_HCS\DC1\HCSDB\README_File_For_HCSDB_Weighting.txt
***          (you may find a shortcut in individual qtr folder)
***
***          9) Starting from Q2FY2017, creating 4-level Age Group instead of 5-
level,
***          since it always causes problems.
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR
/*validvarname=upcase*/ nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max
nocodegen;

*Common Code for Grid;
%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
      %scan(&_sasprogramfile,-1,'/'),));
*%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
*%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/logmd
A1.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/log
mdA1.lst" new;

%let quarter=Q2FY2017;
%let shortquarter = fy17q2;

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/Zero_One_
Cells.sas";

libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* conusA1.sas7bdat, oconusA1.sas7bdat, smplA1A2.sas7bat */
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"; /*
logmdA1.sas7bdat */

libname in2
"/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER./paper_&shortquarter."
access=readonly; /*Sample non-respondents selected for paper ques*/

proc format;
value FMT_TNEX 1 = '1-North'
                2 = '2-South'
                3 = '3-West'
                4 = '4-Other';
value FMT_AGE  1 = '<=24'
                2 = '(24,34]'
                3 = '(34,44]'

```

```

4 = ' >=45';
value FMT_PAT 1 = '1-ACTDTY'
2 = '2-DEFACT'
3 = '3-NADD';
value FMT_PCM 1 = '1-Nonenrollee'
2 = '2-CIV Enrollee'
3 = '3-MTF Enrollee';
value FMT_PNLC 1 = '1-Other'
2 = '2-Grd/Resv';
value FMT_RANK 1 = '1-E1234'
2 = '2-E56789101112'
3 = '3-W1230123'
4 = '4-W45045678910';
value FMT_RK 1 = '1-E1_12'
2 = '2-W1_501_10';
value FMT_SEX 1 = '1-Male'
2 = '2-Female';
value FMT_SVC 1 = '1-Army'
2 = '2-Air Force'
3 = '3-N/M/C/O/U';
value FMT_INCT 1 = '1-Not in Catch'
2 = '2-In catch';
value FMT_PLUS 1 = '1- TRICARE PLUS'
2 = '2- Not TRICARE PLUS';
value FMT_TRS 1 = '1- TRICARE Reserve Select'
2 = '2- Not TRICARE Reserve Select';
value FMT_addr 0 = '0- CHCS mailling address unavailable'
1 = '1- CHCS mailling address available';
value FMT_chcs 1 = '1- CHCS mailling address unavailable'
2 = '2- CHCS mailling address available';
value FMT_emai 1 = 'AD with Email Address available'
2 = 'AD with Email Address unavailable'
3 = 'Non Active Duty(AD)';
run;

```

```

title1 "Program: logmdA1.sas (&quarter.)";
title2 "Purpose: Predict the Response Probability for the unknown Eligibility
Adjustment";

```

```

*=====
=====
Create the dummy variables to be used in the SUDAAN model
=====
=====;
data logmdA1;
set in.conusA1 in.oconusA1;

*Convert MPRID and stratum into numerical values since SUDAAN takes only numerical
values;
length MPRID_c9 $9 stratum1 $8 stratum_h1 $9;
MPRID_c9='1' || MPRID;
MPRID_nm = input (MPRID_c9, 9.);

stratum1='1' || stratum;
STRAT_nm = input (stratum1, 8.);

```

```

stratum_h1='1' || stratum_h;
STRAT_H_nm = input (stratum_h1, 9.);

*****
Convert all the categorical variables into numeric variables
*****;
if TNEX_grp='N' then TNEX_num=1;
else if TNEX_grp='S' then TNEX_num=2;
else if TNEX_grp='W' then TNEX_num=3;
else if TNEX_grp='O' then TNEX_num=4;

AGE_num4=input(AGE_GRP4, 1.);

/*Collapse Active Duty with Email/NO-Email, since they are involved in so many zero
cell
  If PATC_grp in ('ACTDTY_EMAIL','ACTDTY_NOEMAIL') then PATC_grp= 'ACTDTY'*/
if PATC_grp='ACTDTY' then PATC_num=1;
else if PATC_grp= 'DEPACT' then PATC_num=2;
else if PATC_grp = 'NADD' then PATC_num=3;

if PCM_grp='NON' then PCM_num=1;
else if PCM_grp='CIV' then PCM_num=2;
else if PCM_grp='MTF' then PCM_num=3;

if PNLC_grp = 'Other' then PNLC_num=1;
else if PNLC_grp= 'Grd/Resv' then PNLC_num=2;

if RANK_grp='E1234' then RANK_num=1;
else if RANK_grp= 'E56789101112' then RANK_num=2 ;
else if RANK_grp = 'W1230123' then RANK_num= 3;
else if RANK_grp = 'W45045678910' then RANK_num=4;

if SEX_grp='1' then SEX_num=1;
else if SEX_grp= '2' then SEX_num = 2;

if SVC_grp='Army' then SVC_num=1;
else if SVC_grp='Air Force' then SVC_num=2;
else if SVC_grp='N/M/C/O/U' then SVC_num=3;

if IN_CATCH='0' then INCAT_num=1;
else if IN_CATCH='1' then INCAT_num=2;

if CHCSAddr='0' then CHCS_num=1;
else if CHCSAddr='1' then CHCS_num=2;
run;

*****
*****
*Starting from Q3FY2015, to increase RR, we selected a sample from non-respondents
to send a paper follow-up middle of the survey period. Nancy suggested to create
a Flag variable using paper mailing information. We will use the flag in SAS
Stepwise
as a main effect (Ref=1). Also, will include a flag*Patc interaction term in SAS
modelling.
Merging data to create Flag flag_smplNR.
Program for followup survey 'Select_Sample_for_Paper_Instrument.sas' is in Q3 folder

```

```

*****
*****;
data EligNR (keep=flag_smplNR mprid);
set in2.sampla02pq;
flag_smplNR=1;
run;

proc sort data=EligNR; by MPRID; run;
proc sort data=logmdA1; by MPRID; run;

data logmdA1;
merge logmdA1(In=A) EligNR(in=B);
by MPRID;
If A;
if (flag_smplNR=. and PATC_grp~='ACTDTY') then flag_smplNR=0;
Run;

*New as of Q3FY2015.
Nancy: Flag variable flag_smplNR may have a interaction with PATC.
As we know, none of the AD were offered a paper instrument
ie., all AD have a flag_smplNR=0. So to include in model,
we need to create new variables flag_NADD and flag_ADFM;

data logmdA1;
set logmdA1;

*creating a main effect for modelling;
if flag_smplNR=1 then flag_NR=1;
else flag_NR=2;

*creating a crosstab (NR flag and PATC);
if PATC_grp='DEPACT' then do;
    if flag_smplNR=1 then flag_ADFM=1;
    else flag_ADFM=2;
end;

if PATC_grp='NADD' then do;
    if flag_smplNR=1 then flag_NADD=1;
    else flag_NADD=2;
end;

if flag_ADFM=. then flag_ADFM=2;
if flag_NADD=. then flag_NADD=2;
run;

proc sort data=logmdA1;
    by conus;
run;

title3 'Check the construction of the numeric variables';
proc freq data=logmdA1;
tables TNEX_num*TNEX_grp
    AGE_num4*AGE_GRP4
    PATC_num*PATC_grp
    PCM_num*PCM_grp

```

```

        PNLc_num*PNLC_grp
        RANK_num*RANK_grp
        SEX_num*SEX_grp
        SVC_num*SVC_grp
        INCAT_num*IN_CATCH
        CHCS_num*CHCSAddr
/missing list;
run;

title3 "Checking Crosstab/Freq";
proc freq data=logmdA1;
tables fnstatus
        conus*fnstatus/list missing;
run;

title3 "Checking the Construction of new flag variables:";
proc freq data=logmdA1;
tables flag_smp1NR*patc_grp*flag_NR*flag_ADFM*flag_nadd
        conus*flag_ADFM*flag_NADD/list missing;
run;

*Creating Conus and Oconus Data sets;
data conus oconus;
set logmdA1;
if conus='1' then output conus;
else if conus='0' then output oconus;
run;

*=====
=====
Start the modeling for CONUS
In the full model, all the variables put in the answer tree are used as main effects,
and
the interactions are picked based on the tree for Conus A1 for the current quarter
=====
=====;
/*Running macro to check ZeroCell for CONUS*/
*We can keep all variables as macro variable Vars_in_interactions_conus below;
%let Vars_in_interactions_conus = AGE_GRP4 tnex_grp patc_grp pnlc_grp pcm_grp
rank_grp
                                chcsaddr in_catch svc_grp sex_grp;

/*The interactions below are determined based on the Conus A1 tree for the current
quarter*/
%let Interactions_from_chaid_conus =
/*Q2FY2017:*/
AGE_GRP4*rank_grp
AGE_GRP4*svc_grp
AGE_GRP4*patc_grp
;

title3 "Check the zero cells for Conus";
%ZERO_ONE_CELLS(conus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);

```

```
/*NOTE:
If Zero cell found, please add code here to perform following tasks and check zero
cell again for Conus:
```

- Check to see how to collapse (CONUS):
- Collapse the Zero Cells (CONUS)
- Checks zero cell collapsements (CONUS)

```
title3 "Checks the zero cells again for Conus after zero cell collapse ";
%ZERO_ONE_CELLS(conus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);
*/
```

```
*****
```

```
Run the SAS stepwise model
*****;
```

```
%macro modelselect_conus(method= );
title3 "SAS Logistic for CONUS - &method.";
proc logistic data=conus descending;
CLASS
TNEX_grp (ref='N')
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='CIV') /*There are no NON so change from 'NON' to 'CIV'*/
PNLC_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='1') /* There are no '0' so change '0' to '1'*/
TRS (ref='2')
CHCSAddr (ref='0')
flag_NR (ref='2')
flag_ADFM (ref='2')
flag_NADD (ref='2')
```

```
/*HASEmail(ref='YES')*/
```

```
/param=ref descending;
```

```
MODEL eligkwn =
```

```
TNEX_grp
AGE_GRP4
PATC_grp
PCM_grp
PNLC_grp
RANK_grp
SEX_grp
SVC_grp
IN_CATCH
TRS
CHCSAddr
flag_NR
flag_ADFM /*new flag variable*/
flag_NADD /*new flag variable*/
```

```
/*Note: We treat flag_NR as main effect and flag_ADFM and flag_NADD are
interaction of NR selected for survey flag and PATC. ;
```

```
/*Q2FY2017: Two way interaction from the 2-level chaid answer tree ran*/
```



```
AGE_GRP4*rank_grp
AGE_GRP4*svc_grp
AGE_GRP4*patc_grp
```

```
/Lackfit rsquare details hierarchy=single selection=&method. slentry=0.15
slstay=0.20;
OUTPUT OUT=out_conus PREDICTED=predicted;
WEIGHT bwt /norm ; /*Weighted SAS Model*/
run;
%mend modelselect_conus;
```

```
%modelselect_conus(method=stepwise);
```

```
*****
: Summary of Stepwise Selection :
*****;
```

```
/*          Summary of Stepwise Selection
              Effect                      Number      Score
Wald
  Step Entered      Removed          DF      In Chi-Square Chi-
Square Pr > ChiSq
1 AGE_GRP4          3              1      4385.3166
<.0001
2 RANK_GRP          3              2      447.6957
<.0001
3 PATC_GRP          2              3      404.7019
<.0001
4 SVC_GRP           2              4      241.1643
<.0001
5 AGE_GRP4*SVC_GRP  6              5      203.6245
<.0001
6 AGE_GRP4*PATC_GRP 6              6      88.8716
<.0001
7 AGE_GRP4*RANK_GRP 9              7      57.2973
<.0001
8 SEX_GRP           1              8      18.4723
<.0001
9 PNLC_GRP          1              9      16.8348
<.0001
10 CHCSADDR         1              10     11.1619
0.0008
*/
```

```
*****
Macro to Check the SUDAAN fit for the the SAS Final Model above
*****;
*Proc Sort before Proc Rlogist;
proc sort data=conus;
by STRAT_H_nm;
run;
```

```

%macro sudaan_conus(ttl, vars);
Title3 " The Final Model from SAS Stepwise - CONUS ";
Title4 " &ttl.";
proc rlogist data=conus design=STRWR filetype=SAS;
NEST STRAT_H_nm/missunit;
weight bwt;
CLASS      AGE_num4      PATC_num      PCM_num      RANK_num      sex_num      PNLc_num
           SVC_num      incat_num      TRS         chcs_num      tnex_num
           flag_NR      flag_NADD     flag_ADFM;

REFLEVEL  AGE_num4=1    PATC_num=3    PCM_num=2    RANK_num=1    SEX_num=1    PNLc_num=1
           SVC_num=1    INCAT_num=2  TRS=2       chcs_num=1    tnex_num=1
           flag_NR=2    flag_NADD=2  flag_ADFM=2;

MODEL  eligkwn = &vars.;
idvar MPRID_nm;
print beta sebeta t_beta p_beta
HLCHISQ HLCHIDF HLCHIP HLWALDF HLWALDDF HLWALDP HLSATF HLSATDF HLSATP DF WALDCHI
WALDCHP
/betafmt=f7.3 sebetafmt=f7.3 WALDCHIFMT=F8.2 waldchpfmt=f8.6;
output expected observed nest idvar /filename =pred_c filetype=sas replace;
rformat AGE_num4 FMT_AGE.;
rformat PATC_num FMT_PAT.;
rformat PCM_num FMT_PCM.;
rformat RANK_num FMT_RANK.;
rformat sex_num FMT_SEX.;
rformat PNLc_num FMT_PNLc.;
rformat SVC_num FMT_SVC.;
rformat INCAT_num FMT_INCT.;
rformat trs FMT_TRS.;
rformat tnex_num FMT_tnex.;
rformat chcs_num FMT_CHCS.;
run;
%mend sudaan_conus;

```

```

*****
Macro to Check AIC and Concordant/Discordant) for Sudaan Models:
*****;
%macro Check_AIC_and_rates(InFile=, RunNo=, VariableList=);
title3 "Check AIC and Concordant/Discordant for Run=&RunNo.";
proc logistic data=&InFile. descending;
class
TNEX_grp (ref='N')
AGE_GRP4 (ref='1')
PATC_grp (ref='NADD')
PCM_grp (ref='CIV') /*There were no NON so change from 'NON' to 'CIV'*/
PNLc_grp (ref='Other')
RANK_grp (ref='E1234')
SEX_grp (ref='1')
SVC_grp (ref='Army')
IN_CATCH (ref='1') /* There are no '0' so change '0' to '1'*/
TRS (ref='2')
CHCSAddr (ref='0')
flag_ADFM (ref='2')
flag_NADD (ref='2')
/*HASEmail(ref='YES')*/
/param=ref descending;
MODEL eligkwn =

```

```

&variablelist.;
ods select FitStatistics Association;
run;
%mend Check_AIC_and_rates;

/*****/
/* SUDAAN MODELLING: */
/* 1st Approach (usual way) */
/*****/
*Running Initial Model from SAS Stepwise;
%sudaan_conus(
%str(Run0: Initial Model),
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
sex_num
PNLC_num
CHCS_num
);
*HL = 0.0113
* Variable-to-drop:CHCS_num pvalue=0.001503;

%sudaan_conus(
%str(Run1: Initial Model),
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
sex_num
PNLC_num
/*CHCS_num 1st */
);
*HL = 0.0072
* Variable-to-drop:sex_num pvalue= 0.000301;

%sudaan_conus(
%str(Run2: Initial Model),
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
/*sex_num 2nd */
PNLC_num
/*CHCS_num 1st */

```

```

);
*HL = 0.0002
* Variable-to-drop:PNLC_num pvalue= 0.000143;

%sudaan_conus(
%str(Run3: Initial Model),
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
/*sex_num 2nd */
/*PNLC_num 3rd */
/*CHCS_num 1st */
);
*HL = 0.1536
* Variable-to-drop:x;

*****
CHECKING AIC and Rates:
*****;
%Let Var0 =
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
sex_num
PNLC_num
CHCS_num
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run0, VariableList=&Var0.);

%Let Var0 =
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
sex_num
PNLC_num
/*CHCS_num 1st */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run1, VariableList=&Var0.);

%Let Var0 =
AGE_num4
RANK_num

```

```

PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
/*sex_num 2nd */
PNLC_num
/*CHCS_num 1st */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run2, VariableList=&Var0.);

```

```

%Let Var0 =
AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
/*sex_num 2nd */
/*PNLC_num 3rd */
/*CHCS_num 1st */
;
%Check_AIC_and_rates(InFile=conus, RunNo=Run3, VariableList=&Var0.);

```

```

/*
# Sudaan Fit Largest Ind.Pvalue Intercept Only Intercept & Covariates
Concordant Discordant
0 0.0113 0.001503 57284.904 52537.457 69.6
28.8
1 0.0072 0.000301 57284.904 52552.956 69.5
28.7
2 0.0002 0.000143 57284.904 52560.029 68.6
28.0
3 0.1536 0.000005 57284.904 52562.254 68.5
28.0

```

```

Final Model:
3 0.1536 0.000005 57284.904 52562.254 68.5
28.0

```

```

** Note: Smallest is better for AIC and Discordant.
Largest is better for Concordant and Sudaan fit.
*/

```

```

*****
**Run FINAL CONUS Model:
*****;
*Run the final sudaan model again for conus once confirmed with Eric;

```

```

*FINAL MODEL;
%sudaan_conus(
%str(Run3: Initial Model),

```

```

AGE_num4
RANK_num
PATC_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
AGE_num4*RANK_num
/*sex_num 2nd */
/*PNLC_num 3rd */
/*CHCS_num 1st */
);
*HL = 0.1537
* Variable-to-drop:x;

*=====
=====
Remove all OCONUS modeling
=====
=====;

*=====
=====
Compute the unknown eligibility adjustment factor A1
=====
=====;
data pred (Drop=STRAT_H_nm);
set pred_c; /*pred_o;*/
run;

proc sort data=pred;
by mprid_nm;
run;

proc sort data=logmdA1;
by mprid_nm;
run;

data logmdA1 only1 only2 problem;
merge logmdA1(in=A) pred(in=B);
by mprid_nm;
if A and B then output logmdA1;
else if A and NOT B then output only1;
else if B and NOT A then output only2;
else output problem;
run;

data out.logmdA1;
set logmdA1(rename=(expected=PscoreA1) drop=MPRID_c9 stratum1);
label TNEX_grp="Facility's TNEX region"
PscoreA1="Propensity score for unknown eligibility adjustment";
run;

Title3 "Proc Print if PscoreA1 is Missing (Problem):";
proc freq data=out.logmdA1;
tables pscoreA1/list missing;
where pscoreA1=.;

```

```
run;
title3 "Univariate of expected";
title4;
proc univariate data=out.logmdA1;
var PscoreA1;
run;

title3 "Contents of OUT.logmdA1";
title4;
proc contents data=OUT.logmdA1;
run;

proc printto;
run;

***** The End *****;
```

H.10.B - HCSDB_HEDIS\Programs\Weighting\NewWeights\Zero_One_Cells.sas - Include file for logmdA1.sas

```
*****
*****
*** MACRO
*** Project: Charter School (6043-100)
*** Program: H:\SCRATCH\HXu\CommonProgramsData\Zero_One_Cells.sas
*** Purpose: Check the zero cells
***
*** Inputs:
*** Outputs:
***
*** Note: This macro is originally written by Fan Zhang from NSF
*****
*****;

%MACRO ZERO_ONE_CELLS(INPUT_DATA, CLASS_VARS, INPUT_VARS, BY_VARS);

PROC TABULATE DATA=&INPUT_DATA OUT=TABLE_TEMP1 (DROP=_TYPE_ _PAGE_ _TABLE_);
  CLASS &CLASS_VARS.;
  VAR &INPUT_VARS.;
  TABLES &BY_VARS.,
          &INPUT_VARS.*(MEAN N);
RUN;

DATA TABLE_TEMP2;
  SET TABLE_TEMP1;
  IF &INPUT_VARS._MEAN IN (0, 1);
RUN;

PROC PRINT DATA=TABLE_TEMP2;
  SUM &INPUT_VARS._N;
RUN;

%MEND ZERO_ONE_CELLS;
```


H.11 - HCSDB_HEDIS\Programs\Weighting\NewWeights\adjwt1.sas - Calculate the unknown eligibility adjusted weight

```
dm 'clear output;clear log';
*****
*****
*** Program : Adjwt1.sas
*** Task    : 40309.31H
*** Purpose : Create the weighting class cells based on the propensity from
***          the unknown eligibility modeling
***          Calculate the unknown eligibility adjusted weight
*** Inputs  : logmdA1.sas7bdat, framea.sas7bat
*** Outputs : adjwt1.sas7bdat
*** Modified: Sabrina R. for GRID Testing with Q3FY2016
***
*** Note:
*** From Q1FY2014, our sample size increased from 50k to 100k. It is now web only
and RR dropped.
*** For low RR, A1 is too large using the usual 10 cells and 5cells. So now we are
trying following
*** three different approaches:
*** - Create 5 CONUS and 4 OCONUS weighting class
*** - Create 5 CONUS and 4 OCONUS then collapsing if necessary (usually combine
first 2 CONUS and
*** OCONUS to create 4 CONUS and 3 OCONUS).
*** - Create fewer Strata (4 CONUS and 3 OCONUS) instead of collapsing
*** After looking at the A1 for each of the 3 scenarios, we take the final
collapsing decision
*** - In this program, we created 5 CONUS and 4 OCONUS then collapsed
***
*** Starting from Q2FY2016t, we decided to use all decisions we took in regular
quarter to the
*** corresponding Trickle Quarter. We historically noticed, with few hundred extra
responses
*** decisions hardly change in trickle quarter than regular quarter, so we want to
keep code as
*** is to reduce extra afford.
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
    %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adjwt
1.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adj
wt1.lst" new;

%let quarter=Q2FY2017;
```

```

libname in      "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* logmdA1.sas7bdat */
libname in_f   "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out    "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"; /*
adjwt1.sas7bdat */

title1 "Program: Adjwt1.sas (&quarter.)";
title2 "Purpose: Calculate the unknown Eligibility Adjusted Weight";

***Calculate the 20th percentiles within conus region;
%macro univ_conus(inputdata=, step=, region=, var=, cellvar=, outputdata=);

proc univariate data=&inputdata. noprint;
var &var.;
where conus="&region.";
output out=out pctlpts =20 40 60 80 pctlpre=cutoff;
run;

title3 "Cutoff points for conus=&region.";
proc print data=out;
var cutoff20 cutoff40 cutoff60 cutoff80;
run;

data temp;
set &inputdata.;
M=1;
where conus="&region.";
run;

data out;
set temp;
M=1;
run;

data &outputdata.;
merge temp out;
by M;
run;

data &outputdata.;
set &outputdata.;
length &cellvar. $4;

if &var.<=cutoff20 then &cellvar. = "&step.&region.01";
else if &var.<=cutoff40 then &cellvar. = "&step.&region.02";
else if &var.<=cutoff60 then &cellvar. = "&step.&region.03";
else if &var.<=cutoff80 then &cellvar. = "&step.&region.04";
else if &var. >cutoff80 then &cellvar. = "&step.&region.05";
run;

data &outputdata.;
set &outputdata.;
drop cutoff20 cutoff40 cutoff60 cutoff80 M;
run;

title3 "Freq of &cellvar.*&var. for conus=&region.";

```

```

proc freq data=&outputdata.;
tables &cellvar. &cellvar.*&var. /missing list;
run;
%mend univ_conus;

/* No oconus data - Comment out calculate the 25th percentiles within oconus region
***Calculate the 25th percentiles within oconus region;
%macro univ_oconus(inputdata=, step=, region=, var=, cellvar=, outputdata=);

proc univariate data=&inputdata. noprint;
var &var.;
where conus="&region.";
output out=out pctlpts =25 50 75 pctlpre=cutoff;
run;

title3 "Cutoff points for conus=&region.";
proc print data=out;
var cutoff25 cutoff50 cutoff75;
run;

data temp;
set &inputdata.;
M=1;
where conus="&region.";
run;

data out;
set out;
M=1;
run;

data &outputdata.;
merge temp out;
by M;
run;

data &outputdata.;
set &outputdata.;
length &cellvar. $4;

if &var.<=cutoff25 then &cellvar. = "&step.&region.01";
else if &var.<=cutoff50 then &cellvar. = "&step.&region.02";
else if &var.<=cutoff75 then &cellvar. = "&step.&region.03";
else if &var. >cutoff75 then &cellvar. = "&step.&region.04";
run;

data &outputdata.;
set &outputdata.;
drop cutoff25 cutoff50 cutoff75 M;
run;

title3 "Freq of &cellvar.*&var. for conus=&region.";
proc freq data=&outputdata.;
tables &cellvar. &cellvar.*&var. /missing list;
run;
%mend univ_oconus;
*/

```

```

*****
Compute the dencile of PscoreA1 within conus/oconus region
*****;
%univ_conus(inputdata=in.logmdA1, step=1, region=1, var=PscoreA1, cellvar=Pcell_A1,
outputdata=Alconus);
*%univ_oconus(inputdata=in.logmdA1, step=1, region=0, var=PscoreA1, cellvar=Pcell_A1,
outputdata=Aloconus);

```

```

/*Q2FY2017:
adjwt1_Run1_5Conus:

```

```

-----
Obs   PCELL_A1    CNTG1 CNTG2 CNTG3  CELLCNT          SUMG1    SUMG2    SUMG3
SUMBWT    A1
1     1101      597      2     12382 12981    20428.16    30.484
442297.71 462756.35 22.6191
2     1102      1115      1     10382 11498    34114.94    20.339    345754.26
379889.54 11.1289
3     1103      1825      0     9805 11630    50905.64    0.000    271653.01
322558.65 6.3364
4     1104      4968      6     12152 17126    134250.10   175.984   341060.58
475486.66 3.5372
5     1105      2523      3     4225 6751     70177.61    58.871    119503.15
189739.63 2.7014
=====
1830430.84      11028      12 48946 59986    309876.45 285.677   1520268.71

```

```

adjwt1_Run2_4Conus:

```

```

-----
Obs   PCELL_A1    CNTG1 CNTG2 CNTG3  CELLCNT          SUMG1    SUMG2    SUMG3
SUMBWT    A1
1     1102      1712      3     22764 24479    54543.10   50.823   788051.97
842645.89 15.4348
2     1103      1825      0     9805 11630    50905.64    0.000   271653.01
322558.65 6.3364
3     1104      4968      6     12152 17126    134250.10   175.984   341060.58
475486.66 3.5372
4     1105      2523      3     4225 6751     70177.61    58.871   119503.15
189739.63 2.7014
=====
1830430.84      11028      12 48946 59986    309876.45 285.677   1520268.71

```

```

FINAL: adjwt1_Run2_4Conus_Collapse

```

```

*/

```

```

***combine conus/oconus together;
data merged;
set Alconus; *Aloconus - Note that Aloconus is an empty table;
/*****\
Comment Out the next line next quarter if not needed:

```

```

\*****/
if Pcell_A1='1101' then Pcell_A1='1102';
run;

```

*** Ratio is still little large but we will keep it as is to differentiate between propensity scores.

```

*****
* Start to calculate the adjusted weight using the weighting class method
*****;

```

```

%MACRO PROCESS(DOMAIN1, INPT);

```

```

  *** Initial Information. ***;

```

```

  title3 "Frame (FRAMEA) Count";
  proc freq data=in_f.framea;
  table enbgsmpl / list missing;
  run;

```

```

  title3 "Weighted Counts Using BWT as the Weight - excluding fnstatus=32";
  proc freq data=&inpt.;
  table enbgsmpl fnstatus / list missing;
  weight bwt;
  run;

```

```

  title3 "Sample Counts - excluding fnstatus=32";
  proc freq data=&inpt.;
  table enbgsmpl fnstatus web*fnstatus/ list missing;
  run;

```

```

  PROC SORT DATA=&inpt.;
  BY &DOMAIN1.;
  RUN;

```

```

*****
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****;

```

```

Data cellsal (keep=sumbwt sumg1-sumg3 A1 cellcnt cntg1-cntg3 &domain1. )
  mpridsal (keep=mprid fnstatus bwt &domain1. com_geo enbgsmpl)
  ;
SET &INPT.;
BY &DOMAIN1.;

```

```

IF FIRST.&DOMAIN1. THEN DO;
  CELLCNT = 0;
  cntg1   = 0;
  cntg2   = 0;
  cntg3   = 0;
  SUMBWT  = 0.0;
  SUMG1   = 0.0;
  SUMG2   = 0.0;
  SUMG3   = 0.0;
  A1      = 0.0;

```

```

END;
CELLCNT + 1;

*****
* Accumulate total weight sum
*****;

SUMBWT + BWT;

*****
* Accumulate group 1 weight sum
*****;
IF FNSTATUS IN (11,12) THEN
  do;
    SUMG1 + BWT;
    cntg1 + 1;
  end;

*****
* Accumulate group 2 weight sum
*****;
ELSE IF FNSTATUS in (20,31) THEN
  do;
    SUMG2 + BWT;
    cntg2 + 1;
  end;

*****
* Accumulate group 3 weight sum
*****;
ELSE IF FNSTATUS in (41,42) THEN
  do;
    SUMG3 + BWT;
    cntg3 + 1;
  end;

RETAIN SUMBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 MPRID;

IF LAST.&DOMAIN1. THEN DO;
  A1 = SUMBWT/(SUMG1 + SUMG2);
  OUTPUT CELLSA1;
END;

OUTPUT MPRIDSA1;

RUN;

title3 "Check for CELLSA1 Data Set";
proc print data=cellsal;
var &domain1. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

title3 "Checks the Adjustment ratio";
title4 "Print if: ( a1> 7 ) or ( cntg1 + cntg2 < 100 )";
proc print data=cellsal;
where ( a1> 7 ) or ( cntg1 + cntg2 < 100 );
var &domain1. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;

```

```

sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

title3 "Univariate of Adjustment ratio (A1)";
proc univariate data=cellsal normal ;
var a1;
run;

proc sort data=mpridsal;
by &domain1.;
run;

proc sort data=cellsal;
by &domain1.;
run;

data adj_one;
merge mpridsal cellsal;
by &domain1.;
if fnstatus in (11,12,20,31) then adj1 = a1;
    else adj1 = 0;
adjwt1 = adj1 * bwt;
run;

title3 "Checks for ADJ_ONE Data Set";
title4 "Cross Freq of fnstatus and Adjustment Factor by various Domains";
proc freq data=adj_one;
table &domain1.*fnstatus*adj1/ list missing;
run;

title3 "Checks for ADJ_ONE Data Set";
title4 "Cross Freq of Adjusted Weight (Adjwt1) and BWT by variaious Domains";
proc freq data=adj_one;
tables adjwt1*&domain1.*bwt/missing list;
where adjwt1 ~=0;
run;

title3 " Checking the individuals with the largest adjwt";
proc sort data=adj_one out=sorted;
by descending adjwt1;
run;

title3 " Checking the individuals with the largest adjwt";
title4 " sorting adjwt1 descending order (obs=200)";
proc print data=sorted (obs=200);
var &domain1. fnstatus BWT a1 adj1 adjwt1 ;
run;

proc means data=adj_one n sum NOPRINT;
class enbgsmpl;
var adjwt1;
output out=print sum=sum;
run;

Title3 "Print the Proc Means of Adjwt1 by enbgsmpl";
Proc print data=print;
sum _freq_ sum;
where _type_=1;

```

```

run;

*****
* Sort the original data
*****;
PROC SORT DATA=&INPT.;
BY MPRID;
RUN;

*****
* Sort the ADJ_ONE data set
*****;
PROC SORT DATA=adj_one;
BY MPRID;
RUN;

*****
* Append the adjusted weight variable (adjwt1)
*****;
Data adj_one(Drop=bwt com_geo enbgsmpl FNSTATUS Pcell_A1);
  Set Adj_one;
run;

DATA out.adjwt1;
  MERGE adj_one(in=A) &INPT.(in=B);
  BY MPRID;
  if A and B;
RUN;

title3 "Sum of Adjusted Weight (Adjwt1) by Final Status";
proc means data=out.adjwt1 n sum NOPRINT;
class fnstatus;
var adjwt1;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 "Proc Univariate of Adjusted Weight";
title4 "Propensity Score Weighting Method - Individual Level Adjwt";
title5 " where fnstatus=11";
proc univariate data=out.adjwt1 normal ;
where fnstatus=11;
var adjwt1;
run;

/*Beneficiary's tnexreg*/
proc sort data=out.adjwt1;
by tnexreg;
run;

title3 "Distribution of weights by tnexreg";
title4 " where fnstatus=11";
proc means data=out.adjwt1 noprint ;
where fnstatus=11;

```



```

var adjwt1;
by tnexreg;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min max=max ;
run;

proc print data=out_tnex;
sum n;
run;

/*Facility's tnexreg*/
proc sort data=out.adjwt1;
by TNEX_grp;
run;

title3 "Distribution of weights by Facility's TNEX region: TNEX_grp";
title4 " where fnstatus=11";
proc means data=out.adjwt1 noprint ;
where fnstatus=11;
var adjwt1;
by TNEX_grp;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min max=max ;
run;

proc print data=out_tnex;
sum n;
run;

*****
* Calculate final weight based on user-specified parameters.
*****;
%MEND PROCESS;
%PROCESS(Pcell_A1, merged);
RUN;

/*Added in Q1FY2013*/
title "Checks ADJWT1>9000:";
data max1;
set out.adjwt1;
if adjwt1>9000;
*if adjwt1>10000;
run;

proc freq data=max1;
tables
stratum_h*AGE_num4*SVC_num*RANK_num*PATC_num*PCM_num*SEX_num*CHCS_num*PNLC_num*incat_
num*TNEX_num*TRS*adjwt1/list missing nocum nopercnt;
run;

proc freq data=max1;
tables
stratum_h*AGE_grp4*SVC_grp*RANK_grp*PATC_grp*PCM_grp*SEX_grp*CHCSAddr*PNLC_grp*in_cat
ch*TNEX_grp*TRS*adjwt1/list missing nocum nopercnt;
run;

title "Proc Contents of ADJWT1:";
proc contents data=out.adjwt1;
run;

```

```
proc printto;  
run;  
  
***** The end *****;
```

H.12 - HCSDB_HEDIS\Programs\Weighting\NewWeights\adjwt2.sas - Calculate the nonresponse adjusted weight

```
*****
*****
*** Program: Adjwt2.sas
*** Task   : 40309.31H
*** Purpose: Calculate the nonresponse adjusted weight
*** Inputs:  smplA2.sas7bdat,
***          adjwt1.sas7bdat
*** Outputs: adjwt2.sas7bdat
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")), .sas, .log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")), .sas, .lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adjwt
2.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adj
wt2.lst" new;

%let quarter=Q2FY2017;

libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly;
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal";

title1 "Program: adjwt2.sas (&quarter.)";
title2 "Purpose: Calculate the nonresponse adjusted weight";

*****
Merge smplA2 with adjwt1 to get the variable adjwt1
*****;
proc sort data=in.smplA2 out=smplA2;
by MPRID;
run;

proc sort data=in.adjwt1(keep=MPRID adj1 adjwt1)
out=adjwt1;
by MPRID;
run;

data merged only1 only2 problem;
merge smplA2(in=A) adjwt1(in=B);
by MPRID;
if A and B then output merged;
else if A and NOT B then output only1;
```

```

else if B and NOT A then output only2;
else output problem;
run;

```

```

*****
Since there is not much going on in 2nd stage, we decided not to do the modeling,
and instead to create the weight cells based on the A2 tree for the current quarter.
Pcell_A2=adjustment stage||region||cell index.
adjustment stage: 1-unknown eligibility adjustment stage, 2 - nonresponse adjustment
stage
region: 1 - conus, 0-oconus
cell index: 01- #of terminal nodes
*****;

```

```

data merged;
set merged;
length Pcell_A2 $4;
/*Based on conus_A2_level2_ageGRP4_tree.htm*/
/*Q2FY2017*/
if conus='1' then do;
  if PATC_GRP in ('NADD', 'DEPACT') then pcell_a2='2101';
  else if PATC_GRP in ('ACTDTY') then do;
    if RANK_GRP in ('E1234','E56789101112') then pcell_a2='2102';
    else if RANK_GRP in ('W45045678910','W1230123') then pcell_a2='2103';
  end;
end;
run;

```

```

title3 'Check the construction of weighting classes';
proc freq data=merged;
tables conus*Pcell_A2/missing list;
run;

```

```

/*Q2FY2017*/
title3 'Check the Construction of Weighting Classes (CONUS)';
proc freq data=merged;
where conus='1';
tables pcell_a2*conus*PATC_GRP*AGE_GRP4*RANK_GRP/missing list;
run;

```

```

/*Q2FY2017*/ /*Note the oconus table will be empty here*/
title3 'Check the Construction of Weighting Classes (OCONUS)';
proc freq data=merged;
where conus='0';
tables pcell_a2*conus*AGE_GRP4/missing list;
run;

```

```

* Calculate nonresponse adjusted weight based on user-specified domains.
*****;
%MACRO PROCESS(DOMAIN2, INPT);

```

```

title3 "Freq of fnstatus";
proc freq data=&inpt.;
tables fnstatus/missing list;
run;

```

```

proc sort data=&inpt.;
BY &domain2.;
run;

DATA CELLSA2 (KEEP= &domain2. NUMER DENOM numercnt denomcnt A2);
  set &inpt. ;
  BY &domain2.;

  IF FIRST.&domain2. THEN DO;
    A2 = 0.0;
    NUMER = 0.0;
    DENOM = 0.0;
    numercnt = 0;
    denomcnt = 0;
  END;

  RETAIN NUMER DENOM A2 numercnt denomcnt;

  IF FNSTATUS IN (11,12,20) THEN
    do;
      NUMER + adjwt1;
      numercnt + 1;
    end;

  IF FNSTATUS = 11 THEN
    do;
      DENOM + adjwt1;
      denomcnt + 1;
    end;

  IF LAST.&domain2. THEN DO;
    A2 = NUMER/DENOM;
    OUTPUT CELLSA2;
  END;
RUN;

title3 "Check for CELLSA2 Data Set";
title4 "Checks the Adjustment Ratio";
proc print data=cellsa2;
var &domain2. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

title3 "Checks the Adjustment Ratio";
title4 "Print if ( a2 > 7 ) or ( denomcnt < 100 )";
proc print data=cellsa2;
where ( a2 > 7 ) or ( denomcnt < 100 );
var &domain2. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

title3 "Proc Univariate of Adjustment Ratio (A2)";
proc univariate data=cellsa2 normal ;
var a2;
run;

```

```

proc sort data=cellsa2;
by &domain2.;
run;

data adjwt2;
merge &inpt. cellsa2;
by &domain2.;
if fnstatus = 11 then adj2 = a2;
  else adj2 = 0;
adjwt2 = adj2 * adjwt1;
label adjwt2 = "Nonresponse adjusted weight";
KEEP MPRID fnstatus enbgsmpl adj1 adj2 adjwt1 &domain2. a2 adjwt2 ;
run;

title3 "Check for ADJWT2 Data Set";
title4 "Cross Freq of fnstatus and Adjustment Factor (adj2) with various Domains";
proc freq data=adjwt2;
table &domain2.*fnstatus*adj2 / list missing;
run;

proc means data=adjwt2 n sum NOPRINT;
class fnstatus;
var adjwt2;
output out=print sum=sum;
run;

title3 "Printing proc means of Adjust2 by fnstatus";
Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

proc means data=adjwt2 n sum NOPRINT;
class enbgsmpl;
var adjwt2;
output out=print sum=sum;
run;

title3 "Printing proc means of Adjust2 by enbgsmpl";
Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

data out.adjwt2;
set adjwt2;
run;
%MEND PROCESS;

%PROCESS(Pcell_A2, merged);

title3 "Proc Contents of Nonresponse Adjusted Weight (Adjwt2)";
proc contents data=out.adjwt2;
run;

proc printto;
run;
***** The End *****;

```

H.13 - HCSDB_HEDIS\Programs\Weighting\NewWeights\adjwtp.sas - Calculate the final adjusted weight

```
*****
*** Program: adjwtp.sas
*** Task   : 40309.31H
*** Purpose: Assign the final adjusted weight for all sample cases
*** Inputs: Adjwt1.sas7bdat adjwt2.sas7bdat, selectq.sas7bdat, framea.sas7bdat
*** Outputs: Adjwtp.sas7bdat
***
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adjwt
p.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/adj
wtp.lst" new;

%let quarter=Q2FY2017;

libname inr  "/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER." access=readonly;
*Extract.sas7bdat;
libname in   "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; * adjwt1.sas7bdat, adjwt2.sas7bdat;
libname inv9 "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; * selectq.sas7bdat;
libname in_f "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; * framea.sas7bdat;
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal";

title1 "Program: Adjwtp.sas (&quarter.)";
title2 "Purpose: Assign the final adjusted weight";

*****
* Sort the original data selectq.sd2
*****;
proc sort data=inv9.selectq
      (keep=BWT COM_GEO D_HEALTH dageqy ENBGSMPL FNSTATUS MPCSMPL MPRID
          PATCAT PCM PNLATCD PNSEXCD SERVAFF SEXSMPL STRATUM STRATUM_H SVCSMPL WEB
TNEXREG DBENCAT/*Keep DBENCAT for DE*/)
      out=selectq;
      format _all_;
      by mprid;
run;

*****
```

```

* Sort the ADJWT1, ADJWT2, data set
*****;
proc sort data=selectq;
by MPRID;
run;

PROC SORT DATA=in.adjwt1(keep=mprid pcell_a1 a1 adj1 adjwt1) out=adjwt1;
BY MPRID;
RUN;

PROC SORT DATA=in.adjwt2(keep=mprid pcell_a2 a2 adj2 adjwt2) out=adjwt2;
BY MPRID;
RUN;

PROC SORT DATA=in.smplA1A2(keep=mprid conus tnex_grp chcsaddr /*fnstatus*/)
out=smplA1A2;
BY MPRID;
RUN;

*****
* Append final weight variable (adjwt)
*****;
DATA out.adjwtp;
MERGE selectq adjwt1 adjwt2 smplA1A2;
BY MPRID;

encounter=chcsaddr;
drop chcsaddr;

*Assign a1, adj1, adjwt1 for fnstatus=32;
if fnstatus = 32 then do;
a1=1;
adj1=1;
adjwt1 = bwt*adj1;
end;
*Assign a2, adj2, adjwt2 for fnstatus in (31, 32, 41, 42);
if fnstatus in (31, 32, 41, 42) then do;
if fnstatus in (31, 32) then do;
a2=1;
adj2=1;
end;
else if fnstatus in (41, 42) then do;
a2=0;
adj2=0;
end;
adjwt2=adj2*adjwt1;
end;

adjwt = adjwt2;

RUN;

title3 'Sum of Adjwt By Final Status';
proc means data=out.adjwtp n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

```



```

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Frame counts By enbgsmpl';
proc freq data=in_f.framea;
tables enbgsmpl/missing list;
run;

title3 'Sum of Adjwtp By enbgsmpl';
proc means data=out.adjwtp n sum NOPRINT;
class enbgsmpl;
var adjwtp;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Selectq using BWT as the weight';
title4 'Sum of BWT by Final Status';
proc means data=selectq n sum NOPRINT;
class fnstatus;
var bwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Sum of BWT by enbgsmpl';
proc means data=selectq n sum NOPRINT;
class enbgsmpl;
var bwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum _freq_ sum;
where _type_=1;
run;

title3 'Checks for Adjwtp Dataset';
proc sort data=out.adjwtp out=chk;
by pcell_a1 pcell_a2 fnstatus;
run;

data sub_chk;
set chk(keep = com_geo stratum_h pcell_a1 pcell_a2 fnstatus bwt adj1 adj2 adjwtp);
by pcell_a1 pcell_a2 fnstatus;
prodadj1 = adj1 * adj2;

```

```

retain cellcnt sumadjwt;
if first.fnstatus then
  do;
    cellcnt = 1;
    sumadjwt = adjwt;
  end;
else
  do;
    cellcnt = cellcnt +1;
    sumadjwt = sumadjwt + adjwt;
  end;
if last.fnstatus then output sub_chk;
run;

proc print data=sub_chk noobs;
var pcell_a1 pcell_a2 fnstatus bwt adj1 adj2 prodadjs adjwt cellcnt sumadjwt;
sum cellcnt sumadjwt;
run;

proc freq data=sub_chk noprint;
tables prodadjs/missing list out=prodadjs;
run;

title3 "Univariate of Prodads = adj1 * adj2";
proc univariate data=prodadjs normal ;
var prodadjs;
run;

title3 "Univariate of Adjwt (fnstatus=11)";
proc univariate data=out.adjwtp normal ;
where fnstatus=11;
var adjwt;
run;

title3 " Checking the individuals with the largest adjwt";
proc sort data=out.adjwtp out=sorted;
by descending adjwt;
run;

data sorted;
set sorted;
prodadjs=a1*a2;
run;

title3 "Proc Print: Checking the individuals with the largest adjwt (obs=200
descending)";
proc print data=sorted (obs=200);
var stratum_h pcell_a1 pcell_a2 BWT fnstatus a1 adj1 adjwt1 a2 adj2 adjwt prodadjs;
run;

data OUT.adjwtp;
set OUT.adjwtp;
drop a1 a2 ;
run;

*tnexreg;
proc sort data=out.adjwtp;
by tnexreg;

```

```
run;

title3 "Distribution of weights by tnexreg for FNSTATUS=11";
proc means data=out.adjwtp noprint ;
where fnstatus=11;
var adjwt;
by tnexreg;
output out=out_tnex(drop=_type_ _freq_) n=n mean=mean std=stddev min=min max=max ;
run;

proc print data=out_tnex;
sum n;
run;

title3 "Contents of OUT.adjwtp";
proc contents data=out.adjwtp;
run;

proc printto;
run;

***** The End *****;
```

H.14.A - HCSDB_HEDIS\Programs\Weighting\NewWeights\postwt.sas - Do the poststratification

```
*****
*****
*** Program: postwt.sas
*** Task   : 40309.31H
*** Purpose: Do the poststratification to force weighted counts to population counts
in certain domain.
*** Inputs : framea.sas7bdat: the frame file
***         adjwtp.sas7bdat: weighted survey data
***
*** Outputs: postwt.sas7bdat: final weight data after poststratification
*** Written: Haixia Xu on 12/27/2006
*** Note:   1) From Q1FY2011, we will create POSTCELL from Sampling 'Stratum' instead
of (Group||Comgeo)
***         ie., Postcell=substr(Stratum,1,5)
***         2) Starting from Q1FY2014, SampleSize Increased to 100,000 and it's
WebOnly for all
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                           %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/postwt
t.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/post
wt.lst" new;

%let quarter=Q2FY2017;

Title1 "Program: postwt.sas (&quarter.)";
Title2 "Purpose: Do the poststratification";

*** Set up the input and output paths. ***;
libname in   "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */
libname inv9 "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"; /*
postwt.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/calpostst
r.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/design_ef
fects_unequal_weights.sas";
```

```

***Sample***;
data framea;
set inv9.framea;
length postcell $6;
postcell= substr(stratum_h,1,6); *Creating Postcell from Sampling Stratum;

```

```

/*collapse postcell groups
*****/
/*

```

Q2Fy2017:

Check the small cells or too small/large ratios - or (unwtcnt<15) or (ps < 0.75) or (ps > 2)

Obs	POSTCELL	UNWTCNT	WTCNT	POPCNT	PS
1	00060201	100	11029.72	6186	0.56085
5	00090201	49	7976.27	4474	0.56091
6	00090202	12	2012.34	2448	1.21650
9	00100201	86	9826.61	6789	0.69088
13	00140201	89	10474.02	6845	0.65352
14	00140202	11	1616.61	2936	1.81614
22	00290202	13	7909.27	13514	1.70863
25	00320202	10	5485.42	10618	1.93568
27	00330201	83	13665.88	6489	0.47483
32	00380202	9	3103.21	3333	1.07405
36	00390202	10	4490.47	6920	1.54104
38	00420201	75	9887.62	6700	0.67761
46	00470202	12	2887.25	5206	1.80310
56	00510201	72	5927.72	4091	0.69015
57	00510202	9	901.84	2060	2.28422
63	00550201	78	8937.69	5437	0.60832
68	00570203	75	9361.95	4649	0.49658
72	00600203	51	12225.51	9102	0.74451
74	00610201	72	5700.74	4001	0.70184
75	00610202	14	2303.89	2105	0.91367
84	00690202	30	7252.62	5383	0.74221
86	00780104	40	2624.83	1904	0.72538
87	00780201	92	8773.49	6546	0.74611
90	00790201	87	13968.47	8966	0.64187
95	00890202	11	10035.39	19759	1.96893
100	00910203	37	10535.42	6792	0.64468
105	00960201	75	9721.08	6533	0.67204
111	01000104	45	4144.07	2527	0.60979
125	01100104	48	17559.17	13066	0.74411
129	01170201	82	21315.88	12159	0.57042
130	01170202	12	5509.80	8514	1.54525
132	01200201	80	10746.66	7364	0.68524
140	01220202	12	2341.79	2718	1.16065
155	01260202	12	5325.18	6291	1.18137
157	02520201	102	9232.51	6315	0.68400
164	03260202	13	1233.66	2709	2.19591
168	03300203	28	3572.50	2414	0.67572
173	03850202	25	5211.35	2819	0.54093

after collapsing to substr(stratum_h,1,6) below:

Obs	POSTCELL	UNWTCNT	WTCNT	POPCNT	PS
13	003302	310	26348.78	18252	0.69271
38	007801	40	2624.83	1904	0.72538
49	010001	45	4144.07	2527	0.60979

55	011001	48	17559.17	13066 0.74411
77	038502	181	23264.32	17154 0.73735

*/

```

*****
*Construct Necessary Variables:
*****;
***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01','05') then TNEX_grp='N';
else if d_health in ('18','04') then TNEX_grp='S';
else if d_health in ('19','08','11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which is the
region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

***CONUS region***;
length conus $1;
*if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('O','N', 'S', 'W') then conus='1'; *Only include conus=1;
run;

```

```

Title3 "Checking the Construction of PostCell";
Title4 " Postcell=substr(stratum_h,1,6)";
proc freq data=framea;
tables stratum_h*Postcell/list missing;
run;

```

```

proc sort data=framea;
by MPRID;
run;

```

```

proc sort data=in.adjwtp out=adjwt;
by MPRID;
run;

```

```

data adjwt;
merge adjwt(in=A) framea(in=B keep=mprid postcell group) ;
by MPRID;
if A and B;
run;

```

```

Title3 "Checking the Construction of PostCell";
Title4 " Postcell=substr(stratum_h,1,6)";
proc freq data=adjwt;
tables stratum_h*Postcell/list missing;
run;

```

```

*****
*** Do the Poststratification
*****;
options compress=yes;
%calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell, preadjwt=adjwt,
psratio=ps, postwt=postwt, outdata=OUT.postwt);

Title3 "Proc Univariate of Postwt (where Postwt>0):";
proc univariate data=out.postwt plot;
var postwt ;
where postwt>0;
run;

*****
*** Compare the weighted counts and the population counts by the domains
*****;
options compress=no;
%macro comparecnt(smpldata=, frmedata=, domain=, weight=);

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt) drop=percent);
weight &weight.;
run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt) drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by &domain.;
if a and not b and popcnt=. then popcnt=0;
if b and not a and wtcnt=. then wtcnt=0;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff;
run;

%mend comparecnt;

title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by the different domains';
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=postcell, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=group, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=TNEX_grp, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=PCM, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=enbgsmpl, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=patcat, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=stratum_h, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=com_geo, weight=postwt);

```

```

* _____
*Domain=(TNEX_grp*PCM)
* _____;
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
proc freq data=in.postwt NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt) drop=percent);
weight postwt;
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt) drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff ;
run;

proc univariate data=cnt_sf;
var diff ;
run;

* _____
*Domain=(TNEX_grp*PCM)
where Group=(1,2,3)
* _____;
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
title5 " where, Group = (1,2,3)";
proc freq data=in.postwt NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt) drop=percent);
weight postwt;
where group IN ('1','2','3');
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt) drop=percent);
where group IN ('1','2','3');
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;

```



```

sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff ;
run;

*****
*** Compare the weighted sum before and after the poststratification
*****;

%macro procmeans(weightvar=, classvar=);
proc means data=OUT.postwt noprint;
class &classvar.;
var &weightvar.;
output out=out sum=/autoname;
run;

data print;
set out;
where _type_=1;
run;

title3 "weighted info by &classvar. using &weightvar. as weight";
proc print data=print;
sum _freq_ bwt_sum adjwt1_sum adjwt2_sum adjwt_sum postwt_sum;
run;
%mend procmeans;

%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=fnstatus);
*%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=stratum_h);

*****
*Additional Checking:
*****;

data chk;
set OUT.postwt;
run;

Proc sort data=chk;
by decending postwt ;
run;

Title3 "Checking 50 largest Postwts:";
Proc print data=chk (obs=50);
var postcell stratum_h postwt ps adjwt adjwt2 adj2 adjwt1 adj1 bwt;
run;

*****
*** Output the datasets
*****;

options compress=yes;

data out.postwt;
set out.postwt(drop=adjwt );
label ENBGSMPL ='ENBGSMPL - Beneficiary/Enrollment Status'

```

```

        PCM = 'Primary care Manager Code';
run;

*****
*** Calculate the Design Effects
*****;

**create dataset of completes only;
data postwt_fnl;
set out.postwt;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, postcell, postwt, deff_overall,
deff_postcell );
%design_effects_unequal_weights ( postwt_fnl, stratum_h, postwt, deff_overall,
deff_mtf );
%design_effects_unequal_weights ( postwt_fnl, com_geo, postwt, deff_overall,
deff_cac );
%design_effects_unequal_weights ( postwt_fnl, pcm, postwt, deff_overall, deff_pcm );
%design_effects_unequal_weights ( postwt_fnl, patcat, postwt, deff_overall,
deff_patcat);
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, postwt, deff_overall,
deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, postwt, deff_overall,
deff_tnexreg );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, postwt, deff_overall,
deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus, postwt, deff_overall,
deff_conus );

title3 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For postcell ***;
title3 "Design Effects for postcell";
proc print data= deff_postcell;
sum _freq_;
run;

*** For MTF stratum ***;
title3 "Design Effects for MTF stratum";
proc print data= deff_mtf;
sum _freq_;
run;

*** For geographic Area ***;
title3 "Design Effects for com_geo";
proc print data= deff_cac;
sum _freq_;
run;

*** For PCM ***;
title3 "Design Effects for PCM";
proc print data= deff_pcm;
sum _freq_;
run;

```

```
*** For PATCAT ***;
title3 "Design Effects for PATCAT";
proc print data= deff_patcat;
sum _freq_;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

title3 "Contents of OUT.postwt";
proc contents data=OUT.postwt;
run;

***** The end *****;
```

H.14.B - HCSDB_HEDIS\Programs\Weighting\NewWeights\calpoststr.sas - Include file for postwt.sas, trim.sas, postwt_trimmed.sas

```
*****
* Macro to do the poststratification
*****;
%macro calpoststr(smpldata=, frmedata=, domain=, preadjwt=, psratio=, postwt=,
outdata=);

proc freq data=&smpldata. NOPRINT;
where fnstatus in (11, 31, 32);
tables &domain./missing list out=unweight_s(rename=(count=unwcnt) drop=percent);
run;

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt) drop=percent);
weight &preadjwt.;
run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt) drop=percent);
run;

data cnt_sf out.only_f_calpoststr;
merge unweight_s(in=A) weight_s(in=B) unweight_f(in=C);
by &domain.;
if A and B and C then do;
    &psratio.=popcnt/wtcnt;
    label &psratio.="poststratification ratio";
    output cnt_sf;
end;
else if C and NOT A then output out.only_f_calpoststr;
run;

*Sorting data with Poststratification Ratio by PS;
proc sort data=cnt_sf out=test;
by &psratio.;
run;

title3 "Check the calculation of poststratification ratio";
title4 "(sorted by PS)";
proc print data=test;
sum unwcnt wtcnt popcnt;
run;

title3 "Univariate of poststratification ratio";
proc univariate data=cnt_sf;
var &psratio.;
run;

title3 "Check the small cells or too small/large ratios - or (unwcnt<15) or
(&psratio. < 0.75) or (&psratio. > 2)";
proc print data=cnt_sf;
where (&psratio. > 2) or (&psratio. < 0.75) or (unwcnt <15);
run;

*Append cnt_sf back to the adjusted weight data;
proc sort data=&smpldata.;
```

```

by &domain.;
run;

data &outdata.;
merge &smpldata. cnt_sf(keep=&psratio. &domain.);
by &domain.;
run;

data &outdata.;
set &outdata.;
if fnstatus in (11, 31, 32) then &psratio.=&psratio.;
else if fnstatus in (12, 20, 41, 42) then &psratio.=0;
&postwt. = &preadjwt.*&psratio.;
run;

title3 "check the calculation of final weight";
proc print data=&outdata.(obs=200);
var &domain. fnstatus &preadjwt. &psratio. &postwt.;
run;

title3 "Univariate of final weight";
proc univariate data=&outdata.;
var &postwt.;
where fnstatus=11;
run;
%mend calpoststr;

```

H.14.C - HCSDB_HEDIS\Programs\Weighting\NewWeights\design_effects_unequal_weights.sas - Include file for postwt.sas, trim.sas, postwt_trimmed.sas

Name:
design_effects_unequal_weights

Purpose:
Calculate the design effects due to unequal weights. Creates two data sets. One data set contains the overall design effect and the information used to calculate the design effect. The other data set contains the design effects for each category of the analysis variable and the information used to calculate these design effects. In the two data sets, the additional information refers to the number of observations, the sum of the squared weights, and the sum of the weights squared.

Programmer:
Darryl V. Creel

Parameters:
There are five:

- (1) in_data_set - The input data set.
- (2) analysis_variable - The analysis variable contains the categories by which the design effects are calculated.
- (3) weight_variable - The weight variable.
- (4) out_overall_data_set - Name of the data set that contains the overall design effect.
- (5) out_data_set - Name of the output data set that contains the design effects for each category of the analysis variable.

Output:
There are two data sets:

- (1) A data set that contains the overall design effect and the information used to calculate the overall design effect. It includes observations that have a missing value for the analysis variable. This data set is named by the out_overall_data_set parameter.
- (2) A data set that contains the design effects for each category of the analysis variable and the information used to calculate these design effects. There is one observation for each category of the analysis variable, including a missing category, if there are missing values for the analysis variable. This data set is named by the out_data_set parameter.

Side Effects:

None

Notes:

(1) Use with SAS V8.

(2) Do NOT use the following variable names as parameters:

- (a) _weight_variables
- (b) _overall_design_effect
- (c) _design_effect.

*****;

```
%macro design_effects_unequal_weights
```

```
( in_data_set,  
  analysis_variable,  
  weight_variable,  
  out_overall_data_set,  
  out_data_set );
```

```
data _weight_variables;  
  set &in_data_set. ( keep = &analysis_variable. &weight_variable. );  
  &weight_variable._sq = &weight_variable. * &weight_variable.;
```

```
run;
```

```
proc means data = _weight_variables missing noprint;  
  var &weight_variable. &weight_variable._sq;  
  output out = _overall_design_effect  
         sum ( &weight_variable. &weight_variable._sq ) =  
         sum_&weight_variable. sum_&weight_variable._sq;
```

```
run;
```

```
data &out_overall_data_set.;
```

```
  set _overall_design_effect ( drop = _type_ );
```

```
  design_effect = ( _freq_ * sum_&weight_variable._sq ) / ( sum_&weight_variable.
```

```
* sum_&weight_variable. );
```

```
run;
```

```
proc sort data = _weight_variables;  
  by &analysis_variable.;
```

```
run;
```

```
proc means data = _weight_variables missing noprint;  
  var &weight_variable. &weight_variable._sq;  
  by &analysis_variable.;
```

```
  output out = _design_effect
```

```
         sum ( &weight_variable. &weight_variable._sq ) =
```

```
         sum_&weight_variable. sum_&weight_variable._sq;
```

```
run;
```

```
data &out_data_set.;
```

```
  set _design_effect ( drop = _type_ );
```

```
        design_effect = ( _freq_ * sum_&weight_variable._sq ) / ( sum_&weight_variable.  
* sum_&weight_variable. );  
    run;  
  
    proc datasets;  
        delete _weight_variables _overall_design_effect _design_effect;  
    run;  
  
%mend design_effects_unequal_weights;
```


H.15 - HCSDB_HEDIS\Programs\Weighting\NewWeights\repwtp.sas - Create the replicate weights

```
*****
* PROGRAM: Repwtp.SAS
* TASK:    2011 DOD QUARTERLY HEALTH CARE SURVEY (6663-300)
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY USING THE NEW WEIGHTING METHOD.
* WRITTEN: 12/30/1999 BY Keith Ranthbun
* Modified By Haixia Xu on 12/27/2006
*
* INPUTS:  Postwt.sas7bdat - Final Weights file
*          Framea.sas7bdat
*
* OUTPUTS: Repwtp.sas7bdat - Replicate Weights File
* Note    : From Q1FY2011, we create POSTCELL from Sampling Stratum
*          Oldway: Postcell=(Group||Comgeo)
*          Newway: Postcell=substr(Stratum,1,5)
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/'),));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/repwt
p.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/NewWeights/rep
wtp.lst" new;

%let quarter = Q2FY2017;

Title1 "Program: repwtp.sas (&quarter.)";
Title2 "Purpose: Calculate the replicate weights";

*** Set up the input and output paths. ***;
libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* postwt.sas7bdat */
libname inv6 "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal"; /*
repwtp.sas7bdat */

%MACRO PROCESS(DOMAIN1,DOMAIN2,DOMAIN3, reps);

*****
* calculate the population counts to be used in the poststratification
*****;
data framea;
set inv6.framea;
length POSTCELL $6;
postcell=substr(stratum_h,1,6); *Creating Postcell from Sampling Stratum;

run;

proc freq data=framea NOPRINT;
tables &domain3./missing list out=framecnt(drop=percent rename=(count=popcnt));
```

```

run;

*****
* Sort the final weights file by user-specified domains
*****;
PROC SORT DATA=IN.postwt(KEEP=FNSTATUS MPRID BWT &DOMAIN1. &DOMAIN2. &domain3.
stratum_h ) OUT=postwt;
    BY stratum_h MPRID ;
RUN;

*****
* Append SUBSET index (I) to each observation
*****;
DATA SUBSETS;
    SET postwt;
    BY stratum_h MPRID;

    IF _N_ = 1 OR MOD(_N_-1,&reps.) = 0 THEN SUBSET = 1;
    ELSE SUBSET + 1;

    RETAIN SUBSET;
    BBWT = BWT * (&reps. / (&reps. - 1));
RUN;

*****
*****
* Generate JackKnife/replicated weights adjwt01-adjwt60
*****;
%DO I = 1 %TO &reps.;

DATA SUBSET;
    SET SUBSETS;
    IF &I. = SUBSET THEN DELETE; *Remove the current subset;
RUN;

*****
* Calculate adjustment factor A1 for each cell
*****;

proc sort data=subset;
by &domain1.;
run;

*****
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****;
DATA CELLSA1 (KEEP=SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 &domain1. )
    MPRIDSA1 (KEEP=MPRID FNSTATUS BBWT &DOMAIN1. &DOMAIN2. &domain3. )
    ;
    SET subset;
    BY &DOMAIN1.;

if FNSTATUS in (11, 12, 20, 31, 41, 42) THEN DO;

    IF FIRST.&DOMAIN1. THEN DO;

```

```

CELLCNT = 0;
cntg1   = 0;
cntg2   = 0;
cntg3   = 0;
SUMBBWT = 0.0;
SUMG1   = 0.0;
SUMG2   = 0.0;
SUMG3   = 0.0;
A1      = 0.0;
END;
CELLCNT + 1;

*****
* Accumulate total weight sum
*****;

SUMBBWT + BBWT;

*****
* Accumulate group 1 weight sum
*****;

IF FNSTATUS IN (11,12) THEN
  do;
    SUMG1 + BBWT;
    cntg1 + 1;
  end;

*****
* Accumulate group 2 weight sum
*****;

ELSE IF FNSTATUS in (20,31) THEN
  do;
    SUMG2 + BBWT;
    cntg2 + 1;
  end;

*****
* Accumulate group 3 weight sum
*****;

ELSE IF FNSTATUS in (41,42) THEN
  do;
    SUMG3 + BBWT;
    cntg3 + 1;
  end;

RETAIN SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 MPRID;

IF LAST.&DOMAIN1. THEN DO;
  A1 = (SUMG1 + SUMG2 + SUMG3)/(SUMG1 + SUMG2);
  OUTPUT CELLSA1;
END;
END;

OUTPUT MPRIDSA1;
RUN;

```

```

proc sort data=mpridsal;
by &domain1.;
run;

proc sort data=cellsal;
by &domain1.;
run;

data adj_one;
merge mpridsal cellsal;
by &domain1.;
if fnstatus in (11,12,20,31) then adj1 = a1;
  else if fnstatus = 32 then adj1=1;
  else adj1 = 0;
adj_wt1 = adj1 * bbwt;
run;

*****
* Calculate adjustment factor A2 for each cell.
* This is the Nonresponse adjustment and creates the final weight (adjwt).
*****;

proc sort data=adj_one;
by &domain2.;
run;

DATA CELLSA2 (KEEP= &domain2. NUMER DENOM numercnt denomcnt A2);
  set adj_one;
  BY &domain2.;

IF FNSTATUS in (11, 12, 20) THEN DO;

  IF FIRST.&domain2. THEN DO;
    A2 = 0.0;
    NUMER = 0.0;
    DENOM = 0.0;
    numercnt = 0;
    denomcnt = 0;
  END;

  RETAIN NUMER DENOM A2 numercnt denomcnt;

  IF FNSTATUS IN (11,12,20) THEN
    do;
      NUMER + adj_wt1;
      numercnt + 1;
    end;

  IF FNSTATUS = 11 THEN
    do;
      DENOM + adj_wt1;
      denomcnt + 1;
    end;

  IF LAST.&domain2. THEN DO;
    A2 = NUMER/DENOM;

```

```

        OUTPUT CELLSA2;
    END;
END;

RUN;

proc sort data=adj_one;
by &domain2.;
run;

proc sort data=cellsa2;
by &domain2.;
run;

data adj_two;
merge adj_one cellsa2;
by &domain2.;
if fnstatus = 11 then adj2 = a2;
    else if fnstatus in (31, 32) then adj2 = 1;
    else adj2 = 0;
adj_wt2 = adj2 * adj_wt1;
KEEP MPRID FNSTATUS adj_wt2 bbwt &DOMAIN1. &DOMAIN2. &domain3.;
run;

*****
* Calculate poststratification adjustment factor ps for each cell.
*****;
proc freq data=adj_two NOPRINT;
tables &domain3./missing list out=weighted(drop=percent rename=(count=wtcnt));
weight adj_wt2;
run;

data ps;
merge framecnt(in=A) weighted(in=B);
by &domain3.;
ps = popcnt/wtcnt;
if A and B;
run;

proc sort data=adj_two;
by &domain3.;
run;

data subset&i.;
merge adj_two ps;
by &domain3.;
jkweight = ps * adj_wt2;
subset = &i.;
KEEP MPRID subset jkweight;
run;

proc sort data=subset&i.;
by mprid;
run;

*****
*****
* End of JackKnife/replicated weights WRWT01-WRWT60 assignments

```

```

*****
*****;
%END;

*****
* Combine all of the JackKnife weight subsets by MPRID
*****;
DATA ALLSETS;
  SET SUBSET1  SUBSET2  SUBSET3  SUBSET4  SUBSET5
      SUBSET6  SUBSET7  SUBSET8  SUBSET9  SUBSET10
      SUBSET11 SUBSET12 SUBSET13 SUBSET14 SUBSET15
      SUBSET16 SUBSET17 SUBSET18 SUBSET19 SUBSET20
      SUBSET21 SUBSET22 SUBSET23 SUBSET24 SUBSET25
      SUBSET26 SUBSET27 SUBSET28 SUBSET29 SUBSET30
      SUBSET31 SUBSET32 SUBSET33 SUBSET34 SUBSET35
      SUBSET36 SUBSET37 SUBSET38 SUBSET39 SUBSET40
      SUBSET41 SUBSET42 SUBSET43 SUBSET44 SUBSET45
      SUBSET46 SUBSET47 SUBSET48 SUBSET49 SUBSET50
      SUBSET51 SUBSET52 SUBSET53 SUBSET54 SUBSET55
      SUBSET56 SUBSET57 SUBSET58 SUBSET59 SUBSET60
;
  BY MPRID;
  ARRAY JKWT(&reps.) wrwt1-wrwt&reps.; RETAIN wrwt1-wrwt&reps.;
  IF FIRST.MPRID THEN DO;
  DO I = 1 TO &reps.; DROP I;
    JKWT(I) = . ;
  END;
END;
  JKWT(SUBSET) = JKWEIGHT;
  IF LAST.MPRID THEN OUTPUT;
  KEEP MPRID SUBSET wrwt1-wrwt&reps.;
RUN;

*****
* Sort the original data, get the final weight (WRWT), append the
* JackKnife/Replicated weights (WRWT1-WRWT60), and label variables.
*****;
PROC SORT DATA=IN.postwt OUT=postwt;
BY MPRID;
RUN;

proc sort data=allsets;
by mprid;
run;

options compress=yes;

DATA OUT.repwt ;
  MERGE postwt ALLSETS;
  BY MPRID;

  LABEL
    MPRID = 'MPR ID Number'
    WRWT1 = 'Replicated/JackKnife Weight 1'
    WRWT2 = 'Replicated/JackKnife Weight 2'
    WRWT3 = 'Replicated/JackKnife Weight 3'
    WRWT4 = 'Replicated/JackKnife Weight 4'

```

WRWT5 = 'Replicated/JackKnife Weight 5'
WRWT6 = 'Replicated/JackKnife Weight 6'
WRWT7 = 'Replicated/JackKnife Weight 7'
WRWT8 = 'Replicated/JackKnife Weight 8'
WRWT9 = 'Replicated/JackKnife Weight 9'
WRWT10 = 'Replicated/JackKnife Weight 10'
WRWT11 = 'Replicated/JackKnife Weight 11'
WRWT12 = 'Replicated/JackKnife Weight 12'
WRWT13 = 'Replicated/JackKnife Weight 13'
WRWT14 = 'Replicated/JackKnife Weight 14'
WRWT15 = 'Replicated/JackKnife Weight 15'
WRWT16 = 'Replicated/JackKnife Weight 16'
WRWT17 = 'Replicated/JackKnife Weight 17'
WRWT18 = 'Replicated/JackKnife Weight 18'
WRWT19 = 'Replicated/JackKnife Weight 19'
WRWT20 = 'Replicated/JackKnife Weight 20'
WRWT21 = 'Replicated/JackKnife Weight 21'
WRWT22 = 'Replicated/JackKnife Weight 22'
WRWT23 = 'Replicated/JackKnife Weight 23'
WRWT24 = 'Replicated/JackKnife Weight 24'
WRWT25 = 'Replicated/JackKnife Weight 25'
WRWT26 = 'Replicated/JackKnife Weight 26'
WRWT27 = 'Replicated/JackKnife Weight 27'
WRWT28 = 'Replicated/JackKnife Weight 28'
WRWT29 = 'Replicated/JackKnife Weight 29'
WRWT30 = 'Replicated/JackKnife Weight 30'
WRWT31 = 'Replicated/JackKnife Weight 31'
WRWT32 = 'Replicated/JackKnife Weight 32'
WRWT33 = 'Replicated/JackKnife Weight 33'
WRWT34 = 'Replicated/JackKnife Weight 34'
WRWT35 = 'Replicated/JackKnife Weight 35'
WRWT36 = 'Replicated/JackKnife Weight 36'
WRWT37 = 'Replicated/JackKnife Weight 37'
WRWT38 = 'Replicated/JackKnife Weight 38'
WRWT39 = 'Replicated/JackKnife Weight 39'
WRWT40 = 'Replicated/JackKnife Weight 40'
WRWT41 = 'Replicated/JackKnife Weight 41'
WRWT42 = 'Replicated/JackKnife Weight 42'
WRWT43 = 'Replicated/JackKnife Weight 43'
WRWT44 = 'Replicated/JackKnife Weight 44'
WRWT45 = 'Replicated/JackKnife Weight 45'
WRWT46 = 'Replicated/JackKnife Weight 46'
WRWT47 = 'Replicated/JackKnife Weight 47'
WRWT48 = 'Replicated/JackKnife Weight 48'
WRWT49 = 'Replicated/JackKnife Weight 49'
WRWT50 = 'Replicated/JackKnife Weight 50'
WRWT51 = 'Replicated/JackKnife Weight 51'
WRWT52 = 'Replicated/JackKnife Weight 52'
WRWT53 = 'Replicated/JackKnife Weight 53'
WRWT54 = 'Replicated/JackKnife Weight 54'
WRWT55 = 'Replicated/JackKnife Weight 55'
WRWT56 = 'Replicated/JackKnife Weight 56'
WRWT57 = 'Replicated/JackKnife Weight 57'
WRWT58 = 'Replicated/JackKnife Weight 58'
WRWT59 = 'Replicated/JackKnife Weight 59'
WRWT60 = 'Replicated/JackKnife Weight 60'

;
RUN;

```

*****
Check the structure of the data set OUT.repwtpr;
*****;

proc sort data=OUT.repwtpr out=sorted;
by stratum_h mprid;
run;

Title4 "Proc Print of Data=Repwtpr (obs=500)";
proc print data=sorted (obs=500);
var stratum_h mprid SUBSET fnstatus postwt wrwt1-wrwt5;
run;

PROC MEANS DATA=OUT.repwtpr n sum;
VAR postwt WRWT1-WRWT&reps.;
RUN;

PROC SORT DATA=OUT.repwtpr out=repwtpr;
BY MPRID;
RUN;

DATA OUT.repwtpr;
  SET repwtpr;
  BY MPRID;

  ARRAY WGTS(&reps.) WRWT1-WRWT&reps.;
  DO I = 1 TO &reps.; DROP I;
    IF WGTS(I) EQ . THEN WGTS(I) = 0;
  END;

  KEEP MPRID BWT postwt WRWT1-WRWT&reps. fnstatus &domain1. &domain2. &domain3.
com_geo;
RUN;

title4 "Check the replicate weights -- for all cases";
PROC MEANS DATA=OUT.repwtpr n sum;
VAR postwt wrwt1-wrwt&reps.;
output out=sums sum(postwt wrwt1-wrwt&reps.) = postwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var postwt wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var coll;
run;

title4 "Check the replicate weights -- for the final completes";
PROC MEANS DATA=OUT.repwtpr n sum;
where fnstatus=11;
VAR postwt wrwt1-wrwt&reps.;
output out=sums sum(postwt wrwt1-wrwt&reps.) = postwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var postwt wrwt1-wrwt&reps.;

```



```

run;

proc univariate data=t_sums normal ;
var coll;
run;

**added for Amang q4 2002;
data repwt2;
  set out.repwt;
  where fnstatus = 11;
  array subset2(60) wrwt1-wrwt60;
  do m=1 to 60;
    if subset2(m)=0 then
      subset=m;
  end;
run;

proc sort data = repwt2;
by subset;
run;

proc means data = repwt2 noprint;
by subset;
var postwt wrwt1-wrwt60;
output out = amang sum= / autoname;
run;

***added by Haixia on 05/11/2005 for q1, 2005 weighting.
rename wrwt1_sum, ..., wrwt60_sum as sum_wrwt1, ..., sum_wrwt60
so the numbered range list sum_wrwt1 - sum_wrwt60 can be used in the proc print
below;

data amang;
set amang;
rename postwt_sum = sum_postwt;
%do i =1 %to 60;
rename wrwt&i._sum = sum_wrwt&i.;
%end;
run;

proc print data = amang;
sum _freq_ sum_postwt  sum_wrwt1 - sum_wrwt60;
run;

*****
* CREATE FINAL REPWT DATASET FOR KEITH -- Rename the variables
*****;
data out.repwt (drop = postwt com_geo);
set in.repwt;
FWRWT = postwt;
%do i =1 %to 60;
rename wrwt&i.= FWRWT&i.;
%end;
label &domain1. = 'Weighting cell in the unknown eligibility adjustment';
label &domain2. = 'Weighting cell in the nonresponse adjustment';
label &domain3. = "ps cell for new wts - for all 4 quarters";
label fwrwt = "Final NEW Weight";

```

```
run;

data out.repwtpr;
set out.repwtpr;
* Label wts;
  %DO I = 1 %TO 60;
    LABEL    FWRWT&I. = "Replicated/JackKnife NEW Weight &I.";
  %END;
run;

PROC CONTENTS DATA=OUT.repwtpr;
run;

%MEND process;

%PROCESS(pcell_a1, pcell_a2, postcell, 60);
```

H.16 - HCSDB_HEDIS\Programs\Weighting\combine_HEDIS_Q2\combine_HEDIS_Q2.sas - combine weights across HCSDB Q2 and HEDIS

```

*****
*****
*** Program: combine_HEDIS_Q2.sas
*** Task   : 40309.31H
*** Purpose: look at distribution of benes in HCSDB frame/sample by strata used for
HEDIS sampling.
***               combine weights from HCSDB Q2 and HEDIS
*** Inputs  : framea.sas7bdat: the frame file
***               repwtp.sas7bdat: weighted survey data
***
*** Outputs: adjwtp_combine_HEDIS_Q2.sas7bdat: combined weight data to use for
poststratification
*** Written: Breanna Wakar on 7/17/2017
*****
*****;

options formdlim=' ' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-/\<>*" ;

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_Q2
/combine_HEDIS_Q2.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_
Q2/combine_HEDIS_Q2.lst" new;

*set up libraries for frame and sample for HCSDB Q2 and HEDIS;
libname hedis_f "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal";
/*framea.sas7bdat*/
libname q2_f "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017/Data/AFinal";
/*framea.sas7bdat*/

LIBNAME OUTHCSDB "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017t/Data/AFinal"; /*
repwtp.sas7bdat */
LIBNAME OUTHEDIS "/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/"; /*
repwtp.sas7bdat */

LIBNAME OUT
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2";

*set up format to indicate which data set rows are from;
proc format;
value typef 1="HEDIS frame"
2="HEDIS sample"
5="Q2 frame"
6="Q2 sample";

run;

*import the data;
data hedis_f;
set hedis_f.framea;

```

```

run;

data hedis_s;
    set hedis_f.sample;
run;

data q2_f;
    set q2_f.framea;
run;

data q2_s;
    set q2_f.sample;
run;

*merge Q2 frame and HEDIS frame by MPRID;
proc sort data=q2_f;
    by mprid;
run;

proc sort data=hedis_f;
    by mprid;
run;

data hedis_f_both_strata q2_f_both_strata;
    *keep only HEDIS stratum, mprid from HEDIS frame;
    merge hedis_f(in=inA keep=stratum_h mprid) q2_f(in=inB) ;
    by mprid;

    *retain the cases in the HEDIS frame, with all Q2 frame variables now included;
    if inA then do;
        datatype=1;
        output hedis_f_both_strata;
    end;
    if inB then do;
        datatype=5;
        output q2_f_both_strata;
    end;
run;

*create combined HCSDB and HEDIS stratum variable;
data hedis_q2_f_both_strata;
    set hedis_f_both_strata q2_f_both_strata;
    stratum_stratumh=stratum||"_"||stratum_h;
    format datatype typef.;
run;

proc freq data=hedis_q2_f_both_strata;
    table stratum*datatype / missing nocol norow nopercnt;
run;

*now merge HCSDB stratum onto HEDIS sample;
proc sort data=hedis_s;
    by mprid;
run;

```

```

*need HEDIS frame, because stratum_h was deleted from HEDIS sample file for
consistency with HCSDB delivery sample file;
proc sort data=hedis_f_both_strata;
  by mprid;
run;

*merge HEDIS sample to HEDIS frame containing HCSDB stratum by MPRID;
data hedis_s_both_strata;
  merge hedis_s(in=inA keep=mprid) hedis_f_both_strata(drop=datatype) ;
  by mprid;
  datatype=2;
  *keep only cases from HEDIS sample;
  if inA;
run;

proc sort data=q2_s;
  by mprid;
run;

*add datatype and stratum_h to q2 sample;
data q2_s_both_strata;
  merge q2_s(in=inA keep=mprid) q2_f_both_strata(drop=datatype) ;
  by mprid;
  datatype=6;
  if inA;
run;

data hedis_q2_f_s_both_strata;
  set hedis_q2_f_both_strata hedis_s_both_strata q2_s_both_strata;
  stratum_stratumh=stratum||"_"||stratum_h;
  format datatype typef.;
run;

title "frequency by HCSDB stratum in HEDIS and HCSDB frame/sample";
proc freq data=hedis_q2_f_s_both_strata;
  table stratum*datatype / missing nocol norow nopercnt
out=stratum_stratumh_freq ;
run;

*import the final weighted data set for both HEDIS and HCSDB;
data HCSDB;
  set OUTHCSDB.repwt;
run;

data HEDIS;
  set OUTHEDIS.repwt;
run;

proc contents data=HEDIS; run;

*merge weights together with sample file (only sampled cases in weight file);
data weights_both;
  merge HEDIS(rename=fwrwt=hedisfwrwt) HCSDB(rename=fwrwt=hcsdbfwrwt)
hedis_s_both_strata(in=inA) q2_s(in=inB);
  by mprid;
  inHEDIS=inA;
  inHCSDB=inB;

```

```

        *create postcell using HCSDB stratum;
        postcell= substr(stratum,1,5);
run;

title "check construction of postcell";
proc freq data=weights_both;
    table stratum*postcell /list missing;
run;

*sort by stratum in preparation for next step;
proc sort data=weights_both;
    by stratum;
run;

*count the number of completes per stratum, do not use any strata with < 10 completes
in HEDIS;
proc univariate data=weights_both noprint;
    var hedisfwrwt;
    by stratum;
    output out=n_completes_hedis n=n_completes_hedis;
    where inHEDIS=1 and fnstatus=11;
run;

title "number of completes per stratum, HEDIS";
proc freq data=n_completes_hedis;
    table n_completes_hedis;
run;

proc univariate data=weights_both noprint;
    var hcsdbfwrwt;
    by stratum;
    output out=n_completes_hcsdb n=n_completes_hcsdb;
    where inhcsdb=1 and fnstatus=11;
run;

title "number of completes per stratum, HCSDB";
proc freq data=n_completes_hcsdb;
    table n_completes_hcsdb;
run;

*are small strata same across HCSDB/HEDIS;
data n_completes_both;
    merge n_completes_hedis n_completes_hcsdb;
    by stratum;
run;

title "small number of completes in HEDIS, HCSDB, or both";
proc print data=n_completes_both;
    where (n_completes_hedis<10 and n_completes_hedis ne .) or
n_completes_hcsdb<10;
run;

*before calculation, merge back in the HEDIS count of completes, only retain HEDIS
strata with at least 10 HEDIS completes;

```

```

*check how many benes we expect to drop so that we can confirm with observation
counts in the log
- these will be the benes in small HEDIS strata above plus any in HEDIS strata with
zero completes;
data check_deleted_benes;
    merge weights_both n_completes_both;
    by stratum;
run;

proc freq data=check_deleted_benes;
    table stratum*inHEDIS*n_completes_HEDIS /list missing;
    where n_completes_HEDIS <10 and inHEDIS=1;
run;

*we exclude HEDIS strata with <10 completes because we want to use HCSDB weight for
these strata;
*do this by not calculating lambda for these strata;
data weights_both_ge_10;
    merge weights_both n_completes_both;
    by stratum;
    if n_completes_hedis>=10 or inHCSDB=1;
run;

*calculate cv from proc univariate;
*the variable we care about is nonresponse-adjusted weight FWRWT;
proc univariate data=weights_both_ge_10 noprint;
    var hediscv;
    by stratum;
    output out=hediscv cv=hediscv n=hedisn;
    *restrict to HEDIS and complete;
    where inHEDIS=1 and fnstatus=11;
    title2 'distribution of HEDIS weights';
run;

proc univariate data=weights_both_ge_10 noprint;
    var hcsdbfwrwt;
    by stratum;
    output out=hcsdbcv cv=hcsdbcv n=hcsdbn;
    *restrict to HCSDB and complete;
    where inHCSDB=1 and fnstatus=11;
    title2 'distribution of HCSDB weights';
run;

*merge the cv results together, retain only for strata present in both HCSDB and
HEDIS;
data cv_both;
    merge hediscv(in=inA) hcsdbcv(in=inB);
    by stratum;
    if inA and inB;

    *calculate design effect as 1+(cv/100)^2;
    hedisdeff=1+(hediscv/100)**2;
    hcsdbdeff=1+(hcsdbcv/100)**2;

    *calculate lambda where frames overlap;
    *[{N(HCSDB, where frames overlap)/deff(HCSDB, where frames overlap)}
/ {[N(HCSDB, where frames overlap)/deff(HCSDB)]+ [N(HEDIS, where frames
overlap)/deff(HEDIS)]];

```

```

lambda=(hcsdbn/hcsdbdeff)/((hcsdbn/hcsdbdeff) + (hedisn/hedisdeff));

run;

title "univariate of design effects and lambda";
proc univariate data=cv_both;
    var hedisdeff hcsdbdeff lambda;
run;

*merge lambda back to bene-level file;
data weights_lambda;
    merge weights_both cv_both;
    by stratum;

    *replace with zeros to avoid missing values;
    if hcsdbfwrwt=. then hcsdbfwrwt=0;
    if hedisfwrwt=. then hedisfwrwt=0;

    *calculate composite weight for each stratum where frames overlap
    *lambda*HCSDB weight + (1-lambda)*HEDIS weight;
    if lambda ne . then combined_fwrwt=lambda*hcsdbfwrwt + (1-lambda)*hedisfwrwt;

    *for strata not in HEDIS sample, use weight calculated in Q2 weighting,
unadjusted;
    else combined_fwrwt=hcsdbfwrwt;

    if fnstatus=11 and combined_fwrwt=0 then dropflag=1;
    else dropflag=0;

    *for dropflag=1, change fnstatus to 99;
    *for these cases, we are forcing HEDIS benes into HCSDB strata, so we end up
with some small
    numbers of respondents. During weighting QA, we decided that we would use
only the HCSDB weights
    for these strata rather than folding in HEDIS, since HEDIS has so few
completes (use lambda=1).
    To avoid having HEDIS benes with fnstatus=11 and weight of zero, we
will restatus these benes
    as 99, a new category. They will not be included with the completes or
the nonrespondents/ineligibles.
    This affects 96 benes in 19 HEDIS strata.;
    fnstatus_o=fnstatus;
    if dropflag=1 then fnstatus=99;

    label fnstatus="Final Status - 99 are benes from HEDIS strata with fewer than
10 respondents"
           fnstatus_o="Final Status before editing small HEDIS strata - some
fnstatus_o=11 will get weights of zero"
           INHEDIS="1 if in HEDIS sample, 0 if HCSDB"
           INHCSDB="1 if in HCSDB sample, 0 if HEDIS";

run;

*look at dropflag construction;
title "check construction of dropflag";
proc freq data=weights_lambda;
    table dropflag*fnstatus*combined_fwrwt /list missing;

```



```

run;

title "list stratum where dropflag=1 - these should be small HEDIS strata";
proc sql;
    select stratum, inhedis, count(stratum) as freq from weights_lambda where
dropflag=1 group by stratum, inhedis;
quit;

title "small HEDIS strata";
proc print data=n_completes_both;
    where (n_completes_hedis<10 and n_completes_hedis ne .);
    var stratum n_completes_hedis;
run;

*check change in status;
proc freq data=weights_lambda;
    table fnstatus*fnstatus_o*dropflag /list missing;
run;

*look at combined weights;
title "combined HEDIS and HCSDB weights";
proc univariate data=weights_lambda;
    var combined_fwrwt;
run;

title "combined weights for overlap in frames";
proc univariate data=weights_lambda;
    where lambda ne . and combined_fwrwt>0;
    var combined_fwrwt;
run;

title "check postcell";
proc freq data=weights_lambda;
    table stratum*postcell/list missing;
    where stratum="1001401";
run;

*output combined weights for use in postwt.sas;
data OUT.adjwtp;
    set weights_lambda;
run;

title3 "Contents of OUT.adjwtp";
proc contents data=out.adjwtp;
run;

/*
*note: the code below was used to explore other options for how to create lambda.
After examining the resulting design effects, Barb/Eric/Nancy/Sabrina/Breanna
decided
to use the version in which lambda is calculated by stratum, above;

***** by postcell;

*check for small postcell in HEDIS, HCSDB;
*count the number of completes per postcell;
proc univariate data=weights_both noprint;
    var hedisfwrwt;

```

```

        by postcell;
        output out=n_completes_hedis_p n=n_completes_hedis;
        where inHEDIS=1 and fnstatus=11;
run;

title "number of completes per postcell, HEDIS";
proc freq data=n_completes_hedis_p;
    table n_completes_hedis;
run;

proc univariate data=weights_both noprint;
    var hcsdbfwrwt;
    by postcell;
    output out=n_completes_hcsdb_p n=n_completes_hcsdb;
    where inhcsdb=1 and fnstatus=11;
run;

title "number of completes per postcell, HCSDB";
proc freq data=n_completes_hcsdb_p;
    table n_completes_hcsdb;
run;

*are small strata same across HCSDB/HEDIS;
data n_completes_both_p;
    merge n_completes_hedis_p n_completes_hcsdb_p;
    by postcell;
run;

*when using postcell, there are only 2 postcells that are small (5 HEDIS responses
total)
    and HCSDB completes are sufficient for these postcells;
title "small number of completes in HEDIS, HCSDB, or both";
proc print data=n_completes_both_p;
    where (n_completes_hedis<10 and n_completes_hedis ne .) or
n_completes_hcsdb<10;
run;

*before calculation, merge back in the HEDIS count of completes, only retain HEDIS
strata with at least 10 HEDIS completes;
*we exclude HEDIS strata with <10 completes because we want to use HCSDB weight for
these strata;
    *do this by not calculating lambda for these strata;

*check how many benes we expect to drop so that we can confirm with observation
counts in the log
- these will be the 5 in small HEDIS strata above plus any in HEDIS strata with zero
completes;
data check_deleted_benes_p;
    merge weights_both n_completes_both_p;
    by postcell;
run;

proc freq data=check_deleted_benes_p;
    table postcell*inHEDIS*n_completes_HEDIS /list missing;
    where n_completes_HEDIS <10 and inHEDIS=1;
run;

```

```

data weights_both_ge_10_p;
  merge weights_both n_completes_both_p;
  by postcell;
  if n_completes_hedis>=10 or inHCSDB=1;
run;

proc freq data=weights_both_ge_10_p;
  table postcell* n_completes_hedis *inhedis /list missing;
  where n_completes_hedis<10 and inHEDIS=1;
run;

proc univariate data=weights_both_ge_10_p noprint;
  var hediscv;
  by postcell;
  output out=hediscv_p cv=hediscv n=hediscv;
  *restrict to HEDIS and complete;
  where inHEDIS=1 and fnstatus=11;
  title2 'distribution of HEDIS weights';
run;

proc univariate data=weights_both_ge_10_p noprint;
  var hcsdbcv;
  by postcell;
  output out=hcsdbcv_p cv=hcsdbcv n=hcsdbn;
  *restrict to HCSDB and complete;
  where inHCSDB=1 and fnstatus=11;
  title2 'distribution of HCSDB weights';
run;

*merge the cv results together, retain only for postcells present in both HCSDB and
HEDIS;
data cv_both_p;
  merge hediscv_p(in=inA) hcsdbcv_p(in=inB);
  by postcell;
  if inA and inB;

  *calculate design effect as 1+(cv/100)^2;
  hediscvdeff=1+(hediscv/100)**2;
  hcsdbdeff=1+(hcsdbcv/100)**2;

  *calculate lambda where frames overlap;
  *[(N(HCSDB, where frames overlap)/deff(HCSDB, where frames overlap)]
  / {[N(HCSDB, where frames overlap)/deff(HCSDB)]+ [N(HEDIS, where frames
overlap)/deff(HEDIS)]};
  lambda=(hcsdbn/hcsdbdeff)/((hcsdbn/hcsdbdeff) + (hediscv/hediscvdeff));

run;

title "univariate of design effects and lambda - by postcell";
proc univariate data=cv_both_p;
  var hediscvdeff hcsdbdeff lambda;
run;

*merge lambda back to bene-level file;
data weights_lambda_p;
  merge weights_both cv_both_p;
  by postcell;

```

```

*replace with zeros to avoid missing values;
if hcsdbfwrwt=. then hcsdbfwrwt=0;
if hedisfwrwt=. then hedisfwrwt=0;

*calculate composite weight for each postcell where frames overlap
*lambda*HCSDB weight + (1-lambda)*HEDIS weight;
if lambda ne . then combined_fwrwt=lambda*hcsdbfwrwt + (1-lambda)*hedisfwrwt;

*for benes not in HEDIS sample, use weight calculated in Q2 weighting,
unadjusted;
else combined_fwrwt=hcsdbfwrwt;
run;

*look at combined weights;
title "combined HEDIS and HCSDB weights - by postcell";
proc univariate data=weights_lambda_p;
var combined_fwrwt;
run;

title "combined weights for overlap in frames - by postcell";
proc univariate data=weights_lambda_p;
where lambda ne . and combined_fwrwt>0;
var combined_fwrwt;
run;

*output combined weights for use in postwt.sas;
data OUT.adjwtp_combine_HEDIS_Q2_postcell;
set weights_lambda_p;
run;

title3 "Contents of OUT.adjwtp_combine_HEDIS_Q2 - by postcell";
proc contents data=out.adjwtp_combine_HEDIS_Q2_postcell;
run;

***** constant lambda: median (.285);
*use bene-level file;
data weights_lambda_285;
merge weights_both cv_both_p;
by postcell;

*replace with zeros to avoid missing values;
if hcsdbfwrwt=. then hcsdbfwrwt=0;
if hedisfwrwt=. then hedisfwrwt=0;

*calculate composite weight for each postcell where frames overlap
*lambda*HCSDB weight + (1-lambda)*HEDIS weight;
if lambda ne . then combined_fwrwt=.258*hcsdbfwrwt + (1-.258)*hedisfwrwt;

*for benes not in HEDIS sample, use weight calculated in Q2 weighting,
unadjusted;
else combined_fwrwt=hcsdbfwrwt;
run;

*look at combined weights;
title "combined HEDIS and HCSDB weights - median lambda .285";
proc univariate data=weights_lambda_285;

```

```

        var combined_fwrwt;
run;

title "combined weights for overlap in frames - median lambda .285";
proc univariate data=weights_lambda_285;
    where lambda ne . and combined_fwrwt>0;
    var combined_fwrwt;
run;

*output combined weights for use in postwt.sas;
data OUT.adjwtp_combine_HEDIS_Q2_285;
    set weights_lambda_285;
run;

title3 "Contents of OUT.adjwtp_combine_HEDIS_Q2 - median lambda .285";
proc contents data=out.adjwtp_combine_HEDIS_Q2_285;
run;

***** constant lambda: arbitrary (.5);
*merge lambda back to bene-level file;
data weights_lambda_500;
    merge weights_both cv_both_p;
    by postcell;

    *replace with zeros to avoid missing values;
    if hcsdbfwrwt=. then hcsdbfwrwt=0;
    if hedisfwrwt=. then hedisfwrwt=0;

    *calculate composite weight for each postcell where frames overlap
    *lambda*HCSDB weight + (1-lambda)*HEDIS weight;
    if lambda ne . then combined_fwrwt=.5*hcsdbfwrwt + (1-.5)*hedisfwrwt;

    *for benes not in HEDIS sample, use weight calculated in Q2 weighting,
unadjusted;
    else combined_fwrwt=hcsdbfwrwt;
run;

*look at combined weights;
title "combined HEDIS and HCSDB weights - arbitrary lambda .50";
proc univariate data=weights_lambda_500;
    var combined_fwrwt;
run;

title "combined weights for overlap in frames - arbitrary lambda .50";
proc univariate data=weights_lambda_500;
    where lambda ne . and combined_fwrwt>0;
    var combined_fwrwt;
run;

*output combined weights for use in postwt.sas;
data OUT.adjwtp_combine_HEDIS_Q2_50;
    set weights_lambda_500;
run;

title3 "Contents of OUT.adjwtp_combine_HEDIS_Q2 - arbitrary lambda .50";
proc contents data=out.adjwtp_combine_HEDIS_Q2_50;
run;

```

```
*/
```

```
proc printto;  
run;
```

H.17 - HCSDB_HEDIS\Programs\Weighting\combine_HEDIS_Q2\postwt_combine_HEDIS_Q2.sas - do the poststratification of the combined weights

```

*****
*****
*** Program: postwt.sas
*** Task   : 40309.31H
*** Purpose: Do the poststratification to force weighted counts to population counts
in certain domain.
*** Inputs : framea.sas7bdat: the frame file
***         adjwtp.sas7bdat: weighted survey data
***
*** Outputs: postwt.sas7bdat: final weight data after poststratification
*** Written: Haixia Xu on 12/27/2006
*** Note:   1) From Q1FY2011, we will create POSTCELL from Sampling 'Stratum' instead
of (Group||Comgeo)
***         ie., Postcell=substr(Stratum,1,5)
***         2) Starting from Q1Fy2014, SampleSize Increased to 100,000 and it's
WebOnly for all
*****
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                          %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_Q2
/postwt_combine_HEDIS_Q2.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_
Q2/postwt_combine_HEDIS_Q2.lst" new;

%let quarter=Q2FY2017;

Title2 "Purpose: Do the poststratification";

*** Set up the input and output paths. ***;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2"
access=readonly; /* adjwtp.sas7bdat */
libname inv9 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017/Data/AFinal"
access=readonly; /* framea.sas7bdat - use Q2 frame here since HEDIS is a subset*/
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2"; /*
postwt.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017/Programs/Weighting/NewWeights/calpos
tstr.sas";

```

```
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017/Programs/Weighting/NewWeights/design
_effects_unequal_weights.sas";
```

```
%macro postwt_each_option(dataset=);
  Title1 "Program: postwt.sas (&quarter.) &dataset.";
```

```
  ***Sample***;
  data framea;
  set inv9.framea;
  length postcell $6;
  *annual: for Q2 combined with HEDIS, use HCSDB stratum;
  postcell= substr(stratum,1,5); *Creating Postcell from Sampling Stratum;
```

```
  /*collapse postcell groups
  *****/
  /*
```

```
  Q2Fy2017:
```

```
  Check the small cells or too small/large ratios - or (unwtcnt<15) or (ps <
0.75) or (ps > 2)
```

Obs	POSTCELL	UNWTCNT	WTCNT	POPCNT	PS
1	00060201	100	11029.72	6186	0.56085
5	00090201	49	7976.27	4474	0.56091
6	00090202	12	2012.34	2448	1.21650
9	00100201	86	9826.61	6789	0.69088
13	00140201	89	10474.02	6845	0.65352
14	00140202	11	1616.61	2936	1.81614
22	00290202	13	7909.27	13514	1.70863
25	00320202	10	5485.42	10618	1.93568
27	00330201	83	13665.88	6489	0.47483
32	00380202	9	3103.21	3333	1.07405
36	00390202	10	4490.47	6920	1.54104
38	00420201	75	9887.62	6700	0.67761
46	00470202	12	2887.25	5206	1.80310
56	00510201	72	5927.72	4091	0.69015
57	00510202	9	901.84	2060	2.28422
63	00550201	78	8937.69	5437	0.60832
68	00570203	75	9361.95	4649	0.49658
72	00600203	51	12225.51	9102	0.74451
74	00610201	72	5700.74	4001	0.70184
75	00610202	14	2303.89	2105	0.91367
84	00690202	30	7252.62	5383	0.74221
86	00780104	40	2624.83	1904	0.72538
87	00780201	92	8773.49	6546	0.74611
90	00790201	87	13968.47	8966	0.64187
95	00890202	11	10035.39	19759	1.96893
100	00910203	37	10535.42	6792	0.64468
105	00960201	75	9721.08	6533	0.67204
111	01000104	45	4144.07	2527	0.60979
125	01100104	48	17559.17	13066	0.74411
129	01170201	82	21315.88	12159	0.57042
130	01170202	12	5509.80	8514	1.54525
132	01200201	80	10746.66	7364	0.68524
140	01220202	12	2341.79	2718	1.16065
155	01260202	12	5325.18	6291	1.18137
157	02520201	102	9232.51	6315	0.68400
164	03260202	13	1233.66	2709	2.19591

168	03300203	28	3572.50	2414	0.67572
173	03850202	25	5211.35	2819	0.54093

after collapsing to substr(stratum_h,1,6) below:

Obs	POSTCELL	UNWTCNT	WTCNT	POPCNT	PS
13	003302	310	26348.78	18252	0.69271
38	007801	40	2624.83	1904	0.72538
49	010001	45	4144.07	2527	0.60979
55	011001	48	17559.17	13066	0.74411
77	038502	181	23264.32	17154	0.73735

*/

*Construct Necessary Variables:

*****;

facility TNEX region;

length TNEX_grp \$1;

if d_health in ('00', '13', '14', '15') then TNEX_grp='O';

else if d_health in ('17', '01','05') then TNEX_grp='N';

else if d_health in ('18','04') then TNEX_grp='S';

else if d_health in ('19','08','11') then TNEX_grp='W';

*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:

All the cases in the same com_geo should be in the same TNEX region, which is the region of the com_geo;

if COM_GEO = '0047' then TNEX_grp='S';

else if COM_GEO = '9001' then TNEX_grp='N';

else if COM_GEO = '9002' then TNEX_grp='S';

else if COM_GEO = '9003' then TNEX_grp='W';

else if COM_GEO = '9004' then TNEX_grp='O';

CONUS region;

length conus \$1;

*if TNEX_grp = 'O' then conus='0';

else if TNEX_grp in ('O','N', 'S', 'W') then conus='1'; *Only include conus=1;

run;

Title3 "Checking the Construction of PostCell - frame";

Title4 " Postcell=substr(stratum,1,6)";

proc freq data=framea;

*annual: use stratum here, not stratum_h;

tables stratum*Postcell/list missing;

run;

proc sort data=framea;

by MPRID;

run;

*annual: use adjwtp from combining HEDIS and Q2 weights;

proc sort data=in.adjwtp out=adjwt;

by MPRID;

run;

/*

*investigate whether overwriting makes a difference;

data adjwt;

```

merge adjwt(in=A) framea(in=B keep=mprid postcell group stratum
rename=(postcell=postcell_frame group=group_frame)) ;
by MPRID;
if A and B;
if postcell=postcell_frame then postcell_match=1;
else postcell_match=0;

    if group=group_frame then group_match=1;
else group_match=0;
run;

proc freq data=adjwt;
table postcell_match group_match/list missing;
run;
*conclusion: postcell and group match when merged by MPRID, so the overwriting
is not a problem;
*/
data adjwt;
merge adjwt(in=A) framea(in=B keep=mprid postcell group) ;
by MPRID;
if A and B;
run;

Title3 "Checking the Construction of PostCell - adjwt";
Title4 " Postcell=substr(stratum,1,6)";
proc freq data=adjwt;
*annual: use stratum instead of stratum_h;
tables stratum*Postcell/list missing;
run;

*****
*** Do the Poststratification
*****
;

options compress=yes;
*annual: use combined_fwrwt instead of adjwt;
%calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell,
preadjtw=combined_fwrwt, psratio=ps, postwt=postwt, outdata=out.postwt);

Title3 "Proc Univariate of Postwt (where Postwt>0):";
*annual: use postwt from combined HEDIS and Q2;
proc univariate data=out.postwt plot;
var postwt ;
where postwt>0;
run;

*****
*** Compare the weighted counts and the population counts by the domains
*****
;

options compress=no;
%macro comparecnt(smpldata=, frmedata=, domain=, weight=);

proc freq data=&smpldata. NOPRINT;
tables &domain./missing list out=weight_s(rename=(count=wtcnt) drop=percent);
weight &weight.;

```

```

run;

proc freq data=&frmedata. NOPRINT;
tables &domain./missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by &domain.;
if a and not b and popcnt=. then popcnt=0;
if b and not a and wtcnt=. then wtcnt=0;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff;
run;

%mend comparecnt;

title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by the different
domains';
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=postcell,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=group, weight=postwt);
*annual: TNEX_grp is not in the combined postwt file (it gets dropped) -
comment this out for now, but could merge TNEX_grp back in;
%*comparecnt(smpldata=in.postwt, frmedata=framea, domain=TNEX_grp,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=PCM, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea,
domain=enbgsmpl, weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=patcat, weight=postwt);
*annual: use stratum here, not stratum_h;
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=stratum,
weight=postwt);
%comparecnt(smpldata=in.postwt, frmedata=framea, domain=com_geo,
weight=postwt);
/*
annual: again, TNEX_grp has been dropped, so commenting this out rather than
merging TNEX back in;

*_____
*Domain=(TNEX_grp*PCM)
*_____);
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
proc freq data=in.postwt NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight postwt;

```

```

run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff ;
run;

proc univariate data=cnt_sf;
var diff ;
run;

* _____
*Domain=(TNEX_grp*PCM)
where Group=(1,2,3)
* _____;
title3 'Check to see if the poststratification is done correctly';
title4 'Compare the weighted count and the frame count by (TNEX*PCM)';
title5 " where, Group = (1,2,3)";
proc freq data=in.postwt NOPRINT;
tables TNEX_grp*PCM/missing list out=weight_s(rename=(count=wtcnt)
drop=percent);
weight postwt;
where group IN ('1','2','3');
run;

proc freq data=framea NOPRINT;
tables TNEX_grp*PCM/missing list out=unweight_f(rename=(count=popcnt)
drop=percent);
where group IN ('1','2','3');
run;

data cnt_sf;
merge weight_s(in=A) unweight_f(in=B);
by TNEX_grp PCM;
diff = wtcnt - popcnt;
*reldiff=diff/popcnt;
if A and B;
run;

proc print data=cnt_sf;
sum wtcnt popcnt diff;
run;

proc univariate data=cnt_sf;
var diff ;
run;

```

```

*/
*****
*** Compare the weighted sum before and after the poststratification
*****
;

%macro procmeans(weightvar=, classvar=);
proc means data=out.postwt noprint;
class &classvar.;
var &weightvar.;
output out=out sum=/autoname;
run;

data print;
set out;
where _type_=1;
run;

title3 "weighted info by &classvar. using &weightvar. as weight";
proc print data=print;
sum _freq_ bwt_sum /*adjwt1_sum adjwt2_sum adjwt_sum*/ combined_fwrwt_sum
postwt_sum;
run;
%mend procmeans;

*annual: combined_fwrwt does not sum to population. is this a problem?;
%procmeans(weightvar= bwt /*adjwt1 adjwt2 adjwt*/ combined_fwrwt postwt,
classvar=fnstatus);
*annual: use stratum, not stratum_h;
*%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=stratum);

*****
*Additional Checking:
*****;
data chk;
set out.postwt;
run;

Proc sort data=chk;
by decending postwt ;
run;

Title3 "Checking 50 largest Postwts:";
Proc print data=chk (obs=50);
var postcell stratum postwt ps /*adjwt adjwt2 adj2 adjwt1 adj1*/ combined_fwrwt
bwt;
run;

*****
*** Output the datasets
*****
;

options compress=yes;

data out.postwt;
set out.postwt(drop=/*adjwt*/ combined_fwrwt);

```

```

label  ENBGSMPL = 'ENBGSMPL - Beneficiary/Enrollment Status'
      PCM = 'Primary care Manager Code';
run;

*****
*** Calculate the Design Effects
*****
;

**create dataset of completes only;
data postwt_fnl;
set out.postwt;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, postcell, postwt, deff_overall,
deff_postcell );
*annual: use stratum, not stratum_h;
%design_effects_unequal_weights ( postwt_fnl, stratum, postwt, deff_overall,
deff_mtf );
%design_effects_unequal_weights ( postwt_fnl, com_geo, postwt, deff_overall,
deff_cac );
%design_effects_unequal_weights ( postwt_fnl, pcm, postwt, deff_overall,
deff_pcm );
%design_effects_unequal_weights ( postwt_fnl, patcat, postwt, deff_overall,
deff_patcat);
%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, postwt, deff_overall,
deff_enb );
%design_effects_unequal_weights ( postwt_fnl, tnexreg, postwt, deff_overall,
deff_tnexreg );
*annual: comment out b/c TNEX_grp and conus not in postwt file;
%*design_effects_unequal_weights ( postwt_fnl, TNEX_grp, postwt, deff_overall,
deff_tnexgrp );
%*design_effects_unequal_weights ( postwt_fnl, conus, postwt, deff_overall,
deff_conus );

title3 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For postcell ***;
title3 "Design Effects for postcell";
proc print data= deff_postcell;
sum _freq_;
run;

*** For MTF stratum ***;
title3 "Design Effects for MTF stratum";
proc print data= deff_mtf;
sum _freq_;
run;

*** For geographic Area ***;
title3 "Design Effects for com_geo";
proc print data= deff_cac;
sum _freq_;
run;

```

```

*** For PCM ***;
title3 "Design Effects for PCM";
proc print data= deff_pcm;
sum _freq_;
run;

*** For PATCAT ***;
title3 "Design Effects for PATCAT";
proc print data= deff_patcat;
sum _freq_;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;
/*
*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;
*/
title3 "Contents of out.postwt";
proc contents data=out.postwt;
run;
%mend postwt_each_option;

*final decision is saved as postwt, so no need for &dataset parameter;
%postwt_each_option(dataset=);

*note: the code below was used to explore other options for how to create lambda.
After examining the resulting design effects, Barb/Eric/Nancy/Sabrina/Breanna
decided
to use the version in which lambda is calculated by stratum, above;

%*postwt_each_option(dataset=combine_hedis_q2_stratum);
%*postwt_each_option(dataset=combine_hedis_q2_postcell);
%*postwt_each_option(dataset=combine_hedis_q2_285);
%*postwt_each_option(dataset=combine_hedis_q2_50);

proc printto;
run;

***** The end *****;

```

H.18 - HCSDB_HEDIS\Programs\Weighting\combine_HEDIS_Q2\repwtp_combine_HEDIS_Q2.sas - create the replicate weights for the combined weights

```

*****
* PROGRAM: Repwtp.SAS
* TASK:    2011 DOD QUARTERLY HEALTH CARE SURVEY (6663-300)
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY USING THE NEW WEIGHTING METHOD.
* WRITTEN: 12/30/1999 BY Keith Ranthbun
* Modified By Haixia Xu on 12/27/2006
*
* INPUTS:  Postwt.sas7bdat - Final Weights file
*          Framea.sas7bdat
*
* OUTPUTS: Repwtp.sas7bdat - Replicate Weights File
* Note    : From Q1FY2011, we create POSTCELL from Sampling Stratum
*          Oldway: Postcell=(Group||Comgeo)
*          Newway: Postcell=substr(Stratum,1,5)
*****;
options mprint MACROGEN compress=yes ls=132 ps=58 mergenoby=ERROR validvarname=upcase
nocenter
formchar= "|----|+|---+=|-\<>*" orientation=portrait mprint symbolgen spool obs=max;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
    %scan(&_sasprogramfile,-1,'/')));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_Q2
/repwtp_combine_HEDIS_Q2.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_
Q2/repwtp_combine_HEDIS_Q2.lst" new;

%let quarter = Q2FY2017;

Title1 "Program: repwtp.sas (&quarter.)";
Title2 "Purpose: Calculate the replicate weights";

*** Set up the input and output paths. ***;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2"
access=readonly; /* postwt.sas7bdat */
libname inv6 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2017/Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2"; /*
repwtp.sas7bdat */

%MACRO PROCESS(DOMAIN1,DOMAIN2,DOMAIN3, reps);

*****
* calculate the population counts to be used in the poststratification
*****;
data framea;
set inv6.framea;
length POSTCELL $6;
*annual: change to 5 from typical 6 because there are no leading characters in
stratum variable;
postcell=substr(stratum,1,5); *Creating Postcell from Sampling Stratum;

```



```

run;

proc freq data=framea NOPRINT;
tables &domain3./missing list out=framecnt(drop=percent rename=(count=popcnt));
run;

*****
* Sort the final weights file by user-specified domains
*****;
*annual: retain the flags indicating whether a Q2 case is from HCSDB or HEDIS;
PROC SORT DATA=IN.postwt(KEEP=FNSTATUS MPRID BWT &DOMAIN1. &DOMAIN2. &domain3.
stratum INHCSDB INHEDIS) OUT=postwt;
    BY stratum MPRID ;
RUN;

*****
* Append SUBSET index (I) to each observation
*****;
DATA SUBSETS;
    SET postwt;
    BY stratum MPRID;

    IF _N_ = 1 OR MOD(_N_-1,&reps.) = 0 THEN SUBSET = 1;
    ELSE SUBSET + 1;

    RETAIN SUBSET;
    BBWT = BWT * (&reps. / (&reps. - 1));
RUN;

*****
*****
* Generate JackKnife/replicated weights adjwt01-adjwt60
*****
*****;
%DO I = 1 %TO &reps.;

DATA SUBSET;
    SET SUBSETS;
    IF &I. = SUBSET THEN DELETE; *Remove the current subset;
RUN;

*****
* Calculate adjustment factor A1 for each cell
*****;

proc sort data=subset;
by &domain1.;
run;

*****
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****;
DATA CELLSA1 (KEEP=SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 &domain1. )
    MPRIDSA1 (KEEP=MPRID FNSTATUS BBWT &DOMAIN1. &DOMAIN2. &domain3. )
    ;

```

```

SET subset;
BY &DOMAIN1.;

if FNSTATUS in (11, 12, 20, 31, 41, 42) THEN DO;

  IF FIRST.&DOMAIN1. THEN DO;
    CELLCNT = 0;
    cntg1 = 0;
    cntg2 = 0;
    cntg3 = 0;
    SUMBBWT = 0.0;
    SUMG1 = 0.0;
    SUMG2 = 0.0;
    SUMG3 = 0.0;
    A1 = 0.0;
  END;
  CELLCNT + 1;

  *****
  * Accumulate total weight sum
  *****;

  SUMBBWT + BBWT;

  *****
  * Accumulate group 1 weight sum
  *****;

  IF FNSTATUS IN (11,12) THEN
    do;
      SUMG1 + BBWT;
      cntg1 + 1;
    end;

  *****
  * Accumulate group 2 weight sum
  *****;

  ELSE IF FNSTATUS in (20,31) THEN
    do;
      SUMG2 + BBWT;
      cntg2 + 1;
    end;

  *****
  * Accumulate group 3 weight sum
  *****;

  ELSE IF FNSTATUS in (41,42) THEN
    do;
      SUMG3 + BBWT;
      cntg3 + 1;
    end;

  RETAIN SUMBBWT SUMG1-SUMG3 A1 CELLCNT cntg1-cntg3 MPRID;

  IF LAST.&DOMAIN1. THEN DO;
    A1 = (SUMG1 + SUMG2 + SUMG3)/(SUMG1 + SUMG2);
  END;

```

```

        OUTPUT CELLSA1;
    END;
END;

    OUTPUT MPRIDSAL;
RUN;

proc sort data=mpridsal;
by &domain1.;
run;

proc sort data=cellsal;
by &domain1.;
run;

data adj_one;
merge mpridsal cellsal;
by &domain1.;
if fnstatus in (11,12,20,31) then adj1 = a1;
    else if fnstatus = 32 then adj1=1;
    else adj1 = 0;
adj_wt1 = adj1 * bbwt;
run;

*****
* Calculate adjustment factor A2 for each cell.
* This is the Nonresponse adjustment and creates the final weight (adjwt).
*****;

proc sort data=adj_one;
by &domain2.;
run;

DATA CELLSA2 (KEEP= &domain2. NUMER DENOM numercnt denomcnt A2);
    set adj_one;
    BY &domain2.;

IF FNSTATUS in (11, 12, 20) THEN DO;

    IF FIRST.&domain2. THEN DO;
        A2 = 0.0;
        NUMER = 0.0;
        DENOM = 0.0;
        numercnt = 0;
        denomcnt = 0;
    END;

    RETAIN NUMER DENOM A2 numercnt denomcnt;

    IF FNSTATUS IN (11,12,20) THEN
        do;
            NUMER + adj_wt1;
            numercnt + 1;
        end;

    IF FNSTATUS = 11 THEN
        do;

```

```

        DENOM + adj_wt1;
        denomcnt + 1;
    end;

    IF LAST.&domain2. THEN DO;
        A2 = NUMER/DENOM;
        OUTPUT CELLSA2;
    END;
END;

RUN;

proc sort data=adj_one;
by &domain2.;
run;

proc sort data=cellsa2;
by &domain2.;
run;

data adj_two;
merge adj_one cellsa2;
by &domain2.;
if fnstatus = 11 then adj2 = a2;
    else if fnstatus in (31, 32) then adj2 = 1;
    else adj2 = 0;
adj_wt2 = adj2 * adj_wt1;
KEEP MPRID FNSTATUS adj_wt2 bbwt &DOMAIN1. &DOMAIN2. &domain3.;
run;

*****
* Calculate poststratification adjustment factor ps for each cell.
*****;
proc freq data=adj_two NOPRINT;
tables &domain3./missing list out=weighted(drop=percent rename=(count=wtcnt));
weight adj_wt2;
run;

data ps;
merge framecnt(in=A) weighted(in=B);
by &domain3.;
ps = popcnt/wtcnt;
if A and B;
run;

proc sort data=adj_two;
by &domain3.;
run;

data subset&i.;
merge adj_two ps;
by &domain3.;
jkweight = ps * adj_wt2;
subset = &i.;
KEEP MPRID subset jkweight;
run;

proc sort data=subset&i.;

```

```

by mprid;
run;

*****
*****
* End of JackKnife/replicated weights WRWT01-WRWT60 assignments
*****
*****;
%END;

*****
* Combine all of the JackKnife weight subsets by MPRID
*****;
DATA ALLSETS;
  SET SUBSET1  SUBSET2  SUBSET3  SUBSET4  SUBSET5
      SUBSET6  SUBSET7  SUBSET8  SUBSET9  SUBSET10
      SUBSET11 SUBSET12 SUBSET13 SUBSET14 SUBSET15
      SUBSET16 SUBSET17 SUBSET18 SUBSET19 SUBSET20
      SUBSET21 SUBSET22 SUBSET23 SUBSET24 SUBSET25
      SUBSET26 SUBSET27 SUBSET28 SUBSET29 SUBSET30
      SUBSET31 SUBSET32 SUBSET33 SUBSET34 SUBSET35
      SUBSET36 SUBSET37 SUBSET38 SUBSET39 SUBSET40
      SUBSET41 SUBSET42 SUBSET43 SUBSET44 SUBSET45
      SUBSET46 SUBSET47 SUBSET48 SUBSET49 SUBSET50
      SUBSET51 SUBSET52 SUBSET53 SUBSET54 SUBSET55
      SUBSET56 SUBSET57 SUBSET58 SUBSET59 SUBSET60
  ;
  BY MPRID;
  ARRAY JKWT(&reps.) wrwt1-wrwt&reps.; RETAIN wrwt1-wrwt&reps.;
  IF FIRST.MPRID THEN DO;
  DO I = 1 TO &reps.; DROP I;
    JKWT(I) = . ;
  END;
END;
JKWT(SUBSET) = JKWEIGHT;
IF LAST.MPRID THEN OUTPUT;
KEEP MPRID SUBSET wrwt1-wrwt&reps.;
RUN;

*****
* Sort the original data, get the final weight (WRWT), append the
* JackKnife/Replicated weights (WRWT1-WRWT60), and label variables.
*****;
PROC SORT DATA=IN.postwt OUT=postwt;
BY MPRID;
RUN;

proc sort data=allsets;
by mprid;
run;

options compress=yes;

DATA OUT.repwt ;
MERGE postwt ALLSETS;
BY MPRID;

```

LABEL

MPRID = 'MPR ID Number '
WRWT1 = 'Replicated/JackKnife Weight 1 '
WRWT2 = 'Replicated/JackKnife Weight 2 '
WRWT3 = 'Replicated/JackKnife Weight 3 '
WRWT4 = 'Replicated/JackKnife Weight 4 '
WRWT5 = 'Replicated/JackKnife Weight 5 '
WRWT6 = 'Replicated/JackKnife Weight 6 '
WRWT7 = 'Replicated/JackKnife Weight 7 '
WRWT8 = 'Replicated/JackKnife Weight 8 '
WRWT9 = 'Replicated/JackKnife Weight 9 '
WRWT10 = 'Replicated/JackKnife Weight 10 '
WRWT11 = 'Replicated/JackKnife Weight 11 '
WRWT12 = 'Replicated/JackKnife Weight 12 '
WRWT13 = 'Replicated/JackKnife Weight 13 '
WRWT14 = 'Replicated/JackKnife Weight 14 '
WRWT15 = 'Replicated/JackKnife Weight 15 '
WRWT16 = 'Replicated/JackKnife Weight 16 '
WRWT17 = 'Replicated/JackKnife Weight 17 '
WRWT18 = 'Replicated/JackKnife Weight 18 '
WRWT19 = 'Replicated/JackKnife Weight 19 '
WRWT20 = 'Replicated/JackKnife Weight 20 '
WRWT21 = 'Replicated/JackKnife Weight 21 '
WRWT22 = 'Replicated/JackKnife Weight 22 '
WRWT23 = 'Replicated/JackKnife Weight 23 '
WRWT24 = 'Replicated/JackKnife Weight 24 '
WRWT25 = 'Replicated/JackKnife Weight 25 '
WRWT26 = 'Replicated/JackKnife Weight 26 '
WRWT27 = 'Replicated/JackKnife Weight 27 '
WRWT28 = 'Replicated/JackKnife Weight 28 '
WRWT29 = 'Replicated/JackKnife Weight 29 '
WRWT30 = 'Replicated/JackKnife Weight 30 '
WRWT31 = 'Replicated/JackKnife Weight 31 '
WRWT32 = 'Replicated/JackKnife Weight 32 '
WRWT33 = 'Replicated/JackKnife Weight 33 '
WRWT34 = 'Replicated/JackKnife Weight 34 '
WRWT35 = 'Replicated/JackKnife Weight 35 '
WRWT36 = 'Replicated/JackKnife Weight 36 '
WRWT37 = 'Replicated/JackKnife Weight 37 '
WRWT38 = 'Replicated/JackKnife Weight 38 '
WRWT39 = 'Replicated/JackKnife Weight 39 '
WRWT40 = 'Replicated/JackKnife Weight 40 '
WRWT41 = 'Replicated/JackKnife Weight 41 '
WRWT42 = 'Replicated/JackKnife Weight 42 '
WRWT43 = 'Replicated/JackKnife Weight 43 '
WRWT44 = 'Replicated/JackKnife Weight 44 '
WRWT45 = 'Replicated/JackKnife Weight 45 '
WRWT46 = 'Replicated/JackKnife Weight 46 '
WRWT47 = 'Replicated/JackKnife Weight 47 '
WRWT48 = 'Replicated/JackKnife Weight 48 '
WRWT49 = 'Replicated/JackKnife Weight 49 '
WRWT50 = 'Replicated/JackKnife Weight 50 '
WRWT51 = 'Replicated/JackKnife Weight 51 '
WRWT52 = 'Replicated/JackKnife Weight 52 '
WRWT53 = 'Replicated/JackKnife Weight 53 '
WRWT54 = 'Replicated/JackKnife Weight 54 '
WRWT55 = 'Replicated/JackKnife Weight 55 '
WRWT56 = 'Replicated/JackKnife Weight 56 '

```

WRWT57 = 'Replicated/JackKnife Weight 57'
WRWT58 = 'Replicated/JackKnife Weight 58'
WRWT59 = 'Replicated/JackKnife Weight 59'
WRWT60 = 'Replicated/JackKnife Weight 60'
;
RUN;

*****
Check the structure of the data set OUT.repwt;
*****;

proc sort data=OUT.repwt out=sorted;
by stratum mprid;
run;

Title4 "Proc Print of Data=Repwt (obs=500)";
proc print data=sorted (obs=500);
var stratum mprid SUBSET fnstatus postwt wrwt1-wrwt5;
run;

PROC MEANS DATA=OUT.repwt n sum;
VAR postwt WRWT1-WRWT&reps.;
RUN;

PROC SORT DATA=OUT.repwt out=repwt;
BY MPRID;
RUN;

DATA OUT.repwt;
SET repwt;
BY MPRID;

ARRAY WGTS(&reps.) WRWT1-WRWT&reps.;
DO I = 1 TO &reps.; DROP I;
IF WGTS(I) EQ . THEN WGTS(I) = 0;
END;

KEEP MPRID BWT postwt WRWT1-WRWT&reps. fnstatus &domain1. &domain2. &domain3.
com_geo;
RUN;

title4 "Check the replicate weights -- for all cases";
PROC MEANS DATA=OUT.repwt n sum;
VAR postwt wrwt1-wrwt&reps.;
output out=sums sum(postwt wrwt1-wrwt&reps.) = postwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var postwt wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var coll;
run;

title4 "Check the replicate weights -- for the final completes";
PROC MEANS DATA=OUT.repwt n sum;
where fnstatus=11;

```

```

VAR postwt wrwt1-wrwt&reps.;
output out=sums sum(postwt wrwt1-wrwt&reps.) = postwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var postwt wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var coll;
run;

**added for Amang q4 2002;
data repwt2;
  set OUT.repwt;
  where fnstatus = 11;
  array subset2(60) wrwt1-wrwt60;
  do m=1 to 60;
    if subset2(m)=0 then
      subset=m;
  end;
run;

proc sort data = repwt2;
by subset;
run;

proc means data = repwt2 noprint;
by subset;
var postwt wrwt1-wrwt60;
output out = amang sum= / autoname;
run;

***added by Haixia on 05/11/2005 for q1, 2005 weighting.
rename wrwt1_sum, ..., wrwt60_sum as sum_wrwt1, ..., sum_wrwt60
so the numbered range list sum_wrwt1 - sum_wrwt60 can be used in the proc print
below;

data amang;
set amang;
rename postwt_sum = sum_postwt;
%do i =1 %to 60;
rename wrwt&i._sum = sum_wrwt&i.;
%end;
run;

proc print data = amang;
sum _freq_ sum_postwt sum_wrwt1 - sum_wrwt60;
run;

*****
* CREATE FINAL REPWT DATASET FOR KEITH -- Rename the variables
*****;
data OUT.repwt; (drop = postwt com_geo);
set in.repwt;
FWRWT = postwt;
%do i =1 %to 60;

```



```

rename wrwt&i.= FWRWT&i.;
%end;
label &domain1. = 'Weighting cell in the unknown eligibility adjustment';
label &domain2. = 'Weighting cell in the nonresponse adjustment';
label &domain3. = "ps cell for new wts - for all 4 quarters";
label fwrwt = "Final NEW Weight";
run;

data OUT.repwtp;
set OUT.repwtp;
* Label wts;
  %DO I = 1 %TO 60;
    LABEL    FWRWT&I. = "Replicated/JackKnife NEW Weight &I.";
  %END;
run;

*merge back on the indicator variables for HEDIS and HCSDB;
PROC SORT DATA=IN.postwt(KEEP= MPRID INHCSDB INHEDIS FNSTATUS_0) OUT=indicators;
  BY MPRID ;
RUN;

proc sort data=out.repwtp out=repwtp;
  by mprid;
run;

data out.repwtp;
  merge repwtp indicators;
  by mprid;
run;

PROC CONTENTS DATA=OUT.repwtp;
run;

%MEND process;

%PROCESS(pcell_a1, pcell_a2, postcell, 60);

proc printto;
run;

```

H.19 - HCSDB_HEDIS\Programs\Weighting\combine_HEDIS_Q2\CREPWT_Q1_Q2_HEDIS_Q3.sas - Calculate combined replicate weights - Annual

```

*****
* PROGRAM: CREPWT.SAS
* TASK: DOD QUARTERLY HEALTH CARE SURVEY (40309.31H)
* PURPOSE: CALCULATE COMBINED ANNUAL REPLICATE WEIGHTS FOR DOD SURVEY
* - New Weights REQUESTED BY DON JANG.
* CREATED: 12/19/2001 by Esther M Friedman
* UPDATED: 02/09/2006 by Haixia Xu for 2005 annual weighting - new weights
* 07/19/2013 by Sabrina R. for 2016 annual weighting - new weights

* INPUTS: framea.sas7bdat - Quarterly frame files
* REPWTP.sas7bdat - Quarterly new weights
*
* OUTPUTS: crepwt.sd2 - Combined annual replicates for new weights
*
* NOTES: Starting from FY 2013, Q3t and Q4 were not used in calculating of
* Annual Weights. Data for these two quarters were not collected for
* budget cuts.
*
* Updating Annual Weight Program for SAS GRID (FY2017)
*****;
options formdlm='=' pageno=1 /*symbolgen mprint*/ validvarname=UPCASE nocenter
ls=150 ps=60
formchar="|----||---+|-\<>*" ;

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
%scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
/*Grid is case sensitive*/
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto
log="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_Q2
/CREPWT_Q1_Q2_HEDIS_Q3.log" new;
ods listing;
proc printto
print="/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Programs/Weighting/combine_HEDIS_
Q2/CREPWT_Q1_Q2_HEDIS_Q3.lst" new;

%let year=2017;

/*repwtp.sas7bdat*/

LIBNAME IN1 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY&year.t/Data/AFinal"
access=readonly;
*change this path for 2017 to the combined HEDIS and Q2 path;
LIBNAME IN2
"/sasdata/Projects/40309_HCS/DATA/HCSDB_HEDIS/Data/AFinal/combine_HEDIS_Q2"
access=readonly;
LIBNAME IN3 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Data/AFinal"
access=readonly;

/*framea.sas7bdat*/
LIBNAME INF1 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY&year./Data/AFinal"
access=readonly;

```

```

LIBNAME INF2 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY&year./Data/AFinal"
access=readonly;
LIBNAME INF3 "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Data/AFinal"
access=readonly;

/* crepwt.sas7bdat */
LIBNAME OUT "/sasdata/Projects/40309_HCS/DATA/HCSDB/&year./Data";

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q3FY&year./Programs/Weighting/NewWeights/desi
gn_effects_unequal_weights.sas";

OPTIONS PS=79 LS=132 COMPRESS=no errors=0 NOCENTER mlogic mprint symbolgen;

title1 "Program:CREPWT.SAS (YEAR=&year. , TaskNo: 40309.31H)";
title2 "PURPOSE: CREATES ANNUAL COMBINED WEIGHT AND COMBINED REPLICATED WEIGHT - New
weights";

*****
* MERGE THE NEW (with trickles) QUARTERLY WEIGHT FILES
*****;
%macro doqrt(qrt=);
data repwtq&qrt.;
set in&qrt..repwtp(keep=mprid fnstatus postcell bwt fwrwt fwrwt1-fwrwt60);
quarter=&qrt.;
label quarter = 'Dod quarter indicator';
format _all_;
run;

proc sort data=repwtq&qrt.;
by mprid;
run;

%mend doqrt;

%doqrt(qrt=1);
*annual 2017: separate for Q2 because data set is named differently;
%doqrt(qrt=2);
%doqrt(qrt=3);

data repwtq2;
set in2.repwtp(keep=mprid fnstatus postcell bwt fwrwt fwrwt1-fwrwt60 fnstatus_o
inhedis inhcsdb);
quarter=2;
label quarter = 'Dod quarter indicator';
format _all_;
run;

proc sort data=repwtq2;
by mprid;
run;

proc contents data=repwtq2; run;

*merge the new quarterly files;
data repwt;

```

```

*annual: change order to avoid log warning about variable length;
set repwtq2 repwtq1 repwtq3;
by mprid;

*annual: assign the INHCSDB and INHEDIS flags for Q1 and Q3;
if quarter in (1,3) then do;
    INHEDIS=0;
    INHCSDB=1;
    fnstatus_o=fnstatus;
end;

run;

title3 "check assignment of INHEDIS, INHCSDB, fnstatus_o for Q1 and Q3";
proc freq data=repwt;
    table quarter*INHEDIS*INHCSDB quarter*fnstatus_o*fnstatus/list missing;
run;

*****
* CREATE THE ANNUAL WEIGHTS
*****;
* Use Equal Weighting Method: Divide each quarterly weight by 3;
data repwt;
    set repwt;
    cfwt=fwrwt/3;
    label cfwt= 'combined annual NEW wt';
run;

*****
* CHECK NEW ANNUAL WEIGHTS
*****;
title3 "Combined replicate file";
proc freq data=repwt;
    tables quarter fnstatus fnstatus*quarter/list missing;
run;

title3 "Weighted using fwrwt - quarterly new wt";
proc freq data=repwt;
    tables quarter fnstatus fnstatus*quarter/list missing;
    weight fwrwt;
run;

title3 "Weighted using cfwt - combined annual new wt";
proc freq data=repwt;
    tables quarter fnstatus fnstatus*quarter/list missing;
    weight cfwt;
run;

title3 'Checks for cfwt and fwrwt for fnstatus=11';
Proc print data=repwt (obs=200) noobs;
var quarter cfwt fwrwt;
where fnstatus=11;
run;

title3 'Checks for fwrwt by quarter for fnstatus=11';
proc sort data=repwt;
by quarter;
run;

```

```

proc means data=repwt n sum mean min max Q1 median Q3;
var fwrwt;
by quarter;
where fnstatus=11;
run;

title3 'Checks for cfwt for fnstatus=11';
proc univariate data=repwt;
var cfwt;
where fnstatus=11;
run;

options compress=yes;

*****
* CREATE THE REPLICATE WEIGHTS
*****;
data crepwt_newwt ( drop = rep );
set repwt;
array repwt[60] fwrwt1 - fwrwt60;
array annual_repwt[180] cfwt1 - cfwt180;
do rep = 1 to 180;
if 1 <= rep <= 60 then
do;
if quarter in ( 2, 3 ) then
annual_repwt[rep] = fwrwt;
else
annual_repwt[rep] = repwt[rep];
end;
else if 61 <= rep <= 120 then
do;
if quarter in ( 1, 3 ) then
annual_repwt[rep] = fwrwt;
else
annual_repwt[rep] = repwt[rep - 60];
end;
else if 121 <= rep <= 180 then
do;
if quarter in ( 1, 2 ) then
annual_repwt[rep] = fwrwt;
else
annual_repwt[rep] = repwt[rep - 120];
end;
annual_repwt[rep] = annual_repwt[rep]/3;
end;*replicate loop;
run;

* Check the new cfwts;
title3 'Checks for the sum of the new cfwts';
PROC MEANS DATA=crepwt_newwt n sum;
VAR cfwt cfwt1-cfwt180;
output out=sums sum(cfwt cfwt1-cfwt180) = cfwt cfwt1-cfwt180;
RUN;

proc transpose data=sums out=t_sums;
VAR cfwt cfwt1-cfwt180;

```

```

run;

proc univariate data=t_sums normal ;
var coll;
run;

*****;
* Output the combined annual replicate weights - Old and New weights
*****;
* Label wts;
%MACRO LABWT;
  %DO J = 1 %TO 180;
    LABEL CFWT&J. = "Combined Replicated NEW Weight &J.";
  %END;
%MEND LABWT;

data out.crepwt;
set crepwt_newwt;
if _N_=1 then do;
  label CFWT = "Combined annual NEW Weight"
%LABWT;
end;
run;

title3 'Contents of crepwt.sd2';
proc contents data=out.crepwt ;
run;

*****
*** Calculate the Design Effects
*** As per Nancy and Sonya's requests, check the deff for the annual wts to see
*** how the quarterly weight affects the annual estimates.
*****;

%macro mergefiles(qrt=);

data frame&qrt.;
set inf&qrt..framea(keep=mprid enbgsmpl tnexreg d_health com_geo servaff);

***facility TNEX region***;
length TNEX_grp $1;
if d_health in ('00', '13', '14', '15') then TNEX_grp='O';
else if d_health in ('17', '01', '05') then TNEX_grp='N';
else if d_health in ('18', '04') then TNEX_grp='S';
else if d_health in ('19', '08', '11') then TNEX_grp='W';
*Correct the TNEX regions for com_geo 0047, 9001, 9002, 9003, 9004:
All the cases in the same com_geo should be in the same TNEX region, which is the
region of the com_geo;
if COM_GEO = '0047' then TNEX_grp='S';
else if COM_GEO = '9001' then TNEX_grp='N';
else if COM_GEO = '9002' then TNEX_grp='S';
else if COM_GEO = '9003' then TNEX_grp='W';
else if COM_GEO = '9004' then TNEX_grp='O';

if tnex_grp in ('N', 'S', 'W') then conus=1;
else if tnex_grp = 'O' then conus=0;

```

```

run;

title3 "Check the construction TNEX_grp, conus for quarter &qrt.";
proc freq data=frame&qrt.;
tables TNEX_grp*d_health conus*tnex_grp/missing list;
run;

proc sort data=in&qrt..repwtp(keep=mprid) out=repwt; by mprid; run;
proc sort data=frame&qrt.; by mprid; run;

data merged&qrt.;
merge repwt(in=A) frame&qrt.(in=B);
by mprid;
if a and b;
run;

%mend mergefiles;

%mergefiles(qrt=1);
%mergefiles(qrt=2);
%mergefiles(qrt=3);

data merged123;
set merged1 merged2 merged3;
by mprid;
run;

proc sort data=out.crepwt(keep=mprid fnstatus bwt fwrwt cfwt) out=crepwt;
by mprid;
run;

data merged;
merge crepwt(in=A) merged123(in=B);
by mprid;
if a and b;
run;

**create dataset of completes only;
data postwt_fnl;
set merged;
where fnstatus=11;
run;

%design_effects_unequal_weights ( postwt_fnl, enbgsmpl, cfwt, deff_overall, deff_enb
);
%design_effects_unequal_weights ( postwt_fnl, tnexreg, cfwt, deff_overall,
deff_tnexreg );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp, cfwt, deff_overall,
deff_tnexgrp );
%design_effects_unequal_weights ( postwt_fnl, conus, cfwt, deff_overall,
deff_conus );
%design_effects_unequal_weights ( postwt_fnl, servaff, cfwt, deff_overall,
deff_servaff );
%design_effects_unequal_weights ( postwt_fnl, TNEX_grp servaff, cfwt, deff_overall,
deff_TNEXservaff );

*** For Overall ***;
title3 'Design Effects Overall';

```

```

proc print data = deff_overall;
run;

*** For ENBGSMPL Groups ***;
title3 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
sum _freq_;
run;

*** For Beneficiary TNEX Region ***;
title3 'Design Effects for TNEXREG';
proc print data= deff_tnexreg;
sum _freq_;
run;

*** For Facility TNEX region ***;
title3 "Design Effects for Facility's TNEX region";
proc print data= deff_tnexgrp;
sum _freq_;
run;

*** For conus region ***;
title3 "Design Effects for conus";
proc print data= deff_conus;
sum _freq_;
run;

*** For Service Affiliation for the facility ***;
title3 "Design Effects for Facility's Service Affiliation";
proc print data= deff_servaff;
sum _freq_;
run;

*** For TNEX_grp*Servaff ***;
title3 "Design Effects for TNEX_grp by Servaff";
proc print data= deff_TNEXservaff;
sum _freq_;
run;

proc printto;
run;

***** The End *****;

```


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APPENDIX I

**SAS CODE FOR 2017 TRICARE CONSUMER WATCH – QUARTERS I-III AND COMBINED
ANNUAL**

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I.1.A - ConsumerWatch\CONSUMERWATCH-C.SAS - Run annual MTF TRICARE Consumer Watch reports.

```

*****
* PROJECT: 8860-420
* PROGRAM: CONSUMERWATCH-C.SAS
* PURPOSE: Run Catchment Consumer Watch
* AUTHOR : NATALIE JUSTH
* DATE   : 2/12/02
* UPDATED: 2/5/03
* UPDATED: 11/17/03
* UPDATED: 03/17/05 BY LUCY LU.
* UPDATED: 01/02/06 BY LUCY LU.
* UPDATED: 11/22/06 BY LUCY LU.
* UPDATED: 11/16/07 BY LUCY LU.
* MODIFIED: 11/23/2010 BY LUCY LU. WITH IMPROVED PROGRAMMING, WE
*          COMBINED ALL REGIONAL PROGRAMS INTO A SINGLE RUN.
*****;
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMterr SPOOL;

/*****/
/* TIME PERIOD MACROS */
/*****/
%LET YEAR   = 2017;
%LET YEARP1 = 2016;
%LET YEARP2 = 2015;
%LET PATH = N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT    '..\loadweb';

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/

DATA TREND_A;
  SET INT.TREND_A(RENAME=(REGCAT=XREGCAT));

REGCAT=COMPRESS(XREGCAT, "'");
DROP XREGCAT;

RUN;

%INCLUDE "CONSUMERWATCH-CMACRO.INC";

/**** MACRO TO RUN CATCHMENT LEVEL REPORTS BY REGION ****/

%MACRO RUNBYREG (REG=, /*Region as it appears in TREND_A */
                FOLDER= /*Regional folder name */
                );

  PROC FREQ DATA=TREND_A;
    TABLES REGION*REGCAT / LIST MISSING OUT=TEMP;
    WHERE (REGION=&REG AND REGCAT NE &REG) OR REGION='USA MHS';
  RUN;

```

```

DATA TEMP;
  SET TEMP;

  /* DO NOT PRODUCE CONSUMER WATCH REPORTS FOR OUT OF CATCHMENT AREAS */

  IF SUBSTR(REGCAT,1,16)="Out of Catchment" THEN DELETE;

RUN;

DATA _NULL_;
  SET TEMP END=FINISHED;

  LENGTH CMPRS $39;
  LENGTH NUM $4;

  CMPRS=COMPRESS(REGCAT);
  NUM=COMPRESS(PUT(_N_,4.));

  CALL SYMPUT("REGCAT" || NUM,REGCAT);
  CALL SYMPUT("CMPRS" || NUM,CMPRS);

  IF FINISHED THEN DO;
    CALL SYMPUT("N",_N_);
  END;
RUN;

%MACRO PROCESS;
  %DO I=1 %TO &N;
    %RUNCW(AREA=&&REGCAT&I,NAME=&&CMPRS&I,FOLDER=&FOLDER);
  %END;
%MEND PROCESS;

%PROCESS;

%MEND RUNBYREG;

/*
%RUNBYREG(REG="USA MHS",FOLDER=USAMHS);

%RUNBYREG(REG="North Air Force",FOLDER=North);
%RUNBYREG(REG="North Army",FOLDER=North);
%RUNBYREG(REG="North Navy",FOLDER=North);
%RUNBYREG(REG="North Other",FOLDER=North);
%RUNBYREG(REG="North Joint Service",FOLDER=North);

%RUNBYREG(REG="South Air Force",FOLDER=South);
%RUNBYREG(REG="South Army",FOLDER=South);
%RUNBYREG(REG="South Navy",FOLDER=South);
%RUNBYREG(REG="South Other",FOLDER=South);
*/
%RUNBYREG(REG="West Air Force",FOLDER=West);
%RUNBYREG(REG="West Army",FOLDER=West);
%RUNBYREG(REG="West Navy",FOLDER=West);

```

```
%RUNBYREG(REG="West Other",FOLDER=West);  
/*  
%RUNBYREG(REG="Overseas Pacific",FOLDER=Overseas);  
%RUNBYREG(REG="Overseas Europe",FOLDER=Overseas);  
%RUNBYREG(REG="Overseas Latin America",FOLDER=Overseas);  
*/
```

I.1.B - ConsumerWatch\CONSUMERWATCH-CMACRO.INC - Produce numbers for annual Consumer Watch reports.

```

*****
* PROJECT: 8860-420
* PROGRAM: CONSUMERWATCH-Cmacro.INC
* PURPOSE: To pull from Beneficiary Reports the numbers that go into the data
*          sheet in Excel to produce graphs
*          Catchment level only
* AUTHOR  : NATALIE JUSTH
* DATE    : 2/12/02
* UPDATED: 2/5/03
* UPDATED: 11/17/03
* UPDATED 03/15/2005 LUCY LU
*          --REMOVE LIBNAME FORM THE PROGRAM
*          --SUBSTITUTE ACTUAL YEAR VALUES BY MACRO YEAR VARIABLES
*          --ADD SMOKING CESSATION RATE ON PREVENTIVE CARE TABLE
* UPDATED: 01/31/2006 LUCY LU FOR 2005 ANNUAL CATCHMENT
*          --CHANGE 'CHOLESTEROL TESTING' TO 'PERCENT OF NORMAL WEIGHT'
* UPDATED: 04/07/2006 LUCY LU: ADD THE CODE TO COMPARE THE ANNUAL COMSUMER WATCH
*          WITH REPORT CARDS IN SCORESAND SIGNIFICANCE.
* MODIFIED 11/24/09 BY LUCY LU
*          1.START THIS YEAR, THE DATA DOES NOT INCLUDE THE VALUE OF
*            'Courteous and Helpful Office Staff'. THE PROGRAM WILL DELETE
*            RELATED CODE.
*          2.CHANGE IN CLCULATION OF VARIABLE SCORE
* MODIFIED 7/23/2010 BY LUCY LU
*          1. ADD MACRO TO MINIMIZE EXCEL WAITING, REDUCE PROGRAM
*            RUNNING TIME
*          2. ELIMINATE UNNECESSARY MACRO VARIABLE &VAL
* MODIFIED 7/2/2014 BY LUCY LU / KATHY BENCIO
*          MODIFIED CODE FOR 508 COMPLIANCE
*          1. CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4
*          2  CREATE NEW VAR WITH ASTERISK FOR PREVENTIVE CARE TABLE
*          3. RECODED ALL MISSING DATA TO DASH '-'
*
* INPUT   : ..\..\..\&YEAR.\PROGRAMS\LOADWEB\TREND_A.SAS7BDAT
* OUTPUT  : INTO EXCEL SPREADSHEET
*****;

OPTIONS NOXWAIT NOFMterr /*MPRINT*/;

TITLE "Consumer Watch &YEAR. - Catchment";

%MACRO RUNCW (AREA=, /*AREA=Catchment area
*/
              NAME=, /*NAME=Name of Excel file being created for catchment area
*/
              FOLDER= /*FOLDER=Regional folder
*/
              );

/* Change parameter for each catchment area */

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;

```



```

LENGTH FID RC START STOP TIME 8;
FID = FOPEN('CMDS' , 'S');
IF (FID LE 0) THEN DO;
  RC = SYSTEM('START EXCEL');
  START = DATETIME();
  STOP = START + 10;
  DO WHILE (FID LE 0);
    FID = FOPEN('CMDS' , 'S');
    TIME = DATETIME();
    IF (TIME GE STOP) THEN FID = 1;
  END;
END;
RC = FCLOSE(FID);
RUN;

```

*LLU 7/21/2010--DETECTING AVAILABILITY OF EXCEL, MINIMIZE WAITING TIME;

```
%MACRO SETUP;
```

```
%GLOBAL OPENXLS SAVEXLS;
```

```
DATA _NULL_;
```

```

  SINGLE=" ";
  DOUBLE=" ";

```

```
LENGTH OPENXLS SAVEXLS $160;
```

```
OPENXLS=SINGLE || "[OPEN(" || DOUBLE || "&PATH.\templateAnnual.XLSB" || DOUBLE || ")]" || SINGLE;
```

```
SAVEXLS=SINGLE || "[SAVE.AS(" || DOUBLE || "&PATH.\&FOLDER.\&NAME..XLSB" || DOUBLE || ")]" || SINGLE;
```

```

  CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
  CALL SYMPUT ("SAVEXLS",TRIM(SAVEXLS));

```

```
RUN;
```

```
%MEND SETUP;
```

```
%SETUP;
```

```
DATA _NULL_;
```

```

  FILE CMDS;
  PUT &OPENXLS;
  X=SLEEP(2);
  PUT '[ERROR(FALSE)]';
  PUT &SAVEXLS;
  PUT '[app.minimize()]';

```

```
RUN;
```

```

*****
* FIGURE 1: Health Care Rating
*****;
TITLE2 'Figure 1: Health Care Rating';

```

```

PROC FREQ DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT in ("%AREA","Benchmark")
    AND BENEFIT = 'Health Care'
    AND TIMEPD IN ("%YEARP2.", "%YEARP1.", "%YEAR.");
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/NOPRINT OUT=FIG1_SC(DROP=COUNT
PERCENT);
RUN;
PROC FREQ DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND BENEFIT = 'Health Care'
    AND TIMEPD = "%YEAR.";
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/NOPRINT OUT=FIG1_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG1_SC FIG1_A(KEEP=SCORE TIMEPD);
  SET FIG1_SC;
  IF REGCAT='Benchmark' THEN OUTPUT FIG1_A;
  ELSE OUTPUT FIG1_SC;
RUN;
PROC SORT DATA=FIG1_SC;
  BY TIMEPD;
RUN;
PROC SORT DATA=FIG1_A;
  BY TIMEPD;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG1;
  SET FIG1_SC;

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

/*
DATA FIG1_SC(DROP=ASCORE);
  MERGE FIG1_SC
    FIG1_A(RENAME=(SCORE=ASCORE));
  BY TIMEPD;
  SCORE=SCORE-ASCORE;
RUN;
*/
DATA FIG1;
  SET FIG1_BE FIG1_SC;
  RETAIN BSCORE;
  IF REGCAT = 'Benchmark' THEN DO;
    ROW = 1;
    BSCORE=SCORE;
  END;
  ELSE IF TIMEPD = "%YEARP2." THEN DO;
    ROW = 2;
    * SCORE=BSCORE+SCORE;
  END;
  ELSE IF TIMEPD = "%YEARP1." THEN DO;
    ROW = 3;
    * SCORE=BSCORE+SCORE;
  END;
  ELSE IF TIMEPD = "%YEAR." THEN DO;
    ROW =4 ;

```

```

*   SCORE=BSCORE+SCORE;
END;

COL2 = SCORE;
COL3 = SIG;

*3/28/2014 CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4;
IF COL3 IN (1, -1) THEN NEWCOL2=CATS(" ",PUT(ROUND(SCORE,1),8.));
ELSE IF SCORE >0 THEN NEWCOL2=PUT(ROUND(SCORE,1),8.);
RUN;

PROC SORT;
  BY ROW;
RUN;
*TITLE2 'FIGURE 1';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME CMDS DDE "EXCEL|SYSTEM";

FILENAME TBL DDE "EXCEL|RATINGS!R18C2:R21C3";

DATA _NULL_;
  SET FIG1;
  FILE TBL NOTAB LRECL=200;
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 2: Health Plan Rating
*****;
TITLE2 'Figure 2: Health Plan Rating';
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT in ("%AREA","Benchmark")
    AND BENEFIT = 'Health Plan'
    AND TIMEPD IN ("%YEARP2.", "%YEARP1.", "%YEAR.");
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG2_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND BENEFIT = 'Health Plan'
    AND TIMEPD = "%YEAR.";
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG2_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG2_SC FIG2_A(KEEP=SCORE TIMEPD);
  SET FIG2_SC;
  IF REGCAT='Benchmark' THEN OUTPUT FIG2_A;
  ELSE OUTPUT FIG2_SC;
RUN;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG2;
  SET FIG2_SC;

```

```

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

PROC SORT DATA=FIG2_SC;
  BY TIMEPD;
RUN;
PROC SORT DATA=FIG2_A;
  BY TIMEPD;
RUN;
/*
DATA FIG2_SC(DROP=ASCORE);
  MERGE FIG2_SC
        FIG2_A(RENAME=(SCORE=ASCORE));
  BY TIMEPD;
  SCORE=SCORE-ASCORE;
RUN;
*/
DATA FIG2;
  SET FIG2_BE FIG2_SC;
  RETAIN BSCORE;
  IF REGCAT = 'Benchmark' THEN DO;
    ROW = 1;
    BSCORE=SCORE;
  END;
  ELSE IF TIMEPD = "&YEARP2." THEN DO;
    ROW = 2;
*    SCORE=BSCORE+SCORE;
  END;
  ELSE IF TIMEPD = "&YEARP1." THEN DO;
    ROW = 3;
*    SCORE=BSCORE+SCORE;
  END;
  ELSE IF TIMEPD = "&YEAR." THEN DO;
    ROW = 4;
*    SCORE=BSCORE+SCORE;
  END;

  COL2 = SCORE;
  COL3 = SIG;

  *3/28/2014 CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4;
  IF COL3 IN (1, -1) THEN NEWCOL2=CATS(" ",PUT(ROUND(SCORE,1),8.));
  ELSE IF SCORE >0 THEN NEWCOL2=PUT(ROUND(SCORE,1),8.);
RUN;

PROC SORT;
  BY ROW;
RUN;
*TITLE2 'FIGURE 2';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|RATINGS!R18C6:R21C7";

```

```

DATA _NULL_;
  SET FIG2;
  FILE TBL NOTAB LRECL=200;
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 3: Personal Doctor
*****;
TITLE2 'Figure 3: Personal Doctor Rating';
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT in ("&AREA","Benchmark")
    AND BENEFIT = 'Personal Doctor'
    AND TIMEPD IN ("&YEARP2.", "&YEARP1.", "&YEAR.");
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG3_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND BENEFIT = 'Personal Doctor'
    AND TIMEPD = "&YEAR.";
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG3_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG3_SC FIG3_A(KEEP=SCORE TIMEPD);
  SET FIG3_SC;
  IF REGCAT='Benchmark' THEN OUTPUT FIG3_A;
  ELSE OUTPUT FIG3_SC;
RUN;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG3;
  SET FIG3_SC;

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

PROC SORT DATA=FIG3_SC;
  BY TIMEPD;
RUN;
PROC SORT DATA=FIG3_A;
  BY TIMEPD;
RUN;
/*
DATA FIG3_SC(DROP=ASCORE);
  MERGE FIG3_SC
    FIG3_A(RENAME=(SCORE=ASCORE));
  BY TIMEPD;
  SCORE=SCORE-ASCORE;
RUN;
*/

DATA FIG3;
  SET FIG3_BE FIG3_SC;
  RETAIN BSCORE;
  IF REGCAT = 'Benchmark' THEN DO;

```

```

        ROW = 1;
        BSCORE=SCORE;
    END;
    ELSE IF TIMEPD = "&YEARP2." THEN DO;
        ROW = 2;
*       SCORE=BSCORE+SCORE;
    END;
    ELSE IF TIMEPD = "&YEARP1." THEN DO;
        ROW = 3;
*       SCORE=BSCORE+SCORE;
    END;
    ELSE IF TIMEPD = "&YEAR." THEN DO;
        ROW = 4;
*       SCORE=BSCORE+SCORE;
    END;

    COL2 = SCORE;
    COL3 = SIG;

    *3/28/2014 CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4;
    IF COL3 IN (1, -1) THEN NEWCOL2=CATS(" ",PUT(ROUND(SCORE,1),8.));
    ELSE IF SCORE >0 THEN NEWCOL2=PUT(ROUND(SCORE,1),8.);
RUN;

PROC SORT;
    BY ROW;
RUN;
*TITLE2 'FIGURE 3';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|RATINGS!R18C10:R21C11";

DATA _NULL_;
    SET FIG3;
    FILE TBL NOTAB LRECL=200;
    PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 4: Specialist Rating
*****;
TITLE2 'Figure 4: Specialist Rating';
PROC FREQ NOPRINT DATA=TREND_A;
    WHERE MAJGRP = 'Prime Enrollees'
        AND REGCAT in ("&AREA","Benchmark")
        AND BENEFIT = 'Specialty Care'
        AND TIMEPD IN ("&YEARP2.", "&YEARP1.", "&YEAR.");
    TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG4_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
    WHERE MAJGRP = 'Prime Enrollees'
        AND REGCAT = 'Benchmark'

```

```

        AND BENEFIT = 'Specialty Care'
        AND TIMEPD = "&YEAR.";
    TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG4_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG4_SC FIG4_A(KEEP=SCORE TIMEPD);
    SET FIG4_SC;
    IF REGCAT='Benchmark' THEN OUTPUT FIG4_A;
    ELSE OUTPUT FIG4_SC;
RUN;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG4;
    SET FIG4_SC;

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

PROC SORT DATA=FIG4_SC;
    BY TIMEPD;
RUN;
PROC SORT DATA=FIG4_A;
    BY TIMEPD;
RUN;
/*
DATA FIG4_SC(DROP=AScore);
    MERGE FIG4_SC
        FIG4_A(RENAME=(SCORE=AScore));
    BY TIMEPD;
    SCORE=SCORE-AScore;
RUN;
*/
DATA FIG4;
    SET FIG4_BE FIG4_SC;
    RETAIN BSCORE;
    IF REGCAT = 'Benchmark' THEN DO;
        ROW = 1;
        BSCORE=SCORE;
    END;
    ELSE IF TIMEPD = "&YEARP2." THEN DO;
        ROW = 2;
        *   SCORE=BSCORE+SCORE;
    END;
    ELSE IF TIMEPD = "&YEARP1." THEN DO;
        ROW = 3;
        *   SCORE=BSCORE+SCORE;
    END;
    ELSE IF TIMEPD = "&YEAR." THEN DO;
        ROW = 4;
        *   SCORE=BSCORE+SCORE;
    END;

    COL2 = SCORE;
    COL3 = SIG;

    *3/28/2014 CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4;
    IF COL3 IN (1, -1) THEN NEWCOL2=CATS(" ",PUT(ROUND(SCORE,1),8.));
    ELSE IF SCORE >0 THEN NEWCOL2=PUT(ROUND(SCORE,1),8.);
RUN;

```

```

PROC SORT;
  BY ROW;
RUN;
*TITLE2 'FIGURE 4';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|RATINGS!R18C14:R21C15";

DATA _NULL_;
  SET FIG4;
  FILE TBL NOTAB LRECL=200;
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 5: Access Composites
*****;
TITLE2 'Figure 5: Access Composites';
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT in ("%AREA","Benchmark")
    AND BENEFIT IN ('Getting Needed Care','Getting Care Quickly')
    AND BENTYPE='Composite' & TIMEPD IN ("%YEARP2.", "%YEARP1.", "%YEAR.");
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG5_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND BENEFIT IN ('Getting Needed Care','Getting Care Quickly')
    AND BENTYPE='Composite' & TIMEPD = "%YEAR.";
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG5_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG5_SC FIG5_A(KEEP=SCORE TIMEPD BENEFIT);
  SET FIG5_SC;
  IF REGCAT='Benchmark' THEN OUTPUT FIG5_A;
  ELSE OUTPUT FIG5_SC;
RUN;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG5;
  SET FIG5_SC;

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

PROC SORT DATA=FIG5_SC;
  BY BENEFIT TIMEPD;
RUN;
PROC SORT DATA=FIG5_A;
  BY BENEFIT TIMEPD;

```



```

RUN;
/*DATA FIG5_SC(DROP=ASCORE);
MERGE FIG5_SC
      FIG5_A(RENAME=(SCORE=ASCORE));
BY BENEFIT TIMEPD;
SCORE=SCORE-ASCORE;
RUN;*/
PROC SORT DATA=FIG5_BE;
BY BENEFIT;
RUN;

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
      COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
      COL4(DROP=SCORE RENAME=(SCORE1=COL4))
      COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
      COL6(KEEP=ROW SIG RENAME=(SIG=COL6))
      COL7(KEEP=ROW SIG RENAME=(SIG=COL7));
SET FIG5_BE FIG5_SC ; BY BENEFIT;
RETAIN BSCORE;
IF REGCAT = 'Benchmark' THEN DO;
  ROW = 1;
  BSCORE=SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP2." THEN DO;
  ROW = 2;
  *   SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP1." THEN DO;
  ROW = 3;
  *   SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEAR." THEN DO;
  ROW = 4;
  *   SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;

IF (BENEFIT = 'Getting Needed Care' AND REGCAT NE 'Benchmark') THEN OUTPUT COL2
COL6;
IF (BENEFIT = 'Getting Needed Care' AND REGCAT = 'Benchmark') THEN OUTPUT COL3;
IF (BENEFIT = 'Getting Care Quickly' AND REGCAT NE 'Benchmark') THEN OUTPUT COL4
COL7;
IF (BENEFIT = 'Getting Care Quickly' AND REGCAT = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

```

```

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 5. LLU 04/07/2006*/

```

```

DATA FIG5A;
  MERGE COL2 COL6;
  BY ROW;
RUN;

DATA FIG5B;
  MERGE COL4 COL7;
  BY ROW;
RUN;

DATA FIG5AB;
  SET FIG5A FIG5B;
  BY ROW;
RUN;

DATA FIG5;
  MERGE COL2 COL3 COL4(KEEP=ROW COL4) COL5 COL6 COL7;
  BY ROW;
RUN;
*TITLE2 'ACCESS COMPOSITES';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C2:R21C2";

DATA _NULL_;
  SET FIG5;
  FILE TBL NOTAB LRECL=200;
  PUT COL2;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C3:R18C3";

DATA _NULL_;
  SET FIG5;
  FILE TBL NOTAB LRECL=200;
  PUT COL3;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C4:R21C4";

DATA _NULL_;
  SET FIG5;
  FILE TBL NOTAB LRECL=200;
  PUT COL4;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C5:R18C5";

DATA _NULL_;
  SET FIG5;

```

```

FILE TBL NOTAB LRECL=200;
PUT COL5;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R22C2:R25C4";

```

```

DATA _NULL_;
SET FIG5;
FILE TBL NOTAB LRECL=200;
PUT COL6 '09'X '09'X COL7;
RUN;

```

```

*****
* FIGURE 6: Office Composites
*****;
TITLE2 'Figure 6: Office Composites';
PROC FREQ NOPRINT DATA=TREND_A;
WHERE MAJGRP = 'Prime Enrollees'
AND REGCAT IN ("&AREA", "Benchmark")
AND BENEFIT IN ('How Well Doctors Communicate')
AND BENTYPE="Composite" & TIMEPD
IN ("&YEARP2.", "&YEARP1.", "&YEAR.");
TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG6_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
WHERE MAJGRP = 'Prime Enrollees'
AND REGCAT = 'Benchmark'
AND BENEFIT IN ('How Well Doctors Communicate')
AND BENTYPE="Composite" & TIMEPD = "&YEAR.";
TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG6_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG6_SC FIG6_A(KEEP=SCORE TIMEPD BENEFIT);
SET FIG6_SC;
IF REGCAT='Benchmark' THEN OUTPUT FIG6_A;
ELSE OUTPUT FIG6_SC;
RUN;

```

```

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG6;
SET FIG6_SC;

```

```

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

```

```

PROC SORT DATA=FIG6_SC;
BY BENEFIT TIMEPD;
RUN;
PROC SORT DATA=FIG6_A;
BY BENEFIT TIMEPD;
RUN;
/*DATA FIG6_SC(DROP=ASCORE);
MERGE FIG6_SC
FIG6_A(RENAME=( SCORE=ASCORE));
BY BENEFIT TIMEPD;
SCORE=SCORE-ASCORE;
RUN;*/
PROC SORT DATA=FIG6_BE;

```

```

    BY BENEFIT;
RUN;

DATA COL4(DROP=SCORE RENAME=(SCORE1=COL4))
    COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
    COL7(KEEP=ROW SIG RENAME=(SIG=COL7));
SET FIG6_BE FIG6_SC ; BY BENEFIT;
RETAIN BSCORE;
IF REGCAT = 'Benchmark' THEN DO;
    ROW = 1;
    BSCORE=SCORE;
    SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP2." THEN DO;
    ROW = 2;
*    SCORE=BSCORE+SCORE;
    SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP1." THEN DO;
    ROW = 3;
*    SCORE=BSCORE+SCORE;
    SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEAR." THEN DO;
    ROW = 4;
*    SCORE=BSCORE+SCORE;
    SCORE1=SCORE;
END;

IF (BENEFIT = 'How Well Doctors Communicate' AND REGCAT NE 'Benchmark') THEN
OUTPUT COL4 COL7;
IF (BENEFIT = 'How Well Doctors Communicate' AND REGCAT = 'Benchmark') THEN OUTPUT
COL5;

RUN;

PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;

PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 5. LLU 04/07/2006*/

DATA FIG6B;
    MERGE COL4 COL7;
    BY ROW;
RUN;

DATA FIG6AB;
    SET FIG6B;
    BY ROW;
RUN;

DATA FIG6;
    MERGE COL4(KEEP=ROW COL4) COL5 COL7;

```

```

    BY ROW;
RUN;
*TITLE2 'OFFICE COMPOSITES';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C8:R21C8";

DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  PUT COL4;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C9:R18C9";

DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  PUT COL5;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R22C8:R25C8";

DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  PUT COL7;
RUN;

*****
* FIGURE 7: Claims/Service Composites
*****;
TITLE2 'Figure 7: Claims/Service Composites';
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT in ("%AREA","Benchmark")
    AND BENEFIT IN ('Customer Service','Claims Processing')
    AND BENTYPE ="Composite" & TIMEPD IN ("%YEARP2.", "%YEARP1.", "%YEAR.");
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE*SIG/ OUT=FIG7_SC(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND BENEFIT IN ('Customer Service','Claims Processing')
    AND BENTYPE ="Composite" & TIMEPD= "%YEAR.";
  TABLES MAJGRP*REGCAT*BENEFIT*TIMEPD*SCORE/ OUT=FIG7_BE(DROP=COUNT PERCENT);
RUN;
DATA FIG7_SC FIG7_A(KEEP=SCORE TIMEPD BENEFIT);
  SET FIG7_SC;
  IF REGCAT='Benchmark' THEN OUTPUT FIG7_A;
  ELSE OUTPUT FIG7_SC;

```

```

RUN;

/*add the code here to preserve above dataset for later comparision, LLu 4/6/2006*/
DATA CFIG7;
  SET FIG7_SC;

KEEP MAJGRP REGCAT BENEFIT TIMEPD SCORE SIG;
RUN;

PROC SORT DATA=FIG7_SC;
  BY BENEFIT TIMEPD;
RUN;
PROC SORT DATA=FIG7_A;
  BY BENEFIT TIMEPD;
RUN;
/*DATA FIG7_SC(DROP=AScore);
  MERGE FIG7_SC
        FIG7_A(RENAME=(SCORE=AScore));
  BY BENEFIT TIMEPD;
  SCORE=SCORE-AScore;
RUN;*/
PROC SORT DATA=FIG7_BE;
  BY BENEFIT;
RUN;

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
  COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
  COL4(DROP=SCORE RENAME=(SCORE1=COL4))
  COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
  COL6(KEEP=ROW SIG RENAME=(SIG=COL6))
  COL7(KEEP=ROW SIG RENAME=(SIG=COL7));
SET FIG7_BE FIG7_SC ; BY BENEFIT;
RETAIN BSCORE;
IF REGCAT = 'Benchmark' THEN DO;
  ROW = 1;
  BSCORE=SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP2." THEN DO;
  ROW = 2;
  * SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEARP1." THEN DO;
  ROW = 3;
  * SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&YEAR." THEN DO;
  ROW = 4;
  * SCORE=BSCORE+SCORE;
  SCORE1=SCORE;
END;

IF (BENEFIT = 'Customer Service' AND REGCAT NE 'Benchmark') THEN OUTPUT COL2 COL6;
IF (BENEFIT = 'Customer Service' AND REGCAT = 'Benchmark') THEN OUTPUT COL3;

```

```

    IF (BENEFIT = 'Claims Processing' AND REGCAT NE 'Benchmark') THEN OUTPUT COL4
COL7;
    IF (BENEFIT = 'Claims Processing' AND REGCAT = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 5. LLU 04/07/2006*/

DATA FIG7A;
    MERGE COL2 COL6;
    BY ROW;
RUN;

DATA FIG7B;
    MERGE COL4 COL7;
    BY ROW;
RUN;

DATA FIG7AB;
    SET FIG7A FIG7B;
    BY ROW;
RUN;

DATA FIG7;
    MERGE COL2 COL3 COL4(KEEP=ROW COL4) COL5 COL6 COL7;
    BY ROW;
RUN;
*TITLE2 'CLAIMS/SERVICE COMPOSITES';
*PROC PRINT;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C14:R21C14";
DATA _NULL_;
X=SLEEP(1);
RUN;

DATA _NULL_;
    SET FIG7;
    FILE TBL NOTAB LRECL=200;
    PUT COL2;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C15:R18C15";

DATA _NULL_;
    SET FIG7;

```

```

FILE TBL NOTAB LRECL=200;
X=SLEEP(1);
PUT COL3;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C16:R21C16";
DATA _NULL_;
X=SLEEP(1);
RUN;

```

```

DATA _NULL_;
SET FIG7;
FILE TBL NOTAB LRECL=200;
PUT COL4;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C17:R18C17";
DATA _NULL_;
SET FIG7;
FILE TBL NOTAB LRECL=200;
X=SLEEP(1);
PUT COL5;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R22C14:R25C16";
DATA _NULL_;
SET FIG7;
FILE TBL NOTAB LRECL=200;
X=SLEEP(1);
PUT COL6 '09'X '09'X COL7;
RUN;

```

```

*****
* TABLE 1: Preventive Care
*****;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = "&AREA"
    AND TIMEPD = "&YEAR"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
                    'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit');
  TABLES MAJGRP*REGCAT*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB1_03(DROP=COUNT
PERCENT);
  TABLES MAJGRP*REGCAT*BENEFIT*BENTYPE*SEMEAN*N_OBS/ OUT=TAB2_03(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = 'Benchmark'
    AND TIMEPD = "&YEAR"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
                    'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit');
  TABLES MAJGRP*REGCAT*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB3_03(DROP=COUNT
PERCENT);

```



```

RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = "&AREA"
    AND TIMEPD = "&YEARP1"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit');
  TABLES MAJGRP*REGCAT*BENEFIT*BENTYPE*SEMEAN*SCORE*N_OBS*N_WGT*SIG/
OUT=TAB1_02(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=TREND_A;
  WHERE MAJGRP = 'Prime Enrollees'
    AND REGCAT = "&AREA"
    AND TIMEPD = "&YEARP2"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit');
  TABLES MAJGRP*REGCAT*BENEFIT*BENTYPE*SEMEAN*SCORE*N_OBS*N_WGT*SIG/
OUT=TAB1_01(DROP=COUNT PERCENT);
RUN;

DATA TAB303;
  SET TAB3_03;
  IF REGCAT = 'Benchmark' THEN DO;
    ROW=5;
    IF BENTYPE='Mammography' THEN COL2=SCORE;
    ELSE IF BENTYPE='Pap Smear' THEN COL3=SCORE;
    ELSE IF BENTYPE='Hypertension' THEN COL4=SCORE;
    ELSE IF BENTYPE='Prenatal Care' THEN COL5=SCORE;
    ELSE IF BENTYPE='Percent Not Obese' THEN COL6=SCORE;
    ELSE IF BENTYPE = 'Non-Smoking Rate' THEN COL7=SCORE;
    ELSE IF BENTYPE = 'Counselled To Quit' THEN COL8=SCORE;
  END;
PROC SORT;
  BY ROW;
RUN;
DATA TAB203;
  SET TAB2_03;
  ROW=4;
  IF MAJGRP='Prime Enrollees';
  IF BENTYPE='Mammography' THEN COL2=N_OBS;
  ELSE IF BENTYPE='Pap Smear' THEN COL3=N_OBS;
  ELSE IF BENTYPE='Hypertension' THEN COL4=N_OBS;
  ELSE IF BENTYPE='Prenatal Care' THEN COL5=N_OBS;
  ELSE IF BENTYPE='Percent Not Obese' THEN COL6=N_OBS;
  ELSE IF BENTYPE = 'Non-Smoking Rate' THEN COL7=N_OBS;
  ELSE IF BENTYPE = 'Counselled To Quit' THEN COL8=N_OBS;
PROC SORT;
  BY ROW;
RUN;
DATA TAB103;
  SET TAB1_03;
  ROW=3;
  IF BENTYPE='Mammography' THEN DO;
    COL2=SCORE;
    COL9=SIG;
  END;

```

```

ELSE IF BENTYPE='Pap Smear' THEN DO;
  COL3=SCORE;
  COL10=SIG;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
  COL4=SCORE;
  COL11=SIG;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
  COL5=SCORE;
  COL12=SIG;
END;
ELSE IF BENTYPE='Percent Not Obese' THEN DO;
  COL6=SCORE;
  COL13=SIG;
END;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
  COL7=SCORE;
  COL14=SIG;
END;
ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
  COL8=SCORE;
  COL15=SIG;
END;

PROC SORT;
BY ROW;
RUN;

DATA TAB101;
SET TAB1_01;
ROW=1;
IF BENTYPE='Mammography' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL2=.;
  ELSE DO;
    COL2=SCORE;
    COL9=SIG;
  END;
END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL3=.;
  ELSE DO;
    COL3=SCORE;
    COL10=SIG;
  END;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL4=.;
  ELSE DO;
    COL4=SCORE;
    COL11=SIG;
  END;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL5=.;
  ELSE DO;
    COL5=SCORE;
    COL12=SIG;
  END;
END;

```

```

        END;
    END;
ELSE IF BENTYPE='Percent Not Obese' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL6=.;
    ELSE DO;
        COL6=SCORE;
        COL13=SIG;
    END;
END;
ELSE IF BENTYPE='Non-Smoking Rate' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL7=.;
    ELSE DO;
        COL7=SCORE;
        COL14=SIG;
    END;
END;
ELSE IF BENTYPE='Counselled To Quit' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL8=.;
    ELSE DO;
        COL8=SCORE;
        COL15=SIG;
    END;
END;

PROC SORT;
    BY ROW;
RUN;
DATA TAB102;
    SET TAB1_02;
    ROW=2;
    IF BENTYPE='Mammography' THEN DO;
        IF (N_WGT<200 OR N_OBS<30) THEN COL2=.;
        ELSE DO;
            COL2=SCORE;
            COL9=SIG;
        END;
    END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL3=.;
    ELSE DO;
        COL3=SCORE;
        COL10=SIG;
    END;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL4=.;
    ELSE DO;
        COL4=SCORE;
        COL11=SIG;
    END;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
    IF (N_WGT<200 OR N_OBS<30) THEN COL5=.;
    ELSE DO;
        COL5=SCORE;
        COL12=SIG;
    END;
END;

```

```

ELSE IF BENTYPE='Percent Not Obese' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL6=.;
  ELSE DO;
    COL6=SCORE;
    COL13=SIG;
  END;
END;
ELSE IF BENTYPE='Non-Smoking Rate' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL7=.;
  ELSE DO;
    COL7=SCORE;
    COL14=SIG;
  END;
END;
ELSE IF BENTYPE='Counselled To Quit' THEN DO;
  IF (N_WGT<200 OR N_OBS<30) THEN COL8=.;
  ELSE DO;
    COL8=SCORE;
    COL15=SIG;
  END;
END;
PROC SORT;
  BY ROW;
RUN;

DATA TAB1;
  MERGE TAB101 TAB102 TAB103 TAB203 TAB303;
  BY ROW;
RUN;
DATA COL2(DROP=COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL3(DROP=COL2 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL4(DROP=COL2 COL3 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL5(DROP=COL2 COL3 COL4 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL6(DROP=COL2 COL3 COL4 COL5 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL7(DROP=COL2 COL3 COL4 COL5 COL6 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL8(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL9(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL10 COL11 COL12 COL13 COL14
COL15)
  COL10(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL11 COL12 COL13 COL14
COL15)
  COL11(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL12 COL13 COL14
COL15)
  COL12(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL13 COL14
COL15)
  COL13(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL14
COL15)
  COL14(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13
COL15)
  COL15(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13
COL14)
;

```

```

SET TAB1;

IF COL2 NE . THEN OUTPUT COL2;
IF COL3 NE . THEN OUTPUT COL3;
IF COL4 NE . THEN OUTPUT COL4;
IF COL5 NE . THEN OUTPUT COL5;
IF COL6 NE . THEN OUTPUT COL6;
IF COL7 NE . THEN OUTPUT COL7;
IF COL8 NE . THEN OUTPUT COL8;
IF COL9 NE . THEN OUTPUT COL9;
IF COL10 NE . THEN OUTPUT COL10;
IF COL11 NE . THEN OUTPUT COL11;
IF COL12 NE . THEN OUTPUT COL12;
IF COL13 NE . THEN OUTPUT COL13;
IF COL14 NE . THEN OUTPUT COL14;
IF COL15 NE . THEN OUTPUT COL15;
RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;
PROC SORT DATA=COL8; BY ROW; RUN;
PROC SORT DATA=COL9; BY ROW; RUN;
PROC SORT DATA=COL10; BY ROW; RUN;
PROC SORT DATA=COL11; BY ROW; RUN;
PROC SORT DATA=COL12; BY ROW; RUN;
PROC SORT DATA=COL13; BY ROW; RUN;
PROC SORT DATA=COL14; BY ROW; RUN;
PROC SORT DATA=COL15; BY ROW; RUN;

DATA ALLROWS;
  LENGTH ROW 8.;
  DO ROW = 1 TO 5;
    OUTPUT;
  END;
RUN;

PROC SORT DATA=ALLROWS; BY ROW; RUN;

DATA TABLE1;
  MERGE COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11
        COL12 COL13 COL14 COL15 ALLROWS;
  BY ROW;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|TABLES!R3C10:R8C23";

DATA _NULL_;
  SET TABLE1;
  FILE TBL NOTAB LRECL=200;

```

```

*3/28/2014 CREATE NEW VAR WITH ASTERISK FOR TABLE1;
ARRAY CARE    COL2 COL3  COL4  COL5  COL6  COL7  ;
ARRAY SIGS    COL9 COL10 COL11 COL12 COL13 COL14 ;

ARRAY NEWVAR $ MAMM PAP HBP PRENATAL NONOBE NONSMOKE ;

DO I = 1 TO 6;

    IF CARE(I) >=0 THEN NEWVAR(I)=PUT(ROUND(CARE(I),1),8.);
    ELSE IF CARE(I) <0 THEN NEWVAR(I) = '-';

END;

*no benchmark for counseled to quit;
IF COL8>=0 THEN QUIT = PUT(ROUND(COL8,1),8.);
ELSE QUIT='-';
IF ROW=5 THEN QUIT='-';

PUT MAMM '09'X  PAP  '09'X HBP    '09'X PRENATAL '09'X NONOBE '09'X NONSMOKE '09'X
QUIT '09'X
    COL9 '09'X COL10 '09'X COL11 '09'X COL12    '09'X COL13  '09'X COL14    '09'X
COL15;
RUN;

/*Run Excel macro signif, May 9 2006, LLU*/

options noxsync;
*-- Specify XL filename ;

*%let excelf = &NAME..XLS ;

*-- Specify XL macro name ;
%let macron = signif ;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
FILE CMDS;
DDECommand = '[Run("  || "&macron" || ',0)]' ;
put DDECommand ;

RUN;

*FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
FILE CMDS;
PUT '[SAVE]';
PUT '[CLOSE]';
RUN;

*****
      COMPARE SCORES AND SIG B/T CONSUMER WATCH AND REPORT CARDS.

```

SET 0.015 DIFFERENCE AS THRESHOLD.
LUCY LU 04/04/2006

*****;

PROC SORT DATA=FIG1(DROP=SCORE); *FROM CONSUMER WATCH;
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG2(DROP=SCORE);
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG3(DROP=SCORE);
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG4(DROP=SCORE);
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG5AB OUT=FIG5;
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG6AB OUT=FIG6;
BY BENEFIT TIMEPD REGCAT;

PROC SORT DATA=FIG7AB OUT=FIG7;
BY BENEFIT TIMEPD REGCAT;
RUN;

%MACRO COMPARE(I=, TITL=);

PROC SORT DATA=CFIG&I; *FROM REPROT CARDS;
BY BENEFIT TIMEPD REGCAT;
RUN;

DATA COMBFIG&I;
MERGE CFIG&I.(IN=F1) FIG&I(IN=F2);
BY BENEFIT TIMEPD REGCAT;

IF F1 AND F2;

FIG = &I;

IF FIG <=4 THEN DO;
SCORE2=COL2*100;
SIG2=COL3;
END;

ELSE IF FIG >4 THEN DO;
IF COL2 >= 0 THEN SCORE2=COL2;
ELSE IF COL4 >0 THEN SCORE2=COL4;

IF COL6 >= .Z THEN SIG2=COL6;
ELSE IF COL7>=.Z THEN SIG2=COL7;
END;

```

SCOREDIF=SCORE2-SCORE;
SIGDIF=SIG2-SIG;

IF ABS(SCOREDIF)>.015 OR SIGDIF>0 THEN FLAG=1;
ELSE FLAG=0;

KEEP BENEFIT TIMEPD REGCAT SCORE SIG SCORE2 SIG2 SCOREDIF SIGDIF FLAG;

LABEL
FLAG="DIFF IN SCORES >0.015 OR/AND DIFF IN SIG >0"
SCORE="SCORES FROM CONUS"
SCORE2="SCORES FROM CONSUMER WATCH"
SIG="SIG FROM CONUS"
SIG2="SIG FROM CONSUMER WATCH"
;

TITLE  "  ";
TITLE2 "*****";
TITLE3 "&YEAR. CATCHMENT CONSUMER WATCH, &AREA ";

PROC PRINT L NOOBS;
TITLE4 "Compare &TITL.";
RUN;

%MEND COMPARE;

%COMPARE(I=1, TITL=Health Care Rating);
%COMPARE(I=2, TITL=Health Plan Rating);
%COMPARE(I=3, TITL=Personal Provider Rating);
%COMPARE(I=4, TITL=Specialist Rating);

%COMPARE(I=5, TITL=Access composites);

%COMPARE(I=6, TITL=Office composites);
%COMPARE(I=7, TITL=Claims/Service composites);

%MEND RUNCW;

```


I.2.A - ConsumerWatch\LISTOFMTF-NORTH.SAS - Produce the list of MTF to run automated consumer watch report in Word-North.

```

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/')));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto new log="&logname." print="&lstname.";
run;

*****
* PROJECT: 6663-420
* PROGRAM: ListOfMTF-xxxxxx.SAS
* PURPOSE: Produce the list of MTF to run automated consumer watch report in Word
* AUTHOR : Lucy Lu
* DATE   : 11/30/09
* NOTE   : Run listOfMTF-xxxxxx.Sas first to copy the list of MTF in .lst file.
*****;
OPTIONS PS=120 LS=256 NOCENTER /*MPRINT*/ NOFMterr SPOOL ;

%LET YEAR = 2017;

LIBNAME LIBRARY "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Data/fmtlib"
access=readonly;
LIBNAME INT     "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Programs/LoadWeb"
access=readonly;

%LET REG=("North Air Force","North Army","North Navy","North Other","North Joint
Service");
%LET FOLDER=North;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
DATA TREND_A;
  SET INT.TREND_A(RENAME=(REGCAT=XREGCAT) KEEP=REGCAT REGION);

  REGCAT=COMPRESS(XREGCAT,"");

CMPRS=COMPRESS(REGCAT)||".xlsb";
CMPRS2=COMPRESS(REGCAT);

IF SUBSTR(REGCAT,1,16)="Out of Catchment" THEN DELETE;

LENGTH MTFLIST $200;
MTFLIST='%RUNWD' || '(' || 'AREA=' || TRIM(LEFT(REGCAT)) || ', ' || 'NAME='
        || TRIM(LEFT(CMPRS)) || ', ' || 'NAME2=' || TRIM(LEFT(CMPRS2)) || ', ' || 'FOLDER='
        || "&FOLDER" || ')' || ';';

APPENLIST='%APPENDIX' || '(' || 'NAME='
          || TRIM(LEFT(CMPRS2)) || ', ' || 'NAME2=' || TRIM(LEFT(REGCAT)) || ', ' || 'FOLDER='
          || "&FOLDER" || ')' || ';';

IF (REGION in &REG AND REGCAT not in &REG) THEN OUTPUT;

```

```
RUN;
```

```
PROC SORT DATA=TREND_A(KEEP=MTFLIST APPENLIST) OUT=MTFLIST NODUPKEY;  
  BY MTFLIST APPENLIST; RUN;
```

```
TITLE "AREA = &FOLDER";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR MTFLIST;  
RUN;
```

```
TITLE2 "LIST OF MACRO CALLS FOR APPENDIX PRODUCTION";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR APPENLIST;  
RUN;
```

I.2.B - ConsumerWatch\LISTOFMTF-OVERSEAS.SAS - Produce the list of MTF to run automated consumer watch report in Word-Overseas.

```

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
    %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto new log="&logname." print="&lstname.";
run;

*****
* PROJECT: 6663-420
* PROGRAM: ListOfMTF.SAS
* PURPOSE: Produce the list of MTF to run automated consumer watch report in Word
* AUTHOR : Lucy Lu
* DATE   : 11/30/09
* NOTE   : Run listOfMTF-South.Sas first to copy the list of MTF in .lst file.
*****;
OPTIONS PS=120 LS=256 NOCENTER /*MPRINT*/ NOFMterr SPOOL ;

%LET YEAR = 2017;

LIBNAME LIBRARY "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Data/fmtlib"
access=readonly;
LIBNAME INT      "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Programs/LoadWeb"
access=readonly;

%LET REG=("Overseas Europe","Overseas Pacific");
%LET FOLDER=Overseas;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
DATA TREND_A;
    SET INT.TREND_A(RENAME=(REGCAT=XREGCAT) KEEP=REGCAT REGION);

    REGCAT=COMPRESS(XREGCAT,"");

CMPRS=COMPRESS(REGCAT)||".xlsb";
CMPRS2=COMPRESS(REGCAT);

IF SUBSTR(REGCAT,1,16)="Out of Catchment" THEN DELETE;

LENGTH MTFLIST $200;
MTFLIST='%RUNWD' || '(' || 'AREA=' || TRIM(LEFT(REGCAT)) || ', ' || 'NAME='
        || TRIM(LEFT(CMPRS)) || ', ' || 'NAME2=' || TRIM(LEFT(CMPRS2)) || ', ' || 'FOLDER='
        || "&FOLDER" || ')';

APPENLIST='%APPENDIX' || '(' || 'NAME='
        || TRIM(LEFT(CMPRS2)) || ', ' || 'NAME2=' || TRIM(LEFT(REGCAT)) || ', ' || 'FOLDER='
        || "&FOLDER" || ')';

IF (REGION in &REG AND REGCAT not in &REG) THEN OUTPUT;

RUN;

PROC SORT DATA=TREND_A(KEEP=MTFLIST APPENLIST) OUT=MTFLIST NODUPKEY;

```

```
BY MTFLIST APPENLIST; RUN;
```

```
TITLE "AREA = &FOLDER";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR MTFLIST;  
RUN;
```

```
TITLE2 "LIST OF MACRO CALLS FOR APPENDIX PRODUCTION";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR APPENLIST;  
RUN;
```

I.2.C - ConsumerWatch\LISTOFMTF-SOUTH.SAS - Produce the list of MTF to run automated consumer watch report in Word-South.

```

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
                             %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto new log="&logname." print="&lstname.";
run;

*****
* PROJECT: 6663-420
* PROGRAM: ListOfMTF.SAS
* PURPOSE: Produce the list of MTF to run automated consumer watch report in Word
* AUTHOR : Lucy Lu
* DATE   : 11/30/09
*****;
OPTIONS PS=120 LS=256 NOCENTER /*MPRINT*/ NOFMterr SPOOL ;

%LET YEAR = 2017;

LIBNAME LIBRARY "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Data/fmtlib"
access=readonly;
LIBNAME INT      "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Programs/LoadWeb"
access=readonly;

%LET REG=("South Air Force","South Army","South Navy","South Other");
%LET FOLDER=South;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
DATA TREND_A;
  SET INT.TREND_A(RENAME=(REGCAT=XREGCAT) KEEP=REGCAT REGION);

  REGCAT=COMPRESS(XREGCAT,"");

  CMPRS=COMPRESS(REGCAT)||".xlsb";
  CMPRS2=COMPRESS(REGCAT);
  *%RUNWD(AREA=&&REGCAT&I,NAME=&&CMPRS&I,NAME2=&&CMPRS2&I,FOLDER=&FOLDER);

IF SUBSTR(REGCAT,1,16)="Out of Catchment" THEN DELETE;

LENGTH MTFLIST $400;
MTFLIST='%RUNWD'||'|('||'|'AREA='||TRIM(LEFT(REGCAT))||'|, '||'|'NAME='
        ||TRIM(LEFT(CMPRS))||'|, '||'|'NAME2='||TRIM(LEFT(CMPRS2))||'|, '||'|'FOLDER='
        ||"&FOLDER"||'|')'||'|';

APPENLIST='%APPENDIX'||'|('||'|'NAME='
          ||TRIM(LEFT(CMPRS2))||'|, '||'|'NAME2='||TRIM(LEFT(REGCAT))||'|, '||'|'FOLDER='
          ||"&FOLDER"||'|')'||'|';

IF (REGION in &REG AND REGCAT not in &REG) THEN OUTPUT;

```

```
RUN;
```

```
PROC SORT DATA=TREND_A(KEEP=MTFLIST APPENLIST) OUT=MTFLIST NODUPKEY;  
  BY MTFLIST APPENLIST; RUN;
```

```
TITLE "AREA = &FOLDER";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR MTFLIST;  
RUN;
```

```
TITLE2 "LIST OF MACRO CALLS FOR APPENDIX PRODUCTION";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR APPENLIST;  
RUN;
```

I.2.D - ConsumerWatch\LISTOFMTF-WEST.SAS - Produce the list of MTF to run automated consumer watch report in Word-West.

```

%let pgmpath=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),
    %scan(&_sasprogramfile,-1,'/'),));
%let logname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.log));
%let lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.lst));

proc printto new log="&logname." print="&lstname.";
run;

*****
* PROJECT: 6663-420
* PROGRAM: ListOfMTF-xxxxx.SAS
* PURPOSE: Produce the list of MTF to run automated consumer watch report in Word
* AUTHOR : Lucy Lu
* DATE : 11/30/09
* NOTE : Run listOfMTF-xxxxx.Sas first to copy the list of MTF in .lst file.
*****;
OPTIONS PS=120 LS=256 NOCENTER /*MPRINT*/ NOFMTERR SPOOL ;

%LET YEAR = 2017;

LIBNAME LIBRARY "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Data/fmtlib"
access=readonly;
LIBNAME INT "/sasdata/Projects/40309_HCS/DATA/HCSDB/&YEAR./Programs/LoadWeb"
access=readonly;

%LET REG=("West Air Force","West Army","West Navy","West Other");
%LET FOLDER=West;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
DATA TREND_A;
    SET INT.TREND_A(RENAME=(REGCAT=XREGCAT) KEEP=REGCAT REGION);

    REGCAT=COMPRESS(XREGCAT,"");

CMPRS=COMPRESS(REGCAT)||".xlsb";
CMPRS2=COMPRESS(REGCAT);

IF SUBSTR(REGCAT,1,16)="Out of Catchment" THEN DELETE;

LENGTH MTFLIST APPENLIST $200;
MTFLIST='%RUNWD' || '(' || 'AREA=' || TRIM(LEFT(REGCAT)) || ', ' || 'NAME='
        || TRIM(LEFT(CMPRS)) || ', ' || 'NAME2=' || TRIM(LEFT(CMPRS2)) || ', ' || 'FOLDER='
        || "&FOLDER" || ')' || ';';

APPENLIST='%APPENDIX' || '(' || 'NAME='
        || TRIM(LEFT(CMPRS2)) || ', ' || 'NAME2=' || TRIM(LEFT(REGCAT)) || ', ' || 'FOLDER='
        || "&FOLDER" || ')' || ';';

IF (REGION in &REG AND REGCAT not in &REG) THEN OUTPUT;

RUN;

```

```
PROC SORT DATA=TREND_A(KEEP=MTFLIST APPENLIST) OUT=MTFLIST NODUPKEY;  
  BY MTFLIST APPENLIST; RUN;
```

```
TITLE "AREA = &FOLDER";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR MTFLIST;  
RUN;
```

```
TITLE2 "LIST OF MACRO CALLS FOR APPENDIX PRODUCTION";  
PROC PRINT DATA=MTFLIST NOOBS;  
VAR APPENLIST;  
RUN;
```


I.3.A - ConsumerWatch\CONSUMERWATCH-WORD-CNORTH.SAS - Run annual automated word MTF TRICARE Consumer Watch reports-North.

```
*****
PROJECT: 6663-420
PROGRAM: consumerwatch-word-CNorth.sas
PURPOSE: Automatet the Consumer Watch Report
         Only be able to automate one Word product at a time, multiple file-open
         and File-save causes SAS to lock up with JAWs screen reader unless
         fixing the problem by downloading "Hot Fix" in SAS institute website.
AUTHOR  : Lucy Lu
DATE    : 11/30/09
NOTE    : This is the second step to automnate the Consumer Watch report.
         1. step 1--run listOfMTF-xxxx.sas
         2. Step 2--copy the list of MTF in listOfMTF.lst file and run this macro.
*****;
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 MPRINT NOCENTER NOFMterr SPOOL;

LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT  '..\loadweb';

/*****/
/* TIME PERIOD MACROS */
/*****/

%LET YEAR      = 2017;
%LET YEARP1    = 2016;
%LET YEARP2    = 2015;
%LET YOURSAY   = MTF;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/

%INCLUDE "CONSUMERWATCH-CMACRO-WORD.INC";
/*
%RUNWD(AREA=375th Med Grp-Scott,NAME=375thMedGrp-Scott.xlsb,NAME2=375thMedGrp-
Scott,FOLDER=North);
%RUNWD(AREA=579th Med Group-Bolling,NAME=579thMedGroup-
Bolling.xlsb,NAME2=579thMedGroup-Bolling,FOLDER=North);
%RUNWD(AREA=633rd Med Grp Langley-Eustis,NAME=633rdMedGrpLangley-
Eustis.xlsb,NAME2=633rdMedGrpLangley-Eustis,FOLDER=North);
%RUNWD(AREA=66th Med Grp-Hanscom,NAME=66thMedGrp-Hanscom.xlsb,NAME2=66thMedGrp-
Hanscom,FOLDER=North);
%RUNWD(AREA=779th Med Grp-Andrews,NAME=779thMedGrp-Andrews.xlsb,NAME2=779thMedGrp-
Andrews,FOLDER=North);
%RUNWD(AREA=87th Med Grp-McGuire,NAME=87thMedGrp-McGuire.xlsb,NAME2=87thMedGrp-
McGuire,FOLDER=North);
%RUNWD(AREA=88th Med Grp-Wright-Patterson,NAME=88thMedGrp-Wright-
Patterson.xlsb,NAME2=88thMedGrp-Wright-Patterson,FOLDER=North);
%RUNWD(AREA=Blanchfield ACH-Ft. Campbell,NAME=BlanchfieldACH-
Ft.Campbell.xlsb,NAME2=BlanchfieldACH-Ft.Campbell,FOLDER=North);
%RUNWD(AREA=Ft Belvoir Community Hosp-FBCH,NAME=FtBelvoirCommunityHosp-
FBCH.xlsb,NAME2=FtBelvoirCommunityHosp-FBCH,FOLDER=North);
```

```

%RUNWD(AREA=Guthrie AHC-Ft. Drum,NAME=GuthrieAHC-Ft.Drum.xlsb,NAME2=GuthrieAHC-
Ft.Drum,FOLDER=North);
*/
%RUNWD(AREA=Ireland ACH-Ft. Knox,NAME=IrelandACH-Ft.Knox.xlsb,NAME2=IrelandACH-
Ft.Knox,FOLDER=North);
/*
%RUNWD(AREA=Keller ACH-West Point,NAME=KellerACH-WestPoint.xlsb,NAME2=KellerACH-
WestPoint,FOLDER=North);
%RUNWD(AREA=Kenner AHC-Ft. Lee,NAME=KennerAHC-Ft.Lee.xlsb,NAME2=KennerAHC-
Ft.Lee,FOLDER=North);
*/
%RUNWD(AREA=Kimbrough Amb Car Cen-Ft Meade,NAME=KimbroughAmbCarCen-
FtMeade.xlsb,NAME2=KimbroughAmbCarCen-FtMeade,FOLDER=North);
/*
%RUNWD(AREA=McDonald AHC-Ft. Eustis,NAME=McDonaldAHC-
Ft.Eustis.xlsb,NAME2=McDonaldAHC-Ft.Eustis,FOLDER=North);
%RUNWD(AREA=NBHC Little
Creek,NAME=NBHCLittleCreek.xlsb,NAME2=NBHCLittleCreek,FOLDER=North);
%RUNWD(AREA=NBHC Navsta
Sewells,NAME=NBHCNavstaSewells.xlsb,NAME2=NBHCNavstaSewells,FOLDER=North);
%RUNWD(AREA=NBHC Oceana,NAME=NBHCOceana.xlsb,NAME2=NBHCOceana,FOLDER=North);
%RUNWD(AREA=NH Camp
Lejeune,NAME=NHCampLejeune.xlsb,NAME2=NHCampLejeune,FOLDER=North);
%RUNWD(AREA=NHC Annapolis,NAME=NHCAnnapolis.xlsb,NAME2=NHCAnnapolis,FOLDER=North);
%RUNWD(AREA=NHC Cherry
Point,NAME=NHCCherryPoint.xlsb,NAME2=NHCCherryPoint,FOLDER=North);
%RUNWD(AREA=NHC Patuxent
River,NAME=NHCPatuxentRiver.xlsb,NAME2=NHCPatuxentRiver,FOLDER=North);
*/
%RUNWD(AREA=NHC Quantico,NAME=NHCQuantico.xlsb,NAME2=NHCQuantico,FOLDER=North);
/*
%RUNWD(AREA=NMC Portsmouth,NAME=NMCPortsmouth.xlsb,NAME2=NMCPortsmouth,FOLDER=North);
%RUNWD(AREA=Naval Hlth Clinic New
England,NAME=NavalHlthClinicNewEngland.xlsb,NAME2=NavalHlthClinicNewEngland,FOLDER=No
rth);
%RUNWD(AREA=Walter Reed Natl Mil Med
Cntr,NAME=WalterReedNatlMilMedCntr.xlsb,NAME2=WalterReedNatlMilMedCntr,FOLDER=North);
*/
%RUNWD(AREA=Womack AMC-Ft. Bragg,NAME=WomackAMC-Ft.Bragg.xlsb,NAME2=WomackAMC-
Ft.Bragg,FOLDER=North);

/*--dont need to run for pdf report--;

%RUNWD(AREA=North Region-Air force,NAME=NorthRegion-Airforce.xlsb,NAME2=NorthRegion-
Airforce,FOLDER=North);
%RUNWD(AREA=North Region-Other,NAME=NorthRegion-Other.xlsb,NAME2=NorthRegion-
Other,FOLDER=North);

```

I.3.B - ConsumerWatch\CONSUMERWATCH-WORD-COVERSEAS.SAS - Run annual automated word MTF TRICARE Consumer Watch reports-Overseas.

```
*****
PROJECT: 6663-420
PROGRAM: consumerwatch-word-Coverseas.sas
PURPOSE: Automatet the Consumer Watch Report
         Only be able to automate one Word product at a time, multiple file-open
         and File-save causes SAS to lock up with JAWs screen reader unless
         fixing the problem by downloading "Hot Fix" in SAS institute website.
AUTHOR  : Lucy Lu
DATE    : 11/30/09
NOTE    : This is the second step to automnate the Consumer Watch report.
         1. step 1--run listOfMTF-xxxx.sas
         2. Step 2--copy the list of MTF in listOfMTF.lst file and run this macro.
*****;
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 MPRINT NOCENTER NOFMterr SPOOL;

LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT '..\loadweb';

/*****/
/* TIME PERIOD MACROS */
/*****/

%LET YEAR = 2017;
%LET YEARP1 = 2016;
%LET YEARP2 = 2015;
%LET YOURSAY= MTF;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWatch;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;

/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/

%INCLUDE "consumerwatch-Cmacro-word.inc";

%RUNWD(AREA=18th Med Grp-Kadena AB,NAME=18thMedGrp-KadenaAB.xlsb,NAME2=18thMedGrp-
KadenaAB,FOLDER=Overseas);
/*
%RUNWD(AREA=31st Med Grp-Aviano,NAME=31stMedGrp-Aviano.xlsb,NAME2=31stMedGrp-
Aviano,FOLDER=Overseas);
%RUNWD(AREA=35th Med Grp-Misawa,NAME=35thMedGrp-Misawa.xlsb,NAME2=35thMedGrp-
Misawa,FOLDER=Overseas);
%RUNWD(AREA=374th Med Grp-Yokota AB,NAME=374thMedGrp-YokotaAB.xlsb,NAME2=374thMedGrp-
YokotaAB,FOLDER=Overseas);
%RUNWD(AREA=48th Med Grp-Lakenheath,NAME=48thMedGrp-Lakenheath.xlsb,NAME2=48thMedGrp-
Lakenheath,FOLDER=Overseas);
%RUNWD(AREA=51st Med Grp-Osan AB,NAME=51stMedGrp-OsanAB.xlsb,NAME2=51stMedGrp-
OsanAB,FOLDER=Overseas);
%RUNWD(AREA=52nd Med Group-Spangdahlem,NAME=52ndMedGroup-
Spangdahlem.xlsb,NAME2=52ndMedGroup-Spangdahlem,FOLDER=Overseas);
%RUNWD(AREA=86th Medical Group-Ramstein,NAME=86thMedicalGroup-
Ramstein.xlsb,NAME2=86thMedicalGroup-Ramstein,FOLDER=Overseas);
%RUNWD(AREA=Bavaria
Meddac,NAME=BavariaMeddac.xlsb,NAME2=BavariaMeddac,FOLDER=Overseas);
```

```

%RUNWD(AREA=Brian Allgood ACH-Seoul,NAME=BrianAllgoodACH-
Seoul.xlsb,NAME2=BrianAllgoodACH-Seoul,FOLDER=Overseas);
%RUNWD(AREA=Landstuhl Regional
Medcen,NAME=LandstuhlRegionalMedcen.xlsb,NAME2=LandstuhlRegionalMedcen,FOLDER=Oversea
s);
%RUNWD(AREA=NH Guam-Agana,NAME=NHGuam-Agana.xlsb,NAME2=NHGuam-Agana,FOLDER=Overseas);
%RUNWD(AREA=NH Okinawa,NAME=NHOkinawa.xlsb,NAME2=NHOkinawa,FOLDER=Overseas);
%RUNWD(AREA=NH Sigonella,NAME=NHSigonella.xlsb,NAME2=NHSigonella,FOLDER=Overseas);
%RUNWD(AREA=NH Yokosuka,NAME=NHYokosuka.xlsb,NAME2=NHYokosuka,FOLDER=Overseas);
*/

/*--dont need to run for pdf report--;
%RUNWD(AREA=Pacific-Air force,NAME=Pacific-Airforce.xls,NAME2=Pacific-
Airforce,FOLDER=Overseas);
%RUNWD(AREA=Europe-Air force,NAME=Europe-Airforce.xls,NAME2=Europe-
Airforce,FOLDER=Overseas);
%RUNWD(AREA=Europe-Navy,NAME=Europe-Navy.xls,NAME2=Europe-Navy,FOLDER=Overseas);

```

I.3.C - ConsumerWatch\CONSUMERWATCH-WORD-CSOUTH.SAS - Run annual automated word MTF TRICARE Consumer Watch reports-South.

```
*****
PROJECT: 6663-420
PROGRAM: consumerwatch-word-Coverseas.sas
PURPOSE: Automatet the Consumer Watch Report
         Only be able to automate one Word product at a time, multiple file-open
         and File-save causes SAS to lock up with JAWs screen reader unless
         fixing the problem by downloading "Hot Fix" in SAS institute website.
AUTHOR  : Lucy Lu
DATE    : 11/30/09
NOTE    : This is the second step to automnate the Consumer Watch report.
         1. step 1--run listOfMTF-xxxx.sas
         2. Step 2--copy the list of MTF in listOfMTF.lst file and run this macro.
*****;
OPTIONS PS=63 LS=200 ERRORS=2 MPRINT NOCENTER NOFMTERR SPOOL;
```

```
LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT  '..\loadweb';
```

```
/* *****
/* TIME PERIOD MACROS */
/* *****
```

```
%LET YEAR      = 2017;
%LET YEARP1    = 2016;
%LET YEARP2    = 2015;
%LET YOURSAY   = MTF;
```

```
%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWatch;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;
```

```
/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
```

```
%INCLUDE "CONSUMERWATCH-CMACRO-WORD.INC";
```

```
/*
%RUNWD(AREA=14th Med Grp-Columbus,NAME=14thMedGrp-Columbus.xlsb,NAME2=14thMedGrp-
Columbus,FOLDER=South);
%RUNWD(AREA=17th Med Grp-Goodfellow,NAME=17thMedGrp-Goodfellow.xlsb,NAME2=17thMedGrp-
Goodfellow,FOLDER=South);
%RUNWD(AREA=19th Medical Group-Little Rock,NAME=19thMedicalGroup-
LittleRock.xlsb,NAME2=19thMedicalGroup-LittleRock,FOLDER=South);
%RUNWD(AREA=1st Spec Ops Med Grp-Hurlburt,NAME=1stSpecOpsMedGrp-
Hurlburt.xlsb,NAME2=1stSpecOpsMedGrp-Hurlburt,FOLDER=South);
%RUNWD(AREA=20th Med Grp-Shaw,NAME=20thMedGrp-Shaw.xlsb,NAME2=20thMedGrp-
Shaw,FOLDER=South);
%RUNWD(AREA=23rd Med Grp-Moody,NAME=23rdMedGrp-Moody.xlsb,NAME2=23rdMedGrp-
Moody,FOLDER=South);
%RUNWD(AREA=2nd Med Grp-Barksdale,NAME=2ndMedGrp-Barksdale.xlsb,NAME2=2ndMedGrp-
Barksdale,FOLDER=South);
%RUNWD(AREA=325th Med Grp-Tyndall,NAME=325thMedGrp-Tyndall.xlsb,NAME2=325thMedGrp-
Tyndall,FOLDER=South);
*/
```

```

%RUNWD(AREA=359th Med Grp-Randolph,NAME=359thMedGrp-Randolph.xlsb,NAME2=359thMedGrp-
Randolph,FOLDER=South);
/*
%RUNWD(AREA=42nd Medical Group-Maxwell,NAME=42ndMedicalGroup-
Maxwell.xlsb,NAME2=42ndMedicalGroup-Maxwell,FOLDER=South);
%RUNWD(AREA=45th Med Grp-Patrick,NAME=45thMedGrp-Patrick.xlsb,NAME2=45thMedGrp-
Patrick,FOLDER=South);
%RUNWD(AREA=59th Med Wing-Lackland,NAME=59thMedWing-Lackland.xlsb,NAME2=59thMedWing-
Lackland,FOLDER=South);
%RUNWD(AREA=6th Med Grp-MacDill,NAME=6thMedGrp-MacDill.xlsb,NAME2=6thMedGrp-
MacDill,FOLDER=South);
%RUNWD(AREA=72nd Med Grp-Tinker,NAME=72ndMedGrp-Tinker.xlsb,NAME2=72ndMedGrp-
Tinker,FOLDER=South);
*/
%RUNWD(AREA=78th Med Grp-Robins,NAME=78thMedGrp-Robins.xlsb,NAME2=78thMedGrp-
Robins,FOLDER=South);
/*
%RUNWD(AREA=7th Med Grp-Dyess,NAME=7thMedGrp-Dyess.xlsb,NAME2=7thMedGrp-
Dyess,FOLDER=South);
%RUNWD(AREA=81st Med Grp-Keesler,NAME=81stMedGrp-Keesler.xlsb,NAME2=81stMedGrp-
Keesler,FOLDER=South);
%RUNWD(AREA=82nd Med Grp-Sheppard,NAME=82ndMedGrp-Sheppard.xlsb,NAME2=82ndMedGrp-
Sheppard,FOLDER=South);
%RUNWD(AREA=96th Med Grp-Eglin,NAME=96thMedGrp-Eglin.xlsb,NAME2=96thMedGrp-
Eglin,FOLDER=South);
%RUNWD(AREA=Brooke AMC-Ft. Sam Houston,NAME=BrookeAMC-
Ft.SamHouston.xlsb,NAME2=BrookeAMC-Ft.SamHouston,FOLDER=South);
%RUNWD(AREA=Darnall ACH-Ft. Hood,NAME=DarnallACH-Ft.Hood.xlsb,NAME2=DarnallACH-
Ft.Hood,FOLDER=South);
%RUNWD(AREA=Eisenhower AMC-Ft. Gordon,NAME=EisenhowerAMC-
Ft.Gordon.xlsb,NAME2=EisenhowerAMC-Ft.Gordon,FOLDER=South);
%RUNWD(AREA=Fox AHC-Redstone Arsenal,NAME=FoxAHC-RedstoneArsenal.xlsb,NAME2=FoxAHC-
RedstoneArsenal,FOLDER=South);
%RUNWD(AREA=Lyster AHC-Ft. Rucker,NAME=LysterAHC-Ft.Rucker.xlsb,NAME2=LysterAHC-
Ft.Rucker,FOLDER=South);
%RUNWD(AREA=Martin ACH-Ft. Benning,NAME=MartinACH-Ft.Benning.xlsb,NAME2=MartinACH-
Ft.Benning,FOLDER=South);
%RUNWD(AREA=Moncrief ACH-Ft. Jackson,NAME=MoncriefACH-
Ft.Jackson.xlsb,NAME2=MoncriefACH-Ft.Jackson,FOLDER=South);
%RUNWD(AREA=NBHC Fort
Worth,NAME=NBHCFortWorth.xlsb,NAME2=NBHCFortWorth,FOLDER=South);
%RUNWD(AREA=NBHC Mayport,NAME=NBHCMayport.xlsb,NAME2=NBHCMayport,FOLDER=South);
%RUNWD(AREA=NH Beaufort,NAME=NHBeaufort.xlsb,NAME2=NHBeaufort,FOLDER=South);
%RUNWD(AREA=NH
Jacksonville,NAME=NHJacksonville.xlsb,NAME2=NHJacksonville,FOLDER=South);
%RUNWD(AREA=NH Pensacola,NAME=NHPensacola.xlsb,NAME2=NHPensacola,FOLDER=South);
*/
%RUNWD(AREA=NHC Corpus
Christi,NAME=NHCCorpusChristi.xlsb,NAME2=NHCCorpusChristi,FOLDER=South);
/*
%RUNWD(AREA=Naval Health Clinic
Charleston,NAME=NavalHealthClinicCharleston.xlsb,NAME2=NavalHealthClinicCharleston,FO
LDER=South);
%RUNWD(AREA=Winn ACH-Ft. Stewart,NAME=WinnACH-Ft.Stewart.xlsb,NAME2=WinnACH-
Ft.Stewart,FOLDER=South);
*/
/*--dont need to run for pdf report--;

```

```
%RUNWD(AREA=South Region-Air force,NAME=SouthRegion-Airforce.xls,NAME2=SouthRegion-  
Airforce,FOLDER=South);
```

I.3.D - ConsumerWatch\CONSUMERWATCH-WORD-CWEST.SAS - Run annual automated word MTF TRICARE Consumer Watch reports-West.

```
*****
PROJECT: 6663-420
PROGRAM: consumerwatch-word-Coverseas.sas
PURPOSE: Automatet the Consumer Watch Report
        Only be able to automate one Word product at a time, multiple file-open
        and File-save causes SAS to lock up with JAWs screen reader unless
        fixing the problem by downloading "Hot Fix" in SAS institute website.
AUTHOR  : Lucy Lu
DATE    : 11/30/09
NOTE    : This is the second step to automnate the Consumer Watch report.
        1. step 1--run listOfMTF-xxxx.sas
        2. Step 2--copy the list of MTF in listOfMTF.lst file and run this macro.
*****;
OPTIONS PS=63 LS=200 ERRORS=2 MPRINT NOCENTER NOFMterr SPOOL;
```

```
LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT  '..\loadweb';
```

```
/*
*****
/* TIME PERIOD MACROS */
*****
*/
```

```
%LET YEAR      = 2017;
%LET YEARP1    = 2016;
%LET YEARP2    = 2015;
%LET YOURSAY   = MTF;
%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWatch;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;
```

```
/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
```

```
%INCLUDE "CONSUMERWATCH-CMACRO-WORD.INC";
```

```
/*
%RUNWD(AREA=10th Med Group-USAF Academy CO,NAME=10thMedGroup-
USAFAcademyCO.xlsb,NAME2=10thMedGroup-USAFAcademyCO,FOLDER=West);
%RUNWD(AREA=15th Med Grp-Hickam,NAME=15thMedGrp-Hickam.xlsb,NAME2=15thMedGrp-
Hickam,FOLDER=West);
%RUNWD(AREA=21st Med Grp-Peterson,NAME=21stMedGrp-Peterson.xlsb,NAME2=21stMedGrp-
Peterson,FOLDER=West);
%RUNWD(AREA=30th Med Grp-Vandenberg,NAME=30thMedGrp-Vandenberg.xlsb,NAME2=30thMedGrp-
Vandenberg,FOLDER=West);
%RUNWD(AREA=341st Med Grp-Malmstrom,NAME=341stMedGrp-
Malmstrom.xlsb,NAME2=341stMedGrp-Malmstrom,FOLDER=West);
%RUNWD(AREA=355th Med Grp-Davis Monthan,NAME=355thMedGrp-
DavisMonthan.xlsb,NAME2=355thMedGrp-DavisMonthan,FOLDER=West);
%RUNWD(AREA=366th Med Grp-Mountain Home,NAME=366thMedGrp-
MountainHome.xlsb,NAME2=366thMedGrp-MountainHome,FOLDER=West);
%RUNWD(AREA=377th Med Grp-Kirtland,NAME=377thMedGrp-Kirtland.xlsb,NAME2=377thMedGrp-
Kirtland,FOLDER=West);
%RUNWD(AREA=3rd Med Grp-Elmendorf,NAME=3rdMedGrp-Elmendorf.xlsb,NAME2=3rdMedGrp-
Elmendorf,FOLDER=West);
*/
```



```

%RUNWD(AREA=509th Med Grp-Whiteman,NAME=509thMedGrp-Whiteman.xlsb,NAME2=509thMedGrp-Whiteman,FOLDER=West);
%RUNWD(AREA=55th Med Grp-Offutt,NAME=55thMedGrp-Offutt.xlsb,NAME2=55thMedGrp-Offutt,FOLDER=West);
%RUNWD(AREA=56th Med Grp-Luke,NAME=56thMedGrp-Luke.xlsb,NAME2=56thMedGrp-Luke,FOLDER=West);
%RUNWD(AREA=5th Med Grp-Minot,NAME=5thMedGrp-Minot.xlsb,NAME2=5thMedGrp-Minot,FOLDER=West);
%RUNWD(AREA=60th Med Grp-Travis,NAME=60thMedGrp-Travis.xlsb,NAME2=60thMedGrp-Travis,FOLDER=West);
%RUNWD(AREA=61st Med Group-Los Angeles,NAME=61stMedGroup-LosAngeles.xlsb,NAME2=61stMedGroup-LosAngeles,FOLDER=West);
%RUNWD(AREA=75th Med Grp-Hill,NAME=75thMedGrp-Hill.xlsb,NAME2=75thMedGrp-Hill,FOLDER=West);
%RUNWD(AREA=90th Med Grp-F.E. Warren,NAME=90thMedGrp-F.E.Warren.xlsb,NAME2=90thMedGrp-F.E.Warren,FOLDER=West);
%RUNWD(AREA=92nd Med Grp-Fairchild,NAME=92ndMedGrp-Fairchild.xlsb,NAME2=92ndMedGrp-Fairchild,FOLDER=West);
%RUNWD(AREA=95th Med Grp-Edwards,NAME=95thMedGrp-Edwards.xlsb,NAME2=95thMedGrp-Edwards,FOLDER=West);
%RUNWD(AREA=99th Med Grp-OCallaghan Hosp,NAME=99thMedGrp-OCallaghanHosp.xlsb,NAME2=99thMedGrp-OCallaghanHosp,FOLDER=West);
%RUNWD(AREA=Bassett ACH-Ft. Wainwright,NAME=BassettACH-Ft.Wainwright.xlsb,NAME2=BassettACH-Ft.Wainwright,FOLDER=West);
%RUNWD(AREA=Evans ACH-Ft. Carson,NAME=EvansACH-Ft.Carson.xlsb,NAME2=EvansACH-Ft.Carson,FOLDER=West);
*/
%RUNWD(AREA=Irwin ACH-Ft. Riley,NAME=IrwinACH-Ft.Riley.xlsb,NAME2=IrwinACH-Ft.Riley,FOLDER=West);
/*
%RUNWD(AREA=Madigan AMC-Ft. Lewis,NAME=MadiganAMC-Ft.Lewis.xlsb,NAME2=MadiganAMC-Ft.Lewis,FOLDER=West);
%RUNWD(AREA=Munson AHC-Ft. Leavenworth,NAME=MunsonAHC-Ft.Leavenworth.xlsb,NAME2=MunsonAHC-Ft.Leavenworth,FOLDER=West);
%RUNWD(AREA=NBHC NAS North Island,NAME=NBHCNASNorthIsland.xlsb,NAME2=NBHCNASNorthIsland,FOLDER=West);
%RUNWD(AREA=NBHC NTC San Diego,NAME=NBHCNTCSanDiego.xlsb,NAME2=NBHCNTCSanDiego,FOLDER=West);
%RUNWD(AREA=NBHC Port Hueneme,NAME=NBHCPortHueneme.xlsb,NAME2=NBHCPortHueneme,FOLDER=West);
%RUNWD(AREA=NH Bremerton,NAME=NH Bremerton.xlsb,NAME2=NH Bremerton,FOLDER=West);
%RUNWD(AREA=NH Camp Pendleton,NAME=NHCampPendleton.xlsb,NAME2=NHCampPendleton,FOLDER=West);
%RUNWD(AREA=NH LeMoore,NAME=NHLeMoore.xlsb,NAME2=NHLeMoore,FOLDER=West);
%RUNWD(AREA=NH Oak Harbor,NAME=NH Oak Harbor.xlsb,NAME2=NH Oak Harbor,FOLDER=West);
%RUNWD(AREA=NH Twentynine Palms,NAME=NH Twentynine Palms.xlsb,NAME2=NH Twentynine Palms,FOLDER=West);
%RUNWD(AREA=NHC Hawaii,NAME=NH Hawaii.xlsb,NAME2=NH Hawaii,FOLDER=West);
%RUNWD(AREA=NMC San Diego,NAME=NMCSanDiego.xlsb,NAME2=NMCSanDiego,FOLDER=West);
%RUNWD(AREA=R W Bliss AHC-Ft. Huachuca,NAME=RWBlissAHC-Ft.Huachuca.xlsb,NAME2=RWBlissAHC-Ft.Huachuca,FOLDER=West);
%RUNWD(AREA=TRICARE Outpatient-Chula Vista,NAME=TRICAREOutpatient-ChulaVista.xlsb,NAME2=TRICAREOutpatient-ChulaVista,FOLDER=West);
%RUNWD(AREA=Tripler AMC-Ft. Shafter,NAME=TriplerAMC-Ft.Shafter.xlsb,NAME2=TriplerAMC-Ft.Shafter,FOLDER=West);
%RUNWD(AREA=Weed ACH-Ft. Irwin,NAME=WeedACH-Ft.Irwin.xlsb,NAME2=WeedACH-Ft.Irwin,FOLDER=West);

```

```
%RUNWD(AREA=William Beaumont AMC-Ft. Bliss,NAME=WilliamBeaumontAMC-  
Ft.Bliss.xlsb,NAME2=WilliamBeaumontAMC-Ft.Bliss,FOLDER=West);  
*/
```

```
/*--dont need to run for pdf report--;  
%RUNWD(AREA=West Region-Air force,NAME=WestRegion-Airforce.xls,NAME2=WestRegion-  
Airforce,FOLDER=West);
```

I.3.E - ConsumerWatch\CONSUMERWATCH-WORD-CUS.SAS - Run annual automated word MTF TRICARE Consumer Watch reports-US.

```
*****
PROJECT: 6663-420
PROGRAM: consumerwatch-word-Coverseas.sas
PURPOSE: Automatet the Consumer Watch Report
        Only be able to automate one Word product at a time, multiple file-open
        and File-save causes SAS to lock up with JAWs screen reader unless
        fixing the problem by downloading "Hot Fix" in SAS institute website.
AUTHOR  : Lucy Lu
DATE    : 11/30/09
NOTE    : This is the second step to automnate the Consumer Watch report.
        1. step 1--run listOfMTF-xxxx.sas
        2. Step 2--copy the list of MTF in listOfMTF.lst file and run this macro.
*****;
OPTIONS PS=63 LS=200 ERRORS=2 MPRINT NOCENTER NOFMterr SPOOL;
```

```
LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT  '..\loadweb';
```

```
/*
*****
/* TIME PERIOD MACROS */
*****
*/
```

```
%LET YEAR      = 2017;
%LET YEARP1    = 2016;
%LET YEARP2    = 2015;
%LET YOURSAY   = MTF;
%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWatch;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;
```

```
/*LLU 03/17/2005, REMOVE APOSTROPHE FROM VARIABLE REGCAT FOR EXCEL NAMING*/
```

```
%INCLUDE "CONSUMERWATCH-CMACRO-WORD.INC";
```

```
/*
%RUNWD(AREA=10th Med Group-USAF Academy CO,NAME=10thMedGroup-
USAFAcademyCO.xlsb,NAME2=10thMedGroup-USAFAcademyCO,FOLDER=West);
%RUNWD(AREA=15th Med Grp-Hickam,NAME=15thMedGrp-Hickam.xlsb,NAME2=15thMedGrp-
Hickam,FOLDER=West);
%RUNWD(AREA=21st Med Grp-Peterson,NAME=21stMedGrp-Peterson.xlsb,NAME2=21stMedGrp-
Peterson,FOLDER=West);
%RUNWD(AREA=30th Med Grp-Vandenberg,NAME=30thMedGrp-Vandenberg.xlsb,NAME2=30thMedGrp-
Vandenberg,FOLDER=West);
%RUNWD(AREA=341st Med Grp-Malmstrom,NAME=341stMedGrp-
Malmstrom.xlsb,NAME2=341stMedGrp-Malmstrom,FOLDER=West);
%RUNWD(AREA=355th Med Grp-Davis Monthan,NAME=355thMedGrp-
DavisMonthan.xlsb,NAME2=355thMedGrp-DavisMonthan,FOLDER=West);
%RUNWD(AREA=366th Med Grp-Mountain Home,NAME=366thMedGrp-
MountainHome.xlsb,NAME2=366thMedGrp-MountainHome,FOLDER=West);
%RUNWD(AREA=377th Med Grp-Kirtland,NAME=377thMedGrp-Kirtland.xlsb,NAME2=377thMedGrp-
Kirtland,FOLDER=West);
%RUNWD(AREA=3rd Med Grp-Elmendorf,NAME=3rdMedGrp-Elmendorf.xlsb,NAME2=3rdMedGrp-
Elmendorf,FOLDER=West);
*/
```

```

%RUNWD(AREA=509th Med Grp-Whiteman,NAME=509thMedGrp-Whiteman.xlsb,NAME2=509thMedGrp-Whiteman,FOLDER=West);
%RUNWD(AREA=55th Med Grp-Offutt,NAME=55thMedGrp-Offutt.xlsb,NAME2=55thMedGrp-Offutt,FOLDER=West);
%RUNWD(AREA=56th Med Grp-Luke,NAME=56thMedGrp-Luke.xlsb,NAME2=56thMedGrp-Luke,FOLDER=West);
%RUNWD(AREA=5th Med Grp-Minot,NAME=5thMedGrp-Minot.xlsb,NAME2=5thMedGrp-Minot,FOLDER=West);
%RUNWD(AREA=60th Med Grp-Travis,NAME=60thMedGrp-Travis.xlsb,NAME2=60thMedGrp-Travis,FOLDER=West);
%RUNWD(AREA=61st Med Group-Los Angeles,NAME=61stMedGroup-LosAngeles.xlsb,NAME2=61stMedGroup-LosAngeles,FOLDER=West);
%RUNWD(AREA=75th Med Grp-Hill,NAME=75thMedGrp-Hill.xlsb,NAME2=75thMedGrp-Hill,FOLDER=West);
%RUNWD(AREA=90th Med Grp-F.E. Warren,NAME=90thMedGrp-F.E.Warren.xlsb,NAME2=90thMedGrp-F.E.Warren,FOLDER=West);
%RUNWD(AREA=92nd Med Grp-Fairchild,NAME=92ndMedGrp-Fairchild.xlsb,NAME2=92ndMedGrp-Fairchild,FOLDER=West);
%RUNWD(AREA=95th Med Grp-Edwards,NAME=95thMedGrp-Edwards.xlsb,NAME2=95thMedGrp-Edwards,FOLDER=West);
%RUNWD(AREA=99th Med Grp-OCallaghan Hosp,NAME=99thMedGrp-OCallaghanHosp.xlsb,NAME2=99thMedGrp-OCallaghanHosp,FOLDER=West);
%RUNWD(AREA=Bassett ACH-Ft. Wainwright,NAME=BassettACH-Ft.Wainwright.xlsb,NAME2=BassettACH-Ft.Wainwright,FOLDER=West);
%RUNWD(AREA=Evans ACH-Ft. Carson,NAME=EvansACH-Ft.Carson.xlsb,NAME2=EvansACH-Ft.Carson,FOLDER=West);
*/
%RUNWD(AREA=Irwin ACH-Ft. Riley,NAME=IrwinACH-Ft.Riley.xlsb,NAME2=IrwinACH-Ft.Riley,FOLDER=West);
/*
%RUNWD(AREA=Madigan AMC-Ft. Lewis,NAME=MadiganAMC-Ft.Lewis.xlsb,NAME2=MadiganAMC-Ft.Lewis,FOLDER=West);
%RUNWD(AREA=Munson AHC-Ft. Leavenworth,NAME=MunsonAHC-Ft.Leavenworth.xlsb,NAME2=MunsonAHC-Ft.Leavenworth,FOLDER=West);
%RUNWD(AREA=NBHC NAS North Island,NAME=NBHCNASNorthIsland.xlsb,NAME2=NBHCNASNorthIsland,FOLDER=West);
%RUNWD(AREA=NBHC NTC San Diego,NAME=NBHCNTCSanDiego.xlsb,NAME2=NBHCNTCSanDiego,FOLDER=West);
%RUNWD(AREA=NBHC Port Hueneme,NAME=NBHCPortHueneme.xlsb,NAME2=NBHCPortHueneme,FOLDER=West);
%RUNWD(AREA=NH Bremerton,NAME=NH Bremerton.xlsb,NAME2=NH Bremerton,FOLDER=West);
%RUNWD(AREA=NH Camp Pendleton,NAME=NHCampPendleton.xlsb,NAME2=NHCampPendleton,FOLDER=West);
%RUNWD(AREA=NH LeMoore,NAME=NHLeMoore.xlsb,NAME2=NHLeMoore,FOLDER=West);
%RUNWD(AREA=NH Oak Harbor,NAME=NH Oak Harbor.xlsb,NAME2=NH Oak Harbor,FOLDER=West);
%RUNWD(AREA=NH Twentynine Palms,NAME=NH Twentynine Palms.xlsb,NAME2=NH Twentynine Palms,FOLDER=West);
%RUNWD(AREA=NHC Hawaii,NAME=NH Hawaii.xlsb,NAME2=NH Hawaii,FOLDER=West);
%RUNWD(AREA=NMC San Diego,NAME=NMCSanDiego.xlsb,NAME2=NMCSanDiego,FOLDER=West);
%RUNWD(AREA=R W Bliss AHC-Ft. Huachuca,NAME=RWBlissAHC-Ft.Huachuca.xlsb,NAME2=RWBlissAHC-Ft.Huachuca,FOLDER=West);
%RUNWD(AREA=TRICARE Outpatient-Chula Vista,NAME=TRICAREOutpatient-ChulaVista.xlsb,NAME2=TRICAREOutpatient-ChulaVista,FOLDER=West);
%RUNWD(AREA=Tripler AMC-Ft. Shafter,NAME=TriplerAMC-Ft.Shafter.xlsb,NAME2=TriplerAMC-Ft.Shafter,FOLDER=West);
%RUNWD(AREA=Weed ACH-Ft. Irwin,NAME=WeedACH-Ft.Irwin.xlsb,NAME2=WeedACH-Ft.Irwin,FOLDER=West);

```

```
%RUNWD(AREA=William Beaumont AMC-Ft. Bliss,NAME=WilliamBeaumontAMC-  
Ft.Bliss.xlsb,NAME2=WilliamBeaumontAMC-Ft.Bliss,FOLDER=West);  
*/
```

```
/*--dont need to run for pdf report--;  
%RUNWD(AREA=West Region-Air force,NAME=WestRegion-Airforce.xls,NAME2=WestRegion-  
Airforce,FOLDER=West);
```

I.3.F - ConsumerWatch\CONSUMERWATCH-CMACRO-WORD.INC - Produce numbers for annual Consumer Watch reports.

```
*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH-Cmarco-WORD.INC
*
* AUTHOR : LUCY LU
* PURPOSE: Automate the copy and paste process, update the year, region,
*          response rate and sample size for annual catchment Consumer
*          Watch report.
*
* DATE   : 10/29/2009
* modified
* 08/27/2015 LLu, changed calling template from .doc to .docm for 2010 Word
* 09/02/2015 Llu, changed MTF1 and MTF3 from Arial to Times New Roman font.
*
* OUTPUT : WORD DOCUMENTS
*****;

OPTIONS NOXWAIT SPOOL NOXSYNC;

%MACRO RUNWD(AREA=,NAME=,NAME2=,FOLDER=);
*LLU 7/21/2010--DETECTING AVAILABILITY OF EXCEL, MINIMIZE WAITING TIME
  Wait until Excel ready;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;

  LENGTH FID RC START STOP TIME 8;
  FID = FOPEN('CMDS' , 'S');
  IF (FID LE 0) THEN DO;
    RC = SYSTEM('START EXCEL');
    START = DATETIME();
    STOP = START + 10;
    DO WHILE (FID LE 0);
      FID = FOPEN('CMDS' , 'S');
      TIME = DATETIME();
      IF (TIME GE STOP) THEN FID = 1;
    END;
  END;
  RC = FCLOSE(FID);
RUN;

%MACRO SETUP;
  DATA TEST _NULL_;

  SINGLE='';
  DOUBLE='';

  LENGTH OPENXLS OPENWRD SAVEWRD $140;
*11/28/2010, temporary fix for xls.xlsb problem to meet the deadline. Need
  perm fix in Excel pmg;
```

```

OPENXLS=SINGLE || "[OPEN(" || DOUBLE || "&PATH.\&FOLDER.\&NAME2..xlsb" || DOUBLE || ")]" || SINGLE
E;

OPENWRD=SINGLE || "[FileOpen.Name=" || DOUBLE || "&PATH.\templateAnnual.docm" || DOUBLE || "]" |
| SINGLE;

SAVEWRD=SINGLE || "[FileSaveAs.Name=" || DOUBLE || "&PATH.\&FOLDER.\&NAME2..docm" || DOUBLE ||
]" || SINGLE;

    CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
    CALL SYMPUT ("OPENWRD",TRIM(OPENWRD));
    CALL SYMPUT ("SAVEWRD",TRIM(SAVEWRD));

RUN;

%MEND SETUP;
%SETUP;

DATA _NULL_;
    FILE CMDS;
    PUT &OPENXLS;
    X=SLEEP(1);
    PUT '[app.minimize()]';
    RUN;

*7/23/2010 LLU, Wait until Word ready;
FILENAME CMNDS DDE "WINWORD|SYSTEM";

DATA _NULL_;
    LENGTH FID RC START STOP TIME 8;
    FID=FOPEN('CMNDS','S');
    IF (FID LE 0) THEN DO;
        RC=SYSTEM('START WINWORD');
        START=DATETIME();
        STOP=START+10;
        DO WHILE (FID LE 0);
            FID=FOPEN('CMNDS','S');
            TIME=DATETIME();
            IF (TIME GE STOP) THEN FID=1;
        END;
    END;
    RC=FCLOSE(FID);
    RUN;

DATA _NULL_;
    FILE CMNDS;
    PUT &OPENWRD;
    X=SLEEP(1);
    PUT &SAVEWRD;
    PUT '[APPMINIMIZE]';
    RUN;

%MACRO COPYIT;
%DO I=1 %TO 8;

    %IF &I NE 7 %THEN %DO;

```

```

%LET WDMACRO=NEWPASTE&I;
%LET EXMACRO=COPY&I;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CMDS;
  X=SLEEP(1);
  RUN;

DATA _NULL_;
  FILE CMDS;
  DDECommand = '[Run(" | | "&exmacro" | | ',0)]' ;
  PUT DDEcommand ;

  RUN;
  FILENAME CMDS CLEAR;

FILENAME CMNDS DDE 'WINWORD|SYSTEM';

DATA _NULL_;
  X=SLEEP(1);
  RUN;

DATA _NULL_;
  FILE CMNDS;
  put '[ToolsMacro .Name = " "&wdmacro" ', .Run]';
  RUN;

FILENAME CMNDS CLEAR;

  RUN;

%END;
%END;
%MEND COPYIT;
%COPYIT;

/*
FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CMDS;
  PUT '[SAVE]';
  PUT '[QUIT]';
  RUN; */

*READ THE SAMPLE SIZE AND RESPONSE RATE IN .OUT FILES
AND CREATE MACRO VARIABLES for Word document;
%MACRO RATE1 (DAT);
  DATA &DAT;

  INFILE "&RATEPATH.\&DAT..OUT" LRECL=9999 RECFM=V;
  INPUT LINEIN $100 @; DROP LINEIN;
  IF _N_ GE 7 THEN DO;

```



```

        INPUT
            @001 DOMAIN      $CHAR40.
            @141 FRR_UNWT    4.3
            @147 POP         $CHAR7.;
            ;
        OUTPUT;
    END;
RUN;

*MS 2007 doesnt take comma7 format. This is to hard code the comma into the text;
DATA &DAT;
    SET &DAT;
    LENGTH POP_UNWT $10;
    POP1=SUBSTR(RIGHT(POP),1,1);
    POP2=SUBSTR(RIGHT(POP),2,3);
    POP3=SUBSTR(RIGHT(POP),5,3);
    POP_UNWT=CATX(' ',POP1,POP2,POP3);
RUN;

%MEND RATE1;

%RATE1(TABLE02A); /*for USA MHS*/
%RATE1(XCATCH); /*for catchment area*/

DATA ALLRATE;
    SET TABLE02A
        XCATCH
        ;

    DOMAIN=UPCASE(COMPRESS(DOMAIN," "));

    IF DOMAIN='' THEN DOMAIN="USAMHS";
    FRR_UNWT=FRR_UNWT*100;

    *PUT POP_UNWT= FRR_UNWT=;
    IF DOMAIN=UPCASE("&NAME2") THEN OUTPUT;

RUN;

%LET FORMAT=FORMAT1;

%LET MARK1=MTF1;
%LET MARK2=size;
%LET MARK3=rate;
%LET MARK4=MTF2;
%LET MARK5=YourSay;
%LET MARK6=MTF3;

DATA _NULL_;
    SET ALLRATE;

CALL SYMPUT ("TEXT1", "&AREA");
CALL SYMPUT ("TEXT2", COMPRESS(POP_UNWT));
CALL SYMPUT ("TEXT3", COMPRESS(FRR_UNWT));

```

```
CALL SYMPUT ("TEXT4", "&AREA");
CALL SYMPUT ("TEXT5", "&YOURSAY");
CALL SYMPUT ("TEXT6", "&AREA");
```

```
RUN;
```

```
FILENAME CMNDS DDE "WINWORD|SYSTEM";
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(2);
  PUT '[AppMinimize]';
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="MTF1"]';
  put '[FormatFont.Font="Times New Roman",.Points="20"]';
  PUT "&TEXT1";
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="SIZE"]';
  put '[FormatFont.Font="Arial",.Points="8"]';
  PUT "&TEXT2";
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="RATE"]';
  put '[FormatFont.Font="Arial",.Points="8"]';
  PUT "&TEXT3";
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="MTF2"]';
  put '[FormatFont.Font="Arial",.Points="8"]';
  PUT "&TEXT4";
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="YourSay"]';
  put '[FormatFont.Font="Times New Roman",.Points="11"]';
  PUT "&TEXT5";
RUN;
```

```
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="MTF3"]';
```

```

put '[FormatFont.Font="Times New Roman",.Points="16"]';
PUT "&TEXT6";
RUN;

/* The Triplet doeasn't work for MS 2007/SAS 9. Comment out here;
%MACRO DOWORD;

%DO I= 1 %TO 6;      *LLU 2/15/08. Problem with Banner in Word. No change in banner
this time;

FILENAME CMNDS DDE "WINWORD|&PATH.\&FOLDER.\&FOLDER..doc!&&MARK&I." NOTAB;

DATA _NULL_;
FILE CMNDS;

PUT "&&TEXT&I.";

RUN;

FILENAME CMNDS CLEAR;

%END;

%MEND;

%DOWORD;

FILENAME CMNDS DDE 'WINWORD|SYSTEM';
DATA _NULL_;
FILE CMNDS;

PUT '[ToolsMacro .Name = "' "&FORMAT" '", .Run]';

RUN;
*/
*copy and paste figure 7--must do after changing subtitle on page 2;
%LET WDMACRO7=NEWPASTE7;
%LET EXMACRO7=COPY7;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
FILE CMDS;
X=SLEEP(1);
RUN;

DATA _NULL_;
FILE CMDS;
DDECommand = '[Run("' || "&exmacro7" || '",0)]' ;
PUT DDEcommand ;

RUN;
FILENAME CMDS CLEAR;

FILENAME CMNDS DDE 'WINWORD|SYSTEM';

DATA _NULL_;

```

```

FILE CMNDS;
put '[ToolsMacro .Name = "" "&wdmacro7" "', .Run]';
RUN;

FILENAME CMNDS CLEAR;

RUN;

DATA _NULL_;
X=SLEEP(.2);
RUN;

/** 8/22 KB commented out
*savs as pdf;
%LET CMACRO=SaveAspdf;

FILENAME CMNDS DDE 'WINWORD|SYSTEM';
DATA _NULL_;
FILE CMNDS;

PUT '[ToolsMacro .Name = "" "&CMACRO" "', .Run]';
run;
**/

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
FILE CMDS;
*PUT '[SAVE]'; *no save for Excel;
PUT '[CLOSE(FALSE)]';
PUT '[QUIT]';
RUN;

*The following code is reserved for future use;
FILENAME CMNDS DDE 'WINWORD|SYSTEM';

DATA _NULL_;
FILE CMNDS;

PUT '[fileSave] ';
PUT '[FileClose 2] ';
RUN;

%MEND;

```

I.4.A - ConsumerWatch\APPENDIX_North.SAS - Run annual appendix program-North.

```
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX_NORTH.SAS
WRITTEN       : LUCY LU 8/14/2014
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

INCLUDE FILE: APPENDIX.INC

    -- COPY THE LIST OF CATCHMENT AREA FROM listOfMTF-region.lst ---
=====;

OPTIONS MPRINT;
%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

*%INCLUDE "APPENDIX.INC";
%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch\APPENDIX.INC";
%LET Y1=*FY*2015;
%LET Y2=*FY*2016;
%LET Y3=*FY*2017;

%APPENDIX(NAME=375thMedGrp-Scott,NAME2=375th Med Grp-Scott,FOLDER=North);
*%APPENDIX(NAME=579thMedGroup-Bolling,NAME2=579th Med Group-Bolling,FOLDER=North);
%APPENDIX(NAME=633rdMedGrpLangley-Eustis,NAME2=633rd Med Grp Langley-
Eustis,FOLDER=North);
*%APPENDIX(NAME=66thMedGrp-Hanscom,NAME2=66th Med Grp-Hanscom,FOLDER=North);
%APPENDIX(NAME=779thMedGrp-Andrews,NAME2=779th Med Grp-Andrews,FOLDER=North);
%APPENDIX(NAME=87thMedGrp-McGuire,NAME2=87th Med Grp-McGuire,FOLDER=North);
%APPENDIX(NAME=88thMedGrp-Wright-Patterson,NAME2=88th Med Grp-Wright-
Patterson,FOLDER=North);
%APPENDIX(NAME=BlanchfieldACH-Ft.Campbell,NAME2=Blanchfield ACH-Ft.
Campbell,FOLDER=North);
%APPENDIX(NAME=FtBelvoirCommunityHosp-FBCH,NAME2=Ft Belvoir Community Hosp-
FBCH,FOLDER=North);
%APPENDIX(NAME=GuthrieAHC-Ft.Drum,NAME2=Guthrie AHC-Ft. Drum,FOLDER=North);
%APPENDIX(NAME=IrelandACH-Ft.Knox,NAME2=Ireland ACH-Ft. Knox,FOLDER=North);
*%APPENDIX(NAME=KellerACH-WestPoint,NAME2=Keller ACH-West Point,FOLDER=North);
%APPENDIX(NAME=KennerAHC-Ft.Lee,NAME2=Kenner AHC-Ft. Lee,FOLDER=North);
%APPENDIX(NAME=KimbroughAmbCarCen-FtMeade,NAME2=Kimbrough Amb Car Cen-Ft
Meade,FOLDER=North);
%APPENDIX(NAME=McDonaldAHC-Ft.Eustis,NAME2=McDonald AHC-Ft. Eustis,FOLDER=North);
%APPENDIX(NAME=NBHCLittleCreek,NAME2=NBHC Little Creek,FOLDER=North);
%APPENDIX(NAME=NBHCNavstaSewells,NAME2=NBHC Navsta Sewells,FOLDER=North);
*%APPENDIX(NAME=NBHCOceana,NAME2=NBHC Oceana,FOLDER=North);
*%APPENDIX(NAME=NHCampLejeune,NAME2=NH Camp Lejeune,FOLDER=North);
*%APPENDIX(NAME=NHCAnnapolis,NAME2=NHC Annapolis,FOLDER=North);
*%APPENDIX(NAME=NHCCCherryPoint,NAME2=NHC Cherry Point,FOLDER=North);
*%APPENDIX(NAME=NHCPatuxentRiver,NAME2=NHC Patuxent River,FOLDER=North);
%APPENDIX(NAME=NHCCQuantico,NAME2=NHC Quantico,FOLDER=North);
%APPENDIX(NAME=NMCPortsmouth,NAME2=NMC Portsmouth,FOLDER=North);
%APPENDIX(NAME=NavalHlthClinicNewEngland,NAME2=Naval Hlth Clinic New
England,FOLDER=North);
%APPENDIX(NAME=WalterReedNatlMilMedCntr,NAME2=Walter Reed Natl Mil Med
Cntr,FOLDER=North);
%APPENDIX(NAME=WomackAMC-Ft.Bragg,NAME2=Womack AMC-Ft. Bragg,FOLDER=North);
```

```
/*--dont need to run for report--;  
%APPENDIX(NAME=NorthRegion-Airforce,NAME2=North Region-Air force,FOLDER=North);  
%APPENDIX(NAME=NorthRegion-Other,NAME2=North Region-Other,FOLDER=North);
```

I.4.B - ConsumerWatch\APPENDIX_Overseas.SAS - Run annual appendix program-Overseas.

```
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX_SOUTH.SAS
WRITTEN       : LUCY LU 8/14/2014
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

INCLUDE FILE: APPENDIX.INC

    -- COPY THE LIST OF CATCHMENT AREA FROM listOfMTF-region.lst ---
=====;

OPTIONS MPRINT;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch\APPENDIX.INC";
%LET Y1=*FY*2015;
%LET Y2=*FY*2016;
%LET Y3=*FY*2017;

%APPENDIX(NAME=18thMedGrp-KadenaAB,NAME2=18th Med Grp-Kadena AB,FOLDER=Overseas);
*%APPENDIX(NAME=31stMedGrp-Aviano,NAME2=31st Med Grp-Aviano,FOLDER=Overseas);
*%APPENDIX(NAME=35thMedGrp-Misawa,NAME2=35th Med Grp-Misawa,FOLDER=Overseas);
*%APPENDIX(NAME=374thMedGrp-YokotaAB,NAME2=374th Med Grp-Yokota AB,FOLDER=Overseas);
*%APPENDIX(NAME=48thMedGrp-Lakenheath,NAME2=48th Med Grp-Lakenheath,FOLDER=Overseas);
*%APPENDIX(NAME=51stMedGrp-OsanAB,NAME2=51st Med Grp-Osan AB,FOLDER=Overseas);
*%APPENDIX(NAME=52ndMedGroup-Spangdahlem,NAME2=52nd Med Group-
Spangdahlem,FOLDER=Overseas);
*%APPENDIX(NAME=86thMedicalGroup-Ramstein,NAME2=86th Medical Group-
Ramstein,FOLDER=Overseas);
%APPENDIX(NAME=BavariaMeddac,NAME2=Bavaria Meddac,FOLDER=Overseas);
*%APPENDIX(NAME=BrianAllgoodACH-Seoul,NAME2=Brian Allgood ACH-Seoul,FOLDER=Overseas);
*%APPENDIX(NAME=LandstuhlRegionalMedcen,NAME2=Landstuhl Regional
Medcen,FOLDER=Overseas);
*%APPENDIX(NAME=NHGuam-Agana,NAME2=NH Guam-Agana,FOLDER=Overseas);
%APPENDIX(NAME=NHokinawa,NAME2=NH Okinawa,FOLDER=Overseas);
*%APPENDIX(NAME=NHSigonella,NAME2=NH Sigonella,FOLDER=Overseas);
*%APPENDIX(NAME=NHYokosuka,NAME2=NH Yokosuka,FOLDER=Overseas);

/*--dont need to run for report--;
%APPENDIX(NAME=Pacific-Airforce,NAME2=Pacific-Air force,FOLDER=Overseas);
%APPENDIX(NAME=Europe-Airforce,NAME2=Europe-Air force,FOLDER=Overseas);
%APPENDIX(NAME=Europe-Navy,NAME2=Europe-Navy,FOLDER=Overseas);
```

I.4.C - ConsumerWatch\APPENDIX_South.SAS - Run annual appendix program-South.

```
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX_SOUTH.SAS
WRITTEN       : LUCY LU 8/14/2014
DESCRIPTION    : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                  CONSUMER WATCH REPORT

INCLUDE FILE: APPENDIX.INC

    -- COPY THE LIST OF CATCHMENT AREA FROM listOfMTF-region.lst ---
=====;

OPTIONS MPRINT;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch\APPENDIX.INC";
%LET Y1=*FY*2015;
%LET Y2=*FY*2016;
%LET Y3=*FY*2017;

*%APPENDIX(NAME=14thMedGrp-Columbus,NAME2=14th Med Grp-Columbus,FOLDER=South);
*%APPENDIX(NAME=17thMedGrp-Goodfellow,NAME2=17th Med Grp-Goodfellow,FOLDER=South);
*%APPENDIX(NAME=19thMedicalGroup-LittleRock,NAME2=19th Medical Group-Little
Rock,FOLDER=South);
*%APPENDIX(NAME=1stSpecOpsMedGrp-Hurlburt,NAME2=1st Spec Ops Med Grp-
Hurlburt,FOLDER=South);
%APPENDIX(NAME=20thMedGrp-Shaw,NAME2=20th Med Grp-Shaw,FOLDER=South);
*%APPENDIX(NAME=23rdMedGrp-Moody,NAME2=23rd Med Grp-Moody,FOLDER=South);
*%APPENDIX(NAME=2ndMedGrp-Barksdale,NAME2=2nd Med Grp-Barksdale,FOLDER=South);
*%APPENDIX(NAME=325thMedGrp-Tyndall,NAME2=325th Med Grp-Tyndall,FOLDER=South);
%APPENDIX(NAME=359thMedGrp-Randolph,NAME2=359th Med Grp-Randolph,FOLDER=South);
*%APPENDIX(NAME=42ndMedicalGroup-Maxwell,NAME2=42nd Medical Group-
Maxwell,FOLDER=South);
%APPENDIX(NAME=45thMedGrp-Patrick,NAME2=45th Med Grp-Patrick,FOLDER=South);
%APPENDIX(NAME=59thMedWing-Lackland,NAME2=59th Med Wing-Lackland,FOLDER=South);
%APPENDIX(NAME=6thMedGrp-MacDill,NAME2=6th Med Grp-MacDill,FOLDER=South);
%APPENDIX(NAME=72ndMedGrp-Tinker,NAME2=72nd Med Grp-Tinker,FOLDER=South);
%APPENDIX(NAME=78thMedGrp-Robins,NAME2=78th Med Grp-Robins,FOLDER=South);
*%APPENDIX(NAME=7thMedGrp-Dyess,NAME2=7th Med Grp-Dyess,FOLDER=South);
*%APPENDIX(NAME=81stMedGrp-Keesler,NAME2=81st Med Grp-Keesler,FOLDER=South);
*%APPENDIX(NAME=82ndMedGrp-Sheppard,NAME2=82nd Med Grp-Sheppard,FOLDER=South);
*%APPENDIX(NAME=96thMedGrp-Eglin,NAME2=96th Med Grp-Eglin,FOLDER=South);
%APPENDIX(NAME=BrookeAMC-Ft.SamHouston,NAME2=Brooke AMC-Ft. Sam
Houston,FOLDER=South);
%APPENDIX(NAME=DarnallACH-Ft.Hood,NAME2=Darnall ACH-Ft. Hood,FOLDER=South);
%APPENDIX(NAME=EisenhowerAMC-Ft.Gordon,NAME2=Eisenhower AMC-Ft. Gordon,FOLDER=South);
*%APPENDIX(NAME=FoxAHC-RedstoneArsenal,NAME2=Fox AHC-Redstone Arsenal,FOLDER=South);
%APPENDIX(NAME=LysterAHC-Ft.Rucker,NAME2=Lyster AHC-Ft. Rucker,FOLDER=South);
%APPENDIX(NAME=MartinACH-Ft.Benning,NAME2=Martin ACH-Ft. Benning,FOLDER=South);
%APPENDIX(NAME=MoncriefACH-Ft.Jackson,NAME2=Moncrief ACH-Ft. Jackson,FOLDER=South);
%APPENDIX(NAME=NBHCFortWorth,NAME2=NBHC Fort Worth,FOLDER=South);
%APPENDIX(NAME=NBHCMayport,NAME2=NBHC Mayport,FOLDER=South);
%APPENDIX(NAME=NHBeaufort,NAME2=NH Beaufort,FOLDER=South);
```



```
%APPENDIX(NAME=NHJacksonville,NAME2=NH Jacksonville,FOLDER=South);
%APPENDIX(NAME=NHPensacola,NAME2=NH Pensacola,FOLDER=South);
%APPENDIX(NAME=NHCCorpusChristi,NAME2=NHC Corpus Christi,FOLDER=South);
*%APPENDIX(NAME=NavalHealthClinicCharleston,NAME2=Naval Health Clinic
Charleston,FOLDER=South);
%APPENDIX(NAME=WinnACH-Ft.Stewart,NAME2=Winn ACH-Ft. Stewart,FOLDER=South);

/*--dont need to run for report--;
%APPENDIX(NAME=SouthRegion-Airforce,NAME2=South Region-Air force,FOLDER=South);
```

I.4.D - ConsumerWatch\APPENDIX_West.SAS - Run annual appendix program-West.

```
RESETLINES;
*=====
PROJECT      : HCSDB Consumer Watch
PROGRAM      : APPENDIX_WEST.SAS
WRITTEN      : LUCY LU 8/14/2014
DESCRIPTION  : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
              CONSUMER WATCH REPORT

INCLUDE FILE: APPENDIX.INC

      -- COPY THE LIST OF CATCHMENT AREA FROM listOfMTF-region.lst ---
=====;
options symbolgen obs=max nocenter NOXWAIT NOXSYNC NODATE NONUMBER
orientation=portrait;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch\APPENDIX.INC";
%LET Y1=*FY*2015;
%LET Y2=*FY*2016;
%LET Y3=*FY*2017;

/*
%APPENDIX(NAME=10thMedGroup-USAFAcademyCO,NAME2=10th Med Group-USAF Academy
CO,FOLDER=West);
%APPENDIX(NAME=15thMedGrp-Hickam,NAME2=15th Med Grp-Hickam,FOLDER=West);
%APPENDIX(NAME=21stMedGrp-Peterson,NAME2=21st Med Grp-Peterson,FOLDER=West);
%APPENDIX(NAME=30thMedGrp-Vandenberg,NAME2=30th Med Grp-Vandenberg,FOLDER=West);
%APPENDIX(NAME=341stMedGrp-Malmstrom,NAME2=341st Med Grp-Malmstrom,FOLDER=West);
%APPENDIX(NAME=355thMedGrp-DavisMonthan,NAME2=355th Med Grp-Davis
Monthan,FOLDER=West);
%APPENDIX(NAME=366thMedGrp-MountainHome,NAME2=366th Med Grp-Mountain
Home,FOLDER=West);
%APPENDIX(NAME=377thMedGrp-Kirtland,NAME2=377th Med Grp-Kirtland,FOLDER=West);
%APPENDIX(NAME=3rdMedGrp-Elmendorf,NAME2=3rd Med Grp-Elmendorf,FOLDER=West);
%APPENDIX(NAME=509thMedGrp-Whiteman,NAME2=509th Med Grp-Whiteman,FOLDER=West);
%APPENDIX(NAME=55thMedGrp-Offutt,NAME2=55th Med Grp-Offutt,FOLDER=West);
%APPENDIX(NAME=56thMedGrp-Luke,NAME2=56th Med Grp-Luke,FOLDER=West);
%APPENDIX(NAME=5thMedGrp-Minot,NAME2=5th Med Grp-Minot,FOLDER=West);
%APPENDIX(NAME=60thMedGrp-Travis,NAME2=60th Med Grp-Travis,FOLDER=West);
%APPENDIX(NAME=61stMedGroup-LosAngeles,NAME2=61st Med Group-Los Angeles,FOLDER=West);
%APPENDIX(NAME=75thMedGrp-Hill,NAME2=75th Med Grp-Hill,FOLDER=West);
%APPENDIX(NAME=90thMedGrp-F.E.Warren,NAME2=90th Med Grp-F.E. Warren,FOLDER=West);
%APPENDIX(NAME=92ndMedGrp-Fairchild,NAME2=92nd Med Grp-Fairchild,FOLDER=West);
%APPENDIX(NAME=95thMedGrp-Edwards,NAME2=95th Med Grp-Edwards,FOLDER=West);
%APPENDIX(NAME=99thMedGrp-OCallaghanHosp,NAME2=99th Med Grp-OCallaghan
Hosp,FOLDER=West);
%APPENDIX(NAME=BassettACH-Ft.Wainwright,NAME2=Bassett ACH-Ft.
Wainwright,FOLDER=West);
%APPENDIX(NAME=EvansACH-Ft.Carson,NAME2=Evans ACH-Ft. Carson,FOLDER=West);
*/
%APPENDIX(NAME=IrwinACH-Ft.Riley,NAME2=Irwin ACH-Ft. Riley,FOLDER=West);
/*
%APPENDIX(NAME=MadiganAMC-Ft.Lewis,NAME2=Madigan AMC-Ft. Lewis,FOLDER=West);
*/
```

```

%APPENDIX(NAME=MunsonAHC-Ft.Leavenworth,NAME2=Munson AHC-Ft.
Leavenworth,FOLDER=West);
%APPENDIX(NAME=NBHCNASNorthIsland,NAME2=NBHC NAS North Island,FOLDER=West);
%APPENDIX(NAME=NBHCNTCSanDiego,NAME2=NBHC NTC San Diego,FOLDER=West);
%APPENDIX(NAME=NBHCPortHueneme,NAME2=NBHC Port Hueneme,FOLDER=West);
%APPENDIX(NAME=NBHBremerton,NAME2=NBH Bremerton,FOLDER=West);
%APPENDIX(NAME=NBHCampPendleton,NAME2=NBH Camp Pendleton,FOLDER=West);
%APPENDIX(NAME=NBHLeMoore,NAME2=NBH LeMoore,FOLDER=West);
%APPENDIX(NAME=NBHOakHarbor,NAME2=NBH Oak Harbor,FOLDER=West);
%APPENDIX(NAME=NBHTwentyNinePalms,NAME2=NBH TwentyNine Palms,FOLDER=West);
%APPENDIX(NAME=NBCHawaii,NAME2=NBH Hawaii,FOLDER=West);
%APPENDIX(NAME=NBMCSanDiego,NAME2=NBMC San Diego,FOLDER=West);
%APPENDIX(NAME=RWBlissAHC-Ft.Huachuca,NAME2=R W Bliss AHC-Ft. Huachuca,FOLDER=West);
%APPENDIX(NAME=TRICAREOutpatient-ChulaVista,NAME2=TRICARE Outpatient-Chula
Vista,FOLDER=West);
%APPENDIX(NAME=TriplerAMC-Ft.Shafter,NAME2=Tripler AMC-Ft. Shafter,FOLDER=West);
%APPENDIX(NAME=WeedACH-Ft.Irwin,NAME2=Weed ACH-Ft. Irwin,FOLDER=West);
%APPENDIX(NAME=WilliamBeaumontAMC-Ft.Bliss,NAME2=William Beaumont AMC-Ft.
Bliss,FOLDER=West);
*/

/*--dont need to run for report--;
%APPENDIX(NAME=WestRegion-Airforce,NAME2=West Region-Air force,FOLDER=West);

```

I.4.E - ConsumerWatch\APPENDIX_USAMHS.SAS - Run annual appendix program-US.

```
*RESETLINES;
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX_USAMHS.SAS
WRITTEN       : LUCY LU
MODIFIED      : KATHY BENCIO FOR ANNUAL DATA
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

DATE          : 03/22/2014
=====;
options MERGENOBY=NOWARN nocenter NOXWAIT NOXSYNC NODATE NONUMBER
orientation=portrait;

OPTIONS MPRINT;
%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2017\Programs\ConsumerWatch;

%INCLUDE "&PATH.\APPENDIX.INC";
*%INCLUDE "&PATH.\APPENDIX_DOCX.INC";
%LET Y1=*FY*2015;
%LET Y2=*FY*2016;
%LET Y3=*FY*2017;

%APPENDIX(FOLDER=USAMHS,NAME=USAMHS,NAME2=USA MHS);
```

I.4.F - ConsumerWatch\APPENDIX.INC - Include file for appendix programs.

```
*RESETLINES;
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX.INC
WRITTEN       : LUCY LU
MODIFIED      : KATHY BENCIO FOR ANNUAL DATA
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

DATE          : 03/22/2014

MODIFICATION :
08/13/2014 CHANGED TO INCLUDED FILE FOR ANNUAL REPPORT
            EACH REGION RUNS SEPARATELY
09/02/2015 LLU, ADDED &NAME2 FOR MTF NAMES
08/29/2016 LLU,
            - USE a, b SYMBOLS AND DIFFERENT COLORS
              TO HARD CODE THE APPENDIX TABLE
            - ADD MACRO FOR FIGURES 5-7
09062/2016 LLU, CREATE RTF OUTPUT
=====;
options nocenter NOXWAIT NOXSYNC NODATE NONUMBER orientation=portrait
Mergenoby=NOWARN;

PROC FORMAT;
VALUE CAREF
1='Mammography (women >= 40)'
2='Pap Smear (women >=18)'
3='Hypertension Screen (adults)'
4='Prenatal Care (in 1st trimester)'
5='Percent Not Obese (adults)'
6='Non-Smokers (adults)'
7='Counseled to Quit (adults)'
;

%MACRO APPENDIX(NAME=,NAME2=,FOLDER=);

*===== READ DATA FROM EXCEL TABLES =====;

%LET XLSFILE=%STR(&PATH.\&FOLDER.\&NAME);

X "%STR("%&XLSFILE..XLSB%")";
DATA _NULL_;
    X=SLEEP(1);
RUN;

*---- RATINGS ----;

%MACRO RATE(COL1=, COL2=,OUTDATA=);
FILENAME RAT DDE "EXCEL|RATINGS!R1C&COL1.:R21C&COL2.";

DATA &OUTDATA
;
    INFILE    RAT DLM='09'X NOTAB DSD MISSEVER
              LRECL=1000 FIRSTOBS=18
```

```

;
INFORMAT CATEGORY $20. XPRIM_ENRLL SIG
8.
;
INPUT    CATEGORY XPRIM_ENRLL  SIG
;

XPRIM_ENRLL2=PUT(ROUND(XPRIM_ENRLL),3.);

IF SIG = 1 THEN PRIM_ENRLL=CATX(' ',XPRIM_ENRLL2,'^{SUPER a}');
ELSE IF SIG = -1 THEN PRIM_ENRLL=CATX(' ',XPRIM_ENRLL2,'^{SUPER b}');
ELSE IF XPRIM_ENRLL >=0 THEN PRIM_ENRLL=XPRIM_ENRLL2;
ELSE IF XPRIM_ENRLL <0 THEN PRIM_ENRLL='-';

IF _N_=1 THEN CATEGORY="Benchmark";

RUN;

TITLE "----- &OUTDATA -----";
PROC PRINT DATA=&OUTDATA; RUN;

%MEND RATE;
%RATE(COL1=1, COL2=3,OUTDATA=FIG1);
%RATE(COL1=5, COL2=7,OUTDATA=FIG2);
%RATE(COL1=9, COL2=11,OUTDATA=FIG3);
%RATE(COL1=13, COL2=15,OUTDATA=FIG4);

*----- COMPOSITES -----;
%MACRO COMPS(COL1=, COL2=,N=);
TITLE "----- FIGURE &N -----";
FILENAME COMP DDE "EXCEL|COMPOSITES!R1C&COL1.:R25C&COL2";

%IF N=6 %THEN %DO;
DATA XFIG&N XSIG&N
;
  INFILE    COMP DLM='09'X NOTAB DSD
            LRECL=1000 FIRSTOBS=18 MISSEVER
            ;
  INFORMAT  CATEGORY $10. XVAR1 XBENCH1
            8.
            ;
INPUT      CATEGORY XVAR1 XBENCH1 ;

IF UPCASE(SUBSTR(CATEGORY,1,3))='SIG' THEN OUTPUT XSIG&N;
ELSE IF CATEGORY NE " " THEN OUTPUT XFIG&N;

RUN;

*-- MERGE BY ROW --;
DATA FIG&N;
  MERGE XFIG&N
        XSIG&N(KEEP= CATEGORY XVAR1 RENAME=(XVAR1=SIG1 CATEGORY=SIG));

```

```

BENCH1=ROUND(XBENCH1,1);

XVAR11=PUT(ROUND(XVAR1),3.);

IF SIG1 = 1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER b}');
ELSE IF XVAR1>=0 THEN VAR1=XVAR11;
ELSE IF XVAR1 <0 THEN VAR1='-';

RUN;

%END;

%ELSE %DO;
DATA XFIG&N XSIG&N;
    ;
    INFILE    COMP DLM='09'X NOTAB DSD
              LRECL=1000 FIRSTOBS=18 MISSOEVER
              ;
    INFORMAT  CATEGORY $10. XVAR1 XBENCH1 XVAR2 XBENCH2
              8.
              ;
INPUT       CATEGORY XVAR1 XBENCH1 XVAR2 XBENCH2 ;

IF UPCASE(SUBSTR(CATEGORY,1,3))='SIG' THEN OUTPUT XSIG&N;
ELSE IF CATEGORY NE " " THEN OUTPUT XFIG&N;

RUN;

*-- MERGE BY ROW --;
DATA FIG&N;
    MERGE XFIG&N
          XSIG&N(KEEP= CATEGORY XVAR1 XVAR2 RENAME=(XVAR1=SIG1 XVAR2=SIG2
CATEGORY=SIG));

BENCH1=ROUND(XBENCH1,1);
BENCH2=ROUND(XBENCH2,1);

XVAR11=PUT(ROUND(XVAR1),3.);
XVAR22=PUT(ROUND(XVAR2),3.);

IF SIG1 = 1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER b}');
ELSE IF XVAR1>= 0 THEN VAR1= XVAR11;
ELSE IF XVAR1 < 0 THEN VAR1='-';

IF SIG2 = 1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER a}');
ELSE IF SIG2 = -1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER b}');
ELSE IF XVAR2>=0 THEN VAR2= XVAR22;
ELSE IF XVAR2 <0 THEN VAR2='-';

```

```

RUN;
%END;

PROC PRINT DATA=FIG&N; RUN;

%MEND COMPS;
%COMPS(COL1=1, COL2=5, N=5);
%COMPS(COL1=7, COL2=9, N=6);
%COMPS(COL1=13, COL2=17, N=7);

*8/29/2016 LLU, completely rewrite the following code b/c
SAS cant read superscript;

TITLE '--- PREVENTCIVE CARE TABLE ----';

FILENAME XTAB DDE "EXCEL|Tables!R1C9:R8C23";
DATA TABLE;
  INFILE XTAB DLM='09'X NOTAB DSD MISSOEVER
    LRECL=1000 FIRSTOBS=3
    ;
  INFORMAT XQ $11. M1-M7 SIG1-SIG7 $5. ;
  INPUT XQ M1-M7 SIG1-SIG7 ;

ORDER=_N_;
OUTPUT;

RUN;

DATA TABLE1;
  SET TABLE;

  ARRAY M M1-M7;
  ARRAY SIG SIG1-SIG7;
  ARRAY VAR $22. VAR1-VAR7;

  DO I = 1 TO 7;

    VAR(I)=M(I);
    IF M(I) = '-' THEN VAR(I)='-';
    ELSE IF I <=6 THEN DO; *EXCL 7, NO BENCHMARK FOR THE LAST MEASURE;
      IF SIG(I) = '1' THEN VAR(I)=CATX(' ',M(I),'^{SUPER a}');
      ELSE IF SIG(I) = '-1' THEN VAR(I)=CATX(' ',M(I),'^{SUPER b}');
    END;

  END;

  *DROP I SIG1-SIG7;
RUN;

PROC TRANSPOSE DATA=TABLE1 OUT=TABLE2 PREFIX=O ;
ID ORDER;
VAR VAR1-VAR7;
RUN;

```



```

DATA TABLE1_FINAL;
  SET TABLE2(RENAME=(O3=XY3));

LENGTH NEW_Y3 $20.;

*superscript occupies extra space, this way it looks nicer;
IF XY3 NE '-' THEN DO;
IF INDEX(XY3,'a') > 0 OR INDEX(XY3,'b') > 0 THEN
NEW_Y3=TRIM(LEFT(XY3))||'('||TRIM(LEFT(O4))||')';
ELSE
NEW_Y3=TRIM(LEFT(XY3))||' '||'('||TRIM(LEFT(O4))||')';
END;
ELSE NEW_Y3 = '-';

ARRAY NEWVAR XY1 XY2 XY3 GOAL;
ARRAY OLDVAR O1 O2 NEW_Y3 O5;
  DO I= 1 TO 4;
    NEWVAR(I) = OLDVAR(I);

  END;

CARE= _N_;

KEEP CARE  XY1 XY2 XY3 GOAL;

FORMAT CARE CAREF.;
RUN;

PROC PRINT DATA=TABLE1_FINAL;
RUN;

FILENAME CX DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CX;
  PUT '[CLOSE(FALSE)]';
  PUT '[ERROR(FALSE)]';
  PUT '[QUIT]';
RUN;

*==== PUT THE TABLES INTO RTF =====;

ODS LISTING CLOSE;
ods RTF file="&PATH.\&FOLDER.\APPENDIX_&NAME..RTF" style=Styles.SASWEB STARTPAGE=No;
ODS ESCAPECHAR='^';

ODS RTF STARTPAGE=NOW;

%MACRO RATES(TITL=,N=);

*TITLE  "Appendix, &NAME2.";
TITLE ;

```

```

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^ln &titl";

proc report data=FIG&N center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
style(report)={width=70%}
;

    COLUMN CATEGORY PRIM_ENRLL;
    define CATEGORY / "Year/Benchmark" style={fontWeight=Bold just=C};
    define PRIM_ENRLL / 'Prime enrollee' style={fontWeight=Bold just=C
/*cellwidth=1in*/};

    COMPUTE PRIM_ENRLL;
        IF INDEX(PRIM_ENRLL,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[ FOREGROUND=GREEN
fontstyle=italic');
        ELSE IF INDEX(PRIM_ENRLL,"b" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[ FOREGROUND=RED
fontstyle=italic');
        ENDCOMP;

RUN;

%MEND RATES;
%RATES(TITL=%STR(Figure 1: Health Care Rating),N=1);
%RATES(TITL=%STR(Figure 2: Health Plan Rating),N=2);
%RATES(TITL=%STR(Figure 3: Personal Provider Rating),N=3);
%RATES(TITL=%STR(Figure 4: Specialist Rating),N=4);

*--- FIGURES 5 ----;
ODS RTF STARTPAGE=NOW ;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}Figure 5:
Access Composites";

proc report data=FIG5 center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
/* style(summary)=[color=very light grey backgroundcolor=very light grey
fontfamily="Times Roman" fontsize=1pt textalign=C]
style(report)={width=80%}* / ;

    COLUMN CATEGORY VAR1 BENCH1 VAR2 BENCH2;
    define CATEGORY / "Year" style={fontWeight=Bold just=C cellwidth=1.2in};
    define VAR1 / 'Getting Needed Care' style={fontWeight=Bold just=C
cellwidth=1in};
    define BENCH1 / "Benchmark For * Getting Needed Care" style={fontWeight=Bold
just=C cellwidth=1in};
    define VAR2 / 'Getting Care Quickly ' style={fontWeight=Bold just=C
cellwidth=1in};
    define BENCH2 / "Benchmark For * Getting Care Quickly" style={fontWeight=Bold
just=C cellwidth=1in};

    COMPUTE VAR1;

```

```

        IF INDEX(VAR1,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN
fontstyle=italic');
        ELSE IF INDEX(VAR1,"b" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic');
    ENDCOMP;
    COMPUTE VAR2;
        IF INDEX(VAR2,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN
fontstyle=italic');
        ELSE IF INDEX(VAR2,"b" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic');
    ENDCOMP;

```

RUN;

*--- FIGURES 6 ----;

ODS RTF STARTPAGE=NO;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^lnFigure 6:
Doctor's Communication";

proc report data=FIG6 center nowindows headline wrap split='*' spanrows MISSING

style(header)=[color=black backgroundcolor=#CCD9FF]

/*style(summary)=[color=very light grey backgroundcolor=very light grey

fontfamily="Times Roman" fontsize=1pt textalign=C]

style(report)={width=80%}*/ ;

COLUMN CATEGORY VAR1 BENCH1;

define CATEGORY / "Year" style={fontWeight=Bold just=C cellwidth=1.6in};

define VAR1 / "Doctor's Communication" style={fontWeight=Bold just=C
cellwidth=1.4in};

define BENCH1 / "Benchmark" style={fontWeight=Bold just=C cellwidth=1.4in};

COMPUTE VAR1;

IF INDEX(VAR1,"a")>0

THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN
fontstyle=italic');

ELSE IF INDEX(VAR1,"b")>0

THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic');

ENDCOMP;

RUN;

*--- FIGURES 7 ----;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^lnFigure 7:
Claims/Service Composites";

proc report data=FIG7 center nowindows headline wrap split='*' missing spanrows
MISSING

style(header)=[color=black backgroundcolor=#CCD9FF]

/*style(summary)=[color=very light grey backgroundcolor=very light grey

fontfamily="Times Roman" fontsize=1pt textalign=C]

style(report)={width=80%}*/ ;

COLUMN CATEGORY VAR1 BENCH1 VAR2 BENCH2;

define CATEGORY / "Year" style={fontWeight=Bold just=C cellwidth=1.2in};

define VAR1 / 'Customer Service' style={fontWeight=Bold just=C cellwidth=1in};

```

define BENCH1 / "Benchmark For Customer Service" style={fontWeight=Bold just=C
cellwidth=1in};
define VAR2 / 'Claims Processing' style={fontWeight=Bold just=C cellwidth=1in};
define BENCH2 / "Benchmark For Claims Processing" style={fontWeight=Bold just=C
cellwidth=1in};

COMPUTE VAR1;
  IF INDEX(VAR1,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(VAR1,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
COMPUTE VAR2;
  IF INDEX(VAR2,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(VAR2,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

*--- PREVENTIVE CARE TABLE ----;
ODS RTF STARTPAGE=NOW;
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}Preventive
Care";
proc report data=TABLE1_FINAL center nowindows headline wrap split='*' missing
spanrows MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
;

  COLUMN CARE XY1 XY2 XY3 GOAL;
define CARE / "Type of Care " style={fontWeight=Bold just=L cellwidth=2.4in};
define XY1 / "&Y1." style={fontWeight=Bold just=C cellwidth=.8in};
define XY2 / "&Y2." style={fontWeight=Bold just=C cellwidth=.8in};
define XY3 / "&Y3." style={fontWeight=Bold just=C cellwidth=1in};
define GOAL / "Healthy People 2020 Goal" style={fontWeight=Bold just=C
cellwidth=1in BACKGROUND=#FFE5E5};

COMPUTE XY1;
  IF INDEX(XY1,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(XY1,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

COMPUTE XY2;
  IF INDEX(XY2,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(XY2,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

COMPUTE XY3;
  IF INDEX(XY3,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(XY3,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

```

RUN;

```
*blank in text file is to align the text with table;
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
a. Numbers in green significantly exceed the Healthy People 2020 goal (p< .05).";
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
b. Numbers in red significantly fall short of the Healthy People 2020 goal (p<
.05).";
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
The number of responding beneficiaries for each type of care is in parentheses.";
ODS RTF CLOSE;
ODS LISTING;

%MEND APPENDIX;
```

**I.5.A - Q3FY2017\PROGRAMS\ConsumerWatch\CONSUMERWATCH.SAS - Run CONUS TRICARE
Consumer Watch reports - Run Quarterly.**

```
*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH.SAS
* PURPOSE: CALL CONSUMERWATCH MACRO PROGRAM
*          TO PRODUCE EXCEL TABLE.
*
* WRITTEN: 02/10/2005 BY LUCY LU FOR Q4 2004.
*
* UPDATE: 4/26/2005 FOR Q1 2005.
* UPDATE: 8/4/2005 FOR Q2 2005.
* UPDATE: 12/15/2005 FOR Q4 2005.
* UPDATE: 04/04/2006 FOR Q2 FISCAL YEAR 2006, LUCY Lu. STARTING THIS QUARTER,
*          THE PERIOD IS CHANGED TO FISCAL YEAR.
* UPDATE: 09/01/2006 Lucy Lu FOR FY 3 2006.
* UPDATE: 10/05/2006 Lucy Lu FOR FY 4 2006.
* MODIFIED 7/30/2007 BY LUCY LU
*          UNIFY THE PERIOD MACRO VARIABLES WITH BENEFICIARY REPORT CARDS PROGRAMS
*          CURRNT  ===> PERIOD4
*          CURRNTQ ===> PERIOD4Q
*          PREV1   ===> PERIOD3
*          PREV1Q  ===> PERIOD3Q
*          PREV2   ===> PERIOD2
*          PREV2Q  ===> PERIOD2Q
*          PREV3   ===> PERIOD1
*          PREV3Q  ===> PERIOD1Q
* UPDATED 12/27/2008 BY LUCY LU FOR Q1 FY 2008
*          AUTOMATE THE CONSUMER WATCH REPORT PRODUCTION
* MODIFIED 5/11/09 BY LUCY LU
*          1.MACRO INCLUDE PROGRAM IS MODIFIED BY REMOVING VALUE OF
*            'Courteous and Helpful Office Staff'. THE PROGRAM WILL DELETE
*            RELATED CODE.
*          2.THE EXCEL AND WORD TEMPLATES ARE MODIFIED TO REMOVE THE CHARTS
*            FOR 'Courteous and Helpful Office Staff'.
*          3.MACRO VARIABLES %LET PERIODxQ WILL BE FIXED AT Q4-Q1.
*            NO CHANGE NEEDED IN EACH QUARTER SINCE THEY ARE THE PROXIES FOR
*            DATASET NAMES ONLY.
*
* MODIFIED 7/22/2010 LUCY LU
*          MODIFY MACRO VARIABLES TO REFLECT THE CHANGE OF INCLUDE MACRO
*          PROGRAM. SEE consumerwatch-macro.inc FOR DETAILS.
*          1.CONSolidate USMHS, REGION, SERVICE PROGRAMS INTO ONE SAS PROGRAM.
*          2.REPLACE PERIOD MACRO VARIABLES WITH CURRENTQ AND CURRENTY.
* MODIFIED 1/28/2015 BY LUCY LU.
*          UPDATED THE PATH AFTER MOVING TO SAS SERVER
* MODIFIED 3/16/2015 BY LUCY LU,
*          CREATED NEW MACRO VAR TO RECODE 9999 TO MISSING
*          FOR Q4 DATA--WAS MISSING IN THE PREVIOUS REPORT BUT CHANGED
*          9999 THIS QUARTER THUS ARTIFICIALLY INFLATE VALUE IN THE CHARTS
* MODIFIED 7/26/2016 BY KATHY BENCIO, REMOVED * FROM VALUES
*
* INPUT  : DATA FROM CONSUMER REPORTS: ..\..\PROGRAMS\LOADWEB\TOTAL_Q.SAS7BDAT
*
* OUTPUT : INTO EXCEL SPREADSHEET
*
* PROGRAM TO CALL: CONSUMERWATCH-MACRO.INC
```

```

*****;
OPTIONS MPRINT;

LIBNAME CURNTR '..\Loadweb';

*starting 2006, the period is changed to fiscal year, LLU 4/5/06;
%LET CURRENTY=2017;          *CURRENT FISCAL YEAR;
%LET CURRENTQ=3;            *CURRENT FISCAL QUARTER;
*%LET Q4MISSING=July, 2015; *ADDED TO RESET Q4 VALUE FROM 9999 TO MISSING;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&CURRENTQ.FY&CURRENTY.\Programs\ConsumerWatch;

TITLE "DOD CONSUMER WATCH Q&CURRENTQ FY &CURRENTY";

%INCLUDE "CONSUMERWATCH_MACRO.INC";

*%RUNCW(AREA=USA MHS,FOLDER=USAMHS);
%RUNCW(AREA=Overseas Pacific,FOLDER=Pacific);
%RUNCW(AREA=NORTH,FOLDER=North);
%RUNCW(AREA=JOINT SERVICE,FOLDER=JointService);
%RUNCW(AREA=Overseas Europe,FOLDER=Europe);
%RUNCW(AREA=SOUTH,FOLDER=South);
%RUNCW(AREA=NAVY,FOLDER=Navy);
%RUNCW(AREA=AIR FORCE,FOLDER=AirForce);
%RUNCW(AREA=ARMY,FOLDER=Army);
%RUNCW(AREA=WEST,FOLDER=West);

```

I.5.B - Q3FY2017\PROGRAMS\ConsumerWatch\CONSUMERWATCH_MACRO.INC - Produce numbers for quarterly Consumer Watch reports.

```

*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH-MACRO.INC
* PURPOSE: To produce numbers that go into data sheet in Excel to produce graphs
*          for regional consumer watch
* AUTHOR  : MIKI SATAKE
* DATE    : 4/24/01
* UPDATED: 7/16/01 FOR QUARTER 2 BY NATALIE JUSTH
* UPDATED: 10/16/01 FOR QUARTER 3 BY NATALIE JUSTH
* UPDATED: 1/11/02 FOR QUARTER 4 BY NATALIE JUSTH
* UPDATED AND RENAMED: 4/9/02 FOR QUARTER 1 2002 BY NATALIE JUSTH
* UPDATED: 7/5/02 FOR QUARTER 2 2002 BY NATALIE JUSTH
* UPDATED: 7/15/02 FOR QUARTER 3 2002 BY NATALIE JUSTH
* UPDATED: 11/12/02 FOR QUARTER 4 2002 BY NATALIE JUSTH
* UPDATED: 4/3/03 FOR QUARTER 1 2003 BY NATALIE JUSTH
* UPDATED: 5/19/03 FOR QUARTER 2 2003 BY NATALIE JUSTH
* UPDATED: 8/28/03 FOR QUARTER 3 2003 BY NATALIE JUSTH
* UPDATED: 11/14/03 FOR QUARTER 4 2003 BY NATALIE JUSTH
* UPDATED: 05/18/2004 FOR QUARTER 1 2004 BY KEITH RATHBUN
* UPDATED: 06/30/2004 FOR QUARTER 2 2004 BY LUCY LU
* UPDATED: 06/30/2004 FOR QUARTER 3 2004 BY LUCY LU. CHANGING XREGION TO XTNEEXREG.
* UPDATED: 10/07/2004 BY LUCY LU. ADD THE CODE TO COMPARE CONSUMER WATCH
*          WITH REPORT CARDS IN SCORES AND SIGNIFICANCE.*
* MODIFIED 2/10/05 BY LUCY LU:
*          1). CREATE UNIVERSAL MACRO PROGRAM BASED ON PROGRAM CONSUMERWATCH-R.SAS
*             TO ELIMINATE REDUNDANCY AND INCREASE THE EFFECTIVENESS OF PROGRAMMING.
*          2). ADD ADDITIONAL PREVENTION MEASURE "SMOKING CESSATION"
*             INTO PREVENTIVE CARE TABLE.
* MODIFIED 06/2/2005 BY LUCY LU FOR Q1 2005:
*          1). REMOVE CHOLESTEROL MEASUREMENT AND ADD BMI MEASUREMENT
*          2). COMMENT OUT DISENROLL CODE--NO DISENROLL DATA IN Q1 2005
*          3). ADD SPECIALIST RATING.
* MODIFIED 11/16/2006 BY LUCY LU FOR FY Q4 2006
*          ADD PURCHASE CARE VERSION-- CHANGE PRIME ENROLLEE TO
*          Enrollees with Civilian PCM.
* MODIFIED 6/4/2007 BY LUCY LU. UNIFY THE MACRO PROGRAMS FOR CONSUMER WATCH.
*          !! NEED TO DEFINE MACRO VARIABLE &POP IN SAS PROGRAMS:
*          DIRECT CARE CONSUMER WATCH: &POP=='Prime Enrollees'
*          PURCHASE CARE CONSUMER WATCH: &POP=='Enrollees with Civilian PCM'
* MODIFIED 7/30/2007 BY LUCY LU
*          UNIFY THE PERIOD MACRO VARIABLES WITH BENEFICIARY REPORT CARDS PROGRAMS
*          CURRNT  ===> PERIOD4
*          CURRNTQ ===> PERIOD4Q
*          PREV1   ===> PERIOD3
*          PREV1Q  ===> PERIOD3Q
*          PREV2   ===> PERIOD2
*          PREV2Q  ===> PERIOD2Q
*          PREV3   ===> PERIOD1
*          PREV3Q  ===> PERIOD1Q
* MODIFIED 5/11/09 BY LUCY LU
*          1. STARTING THIS QUARTER, THE DATA DOES NOT INCLUDE THE VALUE OF
*             'Courteous and Helpful Office Staff'. THE PROGRAM WILL DELETE
*             RELATED CODE.
*          2. DELETED MACRO VAR &VAL AND REPLACED BY EXISTING MACRO VAR &AREA.

```



```

*
* MODIFIED 7/22/2010 BY LUCY LU
*     1. AUTOMATE PERIOD (QAURTER/YEAR) TO MINIMIZE POSSIBLE ERROR
*     2. ADD MACRO TO MINIMIZE EXCEL WAITING, REDUCE PROGRAM
*         RUNNING TIME
*     3. ELIMINATE UNNECESSARY MACRO VARIABLES PERIOD1Q-PERIOD4Q AND
*         CONSOLIDATE MACRO PROGRAM
*     4. REPLACE MACRO VAR &POP WITH 'Prime Enrollees'.
*
* MODIFIED 4/8/2014 BY LUCY LU
*     MODIFIED CODE FOR 508 COMPLIANCE
*     1. CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4
*     2  CREATE NEW VAR WITH ASTERISK FOR PREVENTIVE CARE TABLE
*     3. RECODED ALL MISSING DATA TO DASH '-'
* MODIFIED 3/16/2015 BY LUCY LU, RECODED 9999 TO MISSING
*     RECODED Q4 DATA--WAS MISSING IN THE PREVIOUS REPORT BUT CHANGED
*     9999 THIS QUARTER THUS ARTIFICIALLY INFLATE VALUE IN THE CHARTS
* MODIFIED 7/26/2016 BY KATHY BENCIO, REMOVED * FROM VALUES
*
* INPUT  : DATA FROM CONSUMER REPORTS:..\..\PROGRAMS\LOADWEB\TOTAL_Q.SAS7BDAT
*
* OUTPUT : INTO EXCEL SPREADSHEET
*****;

OPTIONS PS=60 LS=120 ERRORS=2 NOCENTER NOFMterr NOXWAIT NOXSYNC SPOOL;

*LLU 7/21/2010--AUTOMATING PERIOD, MINIMIZE POSSIBLE ERROR;
DATA M1;

*Set the first month of each quarter with order of running quarter 1 in FY;
DO MONTH='October', 'July', 'April', 'January';
    OUTPUT;
END;
RUN;

%GLOBAL PERIOD4 PERIOD3 PERIOD2 PERIOD1;
DATA _NULL_;
    SET M1;

INDEX=_N_;
IF &CURRENTQ =1 THEN DO;
    ORDER=INDEX; YR= &CURRENTY -1;
END;
IF &CURRENTQ = 2 THEN DO;
    IF INDEX = 4 THEN DO; ORDER=1; YR=&CURRENTY; END; ELSE
    IF INDEX < 4 THEN DO; ORDER = INDEX+1; YR=&CURRENTY-1; END;
END;
IF &CURRENTQ = 3 THEN DO;
    IF INDEX >=3 THEN DO; ORDER=INDEX-2; YR=&CURRENTY; END; ELSE
    IF INDEX < 3 THEN DO; ORDER=INDEX+2; YR=&CURRENTY-1; END;
END;
IF &CURRENTQ = 4 THEN DO;
    IF INDEX IN (2,3,4) THEN DO; ORDER=INDEX-1; YR=&CURRENTY; END; ELSE
    IF INDEX =1 THEN DO; ORDER=4; YR=&CURRENTY-1; END; /*ELSE
    IF INDEX =4 THEN DO; ORDER=3; YR=&CURRENTY; END;*/
END;

LENGTH PERIOD $15;

```

```

PERIOD=TRIM(LEFT(MONTH))||','||' '||(PUT(YR,4.));
IF ORDER=1 THEN CALL SYMPUT('PERIOD4', TRIM(LEFT(PERIOD)));
IF ORDER=2 THEN CALL SYMPUT('PERIOD3', TRIM(LEFT(PERIOD)));
IF ORDER=3 THEN CALL SYMPUT('PERIOD2', TRIM(LEFT(PERIOD)));
IF ORDER=4 THEN CALL SYMPUT('PERIOD1', TRIM(LEFT(PERIOD)));

RUN;

%PUT PERIOD4 = &PERIOD4(current quarter);
%PUT PERIOD3 = &PERIOD3;
%PUT PERIOD2 = &PERIOD2;
%PUT PERIOD1 = &PERIOD1;

*3/16/2015 BY LUCY LU, RECODED 9999 TO MISSING;
DATA TOTAL_Q;
  SET CURNTR.TOTAL_Q;

  *IF TIMEPD = "&Q4MISSING" AND SCORE=9999 THEN SCORE=.;
RUN;

%MACRO RUNCW (AREA=, /* Region/Service/conus */
              FOLDER=, /* Folder containing excel template */
              CURRENT=TOTAL_Q
            );

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;

  LENGTH FID RC START STOP TIME 8;
  FID = FOPEN('CMDS' , 'S');
  IF (FID LE 0) THEN DO;
    RC = SYSTEM('START EXCEL');
    START = DATETIME();
    STOP = START + 10;
    DO WHILE (FID LE 0);
      FID = FOPEN('CMDS' , 'S');
      TIME = DATETIME();
      IF (TIME GE STOP) THEN FID = 1;
    END;
  END;
  RC = FCLOSE(FID);
RUN;

*LLU 7/21/2010--DETECTING AVAILABILITY OF EXCEL, MINIMIZE WAITING TIME;
%MACRO SETUP;

DATA _NULL_;
  SINGLE=" ";
  DOUBLE=" ";

LENGTH OPENXLS SAVEXLS $150;
  OPENXLS=SINGLE||"[OPEN("||DOUBLE||"&PATH.\TEMPLATE.XLSB"||DOUBLE||")]"||SINGLE;

```

```

SAVEEXLS=SINGLE || "[SAVE.AS( || DOUBLE || "&PATH.\&FOLDER.\&FOLDER..XLSB" || DOUBLE || ")]" || S
INGLE;

CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
CALL SYMPUT ("SAVEEXLS",TRIM(SAVEEXLS));

RUN;

%MEND SETUP;
%SETUP;

DATA _NULL_;

FILE CMDS;
PUT &OPENXLS;
X=SLEEP(5);
PUT '[ERROR(FALSE)]';
PUT &SAVEEXLS;
PUT '[app.minimize()]';

RUN;

TITLE2 "&AREA.";

/* This macro pulls data from the specified dataset to be used in the Consumer Watch
*/
%MACRO GETDATA (DATASET=, /* Current quarter data set */
MAJGRP=, /* Value of variable MAJGRP */
REGION=, /* Value of variable REGION */
REGCAT=, /* Value of variable REGCAT */
BENEFIT=, /* Value of variable BENEFIT */
BENTYPE=, /* Value of variable BENTYPE */
TIMEPD=, /* Value of variable TIMEPD */
OUTDATA= /* Name of output data set */
);
PROC FREQ NOPRINT DATA=&DATASET;
WHERE MAJGRP = &MAJGRP
AND REGION IN &REGION
AND REGCAT IN &REGCAT
AND BENEFIT IN &BENEFIT
AND BENTYPE = &BENTYPE
AND TIMEPD = &TIMEPD;
TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SCORE*N_OBS*N_WGT*SIG/
OUT=&OUTDATA(DROP=COUNT PERCENT);
RUN;
%MEND GETDATA;

/* This macro re-calculates SCORE based on the quarterly benchmark */
%MACRO NEWSCORE (FIGURE=); /* Figure number in consumer watch reports;
*/

*-----
7/20/2010 LLu, eliminate macro variables PERIOD1Q-PERIOD4Q and
consolidate the macro code:
Figx_1=current quarter

```

```
Figx_2=previous quarter 1
Figx_3=previous quarter 2
Figx_4=previous quarter 3
```

```
-----;
%DO QUARTER = 1 %TO 4;
```

```
DATA FIG&FIGURE._&QUARTER FIGB_&QUARTER(KEEP=SCORE N);
  SET FIG&FIGURE._&QUARTER;
N=1;
  IF REGION='Benchmark' THEN OUTPUT FIGB_&QUARTER;
  ELSE OUTPUT FIG&FIGURE._&QUARTER;
```

```
RUN;
```

```
/*ADD CODE HERE TO PRESERVE ABOVE DATASET FOR LATER COMPARISON. LLU 10/7/04*/
```

```
DATA CFIG&FIGURE._&QUARTER;
  SET FIG&FIGURE._&QUARTER;
```

```
KEEP MAJGRP REGION BENEFIT BENTYPE TIMEPD SCORE SIG;
RUN;
```

```
DATA FIG&FIGURE._&QUARTER(DROP=RSCORE);
  MERGE FIGB_&QUARTER(RENAME=(SCORE=RSCORE))
    FIG&FIGURE._&QUARTER;
```

```
BY N;
  * SCORE=SCORE-RSCORE;
```

```
RUN;
```

```
%END;
```

```
DATA FIG&FIGURE(DROP=BSCORE);
  SET BENCH FIG&FIGURE._1 FIG&FIGURE._2 FIG&FIGURE._3 FIG&FIGURE._4;
  RETAIN BSCORE;
  IF REGION = 'Benchmark' THEN DO;
    ROW = 3;
    BSCORE=SCORE;
  END;
  ELSE IF TIMEPD = "&PERIOD1" THEN DO;
    ROW = 4;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD2" THEN DO;
    ROW = 5;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD3" THEN DO;
    ROW = 6;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD4" THEN DO;
    ROW=7;
  *   SCORE=SCORE+BSCORE;
  END;
```

```

COL2 = SCORE;    *3/4/08 LLu, increase the score by 100 to align with fig. 5-10;

COL3 = SIG;

*3/28/2014 CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4;
IF COL3 IN (1, -1) THEN NEWCOL2=CATS("*",PUT(ROUND(COL2,1),8.));
ELSE IF COL2 >0 THEN NEWCOL2=PUT(ROUND(COL2,1),8.);

* FILL THE MISSING SIG FOR Q4 DATA, WHICH CAUSES PROBLEM IN CHART;
IF COL3 =. THEN COL3=0;

RUN;
PROC SORT;
  BY ROW;
RUN;

%MEND NEWSCORE;

*****
* FIGURE 1: Health Care Rating
*****;
TITLE2 'Figure 1: Health Care Rating';
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('Health Care'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD4"),
  OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Care'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD4"),
  OUTDATA=FIG1_1);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Care'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD3"),
  OUTDATA=FIG1_2);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Care'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD2"),
  OUTDATA=FIG1_3);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),

```

```

        BENEFIT=('Health Care'),
        BENTYPE=('Composite'),
        TIMEPD=(" &PERIOD1"),
        OUTDATA=FIG1_4);

%NEWSCORE (FIGURE=1);

*****
* DDE LINK
*****;
FILENAME TBL DDE "EXCEL|RATINGS!R18C2:R22C3";

DATA _NULL_;
  SET FIG1;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 2: Health Plan Rating
*****;
TITLE2 'Figure 2: Health Plan Rating';
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('Health Plan'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD4"),
  OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Plan'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD4"),
  OUTDATA=FIG2_1);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Plan'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD3"),
  OUTDATA=FIG2_2);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=(" &AREA", 'Benchmark'),
  REGCAT=(" &AREA", 'Benchmark'),
  BENEFIT=('Health Plan'),
  BENTYPE=('Composite'),
  TIMEPD=(" &PERIOD2"),
  OUTDATA=FIG2_3);
%GETDATA (DATASET=&CURRENT,

```

```

MAJGRP="Prime Enrollees",
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Health Plan'),
BENTYPE=('Composite'),
TIMEPD=("&PERIOD1"),
OUTDATA=FIG2_4);

```

```
%NEWSCORE (FIGURE=2);
```

```

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|RATINGS!R18C6:R22C7";

```

```

DATA _NULL_;
  SET FIG2;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

```

```

*****
* FIGURE 3: Personal Provider Rating
*****;

```

```
TITLE2 'Figure 3: Personal Provider Rating';
```

```
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('Personal Doctor'),
  BENTYPE=('Composite'),
  TIMEPD=("&PERIOD4"),
  OUTDATA=BENCH);
```

```
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=("&AREA",'Benchmark'),
  REGCAT=("&AREA",'Benchmark'),
  BENEFIT=('Personal Doctor'),
  BENTYPE=('Composite'),
  TIMEPD=("&PERIOD4"),
  OUTDATA=FIG3_1);
```

```
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=("&AREA",'Benchmark'),
  REGCAT=("&AREA",'Benchmark'),
  BENEFIT=('Personal Doctor'),
  BENTYPE=('Composite'),
  TIMEPD=("&PERIOD3"),
  OUTDATA=FIG3_2);
```

```
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=("&AREA",'Benchmark'),
  REGCAT=("&AREA",'Benchmark'),
  BENEFIT=('Personal Doctor'),
  BENTYPE=('Composite'),
```

```

        TIMEPD=("&PERIOD2"),
        OUTDATA=FIG3_3);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA", 'Benchmark'),
        REGCAT=("&AREA", 'Benchmark'),
        BENEFIT=('Personal Doctor'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD1"),
        OUTDATA=FIG3_4);

%NEWSCORE (FIGURE=3);

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|RATINGS!R18C10:R22C11";

DATA _NULL_;
    SET FIG3;
    FILE TBL NOTAB LRECL=200;
    X=SLEEP(.1);
    PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 4: Specialist Rating--added for Q1 2005, LLu 6/2/05
*****;
TITLE2 'Figure 4: Specialist Rating';
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=('Benchmark'),
        REGCAT=('Benchmark'),
        BENEFIT=('Specialty Care'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD4"),
        OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA", 'Benchmark'),
        REGCAT=("&AREA", 'Benchmark'),
        BENEFIT=('Specialty Care'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD4"),
        OUTDATA=FIG4_1);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA", 'Benchmark'),
        REGCAT=("&AREA", 'Benchmark'),
        BENEFIT=('Specialty Care'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD3"),
        OUTDATA=FIG4_2);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA", 'Benchmark'),
        REGCAT=("&AREA", 'Benchmark'),

```



```

        BENEFIT=('Specialty Care'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD2"),
        OUTDATA=FIG4_3);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION("&AREA", 'Benchmark'),
        REGCAT("&AREA", 'Benchmark'),
        BENEFIT=('Specialty Care'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD1"),
        OUTDATA=FIG4_4);

%NEWSCORE (FIGURE=4);

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|RATINGS!R18C14:R22C15";

DATA _NULL_;
  SET FIG4;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL2 '09'X COL3 /*'09'X NEWCOL2*/;
RUN;

*****
* FIGURE 5: Access Composites
*****;
TITLE2 'Figure 5: Access Composites';
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION('Benchmark'),
        REGCAT('Benchmark'),
        BENEFIT=('Getting Needed Care', 'Getting Care Quickly'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD4"),
        OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION("&AREA", 'Benchmark'),
        REGCAT("&AREA", 'Benchmark'),
        BENEFIT=('Getting Needed Care', 'Getting Care Quickly'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD4"),
        OUTDATA=FIG5_1);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION("&AREA", 'Benchmark'),
        REGCAT("&AREA", 'Benchmark'),
        BENEFIT=('Getting Needed Care', 'Getting Care Quickly'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD3"),
        OUTDATA=FIG5_2);
%GETDATA (DATASET=&CURRENT,

```

```

        MAJGRP="Prime Enrollees",
        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Getting Needed Care','Getting Care Quickly'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD2"),
        OUTDATA=FIG5_3);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Getting Needed Care','Getting Care Quickly'),
        BENTYPE=('Composite'),
        TIMEPD=("&PERIOD1"),
        OUTDATA=FIG5_4);

*MOD 7/20/2010 LLU;

%MACRO COMPSCORE (FIGNUM=);      *Use macro for figures 5, 6, and 7;

%DO QUARTER = 1 %TO 4;

DATA FIG&FIGNUM._&QUARTER FIGB_&QUARTER (KEEP=SCORE BENEFIT SIG);
    SET FIG&FIGNUM._&QUARTER;
    IF REGION = 'Benchmark' THEN OUTPUT FIGB_&QUARTER;
    ELSE OUTPUT FIG&FIGNUM._&QUARTER;
RUN;
PROC SORT DATA=FIG&FIGNUM._&QUARTER;
    BY BENEFIT;
RUN;
PROC SORT DATA=FIGB_&QUARTER;
    BY BENEFIT;
RUN;

/*ADD CODE HERE TO PRESERVE THE SCORES IN CONUS_Q DATASET FOR LATER COMPARISON. LLU
10/7/04*/
DATA CFIG&FIGNUM._&QUARTER;
    SET FIG&FIGNUM._&QUARTER;

KEEP MAJGRP REGION BENEFIT BENTYPE TIMEPD SCORE SIG;
RUN;

DATA FIG&FIGNUM._&QUARTER(DROP=RSCORE);
    MERGE FIGB_&QUARTER(RENAME=(SCORE=RSCORE))
        FIG&FIGNUM._&QUARTER;
    BY BENEFIT;
*    SCORE=SCORE-RSCORE;
RUN;
%END;

%MEND COMPSCORE;

%COMPSCORE (FIGNUM=5);

/*LLU 10/8/04, TO PRESERVE KEY VARS FOR LATER COMPARISON*/
DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))

```

```

COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
COL4(DROP=SCORE RENAME=(SCORE1=COL4))
COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
COL6(KEEP=ROW SIG RENAME=(SIG=COL6))
COL7(KEEP=ROW SIG RENAME=(SIG=COL7))
;
SET BENCH FIG5_1 FIG5_2 FIG5_3 FIG5_4;
BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
  BSCORE=SCORE;
  ROW = 18;
  SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
  ROW = 18;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
  ROW = 19;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
  ROW = 20;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
  ROW = 21;
*   SCORE=BSCORE+SCORE;
  SCORE1 = SCORE;
END;

IF (BENEFIT = 'Getting Needed Care' AND REGION NE 'Benchmark') THEN OUTPUT COL2
COL6;
IF (BENEFIT = 'Getting Needed Care' AND REGION = 'Benchmark') THEN OUTPUT COL3;
IF (BENEFIT = 'Getting Care Quickly' AND REGION NE 'Benchmark') THEN OUTPUT COL4
COL7;
IF (BENEFIT = 'Getting Care Quickly' AND REGION = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 5. LLU 10/7/04*/

DATA FIG5A;

```

```
MERGE COL2 COL6;
BY ROW;
RUN;
```

```
DATA FIG5B;
MERGE COL4 COL7;
BY ROW;
RUN;
```

```
DATA FIG5AB;
SET FIG5A FIG5B;
BY ROW;
RUN;
```

```
DATA FIG5;
MERGE COL2 COL3 COL4(KEEP=ROW COL4)
COL5 COL6 COL7;
BY ROW;
RUN;
```

```
*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C2:R21C2";
```

```
DATA _NULL_;
SET FIG5;
FILE TBL NOTAB LRECL=200;
X=SLEEP(.1);
PUT COL2;
RUN;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C3:R18C3";
```

```
DATA _NULL_;
SET FIG5;
FILE TBL NOTAB LRECL=200;
X=SLEEP(.1);
PUT COL3;
RUN;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C4:R21C4";
```

```
DATA _NULL_;
SET FIG5;
FILE TBL NOTAB LRECL=200;
X=SLEEP(.1);
PUT COL4;
RUN;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C5:R18C5";
```

```
DATA _NULL_;
SET FIG5;
FILE TBL NOTAB LRECL=200;
```

```

X=SLEEP(.1);
PUT COL5;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R23C2:R26C4";

```

```

DATA _NULL_;
  SET FIG5;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL6 '09'X '09'X COL7;
RUN;

```

```

*****
* FIGURE 6: Office Composites
*****;
/*LLU 5/11/09, DELETE datasets COL2,3,6 WITH SCORES OF
  'Courteous and Helpful Office Staff'*/

```

```

TITLE2 'Figure 6: Office Composites';
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  BENTYPE=('Composite'),
  TIMEPD("&PERIOD4"),
  OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION("&AREA",'Benchmark'),
  REGCAT("&AREA",'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  BENTYPE=('Composite'),
  TIMEPD("&PERIOD4"),
  OUTDATA=FIG6_1);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION("&AREA",'Benchmark'),
  REGCAT("&AREA",'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  BENTYPE=('Composite'),
  TIMEPD("&PERIOD3"),
  OUTDATA=FIG6_2);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION("&AREA",'Benchmark'),
  REGCAT("&AREA",'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  BENTYPE=('Composite'),
  TIMEPD("&PERIOD2"),
  OUTDATA=FIG6_3);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION("&AREA",'Benchmark'),
  REGCAT("&AREA",'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  BENTYPE=('Composite'),

```

```

        TIMEPD=( "&PERIOD1" ),
        OUTDATA=FIG6_4);

%COMPSCORE (FIGNUM=6);

/*LLU 10/8/04, TO PRESERVE KEY VARS FOR LATER COMPARISON*/
DATA COL4(DROP=SCORE RENAME=(SCORE1=COL4))
      COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
      COL7(KEEP=ROW SIG RENAME=(SIG=COL7))
      ;
SET BENCH FIG6_1 FIG6_2 FIG6_3 FIG6_4;
BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
    BSCORE=SCORE;
    ROW = 18;
    SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
    ROW = 18;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
    ROW = 19;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
    ROW = 20;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
    ROW = 21;
*    SCORE=BSCORE+SCORE;
    SCORE1 = SCORE;
END;

IF (BENEFIT = 'How Well Doctors Communicate' AND REGION NE 'Benchmark') THEN
OUTPUT COL4 COL7;
IF (BENEFIT = 'How Well Doctors Communicate' AND REGION = 'Benchmark') THEN OUTPUT
COL5;

RUN;

PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

DATA FIG6;
MERGE COL4(KEEP=ROW COL4)
      COL5 COL7;

```

```
BY ROW;
RUN;
```

```
/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 6. LLU 10/7/04*/
```

```
DATA FIG6AB;
  MERGE COL4 COL7;
  BY ROW;
RUN;
```

```
*****
* DDE LINK (EXCEL file has to be open )
*****;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C9:R21C9";
```

```
DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL4;
RUN;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C10:R18C10";
```

```
DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL5;
RUN;
```

```
FILENAME TBL DDE "EXCEL|COMPOSITES!R23C9:R26C9";
```

```
DATA _NULL_;
  SET FIG6;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL7;
RUN;
```

```
*****
* FIGURE 7: Claims/Service Composites
*****;
```

```
TITLE2 'Figure 7: Claims/Service Composites';
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('Customer Service','Claims Processing'),
  BENTYPE=('Composite'),
  TIMEPD("&PERIOD4"),
  OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
  MAJGRP="Prime Enrollees",
  REGION("&AREA",'Benchmark'),
```

```

        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Customer Service','Claims Processing'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD4"),
        OUTDATA=FIG7_1);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Customer Service','Claims Processing'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD3"),
        OUTDATA=FIG7_2);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Customer Service','Claims Processing'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD2"),
        OUTDATA=FIG7_3);
%GETDATA (DATASET=&CURRENT,
        MAJGRP="Prime Enrollees",
        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('Customer Service','Claims Processing'),
        BENTYPE=('Composite'),
        TIMEPD("&PERIOD1"),
        OUTDATA=FIG7_4);

%COMPSCORE (FIGNUM=7);

/*LLU 10/8/04, TO PRESERVE KEY VARS FOR LATER COMPARISON*/
DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
      COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
      COL4(DROP=SCORE RENAME=(SCORE1=COL4))
      COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
      COL6(KEEP=ROW SIG RENAME=(SIG=COL6))
      COL7(KEEP=ROW SIG RENAME=(SIG=COL7));
SET BENCH FIG7_1 FIG7_2 FIG7_3 FIG7_4;
BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
    BSCORE=SCORE;
    ROW = 18;
    SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
    ROW = 18;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
    ROW = 19;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;

```



```

END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
  ROW = 20;
  * SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
  ROW = 21;
  * SCORE=BSCORE+SCORE;
  SCORE1 = SCORE;
END;

IF (BENEFIT = 'Customer Service' AND REGION NE 'Benchmark') THEN OUTPUT COL2 COL6;
IF (BENEFIT = 'Customer Service' AND REGION = 'Benchmark') THEN OUTPUT COL3;
IF (BENEFIT = 'Claims Processing' AND REGION NE 'Benchmark') THEN OUTPUT COL4
COL7;
IF (BENEFIT = 'Claims Processing' AND REGION = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 7. LLU 10/7/04*/

DATA FIG7A;
  MERGE COL2 COL6;
  BY ROW;
RUN;

DATA FIG7B;
  MERGE COL4 COL7;
  BY ROW;
RUN;

DATA FIG7AB;
  SET FIG7A FIG7B;
  BY ROW;
RUN;

DATA FIG7;
  MERGE COL2 COL3 COL4(KEEP=ROW COL4) COL5 COL6 COL7;
  BY ROW;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|COMPOSITES!R18C14:R21C14";

```

```

DATA _NULL_;
  SET FIG7;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL2;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C15:R18C15";

```

```

DATA _NULL_;
  SET FIG7;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL3;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C16:R21C16";

```

```

DATA _NULL_;
  SET FIG7;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL4;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C17:R18C17";

```

```

DATA _NULL_;
  SET FIG7;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL5;
RUN;

```

```

FILENAME TBL DDE "EXCEL|COMPOSITES!R23C14:R26C16";

```

```

DATA _NULL_;
  SET FIG7;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT COL6 '09'X '09'X COL7;
RUN;

```

```

*****
* TABLE 1: Preventive Care
*****;
/*3/16/2015 CHANGED DATA FROM &CURENT TO CURNTR.TOTAL_Q TO KEEP ROW FROM COLAPSE*/
PROC FREQ NOPRINT DATA=CURNTR.TOTAL_Q;
  WHERE MAJGRP IN ("Prime Enrollees",'Benchmark')
    AND REGION = "&AREA"
    AND REGCAT = "&AREA"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit')
    AND TIMEPD = "&PERIOD4";
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
  OUT=TABLE1_1(DROP=COUNT PERCENT);

```

```

TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*N_OBS/ OUT=TAB2_1(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=CURNTR.TOTAL_Q;
WHERE MAJGRP = "Prime Enrollees"
AND REGION = "&AREA"
AND REGCAT = "&AREA"
AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
AND TIMEPD = "&PERIOD3";
TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_2(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=CURNTR.TOTAL_Q;
WHERE MAJGRP = "Prime Enrollees"
AND REGION = "&AREA"
AND REGCAT = "&AREA"
AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
AND TIMEPD = "&PERIOD2";
TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_3(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=CURNTR.TOTAL_Q;
WHERE MAJGRP = "Prime Enrollees"
AND REGION = "&AREA"
AND REGCAT = "&AREA"
AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
AND TIMEPD = "&PERIOD1";
TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_4(DROP=COUNT PERCENT);
RUN;
DATA TAB1_1;
SET TAB1_1;
IF MAJGRP = 'Benchmark' THEN DO;
ROW=42;
IF BENTYPE='Mammography' THEN COL2=SCORE;
ELSE IF BENTYPE='Pap Smear' THEN COL3=SCORE;
ELSE IF BENTYPE='Hypertension' THEN COL4=SCORE;
ELSE IF BENTYPE='Prenatal Care' THEN COL5=SCORE;
ELSE IF BENTYPE='Percent Not Obese' THEN COL6=SCORE;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN COL7=SCORE;
ELSE IF BENTYPE = 'Counselled To Quit' THEN COL8=SCORE;
END;
ELSE DO;
ROW = 40;
IF BENTYPE='Mammography' THEN DO;
COL2=SCORE;
COL9=SIG;
END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
COL3=SCORE;
COL10=SIG;
END;
END;

```

```

ELSE IF BENTYPE='Hypertension' THEN DO;
    COL4=SCORE;
    COL11=SIG;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
    COL5=SCORE;
    COL12=SIG;
END;
ELSE IF BENTYPE='Percent Not Obese' THEN DO;
    COL6=SCORE;
    COL13=SIG;
END;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
    COL7=SCORE;
    COL14=SIG;
END;
ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
    COL8=SCORE;
    COL15=SIG;
END;
END;
PROC SORT;
BY ROW;
RUN;
DATA TAB2_1;
SET TAB2_1;
ROW=41;
IF MAJGRP="Prime Enrollees";
IF BENTYPE='Mammography' THEN COL2=N_OBS;
ELSE IF BENTYPE='Pap Smear' THEN COL3=N_OBS;
ELSE IF BENTYPE='Hypertension' THEN COL4=N_OBS;
ELSE IF BENTYPE='Prenatal Care' THEN COL5=N_OBS;
ELSE IF BENTYPE='Percent Not Obese' THEN COL6=N_OBS;
ELSE IF BENTYPE='Non-Smoking Rate' THEN COL7=N_OBS;
ELSE IF BENTYPE='Counselled To Quit' THEN COL8=N_OBS;
PROC SORT;
BY ROW;
RUN;
DATA TAB1_2;
SET TAB1_2;
ROW=39;
IF BENTYPE='Mammography' THEN DO;
    COL2=SCORE;
    COL9=SIG;
END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
    COL3=SCORE;
    COL10=SIG;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
    COL4=SCORE;
    COL11=SIG;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
    COL5=SCORE;
    COL12=SIG;
END;
ELSE IF BENTYPE='Percent Not Obese' THEN DO;

```

```

        COL6=SCORE;
        COL13=SIG;
    END;
    ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
        COL7=SCORE;
        COL14=SIG;
    END;
    ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
        COL8=SCORE;
        COL15=SIG;
    END;
PROC SORT;
BY ROW;
RUN;
DATA TAB1_3;
SET TAB1_3;
ROW=38;
    IF BENTYPE='Mammography' THEN DO;
        COL2=SCORE;
        COL9=SIG;
    END;
    ELSE IF BENTYPE='Pap Smear' THEN DO;
        COL3=SCORE;
        COL10=SIG;
    END;
    ELSE IF BENTYPE='Hypertension' THEN DO;
        COL4=SCORE;
        COL11=SIG;
    END;
    ELSE IF BENTYPE='Prenatal Care' THEN DO;
        COL5=SCORE;
        COL12=SIG;
    END;
    ELSE IF BENTYPE='Percent Not Obese' THEN DO;
        COL6=SCORE;
        COL13=SIG;
    END;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
    COL7=SCORE;
    COL14=SIG;
END;
ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
    COL8=SCORE;
    COL15=SIG;
END;
PROC SORT;
BY ROW;

RUN;
DATA TAB1_4;
SET TAB1_4;
ROW=37;
    IF BENTYPE='Mammography' THEN DO;
        COL2=SCORE;
        COL9=SIG;
    END;
    ELSE IF BENTYPE='Pap Smear' THEN DO;
        COL3=SCORE;

```

```

        COL10=SIG;
    END;
    ELSE IF BENTYPE='Hypertension' THEN DO;
        COL4=SCORE;
        COL11=SIG;
    END;
    ELSE IF BENTYPE='Prenatal Care' THEN DO;
        COL5=SCORE;
        COL12=SIG;
    END;
    ELSE IF BENTYPE='Percent Not Obese' THEN DO;
        COL6=SCORE;
        COL13=SIG;
    END;
    ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
        COL7=SCORE;
        COL14=SIG;
    END;
    ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
        COL8=SCORE;
        COL15=SIG;
    END;
PROC SORT;
BY ROW;
RUN;

DATA TAB1;
    MERGE TAB1_4 TAB1_3 TAB1_2 TAB1_1 TAB2_1;
    BY ROW;
RUN;
DATA COL2(DROP=COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL3(DROP=COL2 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL4(DROP=COL2 COL3 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL5(DROP=COL2 COL3 COL4 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL6(DROP=COL2 COL3 COL4 COL5 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL7(DROP=COL2 COL3 COL4 COL5 COL6 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL8(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
    COL9(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL10 COL11 COL12 COL13 COL14
COL15)
    COL10(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL11 COL12 COL13 COL14
COL15)
    COL11(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL12 COL13 COL14
COL15)
    COL12(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL13 COL14
COL15)
    COL13(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL14 COL15)
    COL14(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL15)
    COL15(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13
COL14);

SET TAB1;

```

```

IF COL2 NE . THEN OUTPUT COL2;
IF COL3 NE . THEN OUTPUT COL3;
IF COL4 NE . THEN OUTPUT COL4;
IF COL5 NE . THEN OUTPUT COL5;
IF COL6 NE . THEN OUTPUT COL6;
IF COL7 NE . THEN OUTPUT COL7;
IF COL8 NE . THEN OUTPUT COL8;
IF COL9 NE . THEN OUTPUT COL9;
IF COL10 NE . THEN OUTPUT COL10;
IF COL11 NE . THEN OUTPUT COL11;
IF COL12 NE . THEN OUTPUT COL12;
IF COL13 NE . THEN OUTPUT COL13;
IF COL14 NE . THEN OUTPUT COL14;
IF COL15 NE . THEN OUTPUT COL15;
RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;
PROC SORT DATA=COL8; BY ROW; RUN;
PROC SORT DATA=COL9; BY ROW; RUN;
PROC SORT DATA=COL10; BY ROW; RUN;
PROC SORT DATA=COL11; BY ROW; RUN;
PROC SORT DATA=COL12; BY ROW; RUN;
PROC SORT DATA=COL13; BY ROW; RUN;
PROC SORT DATA=COL14; BY ROW; RUN;
PROC SORT DATA=COL15; BY ROW; RUN;

DATA TABLE1;
MERGE COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14 COL15;
BY ROW;
RUN;

*****
* DDE LINK (EXCEL file has to be open )
*****;
FILENAME TBL DDE "EXCEL|TABLES!R3C10:R8C24";

DATA _NULL_;
SET TABLE1;
FILE TBL NOTAB LRECL=200;

*3/28/2014 CREATE NEW VAR WITH ASTERISK FOR TABLE1;
ARRAY CARE COL2 COL3 COL4 COL5 COL6 COL7 COL8;
ARRAY SIGS COL9 COL10 COL11 COL12 COL13 COL14 COL5;

ARRAY NEWVAR $ MAMM PAP HBP PRENATAL NONOBE NONSMOKE QUIT;

DO I = 1 TO 7;

*3/16/2015 RECODED 9999 TO MISSING FOR Q4 DATA;
*IF TIMEPD = "&Q4MISSING" THEN DO;
* IF CARE(I) =9999 THEN CARE(I)=.;

```

```

*END;

IF CARE(I) >=0 THEN NEWVAR(I)=PUT(ROUND(CARE(I),1),8.);
ELSE IF CARE(I) <0 THEN NEWVAR(I)='-';

END;

*no benchmark for counseled to quit;
IF ROW=42 THEN QUIT='-';

*IF ROW NE 42 THEN DO;
  PUT MAMM '09'X PAM '09'X HBP '09'XPRENATAL '09'X NONOBE '09'X NONSMOKE'09'X
QUIT'09'X
  COL9 '09'X COL10 '09'X COL11 '09'X COL12 '09'X COL13 '09'X COL14 '09'X COL15;
RUN;

/*Run Excel macro signif, May 9 2006, LLU*/

options noxsync;
*-- Specify XL filename ;

%let excelf = &FOLDER..XLSB ;

*-- Specify XL macro name ;
%let macron = signif ;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CMDS;
  DDECommand = '[Run(" | | "&macron" | | ',0)]' ;
  put DDEcommand ;

RUN;

/*
DATA _NULL_;
  FILE CMDS;
  PUT '[SAVE]';
  PUT '[QUIT]';
RUN; */

DATA _NULL_;
  FILE CMDS;
  PUT '[CLOSE(TRUE)]';
RUN;

*****
      COMPARE SCORES AND SIG B/T CONSUMER WATCH AND REPORT CARDS.
      SET 0.015 DIFFERENCE AS THRESHOLD.
      LUCY LU 10/07/2004
*****;

```



```

PROC SORT DATA=FIG1(DROP=SCORE);
BY BENEFIT TIMEPD REGION;

*FROM CONSUMER WATCH. LLU 10/8/04;

PROC SORT DATA=FIG2(DROP=SCORE);
BY BENEFIT TIMEPD REGION;

PROC SORT DATA=FIG3(DROP=SCORE);
BY BENEFIT TIMEPD REGION;

PROC SORT DATA=FIG5AB OUT=FIG5;
BY BENEFIT TIMEPD REGION;

PROC SORT DATA=FIG6AB OUT=FIG6;
BY BENEFIT TIMEPD REGION;

PROC SORT DATA=FIG7AB OUT=FIG7;
BY BENEFIT TIMEPD REGION;
RUN;

%MACRO COMPARE(I=, TITL=);

DATA CFIG&I;
*FROM CONUS. LLU 10/8/04;

    SET CFIG&I._1
        CFIG&I._2
        CFIG&I._3
        CFIG&I._4
        ;
RUN;

PROC SORT DATA=FIG&I;
BY BENEFIT TIMEPD REGION;
RUN;

PROC SORT DATA=CFIG&I;
BY BENEFIT TIMEPD REGION;
RUN;

DATA COMBFIG&I;
    MERGE CFIG&I.(IN=F1) FIG&I(IN=F2);
BY BENEFIT TIMEPD REGION;

IF F1 AND F2;

FIG = &I;

IF FIG <=4 THEN DO;
    SCORE2=COL2;
    SIG2=COL3;
END;

ELSE IF FIG >4 THEN DO;

```

```

IF COL2 >= 0 THEN SCORE2=COL2;
ELSE IF COL4 >0 THEN SCORE2=COL4;

IF COL6 >= .Z THEN SIG2=COL6;
ELSE IF COL7>=.Z THEN SIG2=COL7;
END;

SCOREDIF=SCORE2-SCORE;
SIGDIF=SIG2-SIG;

IF ABS(SCOREDIF)>.015 OR SIGDIF>0 THEN FLAG=1;
ELSE FLAG=0;

KEEP BENEFIT TIMEPD REGION SCORE SIG SCORE2 SIG2 SCOREDIF SIGDIF FLAG;

LABEL
FLAG="DIFF IN SCORES >0.015 OR/AND DIFF IN SIG >0"
SCORE="SCORES FROM CONUS"
SCORE2="SCORES FROM CONSUMER WATCH"
SIG="SIG FROM CONUS"
SIG2="SIG FROM CONSUMER WATCH"
;

TITLE " ";
TITLE2 "*****";
TITLE3 "CONSUMER WATCH, &AREA ";

PROC PRINT L NOOBS;
TITLE4 "Compare &TITL.";
RUN;

%MEND COMPARE;

%COMPARE(I=1, TITL=Health Care Rating);
%COMPARE(I=2, TITL=Health Plan Rating);
%COMPARE(I=3, TITL=Personal Provider Rating);
%COMPARE(I=4, TITL=Specialist Rating);

%COMPARE(I=5, TITL=Access composites);

%COMPARE(I=6, TITL=Office composites);
%COMPARE(I=7, TITL=Claims/Service composites);

%MEND RUNCW;

```

I.6.A - Q3FY2017\PROGRAMS\ConsumerWatch\CONSUMERWATCH_WORD.SAS - Run the automation of the MS Word Consumer Watch report production.

```
*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH-Word.SAS
*
* PURPOSE: CALL CONSUMERWATCH-MACRO-WORD.INC PROGRAM
*          TO PRODUCE WORD DOCUMENT FOR Consumer Watch report.
*
* WRITTEN: 2/21/2008 LUCY LU
*
* INPUT   : EXCEL CHARTS
*
* OUTPUT  : WORD DOCUMENTS
*
* PROGRAM TO CALL: CONSUMERWATCH-MACRO-WORD.INC
* MODIFIED : 4/2/2010 BY LUCY LU, SEE COMMENT ON INCLUDE FILE.
* MODIFIED : 7/23/2010 BY LUCY LU. COMBINE ALL 3 WORD PROGRAMS (USMHS,
*          REGION, SERVICE) INTO A SINGLE PROGRAM.
* MODIFIED : 1/28/2015 BY LUCY LU. UPDATED THE PATH AFTER MOVING TO SAS SERVER
*****;
OPTIONS MPRINT;

%LET QUARTER=3;                *CURRENT QUARTER;
%LET PERIOD=April to March 2017; *FISCAL YEAR PRIOR TO CURRENT QUARTER;
%LET YEAR=2017;                *CURRENT FISCAL YEAR;
%LET QUARTER3=third;           *CURRENT QUARTER;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QUARTER.FY&YEAR.\Programs\ConsumerWatc
h;
%LET RATEPATH=..\..\Data\Afinal\Response_Rate;

%INCLUDE "consumerwatch_macro_word.inc";

*%RUNWD(FOLDER=Europe,YOURSAY=your region);
%RUNWD(FOLDER=USAMHS,NAME=USA MHS,YOURSAY=USA MHS);
%RUNWD(FOLDER=West,YOURSAY=your region);
%RUNWD(FOLDER=South,YOURSAY=your region);
%RUNWD(FOLDER=Navy,YOURSAY=your service);
%RUNWD(FOLDER=JointService,NAME=Joint Service,YOURSAY=your service);

%RUNWD(FOLDER=Pacific,YOURSAY=your region);
%RUNWD(FOLDER=Army,YOURSAY=your service);
%RUNWD(FOLDER=North,YOURSAY=your region);
%RUNWD(FOLDER=AirForce,NAME=Air Force,YOURSAY=your service);
```

I.6.B - Q3FY2017\PROGRAMS\ConsumerWatch\CONSUMERWATCH_MACRO_WORD.INC - Automate the MS Word Consumer Watch report production.

```
*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH-marco-WORD.INC
*
* AUTHOR : LUCY LU
* PURPOSE: Automate the copy and paste process, update the year, region,
*          response rate and sample size for quarterly Consumer
*          Watch report.
*
* DATE   : 03/31/2009
*
* OUTPUT : WORD DOCUMENTS
* MODIFIED: 04/12/2010 BY LUCY LU
*          1. Charts in Word are linked to Excel and automated updated once Excel
*             makes change.
*          2. Excel Triplet doesnt work for MS 2007/SAS 9. Using direct VBA
*             code in SAS.
*          3. The final product is in pdf format. Word report is intentionally
*             unsaved to reserve bookmarks.
* MODIFIED: 06/4/2010 BY LUCY LU
*          1. Replicating the template of Q2 2010 report found the lower quality
*             of charts in Word report. Using copy and paste instead of link.
*          2. The final products are in Word and pdf format.
* MODIFIED 7/23/2010 BY LUCY LU
*          ADD MACRO TO MINIMIZE EXCEL AND WORD WAITING, REDUCE PROGRAM
*          RUNNING TIME
* MODIFIED 2/25/2013 BY LUCY LU
*          ADD NEW FILE TO READ RESPONSE RATE FOR JOINT SERVICE
* MODIFIED 4/8/2014 BY LUCY LU, MOD FOR 508 COMPLIANCE
*          -- COMMENTED OUT FONT & SIZE, USING STYLE IN WORD
* MODIFIED: 9/21/2016 BY LUCY LU,
*          -- PRODUCE WORD FILE ONLY, DONT NEED PDF REPORT
* MODIFIED: 2/14/2017 BY LUCY LU,
*          -- CHANGED DOMAIN=USAMHS
*****;
```

```
OPTIONS NOXWAIT SPOOL NOXSYNC;
```

```
*LLU 7/21/2010--DETECTING AVAILABILITY OF EXCEL, MINIMIZE WAITING TIME;
```

```
%MACRO RUNWD(FOLDER=,NAME=&FOLDER,YOURSAY= );
```

```
*7/23/2010 LLU, Wait until Excel ready;
```

```
FILENAME CMDS DDE "EXCEL|SYSTEM";
```

```
DATA _NULL_;
```

```
LENGTH FID RC START STOP TIME 8;
FID = FOPEN('CMDS' , 'S');
IF (FID LE 0) THEN DO;
  RC = SYSTEM('START EXCEL');
  START = DATETIME();
  STOP = START + 10;
```

```

DO WHILE (FID LE 0);
  FID = FOPEN('CMDS' , 'S');
  TIME = DATETIME();
  IF (TIME GE STOP) THEN FID = 1;
END;
END;
RC = FCLOSE(FID);
RUN;

%MACRO SETUP;
  DATA TEST _NULL_;

  SINGLE=" ";
  DOUBLE=" ";

  LENGTH OPENXLS OPENWRD SAVEWRD $150;

OPENXLS=SINGLE || "[OPEN(" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER..xlsb" || DOUBLE || ")]" || SINGLE;
LE;

OPENWRD=SINGLE || "[FileOpen.Name=" || DOUBLE || "&PATH.\template.docm" || DOUBLE || "]" || SINGLE;
E;

SAVEWRD=SINGLE || "[FileSaveAs.Name=" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER..DOC" || DOUBLE || "]" || SINGLE;

  CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
  CALL SYMPUT ("OPENWRD",TRIM(OPENWRD));
  CALL SYMPUT ("SAVEWRD",TRIM(SAVEWRD));

RUN;

%MEND SETUP;
%SETUP;

DATA _NULL_;
  FILE CMDS;
  PUT &OPENXLS;
  X=SLEEP(2);
  PUT '[app.minimize()]';
  RUN;

*7/23/2010 LLU, Wait until Word ready;
FILENAME CMNDS DDE "WINWORD|SYSTEM";

DATA _NULL_;
  LENGTH FID RC START STOP TIME 8;
  FID=FOPEN('CMNDS','S');
  IF (FID LE 0) THEN DO;
    RC=SYSTEM('START WINWORD');
    START=DATETIME();
    STOP=START+10;
    DO WHILE (FID LE 0);
      FID=FOPEN('CMNDS','S');
      TIME=DATETIME();
      IF (TIME GE STOP) THEN FID=1;
    END;
  END;

```

```

        END;
        RC=FCLOSE(FID);
RUN;

DATA _NULL_;
  FILE CMNDS;
  PUT &OPENWRD;
  X=SLEEP(2);
  PUT &SAVEWRD;
  PUT '[APPMINIMIZE]';
RUN;

%MACRO COPYIT;
%DO I=1 %TO 8;

        %LET WDMACRO=NEWPASTE&I;
        %LET EXMACRO=COPY&I;

FILENAME CMDS DDE "EXCEL|SYSTEM";

        DATA _NULL_;
        FILE CMDS;
        DDECommand = '[Run(" | | "&exmacro" | | "',0)]' ;
        PUT DDEcommand ;

        RUN;
        FILENAME CMDS CLEAR;

        FILENAME CMNDS DDE 'WINWORD|SYSTEM';

        /*DATA _NULL_;
        X=SLEEP(2);
        RUN;*/

        DATA _NULL_;
        FILE CMNDS;
        put '[ToolsMacro .Name = " "&wdmacro" "', .Run]';
        RUN;

        FILENAME CMNDS CLEAR;

        RUN;

%END;
%MEND COPYIT;
%COPYIT;

*READ THE SAMPLE SIZE AND RESPONSE RATE IN .OUT FILES
AND CREATE MACRO VARIABLES for Word document;
%MACRO RATE1 (DAT);
  DATA &DAT;

        INFILE "&RATEPATH.\&DAT..OUT" LRECL=9999 RECFM=V;
        INPUT LINEIN $100 @; DROP LINEIN;

```

```

        IF _N_ GE 7 THEN DO;
            INPUT
                @001 DOMAIN      $CHAR40.
                @141 FRR_UNWT    4.3
                @147 POP         $CHAR7.;
                ;
            OUTPUT;
        END;
    RUN;

*MS 2007 doesnt take comma7 format. This is hard code the comma into text;
DATA &DAT;
    SET &DAT;
    LENGTH POP_UNWT $10;
    POP1=SUBSTR(RIGHT(POP),1,1);
    POP2=SUBSTR(RIGHT(POP),2,3);
    POP3=SUBSTR(RIGHT(POP),5,3);
    POP_UNWT=CATX(' ',POP1,POP2,POP3);
RUN;

%MEND RATE1;

%RATE1(TABLE02A);
%RATE1(XTNEXREG);
%RATE1(XOCONUS);
%RATE1(SERVAFF);
%RATE1(JSFLAG);

DATA ALLRATE;
    SET TABLE02A
        XTNEXREG
        XOCONUS
        SERVAFF
        JSFLAG
        ;

    DOMAIN=COMPRESS(DOMAIN);
    IF UPCASE(DOMAIN)=UPCASE('WesternPacific') THEN DOMAIN='PACIFIC';
    IF UPCASE(DOMAIN)=UPCASE('Y') THEN DOMAIN='JOINTSERVICE';

    IF DOMAIN='' THEN DOMAIN="USAMHS";
    FRR_UNWT=FRR_UNWT*100;

*PUT POP_UNWT= FRR_UNWT=;
IF UPCASE("&FOLDER.")=UPCASE(DOMAIN) THEN OUTPUT;

RUN;

DATA _NULL_;
    SET ALLRATE;

CALL SYMPUT ("SIZE1", COMPRESS(POP_UNWT));
CALL SYMPUT ("RATE1", COMPRESS(FRR_UNWT));

RUN;

```

```

FILENAME CMNDS DDE "WINWORD|SYSTEM";
/*
DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(2);
  PUT '[AppMinimize]';
RUN;
*/

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="Region1"]';
  *put '[FormatFont.Font="Arial",.Points="20"]';
  PUT "&NAME";
RUN;

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="Quarter1"]';
  *put '[FormatFont.Font="Arial",.Points="20"]';
  PUT "&QUARTER";
RUN;

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="Year1"]';
  *put '[FormatFont.Font="Arial",.Points="20"]';
  PUT "&YEAR";
RUN;

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="SIZE"]';
  *put '[FormatFont.Font="Arial",.Points="10"]';
  PUT "&SIZE1";
RUN;

DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="RATE"]';
  *put '[FormatFont.Font="Arial",.Points="10"]';
  PUT "&RATE1";
RUN;

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="Region2"]';
  *put '[FormatFont.Font="Arial",.Points="10"]';
  PUT "&NAME";
RUN;

DATA _NULL_;
  FILE CMNDS;
  *X=SLEEP(.2);
  put '[EditGoto.Destination="YourSay"]';
  *put '[FormatFont.Font="Times New Roman",.Points="11"]';

```



```
PUT "&YOURSAY";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="Quarter3"]';
*put '[FormatFont.Font="Times New Roman",.Points="11"]';
PUT "&QUARTER3";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="year3"]';
*put '[FormatFont.Font="Times New Roman",.Points="11"]';
PUT "&YEAR";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="Period"]';
*put '[FormatFont.Font="Times New Roman",.Points="11"]';
PUT "&PERIOD";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
*X=SLEEP(.2);
put '[EditGoto.Destination="Region3"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&NAME";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
*X=SLEEP(.2);
put '[EditGoto.Destination="Quarter2"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&QUARTER";
RUN;
```

```
DATA _NULL_;
FILE CMNDS;
*X=SLEEP(.2);
put '[EditGoto.Destination="Year2"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&YEAR";
RUN;
```

```
/*9/21/2016 LLU COMMENT OUT
*savs as pdf;
%LET CMACRO=SaveAspdf;
```

```
FILENAME CMNDS DDE 'WINWORD|SYSTEM';
DATA _NULL_;
FILE CMNDS;
```

```
PUT '[ToolsMacro .Name = " "&CMACRO" "', .Run]';  
run;*/
```

```
FILENAME CMDS DDE 'EXCEL|SYSTEM';
```

```
DATA _NULL_;  
  FILE CMDS;  
  *PUT '[SAVE]'; *no save for Excel;  
  PUT '[CLOSE(FALSE)]';  
  PUT '[ERROR(FALSE)]';  
  PUT '[QUIT]';  
RUN;
```

```
* reserved for future use;  
FILENAME CMNDS DDE 'WINWORD|SYSTEM';  
DATA _NULL_;  
  FILE CMNDS;  
  
  PUT '[fileSave] ';  
  PUT '[FileClose 2] ';  
RUN;  
  
%MEND;
```

I.7 - Q3FY2017\PROGRAMS\ConsumerWatch\APPENDIX.SAS - Run the appendix for the quarterly reports.

```

RESETLINES;
*=====
PROJECT       : HCSDB Consumer Watch
PROGRAM       : APPENDIX.SAS
WRITTEN      : LUCY LU
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

DATE          : 03/22/2014

MODIFIED     : 1/28/2015 BY LUCY LU. UPDATED THE PATH AFTER MOVING TO SAS SERVER
MODIFIED     : 8/04/2016 BY LUCY LU. USING a, b SYMBOLS AND DIFFERENT COLORS
                TO HARD CODE THE APPENDIX TABLE
MODIFIED     : 8/30/2016 BY LUCY LU.
                - FILL HEADER FOR Q/FY COLUMN
                - REMOVE THE TITLE ON OUTPUT PDF REPORT
MODIFIED     : 9/21/2016 BY LUCY LU.
                - CREATE OUTPUT WITH RTF FORMAT
=====;
options symbolgen nocenter NOXWAIT NOXSYNC NODATE NONUMBER orientation=portrait
Mergenoby=WARN  ERRORS=2;

%LET PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Programs\ConsumerWatch;

* note q1- q4 is var names and not reflect real quarters;
* insert column names from preventive care table;

%LET Q1=Qtr 4*FY*2016;
%LET Q2=Qtr 1*FY*2017;
%LET Q3=Qtr 2*FY*2017;
%LET Q4=Qtr 3*FY*2017;

PROC FORMAT;
VALUE CAREF
1='Mammography (women >= 40)'
2='Pap Smear (women >=18)'
3='Hypertension Screen (adults)'
4='Prenatal Care (in 1st trimester)'
5='Percent Not Obese (adults)'
6='Non-Smokers (adults)'
7='Counseled to Quit (adults)'
;

%MACRO APPENDIX(FOLDER=,NAME=&FOLDER);

*===== READ DATA FROM EXCLE TABLES =====;

%LET XLSFILE=%STR(&PATH.\&FOLDER.\&FOLDER);
X "%STR("%&XLSFILE..XLSB%)" ;
DATA _NULL_;
X=SLEEP(1);
RUN;

```

```

*----- RATINGS -----;

%MACRO RATE(COL1=, COL2=,OUTDATA=);
FILENAME RAT DDE "EXCEL|RATINGS!R1C&COL1.:R22C&COL2.";

DATA &OUTDATA
;
  INFILE   RAT DLM='09'X NOTAB DSD MISSEVER
           LRECL=1000 FIRSTOBS=18
           ;
  INFORMAT CATEGORY $20. XPRIM_ENRLL SIG
           8.
           ;
  INPUT    CATEGORY XPRIM_ENRLL SIG
           ;

XPRIM_ENRLL2=PUT(ROUND(XPRIM_ENRLL),$3.);

IF SIG = 1 THEN PRIM_ENRLL=CATX(' ',XPRIM_ENRLL2,'^{SUPER a}');
ELSE IF SIG = -1 THEN PRIM_ENRLL=CATX(' ',XPRIM_ENRLL2,'^{SUPER b}');
ELSE IF XPRIM_ENRLL >=0 THEN PRIM_ENRLL=XPRIM_ENRLL2;
ELSE IF XPRIM_ENRLL <0 THEN PRIM_ENRLL='-';

IF _N_=1 THEN CATEGORY="Benchmark";

RUN;

TITLE "----- &OUTDATA -----";
PROC PRINT DATA=&OUTDATA; RUN;

%MEND RATE;
%RATE(COL1=1, COL2=3,OUTDATA=FIG1);
%RATE(COL1=5, COL2=7,OUTDATA=FIG2);
%RATE(COL1=9, COL2=11,OUTDATA=FIG3);
%RATE(COL1=13, COL2=15,OUTDATA=FIG4);

*----- COMPOSITES -----;
TITLE '----- FIGURE 5 -----';
FILENAME COMP5 DDE "EXCEL|COMPOSITES!R1C1:R26C5";
DATA XFIG5 XSIG5
;
  INFILE   COMP5 DLM='09'X NOTAB DSD
           LRECL=1000 FIRSTOBS=18 MISSEVER
           ;
  INFORMAT CATEGORY $10. XVAR1 XBENCH1 XVAR2 XBENCH2
           8.
           ;
  INPUT    CATEGORY XVAR1 XBENCH1 XVAR2 XBENCH2 ;

IF UPCASE(SUBSTR(CATEGORY,1,3))='SIG' THEN
  OUTPUT XSIG5;

```

```

ELSE IF CATEGORY NE " " THEN OUTPUT XFIG5;

RUN;

*-- MERGE BY ROW --;
DATA FIG5;
  MERGE XFIG5
        XSIG5(KEEP= CATEGORY XVAR1 XVAR2 RENAME=(XVAR1=SIG1 XVAR2=SIG2
CATEGORY=SIG));

BENCH1=ROUND(XBENCH1,1);
BENCH2=ROUND(XBENCH2,1);

XVAR11=PUT(ROUND(XVAR1),$3.);
XVAR22=PUT(ROUND(XVAR2),$3.);

IF SIG1 = 1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER b}');
ELSE IF XVAR1 >= 0 THEN VAR1= XVAR11;
ELSE IF XVAR1 < 0 THEN VAR1='-';

IF SIG2 = 1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER a}');
ELSE IF SIG2 = -1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER b}');
ELSE IF XVAR2 >= 0 THEN VAR2= XVAR22;
ELSE IF XVAR2 < 0 THEN VAR2='-';

RUN;

PROC PRINT DATA=FIG5; RUN;

TITLE '----- FIG 6 -----';
FILENAME COMP6 DDE "EXCEL|COMPOSITES!R1C8:R26C10";
DATA XFIG6 XSIG6
  ;
  INFILE COMP6 DLM='09'X NOTAB DSD
        LRECL=1000 FIRSTOBS=18 MISSEVER
  ;
  INFORMAT CATEGORY $10. XVAR1 XBENCH1
        8.
  ;
INPUT CATEGORY XVAR1 XBENCH1 ;

IF UPCASE(SUBSTR(CATEGORY,1,3))='SIG' THEN
  OUTPUT XSIG6;

ELSE IF CATEGORY NE " " THEN OUTPUT XFIG6;

RUN;
*-- MERGE BY ROW --;
DATA FIG6;
  MERGE XFIG6
        XSIG6(KEEP= CATEGORY XVAR1 RENAME=(XVAR1=SIG1 CATEGORY=SIG));

```

```

BENCH1=ROUND(XBENCH1,1);

XVAR11=PUT(ROUND(XVAR1),$3.);

IF SIG1 = 1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER b}');
ELSE IF XVAR1>=0 THEN VAR1=XVAR11;
ELSE IF XVAR1 <0 THEN VAR1='-';

RUN;

PROC PRINT DATA=FIG6; RUN;

TITLE '----- FIGURE 7 -----';
FILENAME COMP7 DDE "EXCEL|COMPOSITES!R1C13:R26C17";
DATA XFIG7 XSIG7
;
  INFILE COMP7 DLM='09'X NOTAB DSD
  LRECL=1000 FIRSTOBS=18 MISSOEVER
  ;
  INFORMAT CATEGORY $10. XVAR1 XBENCH1 XVAR2 XBENCH2
  8.
  ;
INPUT CATEGORY XVAR1 XBENCH1 XVAR2 XBENCH2 ;

IF UPCASE(SUBSTR(CATEGORY,1,3))='SIG' THEN OUTPUT XSIG7;
ELSE IF CATEGORY NE " " THEN OUTPUT XFIG7;

RUN;

*-- MERGE BY ROW --;
DATA FIG7;
  MERGE XFIG7
  XSIG7(KEEP= CATEGORY XVAR1 XVAR2 RENAME=(XVAR1=SIG1 XVAR2=SIG2
CATEGORY=SIG));

BENCH1=ROUND(XBENCH1,1);
BENCH2=ROUND(XBENCH2,1);

XVAR11=PUT(ROUND(XVAR1),$3.);
XVAR22=PUT(ROUND(XVAR2),$3.);

IF SIG1 = 1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN VAR1=CATX(' ',XVAR11,'^{SUPER b}');
ELSE IF XVAR1>=0 THEN VAR1= XVAR11;
ELSE IF XVAR1 <'0' THEN VAR1='-';

IF SIG2 = 1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER a}');
ELSE IF SIG2 = -1 THEN VAR2=CATX(' ',XVAR22,'^{SUPER b}');
ELSE IF XVAR2>=0 THEN VAR2= XVAR22;

```

```

ELSE IF XVAR2 <0 THEN VAR2='-';

RUN;

PROC PRINT DATA=FIG7; RUN;

*8/5/2016 LLU, completely rewrite the following code b/c
SAS cant read superscript;
TITLE '--- PREVENTCIVE CARE TABLE ----';

FILENAME XTAB DDE "EXCEL|Tables!R1C9:R8C23";
DATA TABLE;
  INFILE XTAB DLM='09'X NOTAB DSD MISSOEVER
         LRECL=1000 FIRSTOBS=3
         ;
  INFORMAT XQ $10. M1-M7 SIG1-SIG7 $4. ;
  INPUT XQ M1-M7 SIG1-SIG7 ;

ORDER=_N_;
OUTPUT;

RUN;

DATA TABLE1;
  SET TABLE;

  ARRAY M M1-M7;
  ARRAY SIG SIG1-SIG7;
  ARRAY VAR $20. VAR1-VAR7;

DO I = 1 TO 7;

  VAR(I)=M(I);
  IF M(I) = '-' THEN VAR(I)='-';
  ELSE IF I <=6 THEN DO; *EXCL 7, NO BENCHMARK FOR THE LAST MEASURE;
    IF SIG(I) = '1' THEN VAR(I)=CATX(' ',M(I),'^{SUPER a}');
    ELSE IF SIG(I) = '-1' THEN VAR(I)=CATX(' ',M(I),'^{SUPER b}');
  END;

END;

*DROP I SIG1-SIG7;
RUN;

PROC TRANSPOSE DATA=TABLE1 OUT=TABLE2 PREFIX=O ;
ID ORDER;
VAR VAR1-VAR7;
RUN;

DATA TABLE1_FINAL;
  SET TABLE2(RENAME=(O4=XQ4));

```

```

LENGTH NEW_O4 $20.;

*superscript occupies extra space, this way it looks nicer;
IF XQ4 NE '-' THEN DO;
IF INDEX(XQ4,'a') > 0 OR INDEX(XQ4,'b') > 0 THEN
new_O4=TRIM(LEFT(XQ4))||'('||TRIM(LEFT(O5))||')';
ELSE
NEW_O4=TRIM(LEFT(XQ4))||' '||'('||TRIM(LEFT(O5))||')';
END;
ELSE new_O4 = '-';

ARRAY NEWVAR XQ1 XQ2 XQ3 XQ4 GOAL;
ARRAY OLDVAR O1 O2 O3 NEW_O4 O6;
DO I= 1 TO 5;
NEWVAR(I) = OLDVAR(I);

END;

CARE= _N_;

KEEP CARE XQ1 XQ2 XQ3 XQ4 GOAL;

FORMAT CARE CAREF.;
RUN;

PROC PRINT DATA=TABLE1_FINAL;
RUN;

FILENAME CX DDE "EXCEL|SYSTEM";

DATA _NULL_;
FILE CX;
PUT '[CLOSE(FALSE)]';
PUT '[ERROR(FALSE)]';
PUT '[QUIT]';
RUN;

TITLE ;

*==== PUT THE TABLES INTO RTF =====;

ODS LISTING CLOSE;
ods RTF file="&PATH.\&FOLDER.\APPENDIX_&FOLDER..RTF" style=Styles.SASWEB STARTPAGE=No
;
ODS ESCAPECHAR='^';

ODS RTF STARTPAGE=NOW;

%MACRO RATES(TITL=,N=);

*TITLE "Appendix, &NAME."; *8/30/2016, removed --not nested per rule of 508;
TITLE ;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^ln &titl";

```



```

proc report data=FIG&N center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
style(report)={width=70%}
;

COLUMN CATEGORY PRIM_ENRLL;
define CATEGORY / "Qtr/Yr/Benchmark" style={fontWeight=Bold just=C};
define PRIM_ENRLL / 'Prime enrollee' style={fontWeight=Bold just=C
/*cellwidth=lin*/};

COMPUTE PRIM_ENRLL;
IF INDEX(PRIM_ENRLL,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(PRIM_ENRLL,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
RUN;

%MEND RATES;
%RATES(TITL=%STR(Figure 1: Health Care Rating),N=1);
%RATES(TITL=%STR(Figure 2: Health Plan Rating),N=2);
%RATES(TITL=%STR(Figure 3: Personal Provider Rating),N=3);
%RATES(TITL=%STR(Figure 4: Specialist Rating),N=4);

*--- FIGURES 5 ----;
ODS RTF STARTPAGE=NOW;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}Figure 5:
Access Composites";

proc report data=FIG5 center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
/* style(summary)=[color=very light grey backgroundcolor=very light grey
fontfamily="Times Roman" fontsize=1pt textalign=C]
style(report)={width=80%}* / ;

COLUMN CATEGORY VAR1 BENCH1 VAR2 BENCH2;
define CATEGORY / "Qtr/Yr" style={fontWeight=Bold just=C cellwidth=1.2in};
define VAR1 / 'Getting Needed Care' style={fontWeight=Bold just=C
cellwidth=lin};
define BENCH1 / "Benchmark For * Getting Needed Care" style={fontWeight=Bold
just=C cellwidth=lin};
define VAR2 / 'Getting Care Quickly ' style={fontWeight=Bold just=C
cellwidth=lin};
define BENCH2 / "Benchmark For * Getting Care Quickly" style={fontWeight=Bold
just=C cellwidth=lin};

COMPUTE VAR1;
IF INDEX(VAR1,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR1,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
COMPUTE VAR2;

```

```

        IF INDEX(VAR2,"a" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR2,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

*--- FIGURES 6 ----;
ODS RTF STARTPAGE=NO;
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^lnFigure 6:
Doctor's Communication";
proc report data=FIG6 center nowindows headline wrap split='*' spanrows MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
/*style(summary)=[color=very light grey backgroundcolor=very light grey
fontfamily="Times Roman" fontsize=1pt textalign=C]
style(report)={width=80%}*/ ;

        COLUMN CATEGORY VAR1 BENCH1;
        define CATEGORY / "Qtr/Yr" style={fontWeight=Bold just=C cellwidth=1.6in};
        define VAR1 / "Doctor's Communication" style={fontWeight=Bold just=C
cellwidth=1.4in};
        define BENCH1 / "Benchmark" style={fontWeight=Bold just=C cellwidth=1.4in};

COMPUTE VAR1;
        IF INDEX(VAR1,"a" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR1,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

*--- FIGURES 7 ----;
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^lnFigure 7:
Claims/Service Composites";
proc report data=FIG7 center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
/*style(summary)=[color=very light grey backgroundcolor=very light grey
fontfamily="Times Roman" fontsize=1pt textalign=C]
style(report)={width=80%}*/ ;

        COLUMN CATEGORY VAR1 BENCH1 VAR2 BENCH2;
        define CATEGORY / "Qtr/Yr" style={fontWeight=Bold just=C cellwidth=1.2in};
        define VAR1 / 'Customer Service' style={fontWeight=Bold just=C cellwidth=1in};
        define BENCH1 / "Benchmark For Customer Service" style={fontWeight=Bold just=C
cellwidth=1in};
        define VAR2 / 'Claims Processing' style={fontWeight=Bold just=C
cellwidth=1in};
        define BENCH2 / "Benchmark For Claims Processing" style={fontWeight=Bold just=C
cellwidth=1in};

COMPUTE VAR1;
        IF INDEX(VAR1,"a" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR1,"b" )>0

```

```

        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;
    COMPUTE VAR2;
        IF INDEX(VAR2,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
    ELSE IF INDEX(VAR2,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;

RUN;

*--- PROVENTIVE CARE TABLE ----;
ODS RTF STARTPAGE=NOW;
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}Preventive
Care";
proc report data=TABLE1_FINAL center nowindows headline wrap split='*' missing
spanrows MISSING
style(header)=[color=black backgroundcolor=#CCD9FF]
;

    COLUMN CARE XQ1 XQ2 XQ3 XQ4 GOAL;
    define CARE / "Type of Care " style={fontWeight=Bold just=L cellwidth=2.4in};
    define XQ1 / "&Q1." style={fontWeight=Bold just=C cellwidth=.8in};
    define XQ2 / "&Q2." style={fontWeight=Bold just=C cellwidth=.8in};
    define XQ3 / "&Q3." style={fontWeight=Bold just=C cellwidth=.8in};
        define XQ4 / "&Q4." style={fontWeight=Bold just=C cellwidth=1in};
    define GOAL / "Healthy People 2020 Goal" style={fontWeight=Bold just=C
cellwidth=1in BACKGROUND=#FFE5E5};

    COMPUTE XQ1;
        IF INDEX(XQ1,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
    ELSE IF INDEX(XQ1,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;
    COMPUTE XQ2;
        IF INDEX(XQ2,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
    ELSE IF INDEX(XQ2,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;
    COMPUTE XQ3;
        IF INDEX(XQ3,"a" )>0
            THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
    ELSE IF INDEX(XQ3,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;
        COMPUTE XQ4;
    IF INDEX(XQ4,"a" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
    ELSE IF INDEX(XQ4,"b" )>0
        THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
    ENDCOMP;

RUN;

*blank in text file is to align the text with table;
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
a.Numbers in green significantly exceed the Healthy People 2020 goal (p< .05).";

```

```
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
b.Numbers in red significantly fall short of the Healthy People 2020 goal (p< .05).";
ODS RTF TEXT="^S={OUTPUTWIDTH=100% FONTSIZE=8PT fontstyle=italic Just=L}
The number of responding beneficiaries for each type of care is in parentheses.";
ODS RTF CLOSE;
ODS LISTING;
```

```
%MEND APPENDIX;
```

```
%APPENDIX(FOLDER=Europe);
%APPENDIX(FOLDER=USAMHS);
%APPENDIX(FOLDER=Army);
%APPENDIX(FOLDER=North);
%APPENDIX(FOLDER=West);
%APPENDIX(FOLDER=South);
%APPENDIX(FOLDER=Navy);
%APPENDIX(FOLDER=JointService,NAME=Joint Service);
```

```
%APPENDIX(FOLDER=Pacific)
%APPENDIX(FOLDER=AirForce,NAME=Air Force);
```

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APPENDIX J

SAS CODE FOR 2017 TRICARE PURCHASED CARE CONSUMER WATCH – QUARTERS I-III

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**J.1.A - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare.sas - Run
Purchased Care TRICARE Consumer Watch reports - Run Quarterly.**

```

*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH_PurchasedCare.SAS
* PURPOSE: CALL CONSUMERWATCH MACRO PROGRAM
*           TO PRODUCE EXCEL TABLE FOR PURCHASED CAR>E REPORT.
*
* WRITTEN: 02/10/2005 BY LUCY LU FOR Q4 2004.
*
* UPDATE: 4/26/2005 FOR Q1 2005.
* UPDATE: 8/4/2005 FOR Q2 2005.
* UPDATE: 12/15/2005 FOR Q4 2005.
* UPDATE: 04/04/2006 FOR Q2 FISCAL YEAR 2006, LUCY Lu. STARTING THIS QUARTER,
*           THE PERIOD IS CHANGED TO FISCAL YEAR.
* UPDATE: 09/01/2006 Lucy Lu FOR FY 3 2006.
* UPDATE: 10/05/2006 Lucy Lu FOR FY 4 2006.
* MODIFIED 7/30/2007 BY LUCY LU
*           UNIFY THE PERIOD MACRO VARIABLES WITH BENEFICIARY REPORT CARDS PROGRAMS
*           CURRNT  ===> PERIOD4
*           CURRNTQ ===> PERIOD4Q
*           PREV1   ===> PERIOD3
*           PREV1Q  ===> PERIOD3Q
*           PREV2   ===> PERIOD2
*           PREV2Q  ===> PERION2Q
*           PREV3   ===> PERIOD1
*           PREV3Q  ===> PERIOND1Q
* MODIFIED 8/29/2007 BY LUCY LU TO RUN CONSUMERWATCH_MACRO_COMB.INC
*           STARTING Q4 2007 CONSUMERWATCH_R(REGION) AND CONSUMERWATCH_CONUS RUN A
SINGLE
*           MACRO TO PRODUCE CHARTS FOR BOTH PRIME ENROLLEES AND CIVILIAN PCM
POPULATION
* MODIFIED 5/14/09 BY LUCY LU
*           1.MACRO INCLUDE PROGRAM IS MODIFIED BY REMOVING THE VALUE OF
*           'Courteous and Helpful Office Staff'. THE PROGRAM WILL DELETE
*           RELATED CODE.
*           2.THE EXCEL AND WORD TEMPLATES ARE MODIFIED TO REMOVE THE CHARTS
*           FOR 'Courteous and Helpful Office Staff'.
* MODIFIED 7/23/2010 LUCY
*           Rename CONSUMERWATCH_MACRO_COMB.INC to
*           CONSUMERWATCH_PurchasedCare_MACRO.INC
*           MODIFY MACRO VARIABLES TO REFLECT THE CHANGE OF INCLUDE MACRO
*           PROGRAM. SEE consumerwatch_PurchasedCare_macro.inc FOR DETAILS.
*           1.CONSolidate USMHS AND REGION PROGRAMS INTO ONE SAS PROGRAM.
*           2.REPLACE PERIOD MACRO VARIABLES WITH CURRENTQ AND CURRENTY.
*
* INPUT  : DATA FROM CONSUMER REPORTS: ..\..\PROGRAMS\&DAT.LOADWEB\TOTAL_Q.SD2
*
* OUTPUT : INTO EXCEL SPREADSHEET
*
* PROGRAM TO CALL: CONSUMERWATCH_PURCHASEDCARE_MACRO.INC
*****;

```

/* LIBNAME IS EMBEDDED IN MACRO PROGRAM */

*starting 2006, the period is changed to fiscal year, LLU 4/5/06;

%LET CURRENTQ=3; *CURRENT FISCAL QUARTER;
%LET CURRENTY=2017; *CURRENT FISCAL YEAR;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&CURRENTQ.FY&CURRENTY.\Programs\PurchasedConsumerWatch;

TITLE "DOD PURCHASED CARE CONSUMER WATCH Q&CURRENTQ, FY &CURRENTY";

%INCLUDE "&PATH.\CONSUMERWATCH_PURCHASEDCARE_MACRO.INC";

*%RUNCW(AREA=USA MHS,FOLDER=USAMHS);

%RUNCW(FOLDER=NORTH);
%RUNCW(FOLDER=SOUTH);
%RUNCW(FOLDER=WEST);

J.1.B - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_macro.inc - Produce numbers for Purchased Care TRICARE Consumer Watch reports.

```
*****
* PROJECT: 6077-420
* PROGRAM: consumerwatch_PurchasedCare_macro.inc
* PURPOSE: To produce numbers that go into data sheet in Excel to produce graphs
*         for regional consumer watch
* AUTHOR  : MIKI SATAKE
* DATE   : 4/24/01
* UPDATED: 7/16/01 FOR QUARTER 2 BY NATALIE JUSTH
* UPDATED: 10/16/01 FOR QUARTER 3 BY NATALIE JUSTH
* UPDATED: 1/11/02 FOR QUARTER 4 BY NATALIE JUSTH
* UPDATED AND RENAMED: 4/9/02 FOR QUARTER 1 2002 BY NATALIE JUSTH
* UPDATED: 7/5/02 FOR QUARTER 2 2002 BY NATALIE JUSTH
* UPDATED: 7/15/02 FOR QUARTER 3 2002 BY NATALIE JUSTH
* UPDATED: 11/12/02 FOR QUARTER 4 2002 BY NATALIE JUSTH
* UPDATED: 4/3/03 FOR QUARTER 1 2003 BY NATALIE JUSTH
* UPDATED: 5/19/03 FOR QUARTER 2 2003 BY NATALIE JUSTH
* UPDATED: 8/28/03 FOR QUARTER 3 2003 BY NATALIE JUSTH
* UPDATED: 11/14/03 FOR QUARTER 4 2003 BY NATALIE JUSTH
* UPDATED: 05/18/2004 FOR QUARTER 1 2004 BY KEITH RATHBUN
* UPDATED: 06/30/2004 FOR QUARTER 2 2004 BY LUCY LU
* UPDATED: 06/30/2004 FOR QUARTER 3 2004 BY LUCY LU. CHANGING XREGION TO XTNEXREG.
* UPDATED: 10/07/2004 BY LUCY LU. ADD THE CODE TO COMPARE CONSUMER WATCH
*         WITH REPORT CARDS IN SCORES AND SIGNIFICANCE.*
* MODIFIED 2/10/05 BY LUCY LU:
*     1). CREATE UNIVERSAL MACRO PROGRAM BASED ON PROGRAM CONSUMERWATCH-R.SAS
*         TO ELIMINATE REDUNDANCY AND INCREASE THE EFFECTIVENESS OF PROGRAMMING.
*     2). ADD ADDITIONAL PREVENTION MEASURE "SMOKING CESSATION"
*         INTO PREVENTIVE CARE TABLE.
* MODIFIED 06/2/2005 BY LUCY LU FOR Q1 2005:
*     1). REMOVE CHOLESTEROL MEASUREMENT AND ADD BMI MEASUREMENT
*     2). COMMENT OUT DISENROLL CODE--NO DISENROLL DATA IN Q1 2005
*     3). ADD SPECIALIST RATING.
* MODIFIED 11/16/2006 BY LUCY LU FOR FY Q4 2006
*     ADD PURCHASE CARE VERSION-- CHANGE PRIME ENROLLEE TO
*     Enrollees with Civilian PCM.
* MODIFIED 6/4/2007 BY LUCY LU. UNIFY THE MACRO PROGRAMS FOR CONSUMER WATCH.
*     !! NEED TO DEFINE MACRO VARIABLE &POP IN SAS PROGRAMS:
*     DIRECT CARE CONSUMER WATCH: &POP=='Prime Enrollees'
*     PURCHASE CARE CONSUMER WATCH: &POP=='Enrollees with Civilian PCM'
* MODIFIED 8/30/2007 BY LUCY LU
*     1). COMBINE CONSUMERWATCH-MACRO.INC and CONSUMERWATCH-MACRO_PURCHASE.INC
*         PRODUCE CHARTS CONTAINING BOTH DIRECT CARE AND PURCHASE CARE DATA
*     2). CREATE DUMMY ID FOR MERGE. SAS 9 doesn't allow merge without by
variable
* MODIFIED 9/4/2007 BY LUCY LU. START Q4 2007,
*     DIRECT CARE CONSUMER WATCH &POP='Enrollees with Military PCM'
* MODIFIED 5/14/09 BY LUCY LU
*     1.MACRO INCLUDE PROGRAM IS MODIFIED BY REMOVING VALUE OF
*     'Courteous and Helpful Office Staff'. THE PROGRAM WILL DELETE
*     RELATED CODE.
*     2.THE EXCEL AND WORD TEMPLATES ARE MODIFIED TO REMOVE THE CHARTS
*     FOR 'Courteous and Helpful Office Staff'.
* MODIFIED 7/23/2010 BY LUCY LU
*     1. AUTOMATE PERIOD (QUARTER/YEAR) TO MINIMIZE POSSIBLE ERROR
*     2. ADD MACRO TO MINIMIZE EXCEL WAITING, REDUCE PROGRAM
```

```

*           RUNNING TIME
*
* MODIFIED 4/14/2014 BY LUCY LU
*           MODIFIED CODE FOR 508 COMPLIANCE
*           1. CREATE NEW VAR WITH ASTERISK FOR FIGURES 1-4
*           2. CREATE NEW VAR WITH ASTERISK FOR PREVENTIVE CARE TABLE
*           3. RECODED ALL MISSING DATA TO DASH '-'
*
* INPUT   : DATA FROM CONSUMER REPORTS: ..\..\PROGRAMS\&DAT.LOADWEB\TOTAL_Q.SD2
*
* OUTPUT  : INTO EXCEL SPREADSHEET
*****;

OPTIONS PS=60 LS=120 ERRORS=2 NOCENTER NOFMterr NOXWAIT SPOOL MPRINT;

*LLU 7/23/2010--AUTOMATING PERIOD, MINIMIZE POSSIBLE ERROR;

DATA M1;

*Set the first month of each quarter with order of running quarter 1 in FY;
DO MONTH='October', 'July', 'April', 'January';
    OUTPUT;
END;
RUN;

DATA _NULL_;
    SET M1;

INDEX=_N_;
IF &CURRENTQ =1 THEN DO;
    ORDER=INDEX; YR= &CURRENTY -1;
END;
IF &CURRENTQ = 2 THEN DO;
    IF INDEX = 4 THEN DO; ORDER=1; YR=&CURRENTY; END; ELSE
    IF INDEX < 4 THEN DO; ORDER = INDEX+1; YR=&CURRENTY-1; END;
END;
IF &CURRENTQ = 3 THEN DO;
    IF INDEX >=3 THEN DO; ORDER=INDEX-2; YR=&CURRENTY; END; ELSE
    IF INDEX < 3 THEN DO; ORDER=INDEX+2; YR=&CURRENTY-1; END;
END;
IF &CURRENTQ = 4 THEN DO;
    IF INDEX IN (2,3,4) THEN DO; ORDER=INDEX-1; YR=&CURRENTY; END; ELSE
    IF INDEX =1 THEN DO; ORDER=4; YR=&CURRENTY-1; END;
END;

LENGTH PERIOD $15;
PERIOD=TRIM(LEFT(MONTH))||','||' '||(PUT(YR,4.));
IF ORDER=1 THEN CALL SYMPUT('PERIOD4', TRIM(LEFT(PERIOD)));
IF ORDER=2 THEN CALL SYMPUT('PERIOD3', TRIM(LEFT(PERIOD)));
IF ORDER=3 THEN CALL SYMPUT('PERIOD2', TRIM(LEFT(PERIOD)));
IF ORDER=4 THEN CALL SYMPUT('PERIOD1', TRIM(LEFT(PERIOD)));

RUN;

%PUT PERIOD4 = &PERIOD4(current quarter);

```

```
%PUT PERIOD3 = &PERIOD3;
%PUT PERIOD2 = &PERIOD2;
%PUT PERIOD1 = &PERIOD1;
```

```
%MACRO RUNCW (AREA=&FOLDER, /* Region/Service/conus */
              FOLDER=, /* Folder containing excel template */
              CURRENT=CURNTR.TOTAL_Q /* Libname and dataset for the current
quarter */
              );
```

```
*LLU 7/21/2010--DETECTING AVAILABILITY OF EXCEL, MINIMIZE WAITING TIME;
FILENAME CMDS DDE "EXCEL|SYSTEM";
```

```
DATA _NULL_;
```

```
LENGTH FID RC START STOP TIME 8;
FID = FOPEN('CMDS' , 'S');
IF (FID LE 0) THEN DO;
  RC = SYSTEM('START EXCEL');
  START = DATETIME();
  STOP = START + 10;
  DO WHILE (FID LE 0);
    FID = FOPEN('CMDS' , 'S');
    TIME = DATETIME();
    IF (TIME GE STOP) THEN FID = 1;
  END;
END;
RC = FCLOSE(FID);
```

```
RUN;
```

```
%MACRO SETUP;
```

```
DATA _NULL_;
```

```
SINGLE=" ";
DOUBLE=" ";
```

```
LENGTH OPENXLS SAVEXLS $160;
```

```
OPENXLS=SINGLE || "[OPEN(" || DOUBLE || "&PATH.\Template_PurchasedCare.xlsx" || DOUBLE || ")]" |
| SINGLE;
```

```
SAVEXLS=SINGLE || "[SAVE.AS(" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER._PurchasedCare.XLSB" || D
OUBLE || ")]" || SINGLE;
```

```
CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
CALL SYMPUT ("SAVEXLS",TRIM(SAVEXLS));
```

```
RUN;
```

```
%MEND SETUP;
```

```
%SETUP;
```

```
DATA _NULL_;
```

```
FILE CMDS;
PUT &OPENXLS;
```

```

X=SLEEP(3);
PUT '[ERROR(FALSE)]';
PUT &SAVEXLS;
PUT '[app.minimize()]';
RUN;

%MACRO RUNPOP(MAJPOP=, POP=, DAT=);

TITLE2 "&AREA.";

LIBNAME CURNTR "..\&DAT.Loadweb";

/* This macro pulls data from the specified dataset to be used in the Consumer Watch
*/
%MACRO GETDATA (MAJGRP=, /* Prime enrollee or civilian PCM */
                REGION=, /* Value of variable REGION */
                REGCAT=, /* Value of variable REGCAT */
                BENEFIT=, /* Value of variable BENEFIT */
                TIMEPD=, /* Value of variable TIMEPD */
                OUTDATA=, /* Name of output data set */
                FIGURE= /* Figure number in consumer watch reports */
                );

PROC FREQ NOPRINT DATA=&CURRENT;
  WHERE MAJGRP = &MAJPOP
        AND REGION IN &REGION
        AND REGCAT IN &REGCAT
        AND BENEFIT IN &BENEFIT
        AND BENTYPE = 'Composite'
        AND TIMEPD = &TIMEPD;
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SCORE*N_OBS*N_WGT*SIG/OUT=&OUTDATA
  (DROP=COUNT PERCENT);
RUN;

%MEND GETDATA;

%MACRO NEWSCORE (FIGURE=);
/* This macro re-calculates SCORE based on the quarterly benchmark */
%DO QUARTER=1 %TO 4;

DATA FIG&FIGURE&QUARTER FIG&FIGURE.B&QUARTER(KEEP=SCORE N);
  SET FIG&FIGURE.P&QUARTER;
  N=1; /* DUMMY ID FOR NEXT MERGE STEP;
  IF REGION='Benchmark' THEN OUTPUT FIG&FIGURE.B&QUARTER;
  ELSE OUTPUT FIG&FIGURE&QUARTER;

RUN;

/*ADD CODE HERE TO PRESERVE ABOVE DATASET FOR LATER COMPARISON. LLU 10/7/04*/

DATA CFIG&FIGURE&QUARTER;
  SET FIG&FIGURE&QUARTER;

KEEP MAJGRP REGION BENEFIT BENTYPE TIMEPD SCORE SIG;
RUN;

```

```

DATA FIG&FIGURE.P&QUARTER(DROP=RSCORE);
  MERGE FIG&FIGURE.B&QUARTER(RENAME=(SCORE=RSCORE))
        FIG&FIGURE&QUARTER;
BY N;
*   SCORE=SCORE-RSCORE;
RUN;
%END;
%MEND NEWSCORE;

%MACRO COMBDATA(FIGURE=);

DATA &POP.FIG&FIGURE(DROP=BSCORE);
  SET BENCH FIG&FIGURE.P1 FIG&FIGURE.P4 FIG&FIGURE.P3 FIG&FIGURE.P2;
  RETAIN BSCORE;
  IF REGION = 'Benchmark' THEN DO;
    ROW = 3;
    BSCORE=SCORE;
  END;
  ELSE IF TIMEPD = "&PERIOD1" THEN DO;
    ROW = 4;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD2" THEN DO;
    ROW = 5;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD3" THEN DO;
    ROW = 6;
  *   SCORE=SCORE+BSCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
  END;
  ELSE IF TIMEPD = "&PERIOD4" THEN DO;
    ROW=7;
  *   SCORE=SCORE+BSCORE;
  END;
  &POP.SCORE = SCORE;;   *3/4/08 LLu, increase the score by 100 to align with fig.
5-10;
  &POP.SIG = SIG;

RUN;
PROC SORT;
  BY ROW;
RUN;

%MEND COMBDATA;

*****
* FIGURE 1: Health Care Rating
*****;
TITLE2 'Figure 1: Health Care Rating';

%GETDATA (MAJGRP=&MAJPOP,
          REGION=('Benchmark'),

```

```

        REGCAT=( 'Benchmark' ),
        BENEFIT=( 'Health Care' ),
        TIMEPD="&PERIOD4" ,
        OUTDATA=BENCH);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Care' ),
        TIMEPD="&PERIOD4" ,
        OUTDATA=FIG1P4);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Care' ),
        TIMEPD="&PERIOD3" ,
        OUTDATA=FIG1P3);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Care' ),
        TIMEPD="&PERIOD2" ,
        OUTDATA=FIG1P2);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Care' ),
        TIMEPD="&PERIOD1" ,
        OUTDATA=FIG1P1);
%NEWSCORE(FIGURE=1);
%COMBDATA(FIGURE=1);

```

```

*****
* FIGURE 2: Health Plan Rating
*****;
TITLE2 'Figure 2: Health Plan Rating';

```

```

%GETDATA (MAJGRP=&MAJPOP,
        REGION=( 'Benchmark' ),
        REGCAT=( 'Benchmark' ),
        BENEFIT=( 'Health Plan' ),
        TIMEPD="&PERIOD4" ,
        OUTDATA=BENCH);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Plan' ),
        TIMEPD="&PERIOD4" ,
        OUTDATA=FIG2P4);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),
        REGCAT=( "&AREA", 'Benchmark' ),
        BENEFIT=( 'Health Plan' ),
        TIMEPD="&PERIOD3" ,
        OUTDATA=FIG2P3);
%GETDATA (MAJGRP=&MAJPOP,
        REGION=( "&AREA", 'Benchmark' ),

```



```

REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Health Plan'),
TIMEPD="&PERIOD2",
OUTDATA=FIG2P2);
%GETDATA (MAJGRP=&MAJPOP,
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Health Plan'),
TIMEPD="&PERIOD1",
OUTDATA=FIG2P1);
%NEWSCORE(FIGURE=2);
%COMBDATA(FIGURE=2);

```

```

*****
* FIGURE 3: Personal Provider Rating
*****;
TITLE2 'Figure 3: Personal Provider Rating';

```

```

%GETDATA (MAJGRP=&MAJPOP,
REGION=('Benchmark'),
REGCAT=('Benchmark'),
BENEFIT=('Personal Doctor'),
TIMEPD="&PERIOD4",
OUTDATA=BENCH);
%GETDATA (MAJGRP=&MAJPOP,
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Personal Doctor'),
TIMEPD="&PERIOD4",
OUTDATA=FIG3P4);
%GETDATA (MAJGRP=&MAJPOP,
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Personal Doctor'),
TIMEPD="&PERIOD3",
OUTDATA=FIG3P3);
%GETDATA (MAJGRP=&MAJPOP,
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Personal Doctor'),
TIMEPD="&PERIOD2",
OUTDATA=FIG3P2);
%GETDATA (MAJGRP=&MAJPOP,
REGION=("&AREA",'Benchmark'),
REGCAT=("&AREA",'Benchmark'),
BENEFIT=('Personal Doctor'),
TIMEPD="&PERIOD1",
OUTDATA=FIG3P1);
%NEWSCORE(FIGURE=3);
%COMBDATA(FIGURE=3);

```

```

*****
* FIGURE 4: Specialist Rating--added for Q1 2005, LLu 6/2/05
*****;
TITLE2 'Figure 4: Specialist Rating';

```

```

%GETDATA (MAJGRP=&MAJPOP,
          REGION=('Benchmark'),
          REGCAT=('Benchmark'),
          BENEFIT=('Specialty Care'),
          TIMEPD="&PERIOD4",
          OUTDATA=BENCH);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Specialty Care'),
          TIMEPD="&PERIOD4",
          OUTDATA=FIG4P4);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Specialty Care'),
          TIMEPD="&PERIOD3",
          OUTDATA=FIG4P3);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Specialty Care'),
          TIMEPD="&PERIOD2",
          OUTDATA=FIG4P2);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Specialty Care'),
          TIMEPD="&PERIOD1",
          OUTDATA=FIG4P1);
%NEWSCORE(Figure=4);
%COMBDATA(Figure=4);

```

```

*****
* FIGURE 5 & 6: Access Composites
*****;
TITLE2 'Figure 5 & 6: Access Composites';

```

```

%GETDATA (MAJGRP=&MAJPOP,
          REGION('Benchmark'),
          REGCAT('Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          TIMEPD="&PERIOD4",
          OUTDATA=BENCH);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          TIMEPD="&PERIOD4",
          OUTDATA=FIG5P4);
%GETDATA (MAJGRP=&MAJPOP,
          REGION("&AREA",'Benchmark'),
          REGCAT("&AREA",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          TIMEPD="&PERIOD3",
          OUTDATA=FIG5P3);

```

```

%GETDATA (MAJGRP=&MAJPOP,
          REGION=("&AREA", 'Benchmark'),
          REGCAT=("&AREA", 'Benchmark'),
          BENEFIT=('Getting Needed Care', 'Getting Care Quickly'),
          TIMEPD="&PERIOD2",
          OUTDATA=FIG5P2);
%GETDATA (MAJGRP=&MAJPOP,
          REGION=("&AREA", 'Benchmark'),
          REGCAT=("&AREA", 'Benchmark'),
          BENEFIT=('Getting Needed Care', 'Getting Care Quickly'),
          TIMEPD="&PERIOD1",
          OUTDATA=FIG5P1);

/*Use macro for figures 5-10 */

%MACRO COMPSCORE (FIGNUM=
                 );

%DO QUARTER = 1 %TO 4;

DATA FIG&FIGNUM.P&QUARTER FIGB&QUARTER(KEEP=SCORE BENEFIT SIG);
  SET FIG&FIGNUM.P&QUARTER;
  IF REGION = 'Benchmark' THEN OUTPUT FIGB&QUARTER;
  ELSE OUTPUT FIG&FIGNUM.P&QUARTER;
RUN;
PROC SORT DATA=FIG&FIGNUM.P&QUARTER;
  BY BENEFIT;
RUN;
PROC SORT DATA=FIGB&QUARTER;
  BY BENEFIT;
RUN;

/*ADD CODE HERE TO PRESERVE THE SCORES IN CONUS_Q DATASET FOR LATER COMPARISON. LLU
10/7/04*/

DATA CFIG&FIGNUM.&QUARTER;
  SET FIG&FIGNUM.P&QUARTER;

KEEP MAJGRP REGION BENEFIT BENTYPE TIMEPD SCORE SIG;
RUN;

DATA FIG&FIGNUM.&QUARTER(DROP=RSCORE);
  MERGE FIGB&QUARTER(RENAME=(SCORE=RSCORE))
        FIG&FIGNUM.P&QUARTER;
  BY BENEFIT;
  * SCORE=SCORE-RSCORE;
RUN;
%END;

%MEND COMPSCORE;

%COMPSCORE (FIGNUM=5);

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
  COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))

```

```

        COL4(DROP=SCORE RENAME=(SCORE1=COL4))          /*LLU 10/8/04, TO PRESERVE KEY
VARS FOR LATER COMPARISON*/
        COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
        COL6(KEEP=ROW SIG RENAME=(SIG=COL6))
        COL7(KEEP=ROW SIG RENAME=(SIG=COL7))
        ;
SET BENCH FIG54 FIG53 FIG52 FIG51;
BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
    BSCORE=SCORE;
    ROW = 18;
    SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
    ROW = 18;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
    ROW = 19;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
    ROW = 20;
*    SCORE=BSCORE+SCORE;
    IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
    ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
    ROW = 21;
*    SCORE=BSCORE+SCORE;
    SCORE1 = SCORE;
END;

    IF (BENEFIT = 'Getting Needed Care' AND REGION NE 'Benchmark') THEN OUTPUT COL2
COL6;
    IF (BENEFIT = 'Getting Needed Care' AND REGION = 'Benchmark') THEN OUTPUT COL3;
    IF (BENEFIT = 'Getting Care Quickly' AND REGION NE 'Benchmark') THEN OUTPUT COL4
COL7;
    IF (BENEFIT = 'Getting Care Quickly' AND REGION = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 5. LLU 10/7/04*/

DATA FIG5A;

```

```
    MERGE COL2 COL6;
  BY ROW;
RUN;
```

```
DATA FIG5B;
  MERGE COL4 COL7;
  BY ROW;
RUN;
```

```
DATA FIG5AB;
  SET FIG5A FIG5B;
  BY ROW;
RUN;
```

```
DATA &POP.FIG5;
  MERGE COL2 COL3 COL4(KEEP=ROW COL4) COL5 COL6 COL7;
  BY ROW;
```

```
RUN;
/*
```

```
DATA &POP.FIG6;
  MERGE COL4(KEEP=ROW COL4) COL5 COL7;
  BY ROW;
```

```
RUN;
*/
```

```
*****
* FIGURE 7:  Doctors Communicate
*****;
TITLE2 'Figure 7 :  Doctors Communicate';
```

```
%GETDATA (MAJGRP=&MAJPOP,
  REGION=('Benchmark'),
  REGCAT=('Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  TIMEPD="&PERIOD4",
  OUTDATA=BENCH);
```

```
%GETDATA (MAJGRP=&MAJPOP,
  REGION("&AREA", 'Benchmark'),
  REGCAT("&AREA", 'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  TIMEPD="&PERIOD4",
  OUTDATA=FIG7P4);
```

```
%GETDATA (MAJGRP=&MAJPOP,
  REGION("&AREA", 'Benchmark'),
  REGCAT("&AREA", 'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  TIMEPD="&PERIOD3",
  OUTDATA=FIG7P3);
```

```
%GETDATA (MAJGRP=&MAJPOP,
  REGION("&AREA", 'Benchmark'),
  REGCAT("&AREA", 'Benchmark'),
  BENEFIT=('How Well Doctors Communicate'),
  TIMEPD="&PERIOD2",
  OUTDATA=FIG7P2);
```

```
%GETDATA (MAJGRP=&MAJPOP,
```

```

        REGION=("&AREA",'Benchmark'),
        REGCAT=("&AREA",'Benchmark'),
        BENEFIT=('How Well Doctors Communicate'),
        TIMEPD="&PERIOD1",
        OUTDATA=FIG7P1);

%COMPSCORE (FIGNUM=7);

DATA COL4(DROP=SCORE RENAME=(SCORE1=COL4))          /*LLU 10/8/04, TO PRESERVE KEY
VARS FOR LATER COMPARISON*/
        COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))
        COL7(KEEP=ROW SIG RENAME=(SIG=COL7))
        ;
SET BENCH FIG74 FIG73 FIG72 FIG71;
BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
        BSCORE=SCORE;
        ROW = 18;
        SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
        ROW = 18;
*        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
        ROW = 19;
*        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
        ROW = 20;
*        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
        ROW = 21;
*        SCORE=BSCORE+SCORE;
        SCORE1 = SCORE;
END;

        IF (BENEFIT = 'How Well Doctors Communicate' AND REGION NE 'Benchmark') THEN
OUTPUT COL4 COL7;
        IF (BENEFIT = 'How Well Doctors Communicate' AND REGION = 'Benchmark') THEN OUTPUT
COL5;

RUN;

PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

```

```
/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 6. LLU 10/7/04*/
```

```
DATA FIG7AB;  
  MERGE COL4 COL7;  
  BY ROW;  
RUN;
```

```
DATA &POP.FIG7;  
  MERGE COL4(KEEP=ROW COL4) COL5 COL7;  
  BY ROW;  
RUN;
```

```
*****  
* FIGURE 8 & 9: Claims/Service Composites  
*****;
```

```
TITLE2 'Figure 8 & 9: Claims/Service Composites';
```

```
%GETDATA (MAJGRP=&MAJPOP,  
  REGION=('Benchmark'),  
  REGCAT=('Benchmark'),  
  BENEFIT=('Customer Service','Claims Processing'),  
  TIMEPD="&PERIOD4",  
  OUTDATA=BENCH);
```

```
%GETDATA (MAJGRP=&MAJPOP,  
  REGION("&AREA",'Benchmark'),  
  REGCAT("&AREA",'Benchmark'),  
  BENEFIT=('Customer Service','Claims Processing'),  
  TIMEPD="&PERIOD4",  
  OUTDATA=FIG9P4);
```

```
%GETDATA (MAJGRP=&MAJPOP,  
  REGION("&AREA",'Benchmark'),  
  REGCAT("&AREA",'Benchmark'),  
  BENEFIT=('Customer Service','Claims Processing'),  
  TIMEPD="&PERIOD3",  
  OUTDATA=FIG9P3);
```

```
%GETDATA (MAJGRP=&MAJPOP,  
  REGION("&AREA",'Benchmark'),  
  REGCAT("&AREA",'Benchmark'),  
  BENEFIT=('Customer Service','Claims Processing'),  
  TIMEPD="&PERIOD2",  
  OUTDATA=FIG9P2);
```

```
%GETDATA (MAJGRP=&MAJPOP,  
  REGION("&AREA",'Benchmark'),  
  REGCAT("&AREA",'Benchmark'),  
  BENEFIT=('Customer Service','Claims Processing'),  
  TIMEPD="&PERIOD1",  
  OUTDATA=FIG9P1);
```

```
%COMPSCORE (FIGNUM=9);
```

```
DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))  
  COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))  
  COL4(DROP=SCORE RENAME=(SCORE1=COL4)) /*LLU 10/8/04, TO PRESERVE KEY  
VARS FOR LATER COMPARISON*/  
  COL5(KEEP=ROW SCORE1 RENAME=(SCORE1=COL5))  
  COL6(KEEP=ROW SIG RENAME=(SIG=COL6))  
  COL7(KEEP=ROW SIG RENAME=(SIG=COL7));  
SET BENCH FIG94 FIG93 FIG92 FIG91;
```

```

BY BENEFIT;
RETAIN BSCORE;
IF REGION = 'Benchmark' THEN DO;
  BSCORE=SCORE;
  ROW = 18;
  SCORE1 = SCORE;
END;
ELSE IF TIMEPD = "&PERIOD1" THEN DO;
  ROW = 18;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD2" THEN DO;
  ROW = 19;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD3" THEN DO;
  ROW = 20;
*   SCORE=BSCORE+SCORE;
  IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
  ELSE SCORE1=SCORE;
END;
ELSE IF TIMEPD = "&PERIOD4" THEN DO;
  ROW = 21;
*   SCORE=BSCORE+SCORE;
  SCORE1 = SCORE;
END;

IF (BENEFIT = 'Customer Service' AND REGION NE 'Benchmark') THEN OUTPUT COL2 COL6;
IF (BENEFIT = 'Customer Service' AND REGION = 'Benchmark') THEN OUTPUT COL3;
IF (BENEFIT = 'Claims Processing' AND REGION NE 'Benchmark') THEN OUTPUT COL4
COL7;
IF (BENEFIT = 'Claims Processing' AND REGION = 'Benchmark') THEN OUTPUT COL5;

RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;

/*ADD CODE HERE TO PRESERVE NEW SCORES FOR FIGURE 7. LLU 10/7/04*/

DATA FIG9A;
  MERGE COL2 COL6;
  BY ROW;
RUN;

DATA FIG9B;
  MERGE COL4 COL7;
  BY ROW;
RUN;

```



```

DATA FIG9AB;
  SET FIG9A FIG9B;
  BY ROW;
RUN;

```

```

DATA &POP.FIG9;
  MERGE COL2 COL3 COL4(KEEP=ROW COL4) COL5 COL6 COL7;
  BY ROW;
RUN;

```

```

*****
* TABLE 1: Preventive Care
*****;
PROC FREQ NOPRINT DATA=&CURRENT;
  WHERE MAJGRP IN (&MAJPOP,'Benchmark')
    AND REGION = "&AREA"
    AND REGCAT = "&AREA"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese', 'Non-Smoking Rate','Counselled To Quit')
    AND TIMEPD = "&PERIOD4";
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_P4(DROP=COUNT PERCENT);
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*N_OBS/ OUT=TAB2_P4(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
  WHERE MAJGRP = &MAJPOP
    AND REGION = "&AREA"
    AND REGCAT = "&AREA"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
    AND TIMEPD = "&PERIOD3";
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_P3(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
  WHERE MAJGRP = &MAJPOP
    AND REGION = "&AREA"
    AND REGCAT = "&AREA"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',
      'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
    AND TIMEPD = "&PERIOD2";
  TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_P2(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
  WHERE MAJGRP = &MAJPOP
    AND REGION = "&AREA"
    AND REGCAT = "&AREA"
    AND BENEFIT IN ('Preventive Care','Healthy Behaviors')
    AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care',

```

```

                'Percent Not Obese','Non-Smoking Rate','Counselled To Quit')
    AND TIMEPD = "&PERIOD1";
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/
OUT=TAB1_P1(DROP=COUNT PERCENT);
RUN;
DATA TAB1P4;
    SET TAB1_P4;
    IF MAJGRP = 'Benchmark' THEN DO;
        ROW=42;
        IF BENTYPE='Mammography' THEN COL2=SCORE;
        ELSE IF BENTYPE='Pap Smear' THEN COL3=SCORE;
        ELSE IF BENTYPE='Hypertension' THEN COL4=SCORE;
        ELSE IF BENTYPE='Prenatal Care' THEN COL5=SCORE;
        ELSE IF BENTYPE='Percent Not Obese' THEN COL6=SCORE;
        ELSE IF BENTYPE = 'Non-Smoking Rate' THEN COL7=SCORE;
        ELSE IF BENTYPE = 'Counselled To Quit' THEN COL8=SCORE;
    END;
    ELSE DO;
        ROW = 40;
        IF BENTYPE='Mammography' THEN DO;
            COL2=SCORE;
            COL9=SIG;
        END;
        ELSE IF BENTYPE='Pap Smear' THEN DO;
            COL3=SCORE;
            COL10=SIG;
        END;
        ELSE IF BENTYPE='Hypertension' THEN DO;
            COL4=SCORE;
            COL11=SIG;
        END;
        ELSE IF BENTYPE='Prenatal Care' THEN DO;
            COL5=SCORE;
            COL12=SIG;
        END;
        ELSE IF BENTYPE='Percent Not Obese' THEN DO;
            COL6=SCORE;
            COL13=SIG;
        END;
        ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
            COL7=SCORE;
            COL14=SIG;
        END;
        ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
            COL8=SCORE;
            COL15=SIG;
        END;
    END;
    PROC SORT;
    BY ROW;
RUN;
DATA TAB2P4;
    SET TAB2_P4;
    ROW=41;
    IF MAJGRP=&MAJPOP;
    IF BENTYPE='Mammography' THEN COL2=N_OBS;
    ELSE IF BENTYPE='Pap Smear' THEN COL3=N_OBS;
    ELSE IF BENTYPE='Hypertension' THEN COL4=N_OBS;

```

```

ELSE IF BENTYPE='Prenatal Care' THEN COL5=N_OBS;
ELSE IF BENTYPE='Percent Not Obese' THEN COL6=N_OBS;
ELSE IF BENTYPE='Non-Smoking Rate' THEN COL7=N_OBS;
ELSE IF BENTYPE='Counselled To Quit' THEN COL8=N_OBS;
PROC SORT;
BY ROW;
RUN;
DATA TAB1P3;
SET TAB1_P3;
ROW=39;
IF BENTYPE='Mammography' THEN DO;
COL2=SCORE;
COL9=SIG;
END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
COL3=SCORE;
COL10=SIG;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
COL4=SCORE;
COL11=SIG;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
COL5=SCORE;
COL12=SIG;
END;
ELSE IF BENTYPE='Percent Not Obese' THEN DO;
COL6=SCORE;
COL13=SIG;
END;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
COL7=SCORE;
COL14=SIG;
END;
ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
COL8=SCORE;
COL15=SIG;
END;
PROC SORT;
BY ROW;
RUN;
DATA TAB1P2;
SET TAB1_P2;
ROW=38;
IF BENTYPE='Mammography' THEN DO;
COL2=SCORE;
COL9=SIG;
END;
ELSE IF BENTYPE='Pap Smear' THEN DO;
COL3=SCORE;
COL10=SIG;
END;
ELSE IF BENTYPE='Hypertension' THEN DO;
COL4=SCORE;
COL11=SIG;
END;
ELSE IF BENTYPE='Prenatal Care' THEN DO;
COL5=SCORE;

```

```

        COL12=SIG;
    END;
    ELSE IF BENTYPE='Percent Not Obese' THEN DO;
        COL6=SCORE;
        COL13=SIG;
    END;
ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
    COL7=SCORE;
    COL14=SIG;
    END;
    ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
        COL8=SCORE;
        COL15=SIG;
    END;
PROC SORT;
BY ROW;

RUN;
DATA TAB1P1;
SET TAB1_P1;
ROW=37;
    IF BENTYPE='Mammography' THEN DO;
        COL2=SCORE;
        COL9=SIG;
    END;
    ELSE IF BENTYPE='Pap Smear' THEN DO;
        COL3=SCORE;
        COL10=SIG;
    END;
    ELSE IF BENTYPE='Hypertension' THEN DO;
        COL4=SCORE;
        COL11=SIG;
    END;
    ELSE IF BENTYPE='Prenatal Care' THEN DO;
        COL5=SCORE;
        COL12=SIG;
    END;
    ELSE IF BENTYPE='Percent Not Obese' THEN DO;
        COL6=SCORE;
        COL13=SIG;
    END;
    ELSE IF BENTYPE = 'Non-Smoking Rate' THEN DO;
        COL7=SCORE;
        COL14=SIG;
    END;
    ELSE IF BENTYPE = 'Counselled To Quit' THEN DO;
        COL8=SCORE;
        COL15=SIG;
    END;
PROC SORT;
BY ROW;
RUN;

DATA TAB1;
MERGE TAB1P1 TAB1P2 TAB1P3 TAB1P4 TAB2P4;
BY ROW;
RUN;

```

```

DATA COL2(DROP=COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL3(DROP=COL2 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL4(DROP=COL2 COL3 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL5(DROP=COL2 COL3 COL4 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL6(DROP=COL2 COL3 COL4 COL5 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL7(DROP=COL2 COL3 COL4 COL5 COL6 COL8 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL8(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL9 COL10 COL11 COL12 COL13 COL14
COL15)
  COL9(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL10 COL11 COL12 COL13 COL14
COL15)
  COL10(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL11 COL12 COL13 COL14
COL15)
  COL11(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL12 COL13 COL14
COL15)
  COL12(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL13 COL14
COL15)
  COL13(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL14 COL15)
  COL14(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL15)
  COL15(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13
COL14);

```

```
SET TAB1;
```

```

IF COL2 NE . THEN OUTPUT COL2;
IF COL3 NE . THEN OUTPUT COL3;
IF COL4 NE . THEN OUTPUT COL4;
IF COL5 NE . THEN OUTPUT COL5;
IF COL6 NE . THEN OUTPUT COL6;
IF COL7 NE . THEN OUTPUT COL7;
IF COL8 NE . THEN OUTPUT COL8;
IF COL9 NE . THEN OUTPUT COL9;
IF COL10 NE . THEN OUTPUT COL10;
IF COL11 NE . THEN OUTPUT COL11;
IF COL12 NE . THEN OUTPUT COL12;
IF COL13 NE . THEN OUTPUT COL13;
IF COL14 NE . THEN OUTPUT COL14;
IF COL15 NE . THEN OUTPUT COL15;

```

```
RUN;
```

```

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;
PROC SORT DATA=COL5; BY ROW; RUN;
PROC SORT DATA=COL6; BY ROW; RUN;
PROC SORT DATA=COL7; BY ROW; RUN;
PROC SORT DATA=COL8; BY ROW; RUN;
PROC SORT DATA=COL9; BY ROW; RUN;
PROC SORT DATA=COL10; BY ROW; RUN;
PROC SORT DATA=COL11; BY ROW; RUN;
PROC SORT DATA=COL12; BY ROW; RUN;
PROC SORT DATA=COL13; BY ROW; RUN;
PROC SORT DATA=COL14; BY ROW; RUN;

```

```

PROC SORT DATA=COL15; BY ROW; RUN;

DATA &POP.TABLE1;
MERGE COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11 COL12 COL13 COL14 COL15;
BY ROW;
RUN;

```

```

*****
      COMPARE SCORES AND SIG B/T CONSUMER WATCH AND REPORT CARDS.
      SET 0.015 DIFFERENCE AS THRESHOLD.
      LUCY LU 10/07/2004
*****;

```

```

PROC SORT DATA=&POP.FIG1(DROP=SCORE);          *FROM CONSUMER WATCH. LLU
10/8/04;
BY BENEFIT TIMEPD REGION;

```

```

PROC SORT DATA=&POP.FIG2(DROP=SCORE);
BY BENEFIT TIMEPD REGION;

```

```

PROC SORT DATA=&POP.FIG3(DROP=SCORE);
BY BENEFIT TIMEPD REGION;

```

```

PROC SORT DATA=FIG5AB OUT=&POP.FIG5;
BY BENEFIT TIMEPD REGION;

```

```

PROC SORT DATA=FIG7AB OUT=&POP.FIG7;
BY BENEFIT TIMEPD REGION;

```

```

PROC SORT DATA=FIG9AB OUT=&POP.FIG9;
BY BENEFIT TIMEPD REGION;
RUN;

```

```

%MACRO COMPARE(I=, TITL=);

```

```

TITLE "DATA=&MAJPOP";

```

```

DATA CFIG&I;          *FROM CONUS. LLU 10/8/04;

```

```

  SET CFIG&I.1
    CFIG&I.2
    CFIG&I.3
    CFIG&I.4
  ;

```

```

RUN;

```

```

PROC SORT DATA=&POP.FIG&I;
BY BENEFIT TIMEPD REGION;
RUN;

```

```

PROC SORT DATA=CFIG&I;

```

```

BY BENEFIT TIMEPD REGION;
RUN;

DATA COMBFIG&I;
  MERGE CFIG&I(IN=F1) &POP.FIG&I(IN=F2);
BY BENEFIT TIMEPD REGION;

IF F1 AND F2;

FIG = &I;

IF FIG <=4 THEN DO;
  SCORE2=&POP.SCORE;
  SIG2=&POP.SIG;
END;

ELSE IF FIG >4 THEN DO;
  IF COL2 >= 0 THEN SCORE2=COL2;
  ELSE IF COL4 >0 THEN SCORE2=COL4;

  IF COL6 >= .Z THEN SIG2=COL6;
  ELSE IF COL7>=.Z THEN SIG2=COL7;
END;

SCOREDIF=SCORE2-SCORE;
SIGDIF=SIG2-SIG;

IF ABS(SCOREDIF)>.015 OR SIGDIF>0 THEN FLAG=1;
ELSE FLAG=0;

KEEP BENEFIT TIMEPD REGION SCORE SIG SCORE2 SIG2 SCOREDIF SIGDIF FLAG;

LABEL
FLAG="DIFF IN SCORES >0.015 OR/AND DIFF IN SIG >0"
SCORE="SCORES FROM CONUS"
SCORE2="SCORES FROM CONSUMER WATCH"
SIG="SIG FROM CONUS"
SIG2="SIG FROM CONSUMER WATCH"
;

TITLE2 "*****";
TITLE3 "CONSUMER WATCH, &AREA, DATA=&MAJPOP ";

PROC PRINT L NOOBS;
TITLE4 "Compare &TITL.";
RUN;

%MEND COMPARE;

%COMPARE(I=1, TITL=Health Care Rating);
%COMPARE(I=2, TITL=Health Plan Rating);
%COMPARE(I=3, TITL=Personal Provider Rating);
%COMPARE(I=4, TITL=Specialist Rating);

%COMPARE(I=5, TITL=Access composites);

```

```

%COMPARE(I=7, TITL=Office composites);
%COMPARE(I=9, TITL=Claims/Service composites);

*prepare to merge data;

DATA &POP.FIG5(RENAME=(COL2=&POP.SCORE COL6=&POP.SIG))
    &POP.FIG6(RENAME=(COL4=&POP.SCORE COL7=&POP.SIG));
    SET &POP.FIG5;
    IF BENEFIT='Getting Needed Care' THEN OUTPUT &POP.FIG5;
    ELSE IF BENEFIT = 'Getting Care Quickly' THEN OUTPUT &POP.FIG6;
RUN;

DATA &POP.FIG7(RENAME=(COL4=&POP.SCORE COL7=&POP.SIG));
    SET &POP.FIG7;
    IF BENEFIT = 'How Well Doctors Communicate' THEN OUTPUT;
RUN;

DATA &POP.FIG8(RENAME=(COL2=&POP.SCORE COL6=&POP.SIG))
    &POP.FIG9(RENAME=(COL4=&POP.SCORE COL7=&POP.SIG));
    SET &POP.FIG9;
    IF BENEFIT='Customer Service' THEN OUTPUT &POP.FIG8;
    ELSE IF BENEFIT = 'Claims Processing' THEN OUTPUT &POP.FIG9;
RUN;

%DO I= 1 %TO 9;
PROC SORT DATA=&POP.FIG&I;
BY ROW;
RUN;
%END;

%MEND RUNPOP;

%RUNPOP(MAJPOP='Enrollees with Military PCM', POP=DC,DAT=);
%RUNPOP(MAJPOP='Enrollees with Civilian PCM', POP=PC,DAT=PURCHASED);

%DO I=1 %TO 9;
DATA FIG&I;
    MERGE DCFIG&I PCFIG&I;
    BY ROW;
RUN;
%END;

DATA DCTABLE1;
    SET DCTABLE1;

    ROW=ROW-.5;      *CHANGE DIRECT CARES ROW NUMBER TO PREPARE NEXT STEP;
RUN;

DATA TABLE1;
    SET DCTABLE1 PCTABLE1;
    BY ROW;
RUN;

```



```
*****
* DDE LINK:  FIGURE 1-4: Health Care Rating
*****;
```

```
%MACRO RUNXLS1;
```

```
%DO I = 1 %TO 4;
```

```
FILENAME TBL DDE "EXCEL|RATINGS!R17C%EVAL(&I*7-5):R21C%EVAL(&I*7-2)";
```

```
DATA _NULLGFIG&I;
  SET FIG&I;
```

```
*4/14/2014 CREATE NEW VARS WITH ASTERISK FOR FIGURES 1-4;
IF DCSIG IN (1, -1) THEN NEWDCSCORE=CATS(" ",PUT(ROUND(DCSCORE,1),8.));
ELSE IF DCSCORE >=0 THEN NEWDCSCORE=PUT(ROUND(DCSCORE,1),8.);
```

```
IF PCSIG IN (1, -1) THEN NEWPCSCORE=CATS(" ",PUT(ROUND(PCSCORE,1),8.));
ELSE IF PCSCORE >=0 THEN NEWPCSCORE=PUT(ROUND(PCSCORE,1),8.);
```

```
*.S CREATED PROBLEM IN EXCEL SHEET, RECODED IT;
IF DCSCORE <0 THEN DCSCORE=.;
IF PCSCORE <0 THEN PCSCORE=.;
```

```
FILE TBL NOTAB LRECL=200;
X=SLEEP(.1);
PUT DCSCORE '09'X PCSCORE '09'X DCSIG '09'X PCSIG /***'09'X NEWDCSCORE '09'X
NEWPCSCORE***/;
```

```
RUN;
%END;
%MEND;
%RUNXLS1;
```

```
*****
* DDE LINK:  FIGURE 5-9: Composites
*****;
```

```
%MACRO RUNXLS2;
```

```
%DO I = 5 %TO 9;
```

```
FILENAME TBL DDE "EXCEL|Composites!R18C%EVAL((&I.-4)*5-3):R21C%EVAL((&I.-4)*5-1)";
```

```
DATA _NULL_;
  SET FIG&I;
```

```
*.S CREATED PROBLEM IN EXCEL SHEET, RECODED IT;
IF DCSCORE < 0 THEN DCSCORE=.;
IF PCSCORE < 0 THEN PCSCORE=.;
```

```
FILE TBL NOTAB LRECL=200;
X=SLEEP(.1);
PUT DCSCORE '09'X PCSCORE '09'X BSCORE;
RUN;
```

```
FILENAME TBL DDE "EXCEL|Composites!R23C%EVAL((&I.-4)*5-3):R26C%EVAL((&I.-4)*5-1)";
```

```

DATA _NULL_;
  SET FIG&I;
  FILE TBL NOTAB LRECL=200;
  X=SLEEP(.1);
  PUT DCSIG '09'X PCSIG;
RUN;

%END;
%MEND;
%RUNXLS2;

*****
* DDE LINK: TABLE 1: Preventive Care
*****;
FILENAME TBL DDE "EXCEL|TABLES!R3C11:R14C25";

DATA _NULL_;
  SET TABLE1;
  FILE TBL NOTAB LRECL=200;

  *4/14/2014 CREATE NEW VAR WITH ASTERISK FOR TABLE1;
  *4/15/2016 NO ASTERISK FOR COUNSELED TO QUIT;
  ARRAY CARE COL2- COL7;
  ARRAY SIGS COL9 -COL14;

  ARRAY NEWVAR $ MAMM PAP HBP PRENATAL NONOBE NONSMOKE;

  DO I = 1 TO 6;
    IF CARE(I) >=0 THEN NEWVAR(I)=PUT(ROUND(CARE(I),1),8.);

    ELSE IF CARE(I) <0 THEN NEWVAR(I) = "-";

  END;
  IF COL8>=0 THEN QUIT=PUT(ROUND(COL8,1),8.);
  IF COL8<0 THEN QUIT="-";

  *no benchmark for counseled to quit;
  IF ROW=42 THEN QUIT="-";

  PUT MAMM '09'X PAP '09'X HBP '09'X PRENATAL '09'X NONOBE '09'X NONSMOKE'09'X
QUIT'09'X
COL9 '09'X COL10 '09'X COL11 '09'X COL12 '09'X COL13 '09'X COL14 '09'X COL15;

  /*
  IF ROW <=41 THEN DO;
  PUT COL2 '09'X COL3 '09'X COL4 '09'X COL5 '09'X COL6 '09'X COL7 '09'X COL8 '09'X
COL9 '09'X COL10
'09'X COL11 '09'X COL12 '09'X COL13 '09'X COL14 '09'X COL15;
  END;
  ELSE IF ROW=42 THEN DO; *no benchmark for counselling;
  PUT COL2 '09'X COL3 '09'X COL4 '09'X COL5 '09'X COL6 '09'X COL7 '09'X '-' '09'X
COL9 '09'X COL10
'09'X COL11 '09'X COL12 '09'X COL13 '09'X COL14 '09'X COL15;
  END;*/

RUN;

```

```

/*Run Excel macro signif, May 9 2006, LLU*/

options noxsync;
*-- Specify XL filename ;

*%let excelf = &FOLDER..XLS ;

*-- Specify XL macro name ;
%let macron = sig2.signif2 ;

DATA _NULL_;
  FILE CMDS;
  *X=SLEEP(1);
  DDECommand = '[Run(" " || "&macron" || ",0)]' ;
  put DDECommand ;

RUN;

DATA _NULL_;
  FILE CMDS;
  PUT '[CLOSE(TRUE)]' ;
RUN;
/*
DATA _NULL_;
  FILE CMDS;
  PUT '[SAVE]';
  PUT '[QUIT]';
RUN; */

%MEND RUNCW;

```

J.2.A - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_word.sas - Run program that generates MS Word Purchased Care TRICARE Consumer Watch reports - Run Quarterly.

```

*****
* PROJECT: 6077-420
* PROGRAM: CONSUMERWATCH_PurchasedCare_Word.SAS
*
* PURPOSE: CALL CONSUMERWATCH_PurchasedCare_MACRO.INC PROGRAM
*          TO PRODUCE WORD DOCUMENT FOR Purchased Care Consumer Watch report.
*
* WRITTEN: 2/21/2008 LUCY LU
*
* INPUT  : EXCEL CHARTS
*
* OUTPUT : WORD DOCUMENTS
*
* PROGRAM TO CALL: CONSUMERWATCH_PurchasedCare_MACRO_WORD.INC
* MODIFIED : 4/14/2010 BY LUCY LU, SEE COMMENT ON INCLUDE FILE.
* MODIFIED : 7/23/2010 BY LUCY LU
*          Rename CONSUMERWATCH_MACRO_COMB_WORD.INC to
*                  CONSUMERWATCH_purchasedcare_MACR_WORD.INC
*          CONSOLIDATE USMHS AND REGION INTO ONE SAS PROGRAM
*
*****;
OPTIONS MPRINT;

%LET QUARTER=3;          *CURRENT FISCAL QUARTER;
%LET YEAR=2017;        *CURRENT FISCAL YEAR;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QUARTER.FY&YEAR.\Programs\PurchasedConsumerWatch;

%INCLUDE "consumerwatch_PURCHASEDCARE_macro_word.inc";

*%RUNWD(FOLDER=USAMHS,NAME=USA MHS,YOURSAY=USA MHS);
%RUNWD(FOLDER=North,YOURSAY=your region);
%RUNWD(FOLDER=South,YOURSAY=your region);
%RUNWD(FOLDER=West,YOURSAY=your region);

```

J.2.B -

**Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_macro_word.inc -
Generate MS Word quarterly Purchased Care TRICARE Consumer Watch reports.**

```
*****
* PROJECT: 6077-420
* PROGRAM: consumerwatch_PurchasedCare_macro_word.inc
*
* AUTHOR : LUCY LU
* PURPOSE: Automate the copy and paste process, update the year, region,
* response rate and sample size for quarterly Consumer
* Watch report.
*
* DATE : 03/12/2009
*
* OUTPUT : WORD DOCUMENTS
* MODIFIED: 06/4/2010 BY LUCY LU
* NOTE: 1. Replicating the template of Q2 2010 report found the lower
quality
* of charts in Word report. Using copy and paste instead of link.
* 2. Excel Triplet doesnt work for MS 2007/SAS 9. Using direct VBA
* code in SAS.
* 3. The final products are in Word and pdf format.
* MODIFIED: 7/23/2010 BY LUCY LU
* ADD MACRO TO MINIMIZE EXCEL AND WORD WAITING, REDUCE PROGRAM
* RUNNING TIME
* MODIFIED: 4/18/2014 BY LUCY LU, MOD FOR 508 COMPLIANCE
* -- COMMENTED OUT FONT & SIZE, USING STYLE IN WORD
* MODIFIED: 9/21/2016 BY LUCY LU,
* -- PRODUCE WORD FILE ONLY, DONT NEED PDF REPORT
*****;
```

OPTIONS NOXWAIT SPOOL NOXSYNC;

%MACRO RUNWD(FOLDER=,NAME=&FOLDER,YOURSAY=);

*7/23/2010 LLU, Wait until Excel ready;

FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;

```
LENGTH FID RC START STOP TIME 8;
FID = FOPEN('CMDS' , 'S');
IF (FID LE 0) THEN DO;
  RC = SYSTEM('START EXCEL');
  START = DATETIME();
  STOP = START + 10;
  DO WHILE (FID LE 0);
    FID = FOPEN('CMDS' , 'S');
    TIME = DATETIME();
    IF (TIME GE STOP) THEN FID = 1;
  END;
END;
RC = FCLOSE(FID);
RUN;
```

```

%MACRO SETUP;
  DATA _NULL_;

  SINGLE=" ";
  DOUBLE=" ";

  LENGTH OPENXLS OPENWRD SAVEWRD $170;

OPENXLS=SINGLE || "[OPEN(" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER._PurchasedCare.xlsb" || DOUB
LE || ")]" || SINGLE;

OPENWRD=SINGLE || "[FileOpen.Name=" || DOUBLE || "&PATH.\Template_purchasedcare.docm" || DOUB
LE || "]" || SINGLE;

SAVEWRD=SINGLE || "[FileSaveAs.Name=" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER._PurchasedCare.
docm" || DOUBLE || "]" || SINGLE;

  CALL SYMPUT ("OPENXLS",TRIM(OPENXLS));
  CALL SYMPUT ("OPENWRD",TRIM(OPENWRD));
  CALL SYMPUT ("SAVEWRD",TRIM(SAVEWRD));

RUN;

%PUT "OPEN XLS"= &OPENXLS/
    "OPEN WORD"=&OPENWRD/
    "SAVE WORD"=&SAVEWRD ;

%MEND SETUP;
%SETUP;

DATA _NULL_;
  FILE CMDS;
  PUT &OPENXLS;
  X=SLEEP(2);
  PUT '[app.minimize()]';
  RUN;

*7/23/2010 LLU, Wait until Word ready;
FILENAME CMNDS DDE "WINWORD|SYSTEM";

DATA _NULL_;
  LENGTH FID RC START STOP TIME 8;
  FID=FOPEN('CMNDS','S');
  IF (FID LE 0) THEN DO;
    RC=SYSTEM('START WINWORD');
    START=DATETIME();
    STOP=START+10;
  DO WHILE (FID LE 0);
    FID=FOPEN('CMNDS','S');
    TIME=DATETIME();
    IF (TIME GE STOP) THEN FID=1;
  END;
  END;
  RC=FCLOSE(FID);

```

```

RUN;

DATA _NULL_;
  FILE CMNDS;
  PUT &OPENWRD;
  X=SLEEP(2);
  PUT &SAVEWRD;
  PUT '[APPMINIMIZE]';
RUN;

%MACRO COPYIT;
%DO I=1 %TO 10;

  %LET WDMACRO=NEWPASTE&I;
  %LET EXMACRO=COPY&I;

  FILENAME CMDS DDE "EXCEL|SYSTEM";
  DATA _NULL_;
  X=SLEEP(2);
  RUN;

  DATA _NULL_;
  FILE CMDS;
  DDECommand = '[Run(" " || "&exmacro" || ",0)]' ;
  PUT DDEcommand ;

  RUN;
  FILENAME CMDS CLEAR;

  FILENAME CMNDS DDE 'WINWORD|SYSTEM';

  DATA _NULL_;
  X=SLEEP(2);
  RUN;

  DATA _NULL_;
  FILE CMNDS;
  put '[ToolsMacro .Name = " "&wdmacro" ', .Run]';
  RUN;

%END;
%MEND COPYIT;
%COPYIT;

DATA _NULL_;
  FILE CMNDS;
  put '[EditGoto.Destination="Region1"]';
  *put '[FormatFont.Font="Arial",.Points="20"]';
  PUT "&NAME";
RUN;

```

```

DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="Quarter1"]';
*put '[FormatFont.Font="Arial",.Points="20"]';
PUT "&QUARTER";
RUN;

DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="Year1"]';
*put '[FormatFont.Font="Arial",.Points="20"]';
PUT "&YEAR";
RUN;

DATA _NULL_;
FILE CMNDS;
*X=SLEEP(.2);
put '[EditGoto.Destination="YourSay"]';
*put '[FormatFont.Font="Times New Roman",.Points="11"]';
PUT "&YOURSAY";
RUN;

DATA _NULL_;
FILE CMNDS;
X=SLEEP(.2);
put '[EditGoto.Destination="Region2"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&NAME";
RUN;

DATA _NULL_;
FILE CMNDS;
*X=SLEEP(.2);
put '[EditGoto.Destination="Quarter2"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&QUARTER";
RUN;

DATA _NULL_;
FILE CMNDS;
put '[EditGoto.Destination="Year2"]';
*put '[FormatFont.Font="Arial",.Points="16"]';
PUT "&YEAR";
RUN;

/*9/21/2016 LLU COMMENT OUT
*savs as pdf;
%LET CMACRO=SaveAspdf;

FILENAME CMNDS DDE 'WINWORD|SYSTEM';
DATA _NULL_;
FILE CMNDS;

PUT '[ToolsMacro .Name = " "&CMACRO" "', .Run]';
run;*/

```



```
FILENAME CMDS DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CMDS;
  *PUT '[SAVE]'; *no save for Excel;
  PUT '[CLOSE(FALSE)]';
  PUT '[QUIT]';
RUN;

*reserved for future use;
FILENAME CMNDS DDE 'WINWORD|SYSTEM';

DATA _NULL_;
  FILE CMNDS;

  PUT '[fileSave] ';
  PUT '[FileClose 2] ';
RUN;

%MEND;
```

J.3 - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\PurchasedCare_APPENDIX.sas - Run appendix for Purchased Care TRICARE Consumer Watch reports - Run Quarterly.

```

RESETLINES;
*=====
PROJECT       : HCSDB Consumer Watch-Purchased Care
PROGRAM       : PurchasedCare_APPENDIX.SAS
WRITTEN       : LUCY LU
DESCRIPTION   : CREATE APPENDIX TABLES WITH 508 COMPLIANCE FOR
                CONSUMER WATCH REPORT

DATE          : 04/18/2014
MODIFIED      : 8/10/2016 BY LUCY LU. USING a, b SYMBOLS AND DIFFERENT COLORS
                TO HARD CODE THE APPENDIX TABLE
MODIFIED      : 8/30/2016 BY LUCY LU, THE CHANGE MADE TO MEET 508 REQUIREMENT
                - FILL HEADER FOR Q/FY COLUMN
                - REMOVE THE TITLE ON OUTPUT PDF REPORT
                - REMONVE THE EMPTY ROWS IN PROVENTIVE CARE TABLE
MODIFIED      : 9/21/2016 BY LUCY LU.
                - CREATE OUTPUT WITH RTF FORMAT
=====;
options mergeNoBy=warn mprint nocenter NOXWAIT NOXSYNC NODATE NONUMBER ERRORS=2
orientation=portrait spool;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2017\Programs\PurchasedConsumerWatch
;

* note q1- q4 is var names and not reflect real quarters;
* insert column names from preventive care table;
%LET Q1=Qtr 4*FY*2016;
%LET Q2=Qtr 1*FY*2017;
%LET Q3=Qtr 2*FY*2017;
%LET Q4=Qtr 3*FY*2017;

PROC FORMAT;
VALUE CAREF
1="Mammography (women >= 40)"
2="Pap Smear (women >= 18)"
3="Hypertension Screen (adults)"
4="Prenatal Care (in 1st trimester)"
5="Percent Not Obese (adults)"
6="Non-Smokers (adults)"
7="Counseled to Quit (adults)"
;

*%GLOBAL FOLDER NAME;

%MACRO APPENDIX(FOLDER=,NAME=&FOLDER);

*===== READ DATA FROM EXCLE TABLES =====;

%LET XLSFILE=%STR(&PATH.\&FOLDER.\&FOLDER._PurchasedCare);
X "%STR("%&XLSFILE..XLSB%")";
DATA _NULL_;
X=SLEEP(1);
RUN;

```

```

*----- RATINGS -----;
%MACRO RATE(COL1=, COL2=,OUTDATA=);
FILENAME RAT DDE "EXCEL|RATINGS!R1C&COL1.:R21C&COL2.";

DATA &OUTDATA
;
  INFILE   RAT DLM='09'X NOTAB DSD MISSEVER
           LRECL=1000 FIRSTOBS=17
           ;
  INFORMAT CATEGORY $20. DUMMY1 DUMMY2 8.  SIG1 SIG2 2.
           ;
  INPUT    CATEGORY  DUMMY1 DUMMY2  SIG1 SIG2
           ;

XDUMMY1=PUT(ROUND(DUMMY1),$3.);
XDUMMY2=PUT(ROUND(DUMMY2),$3.);

IF SIG1 = 1 THEN DIRECT =CATX(' ',XDUMMY1,'^{SUPER a}');
ELSE IF SIG1 = -1 THEN DIRECT=CATX(' ',XDUMMY1,'^{SUPER b}');
ELSE IF XDUMMY1 >=0 THEN DIRECT=XDUMMY1;
IF DIRECT = ' ' THEN DIRECT ='-';

IF SIG2 = 1 THEN PURCHASED =CATX(' ',XDUMMY2,'^{SUPER a}');
ELSE IF SIG2 = -1 THEN PURCHASED =CATX(' ',XDUMMY2,'^{SUPER b}');
ELSE IF XDUMMY2 >=0 THEN PURCHASED=XDUMMY2;
IF PURCHASED = ' ' THEN PURCHASED ='-';

IF _N_=1 THEN CATEGORY="Benchmark";

*KEEP CATEGORY  DIRECT  PURCHASED;

RUN;

TITLE "----- &OUTDATA -----";
PROC PRINT DATA=&OUTDATA; RUN;

%MEND RATE;
%RATE(COL1=1, COL2=7,OUTDATA=FIG1);
%RATE(COL1=8, COL2=14,OUTDATA=FIG2);
%RATE(COL1=15, COL2=21,OUTDATA=FIG3);
%RATE(COL1=22, COL2=28,OUTDATA=FIG4);

*----- COMPOSITES -----;
%MACRO COMPOSITE(COL1=, COL2=,N=);
TITLE " ----- FIGURE &N -----";
FILENAME COMP&N DDE "EXCEL|COMPOSITES!R1C&COL1.:R26C&COL2.";
DATA XFIG&N XSIG&N
;
  INFILE   COMP&N DLM='09'X NOTAB DSD
           LRECL=1000 FIRSTOBS=17 MISSEVER
           ;
  INFORMAT CATEGORY $10. XVAR1 XVAR2 XBENCH

```

```

      8.
      ;
INPUT   CATEGORY XVAR1 XVAR2 XBENCH ;

IF UPCASE(SUBSTR(CATEGORY,1,3))="SIG" THEN OUTPUT XSIG&N;
ELSE IF CATEGORY NE " " THEN OUTPUT XFIG&N;

RUN;

*-- MERGE BY ROW --;
DATA FIG&N;
  MERGE XFIG&N
        XSIG&N(KEEP= CATEGORY XVAR1 XVAR2 RENAME=(XVAR1=SIG1 XVAR2=SIG2
CATEGORY=SIG));

BENCH=ROUND(XBENCH,1);
;

IF SIG1 = 1 THEN VAR1=CATX(" ",PUT(ROUND(XVAR1,1),$3.),'^{SUPER a}');
ELSE IF SIG1 =-1 THEN VAR1=CATX(" ",PUT(ROUND(XVAR1,1),$3.),'^{SUPER b}');
ELSE IF SIG1 >=0 THEN VAR1=PUT(ROUND(XVAR1,1),$3.);
ELSE IF XVAR1 <0 THEN VAR1="-";

IF SIG2 = 1 THEN VAR2=CATX(" ",PUT(ROUND(XVAR2,1),$3.),'^{SUPER a}');
ELSE IF SIG2 =-1 THEN VAR2=CATX(" ",PUT(ROUND(XVAR2,1),$3.),'^{SUPER b}');
ELSE IF SIG2 >=0 THEN VAR2=PUT(ROUND(XVAR2,1),$3.);
ELSE IF XVAR2 <0 THEN VAR2="-";

RUN;

PROC PRINT DATA=FIG&N; RUN;
%MEND COMPOSITE;
%COMPOSITE(COL1=1, COL2=5, N=5);
%COMPOSITE(COL1=6, COL2=10, N=6);
%COMPOSITE(COL1=11, COL2=15, N=7);
%COMPOSITE(COL1=16, COL2=20, N=8);
%COMPOSITE(COL1=21, COL2=25, N=9);

TITLE '--- PREVENTCIVE CARE TABLE ----';
FILENAME XTAB DDE "EXCEL|Tables!R1C10:R14C24";
DATA TAB;
  INFILE   XTAB DLM='09'X NOTAB DSD MISSOEVER
           LRECL=1000 FIRSTOBS=3
           ;
  INFORMAT CARE $30. M1 - M7 $8.
           SIG1 - SIG7 8.
           ;
INPUT     CARE M1 - M7
           SIG1 - SIG7
           ;
OUTPUT;
RUN;

```

```

DATA DC PC N2020;
  SET TAB;

ARRAY VAR $15 Mammography PapSmear Hypertension Prenatal_Care
              Not_Obese Non_Smoke      Counseled_Quit ;
ARRAY OLD M1 - M7;
ARRAY SIG SIG1 - SIG7;

DO I = 1 TO 7;
  IF I <= 6 THEN DO;
    IF OLD(I) < '0' THEN VAR(I) = "-";
    ELSE IF SIG(I) = 1 THEN VAR(I) = CATX(" ", PUT(OLD(I), $3.), '^ {SUPER a}');
    ELSE IF SIG(I) = -1 THEN VAR(I) = CATX(" ", PUT(OLD(I), $3.), '^ {SUPER b}');
    ELSE IF SIG(I) >= 0 THEN VAR(I) = PUT(OLD(I), $3.);
    ELSE VAR(I) = OLD(I);
  END;
  IF I=7 THEN VAR(7) = OLD(7); *M7 DOESNT HAVE 2020 BENCHMARK;
END;

IF _N_ > 8 THEN OUTPUT N2020;
ELSE IF CARE = 'Direct Care' THEN OUTPUT DC;
ELSE IF CARE = 'Purchased Care' THEN OUTPUT PC;

DROP I M1 - M7;

RUN;

PROC TRANSPOSE DATA=DC OUT=DC1 PREFIX=X;
VAR Mammography PapSmear
    Hypertension Prenatal_Care
    Not_Obese Non_Smoke Counseled_Quit ;
RUN;

PROC TRANSPOSE DATA=PC OUT=PC1 PREFIX=X;
VAR Mammography PapSmear
    Hypertension Prenatal_Care
    Not_Obese Non_Smoke Counseled_Quit ;
RUN;

PROC TRANSPOSE DATA=N2020 OUT=N2020_1;
VAR Mammography PapSmear
    Hypertension Prenatal_Care
    Not_Obese Non_Smoke Counseled_Quit ;
RUN;

PROC SQL;
CREATE TABLE DC_N2020 AS
SELECT DC1.*,
       N2020_1._NAME_,
       N2020_1.COL1,
       N2020_1.COL3
FROM DC1, N2020_1
WHERE DC1._NAME_ = N2020_1._NAME_;
QUIT;
RUN;

```

```

PROC SQL;
CREATE TABLE PC_N2020 AS
SELECT PC1.*,
       N2020_1._NAME_,
       N2020_1.COL2,
       N2020_1.COL4
FROM PC1, N2020_1
WHERE PC1._NAME_=N2020_1._NAME_;
QUIT;
RUN;

```

```

DATA DC2;
  SET DC_N2020(RENAME=(COL1=BENE COL3=GOAL));

```

```

N= _N_+.1;

```

```

LENGTH NEW_X4 $36.  GROUP $50.;

```

```

IF X4 NE '-' THEN DO;
IF INDEX(X4,'a') > 0 OR INDEX(X4,'b') > 0 THEN
new_X4=TRIM(LEFT(X4))||'('||TRIM(LEFT(BENE))||')';
ELSE
NEW_X4=TRIM(LEFT(X4))||' '||'('||TRIM(LEFT(BENE))||')';
END;
ELSE new_X4 = '-';

```

```

GROUP=TRIM(PUT(_N_,CAREF.))||": "||"Direct Care";

```

```

*DELETE DATA ERROR;
IF _NAME_='Counseled_Quit' THEN GOAL='-';

```

```

KEEP GROUP N _NAME_ X1 X2 X3 NEW_X4 GOAL;

```

```

RUN;

```

```

PROC PRINT DATA=DC2; RUN;

```

```

DATA PC2;
  SET PC_N2020(RENAME=(COL2=BENE COL4=GOAL));

```

```

N= _N_+.2;

```

```

LENGTH NEW_X4 $36.;

```

```

IF X4 NE '-' THEN DO;
IF INDEX(X4,'a') > 0 OR INDEX(X4,'b') > 0 THEN
new_X4=TRIM(LEFT(X4))||'('||TRIM(LEFT(BENE))||')';
ELSE
NEW_X4=TRIM(LEFT(X4))||' '||'('||TRIM(LEFT(BENE))||')';
END;
ELSE new_X4 = '-';

```

```

GROUP=TRIM(PUT(_N_,CAREF.))||": "||"Purchased Care";

```

```

*DELETE DATA ERROR;

```

```

IF _NAME_='Counseled_Quit' THEN GOAL='-';

KEEP GROUP N X1 X2 X3 NEW_X4 GOAL;

RUN;
PROC PRINT DATA=PC2; RUN;

DATA TABLE;
  SET DC2
      PC2;
BY N;

RENAME NEW_X4=X4;
RUN;

PROC PRINT DATA=TABLE; RUN;

FILENAME CX DDE "EXCEL|SYSTEM";

DATA _NULL_;
  FILE CX;
  PUT '[QUIT]';
RUN;

*===== PUT THE TABLES INTO RTF =====;

ODS LISTING CLOSE;
ods RTF file="&PATH.\&FOLDER.\APPENDIX_&FOLDER._PurchasedCare.RTF"
style=Styles.SASWEB STARTPAGE=No;
ODS ESCAPECHAR='^';
TITLE;

%MACRO RATES(TITL=,N=);

*TITLE "Appendix, &NAME."; *8/30/2016, removed --not nested per rule of 508;

ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^1n &titl";
proc report data=FIG&N center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF JUST=C]
style(report)={width=70%}
;

  COLUMN CATEGORY DIRECT PURCHASED;
  define CATEGORY / "Qtr/Yr/Benchmark" style={fontWeight=Bold just=C };
  define DIRECT / 'Direct Care' style={fontWeight=Bold just=C /*cellwidth=lin*/
};
  define PURCHASED / 'Purchased Care' style={fontWeight=Bold just=C
/*cellwidth=lin*/};

COMPUTE DIRECT;
  IF INDEX(DIRECT,"a" )>0
  THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
  ELSE IF INDEX(DIRECT,"b" )>0

```

```

    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

    COMPUTE PURCHASED;
    IF INDEX(PURCHASED,"a" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(PURCHASED,"b" )>0
    THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

%MEND RATES;
%RATES(TITL=%STR(Figure 1: Health Care Rating),N=1);
%RATES(TITL=%STR(Figure 2: Health Plan Rating),N=2);
%RATES(TITL=%STR(Figure 3: Personal Provider Rating),N=3);
%RATES(TITL=%STR(Figure 4: Specialist Rating),N=4);

*--- FIGURES 5-9 ----;
ODS RTF STARTPAGE=NOW;

%MACRO COMPOSITES(TITL=,N=);
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}^1n &titl";

proc report data=FIG&N center nowindows headline wrap split="*" missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF JUST=C CELLHEIGHT=.55IN];
/* style(summary)=[color=very light grey backgroundcolor=very light grey
fontfamily="Times Roman" fontsize=1pt textalign=C]
style(report)={width=80%};*/

COLUMN CATEGORY BENCH VAR1 VAR2;
define CATEGORY / "Qtr/Yr" style={fontWeight=Bold just=C cellwidth=1.2in};
define BENCH / "Benchmark" style={fontWeight=Bold just=C cellwidth=1in};
define VAR1 / "Direct Care" style={fontWeight=Bold just=C cellwidth=1in};
define VAR2 / "Purchased Care" style={fontWeight=Bold just=C cellwidth=1in};

COMPUTE VAR1;
IF INDEX(VAR1,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR1,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');

ENDCOMP;
COMPUTE VAR2;
IF INDEX(VAR2,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(VAR2,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

%MEND COMPOSITES;
%COMPOSITES(TITL=%STR(Figure 5: Getting Needed Care),N=5);
%COMPOSITES(TITL=%STR(Figure 6: Getting Care Quickly),N=6);

```



```

%COMPOSITES(TITL=%STR(Figure 7: Doctors Communication),N=7);

ODS RTF STARTPAGE=NOW;
%COMPOSITES(TITL=%STR(Figure 8: Customer Service),N=8);
%COMPOSITES(TITL=%STR(Figure 9: Claims Processing),N=9);

*--- PROVENTIVE CARE TABLE ----;
ODS RTF STARTPAGE=NOW;
ods RTF text="^S={OUTPUTWIDTH=100% FONTWEIGHT=BOLD FONTSIZE=12PT Just=C}Preventive
Care";
proc report data=TABLE center nowindows headline wrap split='*' missing spanrows
MISSING
style(header)=[color=black backgroundcolor=#CCD9FF JUST=C CELLHEIGHT=.7IN]
;

COLUMN GROUP X1 X2 X3 X4 GOAL N;
DEFINE GROUP /"Type of Care " style={fontWeight=Bold just=L cellwidth=3.4in};
define X1 / "&Q1." style={fontWeight=Bold just=C cellwidth=.8in};
define X2 / "&Q2." style={fontWeight=Bold just=C cellwidth=.8in};
define X3 / "&Q3." style={fontWeight=Bold just=C cellwidth=.8in};
define X4 / "&Q4." style={fontWeight=Bold just=C cellwidth=1in};
define GOAL / "Healthy People 2020 Goal" style={fontWeight=Bold just=C
cellwidth=1in BACKGROUND=#FFE5E5};
DEFINE N / ' ' NOPRINT;

COMPUTE X1;
IF INDEX(X1,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(X1,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
COMPUTE X2;
IF INDEX(X2,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(X2,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
COMPUTE X3;
IF INDEX(X3,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(X3,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;
COMPUTE X4;
IF INDEX(X4,"a" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=GREEN fontstyle=italic]');
ELSE IF INDEX(X4,"b" )>0
THEN CALL DEFINE(_COL_, 'STYLE', 'STYLE=[FOREGROUND=RED fontstyle=italic]');
ENDCOMP;

RUN;

*blank in text file is to align the text with table;
ODS RTF TEXT="^S={FONTSIZE=8PT fontstyle=italic Just=L} a.Numbers in green
significantly exceed the Healthy People 2020 goal (p< .05).";

```

```
ODS RTF TEXT="^S={FONTSIZE=8PT fontstyle=italic Just=L} b.Numbers in red
significantly fall short of the Healthy People 2020 goal (p< .05).";
```

```
ODS RTF TEXT="^S={FONTSIZE=8PT fontstyle=italic Just=L} The number of responding
beneficiaries for each type of care is in parentheses.";
```

```
ODS RTF CLOSE;
```

```
ODS LISTING;
```

```
%MEND APPENDIX;
```

```
%APPENDIX(FOLDER=USAMHS);
```

```
%APPENDIX(FOLDER=North);
```

```
%APPENDIX(FOLDER=West);
```

```
%APPENDIX(FOLDER=South);
```

J.1.A - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare.sas - Run Purchased Care TRICARE Consumer Watch reports - Run Quarterly.....3

J.1.B - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_macro.inc - Produce numbers for Purchased Care TRICARE Consumer Watch reports.5

J.2.A - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_word.sas - Run program that generates MS Word Purchased Care TRICARE Consumer Watch reports - Run Quarterly.30

J.2.B - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\consumerwatch_PurchasedCare_macro_word.inc - Generate MS Word quarterly Purchased Care TRICARE Consumer Watch reports.....31

J.3 - Q3FY2017\PROGRAMS\PurchasedConsumerWatch\PurchasedCare_APPENDIX.sas - Run appendix for Purchased Care TRICARE Consumer Watch reports - Run Quarterly.36