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# 2018 Health Care Survey of DoD Beneficiaries:

## Adult Technical Manual

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Final

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Chapter

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## Introduction

The 2018 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 2018, 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 survey based on the Healthcare Effectiveness Data and Information Set (HEDIS) questionnaire of 62,184 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 2018 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. Note that on January 1, 2018, TRICARE Select replaced TRICARE Standard/Extra. This change is reflected in the questionnaires for Quarter II and Quarter III FY 2018 and HEDIS.

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: 2018 Adult Sampling Report" (2018) 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 53 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 62,221 equally across facilities, selecting 1,184 beneficiaries from each of the 53 largest facilities except one, where we selected 653 beneficiaries due to a smaller number of cases from which to draw.

### 2. 2018 Adult HCSDB

The HCSDB 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 HCSDB has been performed on a fiscal year basis, whereas in previous years,



it was based on calendar years. In FY 2018, surveys were fielded in three quarters instead of four, describing a period from October 2017 to May 2018. Thus, this document, the “2018 Health Survey of DoD Beneficiaries: Adult Technical Manual”, describes Quarters I-III of fiscal year 2018 and the HEDIS survey. Throughout this document, Quarter I, 2018 refers to Quarter I of fiscal year 2018. The adult questionnaires for Quarters I-III and HEDIS are reproduced in Appendix A. The 2018 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 HCSDB 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 2017 HCSDB and this year’s survey is the 2018 HCSDB. 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 2018 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 2018 HCSDB, 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, 10.8 percent of the sample members completed the survey. In Quarter II, 12.8 percent of the sample members completed surveys. In Quarter III, 11.8 percent of the sample members completed surveys, and in HEDIS, 15.8 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 10.9 percent for Quarter I, 12.9 percent for Quarter II, and 12.5 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>:

- 2018 TRICARE Beneficiary Reports and TRICARE Purchased Care Beneficiary Reports
- 2018 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 2018 TRICARE Beneficiary Reports
- Appendix F: SAS Code for File Development – Quarters I-III and HEDIS
- Appendix G: SAS Code for Statistical and Web Specifications for the 2018 TRICARE Beneficiary Reports and Purchased Care Beneficiary Reports
- Appendix H: SAS Code for 2018 HEDIS Sampling and Weighting
- Appendix I: SAS Code for 2018 TRICARE Consumer Watch – Quarters I-III and Combined Annual
- Appendix J: SAS Code for 2018 TRICARE Purchased Care Consumer Watch – Quarters I-III

Chapter  
**2**

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## 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 2018 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 2018 Adult HCSDB database by source. For specific information on variable location within the database, refer to the "2018 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 2018 ADULT HCSDB DATA FILE – QUARTERS I-III AND HEDIS

<b>SAMPLE VARIABLES</b>	<b>VARIABLE LABEL</b>
MPRID	- Unique MPR identifier
SVCSMPL	- Branch of service sampling variable
SEXSMPL	- Sex sampling variable
STRATUM	- Sampling stratum
ENBGSMP	- 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

<b>DEERS VARIABLES</b>	<b>VARIABLE LABEL</b>
RACEETHN	- Race/Ethnic code
PNSEXCD	- Person gender
RDAGEQY	- Age at time of sample preparation-Capped (18 and below, 65 and above)
RFLDAGE	- Age at start of fielding period-Capped (18 and below, 65 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

<b>QUESTIONNAIRE RESPONSES</b>	<b>VARIABLE LABEL</b>
H18001	- Are you the person listed on the cover letter
H18002A	- Health plan(s) covered: TRICARE Prime
H18002C	- Health plan(s) covered: TRICARE Select
H18002F	- Health plan(s) covered: Medicare
H18002G	- Health plan(s) covered: Federal Employees Health Benefit Program (FEHBP)
H18002H	- Health plan(s) covered: Medicaid
H18002I	- Health plan(s) covered: civilian HMO
H18002J	- Health plan(s) covered: other civilian
H18002K	- Health plan(s) covered: Uniformed Services Family Health Plan (USFHP)
H18002L	- Health plan(s) covered: not sure
H18002M	- Health plan(s) covered: Veterans
H18002N	- Health plan(s) covered: TRICARE Plus
H18002O	- Health plan(s) covered: TRICARE For Life
H18002P	- Health plan(s) covered: TRICARE Supplemental Insurance
H18002Q	- Health plan(s) covered: TRICARE Reserve Select
H18002R	- Health plan(s) covered: other Non-US government health insurance
H18002S	- Health plan(s) covered: TRICARE Retired Reserve
H18002T	- Health plan(s) covered: TRICARE Young Adult
H18002U	- Health plan(s) covered: Continued Health Care Benefit Program (CHCBP)
H18002V	- Health plan(s) covered: TRICARE Young Adult Ex or Standard
H18003	- Which health plan did you use most in the past 12 months?
H18004	- Months or years in a row with health plan
H18005	- In last year: facility used most for health care

2018 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
H18006	- In last year: have illness/injury/condition that needed care right away
H18007	- In last year: how often got care as soon as you believed you need it
H18008	- In last year: wait between trying to get care and actually seeing a provider for an illness or injury
H18009	- In last year: made appointments for non-urgent health care
H18010	- In last year: how often got appointments for non-urgent health care as soon as you wanted
H18011	- In last year: days between making an appointment for regular or routine care and actually seeing a provider
H18012	- In last year: times went to an emergency room for own care
H18013	- In last year: times went to a doctor's office or clinic for yourself (not counting times went to an emergency room)
H18014	- In last year: how often talk to doctor or other health care provider about illness prevention
H18015	- In last year: doctor or other health care provider talked about more than 1 choice for treatment
H18016	- In last year: doctor talked about pros/cons of each treatment/health care choice
H18017	- 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
H18018	- Rating of all health care in last year
H18019	- Have one person you think of as your personal doctor
H18020	- In last year: number of times visited personal doctor for care for self
H18021	- In last year: how often personal doctor listened carefully to you
H18022	- In last year: how often personal doctor explained things in a way that was easy to understand
H18023	- In last year: how often your personal doctor showed respect for what you have to say
H18024	- In last year: how often your personal doctor spent enough time with you
H18025	- In last year: got care from doctor or other health provider other than personal doctor
H18026	- In last year: how often personal doctor seemed informed and up-to-date about care received from other doctors
H18027	- Rating of your personal doctor
H18028	- In last year: tried to make appointment to see a specialist
H18029	- In last year: how often it was easy to get appointments with specialists
H18030	- In last year: how many specialists seen
H18031	- Rating of specialist seen most often in last year
H18033	- In last year: how often easy to get care, tests, or treatment you thought you needed through health plan
H18034	- In last year: looked for information in written material or on the Internet about how health plan works
H18035	- In last year: how often written material/Internet provide information you needed about how your plan works
H18036	- In last year: looked for information from health plan on cost of health care service or equipment
H18037	- In last year: how often able to find out from health plan cost of health care service or equipment
H18038	- In last year: looked for information from health plan on cost of prescription medications
H18039	- In last year: how often able to find out cost of prescription medications
H18040	- In last year: tried to get information or help from health plan's customer service
H18041	- In last year: how often did customer service give needed information or help
H18042	- In last year: how often did customer service treat with courtesy and respect
H18043	- In last year: health plan gave forms to fill out
H18044	- In last year: how often forms from health plan were easy to fill out

2018 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
H18045	- In last year: sent in any claims to your health plan
H18046	- In last year: how often health plan handled claims quickly
H18047	- In last year: how often health plan handled claims correctly
H18048	- Rating of all experience with health plan
H18049	- Blood pressure: when last reading
H18050	- Blood pressure: know if blood pressure is too high or not
H18051	- When did you last have a flu shot
H18052	- Smoked at least 100 cigarettes in life
H18053	- Smoke or use tobacco everyday, some days, or not at all
H18054	- Last year: how often advised by doctor to quit smoking or use tobacco
H18055	- Last year: how often medication was recommended or discussed by doctor to assist with quitting smoking or using tobacco
H18056	- Last year: how often doctor recommended or discussed methods and strategies to assist quitting smoking or using tobacco
H18057A	- Do you smoke or use: cigarettes
H18057B	- Do you smoke or use: dip, chewing tobacco, snuff, or snus
H18057C	- Do you smoke or use: cigars
H18057D	- Do you smoke or use: pipes, bidis, or kreteks
H18058	- Are you male or female
H18059B	- Female: last have a Pap smear test
H18060	- Female: are you under age 40
H18061	- Female: last time breasts checked by mammography
H18062	- Female: been pregnant in last year or pregnant now
H18063	- Female: in what trimester is your pregnancy
H18064	- Female: trimester first received prenatal care
H18065	- In general how would you rate your overall health
H18066	- Limited in any way in any activities because of any impairment or health problem
H18067	- In last year: seen doctor or other health provider 3 or more times for same condition or problem
H18068	- Condition lasted for at least 3 months
H18069	- Need to take medicine prescribed by a doctor
H18070	- Medicine to treat condition that has lasted for at least 3 months
H18073	- Are you Spanish, Hispanic, or Latino
H18073A	- No, not Spanish, Hispanic, or Latino
H18073B	- Yes, Mexican, Mexican American, Chicano
H18073C	- Yes, Puerto Rican
H18073D	- Yes, Cuban or other Spanish, Hispanic, or Latino
H18074	- Currently covered by Medicare
H18075	- Currently covered by Medicare part A
H18076	- Currently covered by Medicare part B
H18077	- Enrolled in a Medicare Advantage plan
H18078	- Currently covered Medicare supplemental
H18079	- Enrolled in Medicare Part D
SREDA	- Highest grade completed
SRRACEA	- Race: White
SRRACEB	- Race: Black or African American
SRRACEC	- Race: American Indian or Alaska native or Native Hawaiian/other Pacific Islander
SRRACED	- Race: Asian
SRAGE	- What is your age now?
S18009	- Had the same personal doctor or nurse before joining this health plan
S18010	- Since joined health plan, how much of a problem, if any, was it to get a personal doctor or nurse you are happy with?

2018 HEALTH CARE SURVEY OF DOD BENEFICIARIES

QUESTIONNAIRE RESPONSES	VARIABLE LABEL
S18011	- Agree/disagree: able to see provider when needed
S18014	- How satisfied with health care during last visit
S18B01	- Self rating of overall mental/emotional health
S18B02	- Last year: needed treatment/counseling for personal/family problem
S18B03	- Last year: problem getting needed treatment/counseling
S18B04	- Last year: rating of treatment/counseling received
S18AC01	- Last year: missed appointment at this facility
S18AC02A	- Missed appointment: forgot about appointment
S18AC02B	- Missed appointment: felt better
S18AC02C	- Missed appointment: felt worse
S18AC02D	- Missed appointment: got care somewhere else
S18AC02E	- Missed appointment: scheduling conflict
S18AC02F	- Missed appointment: difficulty getting to facility
S18AC02G	- Missed appointment: other
S18AC03	- Last year: cancel/reschedule appointment at this facility
S18AC04	- Last year: how many appointments canceled/rescheduled at this facility
S18AC05A	- Cancel/reschedule appointment: forgot about appointment
S18AC05B	- Cancel/reschedule appointment: felt better
S18AC05C	- Cancel/reschedule appointment: felt worse
S18AC05D	- Cancel/reschedule appointment: got care somewhere else
S18AC05E	- Cancel/reschedule appointment: scheduling conflict
S18AC05F	- Cancel/reschedule appointment: difficulty getting to facility
S18AC05G	- Cancel/reschedule appointment: other
S18AC06A	- When trying to make appts, told no appointments available and to call back - Civilian facilities
S18AC06B	- When trying to make appts, told no appointments available and to call back - Military facilities
S18BI01	- In last 6 mos, did you need care right away in an urgent care center, ER, or doctor's office?
S18BI02A	- In last 6 mos, when you needed care right away, did you go to an urgent care center?
S18BI02B	- In last 6 mos, when you needed care right away, did you go to a hospital ER?
S18BI02C	- In last 6 mos, when you needed care right away, did you go to a doctor's office?
S18BI02D	- In last 6 mos, when you needed care right away, did you go someplace else?
S18BI02E	- In last 6 mos, I didn't need care right away for an illness, injury, or condition
S18BI03	- Urgent care center: Location is more convenient than my normal place of care
S18BI04	- Urgent care center: Urgent care was low cost or no cost to me
S18BI06	- Urgent care center: I could just walk in for care without an appt
S18BI07	- Urgent care center: I trust the urgent care center provider(s)
S18BI08	- Urgent care center: The urgent care center would process my TRICARE claim without problems
S18BI09	- Urgent care center: Would have used appt with regular provider if had been available
S18BI10	- Urgent care center: I wanted to avoid the wait at a hospital ER
S18BI11	- Urgent care center: The location is more convenient than the hospital ER
S18BI12	- Urgent care center: My condition was not a medical emergency requiring a hospital ER
S18BI14	- Urgent care center: I thought it would take less time than at my usual place of care
S18BI15	- Urgent care center: did you or someone else call a nurse advice line before going to urgent care
S18BI16	- Did the nurse advise you to seek urgent care?
S18BI17	- Urgent care center: did the health care providers advise you to seek care in a hospital ER?
S18BI18	- Did you seek care at a hospital ER?



QUESTIONNAIRE RESPONSES	VARIABLE LABEL
S18BI19	- On most recent visit to urgent care center, what was the main reason you went?
S18BI20	- What number would you use to rate your care during this urgent care center visit?
S18BF4	- How often do you use e-cigarettes
S18BG01	- How many days was physical health not good in past 30 days
S18BG02	- How many days was mental health not good in past 30 days
S18BG03	- How many days did poor health stop usual activities in past 30 days
S18BE01A	- Has a doctor told you that you have conditions: heart attack
S18BE01B	- Has a doctor told you that you have conditions: angina or coronary heart disease
S18BE01C	- Has a doctor told you that you have conditions: stroke
S18BE01D	- Has a doctor told you that you have conditions: diabetes or high blood sugar
S18BE01E	- Has a doctor told you that you have conditions: high cholesterol
S18BE01F	- Has a doctor told you that you have conditions: asthma, COPD, emphysema
S18BE01G	- Has a doctor told you that you have conditions: cancer
S18BE01H	- Has a doctor told you that you have conditions: osteoporosis
S18BE01I	- Has a doctor told you that you have conditions: depression, anxiety
S18BE01J	- Has a doctor told you that you have conditions: autoimmune disease
S18BE01K	- Has a doctor told you that you have conditions: none of these

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
KEYCOUNT	- Number of key questions answered
WEB	- Web survey indicator
SURVTYPE	- Web or mail survey
HURRICAN	- Hurricane indicator – Harvey/Irma

CODING SCHEME FLAGS AND COUNTS	VARIABLE LABEL
N1	- Coding Scheme Note 1
N1_AC1	- Coding Scheme Note 1_AC1
N1_AC2	- Coding Scheme Note 1_AC2
N1_AC3	- Coding Scheme Note 1_AC3
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_BI3
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

<b>CODING SCHEME FLAGS AND COUNTS</b>	<b>VARIABLE LABEL</b>
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: 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

<b>CONSTRUCTED VARIABLES</b>	<b>VARIABLE LABEL</b>
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)
XBMICAT	- Body mass index category
XBNFGRP	- Constructed beneficiary group
XSERVAFF	- Service affiliation
KMILOPQY	- Outpatient visits to military facility
KCIVOPQY	- Outpatient visits to civilian facility

<b>CONSTRUCTED VARIABLES</b>	<b>VARIABLE LABEL</b>
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_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)

<b>POST-STRATIFICATION VARIABLES</b>	<b>VARIABLE LABEL</b>
POSTCELL	- Poststratification cell for new weights

<b>WEIGHTS</b>	<b>VARIABLE LABEL</b>
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 2018 Adult HCSDB 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 2018 HCSDB VARIABLES – QUARTERS I-III AND HEDIS  
(VARIABLES REPRESENTING SURVEY QUESTIONS)

1 <sup>st</sup> Character: Survey Type	2 <sup>nd</sup> – 3 <sup>rd</sup> Characters: Survey Year	4 <sup>th</sup> – 6 <sup>th</sup> Characters: Question #	Additional Characters: Additional Information
<p>H= Health Beneficiaries (18 and older, Adult Questionnaire)</p> <p>-----</p> <p>S = Supplemental Question</p>	<p>18</p>	<p>001 to 079</p> <p>-----</p> <p>Quarter I 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>Quarter II 009-011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>BF4 – Supplemental question about electronic cigarettes</p> <p>Quarter III 009-010 – Supplemental questions about the respondent’s healthcare provider.</p> <p>BF4 – Supplemental question about electronic cigarettes</p> <p>HEDIS 009-011, 014 – Supplemental questions about visits to the respondent’s healthcare provider.</p> <p>BF4 – Supplemental question about electronic cigarettes</p>	<p>A to V are used to label responses associated with a multiple response question</p>

1 <sup>st</sup> Character: Survey Type	2 <sup>nd</sup> – 3 <sup>rd</sup> Characters: Survey Year	4 <sup>th</sup> – 7 <sup>th</sup> Characters: Question #	Additional Characters: Additional Information
S = Supplemental Question	18	<p>Quarter I AC01-AC06 – Supplemental questions about missed appointments.</p> <p>BI01-BI04, BI06-BI12, BI14-BI20 – Supplemental questions about urgent health care in the past 6 months.</p> <p>Quarter III</p> <p>BE01 – Supplemental questions about health conditions</p> <p>BG01-BG03 – Supplemental questions about physical and mental health.</p>	A to K are used to label responses associated with a multiple response question

1 <sup>st</sup> 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 2018 conventions for missing variables are the same as the 2017 conventions. All missing value conventions used in the 2018 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 2018 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 2018 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 H18025 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 H18025 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 2018 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. There were some changes in the questionnaire after Q1, so the list of key variables changed in Q2. The key survey variables for Q1 are: H18003, H18005, H18006, H18009, H18013, H18018, H18019, H18027, H18028, H18031, H18033, H18040, H18043, H18048, H18051, H18052, H18065, H18073, SREDA, and the race indicator variables (SRRACEA-SRRACEE). The key survey variables for Q2, HEDIS, and Q3 are: H18003, H18006, H18009, H18013, H18018, H18019, H18025, H18027, H18028, H18031, H18033, H18040, H18043, H18048, H18051, H18052, H18065, H18073, SREDA, and the race indicator variables (SRRACEA-SRRACEE).

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. Out of 53 HEDIS places, for 51 places we had separate stratum in both surveys. We created stratum in the HCSDB frame and sample for two HEDIS places where we had a separate stratum in HEDIS but not in the HCSDB.

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 45,456 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 2018. 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.

```
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','23','24') 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 = East-North
- 2 = East-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 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;
```

**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. 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;
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;

```

#### h. 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;

**i. 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 H18003 (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, now known as TRICARE Select)
- 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 */

```

**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 */

```

**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;
```

**g. 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 variable 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, 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 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	H18049 & H18050	HP_BP	Number with care in the past 24 months and know the results	Adults	95% within past 2 years
Flu Shot	H18051	HP_FLU	Number with care in the past 12 months	Adults age 65 and older	90% in past year, age 65 and over
Pap Smear	H18059B	HP_PAP	Number with care in the past 36 months	Adult females	93% in the past 36 months
Mammography	H18061	HP_MAMOG	Number with care in the past 24 months	Females age 40 and over	81% in the past 24 months
Mammography	H18061	HP_MAM50	Number with care in the past 24 months	Females age 50 and over	81% in the past 24 months
Smoker	H18054	HP_SMOKE	Number that smoked in the past 12 months	Adults	12% in the last 12 months
Smoker	H18052 & H18053	HP_SMKH3	Number that smoked in the past 12 months	Adults	12% in the last 12 months
Smoking Cessation	H18053 & H18054	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	H18062, H18063, H18064	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	H18071F, H180711 & H18072	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 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;

```

#### 4. 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 2018 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 2018 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 2018 adult sample design, see Mathematica’s “Health Care Survey of DoD Beneficiaries: 2018 Adult Sampling Report (2018).”

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  $i^{\text{th}}$  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 2018 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 2018 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 2018 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 2018 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  $i^{\text{th}}$  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.<sup>1</sup> 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

---

<sup>1</sup> 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  $h^{\text{th}}$  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  $h^{\text{th}}$  poststratum for the  $i^{\text{th}}$  beneficiary. We calculated the poststratified adjusted weight for the  $i^{\text{th}}$  beneficiary sampled from the  $h^{\text{th}}$  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, because the sample frame for both surveys was the same DEERS extract. Most of the MTFs that were the basis for the HEDIS strata were also strata in the HCSDB (51 of 53 MTFs). For the remaining two MTFs, we created a poststrata in the HCSDB frame and sample. Poststratification adjustments were done using the HCSDB poststrata, including the two new poststrata needed to combined the HEDIS with the HCSDB.

6. Calculation of Combined Annual Weights

As a final step, we combined the three consecutive quarterly data files. Because there were a total of 139 late respondents who were not included in the Quarters I–II, 2018 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:

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

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

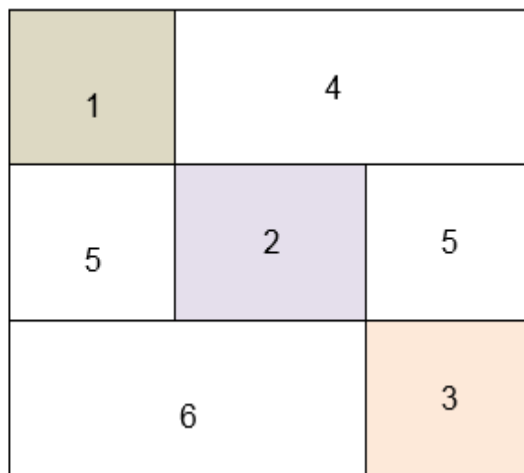
Calculation of variance estimates in the HCSDB requires a design-based variance estimation technique that is available in most statistical software packages for analysis from a complex survey data, such as WesVarPC® (Brick et al. 1996), SUDAAN®, SAS/STAT® version 8 or higher, and STATA®. The Taylor series 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  $\theta$  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 2018 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 2018 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 size<sup>2</sup> ( $\hat{N}_i$  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

<sup>2</sup> 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 2018 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 2018 Adult HCSDb was 12.5 percent (which is found in Table 3.1 in the “Overall” row and COMBINED column). This rate is higher than the 12.3 percent response rate achieved in the combined 2017 Adult HCSDb.
- Beneficiary group and enrollment status: All response rates calculated by beneficiary group and enrollment status show similar patterns to the 2017 survey, with active duty beneficiaries and their family members having the lowest response rates and beneficiaries 65 years and older having the highest rates.<sup>3</sup>
- 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, 2018

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	10.9	16.8	12.9	18.5	11.8	17.4	15.8	14.4	12.5	17.5
Active Duty	15.1	13.2	16.8	14.6	16.4	14.5	15.3	13.0	15.9	14.1
Active Duty family, Prime, civilian PCM	5.2	5.0	7.0	6.7	5.7	5.7	.	.	6.0	5.8
Active Duty family, Prime, military PCM	4.7	4.7	5.7	5.9	5.4	5.7	7.1	6.9	5.5	5.5
Active Duty family, non-enrollee	2.7	2.8	3.3	4.0	3.1	3.1	.	.	3.0	3.3
Retired,<65, civilian PCM	18.1	18.2	21.5	21.1	18.2	17.9	.	.	19.3	19.1
Retired,<65, military PCM	15.9	17.0	19.7	19.7	16.9	17.7	21.3	20.9	18.5	18.1
Retired,<65, non- enrollee	11.1	13.0	13.3	14.3	11.3	12.3	.	.	11.9	13.2
Retired,65+, enrollee	35.3	35.1	34.9	34.2	31.9	31.8	.	.	34.0	33.7
Retired,65+, non- enrollee	25.8	25.8	27.5	27.4	27.2	26.8	.	.	26.8	26.7
TRICARE Reserve Select	7.9	7.9	9.5	9.5	9.9	9.9	.	.	9.1	9.1

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 10.7 percent for Overseas to 12.9 percent for East-North (Table D.9).

<sup>3</sup> 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 10.0 percent as compared to 15.4 percent for men. (Table D.3).
- OCONUS: Combined response rate for Latin America is 9.2 percent as compared to 11.8 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 6.6 percent for NH Beaufort to 34.6 percent for USCG Clinic Key West. (Table D.6).
- Beneficiary groups by sex: Women respond at a higher rate than men for both Active Duty and Active Duty family members, 18.6 percent versus 15.3 percent and 5.1 percent versus 3.3 percent, respectively. The opposite pattern emerges for retirees, survivors and family members 65 and older, 21.7 percent for women versus 34.2 percent for men. The response rates for retirees less than 65 are 18.5 for men vs 15.7 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 3.7 percent and the largest from Active Duty and Guard Reserves with other/unknown service affiliation with 36.8 percent. (Table D.12).

## B. VARIANCE ESTIMATION

Due to the complex sample design, variance estimation for the 2018 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 2018 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 2018 HCSDB.

### 1. Taylor Series Linearization

Mathematica uses Taylor series linearization to produce standard errors for the estimates from the 2018 HCSDB. For most sample designs, including the 2018 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,  $\mu_1$  might represent the characteristic of interest for the active duty group while  $\mu_2$  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 2018 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,  $\beta_{ql}$ '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  $H_{jl}$ 's are catchment area dummy variables ( $H_{jl} = 1$  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  $\varepsilon_{ijkl}$  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 2017, were used in calculating benchmarks for FY 2018.

### 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  $\sigma_t$  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: 2018 TRICARE Beneficiary Reports, the TRICARE Consumer Watch, and the "Health Care Survey of DoD Beneficiaries: Annual Report." The 2018 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. 2018 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 as well as the HEDIS survey and presents results by catchment area, region, and service.

#### b. Beneficiary Report Production

##### 1. Content

The quarterly Beneficiary Reports present 11 scores for all beneficiary groups and all enrollment groups by region and USA MHS overall. The annual Beneficiary Report contains additional figures for the East region. This region is the union of the East-North region and the East-South region.

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 2018 HCSDb 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. 2018 TRICARE Consumer Watch Production

#### 1. Content

The Consumer Watch contains graphs of four ratings and five 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 an obesity rate, 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 and line 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 2018 and previous years.

**b. Procedures for Report Production**

**1. Content**

The content reflects areas that are relevant for policy makers. These topics include health plan choice, usual sources of care, health plan and health care ratings, access to care, healthy behaviors, doctor communication, tobacco and electronic cigarette use, serious physical conditions and their relationship to mental health, comprehensive Autism Care Demonstration awareness, and predicting healthcare ratings.

**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 QUESTIONNAIRES – QUARTERS I-III AND 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

October 2017

## Annotated Questionnaire Quarter I

### Military Health Care Survey: Adult Questionnaire October 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:** H18001

**Editing notes:** None

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes	Go to Question 2	1	99.6%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.4%

Annotated Questionnaire Quarter I

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

**MARK ALL THAT APPLY**

**Variable names:** H18002A, H18002C, H18002F-H18002V

**Editing notes:** None

**Military Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H18002A	45.3%
TRICARE Extra or Standard (CHAMPUS)	H18002C	12.3%
TRICARE Plus	H18002N	0.8%
TRICARE for Life	H18002O	33.1%
TRICARE Supplemental Insurance	H18002P	0.5%
TRICARE Reserve Select	H18002Q	3.4%
TRICARE Retired Reserve	H18002S	2.1%
TRICARE Young Adult Prime	H18002T	0.1%
TRICARE Young Adult Extra or Standard	H18002V	0.5%
Uniformed Services Family Health Plan (USFHP)	H18002K	1.6%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H18002U	0.0%

**Other Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
Medicare	H18002F	31.9%
Federal Employees Health Benefit Program (FEHBP)	H18002G	2.5%
Medicaid	H18002H	0.6%
A civilian HMO (such as Kaiser)	H18002I	1.4%
Other civilian health insurance (such as Blue Cross)	H18002J	6.2%
The Veterans Administration (VA)	H18002M	8.1%
Government health insurance from a country other than the U.S.	H18002R	0.2%
Not sure	H18002L	5.7%

Annotated Questionnaire Quarter I

**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:** H18003

**Editing notes:** See Note 1

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	43.1%
TRICARE Extra or Standard (CHAMPUS)		3	9.1%
TRICARE Plus		11	0.7%
TRICARE Reserve Select		12	3.3%
TRICARE Retired Reserve		14	1.1%
TRICARE Young Adult Prime		15	0.1%
TRICARE Young Adult Extra or Standard		17	0.3%
Uniformed Services Family Health Plan (USFHP)		9	1.4%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	0.1%
Medicare (may include TRICARE for Life)		4	27.1%
Federal Employees Health Benefit Program (FEHBP)		5	1.4%
Medicaid		6	0.6%
A civilian HMO (such as Kaiser)		7	0.9%
Other civilian health insurance (such as Blue Cross)		8	4.5%
The Veterans Administration (VA)		10	3.8%
Government health insurance from a country other than the U.S.		13	0.1%
Not sure	Go to Question 5	-5	2.7%
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:** H18004

**Editing notes:** See Note 1

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Less than 6 months	1	1.8%
At least 6 months but less than 12 months	2	4.2%
At least 12 months but less than 24 months	3	8.0%
At least 2 years but less than 5 years	4	18.0%
At least 5 years but less than 10 years	5	20.4%
10 or more years	6	47.6%

**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:** H18005

**Editing notes:** See Note 1\_AC1

Response	Directions	Value	Percent
A military facility – This includes: Military clinic Military hospital PRIMUS clinic NAVCARE clinic		1	34.9%
A civilian facility – This includes: Doctor’s office Clinic Hospital Civilian TRICARE contractor		2	56.6%
Uniformed Services Family Health Plan facility (USFHP)		3	1.1%
Veterans Affairs (VA) clinic or hospital		4	4.8%
I went to none of the listed types of facilities in the last 12 months	Go to Question 11	5	2.6%

**Question 6: In the last 12 months, have you missed any scheduled appointments with a provider at this facility?**

**Variable name:** S18AC01

**Editing notes:** See Notes 1\_AC1 and 1\_AC2

Response	Directions	Value	Percent
Yes		1	7.3%
No	Go to Question 8	2	92.7%

**Question 7: Why did you miss any appointments?**

**MARK ALL THAT APPLY**

**Variable names:** S18AC02A-S18AC02G

**Editing notes:** See Notes 1\_AC1 and 1\_AC2

Response	Variable Name	Percent Marked
Forgot about appointment	S18AC02A	37.1%
Felt better	S18AC02B	2.7%
Felt worse	S18AC02C	4.1%
Got care somewhere else	S18AC02D	1.6%
Scheduling conflict or other commitments	S18AC02E	49.9%
Difficulty getting to facility	S18AC02F	11.0%
Other	S18AC02G	20.3%

Annotated Questionnaire Quarter I

**Question 8: In the last 12 months, did you cancel or reschedule an appointment with a provider at this facility?**

**Variable name:** S18AC03

**Editing notes:** See Notes 1\_AC1 and 1\_AC3

Response	Directions	Value	Percent
Yes		1	36.5%
No	Go to Question 11	2	63.5%

**Question 9: In the last 12 months, about how many appointments did you cancel or reschedule at this facility?**

**Variable name:** S18AC04

**Editing notes:** See Notes 1\_AC1 and 1\_AC3

Response	Value	Percent
1 to 2 appointments	1	86.4%
3 to 5 appointments	2	12.5%
6 or more appointments	3	1.1%

**Question 10: Why did you cancel or reschedule these appointments?**

**MARK ALL THAT APPLY**

**Variable names:** S18AC05A-S18AC05G

**Editing notes:** See Notes 1\_AC1 and 1\_AC3

Response	Variable Name	Percent Marked
Forgot about appointment	S18AC05A	6.1%
Felt better	S18AC05B	4.5%
Felt worse	S18AC05C	2.5%
Got care somewhere else	S18AC05D	2.4%
Scheduling conflict or other commitments	S18AC05E	79.4%
Difficulty getting to facility	S18AC05F	8.0%
Other	S18AC05G	13.0%

**Question 11: In the past 12 months, when trying to make appointments, were you at any time told no appointments were available but to call back when they would be available?**

**PLEASE ANSWER FOR EACH TYPE OF FACILITY**

**Variable names:** S18AC06A, S18AC06B

**Editing notes:** None

Response	Variable Name	Value Yes	Value No	Percent Yes	Percent No
At Civilian facilities	S18AC06A	1	2	6.9%	93.1%
At Military facilities (hospital or clinics)	S18AC06B	1	2	16.4%	83.6%



Annotated Questionnaire Quarter I

**Question 12: 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:** H18006

**Editing notes:** See Note 2

Response	Directions	Value	Percent
Yes		1	41.5%
No	Go to Question 15	2	58.5%

**Question 13: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?**

**Variable name:** H18007

**Editing notes:** See Note 2

Response	Value	Percent
Never	1	2.4%
Sometimes	2	9.4%
Usually	3	16.6%
Always	4	71.5%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

**Question 14: 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:** H18008

**Editing notes:** See Note 2

Response	Value	Percent
Same day	1	65.1%
1 day	2	11.9%
2 days	3	6.7%
3 days	4	3.4%
4-7 days	5	7.1%
8-14 days	6	3.1%
15 days or longer	7	2.7%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

**Question 15: 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:** H18009

**Editing notes:** See Note 3

Response	Directions	Value	Percent
Yes		1	83.9%
No	Go to Question 18	2	16.1%

Annotated Questionnaire Quarter I

**Question 16: 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:** H18010

**Editing notes:** See Note 3

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	3.8%
Sometimes	2	14.5%
Usually	3	28.0%
Always	4	53.7%
I had no appointments in the last 12 months	-6	

**Question 17: 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:** H18011

**Editing notes:** See Note 3

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Same day	1	9.5%
1 day	2	9.0%
2-3 days	3	21.4%
4-7 days	4	24.8%
8-14 days	5	16.9%
15-30 days	6	11.9%
31 days or longer	7	6.5%
I had no appointments in the last 12 months	-6	

**Question 18: In the last 12 months, how many times did you go to an emergency room to get care for yourself?**

**Variable name:** H18012

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
None	1	70.9%
1	2	18.7%
2	3	6.9%
3	4	2.1%
4	5	0.8%
5 to 9	6	0.5%
10 or more	7	0.1%

Annotated Questionnaire Quarter I

**Question 19: 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:** H18013

**Editing notes:** See Note 4

Response	Directions	Value	Percent
None	Go to Question 26	1	11.6%
1		2	10.1%
2		3	18.0%
3		4	15.8%
4		5	15.3%
5 to 9		6	19.0%
10 or more		7	10.2%

**Question 20: 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:** H18014

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	11.5%
Sometimes	2	24.5%
Usually	3	31.7%
Always	4	32.3%

**Question 21: 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:** H18015

**Editing notes:** See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	60.7%
No	Go to Question 24	2	39.3%

**Question 22: 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:** H18016

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	69.7%
Somewhat yes	2	25.4%
Somewhat no	3	3.7%
Definitely no	4	1.3%

## Annotated Questionnaire Quarter I

**Question 23: 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:** H18017

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	59.6%
Somewhat yes	2	30.3%
Somewhat no	3	6.0%
Definitely no	4	4.0%

**Question 24: 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:** H18018

**Editing notes:** See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.3%
1	1	0.4%
2	2	0.9%
3	3	1.5%
4	4	1.7%
5	5	4.6%
6	6	4.3%
7	7	10.0%
8	8	20.1%
9	9	21.8%
10 – Best health care possible	10	34.3%
I had no visits in the last 12 months	-6	

**Question 25: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?**

**Variable name:** H18033

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	1.8%
Sometimes	2	12.2%
Usually	3	35.3%
Always	4	50.7%

**YOUR URGENT HEALTH CARE IN THE LAST 6 MONTHS**

**Question 26:** 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:** S18BI01

**Editing notes:** See Note 5\_BI1

Response	Directions	Value	Percent
Yes		1	30.1%
No	Go to Question 35	2	69.9%

**Question 27:** 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:** S18BI02A-S18BI02E

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

Response	Variable Name	Percent Marked
Urgent care center	S18BI02A	41.0%
Hospital emergency room (ER)	S18BI02B	55.4%
Doctor’s office	S18BI02C	32.8%
Someplace else	S18BI02D	2.5%
I didn’t need care right away for an illness, injury, or condition in the last 6 months	S18BI02E	0.0%

**IF YOU DID NOT USE AN URGENT CARE CENTER IN THE LAST 6 MONTHS, PLEASE GO TO QUESTION 35**

**Question 28:** Thinking about your most recent visit to an urgent care center, what was the main reason why you went to urgent care?

**Variable name:** S18BI19

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

Response	Value	Percent
An accident or injury	1	21.6%
A new health problem	2	51.5%
An ongoing health condition or concern	3	15.4%
Routine care, such as a flu shot or health screening	4	1.2%
Some other reason	5	10.2%

Annotated Questionnaire Quarter I

**Question 29: 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:** S18BI03

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	31.1%
Agree	2	38.4%
Disagree	3	27.5%
Strongly disagree	4	3.1%

**Urgent care was low cost or no cost to me.**

**Variable name:** S18BI04

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	48.5%
Agree	2	38.9%
Disagree	3	9.1%
Strongly disagree	4	3.5%

**I could just walk in for care without an appointment.**

**Variable name:** S18BI06

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	53.6%
Agree	2	37.0%
Disagree	3	7.4%
Strongly disagree	4	2.1%

**I trust the urgent care center provider(s).**

**Variable name:** S18BI07

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	30.6%
Agree	2	59.4%
Disagree	3	9.2%
Strongly disagree	4	0.8%

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

**Variable name:** S18BI08

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	52.3%
Agree	2	40.5%
Disagree	3	4.4%
Strongly disagree	4	2.8%

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

**Variable name:** S18BI09

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	37.8%
Agree	2	39.4%
Disagree	3	17.9%
Strongly disagree	4	4.9%

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

**Variable name:** S18BI10

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	43.6%
Agree	2	27.2%
Disagree	3	20.1%
Strongly disagree	4	9.1%

**The location is more convenient than the hospital emergency room.**

**Variable name:** S18BI11

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	35.8%
Agree	2	33.8%
Disagree	3	23.8%
Strongly disagree	4	6.6%

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

**Variable name:** S18BI12

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	45.8%
Agree	2	35.5%
Disagree	3	13.3%
Strongly disagree	4	5.5%

Annotated Questionnaire Quarter I

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

**Variable name:** S18BI14

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly agree	1	27.4%
Agree	2	40.2%
Disagree	3	24.6%
Strongly disagree	4	7.8%

**Question 30: 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:** S18BI15

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

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes, I called a nurse line and spoke with a nurse		1	17.7%
Yes, I called a nurse line, but did not speak with a nurse	Go to Question 32	2	4.0%
No, I did not call my health plan's nurse advice line	Go to Question 32	3	58.8%
No, my health plan does not have a nurse advice line	Go to Question 32	4	9.2%
Don't know	Go to Question 32	-5	10.3%

**Question 31: Did the nurse advise you to seek urgent care?**

**Variable name:** S18BI16

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

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Yes	1	89.2%
No	2	9.2%
Don't know	-5	1.6%

**Question 32: 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:** S18BI17

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

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	12.7%
No	Go to Question 34	2	84.5%
Don't know	Go to Question 34	-5	2.8%

**Question 33: Did you seek care at a hospital emergency room (ER)?**

**Variable name:** S18BI18

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

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Yes	1	85.6%
No	2	14.4%
Don't know	-5	0.0%



## Annotated Questionnaire Quarter I

**Question 34: 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:** S18BI20

**Editing notes:** See Notes 5\_BI1 and 5\_BI2

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst care possible	0	0.4%
1	1	0.2%
2	2	1.3%
3	3	1.2%
4	4	4.6%
5	5	4.4%
6	6	5.4%
7	7	14.9%
8	8	23.6%
9	9	15.8%
10 – Best care possible	10	28.3%

**YOUR PERSONAL DOCTOR**

**Question 35: 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:** H18019

**Editing notes:** See Note 6

Response	Directions	Value	Percent
Yes		1	79.5%
No	Go to Question 45	2	20.5%

**Question 36: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?**

**Variable name:** H18020

**Editing notes:** See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 41	0	7.2%
1		1	19.6%
2		2	26.6%
3		3	16.7%
4		4	14.9%
5 to 9		5	12.0%
10 or more		6	3.0%

**Question 37: In the last 12 months, how often did your personal doctor listen carefully to you?**

**Variable name:** H18021

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	1.0%
Sometimes	2	4.6%
Usually	3	15.7%
Always	4	78.6%
I had no visits in the last 12 months	-6	

**Question 38: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?**

**Variable name:** H18022

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	0.8%
Sometimes	2	3.4%
Usually	3	17.6%
Always	4	78.3%
I had no visits in the last 12 months	-6	

Annotated Questionnaire Quarter I

**Question 39: In the last 12 months, how often did your personal doctor show respect for what you had to say?**

**Variable name:** H18023

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	1.1%
Sometimes	2	3.7%
Usually	3	13.6%
Always	4	81.7%
I had no visits in the last 12 months	-6	

**Question 40: In the last 12 months, how often did your personal doctor spend enough time with you?**

**Variable name:** H18024

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	1.8%
Sometimes	2	6.2%
Usually	3	21.1%
Always	4	70.9%
I had no visits in the last 12 months	-6	

**Question 41: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?**

**Variable name:** H18025

**Editing notes:** See Notes 6, 7, and 8

Response	Directions	Value	Percent
Yes		1	71.6%
No	Go to Question 43	2	28.4%

**Question 42: 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:** H18026

**Editing notes:** See Notes 6, 7, and 8

Response	Value	Percent
Never	1	5.7%
Sometimes	2	12.4%
Usually	3	35.2%
Always	4	46.7%

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**Question 43: 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:** H18027

**Editing notes:** See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.7%
1	1	0.3%
2	2	0.6%
3	3	0.9%
4	4	1.1%
5	5	3.3%
6	6	3.0%
7	7	7.4%
8	8	15.3%
9	9	24.5%
10 – Best personal doctor possible	10	42.8%
I don't have a personal doctor	-6	

**Question 44: Did you have the same personal doctor before you joined this health plan?**

**Variable name:** S18009

**Editing notes:** See Notes 6 and 8\_01

Response	Directions	Value	Percent
Yes	Go to Question 46	1	29.2%
No		2	70.8%

**Question 45: 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:** S18010

**Editing notes:** See Note 8\_01

Response	Value	Percent
A big problem	1	10.8%
A small problem	2	22.1%
Not a problem	3	67.1%

**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 46:** 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: H18028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	62.7%
No	Go to Question 50	2	37.3%

**Question 47:** In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H18029

Editing notes: See Note 9

Response	Value	Percent
Never	1	5.1%
Sometimes	2	13.0%
Usually	3	29.5%
Always	4	52.4%
I didn't need a specialist in the last 12 months	-6	

**Question 48:** How many specialists have you seen in the last 12 months?

Variable name: H18030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 50	0	2.1%
1 specialist		1	40.1%
2		2	31.5%
3		3	15.0%
4		4	6.4%
5 or more specialists		5	4.9%

Annotated Questionnaire Quarter I

**Question 49: 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:** H18031

**Editing notes:** See Notes 9 and 10

Response	Value	Percent
0 – Worst specialist possible	0	0.3%
1	1	0.5%
2	2	0.6%
3	3	1.2%
4	4	0.9%
5	5	2.5%
6	6	3.1%
7	7	8.4%
8	8	15.7%
9	9	24.4%
10 – Best specialist possible	10	42.5%
I didn't see a specialist in the last 12 months	-6	

**Question 50: In general, how would you rate your overall mental or emotional health?**

**Variable name:** S18B01

**Editing notes:** None

Response	Value	Percent
Excellent	1	41.3%
Very good	2	32.0%
Good	3	18.6%
Fair	4	6.2%
Poor	5	1.9%

**Question 51: In the last 12 months, did you need any treatment or counseling for a personal or family problem?**

**Variable name:** S18B02

**Editing notes:** See Note 10\_B1

Response	Directions	Value	Percent
Yes		1	12.1%
No	Go to Question 54	2	87.9%

**Question 52: 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:** S18B03

**Editing notes:** See Note 10\_B1

Response	Value	Percent
A big problem	1	14.3%
A small problem	2	19.5%
Not a problem	3	66.2%

## Annotated Questionnaire Quarter I

**Question 53: 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:** S18B04

**Editing notes:** See Note 10\_B1

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst treatment or counseling possible	0	1.9%
1	1	1.4%
2	2	2.3%
3	3	3.3%
4	4	1.8%
5	5	9.0%
6	6	5.5%
7	7	8.8%
8	8	16.3%
9	9	18.4%
10 – Best treatment or counseling possible	10	31.2%
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 54:** 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:** H18034

**Editing notes:** See Note 12

Response	Directions	Value	Percent
Yes		1	29.8%
No	Go to Question 56	2	70.2%

**Question 55:** 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:** H18035

**Editing notes:** See Note 12

Response	Value	Percent
Never	1	4.7%
Sometimes	2	26.3%
Usually	3	45.9%
Always	4	23.1%
I didn't look for information from my health plan in the last 12 months	-6	

**Question 56:** 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:** H18036

**Editing notes:** See Note 13

Response	Directions	Value	Percent
Yes		1	14.3%
No	Go to Question 58	2	85.7%

**Question 57:** 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:** H18037

**Editing notes:** See Note 13

Response	Value	Percent
Never	1	16.8%
Sometimes	2	26.5%
Usually	3	30.1%
Always	4	26.6%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	



Annotated Questionnaire Quarter I

**Question 58: 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:** H18038

**Editing notes:** See Note 14

Response	Directions	Value	Percent
Yes		1	17.6%
No	Go to Question 60	2	82.4%

**Question 59: 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:** H18039

**Editing notes:** See Note 14

Response	Value	Percent
Never	1	11.1%
Sometimes	2	17.7%
Usually	3	33.8%
Always	4	37.4%
I didn't need prescription medications from my health plan in the last 12 months	-6	

**Question 60: In the last 12 months, did you try to get information or help from your health plan's customer service?**

**Variable name:** H18040

**Editing notes:** See Note 15

Response	Directions	Value	Percent
Yes		1	22.4%
No	Go to Question 63	2	77.6%

**Question 61: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?**

**Variable name:** H18041

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	5.5%
Sometimes	2	19.4%
Usually	3	31.7%
Always	4	43.5%
I didn't call my health plan's customer service in the last 12 months	-6	

Annotated Questionnaire Quarter I

**Question 62: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?**

**Variable name:** H18042

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	1.6%
Sometimes	2	7.5%
Usually	3	23.2%
Always	4	67.7%
I didn’t call my health plan’s customer service in the last 12 months	-6	

**Question 63: In the last 12 months, did your health plan give you any forms to fill out?**

**Variable name:** H18043

**Editing notes:** See Note 16

Response	Directions	Value	Percent
Yes		1	21.9%
No	Go to Question 65	2	78.1%

**Question 64: In the last 12 months, how often were the forms from your health plan easy to fill out?**

**Variable name:** H18044

**Editing notes:** See Note 16

Response	Value	Percent
Never	1	4.4%
Sometimes	2	11.9%
Usually	3	44.7%
Always	4	39.0%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

**Question 65: 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:** H18045

**Editing notes:** See Note 17

Response	Directions	Value	Percent
Yes		1	46.5%
No	Go to Question 68	2	32.6%
Don’t know	Go to Question 68	-5	20.9%

Annotated Questionnaire Quarter I

**Question 66: In the last 12 months, how often did your health plan handle your claims quickly?**

**Variable name:** H18046

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	2.7%
Sometimes	2	5.8%
Usually	3	26.3%
Always	4	50.5%
Don't know	-5	14.7%
No claims were sent for me in the last 12 months	-6	

**Question 67: In the last 12 months, how often did your health plan handle your claims correctly?**

**Variable name:** H18047

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.4%
Sometimes	2	5.4%
Usually	3	25.2%
Always	4	54.7%
Don't know	-5	13.3%
No claims were sent for me in the last 12 months	-6	

**Question 68: 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:** H18048

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst health plan possible	0	0.4%
1	1	0.5%
2	2	0.4%
3	3	1.2%
4	4	1.2%
5	5	5.9%
6	6	4.3%
7	7	10.7%
8	8	18.6%
9	9	22.7%
10 – Best health plan possible	10	34.0%

**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 69: When did you last have a blood pressure reading?**

**Variable name:** H18049

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	3	94.8%
1 to 2 years ago	2	3.8%
More than 2 years ago	1	1.4%

**Question 70: Do you know if your blood pressure is too high?**

**Variable name:** H18050

**Editing notes:** None

Response	Value	Percent
Yes, it is too high	1	17.1%
No, it is not too high	2	78.7%
Don't know	3	4.1%

**Question 71: When did you last have a flu shot?**

**Variable name:** H18051

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	4	70.1%
1 to 2 years ago	3	12.9%
More than 2 years ago	2	9.9%
Never had a flu shot	1	7.0%

**Question 72: Have you ever smoked at least 100 cigarettes in your entire life?**

**Variable name:** H18052

**Editing notes:** None

Response	Value	Percent
Yes	1	34.9%
No	2	63.3%
Don't know	-5	1.8%

**Question 73: Do you now smoke cigarettes or use tobacco every day, some days or not at all?**

**Variable name:** H18053

**Editing notes:** See Note 18

Response	Directions	Value	Percent
Every day		4	6.2%
Some days		3	5.2%
Not at all	Go to Question 78	2	88.1%
Don't know	Go to Question 78	-5	0.6%

Annotated Questionnaire Quarter I

**Question 74: 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:** H18054

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	18.8%
Sometimes	2	19.6%
Usually	3	22.0%
Always	4	39.6%

**Question 75: 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:** H18055

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	44.1%
Sometimes	2	24.6%
Usually	3	12.8%
Always	4	18.5%

**Question 76: 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:** H18056

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	45.9%
Sometimes	2	24.2%
Usually	3	14.5%
Always	4	15.4%

Annotated Questionnaire Quarter I

**Question 77: On the days you smoke or use tobacco products, what type of product do you smoke or use?**

**MARK ALL THAT APPLY**

**Variable names:** H18057A-H18057D

**Editing notes:** See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H18057A	61.5%
Dip, chewing tobacco, snuff or snus	H18057B	21.7%
Cigars	H18057C	10.8%
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.)	H18057D	3.8%

**Question 78: Do you now use electronic cigarettes every day, some days, or not at all?**

**Variable name:** S18BF4

**Editing notes:** None

Response	Value	Percent
Every day	1	0.9%
Some days	2	2.4%
Not at all	3	96.4%
Don't know	-5	0.4%

**Question 79: Are you male or female?**

**Variable name:** H18058

**Editing notes:** See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 86	1	53.3%
Female		2	46.7%

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

**Variable name:** H18059B

**Editing notes:** See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	31.6%
1 to 2 years ago	5	26.1%
More than 2 but less than 3 years ago	4	9.0%
More than 3 but less than 5 years ago	3	8.6%
5 or more years ago	2	19.3%
Never had a pap smear test	1	5.4%

Annotated Questionnaire Quarter I

**Question 81: Are you under age 40?**

**Variable name:** H18060

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

Response	Directions	Value	Percent
Yes	Go to Question 83	1	33.6%
No		2	66.4%

**Question 82: When was the last time your breasts were checked by mammography?**

**Variable name:** H18061

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

Response	Value	Percent
Within the last 12 months	5	60.5%
1 to 2 years ago	4	19.7%
More than 2 but less than 5 years ago	3	7.6%
5 or more years ago	2	7.9%
Never had a mammogram	1	4.2%

**Question 83: Have you been pregnant in the last 12 months or are you pregnant now?**

**Variable name:** H18062

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	2.1%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 85	2	4.2%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 86	3	93.7%

**Question 84: In what trimester is your pregnancy?**

**Variable name:** H18063

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	Go to Question 86	1	23.4%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)		2	39.4%
Third trimester (28 <sup>th</sup> week until delivery)		3	37.2%

**Question 85: In which trimester did you first receive prenatal care?**

**Variable name:** H18064

**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	4	88.7%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)	3	3.1%
Third trimester (28 <sup>th</sup> week until delivery)	2	0.0%
Did not receive prenatal care	1	8.2%

**ABOUT YOU**

**Question 86: Would you say that in general your health is excellent, very good, good, fair, or poor?**

**Variable name:** H18065

**Editing notes:** None

Response	Value	Percent
Excellent	5	16.9%
Very good	4	41.1%
Good	3	30.7%
Fair	2	9.9%
Poor	1	1.4%

**Question 87: Are you limited in any way in any activities because of any impairment or health problem?**

**Variable name:** H18066

**Editing notes:** None

Response	Value	Percent
Yes	1	38.6%
No	2	61.4%

**Question 88: In the last 12 months, did you get health care 3 or more times for the same condition or problem?**

**Variable name:** H18067

**Editing notes:** See Note 22

Response	Directions	Value	Percent
Yes		1	41.1%
No	Go to Question 90	2	58.9%

**Question 89: Is this a condition or problem that has lasted for at least 3 months? Do not include pregnancy or menopause.**

**Variable name:** H18068

**Editing notes:** See Note 22

Response	Value	Percent
Yes	1	88.1%
No	2	11.9%

**Question 90: Do you now need or take medicine prescribed by a doctor? Do not include birth control.**

**Variable name:** H18069

**Editing notes:** See Note 23

Response	Directions	Value	Percent
Yes		1	65.3%
No	Go to Question 92	2	34.7%



Annotated Questionnaire Quarter I

**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:** H18070

**Editing notes:** See Note 23

Response	Value	Percent
Yes	1	94.9%
No	2	5.1%

**Question 92: How tall are you without your shoes on? Please give your answer in feet and inches.**

**Variable name:** H18071F, H18071I

**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	94.5%

**Question 93: How much do you weigh without your shoes on? Please give your answer in pounds.**

**Variable name:** H18072

**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	94.0%

**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 <sup>th</sup> grade or less	1	0.7%
Some high school, but did not graduate	2	0.9%
High school graduate or GED	3	17.1%
Some college or 2-year degree	4	39.4%
4-year college graduate	5	18.3%
More than 4-year college degree	6	23.5%

Annotated Questionnaire Quarter I

**Question 95: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)**

**MARK ALL THAT APPLY**

**Variable names:** H18073A-H18073E, H18073

**Editing notes:** See Note 24

Response	Variable Name	H18073 Value	Percent Marked
No, not Spanish, Hispanic, or Latino	H18073A	1	87.0%
Yes, Mexican, Mexican American, Chicano	H18073B	2	3.7%
Yes, Puerto Rican	H18073C	3	2.7%
Yes, Cuban	H18073D	4	0.4%
Yes, other Spanish, Hispanic, or Latino	H18073E	5	3.5%

**Question 96: What is your race?**

**MARK ALL THAT APPLY**

**Variable names:** SRRACEA-SRRACEE

**Editing notes:** None

Response	Variable Name	Percent Marked
White	SRRACEA	80.1%
Black or African American	SRRACEB	10.4%
American Indian or Alaska Native	SRRACEC	2.9%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	6.0%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	1.0%

**Question 97: What is your age now?**

**Variable name:** SRAGE

**Editing notes:** None

Response	Value	Percent
18 to 24	1	12.2%
25 to 34	2	14.6%
35 to 44	3	12.5%
45 to 54	4	9.6%
55 to 64	5	19.0%
65 to 74	6	18.0%
75 or older	7	14.0%

**Question 98: Are you currently covered by Medicare?**

**Variable name:** H18074

**Editing notes:** See Note 25

Response	Directions	Value	Percent
Yes		1	35.0%
No	Go to Question 104	2	56.4%
Don't know	Go to Question 104	-5	8.6%

## Annotated Questionnaire Quarter I

**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:** H18075

**Editing notes:** See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part A	1	95.2%
No, I am not covered by Medicare Part A	2	4.8%

**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:** H18076

**Editing notes:** See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare Part B	1	91.9%
No, I am not covered by Medicare Part B	2	8.1%

**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:** H18077

**Editing notes:** See Note 25

Response	Value	Percent
Yes	1	3.9%
No	2	84.9%
Don't know	-5	11.3%

**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:** H18078

**Editing notes:** See Note 25

Response	Value	Percent
Yes, I am now covered by Medicare supplemental insurance	1	14.3%
No, I am not covered by Medicare supplemental insurance	2	85.7%

**Question 103: Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?**

**Variable name:** H18079

**Editing notes:** See Note 25

Response	Value	Percent
Yes	1	10.3%
No	2	81.7%
Don't know	-5	8.0%

Annotated Questionnaire Quarter I

**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:** S18011

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly disagree	1	5.2%
Disagree	2	4.7%
Neither agree nor disagree	3	8.7%
Agree	4	43.8%
Strongly agree	5	37.6%

**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:** S18014

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Completely dissatisfied	1	3.7%
Somewhat dissatisfied	2	4.0%
Neither satisfied nor dissatisfied	3	6.2%
Somewhat satisfied	4	24.5%
Completely satisfied	5	61.7%

**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.**



## Health Care Survey of DoD Beneficiaries

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

January 2018

## Annotated Questionnaire Quarter II

### Military Health Care Survey: Adult Questionnaire January 2018

#### 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:** H18001

**Editing notes:** None

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



## Annotated Questionnaire Quarter II

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

**MARK ALL THAT APPLY**

**Variable names:** H18002A, H18002C, H18002F-H18002V

**Editing notes:** None

### **Military Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H18002A	44.3%
TRICARE Select (previously known as TRICARE Extra or Standard (CHAMPUS))	H18002C	13.9%
TRICARE Plus	H18002N	0.8%
TRICARE for Life	H18002O	31.1%
TRICARE Supplemental Insurance	H18002P	0.4%
TRICARE Reserve Select	H18002Q	3.2%
TRICARE Retired Reserve	H18002S	1.8%
TRICARE Young Adult Prime	H18002T	0.5%
TRICARE Young Adult Extra or Standard	H18002V	0.4%
Uniformed Services Family Health Plan (USFHP)	H18002K	1.2%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H18002U	0.1%

### **Other Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
Medicare	H18002F	31.4%
Federal Employees Health Benefit Program (FEHBP)	H18002G	2.6%
Medicaid	H18002H	1.3%
A civilian HMO (such as Kaiser)	H18002I	0.9%
Other civilian health insurance (such as Blue Cross)	H18002J	6.2%
The Veterans Administration (VA)	H18002M	7.8%
Government health insurance from a country other than the U.S.	H18002R	0.3%
Not sure	H18002L	5.6%

Annotated Questionnaire Quarter II

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

**MARK ONLY ONE ANSWER**

**Variable name:** H18003

**Editing notes:** See Note 1

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	42.4%
TRICARE Extra or Standard (CHAMPUS) (now known as TRICARE Select)		3	10.5%
TRICARE Plus		11	0.6%
TRICARE Reserve Select		12	3.4%
TRICARE Retired Reserve		14	1.0%
TRICARE Young Adult Prime		15	0.3%
TRICARE Young Adult Extra or Standard		17	0.3%
Uniformed Services Family Health Plan (USFHP)		9	1.1%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	0.1%
Medicare (may include TRICARE for Life)		4	25.8%
Federal Employees Health Benefit Program (FEHBP)		5	1.6%
Medicaid		6	0.3%
A civilian HMO (such as Kaiser)		7	0.7%
Other civilian health insurance (such as Blue Cross)		8	4.8%
The Veterans Administration (VA)		10	3.7%
Government health insurance from a country other than the U.S.		13	0.4%
Not sure	Go to Question 5	-5	3.0%
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:** H18004

**Editing notes:** See Note 1

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Less than 6 months	1	1.4%
At least 6 months but less than 12 months	2	4.6%
At least 12 months but less than 24 months	3	7.2%
At least 2 years but less than 5 years	4	20.0%
At least 5 years but less than 10 years	5	21.6%
10 or more years	6	45.3%

<b>YOUR HEALTH CARE IN THE LAST 12 MONTHS</b>
-----------------------------------------------

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, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?**

**Variable name:** H18006

**Editing notes:** See Note 2

Response	Directions	Value	Percent
Yes		1	46.7%
No	Go to Question 8	2	53.3%

**Question 6: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?**

**Variable name:** H18007

**Editing notes:** See Note 2

Response	Value	Percent
Never	1	2.2%
Sometimes	2	10.1%
Usually	3	19.9%
Always	4	67.7%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

**Question 7: 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:** H18008

**Editing notes:** See Note 2

Response	Value	Percent
Same day	1	62.0%
1 day	2	13.5%
2 days	3	7.6%
3 days	4	3.6%
4-7 days	5	6.1%
8-14 days	6	3.7%
15 days or longer	7	3.4%
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, 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:** H18009

**Editing notes:** See Note 3

Response	Directions	Value	Percent
Yes		1	85.8%
No	Go to Question 11	2	14.2%

Annotated Questionnaire Quarter II

**Question 9: 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:** H18010

**Editing notes:** See Note 3

Response	Value	Percent
Never	1	3.3%
Sometimes	2	17.1%
Usually	3	28.1%
Always	4	51.5%
I had no appointments in the last 12 months	-6	

**Question 10: 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:** H18011

**Editing notes:** See Note 3

Response	Value	Percent
Same day	1	7.7%
1 day	2	9.3%
2-3 days	3	22.4%
4-7 days	4	22.7%
8-14 days	5	17.8%
15-30 days	6	12.9%
31 days or longer	7	7.2%
I had no appointments in the last 12 months	-6	

**Question 11: In the last 12 months, how many times did you go to an emergency room to get care for yourself?**

**Variable name:** H18012

**Editing notes:** None

Response	Value	Percent
None	1	71.7%
1	2	18.2%
2	3	6.0%
3	4	2.4%
4	5	1.2%
5 to 9	6	0.4%
10 or more	7	0.1%

Annotated Questionnaire Quarter II

**Question 12: 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:** H18013

**Editing notes:** See Note 4

Response	Directions	Value	Percent
None	Go to Question 19	1	12.6%
1		2	11.3%
2		3	16.8%
3		4	15.3%
4		5	14.3%
5 to 9		6	20.4%
10 or more		7	9.4%

**Question 13: 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:** H18014

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	12.1%
Sometimes	2	25.1%
Usually	3	29.4%
Always	4	33.4%

**Question 14: 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:** H18015

**Editing notes:** See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	61.3%
No	Go to Question 17	2	38.7%

**Question 15: 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:** H18016

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	68.3%
Somewhat yes	2	27.7%
Somewhat no	3	2.7%
Definitely no	4	1.3%

Annotated Questionnaire Quarter II

**Question 16: 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:** H18017

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	60.4%
Somewhat yes	2	30.4%
Somewhat no	3	5.8%
Definitely no	4	3.4%

**Question 17: 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:** H18018

**Editing notes:** See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.7%
1	1	0.5%
2	2	0.7%
3	3	1.6%
4	4	1.9%
5	5	4.9%
6	6	5.5%
7	7	10.6%
8	8	20.6%
9	9	19.9%
10 – Best health care possible	10	33.1%
I had no visits in the last 12 months	-6	

**Question 18: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?**

**Variable name:** H18033

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	2.0%
Sometimes	2	14.2%
Usually	3	33.0%
Always	4	50.8%

**YOUR PERSONAL DOCTOR**

**Question 19: 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:** H18019

**Editing notes:** See Note 6

Response	Directions	Value	Percent
Yes		1	79.4%
No	Go to Question 29	2	20.6%

**Question 20: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?**

**Variable name:** H18020

**Editing notes:** See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 25	0	8.0%
1		1	18.9%
2		2	26.7%
3		3	17.6%
4		4	15.4%
5 to 9		5	11.1%
10 or more		6	2.3%

**Question 21: In the last 12 months, how often did your personal doctor listen carefully to you?**

**Variable name:** H18021

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	0.9%
Sometimes	2	6.4%
Usually	3	16.7%
Always	4	76.0%
I had no visits in the last 12 months	-6	

**Question 22: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?**

**Variable name:** H18022

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	0.4%
Sometimes	2	4.5%
Usually	3	18.2%
Always	4	76.8%
I had no visits in the last 12 months	-6	

Annotated Questionnaire Quarter II

**Question 23: In the last 12 months, how often did your personal doctor show respect for what you had to say?**

**Variable name:** H18023

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	0.9%
Sometimes	2	4.9%
Usually	3	13.5%
Always	4	80.7%
I had no visits in the last 12 months	-6	

**Question 24: In the last 12 months, how often did your personal doctor spend enough time with you?**

**Variable name:** H18024

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.9%
Sometimes	2	6.3%
Usually	3	22.4%
Always	4	69.4%
I had no visits in the last 12 months	-6	

**Question 25: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?**

**Variable name:** H18025

**Editing notes:** See Notes 6, 7, and 8

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	76.2%
No	Go to Question 27	2	23.8%

**Question 26: 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:** H18026

**Editing notes:** See Notes 6, 7, and 8

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	7.0%
Sometimes	2	14.8%
Usually	3	31.4%
Always	4	46.8%



Annotated Questionnaire Quarter II

**Question 27: 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:** H18027

**Editing notes:** See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.7%
1	1	0.6%
2	2	0.6%
3	3	1.2%
4	4	1.0%
5	5	4.2%
6	6	3.5%
7	7	8.0%
8	8	15.3%
9	9	23.6%
10 – Best personal doctor possible	10	41.4%
I don't have a personal doctor	-6	

**Question 28: Did you have the same personal doctor before you joined this health plan?**

**Variable name:** S18009

**Editing notes:** See Notes 6 and 8\_01

Response	Directions	Value	Percent
Yes	Go to Question 30	1	28.6%
No		2	71.4%

**Question 29: 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:** S18010

**Editing notes:** See Note 8\_01

Response	Value	Percent
A big problem	1	12.3%
A small problem	2	23.5%
Not a problem	3	64.2%

**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 30:** 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: H18028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	61.8%
No	Go to Question 34	2	38.2%

**Question 31:** In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H18029

Editing notes: See Note 9

Response	Value	Percent
Never	1	5.5%
Sometimes	2	14.3%
Usually	3	30.4%
Always	4	49.8%
I didn't need a specialist in the last 12 months	-6	

**Question 32:** How many specialists have you seen in the last 12 months?

Variable name: H18030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 34	0	3.0%
1 specialist		1	34.7%
2		2	31.8%
3		3	18.2%
4		4	6.7%
5 or more specialists		5	5.6%

## Annotated Questionnaire Quarter II

**Question 33: 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:** H18031

**Editing notes:** See Notes 9 and 10

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst specialist possible	0	0.6%
1	1	0.2%
2	2	0.6%
3	3	1.1%
4	4	0.7%
5	5	3.4%
6	6	3.3%
7	7	7.5%
8	8	16.3%
9	9	22.6%
10 – Best specialist possible	10	43.8%
I didn't see a specialist 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 34:** 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:** H18034

**Editing notes:** See Note 12

Response	Directions	Value	Percent
Yes		1	33.6%
No	Go to Question 36	2	66.4%

**Question 35:** 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:** H18035

**Editing notes:** See Note 12

Response	Value	Percent
Never	1	3.6%
Sometimes	2	30.9%
Usually	3	43.2%
Always	4	22.3%
I didn't look for information from my health plan in the last 12 months	-6	

**Question 36:** 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:** H18036

**Editing notes:** See Note 13

Response	Directions	Value	Percent
Yes		1	17.1%
No	Go to Question 38	2	82.9%

**Question 37:** 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:** H18037

**Editing notes:** See Note 13

Response	Value	Percent
Never	1	15.4%
Sometimes	2	25.3%
Usually	3	30.8%
Always	4	28.5%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	

Annotated Questionnaire Quarter II

**Question 38: 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:** H18038

**Editing notes:** See Note 14

Response	Directions	Value	Percent
Yes		1	19.8%
No	Go to Question 40	2	80.2%

**Question 39: 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:** H18039

**Editing notes:** See Note 14

Response	Value	Percent
Never	1	11.3%
Sometimes	2	21.2%
Usually	3	27.1%
Always	4	40.3%
I didn't need prescription medications from my health plan in the last 12 months	-6	

**Question 40: In the last 12 months, did you try to get information or help from your health plan's customer service?**

**Variable name:** H18040

**Editing notes:** See Note 15

Response	Directions	Value	Percent
Yes		1	26.7%
No	Go to Question 43	2	73.3%

**Question 41: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?**

**Variable name:** H18041

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	6.1%
Sometimes	2	22.0%
Usually	3	27.6%
Always	4	44.3%
I didn't call my health plan's customer service in the last 12 months	-6	

Annotated Questionnaire Quarter II

**Question 42: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?**

**Variable name:** H18042

**Editing notes:** See Note 15

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	2.5%
Sometimes	2	8.8%
Usually	3	22.3%
Always	4	66.4%
I didn’t call my health plan’s customer service in the last 12 months	-6	

**Question 43: In the last 12 months, did your health plan give you any forms to fill out?**

**Variable name:** H18043

**Editing notes:** See Note 16

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	21.9%
No	Go to Question 45	2	78.1%

**Question 44: In the last 12 months, how often were the forms from your health plan easy to fill out?**

**Variable name:** H18044

**Editing notes:** See Note 16

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	2.7%
Sometimes	2	12.6%
Usually	3	41.7%
Always	4	43.0%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

**Question 45: 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:** H18045

**Editing notes:** See Note 17

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	45.5%
No	Go to Question 48	2	32.9%
Don’t know	Go to Question 48	-5	21.7%

Annotated Questionnaire Quarter II

**Question 46: In the last 12 months, how often did your health plan handle your claims quickly?**

**Variable name:** H18046

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	3.1%
Sometimes	2	7.6%
Usually	3	30.4%
Always	4	44.0%
Don't know	-5	15.0%
No claims were sent for me in the last 12 months	-6	

**Question 47: In the last 12 months, how often did your health plan handle your claims correctly?**

**Variable name:** H18047

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.9%
Sometimes	2	7.5%
Usually	3	26.1%
Always	4	52.1%
Don't know	-5	12.4%
No claims were sent for me in the last 12 months	-6	

**Question 48: 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:** H18048

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst health plan possible	0	0.6%
1	1	0.6%
2	2	0.8%
3	3	1.5%
4	4	1.3%
5	5	5.9%
6	6	5.2%
7	7	11.6%
8	8	19.1%
9	9	21.4%
10 – Best health plan possible	10	32.0%

Annotated Questionnaire Quarter II

**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 49: When did you last have a blood pressure reading?**

**Variable name:** H18049

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	3	93.7%
1 to 2 years ago	2	4.9%
More than 2 years ago	1	1.4%

**Question 50: Do you know if your blood pressure is too high?**

**Variable name:** H18050

**Editing notes:** None

Response	Value	Percent
Yes, it is too high	1	17.7%
No, it is not too high	2	76.7%
Don't know	3	5.6%

**Question 51: When did you last have a flu shot?**

**Variable name:** H18051

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	4	73.6%
1 to 2 years ago	3	9.0%
More than 2 years ago	2	9.7%
Never had a flu shot	1	7.7%

**Question 52: Have you ever smoked at least 100 cigarettes in your entire life?**

**Variable name:** H18052

**Editing notes:** None

Response	Value	Percent
Yes	1	33.5%
No	2	64.4%
Don't know	-5	2.1%

**Question 53: Do you now smoke cigarettes or use tobacco every day, some days or not at all?**

**Variable name:** H18053

**Editing notes:** See Note 18

Response	Directions	Value	Percent
Every day		4	4.8%
Some days		3	4.3%
Not at all	Go to Question 58	2	90.4%
Don't know	Go to Question 58	-5	0.5%



Annotated Questionnaire Quarter II

**Question 54: 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:** H18054

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	23.8%
Sometimes	2	19.8%
Usually	3	20.4%
Always	4	36.0%

**Question 55: 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:** H18055

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	46.3%
Sometimes	2	21.4%
Usually	3	15.3%
Always	4	17.0%

**Question 56: 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:** H18056

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	50.4%
Sometimes	2	21.3%
Usually	3	15.7%
Always	4	12.7%

Annotated Questionnaire Quarter II

**Question 57: On the days you smoke or use tobacco products, what type of product do you smoke or use?**

**MARK ALL THAT APPLY**

**Variable names:** H18057A-H18057D

**Editing notes:** See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H18057A	57.8%
Dip, chewing tobacco, snuff or snus	H18057B	22.9%
Cigars	H18057C	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.)	H18057D	4.3%

**Question 58: Do you now use electronic cigarettes every day, some days, or not at all?**

**Variable name:** S18BF4

**Editing notes:** None

Response	Value	Percent
Every day	1	1.3%
Some days	2	1.5%
Not at all	3	96.9%
Don't know	-5	0.3%

**Question 59: Are you male or female?**

**Variable name:** H18058

**Editing notes:** See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 66	1	48.9%
Female		2	51.1%

**Question 60: When did you last have a Pap smear test?**

**Variable name:** H18059B

**Editing notes:** See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	33.6%
1 to 2 years ago	5	23.3%
More than 2 but less than 3 years ago	4	9.8%
More than 3 but less than 5 years ago	3	7.9%
5 or more years ago	2	18.9%
Never had a pap smear test	1	6.4%

Annotated Questionnaire Quarter II

**Question 61: Are you under age 40?**

**Variable name:** H18060

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

Response	Directions	Value	Percent
Yes	Go to Question 63	1	34.7%
No		2	65.3%

**Question 62: When was the last time your breasts were checked by mammography?**

**Variable name:** H18061

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

Response	Value	Percent
Within the last 12 months	5	63.6%
1 to 2 years ago	4	17.2%
More than 2 but less than 5 years ago	3	8.0%
5 or more years ago	2	6.7%
Never had a mammogram	1	4.6%

**Question 63: Have you been pregnant in the last 12 months or are you pregnant now?**

**Variable name:** H18062

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	2.2%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 65	2	4.4%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 66	3	93.4%

**Question 64: In what trimester is your pregnancy?**

**Variable name:** H18063

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	Go to Question 66	1	30.0%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)		2	36.7%
Third trimester (28 <sup>th</sup> week until delivery)		3	33.4%

**Question 65: In which trimester did you first receive prenatal care?**

**Variable name:** H18064

**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	4	86.4%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)	3	5.0%
Third trimester (28 <sup>th</sup> week until delivery)	2	0.0%
Did not receive prenatal care	1	8.6%

Annotated Questionnaire Quarter II

**ABOUT YOU**

**Question 66: Would you say that in general your health is excellent, very good, good, fair, or poor?**

**Variable name:** H18065

**Editing notes:** None

Response	Value	Percent
Excellent	5	14.6%
Very good	4	38.5%
Good	3	33.4%
Fair	2	11.4%
Poor	1	2.2%

**Question 67: What is the highest grade or level of school that you have completed?**

**Variable name:** SREDA

**Editing notes:** None

Response	Value	Percent
8 <sup>th</sup> grade or less	1	0.3%
Some high school, but did not graduate	2	2.0%
High school graduate or GED	3	17.4%
Some college or 2-year degree	4	39.7%
4-year college graduate	5	17.4%
More than 4-year college degree	6	23.2%

**Question 68: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)**

**MARK ALL THAT APPLY**

**Variable names:** H18073A-H18073E, H18073

**Editing notes:** See Note 24

Response	Variable Name	H18073 Value	Percent Marked
No, not Spanish, Hispanic, or Latino	H18073A	1	86.1%
Yes, Mexican, Mexican American, Chicano	H18073B	2	4.2%
Yes, Puerto Rican	H18073C	3	2.4%
Yes, Cuban	H18073D	4	0.5%
Yes, other Spanish, Hispanic, or Latino	H18073E	5	4.5%

Annotated Questionnaire Quarter II

**Question 69: What is your race?**

**MARK ALL THAT APPLY**

**Variable names:** SRRACEA-SRRACEE

**Editing notes:** None

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
White	SRRACEA	78.3%
Black or African American	SRRACEB	11.0%
American Indian or Alaska Native	SRRACEC	3.6%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	7.1%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	1.1%

**Question 70: What is your age now?**

**Variable name:** SRAGE

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
18 to 24	1	13.0%
25 to 34	2	15.6%
35 to 44	3	12.5%
45 to 54	4	8.9%
55 to 64	5	18.5%
65 to 74	6	19.2%
75 or older	7	12.2%

**Question 71: 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:** S18011

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Strongly disagree	1	4.8%
Disagree	2	5.6%
Neither agree nor disagree	3	10.8%
Agree	4	39.7%
Strongly agree	5	39.1%

Annotated Questionnaire Quarter II

**Question 72: 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:** S18014

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Completely dissatisfied	1	3.4%
Somewhat dissatisfied	2	4.0%
Neither satisfied nor dissatisfied	3	7.9%
Somewhat satisfied	4	25.1%
Completely satisfied	5	59.6%

**Question 73: How tall are you without your shoes on? Please give your answer in feet and inches.**

**Variable name:** H18071F, H18071I

**Editing notes:** See Note 23\_HT

<b>Response</b>	<b>Example feet</b>	<b>Example inches</b>	<b>Percent of responses</b>
Please give your answer in feet and inches. Please write one number in each box.	5	06	95.0%

**Question 74: How much do you weigh without your shoes on? Please give your answer in pounds.**

**Variable name:** H18072

**Editing notes:** See Note 23\_WT

<b>Response</b>	<b>Example pounds</b>	<b>Percent of responses</b>
Please give your answer in pounds. Please write one number in each box.	152	94.7%

**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.**



## Health Care Survey of DoD Beneficiaries

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

March 2018

## Annotated Questionnaire Quarter III

### Military Health Care Survey:

#### Adult Questionnaire

March 2018

#### 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:** H18001

**Editing notes:** None

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes	Go to Question 2	1	99.7%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.3%

## Annotated Questionnaire Quarter III

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

**MARK ALL THAT APPLY**

**Variable names:** H18002A, H18002C, H18002F-H18002V

**Editing notes:** None

### **Military Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H18002A	44.3%
TRICARE Select (previously known as TRICARE Extra or Standard (CHAMPUS))	H18002C	14.7%
TRICARE Plus	H18002N	1.0%
TRICARE for Life	H18002O	32.2%
TRICARE Supplemental Insurance	H18002P	0.5%
TRICARE Reserve Select	H18002Q	3.3%
TRICARE Retired Reserve	H18002S	1.4%
TRICARE Young Adult Prime	H18002T	0.4%
TRICARE Young Adult Extra or Standard	H18002V	0.7%
Uniformed Services Family Health Plan (USFHP)	H18002K	1.5%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H18002U	0.0%

### **Other Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
Medicare	H18002F	31.8%
Federal Employees Health Benefit Program (FEHBP)	H18002G	2.8%
Medicaid	H18002H	0.7%
A civilian HMO (such as Kaiser)	H18002I	0.9%
Other civilian health insurance (such as Blue Cross)	H18002J	6.7%
The Veterans Administration (VA)	H18002M	9.9%
Government health insurance from a country other than the U.S.	H18002R	0.1%
Not sure	H18002L	5.6%

Annotated Questionnaire Quarter III

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

**MARK ONLY ONE ANSWER**

**Variable name:** H18003

**Editing notes:** See Note 1

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	41.6%
TRICARE Extra or Standard (CHAMPUS) (now known as TRICARE Select)		3	10.1%
TRICARE Plus		11	0.5%
TRICARE Reserve Select		12	2.9%
TRICARE Retired Reserve		14	0.7%
TRICARE Young Adult Prime		15	0.2%
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	0.0%
Medicare (may include TRICARE for Life)		4	27.2%
Federal Employees Health Benefit Program (FEHBP)		5	1.8%
Medicaid		6	0.6%
A civilian HMO (such as Kaiser)		7	0.9%
Other civilian health insurance (such as Blue Cross)		8	5.0%
The Veterans Administration (VA)		10	3.9%
Government health insurance from a country other than the U.S.		13	0.3%
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:** H18004

**Editing notes:** See Note 1

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Less than 6 months	1	1.1%
At least 6 months but less than 12 months	2	3.7%
At least 12 months but less than 24 months	3	8.0%
At least 2 years but less than 5 years	4	19.4%
At least 5 years but less than 10 years	5	20.0%
10 or more years	6	47.8%

**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, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor’s office?**

**Variable name:** H18006

**Editing notes:** See Note 2

Response	Directions	Value	Percent
Yes		1	45.7%
No	Go to Question 8	2	54.3%

**Question 6: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?**

**Variable name:** H18007

**Editing notes:** See Note 2

Response	Value	Percent
Never	1	1.9%
Sometimes	2	10.6%
Usually	3	19.5%
Always	4	68.0%
I didn’t need care right away for an illness, injury or condition in the last 12 months	-6	

**Question 7: 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:** H18008

**Editing notes:** See Note 2

Response	Value	Percent
Same day	1	61.1%
1 day	2	12.8%
2 days	3	8.0%
3 days	4	4.7%
4-7 days	5	7.3%
8-14 days	6	3.3%
15 days or longer	7	3.0%
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, 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:** H18009

**Editing notes:** See Note 3

Response	Directions	Value	Percent
Yes		1	87.5%
No	Go to Question 11	2	12.5%

## Annotated Questionnaire Quarter III

**Question 9: 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:** H18010

**Editing notes:** See Note 3

Response	Value	Percent
Never	1	3.0%
Sometimes	2	16.2%
Usually	3	27.3%
Always	4	53.5%
I had no appointments in the last 12 months	-6	

**Question 10: 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:** H18011

**Editing notes:** See Note 3

Response	Value	Percent
Same day	1	8.1%
1 day	2	10.1%
2-3 days	3	23.5%
4-7 days	4	22.2%
8-14 days	5	17.9%
15-30 days	6	12.7%
31 days or longer	7	5.5%
I had no appointments in the last 12 months	-6	

**Question 11: In the last 12 months, how many times did you go to an emergency room to get care for yourself?**

**Variable name:** H18012

**Editing notes:** None

Response	Value	Percent
None	1	73.9%
1	2	16.7%
2	3	6.0%
3	4	2.1%
4	5	0.8%
5 to 9	6	0.5%
10 or more	7	0.1%

## Annotated Questionnaire Quarter III

**Question 12: 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:** H18013

**Editing notes:** See Note 4

Response	Directions	Value	Percent
None	Go to Question 19	1	11.2%
1		2	10.9%
2		3	17.7%
3		4	16.1%
4		5	14.5%
5 to 9		6	19.8%
10 or more		7	9.8%

**Question 13: 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:** H18014

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	11.8%
Sometimes	2	27.1%
Usually	3	26.1%
Always	4	35.0%

**Question 14: 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:** H18015

**Editing notes:** See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	61.1%
No	Go to Question 17	2	38.9%

**Question 15: 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:** H18016

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	67.7%
Somewhat yes	2	28.1%
Somewhat no	3	3.5%
Definitely no	4	0.8%

## Annotated Questionnaire Quarter III

**Question 16: 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:** H18017

**Editing notes:** See Notes 4 and 5

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Definitely yes	1	61.1%
Somewhat yes	2	29.8%
Somewhat no	3	6.4%
Definitely no	4	2.7%

**Question 17: 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:** H18018

**Editing notes:** See Note 4

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst health care possible	0	0.4%
1	1	0.4%
2	2	0.7%
3	3	1.4%
4	4	2.3%
5	5	5.3%
6	6	4.6%
7	7	10.7%
8	8	19.2%
9	9	22.2%
10 – Best health care possible	10	32.8%
I had no visits in the last 12 months	-6	

**Question 18: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?**

**Variable name:** H18033

**Editing notes:** See Note 4

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	2.4%
Sometimes	2	12.3%
Usually	3	33.6%
Always	4	51.7%



<b>YOUR PERSONAL DOCTOR</b>
-----------------------------

**Question 19: 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:** H18019

**Editing notes:** See Note 6

Response	Directions	Value	Percent
Yes		1	80.2%
No	Go to Question 29	2	19.8%

**Question 20: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?**

**Variable name:** H18020

**Editing notes:** See Notes 6 and 7

Response	Directions	Value	Percent
None	Go to Question 25	0	7.2%
1		1	19.5%
2		2	26.0%
3		3	18.7%
4		4	14.3%
5 to 9		5	11.7%
10 or more		6	2.6%

**Question 21: In the last 12 months, how often did your personal doctor listen carefully to you?**

**Variable name:** H18021

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	0.9%
Sometimes	2	5.8%
Usually	3	16.9%
Always	4	76.4%
I had no visits in the last 12 months	-6	

**Question 22: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?**

**Variable name:** H18022

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	0.8%
Sometimes	2	3.9%
Usually	3	17.2%
Always	4	78.0%
I had no visits in the last 12 months	-6	

Annotated Questionnaire Quarter III

**Question 23: In the last 12 months, how often did your personal doctor show respect for what you had to say?**

**Variable name:** H18023

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	0.9%
Sometimes	2	4.0%
Usually	3	12.6%
Always	4	82.5%
I had no visits in the last 12 months	-6	

**Question 24: In the last 12 months, how often did your personal doctor spend enough time with you?**

**Variable name:** H18024

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.6%
Sometimes	2	7.0%
Usually	3	21.3%
Always	4	70.1%
I had no visits in the last 12 months	-6	

**Question 25: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?**

**Variable name:** H18025

**Editing notes:** See Notes 6, 7, and 8

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	76.8%
No	Go to Question 27	2	23.2%

**Question 26: 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:** H18026

**Editing notes:** See Notes 6, 7, and 8

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	6.6%
Sometimes	2	12.9%
Usually	3	32.1%
Always	4	48.4%

## Annotated Questionnaire Quarter III

**Question 27: 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:** H18027

**Editing notes:** See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	0.5%
1	1	0.3%
2	2	0.4%
3	3	1.2%
4	4	1.4%
5	5	4.2%
6	6	2.8%
7	7	7.6%
8	8	15.1%
9	9	23.2%
10 – Best personal doctor possible	10	43.3%
I don't have a personal doctor	-6	

**Question 28: Did you have the same personal doctor before you joined this health plan?**

**Variable name:** S18009

**Editing notes:** See Notes 6 and 8\_01

Response	Directions	Value	Percent
Yes	Go to Question 30	1	31.2%
No		2	68.8%

**Question 29: 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:** S18010

**Editing notes:** See Note 8\_01

Response	Value	Percent
A big problem	1	12.6%
A small problem	2	22.8%
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 30:** 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: H18028

Editing notes: See Note 9

Response	Directions	Value	Percent
Yes		1	64.0%
No	Go to Question 34	2	36.0%

**Question 31:** In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

Variable name: H18029

Editing notes: See Note 9

Response	Value	Percent
Never	1	5.2%
Sometimes	2	14.7%
Usually	3	28.1%
Always	4	52.0%
I didn't need a specialist in the last 12 months	-6	

**Question 32:** How many specialists have you seen in the last 12 months?

Variable name: H18030

Editing notes: See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 34	0	2.7%
1 specialist		1	37.6%
2		2	30.7%
3		3	18.2%
4		4	7.3%
5 or more specialists		5	3.4%

Annotated Questionnaire Quarter III

**Question 33: 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:** H18031

**Editing notes:** See Notes 9 and 10

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst specialist possible	0	0.5%
1	1	0.4%
2	2	0.4%
3	3	1.0%
4	4	1.2%
5	5	3.1%
6	6	3.6%
7	7	7.1%
8	8	14.7%
9	9	25.9%
10 – Best specialist possible	10	42.3%
I didn't see a specialist 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 34:** 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:** H18034

**Editing notes:** See Note 12

Response	Directions	Value	Percent
Yes		1	34.4%
No	Go to Question 36	2	65.6%

**Question 35:** 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:** H18035

**Editing notes:** See Note 12

Response	Value	Percent
Never	1	3.8%
Sometimes	2	33.0%
Usually	3	42.6%
Always	4	20.6%
I didn't look for information from my health plan in the last 12 months	-6	

**Question 36:** 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:** H18036

**Editing notes:** See Note 13

Response	Directions	Value	Percent
Yes		1	18.0%
No	Go to Question 38	2	82.0%

**Question 37:** 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:** H18037

**Editing notes:** See Note 13

Response	Value	Percent
Never	1	14.9%
Sometimes	2	32.6%
Usually	3	27.2%
Always	4	25.3%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	

Annotated Questionnaire Quarter III

**Question 38: 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:** H18038

**Editing notes:** See Note 14

Response	Directions	Value	Percent
Yes		1	22.4%
No	Go to Question 40	2	77.6%

**Question 39: 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:** H18039

**Editing notes:** See Note 14

Response	Value	Percent
Never	1	12.6%
Sometimes	2	24.2%
Usually	3	26.9%
Always	4	36.3%
I didn't need prescription medications from my health plan in the last 12 months	-6	

**Question 40: In the last 12 months, did you try to get information or help from your health plan's customer service?**

**Variable name:** H18040

**Editing notes:** See Note 15

Response	Directions	Value	Percent
Yes		1	27.2%
No	Go to Question 43	2	72.8%

**Question 41: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?**

**Variable name:** H18041

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	6.8%
Sometimes	2	24.6%
Usually	3	25.6%
Always	4	43.0%
I didn't call my health plan's customer service in the last 12 months	-6	

Annotated Questionnaire Quarter III

**Question 42: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?**

**Variable name:** H18042

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	2.9%
Sometimes	2	8.1%
Usually	3	23.3%
Always	4	65.7%
I didn’t call my health plan’s customer service in the last 12 months	-6	

**Question 43: In the last 12 months, did your health plan give you any forms to fill out?**

**Variable name:** H18043

**Editing notes:** See Note 16

Response	Directions	Value	Percent
Yes		1	21.0%
No	Go to Question 45	2	79.0%

**Question 44: In the last 12 months, how often were the forms from your health plan easy to fill out?**

**Variable name:** H18044

**Editing notes:** See Note 16

Response	Value	Percent
Never	1	3.6%
Sometimes	2	13.7%
Usually	3	44.5%
Always	4	38.3%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

**Question 45: 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:** H18045

**Editing notes:** See Note 17

Response	Directions	Value	Percent
Yes		1	47.1%
No	Go to Question 48	2	34.1%
Don’t know	Go to Question 48	-5	18.8%



## Annotated Questionnaire Quarter III

**Question 46: In the last 12 months, how often did your health plan handle your claims quickly?**

**Variable name:** H18046

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	3.2%
Sometimes	2	7.4%
Usually	3	29.6%
Always	4	45.1%
Don't know	-5	14.7%
No claims were sent for me in the last 12 months	-6	

**Question 47: In the last 12 months, how often did your health plan handle your claims correctly?**

**Variable name:** H18047

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.4%
Sometimes	2	7.2%
Usually	3	26.6%
Always	4	50.6%
Don't know	-5	14.2%
No claims were sent for me in the last 12 months	-6	

**Question 48: 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:** H18048

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst health plan possible	0	0.7%
1	1	0.4%
2	2	0.7%
3	3	1.1%
4	4	1.7%
5	5	6.0%
6	6	5.7%
7	7	11.7%
8	8	17.8%
9	9	21.6%
10 – Best health plan possible	10	32.6%

<b>PREVENTIVE CARE</b>
------------------------

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 49: When did you last have a blood pressure reading?**

**Variable name:** H18049

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	3	94.7%
1 to 2 years ago	2	3.6%
More than 2 years ago	1	1.7%

**Question 50: Do you know if your blood pressure is too high?**

**Variable name:** H18050

**Editing notes:** None

Response	Value	Percent
Yes, it is too high	1	17.9%
No, it is not too high	2	76.4%
Don't know	3	5.7%

**Question 51: When did you last have a flu shot?**

**Variable name:** H18051

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	4	73.5%
1 to 2 years ago	3	8.0%
More than 2 years ago	2	11.4%
Never had a flu shot	1	7.1%

**Question 52: Have you ever smoked at least 100 cigarettes in your entire life?**

**Variable name:** H18052

**Editing notes:** None

Response	Value	Percent
Yes	1	34.1%
No	2	63.5%
Don't know	-5	2.4%

**Question 53: Do you now smoke cigarettes or use tobacco every day, some days or not at all?**

**Variable name:** H18053

**Editing notes:** See Note 18

Response	Directions	Value	Percent
Every day		4	5.0%
Some days		3	4.7%
Not at all	Go to Question 58	2	89.8%
Don't know	Go to Question 58	-5	0.6%

## Annotated Questionnaire Quarter III

**Question 54: 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:** H18054

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	16.6%
Sometimes	2	21.7%
Usually	3	26.0%
Always	4	35.7%

**Question 55: 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:** H18055

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	40.9%
Sometimes	2	26.0%
Usually	3	16.7%
Always	4	16.4%

**Question 56: 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:** H18056

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	42.8%
Sometimes	2	25.3%
Usually	3	19.2%
Always	4	12.7%

## Annotated Questionnaire Quarter III

**Question 57: On the days you smoke or use tobacco products, what type of product do you smoke or use?**

**MARK ALL THAT APPLY**

**Variable names:** H18057A-H18057D

**Editing notes:** See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H18057A	63.4%
Dip, chewing tobacco, snuff or snus	H18057B	20.2%
Cigars	H18057C	12.2%
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.)	H18057D	4.4%

**Question 58: Do you now use electronic cigarettes every day, some days, or not at all?**

**Variable name:** S18BF4

**Editing notes:** None

Response	Value	Percent
Every day	1	1.2%
Some days	2	1.9%
Not at all	3	96.6%
Don't know	-5	0.3%

**Question 59: Are you male or female?**

**Variable name:** H18058

**Editing notes:** See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 66	1	49.4%
Female		2	50.6%

**Question 60: When did you last have a Pap smear test?**

**Variable name:** H18059B

**Editing notes:** See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	33.3%
1 to 2 years ago	5	25.1%
More than 2 but less than 3 years ago	4	9.7%
More than 3 but less than 5 years ago	3	9.5%
5 or more years ago	2	17.2%
Never had a pap smear test	1	5.2%

## Annotated Questionnaire Quarter III

### Question 61: Are you under age 40?

**Variable name:** H18060

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

Response	Directions	Value	Percent
Yes	Go to Question 63	1	34.0%
No		2	66.0%

### Question 62: When was the last time your breasts were checked by mammography?

**Variable name:** H18061

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

Response	Value	Percent
Within the last 12 months	5	59.2%
1 to 2 years ago	4	22.6%
More than 2 but less than 5 years ago	3	7.6%
5 or more years ago	2	7.4%
Never had a mammogram	1	3.2%

### Question 63: Have you been pregnant in the last 12 months or are you pregnant now?

**Variable name:** H18062

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	2.2%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 65	2	4.0%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 66	3	93.9%

### Question 64: In what trimester is your pregnancy?

**Variable name:** H18063

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	Go to Question 66	1	24.3%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)		2	37.8%
Third trimester (28 <sup>th</sup> week until delivery)		3	37.9%

### Question 65: In which trimester did you first receive prenatal care?

**Variable name:** H18064

**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	4	89.2%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)	3	6.3%
Third trimester (28 <sup>th</sup> week until delivery)	2	0.3%
Did not receive prenatal care	1	4.3%

<b>ABOUT YOU</b>
------------------

**Question 66: Would you say that in general your health is excellent, very good, good, fair, or poor?**

**Variable name:** H18065

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Excellent	5	13.9%
Very good	4	36.6%
Good	3	35.6%
Fair	2	11.3%
Poor	1	2.5%

**Question 67: 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:** S18BG01

**Editing notes:** See Notes 21\_BG1 and 21\_BG3

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Number of days	1-30	43.2%
None	0	56.8%

**Question 68: 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:** S18BG02

**Editing notes:** See Notes 21\_BG2 and 21\_BG3

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Number of days	1-30	29.2%
None	0	70.8%

**Question 69: 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:** S18BG03

**Editing notes:** See Notes 21\_BG3

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Number of days	1-30	31.4%
None	0	68.6%

## Annotated Questionnaire Quarter III

**Question 70: Has a doctor ever told you that you have or have had any of the following conditions?**

**MARK ALL THAT APPLY**

**Variable names:** S18BE01A-S18BE01K

**Editing notes:** See Note 23\_BE

Response	Variable Name	Percent Marked
A heart attack	S18BE01A	4.2%
Angina or coronary heart disease	S18BE01B	5.9%
A stroke	S18BE01C	2.0%
Any kind of diabetes or high blood sugar	S18BE01D	15.5%
High cholesterol	S18BE01E	31.5%
Asthma, Chronic obstructive pulmonary disease (COPD), or Emphysema	S18BE01F	10.1%
Cancer	S18BE01G	10.5%
Osteoporosis	S18BE01H	5.6%
Depression or Anxiety	S18BE01I	18.6%
An autoimmune disease (e.g., Lupus, Celiac disease, Rheumatoid arthritis)	S18BE01J	4.3%
None of these	S18BE01K	39.7%

**Question 71: How tall are you without your shoes on? Please give your answer in feet and inches.**

**Variable name:** H18071F, H18071I

**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	95.8%

**Question 72: How much do you weigh without your shoes on? Please give your answer in pounds.**

**Variable name:** H18072

**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	95.0%

**Question 73: What is the highest grade or level of school that you have completed?**

**Variable name:** SREDA

**Editing notes:** None

Response	Value	Percent
8 <sup>th</sup> grade or less	1	0.3%
Some high school, but did not graduate	2	1.2%
High school graduate or GED	3	18.0%
Some college or 2-year degree	4	37.4%
4-year college graduate	5	18.5%
More than 4-year college degree	6	24.6%

## Annotated Questionnaire Quarter III

**Question 74: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)**

**MARK ALL THAT APPLY**

**Variable names:** H18073A-H18073E, H18073

**Editing notes:** See Note 24

<b>Response</b>	<b>Variable Name</b>	<b>H18073 Value</b>	<b>Percent Marked</b>
No, not Spanish, Hispanic, or Latino	H18073A	1	87.3%
Yes, Mexican, Mexican American, Chicano	H18073B	2	3.8%
Yes, Puerto Rican	H18073C	3	2.4%
Yes, Cuban	H18073D	4	0.7%
Yes, other Spanish, Hispanic, or Latino	H18073E	5	3.7%

**Question 75: What is your race?**

**MARK ALL THAT APPLY**

**Variable names:** SRRACEA-SRRACEE

**Editing notes:** None

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
White	SRRACEA	77.7%
Black or African American	SRRACEB	11.2%
American Indian or Alaska Native	SRRACEC	2.9%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	6.7%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	1.2%

**Question 76: What is your age now?**

**Variable name:** SRAGE

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
18 to 24	1	11.5%
25 to 34	2	14.9%
35 to 44	3	11.5%
45 to 54	4	9.8%
55 to 64	5	21.1%
65 to 74	6	19.5%
75 or older	7	11.8%

**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.**





## Health Care Survey of DoD Beneficiaries

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

January 2018

## Annotated Questionnaire HEDIS

### Military Health Care Survey:

#### Adult Questionnaire

January 2018

#### 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:** H18001

**Editing notes:** None

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes	Go to Question 2	1	99.9%
No	Please give this questionnaire to the person addressed on the cover letter.	2	0.1%

## Annotated Questionnaire HEDIS

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

**MARK ALL THAT APPLY**

**Variable names:** H18002A, H18002C, H18002F-H18002V

**Editing notes:** None

### **Military Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)	H18002A	91.1%
TRICARE Select (previously known as TRICARE Extra or Standard (CHAMPUS))	H18002C	3.1%
TRICARE Plus	H18002N	0.5%
TRICARE for Life	H18002O	3.0%
TRICARE Supplemental Insurance	H18002P	0.1%
TRICARE Reserve Select	H18002Q	0.5%
TRICARE Retired Reserve	H18002S	0.3%
TRICARE Young Adult Prime	H18002T	0.8%
TRICARE Young Adult Extra or Standard	H18002V	0.2%
Uniformed Services Family Health Plan (USFHP)	H18002K	0.3%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)	H18002U	0.0%

### **Other Health Plans**

<b>Response</b>	<b>Variable Name</b>	<b>Percent Marked</b>
Medicare	H18002F	2.4%
Federal Employees Health Benefit Program (FEHBP)	H18002G	0.7%
Medicaid	H18002H	0.4%
A civilian HMO (such as Kaiser)	H18002I	0.5%
Other civilian health insurance (such as Blue Cross)	H18002J	2.0%
The Veterans Administration (VA)	H18002M	5.5%
Government health insurance from a country other than the U.S.	H18002R	0.1%
Not sure	H18002L	8.4%

## Annotated Questionnaire HEDIS

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

**MARK ONLY ONE ANSWER**

**Variable name:** H18003

**Editing notes:** See Note 1

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
TRICARE Prime (including most Active Duty, TRICARE Prime Remote, and TRICARE Overseas)		1	89.0%
TRICARE Extra or Standard (CHAMPUS) (now known as TRICARE Select)		3	2.1%
TRICARE Plus		11	0.4%
TRICARE Reserve Select		12	0.4%
TRICARE Retired Reserve		14	0.3%
TRICARE Young Adult Prime		15	0.6%
TRICARE Young Adult Extra or Standard		17	0.1%
Uniformed Services Family Health Plan (USFHP)		9	0.2%
Continued Health Care Benefit Program (CHCBP) (a COBRA-like premium-based health care program)		16	0.0%
Medicare (may include TRICARE for Life)		4	0.9%
Federal Employees Health Benefit Program (FEHBP)		5	0.3%
Medicaid		6	0.1%
A civilian HMO (such as Kaiser)		7	0.4%
Other civilian health insurance (such as Blue Cross)		8	0.7%
The Veterans Administration (VA)		10	1.4%
Government health insurance from a country other than the U.S.		13	0.0%
Not sure	Go to Question 5	-5	3.1%
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:** H18004

**Editing notes:** See Note 1

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Less than 6 months	1	1.0%
At least 6 months but less than 12 months	2	4.3%
At least 12 months but less than 24 months	3	7.7%
At least 2 years but less than 5 years	4	21.7%
At least 5 years but less than 10 years	5	18.5%
10 or more years	6	46.8%

<b>YOUR HEALTH CARE IN THE LAST 12 MONTHS</b>
-----------------------------------------------

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, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?**

**Variable name:** H18006

**Editing notes:** See Note 2

Response	Directions	Value	Percent
Yes		1	44.8%
No	Go to Question 8	2	55.2%

**Question 6: In the last 12 months, when you needed care right away, how often did you get care as soon as you needed?**

**Variable name:** H18007

**Editing notes:** See Note 2

Response	Value	Percent
Never	1	4.6%
Sometimes	2	17.9%
Usually	3	25.4%
Always	4	52.1%
I didn't need care right away for an illness, injury or condition in the last 12 months	-6	

**Question 7: 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:** H18008

**Editing notes:** See Note 2

Response	Value	Percent
Same day	1	48.6%
1 day	2	15.3%
2 days	3	9.2%
3 days	4	6.0%
4-7 days	5	11.0%
8-14 days	6	4.7%
15 days or longer	7	5.2%
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, 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:** H18009

**Editing notes:** See Note 3

Response	Directions	Value	Percent
Yes		1	80.1%
No	Go to Question 11	2	19.9%

## Annotated Questionnaire HEDIS

**Question 9: 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:** H18010

**Editing notes:** See Note 3

Response	Value	Percent
Never	1	6.9%
Sometimes	2	29.7%
Usually	3	29.6%
Always	4	33.8%
I had no appointments in the last 12 months	-6	

**Question 10: 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:** H18011

**Editing notes:** See Note 3

Response	Value	Percent
Same day	1	4.9%
1 day	2	6.2%
2-3 days	3	20.1%
4-7 days	4	23.3%
8-14 days	5	24.4%
15-30 days	6	16.9%
31 days or longer	7	4.2%
I had no appointments in the last 12 months	-6	

**Question 11: In the last 12 months, how many times did you go to an emergency room to get care for yourself?**

**Variable name:** H18012

**Editing notes:** None

Response	Value	Percent
None	1	70.6%
1	2	18.5%
2	3	6.8%
3	4	2.3%
4	5	1.3%
5 to 9	6	0.5%
10 or more	7	0.0%



Annotated Questionnaire HEDIS

**Question 12: 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:** H18013

**Editing notes:** See Note 4

Response	Directions	Value	Percent
None	Go to Question 19	1	19.6%
1		2	12.2%
2		3	17.3%
3		4	15.1%
4		5	13.2%
5 to 9		6	14.4%
10 or more		7	8.2%

**Question 13: 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:** H18014

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	17.8%
Sometimes	2	29.7%
Usually	3	25.6%
Always	4	26.9%

**Question 14: 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:** H18015

**Editing notes:** See Notes 4 and 5

Response	Directions	Value	Percent
Yes		1	55.5%
No	Go to Question 17	2	44.5%

**Question 15: 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:** H18016

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	63.2%
Somewhat yes	2	30.7%
Somewhat no	3	4.4%
Definitely no	4	1.7%

## Annotated Questionnaire HEDIS

**Question 16: 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:** H18017

**Editing notes:** See Notes 4 and 5

Response	Value	Percent
Definitely yes	1	57.1%
Somewhat yes	2	31.5%
Somewhat no	3	7.2%
Definitely no	4	4.2%

**Question 17: 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:** H18018

**Editing notes:** See Note 4

Response	Value	Percent
0 – Worst health care possible	0	0.7%
1	1	1.0%
2	2	1.9%
3	3	3.0%
4	4	3.4%
5	5	7.6%
6	6	8.1%
7	7	16.2%
8	8	21.9%
9	9	16.6%
10 – Best health care possible	10	19.6%
I had no visits in the last 12 months	-6	

**Question 18: In the last 12 months, how often was it easy to get the care, tests, or treatment you needed?**

**Variable name:** H18033

**Editing notes:** See Note 4

Response	Value	Percent
Never	1	4.1%
Sometimes	2	24.5%
Usually	3	37.2%
Always	4	34.2%

<b>YOUR PERSONAL DOCTOR</b>
-----------------------------

**Question 19: 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:** H18019

**Editing notes:** See Note 6

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
Yes		1	62.0%
No	Go to Question 29	2	38.0%

**Question 20: In the last 12 months, how many times did you visit your personal doctor to get care for yourself?**

**Variable name:** H18020

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Directions</b>	<b>Value</b>	<b>Percent</b>
None	Go to Question 25	0	15.1%
1		1	21.9%
2		2	22.8%
3		3	14.8%
4		4	11.5%
5 to 9		5	10.8%
10 or more		6	3.1%

**Question 21: In the last 12 months, how often did your personal doctor listen carefully to you?**

**Variable name:** H18021

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.9%
Sometimes	2	10.8%
Usually	3	19.3%
Always	4	68.0%
I had no visits in the last 12 months	-6	

**Question 22: In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand?**

**Variable name:** H18022

**Editing notes:** See Notes 6 and 7

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	1.0%
Sometimes	2	6.7%
Usually	3	20.0%
Always	4	72.2%
I had no visits in the last 12 months	-6	

## Annotated Questionnaire HEDIS

**Question 23: In the last 12 months, how often did your personal doctor show respect for what you had to say?**

**Variable name:** H18023

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	2.1%
Sometimes	2	7.4%
Usually	3	15.5%
Always	4	75.1%
I had no visits in the last 12 months	-6	

**Question 24: In the last 12 months, how often did your personal doctor spend enough time with you?**

**Variable name:** H18024

**Editing notes:** See Notes 6 and 7

Response	Value	Percent
Never	1	4.0%
Sometimes	2	11.3%
Usually	3	22.7%
Always	4	61.9%
I had no visits in the last 12 months	-6	

**Question 25: In the last 12 months, did you get care from a doctor or other health provider besides your personal doctor?**

**Variable name:** H18025

**Editing notes:** See Notes 6, 7, and 8

Response	Directions	Value	Percent
Yes		1	72.8%
No	Go to Question 27	2	27.2%

**Question 26: 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:** H18026

**Editing notes:** See Notes 6, 7, and 8

Response	Value	Percent
Never	1	12.6%
Sometimes	2	19.4%
Usually	3	30.5%
Always	4	37.5%

Annotated Questionnaire HEDIS

**Question 27: 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:** H18027

**Editing notes:** See Note 6

Response	Value	Percent
0 – Worst personal doctor possible	0	1.0%
1	1	0.8%
2	2	1.1%
3	3	2.3%
4	4	2.3%
5	5	6.8%
6	6	5.0%
7	7	10.1%
8	8	18.6%
9	9	20.2%
10 – Best personal doctor possible	10	31.7%
I don't have a personal doctor	-6	

**Question 28: Did you have the same personal doctor before you joined this health plan?**

**Variable name:** S18009

**Editing notes:** See Notes 6 and 8\_01

Response	Directions	Value	Percent
Yes	Go to Question 30	1	9.6%
No		2	90.4%

**Question 29: 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:** S18010

**Editing notes:** See Note 8\_01

Response	Value	Percent
A big problem	1	13.8%
A small problem	2	23.9%
Not a problem	3	62.3%

**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 30:** 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:** H18028

**Editing notes:** See Note 9

Response	Directions	Value	Percent
Yes		1	53.3%
No	Go to Question 34	2	46.7%

**Question 31:** In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?

**Variable name:** H18029

**Editing notes:** See Note 9

Response	Value	Percent
Never	1	10.1%
Sometimes	2	23.7%
Usually	3	28.1%
Always	4	38.1%
I didn't need a specialist in the last 12 months	-6	

**Question 32:** How many specialists have you seen in the last 12 months?

**Variable name:** H18030

**Editing notes:** See Notes 9 and 10

Response	Directions	Value	Percent
None	Go to Question 34	0	4.7%
1 specialist		1	44.3%
2		2	28.9%
3		3	13.2%
4		4	4.7%
5 or more specialists		5	4.1%

## Annotated Questionnaire HEDIS

**Question 33: 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:** H18031

**Editing notes:** See Notes 9 and 10

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst specialist possible	0	0.9%
1	1	1.0%
2	2	1.1%
3	3	2.1%
4	4	1.9%
5	5	4.4%
6	6	4.6%
7	7	9.9%
8	8	18.4%
9	9	22.9%
10 – Best specialist possible	10	32.8%
I didn't see a specialist in the last 12 months	-6	

<b>YOUR HEALTH PLAN</b>
-------------------------

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 34:** 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:** H18034

**Editing notes:** See Note 12

Response	Directions	Value	Percent
Yes		1	28.0%
No	Go to Question 36	2	72.0%

**Question 35:** 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:** H18035

**Editing notes:** See Note 12

Response	Value	Percent
Never	1	6.6%
Sometimes	2	36.6%
Usually	3	38.3%
Always	4	18.5%
I didn't look for information from my health plan in the last 12 months	-6	

**Question 36:** 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:** H18036

**Editing notes:** See Note 13

Response	Directions	Value	Percent
Yes		1	14.1%
No	Go to Question 38	2	85.9%

**Question 37:** 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:** H18037

**Editing notes:** See Note 13

Response	Value	Percent
Never	1	21.8%
Sometimes	2	29.5%
Usually	3	27.8%
Always	4	20.9%
I didn't need a health care service or equipment from my health plan in the last 12 months	-6	



Annotated Questionnaire HEDIS

**Question 38: 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:** H18038

**Editing notes:** See Note 14

Response	Directions	Value	Percent
Yes		1	11.0%
No	Go to Question 40	2	89.0%

**Question 39: 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:** H18039

**Editing notes:** See Note 14

Response	Value	Percent
Never	1	21.5%
Sometimes	2	25.0%
Usually	3	28.5%
Always	4	25.0%
I didn't need prescription medications from my health plan in the last 12 months	-6	

**Question 40: In the last 12 months, did you try to get information or help from your health plan's customer service?**

**Variable name:** H18040

**Editing notes:** See Note 15

Response	Directions	Value	Percent
Yes		1	21.7%
No	Go to Question 43	2	78.3%

**Question 41: In the last 12 months, how often did your health plan's customer service give you the information or help you needed?**

**Variable name:** H18041

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	11.6%
Sometimes	2	28.6%
Usually	3	27.6%
Always	4	32.1%
I didn't call my health plan's customer service in the last 12 months	-6	

Annotated Questionnaire HEDIS

**Question 42: In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect?**

**Variable name:** H18042

**Editing notes:** See Note 15

Response	Value	Percent
Never	1	3.2%
Sometimes	2	12.5%
Usually	3	23.7%
Always	4	60.6%
I didn’t call my health plan’s customer service in the last 12 months	-6	

**Question 43: In the last 12 months, did your health plan give you any forms to fill out?**

**Variable name:** H18043

**Editing notes:** See Note 16

Response	Directions	Value	Percent
Yes		1	25.9%
No	Go to Question 45	2	74.1%

**Question 44: In the last 12 months, how often were the forms from your health plan easy to fill out?**

**Variable name:** H18044

**Editing notes:** See Note 16

Response	Value	Percent
Never	1	3.1%
Sometimes	2	14.0%
Usually	3	40.5%
Always	4	42.3%
I didn’t have any experiences with paperwork for my health plan in the last 12 months	-6	

**Question 45: 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:** H18045

**Editing notes:** See Note 17

Response	Directions	Value	Percent
Yes		1	21.5%
No	Go to Question 48	2	49.5%
Don’t know	Go to Question 48	-5	29.0%

## Annotated Questionnaire HEDIS

**Question 46: In the last 12 months, how often did your health plan handle your claims quickly?**

**Variable name:** H18046

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	5.1%
Sometimes	2	11.1%
Usually	3	26.1%
Always	4	39.6%
Don't know	-5	18.1%
No claims were sent for me in the last 12 months	-6	

**Question 47: In the last 12 months, how often did your health plan handle your claims correctly?**

**Variable name:** H18047

**Editing notes:** See Note 17

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	3.9%
Sometimes	2	9.4%
Usually	3	24.6%
Always	4	44.8%
Don't know	-5	17.3%
No claims were sent for me in the last 12 months	-6	

**Question 48: 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:** H18048

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
0 – Worst health plan possible	0	0.8%
1	1	0.5%
2	2	1.4%
3	3	1.5%
4	4	2.7%
5	5	9.5%
6	6	7.0%
7	7	15.1%
8	8	21.6%
9	9	17.3%
10 – Best health plan possible	10	22.5%

<b>PREVENTIVE CARE</b>
------------------------

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 49: When did you last have a blood pressure reading?**

**Variable name:** H18049

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	3	92.7%
1 to 2 years ago	2	5.7%
More than 2 years ago	1	1.6%

**Question 50: Do you know if your blood pressure is too high?**

**Variable name:** H18050

**Editing notes:** None

Response	Value	Percent
Yes, it is too high	1	12.4%
No, it is not too high	2	79.2%
Don't know	3	8.4%

**Question 51: When did you last have a flu shot?**

**Variable name:** H18051

**Editing notes:** None

Response	Value	Percent
Less than 12 months ago	4	81.2%
1 to 2 years ago	3	7.2%
More than 2 years ago	2	7.4%
Never had a flu shot	1	4.2%

**Question 52: Have you ever smoked at least 100 cigarettes in your entire life?**

**Variable name:** H18052

**Editing notes:** None

Response	Value	Percent
Yes	1	25.5%
No	2	71.8%
Don't know	-5	2.6%

**Question 53: Do you now smoke cigarettes or use tobacco every day, some days or not at all?**

**Variable name:** H18053

**Editing notes:** See Note 18

Response	Directions	Value	Percent
Every day		4	7.0%
Some days		3	7.5%
Not at all	Go to Question 58	2	85.1%
Don't know	Go to Question 58	-5	0.4%

## Annotated Questionnaire HEDIS

**Question 54: 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:** H18054

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	23.4%
Sometimes	2	25.3%
Usually	3	23.3%
Always	4	27.9%

**Question 55: 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:** H18055

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	49.6%
Sometimes	2	26.1%
Usually	3	11.4%
Always	4	13.0%

**Question 56: 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:** H18056

**Editing notes:** See Note 18

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Never	1	48.4%
Sometimes	2	27.7%
Usually	3	11.6%
Always	4	12.2%

## Annotated Questionnaire HEDIS

**Question 57: On the days you smoke or use tobacco products, what type of product do you smoke or use?**

**MARK ALL THAT APPLY**

**Variable names:** H18057A-H18057D

**Editing notes:** See Note 18

Response	Variable Name	Percent Marked
Cigarettes	H18057A	54.5%
Dip, chewing tobacco, snuff or snus	H18057B	35.0%
Cigars	H18057C	15.7%
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.)	H18057D	4.7%

**Question 58: Do you now use electronic cigarettes every day, some days, or not at all?**

**Variable name:** S18BF4

**Editing notes:** None

Response	Value	Percent
Every day	1	2.1%
Some days	2	3.3%
Not at all	3	94.3%
Don't know	-5	0.4%

**Question 59: Are you male or female?**

**Variable name:** H18058

**Editing notes:** See Note 19A

Response	Directions	Value	Percent
Male	Go to Question 66	1	62.4%
Female		2	37.6%

**Question 60: When did you last have a Pap smear test?**

**Variable name:** H18059B

**Editing notes:** See Notes 19A and 19B

Response	Value	Percent
Within the last 12 months	6	36.0%
1 to 2 years ago	5	31.4%
More than 2 but less than 3 years ago	4	11.5%
More than 3 but less than 5 years ago	3	6.7%
5 or more years ago	2	6.1%
Never had a pap smear test	1	8.4%

## Annotated Questionnaire HEDIS

### Question 61: Are you under age 40?

**Variable name:** H18060

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

Response	Directions	Value	Percent
Yes	Go to Question 63	1	59.0%
No		2	41.0%

### Question 62: When was the last time your breasts were checked by mammography?

**Variable name:** H18061

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

Response	Value	Percent
Within the last 12 months	5	61.5%
1 to 2 years ago	4	20.4%
More than 2 but less than 5 years ago	3	6.9%
5 or more years ago	2	3.3%
Never had a mammogram	1	7.9%

### Question 63: Have you been pregnant in the last 12 months or are you pregnant now?

**Variable name:** H18062

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
Yes, I am currently pregnant		1	3.8%
No, I am not currently pregnant, but have been pregnant in the past 12 months	Go to Question 65	2	7.6%
No, I am not currently pregnant, and have not been pregnant in the past 12 months	Go to Question 66	3	88.6%

### Question 64: In what trimester is your pregnancy?

**Variable name:** H18063

**Editing notes:** See Notes 19A, 19B, and 21

Response	Directions	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	Go to Question 66	1	31.5%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)		2	35.6%
Third trimester (28 <sup>th</sup> week until delivery)		3	32.9%

### Question 65: In which trimester did you first receive prenatal care?

**Variable name:** H18064

**Editing notes:** See Notes 19A, 19B, and 21

Response	Value	Percent
First trimester (up to 12 weeks after 1 <sup>st</sup> day of last period)	4	84.5%
Second trimester (13 <sup>th</sup> through 27 <sup>th</sup> week)	3	6.7%
Third trimester (28 <sup>th</sup> week until delivery)	2	0.1%
Did not receive prenatal care	1	8.6%

<b>ABOUT YOU</b>
------------------

**Question 66: Would you say that in general your health is excellent, very good, good, fair, or poor?**

**Variable name:** H18065

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Excellent	5	17.8%
Very good	4	37.0%
Good	3	34.6%
Fair	2	9.2%
Poor	1	1.4%

**Question 67: What is the highest grade or level of school that you have completed?**

**Variable name:** SREDA

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
8 <sup>th</sup> grade or less	1	0.2%
Some high school, but did not graduate	2	0.4%
High school graduate or GED	3	17.4%
Some college or 2-year degree	4	39.6%
4-year college graduate	5	20.6%
More than 4-year college degree	6	21.7%

**Question 68: Are you of Hispanic or Latino origin or descent? (Mark "NO" if not Spanish/Hispanic/Latino.)**

**MARK ALL THAT APPLY**

**Variable names:** H18073A-H18073E, H18073

**Editing notes:** See Note 24

<b>Response</b>	<b>Variable Name</b>	<b>H18073 Value</b>	<b>Percent Marked</b>
No, not Spanish, Hispanic, or Latino	H18073A	1	82.6%
Yes, Mexican, Mexican American, Chicano	H18073B	2	6.8%
Yes, Puerto Rican	H18073C	3	3.2%
Yes, Cuban	H18073D	4	0.7%
Yes, other Spanish, Hispanic, or Latino	H18073E	5	5.5%



## Annotated Questionnaire HEDIS

**Question 69: What is your race?**

**MARK ALL THAT APPLY**

**Variable names:** SRRACEA-SRRACEE

**Editing notes:** None

Response	Variable Name	Percent Marked
White	SRRACEA	72.2%
Black or African American	SRRACEB	17.2%
American Indian or Alaska Native	SRRACEC	3.6%
Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)	SRRACED	8.5%
Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)	SRRACEE	1.9%

**Question 70: What is your age now?**

**Variable name:** SRAGE

**Editing notes:** None

Response	Value	Percent
18 to 24	1	24.1%
25 to 34	2	27.7%
35 to 44	3	18.6%
45 to 54	4	12.6%
55 to 64	5	16.2%
65 to 74	6	0.8%
75 or older	7	0.1%

**Question 71: 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:** S18011

**Editing notes:** None

Response	Value	Percent
Strongly disagree	1	6.0%
Disagree	2	10.3%
Neither agree nor disagree	3	15.4%
Agree	4	44.7%
Strongly agree	5	23.6%

Annotated Questionnaire HEDIS

**Question 72: 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:** S18014

**Editing notes:** None

<b>Response</b>	<b>Value</b>	<b>Percent</b>
Completely dissatisfied	1	3.7%
Somewhat dissatisfied	2	6.7%
Neither satisfied nor dissatisfied	3	12.4%
Somewhat satisfied	4	31.7%
Completely satisfied	5	45.5%

**Question 73: How tall are you without your shoes on? Please give your answer in feet and inches.**

**Variable name:** H18071F, H18071I

**Editing notes:** See Note 23\_HT

<b>Response</b>	<b>Example feet</b>	<b>Example inches</b>	<b>Percent of responses</b>
Please give your answer in feet and inches. Please write one number in each box.	5	06	95.5%

**Question 74: How much do you weigh without your shoes on? Please give your answer in pounds.**

**Variable name:** H18072

**Editing notes:** See Note 23\_WT

<b>Response</b>	<b>Example pounds</b>	<b>Percent of responses</b>
Please give your answer in pounds. Please write one number in each box.	152	96.0%

**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.**

## **APPENDIX B**

### **CODING SCHEME AND CODING TABLES – QUARTERS I-III AND HEDIS**

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## QUARTER I

### 2018 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:  
H18003, H18004**

N1	H18003 is:	H18004 is:	H18003 is coded as:	H18004 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 1\_AC1:  
H18005, S18AC01, S18AC02A-S18AC02G, S18AC03, S18AC04, S18AC05A-S18AC05G**

N1_ AC1	H18005 is:	S18AC01, S18AC02A- S18AC02G,S18AC03, S18AC04, S18AC05A- S18AC05G are:	H18005 is coded as:	S18AC01, S18AC02A- S18AC02G,S18AC03, S18AC04, S18AC05A- S18AC05G are coded as:	*
1	1-4: Facility type or .: missing	Any value	Stands as original value	Stand as original value	
2	5: None of the facility types	Any value	Stands as original value	.N: Valid skip if missing; .C: question should be skipped if marked	F

\* Indication of backward coding (B) or forward coding (F).

**Coding Table for Note 1\_AC2:  
S18AC01, S18AC02A- S18AC02G**

N1_ AC2	S18AC01 is:	S18AC02A- S18AC02G are:	S18AC01 is coded as:	S18AC02A- S18AC02G 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	1: Yes	Any value	Stands as original value	Stand as original value	
3	2: No or .: missing	At least one is "marked"	1: Yes	Stand as original value	B
4	2: No	"All are blank"	Stands as original value	.N: Valid skip	F
5	.: Missing	"All are blank"	Stands as original value	.: Missing	F

\* Indication of backward coding (B) or forward coding (F).

Definition of "all are blank" in Coding Table for Note 1\_AC2:  
Responses to S18AC02A-S18AC02G are all missing or unmarked.

Definition of "marked" in Coding Table for Note 1\_AC2:  
Any pattern of marks outside the definitions "all are blank".

**Coding Table for Note 1\_AC3:  
S18AC03, S18AC04, S18AC05A- S18AC05G**

N1_ AC3	S18AC03 is:	S18AC04, S18AC05A-S18AC05G are:	S18AC03 is coded as:	S18AC04, S18AC05A-S18AC05G 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	1: Yes	Any value	Stands as original value	Stand as original value	
3	2: No or .: missing	At least one is “marked”	1: Yes	Stand as original value	B
4	2: No	“All are blank”	Stands as original value	.N: Valid skip	F
5	.: Missing	“All are blank”	Stands as original value	.: Missing	F

\* Indication of backward coding (B) or forward coding (F).

Definition of “all are blank” in Coding Table for Note 1\_AC3:  
Responses to S18AC04 and S18AC05A-S18AC05G are all missing or unmarked.

Definition of “marked” in Coding Table for Note 1\_AC3:  
Any pattern of marks outside the definitions “all are blank”.

**Coding Table for Note 2:  
H18006, H18007, H18008**

N2	H18006 is:	H18007-H18008 are:	H18006 is coded as:	H18007-H18008 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 H18007-H18008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:  
All of the following are true: H18007-H18008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:  
H18007-H18008 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:  
H18009, H18010, H18011**

N3	H18009 is:	H18010-H18011 are:	H18009 is coded as:	H18010-H18011 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 H18010-H18011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:  
All of the following are true: H18010-H18011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:  
H18010-H18011 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:  
H18013, H18014-H18018, H18033**

N4	H18013 is:	H18014-H18018, H18033 are:	H18013 is coded as:	H18014-H18018, H18033 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 H18014-H18018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:  
All of the following are true: H18014-H18018 and H18033 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:  
H18015, H18016-H18017**

N5	H18015 is:	H18016 is:	H18017 is:	H18015 is coded as:	H18016 is coded as:	H18017 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:  
S18BI01-S18BI20**

N5_B I1	S18BI01 is:	S18BI02-S18BI20 are:	S18BI01 is coded as:	S18BI02-S18BI20 are coded as:	*
1	1: Yes	S18BI02E is not marked, the rest are any value	Stands as original value	Stands as original value	F
2	1: Yes or .: missing	S18BI02E 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 S18BI02-S18BI20 are all missing.

Definition of “blank or NA” in Coding Table for Note 5\_BI1:  
All of the following are true: S18BI02-S18BI20 are a combination of not applicable (-6), missing, or S18BI02E=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:  
S18BI02-S18BI20**

N5_BI2	S18BI02A is:	S18BI02B- S18BI02D is:	S18BI02E is:	S18BI03- S18BI20 are:	S18BI02A is coded as:	S18BI02E is coded as:	S18BI03- S18BI20 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 S18BI02B-S18BI02E or S18BI03-S18BI20 are all missing.

Definition of "blank or don't know" in Coding Table for Note 5\_BI2:

All of the following are true: S18014-S18018 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:  
S18BI15-S18BI16**

N5_BI3	S18BI15 is:	S18BI16 are:	S18BI15 is coded as:	S18BI16 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	
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	
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:  
S18BI17-S18BI18**

N5_BI4	S18BI17 is:	S18BI18 are:	S18BI17 is coded as:	S18BI18 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	
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	
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:  
H18019, H18020-H18027, S18009**

N6	H18019 is:	H18020- H18024 are:	H18025- H18026, S18009 are:	H18027 is:	H18019 is coded as:	H18020- H18026, S18009 are coded as:	H18027 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: H18020 is either 0: None or missing and H18021-H18024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H18020-H18024 outside the definition "blank or NA".

**Coding Table for Note 7:  
H18020, H18021-H18026**

N7	H18020 is:	H18021-H18026 are:	H18020 is coded as:	H18021-H18026 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 H18021-H18026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:  
Responses to H18021-H18026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:  
Any pattern of marks for H18021-H18024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:  
H18025, H18026**

N8	H18025 is:	H18026 is:	H18025 is coded as:	H18026 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:  
S18009, S18010**

N8_01	S18009 is:	S18010 is:	S18009 is coded as:	S18010 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:  
H18028, H18029-H18031**

N9	H18028 is:	H18029-H18031 are:	H18028 is coded as:	H18029 is coded as:	H18030-H18031 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 H18029-H18031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H18029 and H18031 are a combination of not applicable (-6) or missing. H18030 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:  
H18030, H18031**

N10	H18030 is:	H18031 is:	H18030 is coded as:	H18031 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:  
S18B02, S18B03-S18B04**

N10_B1	S18B02 is:	S18B03-S18B04 are:	S18B02 is coded as:	S18B03-S18B04 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 S18B03-S18B04 are all missing.

Definition of "blank or NA" in Coding Table for Note 10\_B1:

All of the following are true: S18B03-S18B04 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:  
H18034, H18035**

N12	H18034 is:	H18035 is:	H18034 is coded as:	H18035 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:  
H18036, H18037**

N13	H18036 is:	H18037 is:	H18036 is coded as:	H18037 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:  
H18038, H18039**

N14	H18038 is:	H18039 is:	H18038 is coded as:	H18039 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:  
H18040, H18041-H18042**

N15	H18040 is:	H18041-H18042 are:	H18040 is coded as:	H18041-H18042 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 H18041-H18042 are all missing.

Definition of "blank or NA" in Coding Table for Note 15:  
All of the following are true: H18041-H18042 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:  
H18043, H18044**

N16	H18043 is:	H18044 is:	H18043 is coded as:	H18044 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:  
H18045, H18046-H18047**

N17	H18045 is:	H18046-H18047 are:	H18045 is coded as:	H18046-H18047 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 H18046-H18047 are all missing.

Definition of "blank or NA" in Coding Table for Note 17:  
Responses to H18046-H18047 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 H18046-H18047 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 H18046-H18047 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:**

**H18053, H18054-H18056, H18057A-H18057D**

N18	H18053 is:	H18054- H18056 are:	H18057A- H18057D are:	H18053 is coded as:	H18054- H18056, H18057A- H18057D 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 H18057A-H18057D 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)**

**H18058, H18059B, H18060-H18064, SEX, XSEXA**

N19A	H16058 is:	SEX is:	H18059B--H18064 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 (H18058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

**Note 19 (Part B):**

**XSEXA, H18059B, H18060-H18064**

N19B	XSEXA	H18059B--H18064	H18059B--H18064	*
	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, H18060, H18061**

N20	XSEXA	AGE	H18060	H18061	H18060	H18061	*
	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, H18062-H18064**

N21	XSEXA is:	H18062 is:	H18063 is:	H18064 is:	H18062 is coded as:	H18063 is coded as:	H18064 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:  
H18067, H18068**

N22	H18067 is:	H18068 is:	H18067 is coded as:	H18068 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:  
H18069, H18070**

N23	H18069 is:	H18070 is:	H18069 is coded as:	H18070 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, H18071F, H18071I**

N23_HT	XSEXA is:	H18071F and H18071I is:	H18071F and H18071I 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, H18072**

N23_WT	XSEXA is:	H18072 is:	H18072 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:  
H18073, H18073A-H18073E**

N24	H18073A is:	H18073B is:	H18073C is:	H18073D is:	H18073E is:	H18073 is coded as:	H18073A-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:  
H18074, H18075-H18079**

N25	H18074 is:	H18075-H18079 are:	H18074 is coded as:	H18075-H18079 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 H18075-H18079 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".



## QUARTER II AND HEDIS

### 2018 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:  
H18003, H18004**

N1	H18003 is:	H18004 is:	H18003 is coded as:	H18004 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:  
H18006, H18007, H18008**

N2	H18006 is:	H18007-H18008 are:	H18006 is coded as:	H18007-H18008 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 H18007-H18008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:  
All of the following are true: H18007-H18008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:  
H18007-H18008 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:  
H18009, H18010, H18011**

N3	H18009 is:	H18010-H18011 are:	H18009 is coded as:	H18010-H18011 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 H18010-H18011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:  
All of the following are true: H18010-H18011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:  
H18010-H18011 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:  
H18013, H18014-H18018, H18033**

N4	H18013 is:	H18014-H18018, H18033 are:	H18013 is coded as:	H18014-H18018, H18033 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 H18014-H18018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:  
All of the following are true: H18014-H18018 and H18033 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:  
H18015, H18016-H18017**

N5	H18015 is:	H18016 is:	H18017 is:	H18015 is coded as:	H18016 is coded as:	H18017 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:  
H18019, H18020-H18027, S18009**

N6	H18019 is:	H18020- H18024 are:	H18025- H18026, S18009 are:	H18027 is:	H18019 is coded as:	H18020- H18026, S18009 are coded as:	H18027 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: H18020 is either 0: None or missing and H18021-H18024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H18020-H18024 outside the definition "blank or NA".

**Coding Table for Note 7:  
H18020, H18021-H18026**

N7	H18020 is:	H18021-H18026 are:	H18020 is coded as:	H18021-H18026 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 H18021-H18026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:  
Responses to H18021-H18026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:  
Any pattern of marks for H18021-H18024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:  
H18025, H18026**

N8	H18025 is:	H18026 is:	H18025 is coded as:	H18026 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:  
S18009, S18010**

N8_01	S18009 is:	S18010 is:	S18009 is coded as:	S18010 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:  
H18028, H18029-H18031**

N9	H18028 is:	H18029-H18031 are:	H18028 is coded as:	H18029 is coded as:	H18030-H18031 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 H18029-H18031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H18029 and H18031 are a combination of not applicable (-6) or missing. H18030 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:  
H18030, H18031**

N10	H18030 is:	H18031 is:	H18030 is coded as:	H18031 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 12:  
H18034, H18035**

N12	H18034 is:	H18035 is:	H18034 is coded as:	H18035 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:  
H18036, H18037**

N13	H18036 is:	H18037 is:	H18036 is coded as:	H18037 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:  
H18038, H18039**

N14	H18038 is:	H18039 is:	H18038 is coded as:	H18039 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:  
H18040, H18041-H18042**

N15	H18040 is:	H18041-H18042 are:	H18040 is coded as:	H18041-H18042 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 H18041-H18042 are all missing.

Definition of “blank or NA” in Coding Table for Note 15:

All of the following are true: H18041-H18042 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:  
H18043, H18044**

N16	H18043 is:	H18044 is:	H18043 is coded as:	H18044 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:  
H18045, H18046-H18047**

N17	H18045 is:	H18046-H18047 are:	H18045 is coded as:	H18046-H18047 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 H18046-H18047 are all missing.

Definition of “blank or NA” in Coding Table for Note 17:  
Responses to H18046-H18047 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 H18046-H18047 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 H18046-H18047 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:**

**H18053, H18054-H18056, H18057A-H18057D**

N18	H18053 is:	H18054- H18056 are:	H18057A- H18057D are:	H18053 is coded as:	H18054- H18056, H18057A- H18057D 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 H18057A-H18057D 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)**

**H18058, H18059B, H18060-H18064, SEX, XSEXA**

N19A	H16058 is:	SEX is:	H18059B--H18064 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 (H18058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

**Note 19 (Part B):**

**XSEXA, H18059B, H18060-H18064**

N19B	XSEXA is:	H18059B--H18064 are:	H18059B--H18064 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, H18060, H18061**

N20	XSEXA is:	AGE is:	H18060 is:	H18061 is:	H18060 is coded as:	H18061 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, H18062-H18064**

N21	XSEXA is:	H18062 is:	H18063 is:	H18064 is:	H18062 is coded as:	H18063 is coded as:	H18064 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 23\_HT:  
XSEXA, H18071F, H18071I**

N23_HT	XSEXA is:	H18071F and H18071I is:	H18071F and H18071I 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, H18072**

N23_WT	XSEXA is:	H18072 is:	H18072 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:  
H18073, H18073A-H18073E**

N24	H18073A is:	H18073B is:	H18073C is:	H18073D is:	H18073E is:	H18073 is coded as:	H18073A-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).

### QUARTER III

#### 2018 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:  
H18003, H18004**

N1	H18003 is:	H18004 is:	H18003 is coded as:	H18004 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:  
H18006, H18007, H18008**

N2	H18006 is:	H18007-H18008 are:	H18006 is coded as:	H18007-H18008 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 H18007-H18008 are all missing.

Definition of “blank or NA” in Coding Table for Note 2:  
All of the following are true: H18007-H18008 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 2:  
H18007-H18008 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:  
H18009, H18010, H18011**

N3	H18009 is:	H18010-H18011 are:	H18009 is coded as:	H18010-H18011 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 H18010-H18011 are all missing.

Definition of “blank or NA” in Coding Table for Note 3:  
All of the following are true: H18010-H18011 are a combination of not applicable (-6) or missing.

Definition of “one marked and one NA” in Coding Table for Note 3:  
H18010-H18011 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:  
H18013, H18014-H18018, H18033**

N4	H18013 is:	H18014-H18018, H18033 are:	H18013 is coded as:	H18014-H18018, H18033 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 H18014-H18018 are all missing.

Definition of “blank or NA” in Coding Table for Note 4:  
All of the following are true: H18014-H18018 and H18033 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:  
H18015, H18016-H18017**

N5	H18015 is:	H18016 is:	H18017 is:	H18015 is coded as:	H18016 is coded as:	H18017 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:  
H18019, H18020-H18027, S18009**

N6	H18019 is:	H18020- H18024 are:	H18025- H18026, S18009 are:	H18027 is:	H18019 is coded as:	H18020- H18026, S18009 are coded as:	H18027 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: H18020 is either 0: None or missing and H18021-H18024 are either not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 6:

Any pattern of marks for H18020-H18024 outside the definition "blank or NA".

**Coding Table for Note 7:  
H18020, H18021-H18026**

N7	H18020 is:	H18021-H18026 are:	H18020 is coded as:	H18021-H18026 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 H18021-H18026 are all missing.

Definition of “blank or NA” in Coding Table for Note 7:  
Responses to H18021-H18026 are a combination of not applicable (-6) or missing.

Definition of “marked” in Coding Table for Note 7:  
Any pattern of marks for H18021-H18024 outside the definitions “all are blank” and “blank or NA”.

**Coding Table for Note 8:  
H18025, H18026**

N8	H18025 is:	H18026 is:	H18025 is coded as:	H18026 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:  
S18009, S18010**

N8_01	S18009 is:	S18010 is:	S18009 is coded as:	S18010 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:  
H18028, H18029-H18031**

N9	H18028 is:	H18029-H18031 are:	H18028 is coded as:	H18029 is coded as:	H18030-H18031 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 H18029-H18031 are all missing.

Definition of "blank or NA" in Coding Table for Note 9:

All of the following are true: H18029 and H18031 are a combination of not applicable (-6) or missing. H18030 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:  
H18030, H18031**

N10	H18030 is:	H18031 is:	H18030 is coded as:	H18031 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 12:  
H18034, H18035**

N12	H18034 is:	H18035 is:	H18034 is coded as:	H18035 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:  
H18036, H18037**

N13	H18036 is:	H18037 is:	H18036 is coded as:	H18037 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:  
H18038, H18039**

N14	H18038 is:	H18039 is:	H18038 is coded as:	H18039 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:  
H18040, H18041-H18042**

N15	H18040 is:	H18041-H18042 are:	H18040 is coded as:	H18041-H18042 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 H18041-H18042 are all missing.

Definition of “blank or NA” in Coding Table for Note 15:

All of the following are true: H18041-H18042 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:  
H18043, H18044**

N16	H18043 is:	H18044 is:	H18043 is coded as:	H18044 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:  
H18045, H18046-H18047**

N17	H18045 is:	H18046-H18047 are:	H18045 is coded as:	H18046-H18047 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 H18046-H18047 are all missing.

Definition of “blank or NA” in Coding Table for Note 17:  
Responses to H18046-H18047 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 H18046-H18047 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 H18046-H18047 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:**

**H18053, H18054-H18056, H18057A-H18057D**

N18	H18053 is:	H18054- H18056 are:	H18057A- H18057D are:	H18053 is coded as:	H18054- H18056, H18057A- H18057D 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 H18057A-H18057D 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)**

**H18058, H18059B, H18060-H18064, SEX, XSEXA**

N19A	H18058 is:	SEX is:	H18059B--H18064 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 (H18058), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

**Note 19 (Part B):**

**XSEXA, H18059B, H18060-H18064**

N19B	XSEXA is:	H18059B--H18064 are:	H18059B--H18064 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, H18060, H18061**

N20	XSEXA is:	AGE is:	H18060 is:	H18061 is:	H18060 is coded as:	H18061 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, H18062-H18064**

N21	XSEXA is:	H18062 is:	H18063 is:	H18064 is:	H18062 is coded as:	H18063 is coded as:	H18064 is coded as:	*
1	1: Male	.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	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

N21	XSEXA	H18062	H18063	H18064	H18062	H18063	H18064	*
	is:	is:	is:	is:	is coded as:	is coded as:	is coded as:	
13	.: Missing	.: Missing	.: Missing	.: 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 21\_BG1:  
S18BG01**

N21_	S18BG01 is:	S18BG01 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:  
S18BG02**

N21_	S18BG02 is:	S18BG02 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\_BG2:  
Any value not greater than 30.

Definition of “Number out of range” in Coding Table for Note 21\_BG2:  
Any value greater than 30 except 88.

**Coding Table for Note 21\_BG3:  
S18BG01, S18BG02, S18BG03**

N21_	S18BG01 is:	S18BG02 is:	S18BG03 is:	S18BG03 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 21\_BG3:  
Any value not greater than 30.

Definition of “Number out of range” in Coding Table for Note 21\_BG3:  
Any value greater than 30 except 88.

**Coding Table for Note 23\_BE:  
S17BE01A-S17BE01K**

N23_BE	S17BE02A-J are:	S17BE02K is:	S17BE02A-J are coded as:	S17BE02K is coded as:	*
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, H18071F, H18071I**

N23_HT	XSEXA is:	H18071F and H18071I is:	H18071F and H18071I 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:  
XSEX, H18072**

N23_WT	XSEX is:	H18072 is:	H18072 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:  
H18073, H18073A-H18073E**

N24	H18073A is:	H18073B is:	H18073C is:	H18073D is:	H18073E is:	H18073 is coded as:	H18073A-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).

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**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 2018
0001	0001	AHC FOX-REDSTONE ARSENAL	1449
0003	0003	AHC LYSTER-RUCKER	1538
0004	0004	AF-C-42nd MEDGRP-MAXWELL	2581
0005	0005	ACH BASSETT-WAINWRIGHT	764
0005	0202	AHC-GREELY	39
0005	0204	THC RICHARDSON	346
0005	6033	KAMISH CLINIC-WAINWRIGHT	466
0006	0006	AF-H-673rd MEDGRP JBER-ELMNDRF	2887
0008	0008	AHC R W BLISS-HUACHUCA	2517
0009	0009	AF-C-56th MEDGRP-LUKE	2677
0010	0010	AF-C-355th MEDGRP-DM	2846
0013	0013	AF-C-19th MEDGRP-LITTLE ROCK	2022
0014	0014	AF-MC-60th MEDGRP-TRAVIS	2731
0018	0018	AF-C-30th MEDGRP-VANDENBERG	2197
0019	0019	AF-C-412th MEDGRP-EDWARDS	2290
0024	0024	NH CAMP PENDLETON	1757
0024	0208	BMC MCB CAMP PENDLETON	220
0024	0210	BMC EDSON RANGE ANNEX	106
0024	0217	NBHC NAS POINT MUGU	28
0024	0269	BMC YUMA	276
0024	1406	BMC MCMH HORNO 53-PENDLTN	49
0024	1407	BMC MCMH MARGARITA 33-PENDLTN	16
0024	1408	BMC MCMH LAS PULGAS 43-PENDLTN	36
0024	1409	BMC MCMH LAS FLORES 41-PENDLTN	14
0024	1657	BMC CAMP DELMAR MCB	21
0024	1659	BMC SAN ONOFRE MCB	137
0024	1974	BMC MCMH CHAPPO 22-PENDLTN	90
0024	6225	BMC MCMH SAN MATEO 62-PENDLTN	49
0026	0026	NBHC PORT HUENEME	2928
0028	0028	NHC LEMOORE	1396
0028	0319	NBHC FALLON	237
0029	0029	NMC SAN DIEGO	1415
0029	0230	NBHC MCRD SAN DIEGO	58
0029	0232	BMC MCAS MIRAMAR	539
0029	0239	NBHC EL CENTRO	28
0029	0406	NBHC RANCHO BERNARDO	74
0029	0410	NBHC EASTLAKE	168
0029	0701	NBHC NAVSTA SAN DIEGO	123
0029	6207	TRICARE OUTPATIENT-CLAIREMONT	432
0030	0030	NH TWENTYNINE PALMS	1466
0030	0212	NBHC NAVWPNCEN CHINA LAKE	174
0032	0032	ACH EVANS-CARSON	1548
0032	6102	CBMH PREMIER-CARSON	222
0032	6123	CBMH MTN POST-CARSON	233
0032	7293	TMC ROBINSON-CARSON	347
0032	7300	TMC DIRAIMONDO-CARSON	485
0033	0033	AF-ASU-10th MEDGRP-ACADEMY	3036
0038	0038	NH PENSACOLA	921
0038	0107	NBHC NSA MID-SOUTH	237
0038	0260	NBHC NAS PENSACOLA	198

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0038	0261	NBHC MILTON WHITING FIELD	280
0038	0262	NBHC NATTC PENSACOLA	199
0038	0265	NBHC NAVCOASTSYSC PANAMA CITY	81
0038	0316	NBHC GULFPORT	301
0038	0317	NBHC MERIDIAN	110
0038	0436	NBHC NAS BELLE CHASE	296
0038	0513	NBHC NTTC PENSACOLA	139
0039	0039	NH JACKSONVILLE	1813
0039	0266	NBHC NAS JACKSONVILLE	251
0039	0275	NBHC ALBANY	45
0039	0337	NBHC KINGS BAY	513
0039	0517	NBHC KEY WEST	91
0042	0042	AF-H-96th MEDGRP-EGLIN	2706
0043	0043	AF-C-325th MEDGRP-TYNDALL	2452
0045	0045	AF-C-6th MEDGRP-MACDILL	1618
0045	1946	AF-CB-BRANDON COMM CLINIC-MIL	1057
0046	0046	AF-C-45th MEDGRP-PATRICK	2580
0047	0047	AMC EISENHOWER-GORDON	1811
0047	1550	TMC-4-GORDON	344
0047	7197	CONNELLY HLTH CLIN-GORDON	208
0047	7239	SOUTHCOM CLINIC-GORDON	258
0047	8924	AHC RODRIGUEZ-BUCHANAN	101
0048	0048	ACH MARTIN-BENNING	1651
0048	1315	CTMC-BENNING	386
0048	1316	FPC WINDER-BENNING	1
0048	1330	CTMC 2-HARMONY CHURCH-BENNING	156
0048	1332	TMC 9-7TH SPECIAL FORCES-EGLIN	172
0048	1555	TMC-5-BENNING	69
0048	6124	CBMH NORTH COLUMBUS-BENNING	324
0049	0049	ACH WINN-STEWART	955
0049	0272	AHC TUTTLE-HUNTER ARMY AIRFLD	640
0049	6122	CBMH RICHMOND HILL-STEWART	332
0049	7344	TMC-STEWART	273
0049	7443	TMC LLOYD C HAWKS-STEWART	653
0051	0051	AF-C-78th MEDGRP-ROBINS	2730
0052	0052	AMC TRIPLER-SHAFTER	1359
0052	0437	AHC SCHOFIELD BARRACKS	559
0052	0534	SCMH SCHOFIELD BARRACKS	752
0052	6120	CBMH WARRIOR OHANA-SHAFTER	182
0053	0053	AF-C-366th MEDGRP-MT HOME	2182
0055	0055	AF-C-375th MEDGRP-SCOTT	2746
0056	0056	JAMES A LOVELL FHCC	1562
0056	1660	NBHC NCTC INPR GREAT LAKES	53
0056	1959	NBHC NTC GREAT LAKES	144
0057	0057	ACH IRWIN-RILEY	1354
0057	1539	AVIATION CLINIC-RILEY	251
0057	6104	CBMH FLINT HILLS-RILEY	371
0057	7289	CUSTER HILL HC-RILEY	167
0057	7337	AMH FARRELLY AHC-RILEY	750
0058	0058	AHC MUNSON-LEAVENWORTH	2715

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0058	1488	TMC #2-USDB 2-LEAVENWORTH	36
0058	1530	TMC #1-USDB-LEAVENWORTH	39
0060	0060	ACH BLANCHFIELD-CAMPBELL	912
0060	1506	AVIATION MEDICINE C-CAMPBELL	399
0060	6108	CBMH SCREAMING EAGLE-CAMPBELL	434
0060	7307	LA POINTE HLTH CLINIC-CAMPBELL	614
0060	7341	BYRD HEALTH CLINIC-CAMPBELL	538
0061	0061	AHC IRELAND-KNOX	2421
0061	0290	AHC ROCK ISLAND ARSENAL	259
0062	0062	AF-C-2nd MEDGRP-BARKSDALE	1609
0064	0064	ACH BAYNE-JONES-POLK	961
0064	6081	SCMH PATRIOT BRIGADE-POLK	441
0064	7199	SCMH-POLK	261
0066	0066	AF-ASU-11th MEDGRP-ANDREWS	2128
0066	0413	AF-C-11th MED SQ JBAB-BOLLING	588
0067	0067	WALTER REED NATL MIL MED CNTR	2665
0067	0256	DILorenzo HEALTH CLINIC	75
0068	0068	NHC PATUXENT RIVER	952
0068	0301	NBHC INDIAN HEAD	138
0068	0386	NBHC DAHLGREN	268
0068	0522	NBHC ANDREWS AFB	183
0069	0069	KIMBROUGH AMB CAR CEN-MEADE	1129
0069	0255	AHC MCNAIR-MYER-HENDERSON HALL	56
0069	0308	AHC KIRK-ABERDEEN PRVNG GD	299
0069	0309	AHC BARQUIST-DETRICK	253
0069	0352	AHC DUNHAM-CARLISLE BARRACKS	316
0069	0390	AHC ANDREW RADER-MYER-HENDERSN	543
0069	0441	AHC FILLMORE-NEW CUMBERLAND	126
0069	0545	OHC EDGEWOOD ARS	1
0073	0073	AF-MC-81st MEDGRP-KEESLER	1540
0074	0074	AF-C-14th MEDGRP-COLUMBUS	2342
0075	0075	ACH LEONARD WOOD	1219
0075	6115	CBMH OZARK-LEONARD WOOD	367
0076	0076	AF-C-509th MEDGRP-WHITEMAN	2249
0077	0077	AF-C-341st MEDGRP-MALMSTROM	2235
0078	0078	AF-C-55th MEDGRP-OFFUTT	2702
0079	0079	AF-MC-99th MEDGRP-NELLIS	2606
0079	1271	AF-EC-CREECH AID STATN-NELLIS	99
0083	0083	AF-C-377th MEDGRP-KIRTLAND	2381
0086	0086	ACH KELLER-WEST POINT	1162
0086	1815	TMC MOLOGNE-WEST POINT	578
0086	7154	MILLS TROOP CLINIC-DIX	4
0089	0089	AMC WOMACK-BRAGG	453
0089	6034	TROOP & FAMILY MED CL-BRAGG	379
0089	6105	CBMH FAYETTEVILLE-BRAGG	143
0089	6106	CBMH HOPE MILLS-BRAGG	173
0089	6107	CBMH LINDEN OAKS-BRAGG	142
0089	7143	ROBINSON CLINIC-BRAGG	746
0089	7286	JOEL CLINIC-BRAGG	302
0089	7294	CLARK CLINIC-BRAGG	529

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0091	0091	NMC CAMP LEJEUNE	1944
0091	0333	BMC MCMH NEW RIVER-LEJEUNE	204
0091	1410	BMC MCMH MAIN SIDE-LEJEUNE	313
0091	1662	BMC CAMP GEIGER MCB	35
0091	1663	BMC CAMP JOHNSON MCB	20
0091	1664	BMC MCMH COURTHOUSE BAY-LEJEUN	22
0091	1992	BMC BLDG 15 MCB CAMP LEJEUNE	115
0091	1995	BMC MCMH FRENCH CREEK-LEJEUNE	169
0092	0092	NHC CHERRY POINT	1587
0094	0094	AF-C-5th MEDGRP-MINOT	2018
0095	0095	AF-MC-88th MEDGRP-WRIGHT-PAT	2687
0096	0096	AF-C-72nd MEDGRP-TINKER	2800
0098	0098	AHC REYNOLDS-SILL	2771
0100	0035	NBHC GROTON	1312
0100	0100	NHC NEW ENGLAND	745
0100	0321	NBHC PORTSMOUTH	324
0100	0328	NBHC SARATOGA SPRINGS	443
0101	0101	AF-C-20th MEDGRP-SHAW	2068
0103	0103	NHC CHARLESTON	3239
0104	0104	NH BEAUFORT	1228
0104	0358	NBHC MCRD PARRIS ISLAND	158
0104	0360	NBHC MCAS BEAUFORT	245
0105	0105	AHC MONCRIEF-JACKSON	1940
0105	6114	CBMH MONCRIEF-JACKSON	775
0108	0108	AMC WILLIAM BEAUMONT-BLISS	236
0108	0327	AHC MCAFEE-WHITE SANDS MSL RAN	65
0108	1259	EAST BLISS CLINIC-BLISS	301
0108	1481	MENDOZA SOLDIER FAM CC-BLISS	1310
0108	1617	TMC MEDICAL EXAM STATION-BLISS	712
0108	6103	CBMH-RIO BRAVO-BLISS	268
0109	0109	AMC BAMC-FSH	821
0109	1585	TAYLOR BURK H C-BAMC-BULLIS	213
0109	1587	TMC-MCWETHY-BAMC-FSH	24
0109	6095	CPT JENNFR MORENO PCC-BAMC-FSH	1040
0109	6118	CBMH BAMC-WESTOVER	313
0109	6119	CBMH BAMC-SCHERTZ	323
0110	0110	AMC DARNALL-HOOD	448
0110	1592	MONROE CONSOLIDATED-HOOD	220
0110	1599	TMC-12-HOOD	103
0110	1601	TMC-14-HOOD	2
0110	6014	CHARLES MOORE HLTH CLN-HOOD	414
0110	6076	RUSSELL COLLIER HLTH CLIN-HOOD	355
0110	6111	CBMH HARKER HEIGHTS-HOOD	231
0110	6112	CBMH KILLEEN-HOOD	214
0110	6113	CBMH COPPERAS COVE-HOOD	175
0110	7236	BENNETT FAM CARE CLINIC-HOOD	346
0110	7347	BLDG 36000-HOOD	293
0112	0112	AF-C-7th MEDGRP-DYESS	2084
0113	0113	AF-C-82nd MEDGRP-SHEPPARD	1940
0117	0117	AF-ASU-59th MDW-WHASC-LACKLAND	2171



GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0117	1350	AF-C-559th MDG-REID-JBSA-LACK	31
0117	2170	AF-CB-59th MDW-NRTH CNTRL CLN	480
0118	0118	NHC CORPUS CHRISTI	1697
0118	0369	NBHC KINGSVILLE	240
0118	0370	NBHC FORT WORTH	346
0119	0119	AF-C-75th MEDGRP-HILL	2774
0120	0120	AF-H-633rd MEDGRP JBLE-LANGLEY	2781
0121	0121	AHC MCDONALD-EUSTIS	2097
0121	0464	AHC-STORY	155
0121	0553	TMC-1-EUSTIS	23
0121	0554	TMC-2-EUSTIS	491
0122	0122	AHC KENNER-LEE	2696
0123	0123	FT BELVOIR COMMUNITY HOSP-FBCH	1257
0123	0256	DILORENZO HEALTH CLINIC	247
0123	6200	FAIRFAX HEALTH CENTER	553
0123	6201	DUMFRIES HEALTH CENTER	669
0124	0124	NMC PORTSMOUTH	1785
0124	0380	NBHC NSY NORFOLK	8
0124	0381	NBHC YORKTOWN	95
0124	0382	NBHC DAM NECK	175
0124	0519	NBHC CHESAPEAKE	92
0124	6214	TRICARE OUTPATIENT CL VA BEACH	366
0124	6221	TRICARE OUTPATIENT CHESAPEAKE	279
0125	0125	AMC MADIGAN-LEWIS	973
0125	0247	AHC MONTEREY	240
0125	1485	AHC-MCCHORD AFB	167
0125	1489	EBH 555 EN/17 FIB-MAMC-JBLM	1
0125	1646	WINDER FAMILY MEDICAL CL-JBLM	535
0125	1649	SCMH OKUBO-JBLM	341
0125	6071	AHC-VA MG GOURLEY CL-MONTEREY	14
0125	6094	SCMH 1-2 GHOST BDE CLINIC-JBLM	167
0125	6116	CBMH MADIGAN-PUYALLUP	203
0125	6117	CBMH SOUTH SOUND-MADIGAN	200
0126	0126	NH BREMERTON	1847
0126	0398	NBHC PUGET SOUND	5
0126	1656	NBHC BANGOR	590
0126	7138	NHCL EVERETT	318
0127	0127	NHC OAK HARBOR BIRTHING CTR	1597
0128	0128	AF-C-92nd MEDGRP-FAIRCHILD	2382
0129	0129	AF-C-90th MEDGRP-FE WARREN	2236
0131	0131	ACH WEED-IRWIN	1383
0131	0206	AHC YUMA PROVING GROUND	163
0131	1644	TMC-1-IRWIN	447
0231	0231	NBHC NAS NORTH ISLAND	1825
0248	0248	AF-C-61st MEDGRP-LOS ANGELES	2315
0252	0252	AF-C-21st MEDGRP-PETERSON	2425
0252	1497	AF-C-SCHRIEVER MED SQ-PETERSON	397
0280	0280	NHC HAWAII	2205
0280	0284	NBHC NAVCAMS EASTPAC	225
0280	0285	BMC MCAS KANEOHE BAY	796

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0280	1987	NBHC MCB CAMP H M SMITH	119
0306	0306	NHC ANNAPOLIS	1035
0306	0322	BMC COLTS NECK EARLE	200
0306	0401	BMC LAKEHURST	138
0306	0525	NBHC BANCROFT HALL	522
0310	0310	AF-C-66th MEDGRP-HANSCOM	2162
0326	0326	AF-C-87th MEDGRP JBMDL-MCGUIRE	1184
0330	0330	AHC GUTHRIE-DRUM	1330
0330	7113	CTMC CONNER-DRUM	1714
0364	0364	AF-C-17th MEDGRP-GOODFELLOW	1923
0366	0366	AF-C-359 MDG-JBSA-RANDOLPH	1481
0370	0370	NBHC FORT WORTH	653
0378	0378	NBHC LITTLE CREEK	1805
0385	0385	NHC QUANTICO	1920
0385	0703	NBHC WASHINGTON NAVY YARD	389
0385	1670	BMC OCS BROWN FIELD	66
0385	1671	NBHC THE BASIC SCHOOL	410
0387	0387	NBHC OCEANA	1673
0405	0405	NBHC MAYPORT	1558
0407	0407	NBHC NTC SAN DIEGO	1796
0508	0508	NBHC NAVSTA SEWELLS	1807
0607	0607	LANDSTUHL REGIONAL MEDCEN	424
0607	0611	AHC-VICENZA	402
0607	0614	AHC SHAPE	107
0607	1126	AHC BAUMHOLDER	261
0607	1128	AHC KAISERSLAUTERN	204
0607	1147	AHC WIESBADEN	304
0607	8977	AHC BRUSSELS	28
0609	1014	AHC ILLESHEIM	2
0609	1015	AHC ANSBACH	175
0609	1016	AHC GRAFENWOEHR	434
0609	1017	AHC VILSECK	432
0609	1019	AHC HOHENFELS	172
0609	8987	AHC PATCH BKS-STUTTGART	543
0612	0612	ACH BRIAN ALLGOOD-SEOUL	331
0612	1156	AHC CAMP STANLEY	3
0612	1157	AHC CAMP CASEY-TONGDUCHON	209
0612	8901	AHC-DC MIDTOWN-PYONGTAEK	180
0612	8903	AHC CAMP HUMPHREYS-PYONGTAEK	499
0612	8907	AHC-CAMP WALKER-TAEGU	161
0612	8912	AHC-CAMP RED CLOUD-UIJONGBU	48
0612	8913	AHC-CAMP CARROLL-KOREA	82
0612	8916	AHC-YONGSAN-SEOUL	167
0620	0620	NH GUAM-AGANA	1492
0620	0871	BMC NAVSTA GUAM	457
0620	6339	OP FORCES-NH GUAM-AGANA	331
0621	0621	NH OKINAWA	825
0621	0861	BMC MCAS FUTENMA	83
0621	0862	BMC EVANS-CAMP FOSTER	172
0621	1269	BMC CAMP KINSER	174

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
0621	6340	OP FORCES-OKINAWA	10
0621	7032	BMC CAMP BUSH/COURTNEY	245
0621	7033	BMC CAMP HANSEN	229
0621	7107	BMC CAMP SCHWAB-OKINAWA	69
0622	0622	NH YOKOSUKA	568
0622	0625	BMC IWAKUNI BIRTHING CTR	321
0622	0852	NBHC COMFLEACT SASEBO	142
0622	0853	NBHC NAF ATSUGI	265
0622	0873	BMA CAMP FUJI	8
0622	6341	OP FORCES-NH YOKOSUKA	425
0622	8934	NBHC NSF DIEGO GARCIA	5
0622	8939	BMC CHINHAE	18
0633	0633	AF-H-48th MEDGRP-LAKENHEATH	1954
0804	0804	AF-C-18th MEDGRP-KADENA	1889
0805	0805	AF-C-52nd MEDGRP-SPANGDAHLEM	3145
0806	0806	AF-C-86th MEDGRP-RAMSTEIN	1934
6215	6215	TRICARE OUTPATIENT-CHULA VISTA	3154
7139	7139	AF-C-1st SPCL OPS MED-HURLBURT	1598
9001	0015	AF-C-9th MEDGRP-BEALE	1
9001	0034	USCG CLINIC NEW LONDON	56
9001	0036	AF-C-436th MEDGRP-DOVER	403
9001	0050	AF-C-23rd MEDGRP-MOODY	1
9001	0055	AF-C-375th MEDGRP-SCOTT	3
9001	0056	JAMES A LOVELL FHCC	379
9001	0059	AF-C-22nd MEDGRP-MCCONNELL	1
9001	0060	ACH BLANCHFIELD-CAMPBELL	543
9001	0061	AHC IRELAND-KNOX	3
9001	0066	AF-ASU-11th MEDGRP-ANDREWS	8
9001	0067	WALTER REED NATL MIL MED CNTR	1513
9001	0069	KIMBROUGH AMB CAR CEN-MEADE	2
9001	0084	AF-C-49th MEDGRP-HOLLOMAN	1
9001	0086	ACH KELLER-WEST POINT	302
9001	0089	AMC WOMACK-BRAGG	1409
9001	0090	AF-C-4th MEDGRP-SJ	337
9001	0091	NMC CAMP LEJEUNE	890
9001	0092	NHC CHERRY POINT	2
9001	0093	AF-C-319th MEDGRP-GRAND FORKS	2
9001	0095	AF-MC-88th MEDGRP-WRIGHT-PAT	288
9001	0097	AF-C-97th MEDGRP-ALTUS	2
9001	0106	AF-C-28th MEDGRP-ELLSWORTH	2
9001	0114	AF-C-47th MEDGRP-LAUGHLIN	1
9001	0120	AF-H-633rd MEDGRP JBLE-LANGLEY	609
9001	0121	AHC MCDONALD-EUSTIS	3
9001	0122	AHC KENNER-LEE	2
9001	0123	FT BELVOIR COMMUNITY HOSP-FBCH	1497
9001	0124	NMC PORTSMOUTH	2423
9001	0126	NH BREMERTON	1
9001	0130	USCG CLINIC KODIAK	1
9001	0203	AF-C-354th MEDGRP-EIELSON	2
9001	0287	AF-C-15th MEDGRP JBHP-HICKAM	4

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9001	0308	AHC KIRK-ABERDEEN PRVNG GD	1
9001	0326	AF-C-87th MEDGRP JBMDL-MCGUIRE	508
9001	0335	AF-LS-43rd MED SQ-JBBP-POPE	2
9001	0338	AF-C-71st MEDGRP-VANCE	2
9001	0352	AHC DUNHAM-CARLISLE BARRACKS	1
9001	0356	AF-C-628th MEDGRP-CHARLESTON	4
9001	0390	AHC ANDREW RADER-MYER-HENDERSN	3
9001	0395	AF-LS-62nd MED FLT-JBLM-MCHORD	1
9001	0413	AF-C-11th MED SQ JBAB-BOLLING	93
9001	0419	USCG CLINIC PETALUMA	10
9001	0420	USCG CLINIC DISTRICT OF COLUMB	91
9001	0424	USCG CLINIC BALTIMORE	16
9001	0425	USCG CLINIC CAPE COD	23
9001	0426	USCG CLINIC BOSTON	26
9001	0427	USCG CLINIC TRAVERSE CITY	4
9001	0428	USCG CLINIC CAPE MAY	93
9001	0430	USCG CLINIC ELIZABETH CITY	30
9001	0432	USCG CLINIC PORTSMOUTH	68
9001	0433	USCG CLINIC YORKTOWN	24
9001	0434	USCG CLINIC PORT ANGELES	1
9001	0435	USCG CLINIC SEATTLE	2
9001	0441	AHC FILLMORE-NEW CUMBERLAND	1
9001	0615	NH GUANTANAMO BAY	19
9001	0617	NH NAPLES	3
9001	0618	NH ROTA	10
9001	0624	NH SIGONELLA	3
9001	0635	AF-ASU-39th MEDGRP-INCIRLIK	1
9001	0637	AF-C-8th MEDGRP-KUNSAN	1
9001	0638	AF-H-51st MEDGRP-OSAN	4
9001	0639	AF-H-35th MEDGRP-MISAWA	1
9001	0640	AF-H-374th MEDGRP-YOKOTA	2
9001	0779	KENTUCKY-FT CAMPBELL AREA	34
9001	0780	KENTUCKY-EXCL FT CAMPBELL AREA	788
9001	0781	NORTHEAST WEST VIRGINIA	91
9001	0782	WESTERN WEST VIRGINIA	346
9001	0783	EASTERN MISSOURI-ST LOUIS AREA	314
9001	0789	IOWA-QUAD CITIES AREA	48
9001	0799	AF-LS-470th MED FLT-GK	2
9001	0802	AF-C-36th MEDGRP-ANDERSEN	3
9001	0808	AF-H-31st MEDGRP-AVIANO	1
9001	0907	CONNECTICUT	597
9001	0908	DELAWARE	229
9001	0914	ILLINOIS	945
9001	0915	INDIANA	1101
9001	0920	MAINE	388
9001	0921	MARYLAND	429
9001	0922	MASSACHUSETTS	739
9001	0923	MICHIGAN	1124
9001	0930	NEW HAMPSHIRE	305
9001	0931	NEW JERSEY	739

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9001	0933	NEW YORK	1776
9001	0934	NORTH CAROLINA	1675
9001	0936	OHIO	1306
9001	0939	PENNSYLVANIA	1689
9001	0940	RHODE ISLAND	247
9001	0946	VERMONT	145
9001	0950	WISCONSIN	763
9001	0995	NORTHERN VIRGINIA	185
9001	0996	SOUTHERN VIRGINIA	954
9001	0999	UNKNOWN LOCATION	174
9001	1153	BMC CAPODICHINO	1
9001	1170	NBHC NSA BAHRAIN	31
9001	5195	USCG CLINIC DETROIT	10
9001	5196	USCG CLINIC NEW YORK	16
9001	5199	USCG CLINIC KEY WEST	2
9001	6200	FAIRFAX HEALTH CENTER	1
9001	6201	DUMFRIES HEALTH CENTER	7
9001	6335	OP FORCES-NH SIGONELLA	17
9001	6336	OP FORCES-NH ROTA	1
9001	6342	OP FORCES-BAHRAIN	6
9001	7042	USCG CLINIC BORINQUEN	1
9001	7046	USCG CLINIC SAN PEDRO	3
9001	7048	USCG CLINIC BASE MIAMI	1
9001	7082	USCG CLINIC HOUSTON/GALVESTON	1
9001	7083	USCG CLINIC HUMBOLDT BAY	1
9001	7200	AF-C-460th MEDGRP-BUCKLEY	5
9001	7286	JOEL CLINIC-BRAGG	4
9002	0003	AHC LYSTER-RUCKER	2
9002	0006	AF-H-673rd MEDGRP JBER-ELMNDRF	1
9002	0015	AF-C-9th MEDGRP-BEALE	5
9002	0034	USCG CLINIC NEW LONDON	4
9002	0036	AF-C-436th MEDGRP-DOVER	4
9002	0038	NH PENSACOLA	408
9002	0039	NH JACKSONVILLE	1155
9002	0042	AF-H-96th MEDGRP-EGLIN	641
9002	0045	AF-C-6th MEDGRP-MACDILL	5
9002	0047	AMC EISENHOWER-GORDON	372
9002	0048	ACH MARTIN-BENNING	406
9002	0049	ACH WINN-STEWART	645
9002	0050	AF-C-23rd MEDGRP-MOODY	478
9002	0059	AF-C-22nd MEDGRP-MCCONNELL	7
9002	0064	ACH BAYNE-JONES-POLK	148
9002	0067	WALTER REED NATL MIL MED CNTR	2
9002	0073	AF-MC-81st MEDGRP-KEESLER	328
9002	0084	AF-C-49th MEDGRP-HOLLOMAN	1
9002	0085	AF-C-27th SPCLOPS MDGRP-CANNON	4
9002	0090	AF-C-4th MEDGRP-SJ	2
9002	0095	AF-MC-88th MEDGRP-WRIGHT-PAT	1
9002	0097	AF-C-97th MEDGRP-ALTUS	149
9002	0098	AHC REYNOLDS-SILL	1

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9002	0104	NH BEAUFORT	187
9002	0106	AF-C-28th MEDGRP-ELLSWORTH	4
9002	0109	AMC BAMC-FSH	967
9002	0110	AMC DARNALL-HOOD	985
9002	0113	AF-C-82nd MEDGRP-SHEPPARD	1
9002	0114	AF-C-47th MEDGRP-LAUGHLIN	138
9002	0117	AF-ASU-59th MDW-WHASC-LACKLAND	6
9002	0203	AF-C-354th MEDGRP-EIELSON	3
9002	0287	AF-C-15th MEDGRP JBHP-HICKAM	4
9002	0326	AF-C-87th MEDGRP JBMDL-MCGUIRE	6
9002	0338	AF-C-71st MEDGRP-VANCE	130
9002	0356	AF-C-628th MEDGRP-CHARLESTON	506
9002	0364	AF-C-17th MEDGRP-GOODFELLOW	1
9002	0395	AF-LS-62nd MED FLT-JBLM-MCHORD	2
9002	0413	AF-C-11th MED SQ JBAB-BOLLING	5
9002	0416	USCG CLINIC MOBILE	51
9002	0417	USCG CLINIC KETCHIKAN	1
9002	0419	USCG CLINIC PETALUMA	5
9002	0420	USCG CLINIC DISTRICT OF COLUMB	1
9002	0421	USCG CLINIC AIR STATION MIAMI	28
9002	0422	USCG CLINIC CLEARWATER	50
9002	0423	USCG CLINIC NEW ORLEANS	37
9002	0424	USCG CLINIC BALTIMORE	1
9002	0428	USCG CLINIC CAPE MAY	17
9002	0430	USCG CLINIC ELIZABETH CITY	1
9002	0431	USCG CLINIC ASTORIA	1
9002	0432	USCG CLINIC PORTSMOUTH	2
9002	0433	USCG CLINIC YORKTOWN	3
9002	0435	USCG CLINIC SEATTLE	1
9002	0610	AHC BG CRAWFORD SAMS-CAMP ZAMA	3
9002	0615	NH GUANTANAMO BAY	7
9002	0617	NH NAPLES	4
9002	0618	NH ROTA	2
9002	0624	NH SIGONELLA	1
9002	0635	AF-ASU-39th MEDGRP-INCIRLIK	1
9002	0637	AF-C-8th MEDGRP-KUNSAN	3
9002	0638	AF-H-51st MEDGRP-OSAN	10
9002	0639	AF-H-35th MEDGRP-MISAWA	1
9002	0640	AF-H-374th MEDGRP-YOKOTA	9
9002	0653	AF-LS-422nd MED FLT-CROUGHTON	1
9002	0787	GEORGIA-FORMER NOBLE CATCHMENT	13
9002	0799	AF-LS-470th MED FLT-GK	1
9002	0802	AF-C-36th MEDGRP-ANDERSEN	4
9002	0808	AF-H-31st MEDGRP-AVIANO	12
9002	0814	AF-LS-423rd MDS-RAF ALCONBURY	1
9002	0858	BMC NAVSUPPACT SOUDA BAY	1
9002	0901	ALABAMA	1574
9002	0904	ARKANSAS	836
9002	0911	GEORGIA	2403
9002	0925	MISSISSIPPI	825

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9002	0937	OKLAHOMA	1566
9002	0941	SOUTH CAROLINA	2043
9002	0943	TENNESSEE	1623
9002	0953	PUERTO RICO	1
9002	0987	EASTERN FLORIDA	3379
9002	0988	WESTERN FLORIDA	282
9002	0989	EASTERN LOUISIANA	516
9002	0990	WESTERN LOUISIANA	541
9002	0993	EASTERN TEXAS	4177
9002	0999	UNKNOWN LOCATION	180
9002	1153	BMC CAPODICHINO	1
9002	1170	NBHC NSA BAHRAIN	11
9002	1585	TAYLOR BURK H C-BAMC-BULLIS	1
9002	1946	AF-CB-BRANDON COMM CLINIC-MIL	1
9002	5196	USCG CLINIC NEW YORK	1
9002	5199	USCG CLINIC KEY WEST	24
9002	6095	CPT JENNFR MORENO PCC-BAMC-FSH	2
9002	6118	CBMH BAMC-WESTOVER	3
9002	6335	OP FORCES-NH SIGONELLA	2
9002	7042	USCG CLINIC BORINQUEN	1
9002	7046	USCG CLINIC SAN PEDRO	1
9002	7048	USCG CLINIC BASE MIAMI	35
9002	7082	USCG CLINIC HOUSTON/GALVESTON	40
9002	7200	AF-C-460th MEDGRP-BUCKLEY	6
9002	7286	JOEL CLINIC-BRAGG	1
9003	0005	ACH BASSETT-WAINWRIGHT	86
9003	0006	AF-H-673rd MEDGRP JBER-ELMNDRF	286
9003	0008	AHC R W BLISS-HUACHUCA	3
9003	0010	AF-C-355th MEDGRP-DM	1
9003	0014	AF-MC-60th MEDGRP-TRAVIS	577
9003	0015	AF-C-9th MEDGRP-BEALE	312
9003	0024	NH CAMP PENDLETON	1561
9003	0028	NHC LEMOORE	2
9003	0029	NMC SAN DIEGO	2236
9003	0030	NH TWENTYNINE PALMS	122
9003	0032	ACH EVANS-CARSON	1027
9003	0033	AF-ASU-10th MEDGRP-ACADEMY	3
9003	0034	USCG CLINIC NEW LONDON	3
9003	0036	AF-C-436th MEDGRP-DOVER	1
9003	0050	AF-C-23rd MEDGRP-MOODY	3
9003	0052	AMC TRIPLER-SHAFTER	1035
9003	0053	AF-C-366th MEDGRP-MT HOME	19
9003	0057	ACH IRWIN-RILEY	310
9003	0059	AF-C-22nd MEDGRP-MCCONNELL	299
9003	0067	WALTER REED NATL MIL MED CNTR	1
9003	0073	AF-MC-81st MEDGRP-KEESLER	2
9003	0075	ACH LEONARD WOOD	152
9003	0078	AF-C-55th MEDGRP-OFFUTT	5
9003	0079	AF-MC-99th MEDGRP-NELLIS	488
9003	0084	AF-C-49th MEDGRP-HOLLOMAN	331

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9003	0085	AF-C-27th SPCLOPS MDGRP-CANNON	346
9003	0090	AF-C-4th MEDGRP-SJ	1
9003	0093	AF-C-319th MEDGRP-GRAND FORKS	156
9003	0097	AF-C-97th MEDGRP-ALTUS	1
9003	0106	AF-C-28th MEDGRP-ELLSWORTH	345
9003	0108	AMC WILLIAM BEAUMONT-BLISS	555
9003	0114	AF-C-47th MEDGRP-LAUGHLIN	3
9003	0125	AMC MADIGAN-LEWIS	1102
9003	0126	NH BREMERTON	375
9003	0127	NHC OAK HARBOR BIRTHING CTR	182
9003	0128	AF-C-92nd MEDGRP-FAIRCHILD	1
9003	0129	AF-C-90th MEDGRP-FE WARREN	2
9003	0130	USCG CLINIC KODIAK	37
9003	0131	ACH WEED-IRWIN	59
9003	0203	AF-C-354th MEDGRP-EIELSON	166
9003	0287	AF-C-15th MEDGRP JBHP-HICKAM	429
9003	0326	AF-C-87th MEDGRP JBMDL-MCGUIRE	2
9003	0338	AF-C-71st MEDGRP-VANCE	7
9003	0395	AF-LS-62nd MED FLT-JBLM-MCHORD	127
9003	0406	NBHC RANCHO BERNARDO	1
9003	0407	NBHC NTC SAN DIEGO	1
9003	0410	NBHC EASTLAKE	1
9003	0413	AF-C-11th MED SQ JBAB-BOLLING	3
9003	0417	USCG CLINIC KETCHIKAN	17
9003	0418	USCG CLINIC ALAMEDA	39
9003	0419	USCG CLINIC PETALUMA	43
9003	0420	USCG CLINIC DISTRICT OF COLUMB	3
9003	0421	USCG CLINIC AIR STATION MIAMI	1
9003	0423	USCG CLINIC NEW ORLEANS	1
9003	0424	USCG CLINIC BALTIMORE	1
9003	0428	USCG CLINIC CAPE MAY	14
9003	0430	USCG CLINIC ELIZABETH CITY	2
9003	0431	USCG CLINIC ASTORIA	16
9003	0432	USCG CLINIC PORTSMOUTH	2
9003	0433	USCG CLINIC YORKTOWN	1
9003	0434	USCG CLINIC PORT ANGELES	14
9003	0435	USCG CLINIC SEATTLE	37
9003	0607	LANDSTUHL REGIONAL MEDCEN	1
9003	0610	AHC BG CRAWFORD SAMS-CAMP ZAMA	2
9003	0615	NH GUANTANAMO BAY	25
9003	0617	NH NAPLES	6
9003	0618	NH ROTA	6
9003	0624	NH SIGONELLA	1
9003	0637	AF-C-8th MEDGRP-KUNSAN	3
9003	0638	AF-H-51st MEDGRP-OSAN	9
9003	0639	AF-H-35th MEDGRP-MISAWA	3
9003	0640	AF-H-374th MEDGRP-YOKOTA	8
9003	0784	WESTERN MISSOURI	1101
9003	0785	ARIZONA-EXCLUDING YUMA AREA	1627
9003	0786	YUMA ARIZONA AREA	127



GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9003	0788	IOWA-EXCLUDING QUAD CITIES	597
9003	0802	AF-C-36th MEDGRP-ANDERSEN	14
9003	0808	AF-H-31st MEDGRP-AVIANO	4
9003	0814	AF-LS-423rd MDS-RAF ALCONBURY	2
9003	0852	NBHC COMFLEACT SASEBO	1
9003	0858	BMC NAVSUPPACT SOUDA BAY	1
9003	0902	ALASKA	155
9003	0906	COLORADO	908
9003	0912	HAWAII	88
9003	0917	KANSAS	809
9003	0924	MINNESOTA	966
9003	0927	MONTANA	342
9003	0928	NEBRASKA	542
9003	0929	NEVADA	280
9003	0932	NEW MEXICO	542
9003	0935	NORTH DAKOTA	293
9003	0938	OREGON	869
9003	0942	SOUTH DAKOTA	315
9003	0945	UTAH	793
9003	0948	WASHINGTON	1044
9003	0951	WYOMING	210
9003	0973	NORTHERN IDAHO	60
9003	0974	SOUTHERN IDAHO	402
9003	0985	NORTHERN CALIFORNIA	1620
9003	0986	SOUTHERN CALIFORNIA	2057
9003	0994	WESTERN TEXAS	8
9003	0999	UNKNOWN LOCATION	157
9003	1153	BMC CAPODICHINO	1
9003	1170	NBHC NSA BAHRAIN	21
9003	1485	AHC-MCCHORD AFB	1
9003	5189	USCG CLINIC SAN DIEGO	2
9003	5195	USCG CLINIC DETROIT	1
9003	6104	CBMH FLINT HILLS-RILEY	2
9003	6116	CBMH MADIGAN-PUYALLUP	1
9003	6123	CBMH MTN POST-CARSON	1
9003	6207	TRICARE OUTPATIENT-CLAIREMONT	4
9003	6215	TRICARE OUTPATIENT-CHULA VISTA	2
9003	6342	OP FORCES-BAHRAIN	9
9003	7043	USCG CLINIC HONOLULU	7
9003	7044	USCG CLINIC JUNEAU	7
9003	7045	USCG CLINIC NORTH BEND	10
9003	7046	USCG CLINIC SAN PEDRO	21
9003	7047	USCG CLINIC SITKA	6
9003	7048	USCG CLINIC BASE MIAMI	1
9003	7083	USCG CLINIC HUMBOLDT BAY	7
9003	7200	AF-C-460th MEDGRP-BUCKLEY	296
9004	0050	AF-C-23rd MEDGRP-MOODY	3
9004	0059	AF-C-22nd MEDGRP-MCCONNELL	1
9004	0084	AF-C-49th MEDGRP-HOLLOMAN	1
9004	0085	AF-C-27th SPCLOPS MDGRP-CANNON	1

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9004	0090	AF-C-4th MEDGRP-SJ	1
9004	0093	AF-C-319th MEDGRP-GRAND FORKS	2
9004	0106	AF-C-28th MEDGRP-ELLSWORTH	1
9004	0203	AF-C-354th MEDGRP-EIELSON	1
9004	0287	AF-C-15th MEDGRP JBHP-HICKAM	3
9004	0326	AF-C-87th MEDGRP JBMDL-MCGUIRE	4
9004	0338	AF-C-71st MEDGRP-VANCE	1
9004	0356	AF-C-628th MEDGRP-CHARLESTON	4
9004	0395	AF-LS-62nd MED FLT-JBLM-MCHORD	2
9004	0413	AF-C-11th MED SQ JBAB-BOLLING	1
9004	0419	USCG CLINIC PETALUMA	1
9004	0428	USCG CLINIC CAPE MAY	3
9004	0607	LANDSTUHL REGIONAL MEDCEN	330
9004	0610	AHC BG CRAWFORD SAMS-CAMP ZAMA	135
9004	0612	ACH BRIAN ALLGOOD-SEOUL	174
9004	0615	NH GUANTANAMO BAY	116
9004	0617	NH NAPLES	421
9004	0618	NH ROTA	356
9004	0620	NH GUAM-AGANA	196
9004	0621	NH OKINAWA	207
9004	0622	NH YOKOSUKA	241
9004	0624	NH SIGONELLA	267
9004	0625	BMC IWAKUNI BIRTHING CTR	14
9004	0633	AF-H-48th MEDGRP-LAKENHEATH	147
9004	0635	AF-ASU-39th MEDGRP-INCIRLIK	108
9004	0637	AF-C-8th MEDGRP-KUNSAN	159
9004	0638	AF-H-51st MEDGRP-OSAN	653
9004	0639	AF-H-35th MEDGRP-MISAWA	460
9004	0640	AF-H-374th MEDGRP-YOKOTA	528
9004	0653	AF-LS-422nd MED FLT-CROUGHTON	57
9004	0799	AF-LS-470th MED FLT-GK	120
9004	0802	AF-C-36th MEDGRP-ANDERSEN	393
9004	0808	AF-H-31st MEDGRP-AVIANO	554
9004	0814	AF-LS-423rd MDS-RAF ALCONBURY	131
9004	0853	NBHC NAF ATSUGI	1
9004	0858	BMC NAVSUPPACT SOUDA BAY	17
9004	0953	PUERTO RICO	3115
9004	0957	GERMANY	938
9004	0958	GREECE	22
9004	0960	ITALY	109
9004	0961	JAPAN	147
9004	0963	PHILIPPINES	186
9004	0964	PORTUGAL	23
9004	0965	KOREA	115
9004	0966	SPAIN	26
9004	0967	TURKEY	37
9004	0968	UNITED KINGDOM	83
9004	0969	CANADA	5
9004	0970	OTHER CARIBBEAN	14
9004	0971	CENTRAL AMERICA	83

GEOGRAPHIC SAMPLING STRATA	DMIS ID	FACILITY NAME	# SAMPLED IN 2018
9004	0972	SOUTH AMERICA	49
9004	0975	U.S. VIRGIN ISLANDS	115
9004	0976	AFRICA	24
9004	0977	MIDEAST	233
9004	0978	SOUTHEAST ASIA	150
9004	0979	BELGIUM	59
9004	0982	OTHER EUROPE	73
9004	0983	OTHER PACIFIC	163
9004	0999	UNKNOWN LOCATION	3907
9004	1147	AHC WIESBADEN	1
9004	1153	BMC CAPODICHINO	81
9004	1170	NBHC NSA BAHRAIN	277
9004	5197	USCG CLINIC SAN JUAN	30
9004	6336	OP FORCES-NH ROTA	66
9004	6337	OP FORCES-NH NAPLES	8
9004	6342	OP FORCES-BAHRAIN	62
9004	7042	USCG CLINIC BORINQUEN	30
9004	7048	USCG CLINIC BASE MIAMI	1
9004	7200	AF-C-460th MEDGRP-BUCKLEY	1
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**APPENDIX D**

**RESPONSE RATE TABLES – QUARTERS I-III AND HEDIS AND COMBINED ANNUAL**

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TABLE D.1  
RESPONSE RATES BY ENROLLMENT AND BENEFICIARY

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Active Duty	15.1	13.2	16.8	14.6	16.4	14.5	15.3	13.0	15.9	14.1
Active Duty fam, Prime, civ PCM	5.2	5.0	7.0	6.7	5.7	5.7	.	.	6.0	5.8
Active Duty fam, Prime, mil PCM	4.7	4.7	5.7	5.9	5.4	5.7	7.1	6.9	5.5	5.5
Active Duty fam, non-enrollee	2.7	2.8	3.3	4.0	3.1	3.1	.	.	3.0	3.3
Retired,<65, civ PCM	18.1	18.2	21.5	21.1	18.2	17.9	.	.	19.3	19.1
Retired,<65, mil PCM	15.9	17.0	19.7	19.7	16.9	17.1	21.3	20.9	18.5	18.1
Retired,<65, non- enrollee	11.1	13.0	13.3	14.3	11.3	12.3	.	.	11.9	13.2
Retired,65+, enrolled	35.3	35.1	34.9	34.2	31.9	31.8	.	.	34.0	33.7
Retired,65+, non- enrollee	25.8	25.8	27.5	27.4	27.2	26.8	.	.	26.8	26.7
TRICARE Reserve Select	7.9	7.9	9.5	9.5	9.9	9.9	.	.	9.1	9.1

TABLE D.2  
RESPONSE RATES BY XOCONUS

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Europe	11.5	12.8	12.4	13.2	11.6	12.6	.	.	11.8	12.8
In Conus/Missing Region	11.0	17.0	13.0	18.7	11.9	17.6	15.8	14.4	12.7	17.7
Latin America	7.3	22.9	11.2	19.2	8.9	4.7	.	.	9.2	16.2
Western Pacific	9.2	10.7	10.9	13.1	10.9	12.7	.	.	10.3	12.2

TABLE D.3  
RESPONSE RATES BY SEX

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Female	8.4	14.3	10.1	15.7	9.2	14.9	14.9	14.0	10.0	14.9
Male	14.0	19.3	16.3	21.2	15.1	19.7	16.5	14.6	15.4	19.9

TABLE D.4  
RESPONSE RATES BY USA/OVERSEAS INDICATOR

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
In USA	17.1	13.1	18.7	12.0	17.7	15.8	14.4	12.8	17.8	17.1
Invalid/Missing	12.0	11.0	15.7	8.9	12.1	.	.	8.8	13.3	12.0
Not in USA	13.5	11.6	13.9	11.0	11.6	.	.	10.9	13.0	13.5

TABLE D.5  
RESPONSE RATES BY BENEFICIARY CATEGORY

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2017 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted	
Active Duty and Guard/Reserve		15.0	12.9	16.7	14.4	16.4	14.4	15.3	13.0	15.9	13.9
Dependent of Active Duty & Guard/Reserve		4.2	4.3	5.1	5.5	4.8	5.1	7.1	6.9	4.9	5.0
Retiree/Dependant of Retiree/Survivor/Other 65+		26.7	26.7	28.2	28.1	27.6	27.3	.	.	27.5	27.4
Retiree/Dependant of Retiree/Survivor/Other <65		14.7	15.4	18.0	17.4	15.4	15.0	21.3	20.9	17.1	16.0



TABLE D.6  
RESPONSE RATES BY CATCHMENT AREA

Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
10th Med Group-USAF Academy CO	13.9	14.9	28.3	27.4	17.6	19.6	22.1	22.1	21.6	20.5
18th Med Grp-Kadena AB	7.8	10.4	12.5	16.1	12.6	16.4	.	.	11.0	14.3
20th Med Grp-Shaw	13.2	15.3	14.3	15.9	15.6	17.3	.	.	14.3	16.1
21st Med Grp-Peterson	13.5	16.4	16.1	19.4	13.4	15.5	17.9	17.9	15.8	17.2
2nd Med Grp-Barksdale	10.6	12.0	13.6	15.8	13.6	16.0	.	.	12.6	14.7
325th Med Grp-Tyndall	14.7	16.1	16.7	18.1	15.7	16.7	.	.	15.7	17.0
355th Med Grp-Davis Monthan	10.8	12.6	12.1	14.8	13.2	16.3	16.4	16.4	13.9	14.7
366th Med Grp-Mountain Home	16.2	33.7	14.1	13.1	15.7	19.0	.	.	15.3	23.5
374th Med Grp-Yokota AB	15.4	18.3	16.4	23.9	12.4	14.1	.	.	14.7	18.8
375th Med Grp-Scott	15.1	18.4	16.9	17.9	16.2	18.1	23.5	23.5	19.3	18.5
377th Med Grp-Kirtland	13.9	14.3	20.6	21.7	14.4	12.7	.	.	16.3	16.3
3rd Med Grp-Elmendorf	11.3	9.7	11.9	25.4	12.5	10.9	17.8	17.8	14.1	15.6
422 ABS Med Flt-Croughton	4.2	5.3	16.7	27.2	12.5	13.7	.	.	10.3	13.5
42nd Medical Group-Maxwell	17.0	18.7	19.2	20.2	16.5	18.0	.	.	17.6	19.0
45th Med Grp-Patrick	13.9	14.4	22.0	22.0	19.1	19.1	.	.	17.9	17.3
470 Med Flt-Geilenkirchen	17.1	21.1	8.8	12.5	18.8	22.4	.	.	15.4	19.3
48th Med Grp-Lakenheath	12.3	16.7	12.8	13.9	10.4	13.7	.	.	11.8	14.7
52nd Med Group-Spangdahlem	14.0	16.7	15.6	18.5	15.5	17.4	.	.	15.0	17.5
55th Med Grp-Offutt	13.1	17.2	15.2	17.9	16.3	22.5	19.4	19.4	16.7	19.2
56th Med Grp-Luke	10.5	13.9	15.1	18.2	13.1	15.4	19.1	19.1	15.6	16.1
59th Med Wing-Lackland	12.4	14.9	14.3	15.4	14.3	15.9	18.7	18.7	15.0	15.6
60th Med Grp-Travis	13.5	16.7	15.4	22.4	12.7	14.7	18.3	18.3	15.1	18.1
633rd Med Grp Langley-Eustis	10.5	19.4	13.4	19.4	13.2	23.3	16.9	16.9	13.8	20.6
6th Med Grp-MacDill	10.1	22.0	15.7	19.6	13.1	20.6	19.2	19.2	15.7	20.7
72nd Med Grp-Tinker	12.2	14.8	14.8	17.9	15.3	17.1	19.2	19.2	15.4	16.7
75th Med Grp-Hill	14.4	15.9	16.2	18.4	15.2	18.5	20.6	20.6	16.5	17.8
779th Med Grp-Andrews	12.5	16.1	12.3	16.1	12.0	12.2	15.8	16.5	13.9	14.9

Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
78th Med Grp-Robins	13.2	15.1	15.2	18.4	12.9	14.8	1.7	1.7	15.1	16.2
7th Med Grp-Dyess	13.0	14.7	17.1	17.0	13.1	14.8	.	.	14.4	15.6
81st Med Grp-Keesler	13.8	14.1	14.4	22.7	11.3	12.2	.	.	13.2	16.3
82nd Med Grp-Sheppard	14.3	15.8	17.5	19.7	17.1	16.9	.	.	16.3	17.5
88th Med Grp-Wright-Patterson	17.3	20.9	20.8	26.4	17.7	29.9	25.4	25.4	21.3	26.0
90th Med Grp-F.E. Warren	12.3	16.1	14.0	20.9	13.0	14.1	.	.	13.1	17.1
92nd Med Grp-Fairchild	17.6	19.8	19.5	17.2	18.8	21.0	.	.	18.6	19.2
95th Med Grp-Edwards	11.9	14.5	13.2	15.3	13.1	14.9	.	.	12.8	14.9
96th Med Grp-Eglin	9.8	12.9	12.0	22.7	15.5	29.5	17.4	17.4	14.2	21.9
99th Med Grp-O'Callaghan Hosp	10.1	21.3	14.3	22.9	14.4	18.1	20.2	20.2	15.7	20.8
BMC Iwakuni	.	.	.	.	7.1	7.1	.	.	7.1	7.1
Bassett ACH-Ft. Wainwright	8.5	10.2	9.7	12.1	8.7	11.8	.	.	9.0	11.4
Bavaria Meddac	9.0	10.8	10.8	13.5	8.4	9.8	.	.	9.4	11.4
Bayne-Jones ACH-Ft. Polk	8.5	10.9	6.4	7.5	9.5	12.8	.	.	8.1	10.3
Blanchfield ACH-Ft. Campbell	7.5	13.3	6.6	9.6	7.8	14.8	8.5	8.5	7.7	12.3
Brian Allgood ACH-Seoul	6.7	7.7	8.3	8.2	9.3	10.6	.	.	8.1	8.8
Brooke AMC-Ft. Sam Houston	11.4	17.9	13.1	24.5	8.7	14.8	16.5	16.5	12.8	19.2
Darnall ACH-Ft. Hood	6.9	14.1	7.3	11.5	8.2	11.8	11.6	11.6	8.7	12.4
Eisenhower AMC-Ft. Gordon	10.5	9.8	9.2	7.8	10.2	12.3	16.8	16.8	12.6	10.2
Evans ACH-Ft. Carson	7.8	14.0	6.8	14.7	7.6	9.3	9.7	9.7	8.1	12.5
FHCC-Formerly NHC Great Lakes	6.7	16.9	9.5	11.2	9.5	10.8	.	.	8.6	13.1
Fox AHC-Redstone Arsenal	14.6	15.9	18.5	22.7	16.2	20.2	.	.	16.4	19.6
Ft Belvoir Community Hosp-FBCH	12.8	16.5	14.9	23.0	15.4	21.4	20.9	20.9	16.2	20.4
Guthrie AHC-Ft. Drum	9.9	9.8	9.1	9.2	9.1	9.4	8.9	8.9	9.2	9.4
Ireland ACH-Ft. Knox	11.8	19.1	19.5	23.8	18.2	26.6	21.8	21.8	18.8	22.9
Irwin ACH-Ft. Riley	8.7	17.5	8.3	8.4	9.0	13.7	9.8	9.8	9.1	13.4
Keller ACH-West Point	11.2	12.3	11.7	13.9	11.1	10.4	.	.	11.3	12.2
Kenner AHC-Ft. Lee	17.0	23.9	18.7	23.0	14.7	17.7	17.6	17.6	17.1	21.4
Kimbrough Amb Car Cen-Ft Meade	13.6	19.5	16.6	25.1	14.7	19.0	2.0	2.0	16.3	21.2

Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
L. Wood ACH-Ft. Leonard Wood	9.1	8.0	10.5	16.3	8.1	8.9	.	.	9.2	11.1
Landstuhl Regional Medcen	10.6	13.2	10.6	11.9	8.9	10.2	.	.	10.0	11.7
Lyster AHC-Ft. Rucker	12.3	13.2	14.5	15.9	12.5	13.3	.	.	13.1	14.1
Madigan AMC-Ft. Lewis	9.7	21.4	10.4	16.3	7.3	13.6	12.2	12.2	10.0	17.0
Martin ACH-Ft. Benning	7.2	11.8	8.5	13.5	7.5	12.9	11.6	11.6	9.2	12.6
McDonald AHC-Ft. Eustis	12.8	15.2	14.6	28.8	11.0	12.7	16.4	16.4	14.4	19.0
Moncrief ACH-Ft. Jackson Munson AHC-Ft. Leavenworth	9.6	11.2	14.3	17.9	12.4	15.4	16.7	16.7	14.1	14.9
	13.3	15.1	15.9	19.0	15.3	17.2	20.5	20.5	16.2	17.3
NBHC Little Creek	9.4	12.0	12.8	15.6	12.1	15.5	.	.	11.4	14.4
NBHC Mayport	7.9	10.2	14.5	17.8	13.1	15.8	.	.	11.8	14.6
NBHC NAS North Island	12.7	14.2	13.7	14.6	14.3	16.6	.	.	13.5	15.1
NBHC NTC San Diego	8.7	11.0	9.4	11.6	8.9	8.7	.	.	9.0	10.3
NBHC Navsta Sewells	13.7	16.1	14.6	16.2	14.1	14.9	.	.	14.2	15.7
NBHC Oceana	9.5	12.7	10.7	13.3	5.6	7.4	.	.	8.6	11.2
NBHC Port Hueneme	9.8	11.4	14.7	14.7	13.6	13.6	.	.	12.9	13.2
NBHC Portsmouth	13.2	14.3	14.9	15.6	15.4	16.5	.	.	14.5	15.5
NH Beaufort	5.2	6.0	7.9	10.0	6.7	12.5	.	.	6.6	9.8
NH Bremerton	10.0	16.7	11.4	21.5	9.8	11.4	13.3	13.3	11.5	16.4
NH Camp Lejeune	4.9	8.8	8.0	11.7	6.8	14.4	9.5	9.5	7.5	11.5
NH Camp Pendleton	6.0	12.6	7.7	17.2	7.4	11.5	9.4	9.4	7.7	13.6
NH Guam-Agana	7.7	9.3	9.9	11.0	9.8	11.9	.	.	9.2	10.7
NH Guantanamo Bay	3.7	4.3	13.8	18.8	10.6	13.4	.	.	9.2	12.0
NH Jacksonville	9.7	16.4	12.6	19.5	9.7	16.5	15.5	15.5	11.9	17.4
NH LeMoore	11.0	11.4	12.7	13.9	10.9	11.5	.	.	11.5	12.2
NH Naples	8.7	10.3	8.4	9.9	12.1	13.6	.	.	9.6	11.2
NH Oak Harbor	11.6	11.9	12.6	23.3	11.5	11.9	.	.	11.9	16.1
NH Okinawa	8.0	10.7	9.1	11.4	11.5	14.6	.	.	9.5	12.2
NH Pensacola	11.2	18.0	11.2	13.4	12.3	19.0	16.3	16.3	13.3	16.9
NH Twentynine Palms	7.9	14.2	9.3	10.7	8.1	8.8	.	.	8.5	11.4
NH Yokosuka	9.3	11.3	9.8	11.1	10.3	11.6	.	.	9.8	11.3
NHC Cherry Point	9.4	18.3	12.2	14.9	10.5	12.5	.	.	10.7	15.3
NHC Corpus Christi	10.8	11.3	17.0	16.9	12.7	13.5	21.4	21.4	15.2	14.0
NHC Hawaii	11.9	14.1	13.5	15.5	11.7	13.8	1.5	1.5	13.3	14.5

Catchment	Q1 2018	Q1 2018	Q2 2018	Q2 2018	Q3 2018	Q3 2018	HEDIS	HEDIS	COMBINED	COMBINED
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
NHC Patuxent River	12.5	13.8	14.9	18.1	14.3	17.0	.	.	13.9	16.3
NHC Quantico	12.2	14.1	10.9	12.0	13.0	16.0	16.8	16.8	14.1	14.2
NMC Portsmouth	7.9	15.5	8.1	13.3	7.0	13.1	11.9	11.9	8.6	13.9
NMC San Diego	7.4	13.1	7.8	11.7	8.7	15.5	10.5	10.5	8.6	13.3
Naval Health Care New England	10.8	13.3	17.5	19.7	12.1	13.9	15.6	15.6	14.4	15.5
Naval Health Clinic Charleston	9.2	9.9	12.1	12.4	9.0	10.8	9.3	9.3	9.8	10.9
Out of Catchment North Region	10.9	18.3	11.9	20.4	11.7	20.7	.	.	11.5	19.8
Out of Catchment OCONUS Region	7.2	13.6	11.1	17.6	8.6	8.3	.	.	9.0	13.1
Out of Catchment South Region	10.3	19.9	11.1	20.1	9.5	17.0	.	.	10.3	19.0
Out of Catchment West Region	10.9	19.4	13.4	22.7	12.5	24.4	.	.	12.3	22.2
R W Bliss AHC-Ft. Huachuca	15.7	12.8	16.3	14.0	15.2	12.5	.	.	15.7	13.1
RAF Upwood	17.0	20.5	12.2	13.1	10.9	13.9	.	.	13.4	16.0
Reynolds ACH-Ft. Sill	11.1	13.0	10.3	11.3	11.2	12.5	14.8	14.8	12.4	12.4
TRICARE Outpatient-Chula Vista	11.4	9.2	15.9	32.5	10.6	10.6	.	.	12.6	17.8
Tripler AMC-Ft. Shafter	7.0	9.0	8.2	10.4	7.4	11.6	10.8	10.8	8.5	10.3
USCG Clinic Detroit	20.0	20.0	33.3	33.3	.	.	.	.	18.2	18.0
USCG Clinic Key West	42.9	45.7	25.0	24.1	36.4	36.4	.	.	34.6	35.2
USCG Clinic San Diego	.	.	.	.	100.0	100.0	.	.	50.0	50.0
Walter Reed AMC-Washington DC	24.1	24.1	36.1	35.7	36.7	36.7	.	.	32.6	32.4
Walter Reed Natl Mil Med Cntr	12.8	26.5	13.7	21.5	13.3	20.1	20.1	20.1	15.1	22.7
Weed ACH-Ft. Irwin	8.8	8.8	9.3	11.0	11.7	24.2	.	.	9.9	15.0
William Beaumont AMC-Ft. Bliss	5.7	6.4	9.0	15.5	7.3	10.8	1.1	1.1	8.5	11.0
Winn ACH-Ft. Stewart	5.6	12.1	6.2	8.2	5.8	11.9	0.9	0.9	6.9	10.8
Womack AMC-Ft. Bragg	7.7	10.2	8.9	11.6	8.7	13.9	10.7	10.7	9.0	11.8

TABLE D.7  
RESPONSE RATES BY SERVICE AFFILIATION

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Administrative	2.7	3.3	.	.	28.6	28.6	.	.	6.3	3.9
Air Force	12.9	17.6	15.4	20.2	14.2	18.0	19.0	19.1	15.0	18.6
Army	9.5	12.8	10.7	14.5	9.8	12.7	13.9	12.8	11.0	13.3
Coast Guard	22.8	24.4	24.7	26.1	25.9	25.6	.	.	24.5	25.4
Missing/unknown	9.0	15.8	2.4	3.4	8.0	20.3	.	.	4.6	12.2
National Capital Region Medical Director	13.0	21.9	14.5	22.7	13.9	20.4	20.7	20.9	16.0	21.6
Navy	9.3	14.0	11.3	14.2	10.2	13.7	13.3	12.2	10.8	13.9
Noncatchment	8.6	19.0	10.3	21.4	9.5	20.4	.	.	9.5	20.3
Support Contractor	11.9	18.0	14.1	19.9	12.4	18.9	10.1	9.5	12.8	18.9
Uniformed Services Family Health Plan	15.9	27.0	17.7	25.9	17.9	27.6	.	.	17.1	26.8

TABLE D.8  
RESPONSE RATES BY BRANCH OF SERVICE

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Air Force	13.2	19.7	15.5	22.0	14.6	20.8	19.1	19.0	15.2	20.8
Army	9.6	15.0	11.2	17.1	10.1	15.7	14.4	13.3	11.1	15.9
Coast Guard	13.8	21.1	16.7	24.6	14.5	18.8	20.1	19.6	15.5	21.5
Marine Corps	7.6	12.9	9.0	13.9	8.3	13.6	11.5	9.9	8.9	13.4
Navy	10.0	17.2	12.2	17.3	10.9	16.9	14.8	14.0	11.6	17.1
Other/Unknown	20.0	26.6	23.6	28.7	20.2	31.9	32.7	31.7	23.5	29.0

TABLE D.9

## RESPONSE RATES BY TRICARE NEXT GENERATION OF CONTRACTS REGION GROUPING

	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
East-North	11.0	17.1	12.7	18.6	11.9	18.6	16.4	15.0	12.9	18.1
East-South	11.1	17.4	13.1	18.3	12.0	16.3	15.5	14.9	12.7	17.3
Overseas	9.6	12.9	11.6	15.4	10.8	11.2	.	.	10.7	13.2
West	11.1	16.6	13.3	19.0	12.0	18.0	15.5	13.4	12.7	17.7

TABLE D.10  
RESPONSE RATES BY COMBINED GEOGRAPHIC AREA

TNEX Reg	Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
East-North	375th Med Grp-Scott	15.1	18.4	16.9	17.9	16.2	18.1	23.5	23.5	19.3	18.5
East-North	470 Med Flt-Geilenkirchen	.	.	.	.	.	.	.	.	.	.
East-North	633rd Med Grp Langley-Eustis	10.5	19.4	13.4	19.4	13.2	23.3	16.9	16.9	13.8	20.6
East-North	779th Med Grp-Andrews	12.5	16.1	12.3	16.1	12.0	12.2	15.8	16.5	13.9	14.9
East-North	88th Med Grp-Wright-Patterson	17.3	20.9	20.8	26.4	17.7	29.9	25.4	25.4	21.3	26.0
East-North	Blanchfield ACH-Ft. Campbell	7.5	13.3	6.6	9.6	7.8	14.8	8.5	8.5	7.7	12.3
East-North	FHCC-Formerly NHC Great Lakes	6.7	16.9	9.5	11.2	9.5	10.8	.	.	8.6	13.1
East-North	Ft Belvoir Community Hosp-FBCH	12.8	16.5	14.9	23.0	15.4	21.4	20.9	20.9	16.2	20.4
East-North	Guthrie AHC-Ft. Drum	9.9	9.8	9.1	9.2	9.1	9.4	8.9	8.9	9.2	9.4
East-North	Ireland ACH-Ft. Knox	11.8	19.1	19.5	23.8	18.2	26.6	21.8	21.8	18.8	22.9
East-North	Keller ACH-West Point	11.2	12.3	11.7	13.9	11.1	10.4	.	.	11.3	12.2
East-North	Kenner AHC-Ft. Lee	17.0	23.9	18.7	23.0	14.7	17.7	17.6	17.6	17.1	21.4
East-North	Kimbrough Amb Car Cen-Ft Meade	13.6	19.5	16.6	25.1	14.7	19.0	2.0	2.0	16.3	21.2
East-North	McDonald AHC-Ft. Eustis	12.8	15.2	14.6	28.8	11.0	12.7	16.4	16.4	14.4	19.0
East-North	NBHC Little Creek	9.4	12.0	12.8	15.6	12.1	15.5	.	.	11.4	14.4
East-North	NBHC Navsta Sewells	13.7	16.1	14.6	16.2	14.1	14.9	.	.	14.2	15.7
East-North	NBHC Oceana	9.5	12.7	10.7	13.3	5.6	7.4	.	.	8.6	11.2
East-North	NBHC Portsmouth	13.2	14.3	14.9	15.6	15.4	16.5	.	.	14.5	15.5
East-North	NH Camp Lejeune	4.9	8.8	8.0	11.7	6.8	14.4	9.5	9.5	7.5	11.5
East-North	NHC Cherry Point	9.4	18.3	12.2	14.9	10.5	12.5	.	.	10.7	15.3
East-North	NHC Patuxent River	12.5	13.8	14.9	18.1	14.3	17.0	.	.	13.9	16.3
East-North	NHC Quantico	12.2	14.1	10.9	12.0	13.0	16.0	16.8	16.8	14.1	14.2
East-North	NMC Portsmouth	7.9	15.5	8.1	13.3	7.0	13.1	11.9	11.9	8.6	13.9
East-North	Naval Health Care New England	10.8	13.3	17.5	19.7	12.1	13.9	15.6	15.6	14.4	15.5
East-North	Out of Catchment North Region	10.9	18.3	11.9	20.4	11.7	20.7	.	.	11.5	19.8
East-North	Out of Catchment OCONUS Region	2.0	8.4	9.6	22.8	5.7	13.4	.	.	5.8	15.4
East-North	Out of Catchment South Region	18.2	47.7	.	.	.	.	.	.	11.8	37.9
East-North	USCG Clinic Detroit	20.0	20.0	33.3	33.3	.	.	.	.	18.2	18.0
East-North	USCG Clinic Key West	100.0	100.0	.	.	.	.	.	.	50.0	51.6
East-North	Walter Reed AMC-Washington DC	24.1	24.1	36.1	35.7	36.7	36.7	.	.	32.6	32.4
East-North	Walter Reed Natl Mil Med Cntr	12.8	26.5	13.7	21.5	13.3	20.1	20.1	20.1	15.1	22.7
East-North	Womack AMC-Ft. Bragg	7.7	10.2	8.9	11.6	8.7	13.9	10.7	10.7	9.0	11.8
East-South	20th Med Grp-Shaw	13.2	15.3	14.3	15.9	15.6	17.3	.	.	14.3	16.1

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2018	Q1 2018	Q2 2018	Q2 2018	Q3 2018	Q3 2018	HEDIS	HEDIS	COMBINED	COMBINED
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
East-South	2nd Med Grp-Barksdale	10.6	12.0	13.6	15.8	13.6	16.0	.	.	12.6	14.7
East-South	325th Med Grp-Tyndall	14.7	16.1	16.7	18.1	15.7	16.7	.	.	15.7	17.0
East-South	42nd Medical Group-Maxwell	17.0	18.7	19.2	20.2	16.5	18.0	.	.	17.6	19.0
East-South	45th Med Grp-Patrick	13.9	14.4	22.0	22.0	19.1	19.1	.	.	17.9	17.3
East-South	470 Med Flt-Geilenkirchen	.	.	.	.	.	.	.	.	.	.
East-South	59th Med Wing-Lackland	12.4	14.9	14.3	15.4	14.3	15.9	18.7	18.7	15.0	15.6
East-South	6th Med Grp-MacDill	10.1	22.0	15.7	19.6	13.1	20.6	19.2	19.2	15.7	20.7
East-South	72nd Med Grp-Tinker	12.2	14.8	14.8	17.9	15.3	17.1	19.2	19.2	15.4	16.7
East-South	78th Med Grp-Robins	13.2	15.1	15.2	18.4	12.9	14.8	1.7	1.7	15.1	16.2
East-South	7th Med Grp-Dyess	13.0	14.7	17.1	17.0	13.1	14.8	.	.	14.4	15.6
East-South	81st Med Grp-Keesler	13.8	14.1	14.4	22.7	11.3	12.2	.	.	13.2	16.3
East-South	82nd Med Grp-Sheppard	14.3	15.8	17.5	19.7	17.1	16.9	.	.	16.3	17.5
East-South	96th Med Grp-Eglin	9.8	12.9	12.0	22.7	15.5	29.5	17.4	17.4	14.2	21.9
East-South	Bayne-Jones ACH-Ft. Polk	8.5	10.9	6.4	7.5	9.5	12.8	.	.	8.1	10.3
East-South	Brooke AMC-Ft. Sam Houston	11.4	17.9	13.1	24.5	8.7	14.8	16.5	16.5	12.8	19.2
East-South	Darnall ACH-Ft. Hood	6.9	14.1	7.3	11.5	8.2	11.8	11.6	11.6	8.7	12.4
East-South	Eisenhower AMC-Ft. Gordon	10.5	9.8	9.2	7.8	10.2	12.3	16.8	16.8	12.6	10.2
East-South	Fox AHC-Redstone Arsenal	14.6	15.9	18.5	22.7	16.2	20.2	.	.	16.4	19.6
East-South	Lyster AHC-Ft. Rucker	12.3	13.2	14.5	15.9	12.5	13.3	.	.	13.1	14.1
East-South	Martin ACH-Ft. Benning	7.2	11.8	8.5	13.5	7.5	12.9	11.6	11.6	9.2	12.6
East-South	Moncrief ACH-Ft. Jackson	9.6	11.2	14.3	17.9	12.4	15.4	16.7	16.7	14.1	14.9
East-South	NBHC Mayport	7.9	10.2	14.5	17.8	13.1	15.8	.	.	11.8	14.6
East-South	NH Beaufort	5.2	6.0	7.9	10.0	6.7	12.5	.	.	6.6	9.8
East-South	NH Jacksonville	9.7	16.4	12.6	19.5	9.7	16.5	15.5	15.5	11.9	17.4
East-South	NH Pensacola	11.2	18.0	11.2	13.4	12.3	19.0	16.3	16.3	13.3	16.9
East-South	NHC Corpus Christi	10.8	11.3	17.0	16.9	12.7	13.5	21.4	21.4	15.2	14.0
East-South	Naval Health Clinic Charleston Out of Catchment OCONUS Region	9.2	9.9	12.1	12.4	9.0	10.8	9.3	9.3	9.8	10.9
East-South	Region	.	.	8.9	5.5	4.5	11.5	.	.	4.5	6.2
East-South	Out of Catchment South Region	10.3	19.8	11.1	20.1	9.5	17.0	.	.	10.3	18.9
East-South	Reynolds ACH-Ft. Sill	11.1	13.0	10.3	11.3	11.2	12.5	14.8	14.8	12.4	12.4
East-South	USCG Clinic Key West	33.3	33.3	28.6	28.6	36.4	36.4	.	.	33.3	33.4
East-South	Winn ACH-Ft. Stewart	5.6	12.1	6.2	8.2	5.8	11.9	0.9	0.9	6.9	10.8
Overseas	18th Med Grp-Kadena AB	7.8	10.4	12.5	16.1	12.6	16.4	.	.	11.0	14.3
Overseas	374th Med Grp-Yokota AB	15.4	18.3	16.4	23.9	12.4	14.1	.	.	14.7	18.8
Overseas	422 ABS Med Flt-Croughton	4.2	5.3	16.7	27.2	12.5	13.7	.	.	10.3	13.5
Overseas	470 Med Flt-Geilenkirchen	17.5	21.8	9.1	12.8	19.1	22.9	.	.	15.8	19.8
Overseas	48th Med Grp-Lakenheath	12.3	16.7	12.8	13.9	10.4	13.7	.	.	11.8	14.7



TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Overseas	52nd Med Group-Spangdahlem	14.0	16.7	15.6	18.5	15.5	17.4	.	.	15.0	17.5
Overseas	BMC Iwakuni	.	.	.	.	7.1	7.1	.	.	7.1	7.1
Overseas	Bavaria Meddac	9.0	10.8	10.8	13.5	8.4	9.8	.	.	9.4	11.4
Overseas	Brian Allgood ACH-Seoul	6.7	7.7	8.3	8.2	9.3	10.6	.	.	8.1	8.8
Overseas	Landstuhl Regional Medcen	10.6	13.2	10.6	11.9	8.9	10.2	.	.	10.0	11.7
Overseas	NH Guam-Agana	7.7	9.3	9.9	11.0	9.8	11.9	.	.	9.2	10.7
Overseas	NH Guantanamo Bay	3.7	4.3	13.8	18.8	10.6	13.4	.	.	9.2	12.0
Overseas	NH Naples	8.7	10.3	8.4	9.9	12.1	13.6	.	.	9.6	11.2
Overseas	NH Okinawa	8.0	10.7	9.1	11.4	11.5	14.6	.	.	9.5	12.2
Overseas	NH Yokosuka	9.3	11.3	9.8	11.1	10.3	11.6	.	.	9.8	11.3
Overseas	Out of Catchment OCONUS Region	7.4	15.2	11.3	22.0	8.8	7.2	.	.	9.1	14.6
Overseas	RAF Upwood	17.0	20.5	12.2	13.1	10.9	13.9	.	.	13.4	16.0
West	10th Med Group-USAF Academy CO	13.9	14.9	28.3	27.4	17.6	19.6	22.1	22.1	21.6	20.5
West	21st Med Grp-Peterson	13.5	16.4	16.1	19.4	13.4	15.5	17.9	17.9	15.8	17.2
West	355th Med Grp-Davis Monthan	10.8	12.6	12.1	14.8	13.2	16.3	16.4	16.4	13.9	14.7
West	366th Med Grp-Mountain Home	16.2	33.7	14.1	13.1	15.7	19.0	.	.	15.3	23.5
West	377th Med Grp-Kirtland	13.9	14.3	20.6	21.7	14.4	12.7	.	.	16.3	16.3
West	3rd Med Grp-Elmendorf	11.3	9.7	11.9	25.4	12.5	10.9	17.8	17.8	14.1	15.6
West	55th Med Grp-Offutt	13.1	17.2	15.2	17.9	16.3	22.5	19.4	19.4	16.7	19.2
West	56th Med Grp-Luke	10.5	13.9	15.1	18.2	13.1	15.4	19.1	19.1	15.6	16.1
West	60th Med Grp-Travis	13.5	16.7	15.4	22.4	12.7	14.7	18.3	18.3	15.1	18.1
West	75th Med Grp-Hill	14.4	15.9	16.2	18.4	15.2	18.5	20.6	20.6	16.5	17.8
West	90th Med Grp-F.E. Warren	12.3	16.1	14.0	20.9	13.0	14.1	.	.	13.1	17.1
West	92nd Med Grp-Fairchild	17.6	19.8	19.5	17.2	18.8	21.0	.	.	18.6	19.2
West	95th Med Grp-Edwards	11.9	14.5	13.2	15.3	13.1	14.9	.	.	12.8	14.9
West	99th Med Grp-O'Callaghan Hosp	10.1	21.3	14.3	22.9	14.4	18.1	20.2	20.2	15.7	20.8
West	Bassett ACH-Ft. Wainwright	8.5	10.2	9.7	12.1	8.7	11.8	.	.	9.0	11.4
West	Evans ACH-Ft. Carson	7.8	14.0	6.8	14.7	7.6	9.3	9.7	9.7	8.1	12.5
West	Irwin ACH-Ft. Riley	8.7	17.5	8.3	8.4	9.0	13.7	9.8	9.8	9.1	13.4
West	L. Wood ACH-Ft. Leonard Wood	9.1	8.0	10.5	16.3	8.1	8.9	.	.	9.2	11.1
West	Madigan AMC-Ft. Lewis	9.7	21.4	10.4	16.3	7.3	13.6	12.2	12.2	10.0	17.0
West	Munson AHC-Ft. Leavenworth	13.3	15.1	15.9	19.0	15.3	17.2	20.5	20.5	16.2	17.3
West	NBHC NAS North Island	12.7	14.2	13.7	14.6	14.3	16.6	.	.	13.5	15.1
West	NBHC NTC San Diego	8.7	11.0	9.4	11.6	8.9	8.7	.	.	9.0	10.3
West	NBHC Port Hueneme	9.8	11.4	14.7	14.7	13.6	13.6	.	.	12.9	13.2
West	NH Bremerton	10.0	16.7	11.4	21.5	9.8	11.4	13.3	13.3	11.5	16.4

TABLE G.10 (continued)

TNEX Reg	Catchment	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
West	NH Camp Pendleton	6.0	12.6	7.7	17.2	7.4	11.5	9.4	9.4	7.7	13.6
West	NH LeMoore	11.0	11.4	12.7	13.9	10.9	11.5	.	.	11.5	12.2
West	NH Oak Harbor	11.6	11.9	12.6	23.3	11.5	11.9	.	.	11.9	16.1
West	NH Twentynine Palms	7.9	14.2	9.3	10.7	8.1	8.8	.	.	8.5	11.4
West	NHC Hawaii	11.9	14.1	13.5	15.5	11.7	13.8	1.5	1.5	13.3	14.5
West	NMC San Diego	7.4	13.1	7.8	11.7	8.7	15.5	10.5	10.5	8.6	13.3
West	Out of Catchment OCONUS Region	11.6	20.5	5.1	6.0	5.6	7.4	.	.	7.1	9.8
West	Out of Catchment West Region	10.9	19.4	13.4	22.7	12.5	24.4	.	.	12.3	22.2
West	R W Bliss AHC-Ft. Huachuca	15.7	12.8	16.3	14.0	15.2	12.5	.	.	15.7	13.1
West	TRICARE Outpatient-Chula Vista	11.4	9.2	15.9	32.5	10.6	10.6	.	.	12.6	17.8
West	Tripler AMC-Ft. Shafter	7.0	9.0	8.2	10.4	7.4	11.6	10.8	10.8	8.5	10.3
West	USCG Clinic San Diego	.	.	.	.	100.0	100.0	.	.	50.0	50.0
West	Weed ACH-Ft. Irwin	8.8	8.8	9.3	11.0	11.7	24.2	.	.	9.9	15.0
West	William Beaumont AMC-Ft. Bliss	5.7	6.4	9.0	15.5	7.3	10.8	1.1	1.1	8.5	11.0

TABLE D.11  
RESPONSE RATES BY BENEFICIARY CATEGORY AND SEX

Beneficiary Category	Sex	Q1 2018 Unweighted	Q1 2018 Weighted	Q2 2018 Unweighted	Q2 2018 Weighted	Q3 2018 Unweighted	Q3 2018 Weighted	HEDIS Unweighted	HEDIS Weighted	COMBINED Unweighted	COMBINED Weighted
Active Duty and Guard/Reserve	Female	17.8	15.2	18.5	16.5	19.0	16.7	19.1	17.0	18.6	16.2
Active Duty and Guard/Reserve	Male	14.4	12.5	16.3	14.0	15.8	13.9	14.5	12.2	15.3	13.4
Dependent of Active Duty & Guard/Reserve	Female	4.4	4.5	5.3	5.8	5.0	5.2	7.3	7.1	5.1	5.2
Dependent of Active Duty & Guard/Reserve	Male	2.8	3.2	3.5	3.3	3.1	4.0	5.3	5.7	3.3	3.6
Retiree/Dependant of Retiree/Survivor/Other 65+	Female	21.4	21.3	21.8	21.6	22.1	21.9	.	.	21.7	21.6
Retiree/Dependant of Retiree/Survivor/Other 65+	Male	32.9	33.0	35.8	35.6	34.0	33.5	.	.	34.2	34.0
Retiree/Dependant of Retiree/Survivor/Other <65	Female	13.3	13.9	16.6	16.0	14.2	14.0	20.0	19.5	15.7	14.7
Retiree/Dependant of Retiree/Survivor/Other <65	Male	16.2	17.1	19.6	19.0	16.7	16.2	22.6	22.4	18.5	17.5

TABLE D.12  
RESPONSE RATES BY BENEFICIARY CATEGORY AND SERVICE

Beneficiary Category	Service	Q1 2018	Q1 2018	Q2 2018	Q2 2018	Q3 2018	Q3 2018	HEDIS	HEDIS	COMBINED	COMBINED
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Active Duty and Guard/Reserve	Air Force	19.4	18.5	22.0	21.8	21.4	21.1	20.8	20.2	20.9	20.5
	Army	12.2	10.8	13.1	11.5	13.2	12.0	13.3	11.9	13.0	11.5
	Coast Guard	22.4	22.2	24.9	26.8	25.6	27.1	26.5	26.4	24.6	25.4
	Marine Corps	9.2	8.2	10.0	8.9	9.7	9.2	10.0	8.0	9.7	8.7
	Navy	12.5	11.5	14.1	12.9	13.6	11.9	13.3	12.3	13.4	12.1
	Other/Unknown	37.0	40.9	33.8	34.2	32.0	34.3	42.5	42.3	36.8	36.7
	Dependent of Active Duty & Guard/Reserve	Air Force	4.3	4.1	5.2	5.7	5.1	5.8	8.0	8.0	5.1
Army		4.0	4.3	4.8	5.4	4.5	4.9	6.6	6.5	4.7	4.9
Coast Guard		6.1	7.8	7.8	9.4	4.8	5.3	10.2	10.1	6.4	7.5
Marine Corps		3.0	3.0	3.9	4.4	3.5	3.1	6.4	7.0	3.7	3.6
Navy		4.3	4.4	5.5	5.2	4.9	5.3	6.5	6.5	5.0	5.0
Other/Unknown		10.3	12.8	12.9	13.7	8.6	8.1	9.7	10.2	10.4	11.5
Retiree/Dependant of Retiree/Survivor/Other 65+		Air Force	26.6	26.6	29.2	29.0	28.9	28.5	.	.	28.2
	Army	25.0	25.0	28.1	28.1	27.2	26.7	.	.	26.8	26.7
	Coast Guard	33.3	33.8	40.7	39.9	25.0	24.8	.	.	34.2	34.1
	Marine Corps	25.8	25.4	27.2	26.7	27.4	28.2	.	.	26.8	26.7
	Navy	28.9	29.0	26.2	26.1	26.4	26.3	.	.	27.2	27.2
	Other/Unknown	30.0	28.3	25.0	23.7	42.9	41.1	.	.	33.3	31.7
	Retiree/Dependant of Retiree/Survivor/Other <65	Air Force	16.1	17.5	19.3	19.6	17.0	17.2	21.9	22.0	18.3
Army		14.1	14.5	17.1	16.4	14.0	13.1	20.7	20.3	16.3	14.8
Coast Guard		14.8	16.7	19.7	19.7	16.8	15.6	19.7	19.7	17.4	17.3
Marine Corps		13.0	13.9	15.9	15.6	14.1	14.5	20.1	19.8	15.4	14.7
Navy		13.9	14.7	17.8	16.7	15.1	15.7	21.6	21.2	16.5	15.8
Other/Unknown		21.4	19.4	38.3	41.9	36.7	38.6	31.4	31.8	32.4	32.9

**APPENDIX E**

**TECHNICAL DESCRIPTION OF THE 2018 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 DHA 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 2018 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.
DHA STANDARD COMPOSITES
Two DHA 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). 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
-------------------------------	---------------------	-----------------

Q25	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
-----	--------------------------------------------------------------------------------------------------------	-----------------------------------------

Q14	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
-------------------------------	------------------------------	-----------------

Q18	In the last 12 months, how often did your personal doctor listen carefully to you?	Never Sometimes Usually Always
-----	------------------------------------------------------------------------------------	-----------------------------------------

Q17	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
-----	----------------------------------------------------------------------------------------------------------------	-----------------------------------------

Q19	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
Q20	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
Q35	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
Q36	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 QUESTIONNAIRE CAHPS 5.0	CLAIMS PROCESSING	RESPONSE CHOICE
Q40	In the last 12 months, how often did your health plan handle your claims quickly?	Never Sometimes Usually Always
Q41	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
Q13	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
Q42	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
Q23	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
Q27	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 DHA'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 2018 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 DHA COMPOSITE

2018 ADULT HCSDB	COMPOSITE PREVENTIVE CARE	RESPONSE CHOICES
H18049	When did you last have a blood pressure reading?	Less than 12 months ago 1 to 2 years ago More than 2 years ago
H18050	Do you know if your blood pressure is too high?	Yes, it is too high No, it is not too high Don't know
H18059B	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
H18061	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
H18064	In which trimester did you first receive prenatal care?	First trimester Second trimester Third trimester Did not receive prenatal care
H18071F, H18071I	How tall are you without your shoes on? Please give your answer in feet and inches.	_____ feet _____ inches
H18072	How much do you weigh without your shoes on? Please give your answer in pounds.	_____ pounds

The healthy behavior composite measures the success of DHA'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 5.0 QUESTIONS AND RESPONSE CHOICES  
EXPRESSED AS COMPOSITE SCORES AND RATINGS

ADULT QUESTIONNAIRE CAHPS 5.0	SMOKING	RESPONSE CHOICE
Q46	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
Q47	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 - Q3FY2018\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
  PNBRTHTD 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 PNBRTHTDT using fielding period
    * starting date.
*****;
    FIELDAGE = INPUT("&FIELDAGE",mmdyy8.);
    DOB = SUBSTR(PNBRTHTDT,5,2) || SUBSTR(PNBRTHTDT,7,2) ||
SUBSTR(PNBRTHTDT,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 FIELDDATE 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. ENBGSAMPL $ENBGS.;  
RUN;  
%MEND;  
%MERGE;
```

**F.2.A - Q1FY2018\PROGRAMS\CODINGScheme\CSCHM18Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 1 FY2018**

```

*****
** ;
*   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.
*           03/22/2018 - Removed S18BI05 and S18BI13 from Note 5_BI1 and
Note 5_BI2, no longer in questionnaire (Irna May Connor)
*
* 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 1_AC1 -- H&YR.005, S&YR.AC01, S&YR.AC02A-S&YR.AC02G, S&YR.AC03-
S&YR.AC04,
S&YR.AC05A-S&YR.AC05G: missed, cancelled, or rescheduled
appointments **/

ARRAY NOTE1AC1_1 S&YR.AC01 S&YR.AC03 S&YR.AC04;
ARRAY NOTE1AC1_2 S&YR.AC02A--S&YR.AC02G S&YR.AC05A--S&YR.AC05G;

IF H&YR.005 < 5 THEN N1_AC1=1;
ELSE DO;
  N1_AC1=2;
  DO OVER NOTE1AC1_1;
    IF NOTE1AC1_1 = . THEN NOTE1AC1_1 = .N;
    ELSE NOTE1AC1_1 = .C;
  END;
  DO OVER NOTE1AC1_2;

```

```

        IF NOTE1AC1_2 IN (.,2) THEN NOTE1AC1_2 = .N;
        ELSE NOTE1AC1_2 = .C;
    END;
END;

/** Note 1_AC2 -- S&YR.AC01, S&YR.AC02A-S&YR.AC02G: missed appointments **/

ARRAY NOTE1AC2  S&YR.AC02A--S&YR.AC02G;

N1AC2NMISS=0;

DO OVER NOTE1AC2;
    IF NOTE1AC2 NOT IN (.,2) THEN N1AC2NMISS+1;
END;

IF S&YR.AC01 IN (.N,.C) THEN N1_AC2=1;
ELSE IF S&YR.AC01=1 THEN N1_AC2=2;
ELSE IF S&YR.AC01 IN (.,2) AND N1AC2NMISS > 0 THEN DO;
    N1_AC2=3;
    S&YR.AC01=1;
END;
ELSE IF S&YR.AC01=2 AND N1AC2NMISS=0 THEN DO;
    N1_AC2=4;
    DO OVER NOTE1AC2;
        NOTE1AC2=.N;
    END;
END;
ELSE IF S&YR.AC01=. AND N1AC2NMISS=0 THEN DO;
    N1_AC2=5;
    DO OVER NOTE1AC2;
        IF NOTE1AC2 NE . THEN NOTE1AC2=.;
    END;
END;

DROP N1AC2NMISS;

/** Note 1_AC3 -- S&YR.AC03, S&YR.AC04, S&YR.AC05A-S&YR.AC05G:
                cancelled and rescheduled appointments **/

ARRAY NOTE1AC3  S&YR.AC05A--S&YR.AC05G;

N1AC3NMISS=0;

DO OVER NOTE1AC3;
    IF NOTE1AC3 NOT IN (.,2) THEN N1AC3NMISS+1;
END;

IF S&YR.AC04 > 0 THEN N1AC3NMISS+1;

IF S&YR.AC03 IN (.N,.C) THEN N1_AC3=1;
ELSE IF S&YR.AC03=1 THEN N1_AC3=2;
ELSE IF S&YR.AC03 IN (.,2) AND N1AC3NMISS > 0 THEN DO;
    N1_AC3=3;
    S&YR.AC03=1;
END;

```

```

ELSE IF S&YR.AC03=2 AND N1AC3NMISS=0 THEN DO;
  N1_AC3=4;
  DO OVER NOTE1AC3;
    NOTE1AC3=.N;
  END;
  S&YR.AC04=.N;
END;
ELSE IF S&YR.AC03=. AND N1AC3NMISS=0 THEN DO;
  N1_AC3=5;
  DO OVER NOTE1AC3;
    IF NOTE1AC3 NE . THEN NOTE1AC3=.;
  END;
END;

DROP N1AC3NMISS;

```

/\*\* 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;

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.BI03-S&YR.BI04 S&YR.BI06-S&YR.BI12 S&YR.BI14-
S&YR.BI20: go to urgent care center **/

ARRAY NOTE5_BI1A S&YR.BI03-S&YR.BI04 S&YR.BI06-S&YR.BI12 S&YR.BI14-
S&YR.BI20; /*removed BI05 and BI13*/
ARRAY NOTE5_BI1B S&YR.BI02A S&YR.BI02B S&YR.BI02C S&YR.BI02D ;
ARRAY NOTE5_BI1 S&YR.BI03-S&YR.BI04 S&YR.BI06-S&YR.BI12 S&YR.BI14-
S&YR.BI20 S&YR.BI02A S&YR.BI02B S&YR.BI02C S&YR.BI02D S&YR.BI02E;

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.BI03-S&YR.BI04 S&YR.BI06-S&YR.BI12
S&YR.BI14-S&YR.BI20: 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.BI04 S&YR.BI06-S&YR.BI12 S&YR.BI14-
S&YR.BI20; /*removed BI05 and BI13*/

```

```

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;
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 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;
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;
    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;

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;
            END;
        END;
    END;

```

```

        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 -- XSEX, 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 (XSEX = 1 AND (63<=INCHES<=76 OR INCHES = .)) OR
(XSEX = 2 AND (59<=INCHES<=70 OR INCHES = .)) THEN N23_HT=1;
ELSE IF XSEX IN (1,2) THEN DO;
  N23_HT=2;
  H&YR.071F=.0;
  H&YR.071I=.0;
END;
ELSE IF XSEX = . 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 (XSEX = 1 AND (126<=H&YR.072<=299 OR H&YR.072 = .)) OR
(XSEX = 2 AND (100<=H&YR.072<=274 OR H&YR.072 = .)) THEN N23_WT=1;
ELSE IF XSEX IN (1,2) THEN DO;
  N23_WT=2;
  H&YR.072 =.0;
END;
ELSE IF XSEX = . 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;
```

```

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 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;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;

```

**F.2.B - Q1FY2018\PROGRAMS\CODINGScheme\CSCHM18Q.FMT - Include file for Coding Scheme for Quarter 1 FY2018**

/\* 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.

S&YR.AC01 O\_S&YR.AC01  
S&YR.AC03 O\_S&YR.AC03  
YN.

S&YR.AC04 O\_S&YR.AC04 S&YR.AC04\_.

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\_.

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.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.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 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.

MISS\_1 MISS\_4-MISS\_7 MISS\_9 MISS\_TOT 4.

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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'  
  
 S&YR.AC01 = "Lst yr: missed appointment at this fcilty"  
 O\_S&YR.AC01 = "Lst yr: missed appointment at this fcilty"  
 S&YR.AC02A = "Missed apptmt: forgot about appointment"  
 O\_S&YR.AC02A = "Missed apptmt: forgot about appointment"  
 S&YR.AC02B = "Missed apptmt: felt better"  
 O\_S&YR.AC02B = "Missed apptmt: felt better"

S&YR.AC02C ="Missed apptmt: felt worse"  
O\_S&YR.AC02C="Missed apptmt: felt worse"  
S&YR.AC02D ="Missed apptmt: got care somewhere else"  
O\_S&YR.AC02D="Missed apptmt: got care somewhere else"  
S&YR.AC02E ="Missed apptmt: scheduling conflict"  
O\_S&YR.AC02E="Missed apptmt: scheduling conflict"  
S&YR.AC02F ="Missed apptmt: difficulty getting to fclty"  
O\_S&YR.AC02F="Missed apptmt: difficulty getting to fclty"  
S&YR.AC02G ="Missed apptmt: other"  
O\_S&YR.AC02G="Missed apptmt: other"  
S&YR.AC03 ="Lst yr: cancel/resched appointment at this  
fclty"  
O\_S&YR.AC03 ="Lst yr: cancel/resched appointment at this  
fclty"  
S&YR.AC04 ="Lst yr: how many appointments cancel/resched"  
O\_S&YR.AC04 ="Lst yr: how many appointments cancel/resched"  
S&YR.AC05A ="Cncl/resched apptmt: forgot about appointment"  
O\_S&YR.AC05A="Cncl/resched apptmt: forgot about appointment"  
S&YR.AC05B ="Cncl/resched apptmt: felt better"  
O\_S&YR.AC05B="Cncl/resched apptmt: felt better"  
S&YR.AC05C ="Cncl/resched apptmt: felt worse"  
O\_S&YR.AC05C="Cncl/resched apptmt: felt worse"  
S&YR.AC05D ="Cncl/resched apptmt: got care somewhere else"  
O\_S&YR.AC05D="Cncl/resched apptmt: got care somewhere else"  
S&YR.AC05E ="Cncl/resched apptmt: scheduling conflict"  
O\_S&YR.AC05E="Cncl/resched apptmt: scheduling conflict"  
S&YR.AC05F ="Cncl/resched apptmt: difficulty getting to  
fclty"  
O\_S&YR.AC05F="Cncl/resched apptmt: difficulty getting to  
fclty"  
S&YR.AC05G ="Cncl/resched apptmt: other"  
O\_S&YR.AC05G="Cncl/resched apptmt: other"  
  
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.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.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.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'  
with'  
O\_S&YR.010= 'Prblm getting prsnl doctor/nurse you are happy'  
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.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"  
N1\_AC1= "Coding Scheme Note 1\_AC1"  
N1\_AC2= "Coding Scheme Note 1\_AC2"  
N1\_AC3= "Coding Scheme Note 1\_AC3"  
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"

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"

HURRICANE = 'Hurricane Indicator'
;

```

**F.2.C - Q2FY2018\PROGRAMS\CODINGScheme\CSCHM18Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 2 FY2018 and HEDIS FY2018**

```
*****
**;
* 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.
* 04/05/2018 - Notes 10_B1, 22, 23, and 25 are removed
*
* 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;

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 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;

```

```

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;

```

```

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;

```

```

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 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;

```

```

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;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;

```

**F.2.D - Q2FY2018\PROGRAMS\CODINGScheme\CSCHM18Q.FMT - Include file for Coding Scheme for Quarter 2 FY2018 and HEDIS FY2018**

/\* 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.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\_.

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 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.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.

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 Select'  
H&YR.002C = 'Health plan(s) covered: TRICARE Select'  
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.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 prvdr'  
H&YR.011 = 'In lst yr:days btwn appt & see prvdr'  
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.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'  
O\_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\_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.BF4='Often do you use e-cigarettes'  
S&YR.BF4 = 'Often do you use e-cigarettes'

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"

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"  
N23\_HT= "Coding Scheme Note 23\_HT"  
N23\_WT= "Coding Scheme Note 23\_WT"  
N24 = "Coding Scheme Note 24"

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.E - Q3FY2018\PROGRAMS\CODINGScheme\CSCHM18Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 3 FY2018**

```
*****
**;
* 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.
* 04/05/2018 - Notes 10_B1, 22, 23, and 25 are removed
*
* 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;

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 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;

```

```

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 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;

```

```

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;

```

```

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;
```

```
/** 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 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;

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;

proc contents data=out.&outdata. varnum;
run;
%MEND;
%CSCHM;

```

**F.2.F - Q3FY2018\PROGRAMS\CODINGScheme\CSCHEM18Q.FMT - Include file for Coding Scheme for Quarter 3 FY2018**

/\* 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.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\_.

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 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.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.

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.

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 Select'  
H&YR.002C ='Health plan(s) covered: TRICARE Select'  
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.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.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\_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.BF4='Often do you use e-cigarettes'  
S&YR.BF4 = 'Often do you use e-cigarettes'

30 days' 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

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

activities 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

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"

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"

N23\_HT= "Coding Scheme Note 23\_HT"

N23\_WT= "Coding Scheme Note 23\_WT"

N23\_BE= "Coding Scheme Note 23\_BE"

N24 = "Coding Scheme Note 24"

```
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 - Q3FY2018\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;

PROC SORT DATA=IN.CSCHM&YR.Q OUT=TEMPA1; BY MPRID; RUN;

```

```

proc freq data=tempal; table flag_fin/list; run;

DATA TEMPAL2 OUT.DUPSA OVERLAP;
  SET TEMPAL (IN=A) ;
  BY MPRID;

/*****/
  /** KEY VARIABLES (Total=20)
  **/
  /** H18005 was replaced with H18025 for 2018Q2 - MBT
  **/

/*****/
  ARRAY KEYVAR H&YR.003 H&YR.006 H&YR.009 H&YR.013 H&YR.018 H&YR.019
H&YR.025 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;
  END;

```

```

        ELSE FNSTATUS = 12;
    END;
    ELSE IF FLAG_FIN IN(3,6,8,10,11,14,16,21,23,24) 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) THEN DO;
        IF FLAG_FIN IN (18,19,20) 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;

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"
;

%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
/MISSING LIST;
RUN;

```

**F.3.B - Q3FY2018\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.&Overlap_Fname. 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;

TITLE "FNSTATUS of overlap cases";
PROC FREQ DATA=OVERLAP_FNSTATUS;
TABLE FNSTATUS;
RUN;
TITLE;

PROC PRINT DATA=ovlp_nomatch;
    TITLE "Cases in the file that are not found in the overlap selectq
file";
RUN;

```

**F.4.A - Q3FY2018\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
*              4/5/2018 BY MTURBYFILL Remove KMILOPQY and KCIVOPQY due to
absence of H18005
*
* 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
                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"
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 rslts"
HP_FLU         = "65 and older, flu shot in last 12 mnths"
HP_SMOKE       = "Advised to quit smoking in last 12 mnths"
KCIIVINS       = "Beneficiary coverd 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.
HP_PRNTL       PRNTL.
HP_MAMOG       HAYNN.
HP_MAM50       HAYNN.
HP_OBESE       HAYNN.
HP_PAP         HAYNN.
HP_BP          HAYNN2_.
HP_FLU         HAYNN.
HP_SMOKE       HAYNN.
KCIIVINS       HAYNN2_.
OUTCATCH       OCATCH.
HP_SMKH3       SMOKE.
HP_CESH3       SMOKE.
ENBGSMPL       $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 */

/* 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 */

/* 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 XENRLMT = 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 XENRLMT = 5 and H&YR.003 = 1) THEN
XINS_RSV = 6; /* Prime, >= 65 */
```

```
/* 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
        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*XINS_COV
    DBENCAT*XBENCAT
    FIELDAGE*ENBGSMPL*XENR_RSV*XENR_PCM
    FIELDAGE*XENRLLMT*H&YR.003*XINS_COV*XINS_RSV
    XTNEXREG*XREGION*CACSMPL
    XREGION*USA
    FIELDAGE*ENBGSMPL*XBNFGRP
    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 XSEXA 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
    ENBGSMPL*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*A*FIELDAGE*H&YR.061*HP_MAM50
    /MISSING LIST;
  FORMAT FIELDAGE $AGE2_. XSEX HASEX.;
RUN;

PROC FREQ DATA=CONVARQ2;
  TABLES XSEX*A*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 - Q3FY2018\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 - Q3FY2018\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
***       4/25/2018: Modified line 192 to add "TOP" to "if d_fac in(...)"
IMC 4/2018
***
*****
*****;

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/assigngeocell.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 in ('NONCAT' 'TGRO' 'TPR' 'TOP') then do;
/*updated to add "TOP" (replaced "TGRO") (IMC 4/2018)*/
if d_health in ('01','02','05','17') or (d_health = '23' and
tnexreg='N') then com_geo = '9901';
else if d_health in ('03','04','06','18') or (d_health = '23' and
tnexreg='S') then com_geo = '9902';
else if d_health in ('07','08','09','10','11','12','19','24') 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 - Q3FY2018\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','23','24') 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 - Q3FY2018\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.
*             04/05/2018 BY MTURBYFILL KMILOPCY and KCIVOPCY are removed, in
addition to H18005,
*                                     S18B01-04, H18066-H18070, H18072, and
H18074-H18079.
*                                     Notes 10_B1, 22, 23, and 25 are removed
as well.
*
* 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
*           7) 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	*/
ENBGSMP	\$ 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	*/
DSPONVVC	\$ 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.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.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	*/
S&YR.009	4	/* supplemental	*/
S&YR.010	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	*/



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 */	
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	*/
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	*/
N23_HT	8	/* CS flag variable	*/
N23_WT	8	/* CS flag variable	*/
N23_BE	8	/* CS flag variable	*/
N24	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	*/
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 */
USA          3      /* constructed */
XOCONUS      3      /* constructed */
OUTCATCH     8      /* constructed */
XSEXA       8      /* constructed */
XBMI        8      /* constructed */
XBMICAT     3      /* constructed */
XBNFGRP     8      /* constructed */
XSERVAFF    3      /* 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;
  title "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 - Q3FY2018\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 - Q3FY2018\Programs\Weighting\NewWeights\smplA1A2.SAS - Define the data sets and create the variables

```
*****
*****
*** Program: smplA1A2.sas
*** Task   : (40309.41H)
*** 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
***          6)Q3FY2018:As we know, the new contract reduces the number of
regions to two.
***             East Region(merges current N and S) and West Region (same as
before).
***             But in this transition period, we currently still have data
for three
***             TRICARE regions in the United States: North, South, and West.
***             In our Q3 data, we have to fix region for (D_HEALTH=23 and
24).
***             We can put d_health=24 to WEST.
***             We need to assign d_health=23 to 'N' and 'S' if the are not
'N' or 'S'
```

```

***          based on MASTCD or Random Assignment.
***          We did a similar work for Q3FY2018 NonResponse Sampling. We
can pull
***          that info and do the same for rest.
*****
*****;
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="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let quarter=Q3FY2018;

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;

/*Q3FY2018*/
LIBNAME NR
"/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER./paper_fyl8q3"; /*For
output data sets*/

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/NewWeigh
ts/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 DBENCAT);

```

```
run;
```

```

*****
***

```

```
Get the variables PGCD, PTNT_ID from extract data
```

```

*****
***;

```

```
proc sort data=selectq; by mprid;
run;
```

```
proc sort data=nr.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;
```

```

*****
***

```

```
*Q3FY2018:
```

```
Reading Tnex info from NonResponse Sampling:
```

```
For these records already assign the Tnex_grp in NR, we want to keep as is
without assign the new Tnex_grp using MASTCD or do the imputation
-Kevin and Sabrina -Q3FY2018
```

```

*****
***;

```

```
proc sort data=NR.sampla02pq_for_stat(keep=mprid Tnex_Grp) out=NRSample;
by mprid;
run;
```

```
data selectq;
merge selectq(in=a) NRSample(in=b);
by mprid;
if b then flag_NRSmpl=1;
if a;
run;
```

```
Title1 "Freq of Tnex_Grp (reading for Non-Response Sample file):";
```

```
Proc Freq Data=SelectQ;
```

```
Tables flag_NRSmpl*Tnex_Grp/List Missing;
```

```
Run;
```

```

*****
***

```

```
Merge the selectq with DEERS to get the address variable c_addr1
```

```

*****
***;

```

```
data deers;
```



```

set inr.DEERS(keep=ptnt_id c_addr1 grp_temp MASTCD); *Q3FY2018: reading
grp_temp MASTCD;
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 selectq2;
set selectq;
*Q3FY2018;
TNEX_GRP_old=TNEX_GRP;

```

```

***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 recommendation, 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 flag_NRSmpl~=1 Then do; /*Q3FY2018*/

  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';

```

```

end; /*Q3FY2018*/

/*
Q3FY2018: create CONUS after fixing d_health=24 and d_health=23 below.
***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;

/*****
/*Updating Code for Q3FY2018:
/*Correction for d_health=24 and d_health=23
/*****/
If (flag_NRSmpl~=1 and d_health='24') Then Do;
    Tnex_grp='W';
    Flag_dhealth=1;
End;
If d_health='23' and Tnex_Grp not in ('N','S') Then Tnex_grp='';

/*Assign missing Tnex_grp using MASTCD*/
If (d_health='23' and TNEX_grp='') Then Do;
    IF MASTCD IN ('TX','OK','AR','LA','MS','AL','GA','TN','SC','FL')
    then TNEX_grp='S';

    ELSE IF MASTCD IN ('WI','IL','MI','IN','KY','OH','WV','PA','VA','NC'
    'DC','MD','DE','NJ','NY','CT','RI','MA','VT','NH','ME') then
TNEX_grp='N';

    ELSE TNEX_grp=' '; *go for random assignment;
End;

If (d_health='23' and flag_NRSmpl~=1 and Flag_dhealth~=1 and TNEX_grp~='')
Then Flag_mastcd=1;

If TNEX_grp=' ' Then Flag_random_assign=1;

/*Random number to be used in Random Assignment*/
randomnum=uniform(748778);

label in_catch='In-catchment area indicator'
      TRS='TRICARE Reserve Select indicator';
run;

Title1 "Checking CrossTab:";
Proc Freq Data=selectq2;
Tables
TNEX_grp*TNEX_GRP_old*d_health*flag_NRSmpl*Flag_dhealth*Flag_mastcd*Flag_ran
dom_assign/List Missing;

```

```

where d_health in ('24','23');
Run;

*****
Random Assignment:
*****;
%macro docount;
%do group = 0 %to 5;
Title4 "Freq of TNEX_grp where grp_temp=&group. and tnex_Grp~=' '";
proc freq data=selectq2 noprint;
table tnex_grp/ out=counts&group.;
where grp_temp=&group. and /*tnexreg~=' '*/tnex_grp in ('N','S');
run;

proc transpose data=counts&group. out=counts&group.;
id tnex_grp;
run;

data counts&group.;
set counts&group.;
if _name_='COUNT' then delete;
grp_temp=&group.;
north=N/100;
run;
%end;
%mend docount;

%docount;

data counts (keep=grp_temp north /*oconus south*/);
set counts0 counts1 counts2 counts3 counts4 counts5;
run;

Title4 "Proc Print of Data=Counts";
proc print data=counts noobs;
run;

*****
*Create Data based on missing/non-missing Tnex_grp:
*****;
Data selectq_miss
      selectq_nomiss;
set selectq2;
If tnex_Grp=' ' Then Output selectq_miss;
Else Output selectq_nomiss;
run;

Title1 "Checking Freq of Grp_Temp for missing Tnext cases";
proc freq data=selectq_miss;
tables tnex_Grp*grp_temp/list missing;
run;

proc sort data=selectq_miss; by grp_temp; where tnex_Grp=' '; run;
proc sort data=counts; by grp_temp; run;

/*Random Assignment of tnex_Grp*/

```

```

data selectq_miss;
merge selectq_miss (in=A) counts (in=B);
by grp_temp;
if A and B;
if randomnum<north then tnex_Grp='N';
else tnex_Grp='S';
run;

Title1 "Checking Random Assignment (after randomly assign d_health=23 to N
and S Region):";
Proc Freq data=selectq_miss;
tables d_health*GRP_TEMP*Tnex_Grp/List Missing;
Run;

*Merging data sets;
data smpl;
set selectq_miss
    selectq_nomiss;

/*Q3FY2018:*/
length conus $1;
if TNEX_grp = 'O' then conus='0';
else if TNEX_grp in ('N', 'S', 'W') then conus='1';
run;

Title1 "Checking Cases where d_health in ('24','23'):";
Proc Freq Data=smpl;
Tables TNEX_GRP_old*TNEX_grp*d_health
    flag_NRSmpl*Flag_dhealth*Flag_mastcd*Flag_random_assign/List Missing;
where d_health in ('24','23');
Run;

Title1 "CrossTab of Selected Variables:";
proc freq data=smpl;
tables
flag_NRSmpl*Flag_dhealth*flag_mastcd*Flag_Random_assign*Tnex_Grp*conus
    conus*Tnex_Grp*d_health
    Tnex_Grp/List Missing;
Run;

Title1 "Checking Cases where flag_NRSmpl=1:";
Proc Freq Data=smpl;
Tables TNEX_GRP_old*TNEX_grp/List Missing;
where flag_NRSmpl=1;
Run;

/*****
Q3FY2018:
Correction for d_health=24 and d_health=23 ended here
*****/

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 - Q3FY2018\Programs\Weighting\NewWeights\logmdA1.SAS - Predict the response propensity score for the unknown eligibility adjustment

```
*****
*****
*** Program: logmdA1.sas (40309.41H)
*** Purpose: Use the SUDAAN model to predict the response propensity
***           score for the unknown eligibility adjustment step
*** Inputs  : conusA1.sas7bdat, oconusA1.sas7bdat, smp1A1A2.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=Q3FY2018;
%let shortquarter = fy18q3;

%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, smplA1A2.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
       PNLG_num*PNLG_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 =
/*Q3FY2018:*/
AGE_GRP4*Patc_grp
;

title3 "Check the zero cells for Conus";
%ZERO_ONE_CELLS(conus, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);
*Q3FY2018 no zero cells found;

/*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*/

/*Q3FY2018: Two way interaction from the 2-level chaid answer tree ran*/
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);

```

\*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 :
*****
*****;

```

```

/*
Summary of Stepwise
Selection

```

Wald	Variable	Effect	Number	Score
Step Entered	Removed	DF	In	Chi-Square
Chi-Square Pr >	ChiSq Label			
<.0001	1 AGE_GRP4	3	1	3717.9657
<.0001	2 FLAG_NR	1	2	1469.1584
<.0001	3 PCM_GRP	2	3	2000.1501
<.0001	4 RANK_GRP	3	4	996.0138
<.0001	5 SEX_GRP	1	5	229.0614

```

        6 SVC_GRP                2          6    163.9905
<.0001
        7 TNEX_GRP              2          7     71.6677
<.0001
        8 PATC_GRP              2          8     72.6323
<.0001
        9 AGE_GRP4*PATC_GRP     6          9     95.0776
<.0001
       10 IN_CATCH              1         10     58.1339
<.0001 In-catchment area indicator
       11 TRS                   1         11     36.7015
<.0001 TRICARE Reserve Select indicator
       12 FLAG_NADD             1         12      7.1956
0.0073
*/

```

```

*****
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
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEX_NUM
PATC_NUM
AGE_NUM4*PATC_NUM
INCAT_num
TRS
FLAG_NADD
);
*HL =0.0033
*Variable-to-drop: FLAG_NADD/0.026616;

%sudaan_conus(
%str(Run1: Dropping Incat),

```

```

AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEC_NUM
PATC_NUM
AGE_NUM4*PATC_NUM
INCAT_num
TRS
/*FLAG_NADD          1st*/
);
*HL = 0.0022
*Variable-to-drop: INCAT_num/0.017979 ;

```

```

%sudaan_conus(
%str(Run2: Dropping Incat),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEC_NUM
PATC_NUM
AGE_NUM4*PATC_NUM
/*INCAT_num          2nd*/
TRS
/*FLAG_NADD          1st*/
);
*HL = 0.0109
*Variable-to-drop: TRS/0.004091 ;

```

```

%sudaan_conus(
%str(Run3: Dropping Incat),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEC_NUM
PATC_NUM
AGE_NUM4*PATC_NUM
/*INCAT_num          2nd*/
/*TRS                 3rd*/
/*FLAG_NADD          1st*/
);
*HL =0.0231
*Variable-to-drop: SVC_NUM/0.000240 ;

```

```

%sudaan_conus(
%str(Run4: Dropping Incat),
AGE_NUM4
FLAG_NR
PCM_NUM

```

```

RANK_NUM
SEX_NUM
/*SVC_NUM          4th*/
TNEX_NUM
PATC_NUM
AGE_NUM4*PATC_NUM
/*INCAT_num        2nd*/
/*TRS              3rd*/
/*FLAG_NADD        1st*/
);
*HL = 0.0571
*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 0.0571 (run4).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 .
*/
%sudaan_conus(
%str(Ru5: Initial Model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEX_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num*/
/*TRS*/
/*FLAG_NADD*/
);

*HL =0.3170
*Variable-to-drop: TNEX_NUM/0.019877 ;

%sudaan_conus(
%str(Ru6: Initial Model),

```

```

AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
/*TNEC_NUM      1st*/
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num*/
/*TRS*/
/*FLAG_NADD*/
);

```

```

*HL =0.1149
*Variable-to-drop: SVC_NUM/0.000157 ;

```

```

%sudaan_conus(
%str(Ru7: Initial Model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
/*SVC_NUM      2nd*/
/*TNEC_NUM      1st*/
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num*/
/*TRS*/
/*FLAG_NADD*/
);

```

```

*HL =0.1984
*Variable-to-drop: x ;

```

```

*****
* Method 2 seems to be a candidate with highest 0.3170(run5)
*****;

```

```

*****
*                               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(Run8: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM

```

```

SVC_NUM
TNEC_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
INCAT_num
TRS
/*FLAG_NADD*/
);
*HL = 0.0012
*Variable-to-drop:INCAT_num /0.016802 ;

```

```

%sudaan_conus(
%str(Run9: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEC_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
TRS
/*FLAG_NADD*/
);
*HL = 0.4058
*Variable-to-drop:TNEC_NUM/0.019365 ;

```

```

%sudaan_conus(
%str(Run10: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
/*TNEC_NUM          2nd*/
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
TRS
/*FLAG_NADD*/
);
*HL = 0.0379
*not as good as adding TRS/0.011060 ;

```

```

%sudaan_conus(
%str(Run11: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
/*TNEC_NUM          2nd*/

```

```

PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
/*TRS                3rd*/
/*FLAG_NADD*/
);
* 0.1149
Next variable to drop: SVC_NUM/0.000157 ;

```

```

%sudaan_conus(
%str(Run12: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
/*SVC_NUM          4th*/
/*TNEC_NUM          2nd*/
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
/*TRS                3rd*/
/*FLAG_NADD*/
);
* 0.1984
Next variable to drop: x ;

```

```

*****
*Method 3 ended the model with HL=0.4058(run9)
*****;

```

```

*****
*                               4th APPROACH                               *
* -----*
* Trying to take out strong covariates one at a time                       *
*****;

```

```

*****
*                               5th APPROACH                               *
* -----*
* Trying Random Combination                                                 *
*****;
*since we have a group of good candidate model in Approach 4th, we will skip
this;

```

```

*****
*                               6th APPROACH                               *
* -----*
* Running Final Model from Previous Quarter                               *
/* (Variable list won't match with current quarter)                       *
*****;

```

```

*****
*                               CHECKING AIC and Rates:                       *
*****;
%let Var5 =

```

```

AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEX_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num*/
/*TRS*/
/*FLAG_NADD*/
;
*HL =0.3170
*Variable-to-drop: TNEX_NUM/0.019877 ;
%Check_AIC_and_rates(InFile=conus, RunNo=Run5, VariableList=&Var5.);

```

```

%Let Var7 =
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
/*SVC_NUM          2nd*/
/*TNEX_NUM          1st*/
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num*/
/*TRS*/
/*FLAG_NADD*/
;
*HL =0.1984
*Variable-to-drop: x ;
%Check_AIC_and_rates(InFile=conus, RunNo=Run7, VariableList=&Var7.);

```

```

%Let Var9 =
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEX_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
TRS
/*FLAG_NADD*/
;
*HL = 0.4058
*Variable-to-drop:TNEX_NUM/0.019365 ;
%Check_AIC_and_rates(InFile=conus, RunNo=Run9, VariableList=&Var9.);

```

```

*=====
=====

```

```

                                SUMMARY TABLE :
#   Sudaan Fit  Largest Ind.Pvalue  Intercept Only  Intercept & Covariates
Concordant  Discordant
5   0.3170      0.019877           66616.185       56460.236
    76.6        23.2
7   0.1984      0.000000           66616.185       56461.672
    75.7        22.4
9   0.4058      0.019365           66616.185       56419.952
    76.6        23.1

```

```

*****
*****

```

Final Model:

```

#   Sudaan Fit  Largest Ind.Pvalue  Intercept Only  Intercept & Covariates
Concordant  Discordant
**9  0.4058      0.019365           66616.185       56419.952
    76.6        23.1

```

\*\* 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(Run9: Main Effects only model),
AGE_NUM4
FLAG_NR
PCM_NUM
RANK_NUM
SEX_NUM
SVC_NUM
TNEX_NUM
PATC_NUM
/*AGE_NUM4*PATC_NUM*/
/*INCAT_num          1st*/
TRS
/*FLAG_NADD*/
);
*HL = 0.4058
*Variable-to-drop:TNEX_NUM/0.019365 ;

```

```
*=====
```

```
=====
```

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 PNLC_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 =
/*Q3FY2018*/
PATC_GRP*AGE_GRP4
PATC_GRP*RANK_GRP
;

title3 "Check the zero cells for Oconus";
%ZERO_ONE_CELLS(oconus, &Vars_in_interactions_oconus., eligkwn,
&Interactions_from_chaid_oconus.);
*Q3FY2018 no zero cells;

/*
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
/*Q3FY2018: Two way interaction from Answer Tree*/
PATC_GRP*AGE_GRP4
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);
```

```
/* Q3FY2018:
```

Summary of Stepwise

```
Selection
```

Wald	Variable	Effect	Number	Score
Step Entered	Chi-Square	Removed	DF	In Chi-Square
Pr >	ChiSq	Label		
<.0001	1	PATC_GRP	2	1 405.1992
<.0001	2	AGE_GRP4	3	2 161.2485
<.0001	3	SVC_GRP	2	3 112.9120
<.0001	4	RANK_GRP	3	4 52.9489
<.0001	5	PATC_GRP*RANK_GRP	6	5 38.9432
<.0001	6	CHCSADDR	1	6 23.2202
0.0019	7	TRS	1	7 9.6737
0.0027	8	TRICARE Reserve Select indicator	1	6
	0.9583	TRICARE Reserve Select indicator		

```

*****
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
RANK_NUM
PATC_NUM*RANK_NUM
chcs_num
);
*HL = 0.1776
*Variable-to-drop/Largest Pvalue = CHCS_NUM / 0.035214;

%sudaan_oconus(
%str(Run1: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
RANK_NUM
PATC_NUM*RANK_NUM
/*chcs_num          1st*/
);
*HL = 0.1644
*Variable-to-drop/Largest Pvalue = PATC_NUM * RANK_NUM / 0.000138 ;

%sudaan_oconus(
%str(Run2: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
RANK_NUM
/*PATC_NUM*RANK_NUM    2nd*/
/*chcs_num             1st*/
);
*HL = 0.5019
*Variable-to-drop/Largest Pvalue = RANK_NUM / 0.000073 ;

%sudaan_oconus(
%str(Run3: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
SVC_NUM
/*RANK_NUM            3rd*/
/*PATC_NUM*RANK_NUM   2nd*/
/*chcs_num            1st*/
);
*HL = 0.3117
*Variable-to-drop/Largest Pvalue = SVC_NUM / 0.000021 ;

%sudaan_oconus(
%str(Run4: Final model from SAS stepwise),
PATC_NUM
AGE_NUM4
/*SVC_NUM             4th*/
/*RANK_NUM             3rd*/
/*PATC_NUM*RANK_NUM   2nd*/
/*chcs_num            1st*/
);
*HL = 0.2800

```

```

*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
RANK_NUM
PATC_NUM*RANK_NUM
chcs_num
);
*HL = 0.1776 ;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=1, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
RANK_NUM
PATC_NUM*RANK_NUM
/*chcs_num          1st*/
);
*HL = 0.1644;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=2, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
RANK_NUM
/*PATC_NUM*RANK_NUM    2nd*/
/*chcs_num            1st*/
);
*HL = 0.5019;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=3, VariableList=
PATC_NUM
AGE_NUM4
SVC_NUM
/*RANK_NUM            3rd*/
/*PATC_NUM*RANK_NUM    2nd*/
/*chcs_num            1st*/
);
*HL = 0.3117;

%Oconus_check_AIC_and_rates(InFile=oconus, RunNo=4, VariableList=
PATC_NUM
AGE_NUM4
/*SVC_NUM            4th*/
/*RANK_NUM            3rd*/
/*PATC_NUM*RANK_NUM    2nd*/
/*chcs_num            1st*/
);
*HL = 0.2800;

/*                                SUMMARY TABLE :

```

#	Sudaan Fit	Largest Concordant Discordant	Ind.Pvalue	Intercept Only	Intercept & Covariates
0	0.1776		0.035214	243038.86	227947.30
	64.2	33.4			
1	0.1644		0.000138	243038.86	228270.63
	64.3	32.6			
2	0.5019		0.000073	243038.86	228532.05
	63.5	33.4			
3	0.3117		0.000021	243038.86	228698.94
	62.5	32.2			
4	0.2800		0.000000	243038.86	229174.27
	57.9	28.5			

final model:

*1	0.1644		0.000138	243038.86	228270.63
	64.3	32.6			

\*\* Note:

Smallest is better for AIC and Discordant.

Largest is better for Concordant and Sudaan Fit.

\*/

\*\*\*\*\*

\*\*Run FINAL OCONUS Model;

\*\*\*\*\*;

\*Q3FY2018;

%sudaan\_oconus(

%str(Run1: Final model from SAS stepwise),

PATC\_NUM

AGE\_NUM4

SVC\_NUM

RANK\_NUM

PATC\_NUM\*RANK\_NUM

/\*chcs\_num 1st\*/

);

\*HL = 0.1644

\*Variable-to-drop/Largest Pvalue = PATC\_NUM \* RANK\_NUM / 0.000138 ;

\*=====

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 - Q3FY2018\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 - Q3FY2018\Programs\Weighting\NewWeights\adjwt1.SAS - Calculate the unknown eligibility adjusted weight

```

dm 'clear output;clear log';
*****
*****
*** Program : Adjwt1.sas
*** Task    : 40309.41H
*** 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=Q3FY2018;

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;

*Q3FY2018 after checking with Eric we pick run2
5 Conus and 4 Oconus cell, then Collapse => CONUS (pctlpts = 20 40 60
80) and OCONUS (pctlpts =25 50 75;

***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 out;
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;

***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=A1conus);
%univ_oconus(inputdata=in.logmdA1, step=1, region=0, var=PscoreA1,
cellvar=Pcell_A1, outputdata=Aloconus);

/*Q3FY2018:
After check with Eric, we pick run2 as the final option.

We tried four usual ones first. Using equal cutoff tried "5 conus and 4
oconus with and without collapse" and "4 conus and 3 oconus with and without
collapse" (Run 1-4).
Run 5 (we used in Q1FY2017 and Q1FY2018) and Run 6 (we used in Q3FY2017)

Run1 and Run3 the A1 value are pretty high which is not good.
Run 2, 4, 5 and 6 looks acceptable, we think run 5 would be a good option or
if we prefer more weighting cells then Run2 could also be picked with
highest A1=28. but want to check with you. Let us know your suggestion.

Run1: 5 Conus and 4 Oconus => CONUS
(pctlpts = 20 40 60 80) and OCONUS (pctlpts =25 50 75)
Run2: 5 Conus and 4 Oconus cell, then Collapse => CONUS (pctlpts = 20 40
60 80) and OCONUS (pctlpts =25 50 75)
Run3: 4 Conus and 3 Oconus => CONUS
(pctlpts = 25 50 75) and OCONUS (pctlpts =33.33 66.66)
Run4: 4 Conus and 3 Oconus, then Collapse => CONUS (pctlpts =25
50 75) and OCONUS (pctlpts =33.33 66.66)

```

```

Run5: 4 Conus and 3 Oconus, then Collapse          => CONUS (pctlpts =25
50 75)                and OCONUS (pctlpts =50 75)
Run6: 3 Conus and 3 Oconus                          => CONUS
(pctlpts =60 90)                and OCONUS (pctlpts =60 90)

```

Run1: 5 Conus and 4 Oconus:

CONUS (pctlpts = 20 40 60 80) and OCONUS (pctlpts =25 50 75) cutoff points are given below:

```

conus
Obs  CUTOFF20  CUTOFF40  CUTOFF60  CUTOFF80
1    0.028704  0.063445  0.11489  0.18385
oconus
Obs  CUTOFF25  CUTOFF50  CUTOFF75
1    0.030424  0.080383  0.17298
Obs  PCELL_A1  CNTG1    CNTG2    CNTG3    CELLCNT    SUMG1
SUMG2  SUMG3    SUMBWT      A1
1      1001      67       0      3129     3196      999.76
0.00   49884.51   50884.27  50.8965
2      1002      282      2      2502     2786      4202.22
26.70   68981.84   73210.77  17.3119
3      1003      445      0      3106     3551     16059.86
0.00   117303.59  133363.45  8.3041
4      1004      573      0      1820     2393     18369.07
0.00   56669.64   75038.71  4.0851
5      1101      403      1      17314    17718    10940.18
15.65   471333.81  482289.64  44.0213
6      1102      772      3      16893    17668    34964.84
53.76   772154.88  807173.48  23.0499
7      1103      1773     0      15909    17682    96788.22
0.00   990020.33  1086808.55  11.2287
8      1104      2643     6      15142    17791    235723.13
4693.55  1316124.50  1556541.18  6.4743
9      1105      5435     15     12081    17531    901066.26
9198.44  2229587.60  3139852.30  3.4494
=====
=====
=====
=====
=====
=====
=====
=====
=====
=====
=====
13988.10  6072060.71  7405162.35

```

Run2: 5 Conus and 4 Oconus cell, then Collapse:

CONUS (pctlpts = 20 40 60 80) and OCONUS (pctlpts =25 50 75) cutoff points are given below:

```

conus
Obs  CUTOFF20  CUTOFF40  CUTOFF60  CUTOFF80
1    0.028704  0.063445  0.11489  0.1838523208
oconus
Obs  CUTOFF25  CUTOFF50  CUTOFF75
1    0.030424  0.080383  0.17298
Obs  PCELL_A1  CNTG1    CNTG2    CNTG3    CELLCNT    SUMG1
SUMG2  SUMG3    SUMBWT      A1
1      1002      349      2      5631     5982     5201.98
26.70   118866.35  124095.04  23.7335

```

```

2      1003      445      0      3106      3551      16059.86
0.00   117303.59   133363.45   8.3041
3      1004      573      0      1820      2393      18369.07
0.00   56669.64   75038.71   4.0851
4      1102      1175      4      34207     35386     45905.01
69.41  1243488.70  1289463.12  28.0474
5      1103      1773      0      15909     17682     96788.22
0.00   990020.33   1086808.55  11.2287
6      1104      2643      6      15142     17791     235723.13
4693.55 1316124.50  1556541.18  6.4743
7      1105      5435      15     12081     17531     901066.26
9198.44 2229587.60  3139852.30  3.4494
=====
=====      12393      27      87896      100316     1319113.53
13988.10 6072060.71  7405162.35
Run3: 4 Conus and 3 Oconus:

```

CONUS (pctlpts = 25 50 75) and OCONUS (pctlpts =33.33 66.66) cutoff points are given below:

```

conus
Obs      CUTOFF25      CUTOFF50      CUTOFF75
1      0.035009      0.083998      0.15772
oconus
Obs      CUTOFF33_      CUTOFF66_
1      0.057625      0.11808
Obs      PCELL_A1      CNTG1      CNTG2      CNTG3      CELLCNT      SUMG1
SUMG2      SUMG3      SUMBWT      A1
1      1001      237      1      4684      4922      3489.60
13.35   99010.62      102513.57   29.2649
2      1002      308      1      2765      3074      9762.67
13.35   99958.50      109734.52   11.2249
3      1003      822      0      3108      3930      26378.64
0.00   93870.46      120249.11   4.5586
4      1101      558      1      21571     22130     15693.91
15.65   617355.31   633064.87   40.2981
5      1102      1330      3      20796     22129     66170.94
53.76  1135898.24   1202122.94   18.1522
6      1103      2933      4      19304     22241     191909.35
3313.66 1280912.30   1476135.32   7.5613
7      1104      6205      17     15668     21890     1005708.42
10578.33 2745055.28   3761342.02   3.7011
=====
=====      12393      27      87896      100316     1319113.53
13988.10 6072060.71  7405162.35
Run4: 4 Conus and 3 Oconus then Collapse:

```

CONUS (pctlpts =25 50 75) and OCONUS (pctlpts =33.33 66.66) cutoff points are given below:

```

conus
Obs      CUTOFF25      CUTOFF50      CUTOFF75
1      0.035009      0.083998      0.15772

```

oconus

Obs	CUTOFF33_	CUTOFF66_				
1	0.057625	0.11808				
Obs	PCELL_A1	CNTG1	CNTG2	CNTG3	CELLCNT	SUMG1
SUMG2	SUMG3	SUMBWT		A1		
1	1002	545	2	7449	7996	13252.27
26.70	198969.12	212248.09		15.9838		
2	1003	822	0	3108	3930	26378.64
0.00	93870.46	120249.11		4.5586		
3	1102	1888	4	42367	44259	81864.85
69.41	1753253.55	1835187.81		22.3983		
4	1103	2933	4	19304	22241	191909.35
3313.66	1280912.30	1476135.32		7.5613		
5	1104	6205	17	15668	21890	1005708.42
10578.33	2745055.28	3761342.02		3.7011		
		=====	=====	=====	=====	=====
		=====	=====	=====	=====	=====
		12393	27	87896	100316	1319113.53
13988.10	6072060.71	7405162.35				

Run5: 4 Conus and 3 Oconus then Collapse:

CONUS (pctlpts =25 50 75) and OCONUS (pctlpts =50 75) cutoff points are given below:

conus

Obs	CUTOFF25	CUTOFF50	CUTOFF75
1	0.035009	0.083998	0.15772

oconus

Obs	CUTOFF50	CUTOFF75				
1	0.080383	0.17298				
Obs	PCELL_A1	CNTG1	CNTG2	CNTG3	CELLCNT	SUMG1
SUMG2	SUMG3	SUMBWT		A1		
1	1001	349	2	5631	5982	5201.98
26.70	118866.35	124095.04		23.7335		
2	1002	445	0	3106	3551	16059.86
0.00	117303.59	133363.45		8.3041		
3	1003	573	0	1820	2393	18369.07
0.00	56669.64	75038.71		4.0851		
4	1102	1888	4	42367	44259	81864.85
69.41	1753253.55	1835187.81		22.3983		
5	1103	2933	4	19304	22241	191909.35
3313.66	1280912.30	1476135.32		7.5613		
6	1104	6205	17	15668	21890	1005708.42
10578.33	2745055.28	3761342.02		3.7011		
		=====	=====	=====	=====	=====
		=====	=====	=====	=====	=====
		12393	27	87896	100316	1319113.53
13988.10	6072060.71	7405162.35				

Run6: 3 Conus and 3 Oconus:

CONUS (pctlpts =60 90) and OCONUS (pctlpts =60 90) cutoff points are given below:

conus

```

Obs    CUTOFF60    CUTOFF90
1      0.11489    0.24688
oconus
Obs    CUTOFF60    CUTOFF90
1      0.11801    0.21615
Obs    PCELL_A1    CNTG1    CNTG2    CNTG3    CELLCNT    SUMG1
SUMG2          SUMG3          SUMBWT          A1

1      1001          476      2      6934    7412    10654.84
26.70    180927.26    191608.80    17.9383
2      1002          604      0      2894    3498    18608.63
0.00    86053.05    104661.68    5.6244
3      1003          287      0      729    1016    10367.44
0.00    25859.28    36226.72    3.4943
4      1101          2948     4      50116   53068   142693.23
69.41    2233509.03    2376271.67    16.6449
5      1102          4432    13    22101   26546   559398.37
10670.54    2539275.01    3109343.92    5.4543
6      1103          3646     8      5122    8776    577391.02
3221.45    1006437.09    1587049.56    2.7334
=====
=====          12393      27      87896    100316    1319113.53
13988.10    6072060.71    7405162.35
*/

```

```

*Q3FY2018;
***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';
else 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;

*Q3FY2018 Update Title below based on current quarter cutoff decision;
title3 "Check for CELLSA1 Data Set (using pctlpts =20 50 75 for conus and
33.33 66.66 for 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 various 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_num*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 - Q3FY2018\Programs\Weighting\NewWeights\adjwt2.SAS - Calculate the nonresponse adjusted weight**

```

*****
*****
*** Program: Adjwt2.sas
*** Task   : 40309.41H
*** 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=Q3FY2018;

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 smp1A2(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*/
/*Q3FY2018
Please create the weighing cells using the order of cell appear in the
answer tree plots for easy QC check*/
if conus='1' then do;
  if AGE_GRP4 in ('3','2') then do;
    pcell_a2='2101';
  end;
  else if AGE_GRP4 in ('1') then do;
    pcell_a2='2102';
  end;
  else if AGE_GRP4 in ('4') then do;
    if CHCSADDR in ('1') then pcell_a2='2103';
    else if CHCSADDR in ('0') then pcell_a2='2104';
  end;
end;
/*Based on oconus_A2_level2_ageGRP4_tree.htm*/
/*Q3FY2018*/
else if conus='0' then do;
  if SEX_GRP in ('1') Then DO;
    IF AGE_GRP4 IN ('4','3') THEN pcell_a2='2001';
    ELSE IF AGE_GRP4 IN ('2','1') THEN pcell_a2='2002';
  END;
  else if SEX_GRP in ('2') Then do;
    if IN_CATCH in ('0') then pcell_a2='2003';
    else if IN_CATCH in ('1') then pcell_a2='2004';
  end;
end;
run;

title3 'Check the construction of weighting classes';

```



```

proc freq data=merged;
tables conus*Pcell_A2/missing list;
run;

/*Q3FY2018*/
title3 'Check the Construction of Weighting Classes (CONUS)';
proc freq data=merged;
where conus='1';
tables pcell_a2*conus*AGE_GRP4*CHCSADDR/missing list;
run;

/*Q3FY2018*/
title3 'Check the Construction of Weighting Classes (OCONUS)';
proc freq data=merged;
where conus='0';
tables pcell_a2*conus*SEX_GRP*IN_CATCH*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=cells2;
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=cells2;
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=cells2 normal ;
var a2;
run;

proc sort data=cells2;
by &domain2.;
run;

data adjwt2;
merge &inpt. cells2;
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 *****;

```

**F.10 - Q3FY2018\Programs\Weighting\NewWeights\adjwtp.SAS - Calculate the final adjusted weight**

```

*****
**
*** Program: adjwtp.sas
*** Task   : 40309.41H
*** Purpose: Assign the final adjusted weight for all sample cases
*** Inputs: Adjwtp1.sas7bdat adjwtp2.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=Q3FY2018;

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; * adjwtp1.sas7bdat, adjwtp2.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
prodadj;
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 - Q3FY2018\Programs\Weighting\NewWeights\postwt.SAS - Do the poststratification

```
*****
*****
*** Program: postwt.sas
*** Task   : 40309.41H
*** 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=Q3FY2018;

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/NewWeigh
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 - Q3FY2018\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 - Q3FY2018\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 - Q3FY2018\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: 40309.41H
*** 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=Q3FY2018;

*** 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_tnexpcm;
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
*****;

*Q3FY2018: Update Final Trim Weight and Domain Macro variables Every
Quarter;
%LET TrimWtThisQtr = Newtrim4;
%LET TrimDomainThisQtr = TNEXREG;

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 - Q3FY2018\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: 40309.41H
*** 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=Q3FY2018;

*** 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/NewWeig
hts/calpoststr.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&QUARTER./Programs/Weighting/NewWeig
hts/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 - Q3FY2018\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=Q3FY2018;

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
*****;

*Q3FY2018: Update Final Trim Weight and Domain
          Macro variables Below Every Quarter;
%LET TrimWtThisQtr      = Newtrim4;
%LET TrimDomainThisQtr = TNEXREG;

%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 - Q3FY2018\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.
*           03/05/2018 by MTURBYFILL Renamed HURRICANE, applies only
to Q1FY2018
*           04/30/2018 BY MTURBYFILL Renamed public use file to _1A
*           05/01/2018 BY ICONNOR COMMENTED OUT XPT EXPORT AT END OF PROGRAM
*
*****
* Define global parameters.
*****
;
%LET DSN1 = HCS&YR.&QT._1A; * 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 Num_email Has_email Sent_email)
  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 PNBRTHTDT 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: ADDWG TSA.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.
*****
;
/****COMMENTING OUT THE EXPORT HERE BECAUSE IT IS BEING CREATED IN THE
WINDOWSVERSIONFORDHA PROGRAM (IMC 2018)****/
/*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 - Q2FY2018h\Programs\Weighting\addwgtsa\_HEDISB.sas - Attach HEDIS weights to Q2 weights**

```

*****
*
* PROGRAM:   ADDWGTSASAS
* 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 = 18;
%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;

proc printto print = "&path./Programs/HCSDB_Database_BatchProgram.lst" log =
"&path./Programs/HCSDB_Database_BatchProgram.log" new;
run;

%LET DATAPATH= &path./Data/AFinal;

%LET DSN1 = HCS&YR.&QT._1A; * 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/HEDISFY2018/Data/AFinal/combine_HEDI
S_Q2";
LIBNAME INT
"/sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.t/Data/AFinal";
LIBNAME INH
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/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_2018";
* 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 TEMPA;
    SET MERGEQH MERGEQ2 ;

*Uncommented to use the original FNSTATUS;
    IF FNSTATUS = 11;
RUN;

PROC SORT DATA=TEMPA;BY MPRID;RUN;

DATA TEMP1
    OUT.MERGEQ
    ;
LENGTH POSTCELL $5.;
MERGE TEMPA(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 NEWFNSTATUS POSTCELL 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;

```

OUTPUT OUT.MERGEQ;

    IF NEWFNSTATUS = 11;

    IF NOT (IN1 AND IN2)
    THEN PUT "ERROR: NO MATCHING MPRID WITH MERGEQ..sas7bdat AND
&DSNw..sas7bdat";

    IF IN1 AND IN2;

    OUTPUT TEMP1;

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
        ;
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 INTIME;
RUN;

/* The third file is the same as the one above, but with INTIME 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;run;
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\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.18 - WEIGHTING\FIX2017XCATCH.SAS - Fix catchment reporting variable (XCATCH) for 2017 - 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
*           8) June 15, 2018 by Matt Turbyfill for 2018 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 = 17;

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 TEMP1;
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.A - WEIGHTING\COMB2018.SAS - Combine quarterly datasets into one annual file - Annual**

```

*****
*
* PROGRAM: COMB2018.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
*           9) June 15, 2018 by Matt Turbyfill for 2018 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 = 18;

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: HCSyqq_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"

;

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 "XCATCH.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;
```

```
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 DATA=OUT.COMB20&YR.; RUN;
```



**F.19.B - WEIGHTING\XCATCH.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.
*              4) 07/03/2018 BY IRNA MAY CONNOR. For HEDIS 2018, adding
'0326','0121','0119','0103','0058','0370'
*              in line 130.
*
*
* 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 V9
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2018\Data\AFinal";
DATA TEMP(KEEP=MPRID GEOCELL PCM ENRID XTNEXREG XSERVAFF XOCONUS PATCAT);
  SET TEMP1;
  BY MPRID;
  if pcm = 'MTF' then do;
    %INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2018\Programs\Sampling\AssignGe
oCell.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;

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);
SET TEMP;

```

```

LENGTH XCATCH 8;
com_geo = geocell;
if pcm = 'MTF' then do;
  %INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2018\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" or d_fac="TOP" then do;
    if d_health in ('01','02','05','17') or (d_health = '23' and
xtnexreg=1) then com_geo = '9901';
    else if d_health in ('03','04','06','18') or (d_health = '23' and
xtnexreg=2) then com_geo = '9902';
    else if d_health in ('07','08','09','10','11','12','19','24') 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'***;
  *** For HEDIS 2018, adding '0326','0121','0119','0103','0058','0370' ***;
  *****
  if geocell in
('0026','0068','0231','0378','0387','0405','0407','0508','6215','0366'
'0326','0121','0119','0103','0058','0370') 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 < 60 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.19.C - SAMPLING\assigngeocell.inc - Include file for XCATCH.INC, FIX2016XCATCH.SAS, and FIX2017XCATCH.SAS**

```
*****;  
*** Administration assignment ***;  
*****;  
if enrid = '0149' then geocell=dcatch;  
else if enrid = '0150' then geocell=dcatch;  
else if enrid = '0151' then geocell=dcatch;  
else if enrid = '0152' then geocell=dcatch;  
else if enrid = '0153' then geocell=dcatch;  
else if enrid = '0154' then geocell=dcatch;  
else if enrid = '0161' then geocell=dcatch;  
else if enrid = '0162' then geocell=dcatch;  
else if enrid = '0164' then geocell=dcatch;  
else if enrid = '0165' then geocell=dcatch;  
else if enrid = '0166' then geocell=dcatch;  
else if enrid = '0169' then geocell=dcatch;  
else if enrid = '0171' then geocell=dcatch;  
else if enrid = '0173' then geocell=dcatch;  
else if enrid = '0175' then geocell=dcatch;  
else if enrid = '0176' then geocell=dcatch;  
else if enrid = '0177' then geocell=dcatch;  
else if enrid = '0178' then geocell=dcatch;  
else if enrid = '0179' then geocell=dcatch;  
else if enrid = '0482' then geocell=dcatch;  
else if enrid = '1320' then geocell=dcatch;  
else if enrid = '5002' then geocell=dcatch;  
else if enrid = '5003' then geocell=dcatch;  
else if enrid = '5210' then geocell=dcatch;  
else if enrid = '5271' then geocell=dcatch;  
else if enrid = '5273' then geocell=dcatch;  
else if enrid = '5274' then geocell=dcatch;  
else if enrid = '5275' then geocell=dcatch;  
else if enrid = '5287' then geocell=dcatch;  
else if enrid = '5288' then geocell=dcatch;  
else if enrid = '5289' then geocell=dcatch;  
else if enrid = '5290' then geocell=dcatch;  
else if enrid = '5291' then geocell=dcatch;  
else if enrid = '5293' then geocell=dcatch;  
else if enrid = '5294' then geocell=dcatch;  
else if enrid = '5409' then geocell=dcatch;  
else if enrid = '5500' then geocell=dcatch;  
else if enrid = '5501' then geocell=dcatch;  
else if enrid = '5502' then geocell=dcatch;  
else if enrid = '5508' then geocell=dcatch;  
else if enrid = '5513' then geocell=dcatch;  
else if enrid = '5515' then geocell=dcatch;  
else if enrid = '5516' then geocell=dcatch;  
else if enrid = '5517' then geocell=dcatch;  
else if enrid = '5518' then geocell=dcatch;  
else if enrid = '5519' then geocell=dcatch;  
else if enrid = '5520' then geocell=dcatch;  
else if enrid = '5521' then geocell=dcatch;  
else if enrid = '5522' then geocell=dcatch;  
else if enrid = '5523' then geocell=dcatch;
```

```

else if enrid = '5526' then geocell=dcatch;
else if enrid = '5527' then geocell=dcatch;
else if enrid = '5528' then geocell=dcatch;
else if enrid = '5529' then geocell=dcatch;
else if enrid = '5530' then geocell=dcatch;
else if enrid = '5531' then geocell=dcatch;
else if enrid = '5532' then geocell=dcatch;
else if enrid = '5533' then geocell=dcatch;
else if enrid = '5534' then geocell=dcatch;
else if enrid = '5535' then geocell=dcatch;
else if enrid = '5997' then geocell=dcatch;
else if enrid = '5998' then geocell=dcatch;
else if enrid = '5999' then geocell=dcatch;
else if enrid = '6000' then geocell=dcatch;
else if enrid = '6001' then geocell=dcatch;
else if enrid = '6002' then geocell=dcatch;
else if enrid = '6003' then geocell=dcatch;
else if enrid = '6005' then geocell=dcatch;
else if enrid = '6007' then geocell=dcatch;
else if enrid = '6008' then geocell=dcatch;
else if enrid = '6009' then geocell=dcatch;
else if enrid = '6010' then geocell=dcatch;
else if enrid = '6011' then geocell=dcatch;
else if enrid = '6012' then geocell=dcatch;
else if enrid = '6020' then geocell=dcatch;
else if enrid = '6021' then geocell=dcatch;
else if enrid = '6022' then geocell=dcatch;
else if enrid = '6024' then geocell=dcatch;
else if enrid = '6036' then geocell=dcatch;
else if enrid = '6343' then geocell=dcatch;
else if enrid = '7038' then geocell=dcatch;
else if enrid = '7148' then geocell=dcatch;
else if enrid = '7285' then geocell=dcatch;
else if enrid = '7383' then geocell=dcatch;
else if enrid = '7384' then geocell=dcatch;
else if enrid = '7386' then geocell=dcatch;
else if enrid = '7387' then geocell=dcatch;
else if enrid = '7389' then geocell=dcatch;
else if enrid = '7390' then geocell=dcatch;
else if enrid = '7391' then geocell=dcatch;
else if enrid = '7393' then geocell=dcatch;
else if enrid = '7394' then geocell=dcatch;
else if enrid = '7395' then geocell=dcatch;
else if enrid = '7397' then geocell=dcatch;
else if enrid = '7398' then geocell=dcatch;
else if enrid = '7399' then geocell=dcatch;
else if enrid = '7400' then geocell=dcatch;
else if enrid = '7448' then geocell=dcatch;
else if enrid = '9990' then geocell=dcatch;
*****;
*** Dental assignment ***;
*****;
else if enrid = '0455' then geocell=dcatch;
else if enrid = '0457' then geocell=dcatch;
else if enrid = '0492' then geocell=dcatch;
else if enrid = '0816' then geocell=dcatch;
else if enrid = '0892' then geocell=dcatch;

```











```

else if enrid = '7334' then geocell=dcatch;
else if enrid = '7339' then geocell=dcatch;
else if enrid = '7340' then geocell=dcatch;
else if enrid = '7342' then geocell=dcatch;
else if enrid = '7343' then geocell=dcatch;
else if enrid = '7348' then geocell=dcatch;
else if enrid = '8899' then geocell=dcatch;
else if enrid = '8922' then geocell=dcatch;
else if enrid = '8952' then geocell=dcatch;
else if enrid = '8961' then geocell=dcatch;
else if enrid = '8967' then geocell=dcatch;
else if enrid = '8970' then geocell=dcatch;
else if enrid = '8973' then geocell=dcatch;
else if enrid = '8974' then geocell=dcatch;
else if enrid = '8975' then geocell=dcatch;
*****;
*** Inactive assignment ***;
*****;
else if enrid = '0000' then geocell=dcatch;
else if enrid = '0002' then geocell=dcatch;
else if enrid = '0007' then geocell=dcatch;
else if enrid = '0011' then geocell=dcatch;
else if enrid = '0012' then geocell=dcatch;
else if enrid = '0016' then geocell=dcatch;
else if enrid = '0017' then geocell=dcatch;
else if enrid = '0020' then geocell=dcatch;
else if enrid = '0021' then geocell=dcatch;
else if enrid = '0022' then geocell=dcatch;
else if enrid = '0023' then geocell=dcatch;
else if enrid = '0025' then geocell=dcatch;
else if enrid = '0027' then geocell=dcatch;
else if enrid = '0031' then geocell=dcatch;
else if enrid = '0037' then geocell=dcatch;
else if enrid = '0040' then geocell=dcatch;
else if enrid = '0041' then geocell=dcatch;
else if enrid = '0044' then geocell=dcatch;
else if enrid = '0054' then geocell=dcatch;
else if enrid = '0063' then geocell=dcatch;
else if enrid = '0065' then geocell=dcatch;
else if enrid = '0070' then geocell=dcatch;
else if enrid = '0071' then geocell=dcatch;
else if enrid = '0072' then geocell=dcatch;
else if enrid = '0080' then geocell=dcatch;
else if enrid = '0081' then geocell=dcatch;
else if enrid = '0082' then geocell=dcatch;
else if enrid = '0087' then geocell=dcatch;
else if enrid = '0088' then geocell=dcatch;
else if enrid = '0099' then geocell=dcatch;
else if enrid = '0102' then geocell=dcatch;
else if enrid = '0111' then geocell=dcatch;
else if enrid = '0115' then geocell=dcatch;
else if enrid = '0116' then geocell=dcatch;
else if enrid = '0155' then geocell=dcatch;
else if enrid = '0156' then geocell=dcatch;
else if enrid = '0157' then geocell=dcatch;
else if enrid = '0167' then geocell=dcatch;
else if enrid = '0168' then geocell=dcatch;

```









































































```

else if enrid = '8941' then geocell=dcatch;
else if enrid = '8942' then geocell=dcatch;
else if enrid = '8943' then geocell=dcatch;
else if enrid = '8944' then geocell=dcatch;
else if enrid = '8945' then geocell=dcatch;
else if enrid = '8946' then geocell=dcatch;
else if enrid = '8947' then geocell=dcatch;
else if enrid = '8948' then geocell=dcatch;
else if enrid = '8949' then geocell=dcatch;
else if enrid = '8950' then geocell=dcatch;
else if enrid = '8951' then geocell=dcatch;
else if enrid = '8953' then geocell=dcatch;
else if enrid = '8954' then geocell=dcatch;
else if enrid = '8955' then geocell=dcatch;
else if enrid = '8956' then geocell=dcatch;
else if enrid = '8957' then geocell=dcatch;
else if enrid = '8958' then geocell=dcatch;
else if enrid = '8959' then geocell=dcatch;
else if enrid = '8960' then geocell=dcatch;
else if enrid = '8962' then geocell=dcatch;
else if enrid = '8963' then geocell=dcatch;
else if enrid = '8964' then geocell=dcatch;
else if enrid = '8965' then geocell=dcatch;
else if enrid = '8966' then geocell=dcatch;
else if enrid = '8968' then geocell=dcatch;
else if enrid = '8969' then geocell=dcatch;
else if enrid = '8971' then geocell=dcatch;
else if enrid = '8972' then geocell=dcatch;
else if enrid = '8976' then geocell=dcatch;
else if enrid = '8978' then geocell=dcatch;
else if enrid = '8979' then geocell=dcatch;
else if enrid = '8980' then geocell=dcatch;
else if enrid = '8981' then geocell=dcatch;
else if enrid = '8982' then geocell=dcatch;
else if enrid = '8983' then geocell=dcatch;
else if enrid = '8984' then geocell=dcatch;
else if enrid = '8985' then geocell=dcatch;
else if enrid = '8986' then geocell=dcatch;
else if enrid = '8988' then geocell=dcatch;
else if enrid = '8989' then geocell=dcatch;
else if enrid = '8990' then geocell=dcatch;
else if enrid = '8991' then geocell=dcatch;
else if enrid = '8992' then geocell=dcatch;
else if enrid = '8993' then geocell=dcatch;
else if enrid = '8994' then geocell=dcatch;
else if enrid = '8995' then geocell=dcatch;
else if enrid = '8996' then geocell=dcatch;
else if enrid = '8997' then geocell=dcatch;
else if enrid = '8998' then geocell=dcatch;
else if enrid = '8999' then geocell=dcatch;
*****;
*** On board ship assignment ***;
*****;
else if enrid = '3002' then geocell=dcatch;

```

```
else if enrid = '3003' then geocell=dcatch;
*****;
*** Managed care contractor assignment ***;
*****;
else if enrid = '6913' then geocell=dcatch;
else if enrid = '6914' then geocell=dcatch;
else if enrid = '6915' then geocell=dcatch;
else if enrid = '6917' then geocell=dcatch;
else if enrid = '6918' then geocell=dcatch;
else if enrid = '6919' then geocell=dcatch;
else if enrid = '6923' then geocell=dcatch;
else if enrid = '6924' then geocell=dcatch;
*****;
*** Uniformed Services Family Health Plan assignment ***;
*****;
else if enrid = '0189' then geocell=dcatch;
else if enrid = '0190' then geocell=dcatch;
else if enrid = '0191' then geocell=dcatch;
else if enrid = '0192' then geocell=dcatch;
else if enrid = '0193' then geocell=dcatch;
else if enrid = '0194' then geocell=dcatch;
else if enrid = '0195' then geocell=dcatch;
else if enrid = '0196' then geocell=dcatch;
else if enrid = '0197' then geocell=dcatch;
else if enrid = '0198' then geocell=dcatch;
else if enrid = '0199' then geocell=dcatch;
```

**F.19.D - SAMPLING\assigncom\_geo.inc - Include file for XCATCH.INC, FIX2016XCATCH.SAS, and FIX2017XCATCH.SAS**

```
*****;  
*** Administration assignment ***;  
*****;  
if enrid = '0149' then com_geo=geocell;  
else if enrid = '0150' then com_geo=geocell;  
else if enrid = '0151' then com_geo=geocell;  
else if enrid = '0152' then com_geo=geocell;  
else if enrid = '0153' then com_geo=geocell;  
else if enrid = '0154' then com_geo=geocell;  
else if enrid = '0161' then com_geo=geocell;  
else if enrid = '0162' then com_geo=geocell;  
else if enrid = '0164' then com_geo=geocell;  
else if enrid = '0165' then com_geo=geocell;  
else if enrid = '0166' then com_geo=geocell;  
else if enrid = '0169' then com_geo=geocell;  
else if enrid = '0171' then com_geo=geocell;  
else if enrid = '0173' then com_geo=geocell;  
else if enrid = '0175' then com_geo=geocell;  
else if enrid = '0176' then com_geo=geocell;  
else if enrid = '0177' then com_geo=geocell;  
else if enrid = '0178' then com_geo=geocell;  
else if enrid = '0179' then com_geo=geocell;  
else if enrid = '0482' then com_geo=geocell;  
else if enrid = '1320' then com_geo=geocell;  
else if enrid = '5002' then com_geo=geocell;  
else if enrid = '5003' then com_geo=geocell;  
else if enrid = '5210' then com_geo=geocell;  
else if enrid = '5271' then com_geo=geocell;  
else if enrid = '5273' then com_geo=geocell;  
else if enrid = '5274' then com_geo=geocell;  
else if enrid = '5275' then com_geo=geocell;  
else if enrid = '5287' then com_geo=geocell;  
else if enrid = '5288' then com_geo=geocell;  
else if enrid = '5289' then com_geo=geocell;  
else if enrid = '5290' then com_geo=geocell;  
else if enrid = '5291' then com_geo=geocell;  
else if enrid = '5293' then com_geo=geocell;  
else if enrid = '5294' then com_geo=geocell;  
else if enrid = '5409' then com_geo=geocell;  
else if enrid = '5500' then com_geo=geocell;  
else if enrid = '5501' then com_geo=geocell;  
else if enrid = '5502' then com_geo=geocell;  
else if enrid = '5508' then com_geo=geocell;  
else if enrid = '5513' then com_geo=geocell;  
else if enrid = '5515' then com_geo=geocell;  
else if enrid = '5516' then com_geo=geocell;  
else if enrid = '5517' then com_geo=geocell;  
else if enrid = '5518' then com_geo=geocell;  
else if enrid = '5519' then com_geo=geocell;  
else if enrid = '5520' then com_geo=geocell;  
else if enrid = '5521' then com_geo=geocell;  
else if enrid = '5522' then com_geo=geocell;  
else if enrid = '5523' then com_geo=geocell;
```

```

else if enrid = '5526' then com_geo=geocell;
else if enrid = '5527' then com_geo=geocell;
else if enrid = '5528' then com_geo=geocell;
else if enrid = '5529' then com_geo=geocell;
else if enrid = '5530' then com_geo=geocell;
else if enrid = '5531' then com_geo=geocell;
else if enrid = '5532' then com_geo=geocell;
else if enrid = '5533' then com_geo=geocell;
else if enrid = '5534' then com_geo=geocell;
else if enrid = '5535' then com_geo=geocell;
else if enrid = '5997' then com_geo=geocell;
else if enrid = '5998' then com_geo=geocell;
else if enrid = '5999' then com_geo=geocell;
else if enrid = '6000' then com_geo=geocell;
else if enrid = '6001' then com_geo=geocell;
else if enrid = '6002' then com_geo=geocell;
else if enrid = '6003' then com_geo=geocell;
else if enrid = '6005' then com_geo=geocell;
else if enrid = '6007' then com_geo=geocell;
else if enrid = '6008' then com_geo=geocell;
else if enrid = '6009' then com_geo=geocell;
else if enrid = '6010' then com_geo=geocell;
else if enrid = '6011' then com_geo=geocell;
else if enrid = '6012' then com_geo=geocell;
else if enrid = '6020' then com_geo=geocell;
else if enrid = '6021' then com_geo=geocell;
else if enrid = '6022' then com_geo=geocell;
else if enrid = '6024' then com_geo=geocell;
else if enrid = '6036' then com_geo=geocell;
else if enrid = '6343' then com_geo=geocell;
else if enrid = '7038' then com_geo=geocell;
else if enrid = '7148' then com_geo=geocell;
else if enrid = '7285' then com_geo=geocell;
else if enrid = '7383' then com_geo=geocell;
else if enrid = '7384' then com_geo=geocell;
else if enrid = '7386' then com_geo=geocell;
else if enrid = '7387' then com_geo=geocell;
else if enrid = '7389' then com_geo=geocell;
else if enrid = '7390' then com_geo=geocell;
else if enrid = '7391' then com_geo=geocell;
else if enrid = '7393' then com_geo=geocell;
else if enrid = '7394' then com_geo=geocell;
else if enrid = '7395' then com_geo=geocell;
else if enrid = '7397' then com_geo=geocell;
else if enrid = '7398' then com_geo=geocell;
else if enrid = '7399' then com_geo=geocell;
else if enrid = '7400' then com_geo=geocell;
else if enrid = '7448' then com_geo=geocell;
else if enrid = '9990' then com_geo=geocell;
*****;
*** Inactive assignment ***;
*****;
else if enrid = '0000' then com_geo=geocell;
else if enrid = '0002' then com_geo=geocell;
else if enrid = '0007' then com_geo=geocell;
else if enrid = '0011' then com_geo=geocell;
else if enrid = '0012' then com_geo=geocell;

```













































































```

else if enrid = '8966' then com_geo=geocell;
else if enrid = '8968' then com_geo=geocell;
else if enrid = '8969' then com_geo=geocell;
else if enrid = '8971' then com_geo=geocell;
else if enrid = '8972' then com_geo=geocell;
else if enrid = '8976' then com_geo=geocell;
else if enrid = '8978' then com_geo=geocell;
else if enrid = '8979' then com_geo=geocell;
else if enrid = '8980' then com_geo=geocell;
else if enrid = '8981' then com_geo=geocell;
else if enrid = '8982' then com_geo=geocell;
else if enrid = '8983' then com_geo=geocell;
else if enrid = '8984' then com_geo=geocell;
else if enrid = '8985' then com_geo=geocell;
else if enrid = '8986' then com_geo=geocell;
else if enrid = '8988' then com_geo=geocell;
else if enrid = '8989' then com_geo=geocell;
else if enrid = '8990' then com_geo=geocell;
else if enrid = '8991' then com_geo=geocell;
else if enrid = '8992' then com_geo=geocell;
else if enrid = '8993' then com_geo=geocell;
else if enrid = '8994' then com_geo=geocell;
else if enrid = '8995' then com_geo=geocell;
else if enrid = '8996' then com_geo=geocell;
else if enrid = '8997' then com_geo=geocell;
else if enrid = '8998' then com_geo=geocell;
else if enrid = '8999' then com_geo=geocell;
else if enrid = '9991' then com_geo=geocell;
else if enrid = '9998' then com_geo=geocell;
else if enrid = '9999' then com_geo=geocell;
*****;
*** On board ship assignment ***;
*****;
else if enrid = '3002' then com_geo=geocell;
else if enrid = '3003' then com_geo=geocell;
*****;
*** Managed care contractor assignment ***;
*****;
else if enrid = '6913' then com_geo=geocell;
else if enrid = '6914' then com_geo=geocell;
else if enrid = '6915' then com_geo=geocell;
else if enrid = '6917' then com_geo=geocell;
else if enrid = '6918' then com_geo=geocell;
else if enrid = '6919' then com_geo=geocell;
else if enrid = '6923' then com_geo=geocell;
else if enrid = '6924' then com_geo=geocell;

```

**F.20 - 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.
*           14) 06/27/18 BY MATT TURBYFILL: Updates for 2018 survey.
*           Removed HEDIS-only fields.
*           15) 06/29/18 BY IRNA MAY CONNOR: ADDED 5_BI1-4 notes in length
statement.
*           16) 07/05/2018 BY IRNA MAY CONNOR: REMOVED STRATUMO and commented
out
*           AA AB AC AD AE AF DCW_ID DHP_CODE ALLCOUNT GEOCELLH in line
71
*           17) 07/06/2018 BY IRNA MAY CONNOR: REMOVED SELECTIONPROB_ALL
*           STRATUM_H STRATUM_4 FLAG_COMGEO_STRATUM4_SAME
*           FLAG_LIST_OF_53 FROM FINAL DATASET
*
* 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 = 18;

LIBNAME OUT          "..\..\DATA";
LIBNAME WTS          "N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\Data\";
LIBNAME LIBRARY     "..\..\Data\FMTLIB\WindowsVersionforDHA";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER NOFMterr VALIDVARNAME=V7;

%LET DSNI_1 = CREPWT;
%LET DSNI_2 = COMB20&YR.;
%LET DSNO_1 = HCS&YR.A_1A;
%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 NEWFNSTATUS /* jma Oct 24 2008 */
/*AA AB AC AD AE AF DCW_ID DHP_CODE ALLCOUNT GEOCELLH*/ /*not in the 2018
dataset*/

);

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 N1_AC1 N1_AC2 N1_AC3 N2 N3
N4 N5 N5_BI1 N5_BI2 N5_BI3 N5_BI4
N6 N7 N8 N8_01
N9 N10 N10_B1
N12 N13 N14 N15 N16
N17
N18 N19A N19B N20 N21 N21_BG1 N21_BG2 N21_BG3
N22 N23 N23_HT N23_WT N23_BE

```

N24 N25  
notes.

INHEDIS INHEDIS.  
INHCSDB INHCSDB.

XBMI xbmi.;

LABEL CFWT='Combined Annual NEW Weight';  
LABEL INHCSDB='1 if in HCSDB sample, 0 if HEDIS';  
LABEL INHEDIS='1 if in HEDIS sample, 0 if HCSDB';

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	*/
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 ADDWGTSAS.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	*/
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 variable	*/
H&YR.002A	4	/* Questionnaire variable	*/
H&YR.002C	4	/* Questionnaire variable	*/
H&YR.002N	4	/* Questionnaire variable	*/
H&YR.002O	4	/* Questionnaire variable	*/
H&YR.002P	4	/* Questionnaire variable	*/
H&YR.002Q	4	/* Questionnaire variable	*/
H&YR.002S	4	/* Questionnaire variable	*/
H&YR.002T	4	/* Questionnaire variable	*/
H&YR.002V	4	/* Questionnaire variable	*/
H&YR.002K	4	/* Questionnaire variable	*/
H&YR.002U	4	/* Questionnaire variable	*/
H&YR.002F	4	/* Questionnaire variable	*/
H&YR.002G	4	/* Questionnaire variable	*/
H&YR.002H	4	/* Questionnaire variable	*/
H&YR.002I	4	/* Questionnaire variable	*/
H&YR.002J	4	/* Questionnaire variable	*/
H&YR.002M	4	/* Questionnaire variable	*/
H&YR.002R	4	/* Questionnaire variable	*/
H&YR.002L	4	/* Questionnaire variable	*/
H&YR.003	4	/* Questionnaire variable	*/
H&YR.004	4	/* Questionnaire variable	*/
H&YR.005	4	/* Questionnaire variable	*/
H&YR.006	4	/* Questionnaire variable	*/
H&YR.007	4	/* Questionnaire variable	*/
H&YR.008	4	/* Questionnaire variable	*/
H&YR.009	4	/* Questionnaire variable	*/
H&YR.010	4	/* Questionnaire variable	*/
H&YR.011	4	/* Questionnaire variable	*/
H&YR.012	4	/* Questionnaire variable	*/
H&YR.013	4	/* Questionnaire variable	*/
H&YR.014	4	/* Questionnaire variable	*/
H&YR.015	4	/* Questionnaire variable	*/
H&YR.016	4	/* Questionnaire variable	*/
H&YR.017	4	/* Questionnaire variable	*/
H&YR.018	4	/* Questionnaire variable	*/
H&YR.019	4	/* Questionnaire variable	*/
H&YR.020	4	/* Questionnaire variable	*/
H&YR.021	4	/* Questionnaire variable	*/
H&YR.022	4	/* Questionnaire variable	*/
H&YR.023	4	/* Questionnaire variable	*/
H&YR.024	4	/* Questionnaire variable	*/
H&YR.025	4	/* Questionnaire variable	*/
H&YR.026	4	/* Questionnaire variable	*/
H&YR.027	4	/* Questionnaire variable	*/
H&YR.028	4	/* Questionnaire variable	*/



H&YR.075	4	/* Questionnaire variable	*/		
H&YR.076	4	/* Questionnaire variable	*/		
H&YR.077	4	/* Questionnaire variable	*/		
H&YR.078	4	/* Questionnaire variable	*/		
H&YR.079	4	/* Questionnaire variable	*/		
SREDA	4	/* Questionnaire variable	*/		
SRRACEA	4	/* Questionnaire variable	*/		
SRRACEB	4	/* Questionnaire variable	*/		
SRRACEC	4	/* Questionnaire variable	*/		
SRRACED	4	/* Questionnaire variable	*/		
SRRACEE	4	/* Questionnaire variable	*/		
/* SRRACEF	4	*/	/* Questionnaire variable	*/	/*not
used in 2018*/					
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.AC01	4	/* Q1 Supplement	*/		
S&YR.AC02A	4	/* Q1 Supplement	*/		
S&YR.AC02B	4	/* Q1 Supplement	*/		
S&YR.AC02C	4	/* Q1 Supplement	*/		
S&YR.AC02D	4	/* Q1 Supplement	*/		
S&YR.AC02E	4	/* Q1 Supplement	*/		
S&YR.AC02F	4	/* Q1 Supplement	*/		
S&YR.AC02G	4	/* Q1 Supplement	*/		
S&YR.AC03	4	/* Q1 Supplement	*/		
S&YR.AC04	4	/* Q1 Supplement	*/		
S&YR.AC05A	4	/* Q1 Supplement	*/		
S&YR.AC05B	4	/* Q1 Supplement	*/		
S&YR.AC05C	4	/* Q1 Supplement	*/		
S&YR.AC05D	4	/* Q1 Supplement	*/		
S&YR.AC05E	4	/* Q1 Supplement	*/		
S&YR.AC05F	4	/* Q1 Supplement	*/		
S&YR.AC05G	4	/* Q1 Supplement	*/		
S&YR.AC06A	4	/* Q1 Supplement	*/		
S&YR.AC06B	4	/* Q1 Supplement	*/		
S&YR.B01	4	/* Q1 Supplemental	*/		
S&YR.B02	4	/* Q1 Supplemental	*/		
S&YR.B03	4	/* Q1 Supplemental	*/		
S&YR.B04	4	/* Q1 Supplemental	*/		
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      */      /*no longer
on questionnaire*/
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.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.BF4      4      /* Q2 & Q3 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      */

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 */

SURVTYPE      8      /* Survey fielding variable */
HURRICAN      $ 4      /* Survey fielding variable */

```



```

    /** jma 11/17/11 MIQCNTL    $ 12    ***/
variable */

```

```

    /** EXPFLAG          8          /* CS flag variable    **/*AMK removed for
2013*/
    N1                   8          /* CS flag variable    */
    N1_AC1               8          /* CS flag variable    */
    N1_AC2               8          /* CS flag variable    */
    N1_AC3               8          /* CS flag variable    */
    N2                   8          /* CS flag variable    */
    N3                   8          /* CS flag variable    */
    N4                   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    */

    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_BE               8          /* CS flag variable    */
    N23_HT               8          /* CS flag variable    */
    N23_WT               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            */

```

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_OBESE	8	/* constructed	*/
HP_SMOKE	8	/* constructed	*/
HP_SMKH3	8	/* constructed	*/
HP_CESH3	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 (DROP=STRATUM_H SELECTIONPROB_ALL
             STRATUM_4 FLAG_COMGEO_STRATUM4_SAME EMAIL_ONLY
             FLAG_LIST_OF_53 HAS_EMAIL NUM_EMAIL SENT_EMAIL
             ZONE ZONE1 ZONE2 ZONE3 ZONE4
             PRN DMIS_ID D_PAR COM_GEO MIQCNTL);

```

```

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
        PNBRTHDT PGCD     MASTCD   MAPRZIP
        MAPRZIPX RANKCD   ENRID
    );
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.
*****
;
/**COMMENTING OUT THE EXPORT HERE BECAUSE IT IS BEING CREATED IN THE
WINDOWSVERSIONFORDHA PROGRAM ***/
/*
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.21 - Q3FY2018\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) Addwgt.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 = 18;
%LET QT = 3;

/*FIELDATE and FIELDLBLE 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 FIELDATE = 04012018; * mmdyyyy;
%LET FIELDLBLE = Apr 1st 2018;
%LET NOSELECTQ = N; /*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 */
```

```

%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/2018/Data; /*This
should be the location of the TSS Selectq dataset, as long as there is one
available*/
%LET OVERLAP_FNAME = Selectq;

%LET PATH = /sasdata/Projects/40309_HCS/DATA/HCSDB/Q&QT.FY20&YR.;

%LET DATAPATH= &path./Data/AFinal;
%LET FMTPATH= &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.sasmac1 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.22.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 (40309.41H)
* 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 = 2018;

%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\HEDISFY2018\PROGRAMS\RESPONSE_RATE\RESPONSE_RATES.XLS;
%LET FILE5 =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\Response_Rate\RESPONSE_RATES.XLS;

LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YEAR.\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(40309.41H)";

*****
***
* 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;
  %ELSE %IF &NUMDOM = 3 %THEN %DO; * Read 5 columns in sheet;
    FILENAME INDATA DDE "excel|&DSN!r5c1:r9999c5";
  %END;
%END;

```

```

%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(100);
    RUN;
    %READXLS(DSN=&DSN1, NUMDOM=0);
    *%READXLS(DSN=&DSN2, NUMDOM=1);
    %READXLS(DSN=&DSN3, NUMDOM=1);
    %READXLS(DSN=&DSN4, NUMDOM=1);
  %END;

```

```

%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(100);
  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;
  %END;

```

```

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";
  END;

```

```

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(100);
run;

*****
***
* Write the combined annual spreadsheet file for each DOMAIN/DSN.
*****
***;
%WRITEXLS(DSN=&DSN1,   NUMDOM=0);
*%WRITEXLS(DSN=&DSN2,   NUMDOM=1);
%WRITEXLS(DSN=&DSN3,   NUMDOM=1);
%WRITEXLS(DSN=&DSN4,   NUMDOM=1);
%WRITEXLS(DSN=&DSN5,   NUMDOM=1);
%WRITEXLS(DSN=&DSN6,   NUMDOM=1);
%WRITEXLS(DSN=&DSN7,   NUMDOM=1);
%WRITEXLS(DSN=&DSN8,   NUMDOM=1);
%WRITEXLS(DSN=&DSN9,   NUMDOM=1);
%WRITEXLS(DSN=&DSN10,  NUMDOM=1);
%WRITEXLS(DSN=&DSN11,  NUMDOM=1);
%WRITEXLS(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.22.B - Response\_Rate\TABLE02.SAS - Calculate the annual Response Rates.

```
*****
* PROGRAM: TABLE02.SAS
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (40309.41H)
* 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:
*   06/28/2018, Sabrina R.- Updated for 2018 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
* 6) In FY2018 final file, the HEDIS part of BWT is weighted up to zone4
instead of all
*   four zone. Checked with Eric/Nancy and as sugested we fixed the issse
in HEDIS postwt.
*   For detail, see the readme note. So BWT is not accurate in final file
for HEDIS part.
*****;
OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOXWAIT NOCENTER NOFMTErr;*
mprint mlogic symbolgen;
ods _ALL_ Close;
ODS Listing;
```

```

%let year = 2018;

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\HEDISFY2018\Data\AFinal";

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\HEDISFY2018\Data\AFinal\fmtlib\Wind
owsVersionForDHA";

TITLE1 "Program: TABLE02.SAS (40309.41H)";
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 = 07-03-2018;
%LET TASKNUM = 40309.41H;

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;

*****
*Combining ALL FY2017 HCSDB Quarters and HEDIS for RR Calculation:
*****;
DATA Mergerr;
    SET FILEQ1t FILEQ2t FILEQ3 Hedis;
RUN;

Title1 "Freq/CrossTab of Selected Variables (All Cases)";
PROC FREQ DATA=MERGERR;
    TABLES  FNSTATUS
            PATCAT*FNSTATUS
            PATCAT RACEETHN PATCAT*RACEETHN PATCAT*SVCSMPL
            flag1*flag2*flag3*flagH  /MISSING LIST;
RUN;

/*
Title1 "Freq/CrossTab of Selected Variables (All Cases)";
Proc Freq Data=MERGERR;
Tables Flag1*Flag2*Flag3*FlagH*FNSTATUS
       Flag1*Flag2*Flag3*FlagH*xoconus
       Flag1*Flag2*Flag3*FlagH*USA
       Flag1*Flag2*Flag3*FlagH*sexsmpl
       Flag1*Flag2*Flag3*FlagH*enbgsmpl
       Flag1*Flag2*Flag3*FlagH*patcat
       Flag1*Flag2*Flag3*FlagH*servaff
       Flag1*Flag2*Flag3*FlagH*xtnexreg

```

```

        Flag1*Flag2*Flag3*FlagH*cacsmpl
/List Missing;
Run;
*/

Title1 "Checking Frequency of cacsmpl:";
Proc Freq Data=MERGERR;
Tables Flag1*Flag2*Flag3*FlagH*cacsmpl/List Missing;
Run;

Title1 "Checking Frequency of patcat where Flag2=1:";
Proc Freq Data=MERGERR;
Tables Flag1*Flag2*Flag3*FlagH*patcat*sexsmpl*servaff/List Missing;
where Patcat='UNKNOWN';
Run;

Title1 "Freq/CrossTab of Selected Variables where (flag2=1 or flagH=1):";
PROC FREQ DATA=MERGERR;
    TABLES  flag2*flagH
            flag2*flagH*FNSTATUS /MISSING LIST;
where (flag2=1 or flagH=1);
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;
*****
* 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 "&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 "&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;

*****
* 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;
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 "&OFILES.&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;
  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 "&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;
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.22.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.22.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.22.E - Response\_Rate\TABLE02\_XCATCH.SAS - Calculate Response Rates by catchment area

```
*****
* PROGRAM: TABLE02_xcatch.SAS
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (40309.41H)
* 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=2018;

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\HEDISFY&YR.\Data\AFinal";

LIBNAME LIBRARY
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY&YR.\Data\AFinal\fmtlib\Windows
VersionForDHA";

TITLE1 "Program: TABLE02_xcatch.SAS (FY=&YR., 40309.41H)";
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 = 07-06-2018;
%LET TASKNUM = 40309.41H;
```

```

*****
*Reading HEDIS Only Data:
*****;
Data Hedis;
format _ALL_;
Set inH.MergeQ;
if enbgsmpl = '09' then enbgsmpl='08';
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 enbgsmpl = '09' then enbgsmpl='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.
*****
;
%include
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YR.\Programs\Weighting\xcatch.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;
```

```
Title1 "Checks Crosstab of Selected variables";
Proc Freq Data=temp;
Tables FNSTATUS/List missing nopercnt;
Run;
```

```
Title1 "Frequency of Xcatch using final combine (Q1t+Q2t+Q3+H) file";
Proc Freq Data=temp;
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;
*****
* 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 "&OFILES.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 "&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;

***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=temp, FORM=A);

*****
* PROCESS SINGLE DOMAIN RESPONSE RATE TABULATION - FORM A
*****;
%PROCESS1(DOMAIN1=XCATCH, INPT=temp, 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(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=XCATCH, NUMDOM=1);

*****
* Quit spreadsheet application.
*****
;
FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
    FILE CMDS;
    PUT '[SAVE]';
    PUT '[QUIT]';
RUN;

***** End *****;

```

**APPENDIX G**

**SAS CODE FOR STATISTICAL AND WEB SPECIFICATIONS FOR THE 2018  
TRICARE BENEFICIARY REPORTS AND PURCHASED CARE BENEFICIARY  
REPORTS**

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**G.1.A - Q3FY2018\PROGRAMS\ReportCards\CAHPS\_AdultQ3FY2018\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.

```

```

*           59) January 17, 2018 by Matt Turbyfill, revised to change North
and South to East-North and East-South.
*
* INPUTS:   1) HCSyyq_2 - DoD Quarterly HCS Database
*
* OUTPUTS:  1) GROUPl-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 = 'East-North Army'
                2 = 'East-North Air Force'
                3 = 'East-North Navy'
                4 = 'East-North Other'
                5 = 'East-North Joint Service'
                6 = 'East-South Army'
                7 = 'East-South Air Force'
                8 = 'East-South Navy'
                9 = 'East-South Other'
                10 = 'East-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;
  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 XSEX = 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 "Hyyxxxx" to "Ryyxxxx".

*****;
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   /*JJS 04/26/2007, added for reservists logic*/
        DBENCAT    /*JJS 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 - Q3FY2018\PROGRAMS\ReportCards\CAHPS\_AdultQ3FY2018\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 - Q3FY2018\PROGRAMS\ReportCards\CAHPS\_AdultQ3FY2018\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.&FYYEAR./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.&FYEAR./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 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 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 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 XSERVREG group;
* we will only use XSERVREGs with more than 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) " " 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; /*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 - Q3FY2018\PROGRAMS\ReportCards\CAHPS\_AdultQ3FY2018\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;
    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;

    %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,qco
unt=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 - Q3FY2018\PROGRAMS\LOADWEB\CAHPS\_AdultQ3FY2018\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,$BENTYPF.);
  ELSE
    BENTYPE = PUT(DEPENDNT,$BENTYPF.);
    BENEFIT = PUT(DEPENDNT,$BENEF.);
    TIMEPD = PUT(&YEAR,$BENTYPF.); ***MJS 07/03/03 Added line;
END;
ELSE IF "&TYPE" = "COMPOSITE" THEN DO;
  BENTYPE = "Composite"; ***MJS 07/03/03 Changed from BENTYPE =
PUT(&YEAR,$BENTYPF.);
  BENEFIT = PUT(DEPENDNT,$BENEF.);
  TIMEPD = PUT(&YEAR,$BENTYPF.); ***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,MAJGRP.);
SCORE = ADJ3;
SEMEAN = SEMEAN3;
N_OBS = &PREFIX.CNT3;
N_WGT = &PREFIX.WGT3;
OUTPUT;

*****
* 4 = Non-enrolled Beneficiaries
*****;
MAJGRP = PUT(4,MAJGRP.);
SCORE = ADJ4;
SEMEAN = SEMEAN4;
N_OBS = &PREFIX.CNT4;
N_WGT = &PREFIX.WGT4;
OUTPUT;

*****
* 5 = Active Duty
*****;
MAJGRP = PUT(5,MAJGRP.);
SCORE = ADJ5;
SEMEAN = SEMEAN5;
N_OBS = &PREFIX.CNT5;
N_WGT = &PREFIX.WGT5;
OUTPUT;

*****
* 6 = Active Duty Dependents
*****;
MAJGRP = PUT(6,MAJGRP.);
SCORE = ADJ6;
SEMEAN = SEMEAN6;
N_OBS = &PREFIX.CNT6;
N_WGT = &PREFIX.WGT6;
OUTPUT;

*****
* 7 = Retirees and Dependents
*****;
MAJGRP = PUT(7,MAJGRP.);
SCORE = ADJ7;
SEMEAN = SEMEAN7;
N_OBS = &PREFIX.CNT7;
N_WGT = &PREFIX.WGT7;
OUTPUT;

*****
* 8 = All Beneficiaries          ALL Beneficiaries
*****;
MAJGRP = PUT(8,MAJGRP.);
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 - Q3FY2018\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 Makehtmlq.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.
*          22) 12/12/17 by Matt Turbyfill, Combined North and South into
East
*          in REGIONF, SERVREGF and SERVREGO.
*
*
* 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 = "East-North"
    2 = "East-South"
    3 = "West"
    4 = "Overseas"
  ;

/*JSO 08/24/2006, Changed Overseas to Service for Europe,Pacific,Latin*/
  VALUE SERVREGF
    1 = "East-North Army"
    2 = "East-North Air Force"
    3 = "East-North Navy"
    4 = "East-North Other"

```

```

5 = "East-North Joint Service"
6 = "East-South Army"
7 = "East-South Air Force"
8 = "East-South Navy"
9 = "East-South Other"
10 = "East-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 = "East-North Army"
2 = "East-North Air Force"
3 = "East-North Navy"
4 = "East-North Other"
5 = "East-North Joint Service"
6 = "East-South Army"
7 = "East-South Air Force"
8 = "East-South Navy"
9 = "East-South Other"
10 = "East-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

```

```

"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     "
"2018 Q1 " = "January, 2018     "
"2018 Q2 " = "April, 2018       "
"2018 Q3 " = "July, 2018        "
"2018 Q4 " = "October, 2018     "

```

```

/*****
*****/
/* Admin. Year Defn.
*/
/* 2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      2018      */
/*****
*****/

```

```

"R08013", "R09029", "R10029", "R11029", "R12029", "R13029", "R14029",
"R15029", "R16029", "R17029", "R18029" = "Getting to See a Specialist
"
"R08027", "R09033", "R10033", "R11033", "R12033", "R13033", "R14033",
"R15033", "R16033", "R17033", "R18033" = "Getting Treatment
"
"R08019", "R09007", "R10007", "R11007", "R12007", "R13007", "R14007",
"R15007", "R16007", "R17007", "R18007" = "Wait for Urgent Care
"
"R08022", "R09010", "R10010", "R11010", "R12010", "R13010", "R14010",
"R15010", "R16010", "R17010", "R18010" = "Wait for Routine Visit
"
"R08033", "R09021", "R10021", "R11021", "R12021", "R13021", "R14021",
"R15021", "R16021", "R17021", "R18021" = "Listens Carefully
"
"R08034", "R09022", "R10022", "R11022", "R12022", "R13022", "R14022",
"R15022", "R16022", "R17022", "R18022" = "Explains so You Can Understand
"
"R08035", "R09023", "R10023", "R11023", "R12023", "R13023", "R14023",
"R15023", "R16023", "R17023", "R18023" = "Shows Respect
"
"R08036", "R09024", "R10024", "R11024", "R12024", "R13024", "R14024",
"R15024", "R16024", "R17024", "R18024" = "Spends Time with You
"
"R08043", "R09040", "R10040", "R11041", "R12041", "R13041", "R14041",
"R15041", "R16041", "R17041", "R18041" = "Getting Information
"
"R08045", "R09041", "R10041", "R11042", "R12042", "R13042", "R14042",
"R15042", "R16042", "R17042", "R18042" = "Courteous Customer Service
"
"R08040", "R09045", "R10045", "R11046", "R12046", "R13046", "R14046",
"R15046", "R16046", "R17046", "R18046" = "Claims Handled in a Reasonable
Time"
"R08041", "R09046", "R10046", "R11047", "R12047", "R13047", "R14047",
"R15047", "R16047", "R17047", "R18047" = "Claims Handled Correctly
"
"R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018", "R18018" = "Health Care
"
"R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048", "R18048" = "Health Plan
"
"R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027", "R18027" = "Primary Care Manager
"
"R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031", "R18031" = "Specialty Care
"
"PHYSIC " = "Physical
"
"MENTAL " = "Mental
"
;
VALUE $BENEF
"RCOMPOS1", "CCOMPOS1", "R08013", "R08027",
"R09029", "R09033",
"R10029", "R10033",

```

"R11029", "R11033",  
"R12029", "R12033",  
"R13029", "R13033",  
"R14029", "R14033",  
"R15029", "R15033",  
"R16029", "R16033",  
"R17029", "R17033",  
"R18029", "R18033"

= "Getting Needed Care "

"RCOMPOS2", "CCOMPOS2", "R08019", "R08022",  
"R09007", "R09010",  
"R10007", "R10010",  
"R11007", "R11010",  
"R12007", "R12010",  
"R13007", "R13010",  
"R14007", "R14010",  
"R15007", "R15010",  
"R16007", "R16010",  
"R17007", "R17010",  
"R18007", "R18010"

= "Getting Care Quickly "

"RCOMPOS3", "CCOMPOS3", "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",  
"R18021", "R18022", "R18023", "R18024"

= "How Well Doctors Communicate "

"RCOMPOS4", "CCOMPOS4", "R08043", "R08045",  
"R09040", "R09041",  
"R10040", "R10041",  
"R11041", "R11042",  
"R12041", "R12042",  
"R13041", "R13042",  
"R14041", "R14042",  
"R15041", "R15042",  
"R16041", "R16042",  
"R17041", "R17042",  
"R18041", "R18042"

= "Customer Service "

"RCOMPOS5", "CCOMPOS5", "R08040", "R08041",  
"R09045", "R09046",  
"R10045", "R10046",  
"R11046", "R11047",

"R12046", "R12047",  
"R13046", "R13047",  
"R14046", "R14047",  
"R15046", "R15047",  
"R16046", "R16047",  
"R17046", "R17047",  
"R18046", "R18047"

= "Claims Processing  
"  
"RCOMPOS11", "COMPOS11", "MENTAL", "PHYS"  
= "Health Status"

/\*  
\*/

/\* Admin. Year Defn.

\*/

/\* 2008 2009 2010 2011 2012 2013 2014  
2015 2016 2017 2018 \*/

/\*  
\*/

"R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",  
"R15018", "R16018", "R17018", "R18018" = "Health Care"

"

"R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",  
"R15048", "R16048", "R17048", "R18048" = "Health Plan"

"

"R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",  
"R15027", "R16027", "R17027", "R18027" = "Primary Care Manager"

"

"R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",  
"R15031", "R16031", "R17031", "R18031" = "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 - Q3FY2018\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.
*            26) February 9, 2018 by Matt Turbyfill - Now keeps RESPONSEMODE
for new benchmark data
*
* 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
          RESPONSEMODE
      H&FY.019
;
RUN;

TITLE1 "Extract Adult CAHPS Questions (DoD)";
TITLE2 "Program Name: BENCHA01.SAS By Keith Rathbun";
TITLE3 "Program Input: &BENCHFILE..sas7bdat";
TITLE4 "Program Output: BENCHA01.sas7bdat";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES _ALL_ /MISSING LIST;
RUN;

```



**G.3.B - Q3FY2018\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: BENCHAO2.SAS By Keith Rathbun";
TITLE3 "Program Input: BENCHAO1.SAS7BDAT";
TITLE4 "Program Output: BENCHAO2.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 - Q3FY2018\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 - Adult CAHPS Questions Renamed to be
*           consistent with the MPR HCSDB 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.
*           49) February 1, 2018 By Keith Rathbun - Definitions and data type
for Disposition status (DISP)
*           changed between the 2015 and 2017 NCQA benchmark files.
Updated coded condition for keeping
*           Complete and Eligible records to be DISP = 0 and ResponseMode
= 1 (Mail) or 3 (Internet).
*
* NOTES:
*
* 1) Run this program after BENCHA01.SAS and BENCHA02.SAS.
```

```

* 2) This program will generate the input for BENCHAO4.SAS.
*
*****
* Assign data libraries and options
*****
;

/** SELECT PROGRAM - ReportCards OR PurchasedReportCards
***/
%LET RCTYPE = &PC.ReportCards;

libname in      "&BENCHDATA."; /*Use BENCHAO2.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 temp;
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;

```

```

%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**0.5)/&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;
    * KRR modified condition for disposition status Complete and Eligible on
    2/1/2018 ;
    * was DISP in ('M10','I10') previously for 2015 NCQA data ;
    if disp = 0 and ResponseMode in (1,3);
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&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 - Q3FY2018\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 BENCHAO2 and GROUPl-8 Files to STATA format
*
* WRITTEN:  01/11/2008 BY KEITH RATHBUN
*
* INPUTS:   1) BENCHAO2.sas7bdat - CAHPS Benchmark Scores Database
*           GROUPl.sas7bdat - Group Files created by STEP1.SAS
*           (where i = 1 -8 = group number)
*
* OUTPUTS:  1) BENCHAO2.dta - CAHPS Benchmark Scores Database - STATA format
*           GROUPl.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 INGROUPl 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 BENCHAO2.sas7bdat from Q1fy2014*/
LIBNAME INGROUPl "../..&PC.ReportCards/CAHPS_Adult&QUARTER./Data";

*****
* Convert CAHPS BENCHAO2 to STATA format.
*****
;
PROC EXPORT
  DATA = INBENCH.BENCHAO2
  OUTFILE = "../..&PC.Benchmark/&QA.predtest/BENCHAO2.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;  
%MEND CONVERT2STATA;  
  
%CONVERT2STATA;
```

**G.3.D.2 - Q3FY2018\PROGRAMS\BENCHMARK\QPREDTEST\varptest.do - Calculates Predicted Errors - Run Quarterly.**

```
/*
Program: varptest.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
statal3
          8) 02/26/2016 Matt Turbyfill, updated vars for 2016
          9) 01/09/2017 Irna May Connor, updated vars for 2017
          10) 02/09/2018 Matt Turbyfill, update limitation for new
benchmark data
WARNING - MUST EDIT THE GLOBAL PATH FOR EACH REPORTING PERIOD
*/

global path
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q3FY2018\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==0 & (responsemode==1|responsemode==3)
```

```

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*r18065), by(sub_id)
keep if ct>1
drop ct

svyreg `1' age1824 age2534 age3544 age4554 age5564 r18065

local i=1
while `i'<9{
use "$path\Qpredtest\group`i'",clear
collapse (mean) age1824 age2534 age3544 age4554 age5564 r18065 [aw=fwrwt]
predict se, stdp
keep se
gen str8 var=`1'"
append using "$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==0 & (responsemode==1|responsemode==3)

```



```

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*r18065), by(sub_id)
keep if ct>1
drop ct

svyreg `1' age1824 age2534 age3544 age4554 age5564 r18065
local i=1
while `i'<9{
use "$path\Qpredtest\group`i'",clear
collapse (mean) age1824 age2534 age3544 age4554 age5564 r18065 [aw=fwrwt]
predict se, stdp
keep se
gen str8 var="`1'"
append using "$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 "$path\Qpredtest\bencha02",clear
stdlist1 r18018 r18048 r18027 r18031
use "$path\Qpredtest\bencha02",clear
stdlist2 r18029 r18033 r18041 r18042 r18007 r18010 r18021 r18022 r18023
r18024 r18046 r18047

log close
```

**G.3.D.3 - Q3FY2018\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 - Q3FY2018\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,qco
unt=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 - Q3FY2018\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=SEX;
RUN;
%END;
%ELSE %DO;

    DATA INP;
        SET IN2.PROJERR&GNUM;
        RENAME SE=SEX;

        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 BENYTYPE $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,MAJGRPF.);

*****
* 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";

BENYTYPE = "Composite";   ***MJS 07/03/03 Changed from BENYTYPE =
PUT(&YEAR,$BENTYPPF.);
TIMEPD = PUT(&YEAR,$BENTYPPF.);   ***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 $8;
    DO I = 1 TO DIM(ITEMS); DROP I;
        CALL VNAME(ITEMS(I),NAME);
            /*z = DIM(ITEMS);
            z1=vname(items(1));*/
        NAME = SUBSTR(NAME,1,6);
        SCORE = ITEMS(I);
        SEMEAN = SQRT(SE(I)**2+SESX**2);
        IF &NVAR GT 1 THEN
            BENTYPE = PUT(NAME,$BENTYPEF.);
            TIMEPD = PUT(&YEAR,$BENTYPEF.);    ***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 BENTYPE MAJGRP REGION REGCAT
REGION*REGCAT
/MISSING LIST;
RUN;

```

**G.4.A - Q3FY2018\PROGRAMS\REPORTCARDS\MPR\_ADULTQ3FY2018\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 Kuids 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
"&NORMFMTLIB."
*              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.
*              12/12/2017 by Matt Turbyfill, North and South changed to East-
in REGIONF
*   Purpose:   Calculate MPR Preventive Care Composites
*   Input:     HCSyyyq_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;

/*Joint services added for 2016 norm data*/
    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*/ /*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;

    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;

```

```

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;
/*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*/
        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 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 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(&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;

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 = "EAST-NORTH"
    2 = "EAST-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;
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  SERRSQ{&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;
    SERRSQ{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;
    ENDIF;
ENDDO;

```

```

        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-SEMV&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.-SEMV&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 -**

**Q3FY2018\PROGRAMS\REPORTCARDS\MPR\_ADULTQ3FY2018\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.
*           45) December 12, 2017 by Matt Turbyfill, North and South
changed to East-.
*           46) February 9, 2018 by Matt Turbyfill, Changed limitation for
new benchmark data
*
* 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 disp =0 and responsemode in (1 3) ; /*20180208 - MBT - Limitation for
complete eligibles receiving mail or internet survey changed for new
benchmark data*/
  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 ccessbnch;
output out=tbench mean=;
proc print;
proc summary;
var ccessbnch;
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;

/*Joint services added for 2016 norm data*/
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 08/22/2006, 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;
    OUTPUT; /*MER
07/12/11, Added 10*/
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
    GROUP=4;
    OUTPUT; /*JSO 07/30/2007, Added 9*/ /*MER 07/12/11,
Added 10*/
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
    GROUP=5;
    OUTPUT; /*JSO 07/30/2007, added DBENCAT conditions*/
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;

/* 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 xbmecat > 0 THEN DO;
    BMI = 0;
    BMI_DN=1;
    IF xbmecat <=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;
    OUTPUT;
/*MER
07/12/11, Added 10*/*AMK 2/13/14 added 14*/
END;

* nonenrollees;
IF NXNS_COV IN (3,9,10,14) THEN DO; /*JSO 08/24/2006, Deleted 4,5*/
    GROUP=4;
    OUTPUT;
/*JSO 07/30/2007, Added 9*/ /*MER
07/12/11, Added 10*/*AMK 2/13/14 added 14*/
END;

* active duty;
IF XBNFGRP = 1 OR DBENCAT IN('IGR','GRD') THEN DO;
    GROUP=5;
    OUTPUT;
/*JSO 07/30/2007, added DBENCAT conditions*/
END;

* active duty dependents;
IF XBNFGRP = 2 OR DBENCAT IN('IDG','DGR') THEN DO;
    GROUP=6;
    OUTPUT;
/*JSO 07/30/2007, added DBENCAT conditions*/

```

```

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 XSEX MPCSMP
        &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 XSEX &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*XSEX*MPCSMPL*&TABLEVAR.;
  SUBGROUP AGE_GRP XSEX 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*XSEX*MPCSMPL;
  SUBGROUP AGE_GRP XSEX 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;
    BENEFIT="Non-Smoking Rate";
  %END;
  %IF &TYPE=CESS %THEN %DO;
    BENEFIT="Counselled To Quit";
  %END;
  %IF &TYPE = BM %THEN %DO;
    BENEFIT = "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="EAST-NORTH";
  ELSE IF XTNEXREG=2 THEN REGION="EAST-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;
END;
IF BENTYPE='Counselled To Quit' THEN DO;
    IF SEMEAN > 0 THEN TSTAT=(SCORE-&CNSLGOAL)/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 > &CNSLGOAL THEN SIG = 1;
        ELSE IF SCORE < &CNSLGOAL 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, &CNSLGOAL,
&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, &CNSLGOAL, &BMIGOAL))/3) THEN SIG = 1;
        ELSE IF SCORE <((SUM(&NSMKGOAL, &CNSLGOAL, &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 - Q3FY2018\PROGRAMS\REPORTCARDS\MPR\_ADULTQ3FY2018\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 Valenzuea, 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
* 45) 12/12/2017 By Matt Turbyfill North and South changed to
East-
*
* 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; /*JSO 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 = 'EAST-NORTH';
    REGCAT = 'EAST-NORTH';
    OUTPUT;
    MAJGRP = "Benchmark";
    REGION = 'EAST-SOUTH';
    REGCAT = 'EAST-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 - Q3FY2018\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 HCSyyyq_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.
*             49) December 12, 2017 by Matt Turbyfill, North and South changed
to East-.
*
* 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 cacempl 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 = 'EAST-NORTH';
  output;
  xservreg=25;
  cafmt = 'EAST-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','East-','West
','EAST-','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;
        and BENTYPE PUT;
        BENTYPE=PUT(L,GETCAREQ.);
        assignment;
        %DO Q = 1 %TO &NUMQTR;
        L loop and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
    ***/
    %END;
    OUTPUT;
END;
ELSE IF K=3 THEN DO;
    DO L=1 TO 5;
        and BENTYPE PUT;
        BENTYPE=PUT(L,HOWWELL.);
        assignment;
        %DO Q = 1 %TO &NUMQTR;
        L loop and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
    ***/
    %END;
    OUTPUT;
END;
ELSE IF K=4 THEN DO;
    DO L=1 TO 3;
        and BENTYPE PUT;
        BENTYPE=PUT(L,CUSTSERV.);
        assignment;
        %DO Q = 1 %TO &NUMQTR;
        L loop and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
    ***/
    %END;
    OUTPUT;
END;
ELSE IF K=5 THEN DO;
    DO L=1 TO 3;
        and BENTYPE PUT;
        BENTYPE=PUT(L,CLMSPROC.);
        assignment;
        %DO Q = 1 %TO &NUMQTR;
        L loop and changed BENTYPE to TIMEPD;
        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
    ***/
    %END;
    OUTPUT;
END;
ELSE IF K=6 THEN DO;
    %DO Q = 1 %TO &NUMQTR;
    BENTYPE = "Composite";
    TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
    ***MJS 07/07/03 Changed BENTYPE to TIMEPD;

```



```

/**** 12-13 MAB ****/
/**** Since quarterly files won't have catchment level data then delete ****/
DATA FAKE;
  SET FAKE;
  IF REGION=REGCAT;
RUN;

/**** 12-13 MAB ****/
/**** Need to create single benchmarks for ALL major groups ****/
DATA EXTRA;
  SET FAKE;
  IF MAJGRP="Prime Enrollees" AND REGION=REGCAT AND REGION^="Benchmark";
  MAJGRP="Benchmark";
RUN;
/**** Combine extra data with fake ****/
DATA FAKE;
  SET EXTRA FAKE;
RUN;

/**** Need to clean up data ****/
DATA OUT.FAKEQ;
  SET FAKE;

  /**** Need to set oddball records to missing ****/
  IF REGION="Benchmark" THEN SIG=.;
  if region=''|compress(regcat)='.' then delete;

  /**** Don't populate catchment areas for 4 major groups ****/
  *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 - Q3FY2018\PROGRAMS\LOADWEB\MERGFQ.SAS - Merge the final CAHPS and MPR Scores Databases into the WEB layout - Run Quarterly.**

```

*****
*
* PROGRAM:   MERGFQ.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 MERGFQ.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) MERGFQ.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.
*           48) December 12, 2017 by Matt Turbyfill, North and South changed
to East-.
*
* 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

```

```

* - BENCH01-04.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 (MERGFINDQ.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 MERGFINDQ;
  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 = 'EAST-NORTH';
                REGCAT = 'EAST-NORTH';
                KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
                      UPCASE(TRIM(MAJGRP))  || UPCASE(TRIM(REGCAT))  ||
                      UPCASE(TRIM(REGION))  || UPCASE(TRIM(TIMEPD));
                OUTPUT;
                MAJGRP = "Benchmark";
                REGION = 'EAST-SOUTH';
                REGCAT = 'EAST-SOUTH';
                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 = '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 MERGFNQ(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 MERGFNQ;
RUN;

*****
* Reorder file according to WEB layout
*****
;
PROC SORT DATA=MERGFNQ OUT=OUT.MERGFNQ; BY ORDER; RUN;

DATA FAKEQ;
SET IN1.FAKEQ;
ORDER = _N_;
RUN;

DATA LAYONLY;
MERGE FAKEQ(IN=IN1) OUT.MERGFNQ(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: MERGFNQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS Combined Scores data sets and WEB
Layout";
TITLE4 "Program Outputs: MERGFNQ.sas7bdat - Merged Final Scores Database
for input to MAKEHTML.SAS";

TITLE5 "MERGFNQ.sas7bdat Data source counts";
PROC FREQ DATA=OUT.MERGFNQ;
TABLES SOURCE FLAG SVCAHPQ SVMPRQ SVBENQ
SVCAHPQ*SVMPRQ*SVBENQ
/MISSING LIST;
RUN;

TITLE5 "MERGFNQ.sas7bdat Data attribute counts";
PROC FREQ DATA=OUT.MERGFNQ;
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 - Q3FY2018\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.
* 52) December 12, 2017 by Matt Turbyfill, North and South changed
to East-.
*
* 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) BENTYPE = Benefit Type
* 2) MAJGRP = Major Group
* 3) TYPE = INDIVIDUAL or COMPOSITE
* 4) BENEFIT = COMPOSITE Benefit Type
*
*****
;

```

```

%MACRO PROCESS(BENTYPE=,MAJGRP=,TYPE=,BENEFIT=);
DATA TEMP;
  SET IN1.&DSN END=FINISHED;
  %IF "&TYPE" = "INDIVIDUAL" %THEN %DO;
    WHERE BENTYPE = "&BENTYPE" 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 BENTYPE = &BENTYPE 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,1,10) IN ('East-North','East-South') THEN DO;
  IF SUBSTR(REGION,1,10)='East-North' THEN REGCON=1;
  ELSE IF SUBSTR(REGION,1,10)='East-South' THEN REGCON=2;
  TOTCON=1;
  IF SUBSTR(REGION,12,4)='Army' THEN SERVICE=1;
  ELSE IF SUBSTR(REGION,12,9)='Air Force' THEN SERVICE=2;
  ELSE IF SUBSTR(REGION,12,4)='Navy' THEN SERVICE=3;
  ELSE IF SUBSTR(REGION,12,5)='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 BENTYPE 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 = "EAST-NORTH";
    IF REGCON=2 THEN REGION = "EAST-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(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 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 bentype ascore);

```

```

set benchmrk;
where upcase(majgrp)='ALL BENEFICIARIES';
rename score=ascore;
run;
proc sort; by benefit bentype;
proc sort data=benchmrk; by benefit bentype;
data benchmrk;
merge benchmrk abnchmrk; by benefit bentype;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
bentype) ;
set trend;  by majgrp region regcat benefit bentype period;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit|first.bentype 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.bentype 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 ("East-North Joint Service","East-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 - Q3FY2018\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\_Adult2018\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*/
H&FY.004 /* How Long in Health Plan */
/*******/
    INHEDIS
    INHCSDB
);
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 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;
    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 = '0' */
                                /* 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) THEN GROUP1 = 1;/*AMK
6/17/14 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 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
      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 11/11/2012, 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\_Adult2018\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\_Adult2018\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 cacsmpl;
  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
  9
  10
  11
  12
  13
  14
  15
  16
  17
  18
  19
  20
  21
  22
  23
  24
  25
  26
  27
  28
  29
  30
;
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 NEWADJST);
  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;
    NEWADJST=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;

* 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 inconvient, 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 AGE CNT(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;

```

```

        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; *** rlc 4/29/00 changed "9999" to "9998";
    IF CATCNT(I) > 0 THEN DO; *** ems 7/12/00 changed "> 1" to "> 0";
        PUT @16 'CAT' I Z4.;
    END;
END;
PUT @11 ' ';

*-----;
* create a region area array;
* with at least ONE obs;
FILE "../..../ReportCards/CAHPS_Adult&fyyear./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&fyyear./RISKVARS.INC";
    %INCLUDE "../..../ReportCards/CAHPS_Adult&fyyear./MEANFILE.INC";
    RUN;

DATA GROUP&IGRP;
    SET GROUP&IGRP;
    IF _N_ = 1 THEN SET MEANFILE;
    %INCLUDE "../..../ReportCards/CAHPS_Adult&fyyear./RISKARRY.INC";
    %INCLUDE "../..../ReportCards/CAHPS_Adult&fyyear./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 ;

%MEND ;

%MAINLOOP ( &MIN_VAR , &MAX_VAR , &MIN_GRP , &MAX_GRP ) ;
```



**G.8.D - ReportCards\CAHPS\_Adult2018\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;

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 errrd;
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,qco
unt=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,qco
unt=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 = &FYYEAR.;

*****
* 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,MAJGRP.);
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.);
    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.);
    SCORE = ADJ4;
    SEMEAN = SEMEAN4;
    N_OBS = &PREFIX.CNT4;
    N_WGT = &PREFIX.WGT4;
    OUTPUT;
%END;
*****;
* 5 = Active duty;
*****;
MAJGRP = PUT(5,MAJGRP.);
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.);
    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,MAJGRPF.);
  SCORE = ADJ7;
  SEMEAN = SEMEAN7;
  N_OBS = &PREFIX.CNT7;
  N_WGT = &PREFIX.WGT7;
  OUTPUT;
%END;
*****;
* 8 = 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
      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 Makehtm.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

```

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*          20) 12/27/12 by Aimee Valenzuela, Added parameters for 2013
survey.
*          21) 09/20/13 by Amanda Kudis, Added parameters for 2014 survey.
*          22) 12/12/17 by Matt Turbyfill, Combined North and South into
East
*          in REGIONF, SERVREGF and SERVREGO.
*
*
* 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 = "East-North"
    2 = "East-South"
    3 = "West"
    4 = "Overseas"
  ;

/*JSO 08/24/2006, Changed Overseas to Service for Europe,Pacific,Latin*/
  VALUE SERVREGF
    1 = "East-North Army"
    2 = "East-North Air Force"
    3 = "East-North Navy"
    4 = "East-North Other"

```



5 = "East-North Joint Service"  
 6 = "East-South Army"  
 7 = "East-South Air Force"  
 8 = "East-South Navy"  
 9 = "East-South Other"  
 10 = "East-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 = "East-North Army"  
 2 = "East-North Air Force"  
 3 = "East-North Navy"  
 4 = "East-North Other"  
 5 = "East-North Joint Service"  
 6 = "East-South Army"  
 7 = "East-South Air Force"  
 8 = "East-South Navy"  
 9 = "East-South Other"  
 10 = "East-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

"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    "
"2018 Q1 " = "January, 2018     "
"2018 Q2 " = "April, 2018      "
"2018 Q3 " = "July, 2018       "
"2018 Q4 " = "October, 2018    "

```

```

/*****
*****/
/* Admin. Year Defn.
*/
/* 2008      2009      2010      2011      2012      2013      2014
2015      2016      2017      2018      */
/*****
*****/

```

```

"R08013", "R09029", "R10029", "R11029", "R12029", "R13029", "R14029",
"R15029", "R16029", "R17029", "R18029" = "Getting to See a Specialist
"
"R08027", "R09033", "R10033", "R11033", "R12033", "R13033", "R14033",
"R15033", "R16033", "R17033", "R18033" = "Getting Treatment
"
"R08019", "R09007", "R10007", "R11007", "R12007", "R13007", "R14007",
"R15007", "R16007", "R17007", "R18007" = "Wait for Urgent Care
"
"R08022", "R09010", "R10010", "R11010", "R12010", "R13010", "R14010",
"R15010", "R16010", "R17010", "R18010" = "Wait for Routine Visit
"
"R08033", "R09021", "R10021", "R11021", "R12021", "R13021", "R14021",
"R15021", "R16021", "R17021", "R18021" = "Listens Carefully
"
"R08034", "R09022", "R10022", "R11022", "R12022", "R13022", "R14022",
"R15022", "R16022", "R17022", "R18022" = "Explains so You Can Understand
"
"R08035", "R09023", "R10023", "R11023", "R12023", "R13023", "R14023",
"R15023", "R16023", "R17023", "R18023" = "Shows Respect
"
"R08036", "R09024", "R10024", "R11024", "R12024", "R13024", "R14024",
"R15024", "R16024", "R17024", "R18024" = "Spends Time with You
"
"R08043", "R09040", "R10040", "R11041", "R12041", "R13041", "R14041",
"R15041", "R16041", "R17041", "R18041" = "Getting Information
"
"R08045", "R09041", "R10041", "R11042", "R12042", "R13042", "R14042",
"R15042", "R16042", "R17042", "R18042" = "Courteous Customer Service
"
"R08040", "R09045", "R10045", "R11046", "R12046", "R13046", "R14046",
"R15046", "R16046", "R17046", "R18046" = "Claims Handled in a Reasonable
Time"
"R08041", "R09046", "R10046", "R11047", "R12047", "R13047", "R14047",
"R15047", "R16047", "R17047", "R18047" = "Claims Handled Correctly
"
"R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",
"R15018", "R16018", "R17018", "R18018" = "Health Care
"
"R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",
"R15048", "R16048", "R17048", "R18048" = "Health Plan
"
"R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",
"R15027", "R16027", "R17027", "R18027" = "Primary Care Manager
"
"R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",
"R15031", "R16031", "R17031", "R18031" = "Specialty Care
"
"PHYSIC " = "Physical
"
"MENTAL " = "Mental
"
;
VALUE $BENEF
"RCOMPOS1", "CCOMPOS1", "R08013", "R08027",
"R09029", "R09033",
"R10029", "R10033",

```

"R11029", "R11033",  
"R12029", "R12033",  
"R13029", "R13033",  
"R14029", "R14033",  
"R15029", "R15033",  
"R16029", "R16033",  
"R17029", "R17033",  
"R18029", "R18033"

= "Getting Needed Care "

"RCOMPOS2", "CCOMPOS2", "R08019", "R08022",  
"R09007", "R09010",  
"R10007", "R10010",  
"R11007", "R11010",  
"R12007", "R12010",  
"R13007", "R13010",  
"R14007", "R14010",  
"R15007", "R15010",  
"R16007", "R16010",  
"R17007", "R17010",  
"R18007", "R18010"

= "Getting Care Quickly "

"RCOMPOS3", "CCOMPOS3", "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",  
"R18021", "R18022", "R18023", "R18024"

= "How Well Doctors Communicate "

"RCOMPOS4", "CCOMPOS4", "R08043", "R08045",  
"R09040", "R09041",  
"R10040", "R10041",  
"R11041", "R11042",  
"R12041", "R12042",  
"R13041", "R13042",  
"R14041", "R14042",  
"R15041", "R15042",  
"R16041", "R16042",  
"R17041", "R17042",  
"R18041", "R18042"

= "Customer Service "

"RCOMPOS5", "CCOMPOS5", "R08040", "R08041",  
"R09045", "R09046",  
"R10045", "R10046",  
"R11046", "R11047",

"R12046", "R12047",  
"R13046", "R13047",  
"R14046", "R14047",  
"R15046", "R15047",  
"R16046", "R16047",  
"R17046", "R17047",  
"R18046", "R18047"

= "Claims Processing  
"  
"RCOMPOS11", "COMPOS11", "MENTAL", "PHYS"  
= "Health Status"

/\*  
\*/

/\* Admin. Year Defn.

\*/

/\* 2008 2009 2010 2011 2012 2013 2014  
2015 2016 2017 2018 \*/

/\*  
\*/

"R08037", "R09018", "R10018", "R11018", "R12018", "R13018", "R14018",  
"R15018", "R16018", "R17018", "R18018" = "Health Care"

"

"R08048", "R09047", "R10047", "R11048", "R12048", "R13048", "R14048",  
"R15048", "R16048", "R17048", "R18048" = "Health Plan"

"

"R08009", "R09027", "R10027", "R11027", "R12027", "R13027", "R14027",  
"R15027", "R16027", "R17027", "R18027" = "Primary Care Manager"

"

"R08015", "R09031", "R10031", "R11031", "R12031", "R13031", "R14031",  
"R15031", "R16031", "R17031", "R18031" = "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=(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;

```

```

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=0 and (responsemode=1 or responsemode=3) ; ***MBT 07/10/2018
Restriction changed for new benchmark data;
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 &FYYEAR.;
/*           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,$BENTYP.);
  TIMEPD = PUT(&YEAR,$BENTYP.);   ***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 $8;
    DO I = 1 TO DIM(ITEMS); DROP I;
        CALL VNAME(ITEMS(I),NAME);
        NAME = SUBSTR(NAME,1,6);
        SCORE = ITEMS(I);
        SEMEAN = SQRT(SE(I)**2+SESX**2);
        IF &NVAR GT 1 THEN
            BENTYPE = PUT(NAME,$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.
*****
*****
;
/*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: 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 BENTYPE MAJGRP REGION REGCAT
      REGION*REGCAT
      /MISSING LIST;
RUN;

```

**G.11.A - ReportCards\MPR\_Adult2018\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 *****/
/***** 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*/
%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 11/11/2012 (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*/

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;

```



```

        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;
    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(&CMPNUM1+1);

%IF %UPCASE(&BYVAR)=XSERVREG %THEN %LET PEF=R;
%ELSE %IF %UPCASE(&BYVAR)=USA %THEN %LET PEF=C;
%ELSE %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PEF=M;
%ELSE %IF %UPCASE(&BYVAR)=XTNEXREG %THEN %LET PEF=S;
%ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PEF=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= &PEF.CMPSUM(DROP = _TYPE_)
  SUM = ;
RUN;
PROC MEANS NWAY NOPRINT DATA=normdata;
* CLASS &BYVAR;
  VAR
      DENV1-DENV&COMPNUM;
  WEIGHT &wgt.;
  OUTPUT OUT= &PEF.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=&PEF.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 &PEF.CMPSUM;
  MERGE &PEF.CMPSUM(RENAME=( _FREQ_=N_OBS&YR.))
  &PEF.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)=svcwt(k)*proport(k);
END;
DROP K;
CP&YR.BMK1=SUM(OF WTD&YR.V1-WTD&YR.V&CMPNUM1);
CP&YR.BMK2=SUM(OF WTD&YR.V&START-WTD&YR.V&COMPNUM);
comp&yr.1=sum(of cmp&yr.v1-cmp&yr.v&cmpnum1);
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 = "EAST-NORTH"
        2 = "EAST-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&COMPCNT CP&YR.1SE CP&YR.2SE
      CP&YR.BMK1-CP&YR.BMK&COMPCNT
      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&COMPCNT
      DEN&YR.V1-DEN&YR.V&COMPNUM CP&YR.DEN1-CP&YR.DEN&COMPCNT);

/** 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;
for 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      SERRSQ{&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;
  SERRSQ{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;

```

```

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 &COMPNT;
    %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);
    %END;
%END;

```



```

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 unitialized 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\_Adult2018\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 disp =0 and responsemode in (1 3) ; /*20180208 - MBT - Limitation for
complete eligibles receiving mail or internet survey changed for new
benchmark data*/
  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 ;

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 XTNEXREG 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 = 'O' */
/* 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 XSEX 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 XSEX &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*XSEX*MPCSMPL*&TABLEVAR.;
    SUBGROUP AGE_GRP XSEX 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*XSEX*MPCSMPL;
    SUBGROUP AGE_GRP XSEX 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*XSEX*&TABLEVAR.;
      SUBGROUP AGE_GRP XSEX&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&TABLEVAR.;
      SUBGROUP AGE_GRP XSEX&TABLEVAR.;
      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&TABLEVAR. 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 xsexa;
    output out=norm_&i. sum=normwt;

proc sort data=&pref.ser_&i.&smoke.;
    by age_grp xsexa;

data &pref.ser_&i.&smoke.;
    merge &pref.ser_&i.&smoke.(in=gin) norm_&i.;
    by age_grp xsexa;
    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);
%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;
        BENEFIT="Non-Smoking Rate";
    %END;
    %IF &TYPE=CESS %THEN %DO;
        BENEFIT="Counselled To Quit";
    %END;
    %IF &TYPE = BM %THEN %DO;
        BENEFIT = "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="EAST-NORTH";
    ELSE IF XTNEXREG=2 THEN REGION="EAST-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-&CNSLGOAL)/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 > &CNSLGOAL THEN SIG = 1;
        ELSE IF SCORE < &CNSLGOAL 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, &CNSLGOAL,
&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, &CNSLGOAL, &BMIGOAL))/3) THEN SIG = 1;
        ELSE IF SCORE < ((SUM(&NSMKGOAL, &CNSLGOAL, &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;

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\_Adult2018\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 = 'EAST-NORTH';
    REGCAT = 'EAST-NORTH';
    OUTPUT;
    MAJGRP = "Benchmark";
    REGION = 'EAST-SOUTH';
    REGCAT = 'EAST-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 East-
North Region';
    IF REGCAT='Out of Catchment Region 02' then REGCAT='Out of Catchment East-
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";
    END;

```



```

        /*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/cp03bnk1)-(comp011*adj2/cp01bnk1));*/

/*RSG 02/2005 following code no longer needed - need trend for all
benefit level, not just composite*/
/*  score=cmptrnd1;
    SIG= SIGCPTR1;
    N_OBS=DF_COMPL;
    N_WGT=NWGTCL;
    BENYTYPE="Trend";
    BENEFIT="Preventive Care";
    OUTPUT;
*/
IF REGCAT='Out of Catchment Region 01' then REGCAT='Out of Catchment East-
North Region';
IF REGCAT='Out of Catchment Region 02' then REGCAT='Out of Catchment East-
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. NWGTCL;
    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 BENYTYPE = "Prenatal Care";
        ELSE IF I = 2 THEN BENYTYPE = "Mammography";
        ELSE IF I = 3 THEN BENYTYPE = "Pap Smear";
        ELSE IF I = 4 THEN BENYTYPE = "Hypertension";
        /*ELSE IF I = 5 THEN BENYTYPE = "Cholesterol Testing";*/ /*RSG
01/27/06*/
        ELSE IF I = 5 THEN DO;
            BENYTYPE = "Composite"; /*RSG 02/2005*/
        *
            score=score*100;
        END;;
        TIMEPD = "Trend";
        OUTPUT;
    END;
RUN;

DATA TREND2(KEEP=MAJGRP REGION REGCAT BENEFIT BENYTYPE SCORE SIG TIMEPD);
    FORMAT MAJGRP $30. REGION $30. REGCAT $42. /* MER 11/11/2012 - Updated
REGION for Joint Service facilities */
        BENEFIT $34. BENYTYPE $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\_Adult2018\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.
              2) 08/09/2018 by Irna May Connor, Added "east-" prefixes to
2016's data.
*
* 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);

  /*Adding "east-" prefixes to 2016's data so that it's consistent with 2018
  data.*/
  /*This recode will become obsolete in 2020, but it will do no harm.*/
  DATA &INDATA.&EYR.;
  SET IN&EYR..&INDATA;
  IF SUBSTR(REGION,1,5) IN ("North" "South") then region = "East-" ||
region;
  IF SUBSTR(REGION,1,5) IN ("NORTH" "SOUTH") then region = "EAST-" ||
region;
  IF SUBSTR(regcat,1,5) IN ("North" "South") then regcat = "East-" ||
regcat;
  IF SUBSTR(regcat,1,5) IN ("NORTH" "SOUTH") then regcat = "EAST-" ||
regcat;
  IF SUBSTR(REGION,18,5) IN ("North" "South") then region =
SUBSTR(region,1,17) || "East-" || SUBSTR(region,18,17);
  IF SUBSTR(regcat,18,5) IN ("North" "South") then regcat =
SUBSTR(regcat,1,17) || "East-" || SUBSTR(regcat,18,17);
  RUN;
  /*END OF ADDITION*/

  PROC SORT DATA=&INDATA.&EYR.;
  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.) &INDATA.&EYR.(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&YR.{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}=.;
  DEGFR{I}=MIN(DEGFR&YR.{I},DEGFR&EYR.{I});
  NWGT{I}=MIN(DEN&YR.{I},DEN&EYR.{I});
  IF DEGFR{I}=0 THEN DEGFR{I}=1;
  IF DEGFR{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}),DEGFR{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 cacsmpl 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 = 'EAST-NORTH';
    output;
```

```
xservind=25;
cafmt = 'EAST-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',
             'EAST-NORTH','EAST-SOUTH','WEST','OVERSEAS','USA MHS',
             'Overseas Europe','Overseas Pacific','Overseas Latin
America',
             'East-North Army','East-North Navy','East-North Air
Force','East-North Other','East-North Joint Service',
             'East-South Army','East-South Navy','East-South Air
Force','East-South Other','East-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;
and BENTYPE PUT;
BENTYPE=PUT(L,HOWWELL.);
assignment;
%DO Q = 1 %TO &NUMQTR;
point to 2 for annual - only go back 2 years;
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
***/
%END;
OUTPUT;
END;
END;
ELSE IF K=4 THEN DO;
DO L=1 TO 3;
and BENTYPE PUT;
BENTYPE=PUT(L,CUSTSERV.);
assignment;
%DO Q = 1 %TO &NUMQTR;
point to 2 for annual - only go back 2 years;
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
***/
%END;
OUTPUT;
END;
END;
ELSE IF K=5 THEN DO;
DO L=1 TO 3;
and BENTYPE PUT;
BENTYPE=PUT(L,CLMSPROC.);
assignment;
%DO Q = 1 %TO &NUMQTR;
point to 2 for annual - only go back 2 years;
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR
***/
%END;
OUTPUT;
END;
END;
ELSE IF K=6 THEN DO;
%DO Q = 1 %TO &NUMQTR;
2 for annual - only go back 2 years;
BENTYPE = "Composite";
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
***MJS 07/07/03 Changed BENTYPE to TIMEPD;
%END;
BENTYPE="Trend" OUTPUT after this line;
END;
ELSE IF K=7 THEN DO;
%DO Q = 1 %TO &NUMQTR;
2 for annual - only go back 2 years;
BENTYPE = "Composite";
TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
***MJS 07/07/03 Changed BENTYPE to TIMEPD;
%END;
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;
        %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=11 THEN DO;          ***RSG 02/2005 Added for smoking
scores.;
        DO M=1 TO 4;
        BENTYPE=PUT(M,SMOKEF.);
        %DO Q = 1 %TO &NUMQTR;    ***RSG 02/2005 Changed start
point to 2 for annual - only go back 2 years;
        TIMEPD = "&&PERIOD&Q"; OUTPUT;
        %END;
        END;
    END;
    END;
    END;
    END;
    RUN;
    %MEND FAKE;
    %FAKE;

/**** 12-13 MAB ****/
/**** Need to create single benchmarks for ALL major groups ****/
DATA EXTRA;
    SET FAKE;
    IF MAJGRP="Prime Enrollees" AND REGION=REGCAT AND REGION^="Benchmark";
    MAJGRP="Benchmark";
    RUN;
/**** Combine extra data with fake ****/
DATA FAKE;
    SET EXTRA FAKE;

```

```

    IF REGCAT="Benchmark" THEN REGION=REGCAT;
RUN;

/** Need to clean up data **/
DATA FAKE2;
    SET FAKE;

    /** Need to set oddball records to missing **/
    if region='|compress(regcat)='.' then delete;

    /** Don't populate catchment areas for 4 major groups **/
    IF I IN(3,4,6,7) AND REGION^=REGCAT THEN DELETE;
    SIG = .;
    SCORE = .;

    DROP I K;
RUN;

/*RSG 02/2005 ORDER FILE*/

DATA ORDER1;
    SET FAKE2;
    IF MAJGRP = "Benchmark" THEN DELETE;

    IF MAJGRP = "Prime Enrollees" THEN LINEUP=1;
    IF MAJGRP = "Enrollees with Military PCM" THEN LINEUP=2;
    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) = 'EAST' THEN LINEUP1=7.1;
    ELSE IF UPCASE(REGION) = 'EAST ARMY' THEN LINEUP1=7.2;
    ELSE IF UPCASE(REGION) = 'EAST NAVY' THEN LINEUP1=7.3;
    ELSE IF UPCASE(REGION) = 'EAST AIR FORCE' THEN LINEUP1=7.4;
    ELSE IF UPCASE(REGION) = 'EAST OTHER' THEN LINEUP1=7.5;
    ELSE IF UPCASE(REGION) = 'EAST JOINT SERVICE' THEN LINEUP1=7.6;

    ELSE IF UPCASE(REGION) = 'EAST-NORTH' THEN LINEUP1=8;
    ELSE IF UPCASE(REGION) = 'EAST-NORTH ARMY' THEN LINEUP1=9;
    ELSE IF UPCASE(REGION) = 'EAST-NORTH NAVY' THEN LINEUP1=10;
    ELSE IF UPCASE(REGION) = 'EAST-NORTH AIR FORCE' THEN LINEUP1=11;
    ELSE IF UPCASE(REGION) = 'EAST-NORTH OTHER' THEN LINEUP1=12;
    ELSE IF UPCASE(REGION) = 'EAST-NORTH JOINT SERVICE' THEN LINEUP1=13;

    ELSE IF UPCASE(REGION) = 'EAST-SOUTH' THEN LINEUP1=14;

```

```

ELSE IF UPCASE(REGION) = 'EAST-SOUTH ARMY' THEN LINEUP1=15;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH NAVY' THEN LINEUP1=16;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH AIR FORCE' THEN LINEUP1=17;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH OTHER' THEN LINEUP1=18;
ELSE IF UPCASE(REGION) = 'EAST-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;
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 ending 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
*           - BENCH04.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
* - BENCHAO1-04.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 MERGFINL;
  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.)
      IN10.BENCHA04 (IN=INBEN&FY1.);
  SVCAHP&FY. = INCAHP&FY.;
  SVCAHP&FY2. = INCAHP&FY2.;
  SVCAHP&FY1. = INCAHP&FY1.;
  SVMPR&FY. = INMPR&FY.;
  SVMPR&FY2. = INMPR&FY2.;
  SVMPR&FY1. = INMPR&FY1.;
  SVBEN&FY. = INBEN&FY.;
  SVBEN&FY2. = INBEN&FY2.;
  SVBEN&FY1. = INBEN&FY1.;
  LENGTH KEY $200;

  *Added so that the 9905 catchment in previous years is formatted properly
  for 2018;
  if find(regcat,"9905") then regcat="Out of Catchment Europe Region";

  IF SUBSTR(REGION,1,5) IN ("North" "South") then region = "East-" ||
region;
  IF SUBSTR(REGION,1,5) IN ("NORTH" "SOUTH") then region = "EAST-" ||
region;
  IF SUBSTR(regcat,1,5) IN ("North" "South") then regcat = "East-" ||
regcat;
  IF SUBSTR(regcat,1,5) IN ("NORTH" "SOUTH") then regcat = "EAST-" ||
regcat;
  IF SUBSTR(REGION,18,5) IN ("North" "South") then region =
SUBSTR(region,1,17) || "East-" || SUBSTR(region,18,17);
  IF SUBSTR(regcat,18,5) IN ("North" "South") then regcat =
SUBSTR(regcat,1,17) || "East-" || SUBSTR(regcat,18,17);

  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 (INMPR&FY2. OR INMPR&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 SVCAHP&FY. = 1 THEN SOURCE = "CAHPS &PERIOD.";
  IF SVCAHP&FY1. = 1 THEN SOURCE = "CAHPS &PERIOD1.";
  IF SVCAHP&FY2. = 1 THEN SOURCE = "CAHPS &PERIOD2.";
  IF SVMPR&FY. = 1 THEN SOURCE = "MPR &PERIOD. ";
  IF SVMPR&FY1. = 1 THEN SOURCE = "MPR &PERIOD1. ";
  IF SVMPR&FY2. = 1 THEN SOURCE = "MPR &PERIOD2. ";
  IF SVBEN&FY. = 1 THEN SOURCE = "BENCHMARK &PERIOD.";
  IF SVBEN&FY1. = 1 THEN SOURCE = "BENCHMARK &PERIOD1.";
  IF SVBEN&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 inding 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 fakel;
set in.fake;
order=_n_;
  IF SUBSTR(UPCASE(REGCAT),1,6)="EAST-N" THEN DO;
  output;
  IF SUBSTR(REGCAT,1,6)="EAST-N" then do;
    regcat="EAST" || substr(regcat,11,100);
    region="EAST" || substr(region,11,100);
  end;
  else do;
    regcat="East" || substr(regcat,11,100);
    region="East" || substr(region,11,100);
  end;
end;
output;
run;
data fake;
set fakel;

  IF MAJGRP = "Prime Enrollees" THEN LINEUP=1;
  IF MAJGRP = "Enrollees with Military PCM" THEN LINEUP=2;
  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) = 'EAST' THEN LINEUP1=7.1;
  ELSE IF UPCASE(REGION) = 'EAST ARMY' THEN LINEUP1=7.2;
  ELSE IF UPCASE(REGION) = 'EAST NAVY' THEN LINEUP1=7.3;
  ELSE IF UPCASE(REGION) = 'EAST AIR FORCE' THEN LINEUP1=7.4;
  ELSE IF UPCASE(REGION) = 'EAST OTHER' THEN LINEUP1=7.5;
  ELSE IF UPCASE(REGION) = 'EAST JOINT SERVICE' THEN LINEUP1=7.6;

  ELSE IF UPCASE(REGION) = 'EAST-NORTH' THEN LINEUP1=8;
  ELSE IF UPCASE(REGION) = 'EAST-NORTH ARMY' THEN LINEUP1=9;
  ELSE IF UPCASE(REGION) = 'EAST-NORTH NAVY' THEN LINEUP1=10;
  ELSE IF UPCASE(REGION) = 'EAST-NORTH AIR FORCE' THEN LINEUP1=11;
  ELSE IF UPCASE(REGION) = 'EAST-NORTH OTHER' THEN LINEUP1=12;
  ELSE IF UPCASE(REGION) = 'EAST-NORTH JOINT SERVICE' THEN LINEUP1=13;

  ELSE IF UPCASE(REGION) = 'EAST-SOUTH' THEN LINEUP1=14;
  ELSE IF UPCASE(REGION) = 'EAST-SOUTH ARMY' THEN LINEUP1=15;
  ELSE IF UPCASE(REGION) = 'EAST-SOUTH NAVY' THEN LINEUP1=16;

```

```

ELSE IF UPCASE(REGION) = 'EAST-SOUTH AIR FORCE' THEN LINEUP1=17;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH OTHER' THEN LINEUP1=18;
ELSE IF UPCASE(REGION) = 'EAST-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;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA JOINT SERVICE' THEN LINEUP1=44;

ELSE LINEUP1=45;

IF REGION=REGCAT THEN LINEUP2=1;
ELSE LINEUP2=2;

run;

PROC SORT DATA=fake ;
BY LINEUP LINEUP1 LINEUP2 REGCAT;
RUN;

data fake(DROP=LINEUP LINEUP1 LINEUP2);
set fake;
oorder=_n_;
run;

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 out.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;
      output out.bench;
  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 score=. then sig=0;
IF SIN;
RUN;

data trends out.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 out.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 out.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 out.notgin out.conus_qt;
merge conus_q order(in=gin); by key;
if not gin then output out.notgin;
if gin;
output;
run;
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 ("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 - LOADWEB\East\_Conus.sas - Attach the East region rows to the 2018 Annual data.

```
/*  
E*ast_Conus.sas
```

```
Creator: Matt Turbyfill  
Date: 8/28/2018
```

This is run to attach the East region rows to the 2018 Annual data.

```
*****/  
%let flag=0;  
libname in1 "&PROGRAMS./&PC.LoadWeb";  
libname out "&PROGRAMS./&PC.LoadWeb";  
libname newconus "../.../2018E/Programs/&PC.LoadWeb";  
  
DATA INIT;  
    SET in1.conus_q1;  
    KEEP TIMEPD MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN N_OBS  
N_WGT;  
    IF BENEFIT NE "Preventive Care" then SEMEAN = SEMEAN*100;  
  
    DELETE;  
RUN;  
  
%MACRO PROCESS(BENTYPE=,MAJGRP=,TYPE=,BENEFIT=);  
DATA TEMP newconus.temp;  
    SET pretemp END=FINISHED;  
    %IF "&TYPE" = "INDIVIDUAL" %THEN %DO;  
        WHERE BENTYPE = "&BENTYPE" AND "&MAJGRP" = MAJGRP AND REGION = REGCAT  
AND  
            substr(REGCAT,1,4) in ("EAST" "East") and region=regcat;  
    %END;  
    %ELSE %IF "&TYPE" = "COMPOSITE" %THEN %DO;  
        WHERE BENTYPE = &BENTYPE AND "&MAJGRP" = MAJGRP AND REGION = REGCAT  
AND  
            BENEFIT = "&BENEFIT" AND  
            substr(REGCAT,1,4) in ("EAST" "East") and region=regcat;  
    %END;  
    %ELSE %DO;  
        PUT "ERROR: Invalid Type = &TYPE";  
    %END;  
  
    IF SUBSTR(REGION,12,4)='Army' THEN SERVICE=1;  
    ELSE IF SUBSTR(REGION,12,9)='Air Force' THEN SERVICE=2;  
    ELSE IF SUBSTR(REGION,12,4)='Navy' THEN SERVICE=3;  
    ELSE IF SUBSTR(REGION,12,5)='Joint' THEN SERVICE=5;  
    ELSE IF SUBSTR(REGION,12,5)='Other' THEN SERVICE=4;
```

```

        if substr(region,6,5) = "NORTH" then regcon=1;
        else if substr(region,6,5) = "SOUTH" then regcon=1;
        else regcon=0;
        DROP SUM;
RUN;

*****;
* RSG 01/2005 Calc. total Service Affiliation Scores      *;
*****;
PROC SORT DATA=TEMP;
BY timepd SERVICE ;
DATA TEMP2 newconus.temp2;
    SET TEMP (where=(substr(region,1,4)="East"));
    BY timepd SERVICE;
    length key $200;
    IF FIRST.SERVICE THEN DO;
        SUMSCOR1 = 0;    RETAIN SUMSCOR1;
        SUMWGT1 = 0;    RETAIN SUMWGT1;
        SUMSE1 = 0;    RETAIN SUMSE1;
        N_OBS1 = 0;    RETAIN N_OBS1;
        FIRSTFLAG=1;
    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 SUMSE1 = SUMSE1 + (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 SUMSE1 KEY FIRSTFLAG;    ***MJS 07/08/03
Added TIMEPD;

    IF LAST.SERVICE THEN DO;

        IF SUMWGT1 NOTIN (.,0) THEN DO;
            SCORE = SUMSCOR1/SUMWGT1;
            SEMEAN = SQRT(SUMSE1)/SUMWGT1;
        END;
        ELSE DO;
            SCORE = .;
            SEMEAN = .;
        END;

        N_OBS = N_OBS1;
        N_WGT = SUMWGT1;
        SOURCE = "USA";
        FLAG = "USA";
        IF SERVICE=1 THEN REGION = "East Army";
        IF SERVICE=2 THEN REGION = "East Air Force";
        IF SERVICE=3 THEN REGION = "East Navy";
        IF SERVICE=4 THEN REGION = "East Other";
        IF SERVICE=5 THEN REGION = "East 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 timepd REGCON;
DATA TEMP3 newconus.temp3;
    SET temp(where=(regcon=1));
    BY timepd;
    length key $200;
    IF FIRST.timepd THEN DO;
        SUMSCOR2 = 0;    RETAIN SUMSCOR2;
        SUMWGT2 = 0;    RETAIN SUMWGT2;
        SUMSE2 = 0;    RETAIN SUMSE2;
        N_OBS2 = 0;    RETAIN N_OBS2;
    END;

    IF SCORE NE . AND N_WGT NE . THEN SUMSCOR2 = SUMSCOR2 + (SCORE*N_WGT);
    IF N_WGT NE . THEN SUMWGT2 = SUMWGT2 + N_WGT;
    IF SEMEAN NE . AND N_WGT NE . THEN SUMSE2 = SUMSE2 + (SEMEAN*N_WGT)**2;
    IF N_OBS NE . THEN N_OBS2 = N_OBS2 + N_OBS;

KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD SIG SCORE SEMEAN N_OBS
N_WGT
    FLAG SOURCE SUMSCOR2 SUMWGT2 SUMSE2 n_obs2 KEY regcon; ***MJS
07/08/03 Added TIMEPD;

    IF LAST.timepd THEN DO;

        IF SUMWGT2 NOTIN (.,0) THEN DO;
            SCORE = SUMSCOR2/SUMWGT2;
            SEMEAN = SQRT(SUMSE2)/SUMWGT2;
        END;
        ELSE DO;
            SCORE = .;
            SEMEAN = .;
        END;

        N_OBS = N_OBS2;
        N_WGT = SUMWGT2;
        SOURCE = "REGION";
        FLAG = "REGION";
        IF REGCON=1 THEN REGION = "EAST";
        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 temp3;
        END;
    output newconus.temp3;

```

RUN;

```
%IF &FLAG = 0 %THEN %DO;
  DATA FINAL;
    SET INIT TEMP2 TEMP3 ;
  RUN;
%END;
%ELSE %DO;
  DATA FINAL;
    SET FINAL TEMP2 TEMP3 ;
  RUN;
%END;
%LET FLAG = 1;

%MEND;
```

```
DATA PRETEMP;
SET in1.conus_ql;
  SEMEAN = SEMEAN*100;
  KEEP TIMEPD MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN N_OBS N_WGT
  BSCORE BSEMEAN;
```

RUN;

```
%macro runbentypes(grp=);
*****
* Create CONUS for Active Duty - Individual
*****
;
%PROCESS(BENTYPE=Claims Handled Correctly ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous Customer Service ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You Can Understand ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Information ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting to See a Specialist ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Getting Treatment ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
```



```

%PROCESS(BENTYPE=Mammography ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Pap Smear ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Hypertension ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Prenatal Care ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Non-Smoking Rate ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Counselled To Quit ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Percent Not Obese ,MAJGRP=&grp.,
TYPE=INDIVIDUAL);

%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp., TYPE=COMPOSITE,BENEFIT=Healthy
Behaviors);
%PROCESS(BENTYPE="Composite", MAJGRP=&grp.,
TYPE=COMPOSITE,BENEFIT=Preventive Care);

%mend runbentypes;

%runbentypes(grp=Active Duty);
%runbentypes(grp=Active Duty Dependents);
%runbentypes(grp=Enrollees with Civilian PCM);
%runbentypes(grp=Enrollees with Military PCM);
%runbentypes(grp=Non-enrolled Beneficiaries);
%runbentypes(grp=Prime Enrollees);
%runbentypes(grp=Retirees and Dependents);
%runbentypes(grp=All Beneficiaries);

*****
* Extract ORDER and KEY from the WEB Layout file. TEMPQ will be used
* as place holders for missing records. FAKE will be used for adding
* new records.
*****
;

```

```

DATA FAKE;
  SET IN1.FAKE;
  SIG = .;
  SCORE = .;
  ORDER = _N_;
  IF SUBSTR(UPCASE(REGCAT),1,6)="EAST-S" THEN DELETE;
  IF SUBSTR(UPCASE(REGCAT),1,6)="EAST-N" THEN DO;
    IF SUBSTR(REGCAT,1,6)="EAST-N" then do;
      regcat="EAST" || substr(regcat,11,100);
      region="EAST" || substr(region,11,100);
    end;
    else do;
      regcat="East" || substr(regcat,11,100);
      region="East" || substr(region,11,100);
    end;
  end;
  LENGTH KEY $200.;
  KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
        UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
        UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
  IF BENEFIT='Total' THEN DELETE;

RUN;
PROC SORT DATA=FAKE OUT=TEMPQ; BY KEY; RUN;
PROC SORT DATA=FAKE(KEEP=ORDER KEY); BY KEY; RUN;

*****
* Append BENCHMARK records to CAHPS records and perform significance tests
*****
;
DATA BENCHMRK(KEEP=MAJGRP BENEFIT BENTYPE SEMEAN SCORE timepd);
  SET IN1.CONUS_Q1;
  WHERE REGION = "Benchmark" ; /*KRR 11/14/2007*/
  IF BENEFIT NE "Preventive Care" then SEMEAN = SEMEAN*100;
RUN;
Data abnchmrk(keep=benefit bentype timepd ascore);
set benchmrk;
where majgrp='All Beneficiaries';
rename score=ascore;
run;
proc sort; by benefit bentype timepd;
proc sort data=benchmrk; by benefit bentype timepd;
data benchmrk out.benchmrk;
merge benchmrk abnchmrk; by benefit bentype timepd;

PROC SORT DATA=BENCHMRK; BY MAJGRP BENEFIT BENTYPE timepd; RUN;

PROC SORT DATA=FINAL; BY KEY; RUN;

DATA CONUS_Q out.conus_qm;
  MERGE FINAL(IN=IN1 ) FAKE(IN=IN2);
  BY KEY;
  IF IN1;
RUN;
PROC SORT DATA=CONUS_Q; BY MAJGRP BENEFIT BENTYPE timepd; RUN;

*****

```

```

* Perform significance tests for CONUS scores
*****
;
/*
%macro runsig(ben=, bscore=);
    IF BENTYPE=&ben. THEN DO;
        BSCORE=&bscore.;
        IF SEMEAN > 0 THEN TSTAT=(SCORE-&bscore.)/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 > &bscore. THEN SIG = 1;
            ELSE IF SCORE < &bscore. THEN SIG = -1;
        END;
    END;

%mend;
*/

data newconus.final;
set final;
run;
DATA SIGTEST1 newconus.sigtest1;
MERGE CONUS_Q(IN=SIN) BENCHMRK(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
BY MAJGRP BENEFIT BENTYPE timepd;
LENGTH KEY $200.;

if benefit not in ( "Healthy Behaviors" "Preventive Care") then do;

    TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
    IF N_OBS > 1 THEN TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
    ELSE TEST = .;
    SIG = 0;
    IF TEST < 0.05 THEN SIG = 1;
    IF SCORE < BSCORE THEN SIG = -SIG;
    score=score+ascore-bscore;
end;
else do;

    IF SEMEAN > 0 THEN TSTAT=(SCORE-bscore)/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 > bscore THEN SIG = 1;
        ELSE IF SCORE < bscore THEN SIG = -1;
    END;
end;

KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
      UPCASE(TRIM(MAJGRP)) || UPCASE(TRIM(REGCAT)) ||
      UPCASE(TRIM(REGION)) || UPCASE(TRIM(TIMEPD));
SOURCE = "USA_Q";

```

```

FLAG    = "USA_Q";
IF SIN;
RUN;

*****
* Extract CAHPS scores to perform significance tests
*****
;
DATA CAHPS MPR;
  SET IN1.CONUS_Q1;
  *****
  * Significance tests have already been performed for MPR scores,
  * so remove from file.

*****;
  IF BENEFIT NE "Preventive Care" then SEMEAN = SEMEAN*100;

  KEEP TIMEPD MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN N_OBS N_WGT
KEY;

  IF SVMPR&FY2. = 1|svmpR&FY1.=1|svmpR&FY.=1 THEN OUTPUT MPR; /*KRR
11/14/2007*/
  IF SVMPR&FY2. = 0 & svmpR&FY1. = 0 & svmpR&FY. = 0 THEN OUTPUT CAHPS;
/*KRR 11/14/2007*/
RUN;

PROC SORT DATA=final;
  BY MAJGRP BENEFIT BENTYPE timepd;
RUN;

PROC SORT DATA=SIGTEST1; BY KEY; RUN;
PROC SORT DATA=MPR; BY KEY; RUN;

DATA COMBINE OUT.LT30QE;
  SET SIGTEST1 ;
  BY KEY;
  *****
  * 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.LT30QE;
  ELSE OUTPUT COMBINE;
RUN;

*****
* Create place holders for missing records
*****
;
DATA FAKEONLY;
  MERGE COMBINE(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 newconus.conus_q ;
  SET FAKEONLY COMBINE;
  BY KEY;
where substr(regcat,1,4) in ("EAST" "East") and region=regcat and
find(upcase(regcat),"NORTH")=0 and find(upcase(regcat),"SOUTH")=0;

SEMEAN=SEMEAN/100;

RUN;

data out.conus_q OUT.LT30Q;
set in1.conus_q1 conus_q;

IF MAJGRP = "Prime Enrollees" THEN LINEUP=1;
IF MAJGRP = "Enrollees with Military PCM" THEN LINEUP=2;
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) = 'EAST' THEN LINEUP1=8;
ELSE IF UPCASE(REGION) = 'EAST ARMY' THEN LINEUP1=9;
ELSE IF UPCASE(REGION) = 'EAST NAVY' THEN LINEUP1=10;
ELSE IF UPCASE(REGION) = 'EAST AIR FORCE' THEN LINEUP1=11;
ELSE IF UPCASE(REGION) = 'EAST OTHER' THEN LINEUP1=12;
ELSE IF UPCASE(REGION) = 'EAST JOINT SERVICE' THEN LINEUP1=13;

ELSE IF UPCASE(REGION) = 'EAST-NORTH' THEN LINEUP1=8;
ELSE IF UPCASE(REGION) = 'EAST-NORTH ARMY' THEN LINEUP1=9;
ELSE IF UPCASE(REGION) = 'EAST-NORTH NAVY' THEN LINEUP1=10;
ELSE IF UPCASE(REGION) = 'EAST-NORTH AIR FORCE' THEN LINEUP1=11;
ELSE IF UPCASE(REGION) = 'EAST-NORTH OTHER' THEN LINEUP1=12;
ELSE IF UPCASE(REGION) = 'EAST-NORTH JOINT SERVICE' THEN LINEUP1=13;

ELSE IF UPCASE(REGION) = 'EAST-SOUTH' THEN LINEUP1=14;

```

```

ELSE IF UPCASE(REGION) = 'EAST-SOUTH ARMY' THEN LINEUP1=15;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH NAVY' THEN LINEUP1=16;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH AIR FORCE' THEN LINEUP1=17;
ELSE IF UPCASE(REGION) = 'EAST-SOUTH OTHER' THEN LINEUP1=18;
ELSE IF UPCASE(REGION) = 'EAST-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;
ELSE IF UPCASE(REGION) = 'LATIN AMERICA JOINT SERVICE' THEN LINEUP1=44;

ELSE LINEUP1=45;

IF REGION=REGCAT THEN LINEUP2=1;
ELSE LINEUP2=2;

IF (N_OBS < 30 OR N_WGT < 200) AND (MAJGRP NE "Benchmark") AND
(REGION NE "Benchmark")
THEN DO;
  OUTPUT OUT.LT30Q;
  SCORE=. ;
  SIG=. ;
  N_OBS=. ;
  N_WGT=. ;
  SEMEAN=. ;
  OUTPUT OUT.CONUS_Q;
END;
ELSE DO;
  OUTPUT OUT.CONUS_Q;
END;
run;

```

```
PROC SORT DATA=OUT.CONUS_Q;  
BY LINEUP LINEUP1 LINEUP2 REGCAT;  
;RUN;
```

```
DATA OUT.CONUS_Q(DROP=LINEUP LINEUP1 LINEUP2);  
SET OUT.CONUS_Q;  
ORDER=_N_;  
RUN;
```

```
proc freq data=conus_q;  
table regcat;  
run;  
proc freq data=combine;  
table regcat;  
run;  
proc freq data=fakeonly;  
table regcat;  
run;
```

**G.16 - PROGRAMS\HCSDB\_Bene\_Report\_Macro\_Batch\_Program.SAS - Run all beneficiary report programs as a single process, including purchased care.**

```
/******  
NOTE: FOR ANNUAL, YOU WILL STILL NEED TO RUN BENE REPORTS ON THE SASGRID,  
BUT RUN THE FIRST PART OF THE PROGRAM FIRST, UP TO LINE 183, THEN RUN THE  
VARTEST.DO PROGRAMS SEPARATELY ON YOUR LAPTOP IN STATA, AND THEN RUN THE  
SECOND PART OF THIS PROGRAM.  
*****/
```

```
options msglevel = i;  
options nosource;  
%syndel 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 = 2018;  
%LET FYQTR = A;  
/*This is always the last two digits of FYYEAR.*/  
%LET FY = 18; /*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 = 16;
```

```
/*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, C15_ZAMV.*/  
%LET BENCHINPUT = /sasdata/Projects/40309_HCS/DATA/HCSDB/2017AdultNCQA;  
/*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/Q1FY2018/Programs/Benchmark/data;
```

```
%LET BENCHFILE = ncqa2017;  
/*This is the location of the Norm data.*/  
%LET NORMDATA = /sasdata/Projects/40309_HCS/DATA/HCSDB/20&NY./Data;  
%LET NORMFMLIB =  
/sasdata/Projects/40309_HCS/DATA/HCSDB/Q1FY2018/Data/AFinal/fmtlib/2016_Unix  
;  
%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('%symdel '||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/fm
tlib, 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);
%END;
%MEND;
%RUNPROGS;

%runprog(dir=&PROGRAMS./&PC.Benchmark, file =BENCHA03);
%runprog(dir=&PROGRAMS./&PC.Benchmark/apredtest, file =SAS2STATA_Grps);

x "cd &PROGRAMS./&PC.Benchmark";

/** CHANGE HERE!!!! **/
/*FOR ANNUAL: RUN THE VARTEST.DO PROGRAMS SEPARATELY. DON'T RUN THIS
SECTION OF CODE.*/
/*%if &PC = %str() %then %do;
    *x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/SASGRID/DATA/HCSDB/2018/Programs/Benchmark/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/Benchmark/apredtest/varte
st.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/2018/Programs/PurchasedBenchmark/ap
redtest/vartest.do" ;
*x "Y:/APPS/Stata/13/MP4/64/StataMP-64.exe" /e do
"N:/Project/40309_HCS/DC1/HCSDB/2014/Test_Programs/PurchasedBenchmark/apredt
est/vartest.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;

```

**APPENDIX H**

**SAS CODE FOR 2018 HEDIS SAMPLING AND WEIGHTING**

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### H.1.A - HEDISFY2018\Programs\Sampling\framea\_prelim.sas - count number of eligible beneficiaries per facility

```
*****
*** Program: framea_prelim.sas
*** Project: Health Care Survey of DoD Beneficiaries - Adult (40309.41H)
*** Purpose: Create the Preliminary Sampling Frame for the Adult Survey.
***
*** 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)
***
*** Written: Haixia Xu on 08/15/2006
*** Last Updated: 09/29/2016 by Sabrina R. for Q2FY2017 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
***        8) Used updated frame.inc for HEDIS
***          For HEDIS 2018, making '0326' sites stand alone
*****;
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="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

libname in1  "/sasdata/Projects/40309_HCS_Restricted/DATA/&hcsdb_quarter."
access=readonly;
libname in2
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&hcsdb_quarter./Data/AFinal";
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data";

TITLE1 "DOD Health Care Survey, Sampling (40309.41H)";
title2 "Program: FRAMEA_PRELIM.SAS (&QUARTER.)";
title3 "Purpose: Construct the Preliminary Adult Sampling Frame";

%let Folder      =
/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Sampling;
%let TMAfolder    =
/sasdata/Projects/40309_HCS/DATA/HCSDB/&hcsdb_quarter./Data/AFinal/DMISID_20
1711; *reading downloaded excel file;
%let TMAfilename  = 201711_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=TMA
            replace;

run;

Data Out.TMA(drop=AA AB AC AD AE AF);
Set TMA;
Run;

Title3 "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 pcm patcat dageqy acv
                  pntypcd MBRRELCD pnlcatcd pnsexcd svccd TNEXREG
PRRECFLG);
  /*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 PRRECFLG PATCAT DAGEQY DAGEQY*PNTYPCD*MBRRELCD
         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;

%include "&folder./frame.inc"; *Include file;

*
-----
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;

*Keeping large clinic seperate for HEDIS 2018;
Data NewDMIS;
Input DMIS ;
datalines;
326
121
119
103
058
370
;
Run;

Data listdmis_hedis;
Set in2.listdmis
    NewDMIS;
If DMIS=326 Then Label=' '; *AF-C-87th MEDGRP-JBDL-MCGUIRE';
If DMIS=121 Then Label=' ';
If DMIS=119 Then Label=' ';
If DMIS=103 Then Label=' ';
If DMIS=058 Then Label=' ';
If DMIS=370 Then Label=' ';
Run;

Title4 "Print modified ListDmis FOR HEDIS 2018:";
proc print data=listdmis_hedis;
run;

data listdmis; *Keeping file name same for code below;
set listdmis_hedis(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;

proc sort data=listdmis; by com_geo; run;
proc sort data=t_frame; by com_geo; run;

data merged both only1 only2 problem;
merge t_frame(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';
            when (' ') enbgsmpl='04';
            otherwise enbgsmpl='c';
        end;
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;
else if dageqy > '064' then do;

```

```

                select (pcm);
                    when ('CIV') enbgsmpl='08';
                    when ('MTF') enbgsmpl='09';
                    when (' ') enbgsmpl='10';
                    otherwise enbgsmpl='1';
                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;
end;

run;

title4 "Check Com_geo";
proc freq data=merged;
tables com_geo*R_MTF*tnexreg*patcat*dageqy*pcm*ACV/missing list;
format dageqy $FMTage.;
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 $FMTage.;
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 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;

```

```

title1 "Check for HEDIS 2018:";
title2 "Crosstab with Selected Variables where group='1' and zone=4";
proc freq data=framea_prelim;
tables group*R_MTF*stratum*com_geo*D_DMIS/missing list;
where group='1' and zone=4;
run;

```

```

title2 "Checking com_geo='0326'";
proc freq data=framea_prelim;
tables stratum*com_geo*enrid*d_dmis/missing list;
where com_geo='0326';
run;

```

\*\*\*\*\*

Output Final File:

\*\*\*\*\*;

Data out.framea\_prelim\_HEDIS; \*Used updated frame.inc for HEDIS;

```
Set framea_prelim;  
Run;
```

```
*****
```

```
Additonal Checking:
```

```
*****;
```

```
title4 "Checks Zone Assignment in Preliminary Adult Sampling Frame:";
```

```
proc freq data=out.framea_prelim_HEDIS;
```

```
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_HEDIS;
```

```
run;
```

```
proc printto;
```

```
run;
```

```
***** The End *****;
```



## H.1.B - HEDISFY2018\Programs\Sampling\frame.inc - include file for framea\_prelim.sas

```
*****
*****
*** Project:          Health Care Survey of DoD Beneficiaries -
Quarterly/Annual Adult Dataset
*** Program:         Frame.inc -- include file used in adjwt.sas and
cacsmp1.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 = Cacsmp1
*** 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 cacsmp1=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 \*\*\*/

```

*****;
*** 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 ***";
                    put "*****";
                end;
                else if &var_name.='INACT' then do;
                    put "*****";
                    put "*** Inactive assignment ***";
                end;
            end;
        %end;
    %end;
%macroend;

```

```

        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;
  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;
%let fromvar=geocell;

```

```

%let tovar=dcatch;

%assigngeocell;

DATA FRAME;
  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=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;

proc sort data=frame;
  by geocell;
run;

data frame2 both fr_only fy_only;
  merge frame (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 */

    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' ***;
*** For HEDIS 2018, adding '0326','0121','0119','0103','0058','0370' ***;
*****;
/*NOTE in q1fy2007: 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','0326
','0121','0119','0103','0058','0370') 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.2 - HEDISFY2018\Programs\Sampling\framea.sas - restrict frame to only 50 largest facilities, collapse small strata

```
*****
*****
*** Program : framea.sas
*** Project : Health Care Survey of DoD Beneficiaries - Adult (40309.21H)
*** Purpose : Collapse the small stratum, and finalize the frame
*** 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 Miller Wakar 8/31/2015 Q1FY2016 Adult Sampling
*** Note    : From Q1FY2014, our sample size is 100,000 (webonly).
***          We decided to collapse all stratum <1900
***          For Strata <2000, please check teh excel file (Strata Less
Than 2000.xlsx)
*****
*****;
*** Set up options. ***;
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="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

*** Set up the titles. ***;
title1 "Program: FRAMEA.sas ";
title2 "Collapse the small stratum, and finalize the frame";

*** Set up the input and output paths. ***;
libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data";
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data";
```



```

data framea;
set in.framea_prelim_HEDIS;
stratumo=stratum;

*
_____
                                COLLAPSE
_____
;

*FIX COLLAPSEMENT (THIS PART DO NOT CHANGE QUARTER TO QUATER ;

/*Note: Collapse these cells to attempt to raise sample size*/
/*Note: Tom indicated he wanted to drop TRS regional estimates -
so we could do one MHS-wide stratum for TRS,
instead of regional.*/

/*Note: Tom also said that he did not think we need to keep TRICARE Plus
separate from other 65+, so we could collapse all 65+ together,
with same objective as current nonenrolled 65+. */

/*Note: For the beneficiaries 65+, we don't separate sample TRICARE Plus
enrollees*/;

if stratumo in ('4900199','5900199') then stratum='6900199';
if stratumo in ('4900299','5900299') then stratum='6900299';
if stratumo in ('4900399','5900399') then stratum='6900399';
if stratumo in ('4900499','5900499') then stratum='6900299';

/*Note: We don't stratify TRICARE Reserve Select(TRS) enrollees by TNEX
region,
        instead, we just had all TRS enrollees in one stratum.*/
if stratumo in ('0900111','0900211','0900311','0900411') then
stratum='0999911';

/*Added in q3fy2009. AS per Nancy's email below:
From: Nancy Clusen
Sent: Thursday, November 13, 2008 12:46 PM
To: Eric Schone; Keith Rathbun
Cc: Amang Sukasih; Haixia Xu
Subject: FW: checking dmid=1350

Hello,
37th Medical Group Lackland Air Force Base DMIS ID 1350 first appears in the
frame in Q2.
The facility type is Clinic, but it also is its own Parent facility.
As you can from Haixia email below, most of the beneficiaries enrolled to
1350 in Q2
were enrolled with the 59th Medical Wing-Lackland DMIS ID 117 in Q1.
Should we combine 117 and 1350 for the purposes of reporting?
*/
/*if substr(stratumo,2,4) = '0117' then substr(stratum,2,4)='1350';*/
if substr(stratumo,2,4) = '1350' then substr(stratum,2,4)='0117';

/*Q1FY2012 added Walter Reed closing, merged with Bethesda Naval Hospital*/
if substr(stratumo,2,4) = '0037' then substr(stratum,2,4)='0067';

```

```

run;

title3 "Check stratum after Permanent Cell Collapse";
proc freq data=framea;
tables stratum*stratumo /missing list;
run;

title3 "Check stratum";
proc freq data=framea noprint;
tables stratum*stratumo /missing list;
tables stratum/out=freqcnt missing list;
run;

title4 "Small stratum with count <2000";
proc print data=freqcnt noobs;
var stratum count;
where count<2000;
run;

title4 "Small stratum with count (where count>1900 and count<2000)";
proc print data=freqcnt noobs;
var stratum count;
where count>1900 and count<2000;
run;

* =====
* COLLAPSEMENT CURRENT QUARTER
* =====;
data framea;
    set framea /*(drop=stratumo)*/;
                /*stratumo=stratum;*/

if stratumo in ('1000101','1000103') then stratum = '1000103';
else if stratumo in ('1000403','1000406') then stratum = '1000403';
else if stratumo in ('1000803','1000806') then stratum = '1000803';
else if stratumo in ('1001303','1001306') then stratum = '1001303';
else if stratumo in ('1001803','1001806') then stratum = '1001803';
else if stratumo in ('1001903','1001906') then stratum = '1001903';
else if stratumo in ('1002601','1002603','1002606') then stratum =
'1002603';
else if stratumo in ('1003303','1003306') then stratum = '1003303';
else if stratumo in ('1004303','1004306') then stratum = '1004303';
else if stratumo in ('1004601','1004603','1004606') then stratum =
'1004603';
else if stratumo in ('1005303','1005306') then stratum = '1005303';
else if stratumo in ('1005603','1005606') then stratum = '1005603';
else if stratumo in ('1007401','1007403','1007406') then stratum =
'1007403';
else if stratumo in ('1007603','1007606') then stratum = '1007603';
else if stratumo in ('1007703','1007706') then stratum = '1007703';
else if stratumo in ('1008303','1008306') then stratum = '1008303';
else if stratumo in ('1008603','1008606') then stratum = '1008603';
else if stratumo in ('1010103','1010106') then stratum = '1010103';
else if stratumo in ('1010303','1010306') then stratum = '1010303';

```

```

else if stratumo in ('1011203','1011206') then stratum = '1011203';
else if stratumo in ('1011303','1011306') then stratum = '1011303';
else if stratumo in ('1011803','1011806') then stratum = '1011803';
else if stratumo in ('1012803','1012806') then stratum = '1012803';
else if stratumo in ('1012903','1012906') then stratum = '1012903';
else if stratumo in ('1013103','1013106') then stratum = '1013103';
else if stratumo in ('1023103','1023106') then stratum = '1023103';
else if stratumo in ('1024803','1024806') then stratum = '1024803';
else if stratumo in ('1028006','1028003') then stratum = '1028003';
else if stratumo in ('1030603','1030606') then stratum = '1030603';
else if stratumo in ('1031003','1031006') then stratum = '1031003';
else if stratumo in ('1033006','1033003') then stratum = '1033003';
else if stratumo in ('1036403','1036406') then stratum = '1036403';
else if stratumo in ('1050806','1050803') then stratum = '1050803';
else if stratumo in ('1061206','1061203') then stratum = '1061203';
else if stratumo in ('1062003','1062006') then stratum = '1062003';
else if stratumo in ('1062106','1062103') then stratum = '1062103';
else if stratumo in ('1062206','1062203') then stratum = '1062203';
else if stratumo in ('1063306','1063303') then stratum = '1063303';
else if stratumo in ('1080406','1080403') then stratum = '1080403';
else if stratumo in ('1080501','1080503','1080506') then stratum =
'1080503';
else if stratumo in ('1080606','1080603') then stratum = '1080603';
else if stratumo in ('1621501','1621503','1621506') then stratum =
'1621503';
else if stratumo in ('1009406','1009403') then stratum = '1009403'; *end of
Q2FY2018;

```

```

*****
*Special Case:
* - first we try to collapse (2900402 and 2900405) if they are small.
*   usually we still short by some units. based on sampling rate, we
*   can then collapse with lowest Sampling Rate of any 2900XX stratum.
*   For Q1FY2018: Lowest SAM_RAT for stratum 2900205=0.00377 (from
sampla01.lst)
* - if 3900404 short by XX number, we can collapse '3900404','3900407'
*****;
*Q2FY2018: Similar to some previous quarters, after collapsing just
2900402 and 2099405, 2900402 was short by large number of
units during sample selection so we collapse all 3 strata here instead;

*else if stratumo in ('2900402','2900405') then stratum='2900402';
else if stratumo in ('2900402','2900405','2900205') then stratum='2900205';

*Q2FY2018: Similar to some previous quarters, 3900404 was short by large
units during sample selection so this collapsement was used again. Also
noted, in couple of previous quarters (FY2013, FY2014, FY2015), we
decided to do the following collapse to improve the MTF precision (pre4);
else if stratumo in ('3900404','3900407') then stratum='3900404';

group=substr(stratum,1,1);
run;

*Checks the small stratum again after collapsements;
proc freq data=framea NOPRINT;
tables stratum /out=chksmallsize missing list;

```

```

run;

title3 "Checks the small Stratum again after Collapsesments";
title4 " (note: we leave count>1900 As Is)";
title5 " (for count<1900 (if any),check for the reason for not collapsing)";
proc print data=chksmallsize NOOBS;
where count <2000;
var stratum count;
run;

title1 'CROSS FREQ: Stratum*Group';
proc freq data=framea;
table stratum*group/list missing;
run;

*
_____
Construction of Geosmpl, Ebsmpl and Grop_Geo from Stratum
_____
;

data out.framea;
set framea(drop=stratumo);
geosmpl=substr(stratum, 2, 4);
ebsmpl=substr(stratum, 6, 2);
grp_geo=substr(stratum, 1, 5);
run;

title1 'Check for HEDIS 2018: where com_geo=0326';
proc freq data=out.framea;
tables stratum*com_Geo*ENRID*D_DMIS/missing list;
where com_geo='0326';
run;

title1 "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;

TITLE1 "CROSS FREQ: Check the ebsmpl";
proc freq data=out.framea;
tables group*enbgsmpl*ebsmpl/missing list;
run;

Title1 "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;

title1 '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;

title1 'Check for HEDIS 2018';
proc freq data=out.framea;
tables stratum*COM_GEO/missing list;
run;

title1 'Freq of Stratum*Zone in the Final Frame';
proc freq data=out.framea;
tables stratum*zone/missing list;
run;

title1 'Contents of the Final Frame (framea)';
proc contents data=out.framea;
run;

proc printto;
run;

/*****The End *****/
```

### H.3 - HEDISFY2018\Programs\Sampling\sampla01\_hedis.sas - select sample from zone 4

```
*****
*****
*** Program : sampla01_HEDIS.sas
*** Project : Health Care Survey of DoD Beneficiaries - Adult (40309.41H)
*** Purpose : Creating HEDIS 2018 Frame from Q2FY2018 HCSDB Frame and
Selecting sample
*** Input   : framea.sas7bdat
*** Output  : framea_hedis.sas7bdat
*** Notes   :
1.   For HEDIS we will only use Zone-4
2.   We need to construct the frame just like we normally
     would for HCSDB (using Zone-4)
3.   We already have the EXTRACT (we can use Q2FY2018 extract)
4.   We will only sample from those enrolled for military PCM (GROUP-1)
5.   We can construct full frame but we will only Sample from GROUP-1
     and from only some strata from GROUP-1
6.   We can construct the frame as usual, no need to modify programs
     that much just will sample from GROUP-1
7.   Last year HEDIS was way more complicated. In 2018, Nancy
     convinced Rich to use Military enrollees only
8.   Sample size will be different. 1200 per stratum and stratum
     defination is same as HCSDB
9.   We will only deliver some of them. So we don't have enough
     money to sample from all stratum (Nancy working on list)
10.  We don't need the HCSDB Sample size program. Once we have
     the frame, we can just do the sample selection
11.  May be we can do only 50 of them, Nancy will let me know soon
*****
*****;

*** Set up options. ***;
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)
);

%Let GEOCELLLIST =
'0124','0029','0089','0110','0125','0123','0091','0060','0024','0117',
'0039','0108','0032','0109','0045','0052','0049','0126','0038','0048',
'0079','0069','0067','0280','0047','0370','0009','0057','0096','0055',
'0095','0120','0042','0330','0385','0014','0010','0078','0105','0006',
'0252','0098','0100','0066','0033','0122','0061','0051','0326','0121',
'0103','0119','0058';

proc printto log="&logname." new;
ods listing;
```

```

proc printto print="&lstname." new;

%let hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

*** Set up the titles. ***;
title1 "Program: sampla01_HEDIS.sas (HEDIS &yr. - 40309.41H)";
title2 "Purpose: Creating HEDIS 20&yr. Frame from Q2FY20&yr. HCSDB Frame and
Selecting sample";

*** Set up the input and output paths. ***;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data"; /*framea_hedis.sas
7bdat*/
libname out "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data";
/*framea.sas7bdat*/

%let outxls =
/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Programs/Sampling;

*****
HEDIS- 2018 Frame Construction:
*****;
Data Framea;
set in.Framea;
stratum_4=substr(stratum,2,4);
stratum_H=substr(stratum,1,5);
if com_geo=stratum_4 then Flag_comgeo_stratum4_same=1;
if com_geo in (&GEOCELLLIST.) then Flag_list_of_53=1;
Run;

*Checking Construction of Two Flags;
Title1 "Checking Construction of Stratum_H and Stratum_4 (com_geo)";
Proc Freq Data=Framea (Obs=20);
Tables Stratum*Stratum_H*Stratum_4/List Missing;
Run;

Title2 "Freq of 'Flag_comgeo_stratum4_same' where com_geo~=stratum_4";
Proc Freq Data=Framea;
Tables Flag_comgeo_stratum4_same/List Missing;
where (com_geo~=stratum_4);
Run;

Title2 "Freq of 'Flag_comgeo_stratum4_same' where com_geo=stratum_4";
Proc Freq Data=Framea;
Tables Flag_comgeo_stratum4_same/List Missing;
where (com_geo=stratum_4);
Run;

Title2 "Checking frequency of Stratum_H (where Flag_list_of_53=1) before
restricting:";
Proc Freq Data=Framea Noprint;
Tables stratum_H/List Missing Out=chk1(drop=percent);
where (Flag_list_of_53=1);
Run;

```

```

Proc Print Data=chk1;
Run;

*****
Keeping Eligible Cases Only:
*****;
Data Framea2;
Set Framea;
*we only want to use Group=1 and zone=4 for HEDIS 2018;
if (Group='1' and zone=4 and Flag_list_of_53=1 and
Flag_comgeo_stratum4_same=1);
run;

Title1 "CrossTab of Selected Variables (Zone=4 and Group=1 only)";
Title2 "  if com_Geo=stratum_4 then flag=1";
Proc Freq Data=Framea2;
Tables group*zone*Flag_list_of_53*Flag_comgeo_stratum4_same/List missing;
Run;

Title1 "Checking Construction of Stratum_H and stratum_4:";
Title2 "  stratum_H = 5 digit stratum          ";
Title3 "  stratum_4 = 4 digit stratum          ";
Proc Freq Data=Framea2 noprint;
Tables stratum*stratum_H*stratum_4*Com_Geo*Flag_list_of_53/List missing
Out=chk1(drop=percent);
Tables stratum_H*Group*Zone*Flag_list_of_53/List missing
Out=chk2(drop=percent);
Run;
/*Proc Print Data=chk1; Run;*/
Title1 "Freq of Stratum_H (after restricting 53 places, Group=1 and
Zone=4)";
Proc Print Data=chk2; Sum Count;
Run;

*****
*Requested Spreadsheet:
*****;
*Creating Output Excel file with requested outputs for Nancy;
*Ods html file="&outxls./Check_for_Sampling_Stratum_v6.xls";
/*
Title1 "Check for Sampling Stratum:";
Proc Freq Data=Framea2;
Tables Stratum*com_geo*ENRID*PCM*PATCAT*ACV*d_dmis
      Stratum_H*com_geo*PCM*PATCAT*ACV*d_dmis
      Stratum_H/List missing;
Run;
*/
*Ods html close;

*****
HEDIS- 2018 Sample Selection Plan:
=====
From 53 place, we want to select a sample of 1184 from each HEDIS Stratam.
That will give us 62221 cases in total because we don't have enough sample

```



to draw from one stratum. From that 62,221 cases, we will create a active duty only frame and select 4000 from Active duty from it.

1st Sample:

Frame: Group=1, Zone=1, within 53 Areas in Nancy's list.

- HEDIS Stratum is created as Stratum\_H=(GROUP||Com\_geo)

- From 53 places we will select sample

- sample size is 1184/place, including one cesus, we will select 62221

2nd Sample:

We don't have money to mail them all. We will select a random sample of all active duty beneficiaries only proportionally.

Frame1 (everybody)=> Sample1 everybody (62221)

=> Frame2 (Only ActDty)=> Sample2 (4000 ActDty)

Sample of Act DUTY 4000 cases should get a "EMAIL\_ONLY" flag = 1

(INCLUDING ALL OTHER ACT DUTY AND OTHERS NOT IN THAT

SAMPLE OF 4000 will get EMAIL\_ONLY = 0 )

\*\*\*\*\*;

Data Frame\_All;

Set Framea2;

Run;

\*Creating a data file for sample size;

Title2 "Checking frequency of final stratum:";

Proc Freq Data=Frame\_All noprint;

Tables stratum\_H/List Missing Out=chk\_size(drop=percent

rename=(count=frm\_cnt));

Run;

Proc Print Data=chk\_size;

Run;

Data ssize(Keep=Stratum\_H \_NSIZE\_);

Set chk\_size;

If STRATUM\_H~='10370' Then \_NSIZE\_=1184;

Else if STRATUM\_H='10370' Then \_NSIZE\_=Frm\_Cnt; /\*Census\*/

Run;

Proc Print Data=ssize;

Sum \_NSIZE\_;

Run;

\*Sample Selection;

PROC SURVEYSELECT DATA = Frame\_All

SAMPsize = ssize

METHOD = SEQ

SEED=624145

OUT=Sample\_all(Rename=(SELECTIONPROB=SELECTIONPROB\_All));

STRATA Stratum\_H;

CONTROL Patcat PNSEXCD;

RUN;

Title1 "Checking Selected FIRST Sample (All Beneficiary)";

proc freq data=Sample\_all noprint;

tables Stratum\_H/list missing Out=chk2(Drop=percent);

run;

proc print data=chk2;

```

Sum Count;
run;

Title1 "Freq of Patcat:";
proc freq data=Sample_all;
tables Patcat/list missing;
run;

*****
Create the Sampling Frame for Second Sample:
*****;
Data Frame_ACTDTY;
Set Sample_all;
If Patcat='ACTDTY';
Run;

Title1 "Checkin PATCAT Count for Second Sample (ActDty Beneficiary Only)";
proc freq data=Frame_ACTDTY noprint;
tables Stratum_H*Patcat/list missing Out=chk_ssize2(Drop=percent
Rename=(Count=actdty_cnt));
run;
data chk_ssize2;
set chk_ssize2;
tot_actdty=29407;
tot_ssize=4000;
ssize=(tot_ssize/tot_actdty)*actdty_cnt;
_NSIZE_=ROUND(ssize);
run;
proc print data=chk_ssize2;
Sum actdty_cnt SSIZE _NSIZE_;
run;

Data ssize2(Keep=Stratum_H _NSIZE_);
set chk_ssize2;
run;

*Selecting a sample of 4000 from Frame_ACTDTY;
PROC SURVEYSELECT DATA = Frame_ACTDTY
SAMPsize = ssize2
METHOD = SRS
SEED=153708
OUT=Sample_ACTDTY;
STRATA Stratum_H;
RUN;

Title1 "Checking Selected FIRST Sample (All Beneficiary)";
proc freq data=Sample_ACTDTY noprint;
tables Stratum_H/list missing Out=chk2(Drop=percent);
run;
proc print data=chk2;
Sum Count;
run;

*****
Creating Flag:
*****;

```

```

Data Sample_ACTDTY_ID (Keep=MPRID EMAIL_ONLY);
Set Sample_ACTDTY;
EMAIL_ONLY=1;
Run;

Proc Sort Data=Sample_all; By MPRID; Run;
Proc Sort Data=Sample_ACTDTY_ID; By MPRID; Run;

Data Sample_all2;
Merge Sample_all(In=A) Sample_ACTDTY_ID(In=B);
By MPRID;
If Patcat='ACTDTY' and Email_Only=. Then Email_Only=0;
If A;
Run;

Title1 "Checking Email_Only=1 Cases";
Proc Freq Data=Sample_all2;
Tables Email_Only*Patcat/List Missing;
Run;

*****
*****
*Checking Frame vs Sample Count:
*****
*****;
%Macro FSChk(Fdata=, Sdata=, SSizedata=, Title=);
Title1 "Checking Frame vs &Sdata. ";
Title2 "&Title.";
Title3 " ";
Proc Freq Data=&Fdata. Noprint;
Tables Stratum_H/List Missing Out=Chk_fcount(Drop=Percent
Rename=(Count=FrmCnt));
Run;

Proc Freq Data=&Sdata. Noprint;
Tables Stratum_H/List Missing Out=Chk_scount(Drop=Percent
Rename=(Count=SmplCnt));
Run;

Data Chk_count;
Merge Chk_fcount(In=A) Chk_scount(in=B) &SSizedata.(in=C);
By Stratum_H;
If A;
Diff=(_NSize_-SmplCnt);
If (_NSize_>=FrmCnt) Then flag_census=1;
Run;

/*
Title2 "Prints PracticeID if Sample Count~=Sample Size:";
Title3 " Diff=(SmplCnt-SampleSize) NE 0";
Proc Print Data=Chk_count2 noobs;
Var PracticeID FrmCnt _NSize_ SmplCnt Diff ;
Sum FrmCnt _NSize_ SmplCnt Diff ;
where Diff~=0;
Run;
*/

```

```

Title4 "Prints cases where Flag_Census=1:";
Proc Print Data=Chk_count noobs;
Var Stratum_H FrmCnt _NSize_ SmplCnt Diff Flag_Census;
Sum flag_census FrmCnt _NSize_ SmplCnt Diff;
Run;

Title4 "Checking n min max sum of Frame and Sample Count - Per Practice";
Proc Means Data=Chk_count n min max sum;
Var FRMCNT SMPLCNT ;
Run;
%Mend FSchk;

%FSchk(Fdata=Frame_All, Sdata=Sample_all, SSizedata=ssize,
       Title=First Sample (all cases));

Title1 "Sum of SamplingWeight";
Proc means data=Sample_all n sum;
var SamplingWeight;
run;

Title1 "Univariate of SamplingWeight (Sample Released - Original):";
Proc Univariate data=Sample_all;
Var SamplingWeight;
Run;

/*****
/*CHECKING DISTRIBUTION PER PRATICE*/
*****/
Proc Sort Data=Sample_ALL; By Stratum_H; Run;

%Macro Chk_Dist(Var=, Smpldata=);
Title1 "Checks Distribution: (Variable=&Var.):";
Proc Freq Data=Frame_All NOPRINT;
Tables &Var./List Missing Out=F(Rename=(Count=FrmCnt Percent=FrmPct));
BY Stratum_H;
Run;
Proc Freq Data=&Smpldata. NOPRINT;
Tables &Var./List Missing Out=S(Rename=(Count=SmplCnt Percent=SmplPct));
BY Stratum_H;
Run;

Data FS;
Merge F(In=A) S(In=B);
By Stratum_H &Var.;
If A ;
abs_diff= abs(FrmPCT-SmplPCT);
If (abs_diff>1.0) then flag_abs_diff=1;
Run;

Title2 "Prints Cases where (FrmPCT=100% or SmplPCT=100%):";
Proc Print Data=FS noobs;
Where (FrmPCT=100 or SmplPCT=100);
Run;

Title2 "abd_diff=abs(FrmPct-SmplPCT):";
Proc Print Data=FS noobs;

```

```

Var Stratum_H &Var. FrmCnt Smp1Cnt FrmPCT Smp1PCT abs_Diff flag_abs_diff;
sum flag_abs_diff;
Run;

Title2 "abd_diff=abs(FrmPct-Smp1PCT):";
Title3 "flag_abs_diff=1 if (abs_diff>1.0)";
Proc Print Data=FS noobs;
Var Stratum_H &Var. FrmCnt Smp1Cnt FrmPCT Smp1PCT abs_Diff flag_abs_diff;
sum flag_abs_diff;
where flag_abs_diff=1;
Run;
%Mend Chk_Dist;

%Chk_Dist(Var=PATCAT, Smp1data=Sample_all);

*****
OUTPUT DATA FILE:
*****;
*Output Frame;
Data out.Framea_HEDIS;
Set Frame_All;
Run;

*Output Sample;
Data out.sampla01;
Set Sample_all2;
Run;

Title1 "Proc Contents of Final Files:";
Proc Contents Data=out.Framea_HEDIS; Run;
Proc Contents Data=out.sampla01; Run;

proc printto;
run;

/*****The End *****/

```

#### H.4 - HEDISFY2018\Programs\Sampling\bwt\_hedis.sas - calculate the base weights

```
*****
****
* PROGRAM: BWT_HEDIS.SAS (40309.41H)
* TASK:    DoD Health Care Survey, Quarterly Sampling
* PURPOSE: Construct Sampling Weight for HEDIS 2018
* INPUTS:
* OUTPUTS: BWT.sas7bdat - Sampling Weight for current quarter DOD Survey
*****
****;
*** Set up options. ***;
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="&logname." new;
ods listing;
proc printto print="&lstname." new;

%let yr = 2018; *HEDIS Year;

*HEDIS unrestricted/restricted folder;
libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data"
access=readonly; *selectq;
libname out  "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data";
*extract, deers;

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Sampling/design
_effects_unequal_weights.sas";

title1 "Program: BWT_HEDIS.SAS (HCSDB HEDIS 2018)";
title2 "Construct the Sampling Weight (BWT) from FRAMEA and SAMPLA";

*
_____
Calculate the bwt
_____

title5 'Information from the Frame';
proc freq data=in.Framea_HEDIS 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.sampla01 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.sampla01 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 ;

*****
Output Data with Base Weight (BWT):
*****;
data out.bwt_hedis;
set bwt(drop=samplingweight);
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=out.bwt_hedis n sum;
var bwt ;
run;

title5 'Contents of the Sampling Weight Data Set';
proc contents data=out.bwt_hedis;
run;

* _____
Check the bwt
_____ ;

%macro checkvar(input_data, sorting_variable, weighting_variable);

data framea;
set in.Framea_HEDIS;
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;

*HCSDB_HEDIS - check by geocell and patcat group;

title5 "HEDIS-specific checks";
%checkvar(in.bwt_hedis, stratum_h, bwt);
%checkvar(in.bwt_hedis, geocell, bwt);
*%checkvar(in.bwt_hedis, patcat_grp, bwt);

*****;
*** Calculate the Design Effects ***;
*****;
/*
title5 "";

```

```

%design_effects_unequal_weights ( out.bwt, group, bwt, deff_overall,
deff_group );
%design_effects_unequal_weights ( out.bwt, geosmpl, bwt, deff_overall,
deff_geosmpl );
%design_effects_unequal_weights ( out.bwt, ebsmpl, bwt, deff_overall,
deff_ebsmpl);
%design_effects_unequal_weights ( out.bwt, enbgsmpl, bwt, deff_overall,
deff_enbgsmpl);
%design_effects_unequal_weights ( out.bwt, grp_geo, bwt, deff_overall,
deff_grp_geo );
%design_effects_unequal_weights ( out.bwt, tnexreg, bwt, deff_overall,
deff_tnexreg );
%design_effects_unequal_weights ( out.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 ( in.bwt_hedis, stratum_h, bwt,
deff_overall, deff_stratum_h );
%design_effects_unequal_weights ( in.bwt_hedis, geocell, bwt, deff_overall,
deff_geocell );
%design_effects_unequal_weights ( in.bwt_hedis, 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;
*/

/*
*variables in hcsdb bwt data;
%let VarList = ACV BWT COM_GEO DAGEQY DCATCH DELGIND DMIS D_DMIS D_FAC
D_HEALTH D_INSTAL D_PAR EBSMPL ENBGSMPL ENRID GEOCELL
GEOSMPL GROUP GRP_GEO MBRRELCD MPRID PATCAT PCM PNLCATCD
PNSEXCD PNTYPCD PRN PRRECFLG R_MTF SERVAFF SEXSMPL STRATUM
SVCCD SVCSMPL TNEXREG ;
*/

proc printto;
run;

***** The End *****;

```

## H.5 - HEDISFY2018\Programs\Sampling\compare.sas - examine overlap with TSS

```
/*dm 'clear output;clear log';*/
*****
*** Project : DoD Adult Sampling-Compare Sample with Previous Quarters
Samples
*** PROGRAM : Compare.SAS
*** 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 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;

TITLE1 "Program: Compare.SAS";
TITLE2 "Purpose: Check the Sample Overlap Situation:";

%LET HEDISYR          = HEDIS18;
%LET HCSDBThisQtr    = Q2FY2018;
%LET HCSDBYRago      = Q2FY2017;
%LET HCSDBTwoYrAgo   = Q2FY2016;

*This Quarter;
libname &HEDISYR.
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data";/*framea_hedis.sas
7bdat*/
LIBNAME &HCSDBThisQtr.
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&HCSDBThisQtr./Data/AFinal";
LIBNAME &HCSDBYRago.
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&HCSDBYRago./Data/AFinal";    *Yr
Ago HCSDB Sample;
LIBNAME &HCSDBTwoYrAgo.
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&HCSDBTwoYrAgo./Data/AFinal"; *Two
Yr Ago HCSDB Sample;

*Compare with other study;
LIBNAME TSS18
"/sasdata/Projects/40309_TSS_Restricted/DATA/DEERS_07312017_for711_2018"
access=readonly;

*Note from Ellen:
TSS16 is now renamed as Rich (the client) asked us to refer to
this year's survey as 2017. The programs that were run already
used 2016 in the path , but from here on out we will need to
refer to it under 2017.
Note from Nancy:
This round of the TSS is actually the 2017. The NDAA did not
authorize a survey for 2016, but rather 2017-2020.
Note from Sabrina: The unrestricted data fodler renamed as
2017 but the restricted data folder is still called 2016
(DEERS_07312016_for711_2016) and we are reading final
sample file from the restricted folder;

*
-----
Checks for MPRID=07187042
-----
;
PROC SORT DATA=&HEDISYR..sampla01 OUT=BDATA;
  BY PRN;
RUN;
*PROC PRINT DATA=BDATA NOOBS;

```

```
*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(tss18.totalsample, TSS2018, TSS2018 Sample); *RECENT TSSB SAMPLE;  
*%CHK(&HCSDBThisQtr..sample, HEDIS2018, Q2FY2018 HCSDB Adult Sample); *Year  
Ago;
```

```
proc printto;  
run;
```

```
***** End of Compare Program *****;
```

## H.6.A - HEDISFY2018\Programs\Sampling\sampla02.sas - create delivery file

```
*****
* PROGRAM:   SAMPLA02.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,
*             PNMIDNM, 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 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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

*For HEDIS 2018;
%let HEDISDropList = COM_GEO DMIS D_DMIS D_FAC D_HEALTH D_INSTAL D_PAR
EBSMPL
FLAG_COMGEO_STRATUM4_SAME FLAG_LIST_OF_53 GEOCELL GEOSMPL GROUP GRP_GEO
SAMPLINGWEIGHT SELECTIONPROB_ALL SERVAF R_MTF ZONE ZONE1 ZONE2 ZONE3 ZONE4
STRATUM_4 STRATUM;

*** Set up the input and output paths. ***;
*libname inr
"/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS_20&yr.";
LIBNAME INr "/sasdata/Projects/40309_HCS_Restricted/DATA/&hcsdb_quarter.";
/* DEERS & xwalk.sas7bdat */
libname in "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data";
libname out "/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS_2018";

*Update the path for the include file/Delete if not needed;
%let pathoverlap =
/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/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;

*DROPPING 37 Overlaps with TSSB2018;
%INCLUDE "&pathoverlap./include_sampla02_to_drop_overlap.sas";
*****
*****;

TITLE1 "DOD Health Care Survey Sampling (&QUARTER.)";
TITLE2 "PROGRAM: SAMPLA02.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, Q2FY2018=E64;
PROC SORT DATA=SAMPLA02 OUT=OUT.SAMPLA02 (DROP = E1-E64 ESR1-ESR64 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
SPRZIP
SPRZIPX
SPTNUMCD
UICADD1
UICADD2
UICITY
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;

*HEDIS-2018: rename sheet to 'hedis2018' manually;
proc export data=Sampla02_AD_email
            outfile =
"/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS_2018/Sampla02_AD_em
ail.xlsx"
            dbms=xlsx
            replace;
run;

proc printto;
run;

***** End *****;

```

**H.6.B - HEDISFY2018\Programs\Sampling\include\_sampla02\_to\_drop\_overlap.sas - include file for samplea02.sas**

```

*****
* PROJECT:  DOD Health Care Survey, Sampling (40309.31H)
* PROGRAM:  Drop_Overlap_Q3_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 TSSB2017;
    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 TSS18
"/sasdata/Projects/40309_TSS_Restricted/DATA/DEERS_07312017_for711_2018"
access=readonly;

PROC SORT DATA=IN.sampla01 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;
overlapflag=1;
donotmailflag=0;
RUN;

```

```

%MEND CHKOVERLAP;

%CHKOVERLAP(tss18.totalsample, TSS2018, TSS2018 Sample); *RECENT TSSB
SAMPLE;

*****
***

*Q3 FY2018- CHECK THAT THIS NEW CODE FROM Q2 DOES NOT CAUSE PROBLEMS!!!

*****
**;

*if this MPRID is found, we want to treat it the same as an overlap with
TSS;
*save the prn so that this can be appended to the TSS overlaps;
*two new variables are created starting in Q2FY2018:
    overlapflag=1 if the case is an overlap with TSS, 0 if the case is a
harsh refusal
    donotmailflag=1 if the case is a harsh refusal, 0 if the case is an
overlap with TSS;

*initialize donotmail macro to zero;
%let donotmailmacro=0;

data donotmail;
    set bdata;
    *if this mprid is in the sample, create a data set with only this
mprid to append to overlaps;
    if mprid='07187042' then do;
        overlapflag=0;
        donotmailflag=1;
        output donotmail;
        %let donotmailmacro=1;
    end;
run;

*if the mprid is found, append overlap and this one mprid;
%macro add_to_overlap;
    %if &donotmailmacro=1 %then %do;
        data overlap;
            set overlap donotmail;
        run;
    %end;
%mend add_to_overlap;

data _null_;
    call execute('%add_to_overlap');
run;

*Output Overlaps in Excel file;

Data OUT_OVERLAP;
    SET OVERLAP(Keep=MPRID PRN overlapflag donotmailflag);
RUN;

```

```

proc export
  data = OUT_OVERLAP
  outfile = "&outxls./OVERLAP_MPRID_PRN_TO_DROP.XLSX"
  dbms = xlsx
  replace;
run;

/*
ODS HTML
FILE="/sasdata/Projects/40309_HCS_P/DATA/HCSDB/&QUARTER./Programs/Sampling/O
VERLAP_MPRID_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(Drop=&HEDISDropList.);
MERGE SAMPLA01(IN=A) DROP_OVERLAP(IN=B);
BY MPRID;
IF A AND NOT B;
RUN;

Data SAMPLA01;
Set SAMPLA01;
Label
Email_Only = 'Active Duty contact by email only'
ENBGSMPL   = 'Enrollee/Beneficiary Group'
Stratum_H  = 'Stratum (HEDIS)'
;
Run;

*****;

```

## H.7 - HEDISFY2018\Programs\Weighting\NewWeights\smplA1A2.sas - Define the data sets and create the variables

```

*****
*****
*** Program:  smplA1A2.sas
*** Task   :  (40309.41H)
*** 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
*** Modified: Sabrina R. for HEDIS 2018 Weighting
***
*** Inputs:  extract.sas7bdat   : Extract file
***          selectq.sas7bdat   : Survey file with CAHPS4.0 questionnaires
***          deers.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:    We have conus only for HEDIS 2018
*****
*****;
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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

*HEDIS unrestricted/restricted folder;
libname in1
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; *selectq;
libname in2  "/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS_&yr."
access=readonly; *extract, deers;

*HCSDB unrestricted/restricted folder;

```

```

libname in3
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&hcsdb_quarter./Data/AFinal";
libname in4  "/sasdata/Projects/40309_HCS_Restricted/DATA/&hcsdb_quarter."
access=readonly;

*Output folder in HEDIS unrestricted/restricted area;
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal";
*smp1a1a1,smp1a1,smp1a2,conusal;
libname outr  "/sasdata/Projects/40309_HCS_Restricted/DATA/HCSDB_HEDIS_&yr.";

libname library v9
"/sasdata/Projects/40309_HCS/DATA/HCSDB/&hcsdb_quarter./Data/AFinal/fmtlib"
access=readonly;

%let outpath =
/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/NewWei
ghts/AnswerTree/;

title1 "Program: smp1a1a2.SAS (HEDIS &yr.)";
title2 "Purpose: Define the data sets and construct the variables";

*****
**
Put the data together;
*****
**;
data selectq;
    set in1.selectq(keep=BWT COM_GEO D_HEALTH D_FAC dageqy ENBGSMPL FNSTATUS
                    MPCSMPL MPRID PATCAT PCM PNLCD PNLCD PNLCD PNSEXCD SERVAFF
                    SEXSMPL STRATUM SVCSMPL WEB TNEXREG
                    GROUP DBENCAT STRATUM_H EMAIL_ONLY);
run;

*****
***
Get the variables PGCD, PTNT_ID from extract data
*****
***;
proc sort data=selectq; by mprid;
run;

proc sort data=in4.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 in4.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 ENBGSMPLE in ('01') then PATC_grp='ACTDTY';
  else if ENBGSMPLE in ('02', '03', '04') then PATC_grp='DEPACT';
  else if ENBGSMPLE 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 recommendation, 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 = '0' 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;

/*For HEDIS 2018*/
If Email_Only=1 Then email_Gp='1';
else email_gp='2';

label in_catch='In-catchment area indicator'
      TRS='TRICARE Reserve Select indicator'
      email_Gp='Active Duty Email 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*PATCAT
      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
      Email_Gp*Email_Only /*For HEDIS 2018*/
/missing list;
run;

Title1 "Proc Contents of Output Data";
Proc Contents Data=OUT.smplA1A2;
Run;

*****
Output the data sets:
Note: We have conus only for HEDIS 2018
*****;
data OUT.smplA1A2
      OUT.smplA1
      OUT.smplA2;
set smpl(drop=DAGEQY PNSEXCD MPCSMPL PGCD PTNT_ID);

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;
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;
end;
run;

options compress=no;
title3 'Freq of conus*fnstatus for 100,000 beneficiaries';
proc freq data=OUT.smplA1A2;
tables fnstatus / missing list;
run;

title3 'Freq of fnstatus*eligkwn for all benes except fnstatus=32';
proc freq data=OUT.smplA1;
tables fnstatus*eligkwn/ missing list;
run;

title3 'Freq of fnstatus*complete for fnstatus=11,12,20';
proc freq data=OUT.smplA2;
tables 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(smplA1);
%SASToSAV(smplA2);

proc printto;
run;

***** The End *****/

```

## H.8.A - HEDISFY2018\Programs\Weighting\NewWeights\logmdA1.sas - Predict the response propensity score for the unknown eligibility adjustment

```

*****
*** Program: logmdA1.sas (40309.41H)
*** Purpose: Use the SUDAAN model to predict the response propensity
***           score for the unknown eligibility adjustment step
*** Inputs  : smplA1.sas7bdat, smplA1A2.sas7bdat
*** Outputs: logmdA1.sas7bdat
***
*** Written: Haixia Xu 12/27/2006 for HCSDB Q4fy2007 weighting
*** Modified: Sabrina R. for HEDIS 2018
*****;
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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/NewWe
ights/Zero_One_Cells.sas";

libname in  "/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* conusA1.sas7bdat, oconusA1.sas7bdat, smplA1A2.sas7bat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"; /*
logmdA1.sas7bdat */

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 (HEDIS &yr.)";
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.smp1A1 /*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;

if Email_gp='1' then Email_nm=1;
else if Email_gp='2' then Email_nm=2;
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 /*only one level*/
       CHCS_num*CHCSAddr
       Email_gp*Email_nm

```

```

        TRS
/missing list;
run;

*=====
Start the modeling for Unknown Eligibility Adjustment (A1)
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 first stage of adjustment (A1)
=====;
/*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 PCM_grp
PNLC_grp
                                RANK_grp SEX_grp SVC_grp IN_CATCH TRS
CHCSAddr
                                Email_gp;

/*The interactions below are determined based on the Conus A1 tree for the
current quarter*/
%let Interactions_from_chaid_conus =

/*HEDIS 2018:*/
AGE_GRP4*Patc_grp
AGE_GRP4*svc_grp;

title3 "Check the zero cells for Conus";
%ZERO_ONE_CELLS(logmdA1, &Vars_in_interactions_conus., eligkwn,
&Interactions_from_chaid_conus.);

*HEDIS 2018 no zero cells found;

*****
Run the SAS stepwise model
*****;
%macro modelselect_A1(method= );
title3 "SAS Logistic for CONUS - &method.";
proc logistic data=logmdA1 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='1')*/ /*only one level*/
/*TRS (ref='2')*/ /*only one level*/
CHCSAddr (ref='0')
Email_gp (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
Email_gp

/*HEDIS 2018: 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_A1;

%modelselect_A1(method=stepwise);

```

```

*****
*****
: Summary of Stepwise Selection :
*****
*****;

```

```
/*HEDIS 2018:
```

Summary of Stepwise

Selection

Wald	Effect	Number	Score
Step Entered	Variable	DF	In Chi-Square
Chi-Square Pr >	ChiSq Label		
<.0001	1 AGE_GRP4	3	1 3219.3974
<.0001	2 PATC_GRP	2	2 669.0366
<.0001	3 RANK_GRP	3	3 420.4345
<.0001	4 SVC_GRP	2	4 120.0675
<.0001	5 AGE_GRP4*SVC_GRP	6	5 219.1484
<.0001	6 AGE_GRP4*PATC_GRP	6	6 93.1915
<.0001	7 CHCSADDR	1	7 53.3918

```

      8 SEX_GRP          1      8      13.5276
0.0002
      9 PCM_GRP          2      9      7.4422
0.0242
*/

```

```

*****
Macro to Check the SUDAAN fit for the the SAS Final Model above
*****;

```

```

*Proc Sort before Proc Rlogist;
proc sort data=logmdA1;
by STRAT_nm;
run;

```

```

%macro sudaan_A1(ttl, vars);
Title3 " The Final Model from SAS Stepwise - A1";
Title4 " &ttl.";
proc rlogist data=logmdA1 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;

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;

```

```

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_A1;

```

```

*****
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='1') /* There are no '0' so change '0' to '1'*/
TRS (ref='2')
CHCSAddr (ref='0')
/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_A1(
%str(Run0: Initial Model),
AGE_num4
PATC_num
RANK_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
CHCS_num
SEX_num
PCM_num
);
*HL =0.0000
*Variable-to-drop:PCM_NUM pvalue=0.070065 ;

```

```

%sudaan_A1(
%str(Run1: ),
AGE_num4
PATC_num
RANK_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
CHCS_num
SEX_num
/*PCM_num*/
);
*HL =0.0000
*Variable-to-drop:SEX_NUM pvalue= 0.001756 ;

```

```

%sudaan_A1(
%str(Run2:),
AGE_num4
PATC_num
RANK_num
SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
CHCS_num
/*SEX_num 2nd */
/*PCM_num 1st */
);
*HL =0.0000
*Variable-to-drop: X ;

*****
*                               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.
*****;
%sudaan_A1(
%str(Run3: Dropping Last Four),
AGE_num4
PATC_num
RANK_num
SVC_num
AGE_num4*SVC_num
/*AGE_num4*PATC_num
CHCS_num
SEX_num
PCM_num*/
);
*HL =0.0000
*Variable-to-drop:x ;

*****
*                               3RD APPROACH                               *
* -----*
* Begin with the main effects then slowly adding interaction terms one by one into the model.
*****;

%sudaan_A1(
%str(Run4: Main Effect Only Model),
AGE_num4
PATC_num
RANK_num
SVC_num
/*AGE_num4*SVC_num

```

```

AGE_num4*PATC_num*/
CHCS_num
SEX_num
PCM_num
);
*HL =0.0000
*Variable-to-drop:x ;

%sudaan_A1(
%str(Run5: Main Effect Only Model),
AGE_num4
PATC_num
RANK_num
SVC_num
/*AGE_num4*SVC_num
AGE_num4*PATC_num*/
CHCS_num
/*SEX_num*/
/*PCM_num*/
);
*HL =0.0000
*Variable-to-drop:x ;

*****
*                               4th APPROACH                               *
* -----*
* Model Search: Random tries                                           *
*****;

%sudaan_A1(
%str(Run6: Random Models),
AGE_num4
CHCS_num
/*
AGE_num4 PATC_num RANK_num SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
CHCS_num SEX_num PCM_num
*/
);
*HL=0.0532, Drop=X;

%sudaan_A1(
%str(Run7: Random Models),
AGE_num4
CHCS_num
PCM_num
/*
AGE_num4 PATC_num RANK_num SVC_num
AGE_num4*SVC_num
AGE_num4*PATC_num
CHCS_num SEX_num PCM_num
*/
);
*HL=0.0122, Drop=X;

/*****/
/*Including all main effects variables.      */

```

```

/*There is only one level for IN_CATCH,      */
/*TRS,not including them in model           */
/*****

```

```

%sudaan_A1(
%str(Run8: fifth approach),
AGE_num4
TNEX_num
/*
TNEX_num AGE_num4 PATC_num PCM_num PNLC_num
RANK_num SEX_num SVC_num CHCS_num email_nm
AGE_num4*PATC_num
AGE_num4*SVC_num
*/
);
*HL =0.1129;
*Largest indi pvalue=TNEX_NUM 0.000758;

```

```

%sudaan_A1(
%str(Run9: fifth approach),
AGE_num4
TNEX_num
email_nm
/*
TNEX_num AGE_num4 PATC_num PCM_num PNLC_num
RANK_num SEX_num SVC_num CHCS_num email_nm
AGE_num4*PATC_num
AGE_num4*SVC_num
*/
);
*HL =0.1073;
*Largest indi pvalue=TNEX_NUM 0.000758;

```

```

%sudaan_A1(
%str(Run10: fifth approach),
AGE_num4
TNEX_num
PCM_num
/*
TNEX_num AGE_num4 PATC_num PCM_num PNLC_num
RANK_num SEX_num SVC_num CHCS_num email_nm
AGE_num4*PATC_num
AGE_num4*SVC_num
*/
);
*HL =0.5001
*Drop PCM_NUM pvalue=0.878724;

```

```

%sudaan_A1(
%str(Run11: fifth approach),
AGE_num4
TNEX_num
email_nm
CHCS_num
/*
TNEX_num AGE_num4 PATC_num PCM_num PNLC_num
RANK_num SEX_num SVC_num CHCS_num email_nm

```

```

AGE_num4*PATC_num
AGE_num4*SVC_num
*/
);
*HL =0.0002;

*****
Checking % for crosstab of each Main Effect with Response Variable:
*****;
%macro chk1(var=);
Proc sort data=logmdA1 out=sorted; by &var.; run;
title1 "Checks: &Var.*eligkwn";
proc freq data=sorted noprint;
tables  eligkwn/list missing norow nocol out=k1;
by &var.;
run;
proc print data=k1 noobs;
run;
%mend chk1;

%chk1(var=AGE_num4);
%chk1(var=TNEX_num );
%chk1(var=PATC_num);
%chk1(var=PCM_num );
%chk1(var=PNLC_num);
%chk1(var=RANK_num);
%chk1(var=SEX_num );
%chk1(var=SVC_num );
%chk1(var=CHCS_num );
%chk1(var=email_nm);
%chk1(var=stratum);

*Response status (Eligibility Known) varies a lot by multiple variables.
After reviewing these crosstabs and all models, we decided to go with Run8;

*****
*                CHECKING AIC and Rates:                *
*****;
%Let Var8 =
AGE_num4
TNEX_num
;
*HL =0.1129;
%Check_AIC_and_rates(InFile=logmdA1, RunNo=Run8, VariableList=&Var8.);

%Let Var9 =
AGE_num4
TNEX_num
email_nm
;
*HL =0.1073;
%Check_AIC_and_rates(InFile=logmdA1, RunNo=Run9, VariableList=&Var9.);

```

```
*=====
=====
```

```
                                SUMMARY TABLE :
#   Sudaan Fit Largest Ind.Pvalue Intercept Only Intercept & Covariates
Concordant Discordant
8   0.1129     0.000           55464.822           52664.162
61.6          30.0
9   0.1073     0.000           55464.822           52627.030
62.1          30.3
```

Final Model:

```
** Note:
Smallest is better for AIC and Discordant.
Largest is better for Concordant and Sudaan fit.;
```

```
*****
```

```
**Run FINAL CONUS Model:
*****;
%sudaan_A1(
%str(Run8: FINAL MODEL),
AGE_num4
TNEX_num
/*
TNEX_num AGE_num4 PATC_num PCM_num PNLC_num
RANK_num SEX_num SVC_num CHCS_num email_nm
AGE_num4*PATC_num
AGE_num4*SVC_num
*/
);
```

```
*=====
Compute the unknown eligibility adjustment factor A1
=====;
```

```
data pred (Drop=STRAT_nm);
set pred_c ;
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.8.B - HEDISFY2018\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.9 - HEDISFY2018\Programs\Weighting\NewWeights\adjwt1.sas - Calculate the unknown eligibility adjusted weight

```
dm 'clear output;clear log';
*****
*** Program : Adjwt1.sas
*** Task    : 40309.41H
*** 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
*****;
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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* logmdA1.sas7bdat */
libname in_f
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"; /*
adjwt1.sas7bdat */

title1 "Program: Adjwt1.sas (HEDIS &yr.)";
title2 "Purpose: Calculate the unknown Eligibility Adjusted Weight";
title3 " ";

***Calculate the 20th percentiles ;
%macro univ_A1(inputdata=, step=, var=, cellvar=, outputdata=);

proc univariate data=&inputdata. noprint;
var &var.;
output out=out pctlpts =20 40 60 80 pctlpre=cutoff;
run;
```

```

title3 "Cutoff points:";
proc print data=out;
var cutoff20 cutoff40 cutoff60 cutoff80;
run;

data temp;
set &inputdata.;
M=1;
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.<=cutoff20 then &cellvar. = "&step.01";
else if &var.<=cutoff40 then &cellvar. = "&step.02";
else if &var.<=cutoff60 then &cellvar. = "&step.03";
else if &var.<=cutoff80 then &cellvar. = "&step.04";
else if &var. >cutoff80 then &cellvar. = "&step.05";
run;

data &outputdata.;
set &outputdata.;
drop cutoff20 cutoff40 cutoff60 cutoff80 M;
run;

title3 "Freq of &cellvar.*&var.:";
proc freq data=&outputdata.;
tables &cellvar. &cellvar.*&var. /missing list;
run;
%mend univ_A1;

*****
***
Compute the dencile of PscoreA1
*****
***;
%univ_A1(inputdata=in.logmdA1, step=1, var=PscoreA1, cellvar=Pcell_A1,
outputdata=A1data);

/*
Obs      PCELL_A1      CNTG1      CNTG2      CNTG3      CELLCNT      SUMG1      SUMG2
SUMG3      SUMBWT      A1
1          101          1065          0          14028          15093          6800.05          0.0000
108614.79      115414.84      16.9727

```

2	102	1350	0	10229	11579	8459.75	0.0000
71395.67	79855.42	9.4395					
3	103	1955	1	10777	12733	12186.02	10.0177
74311.28	86507.32	7.0931					
4	104	4054	3	12227	16284	24942.87	18.4426
77907.70	102869.01	4.1211					
5	105	1775	0	4577	6352	11333.07	0.0000
29117.14	40450.20	3.5692					
		=====	=====	=====	=====	=====	=====
361346.57	425096.79	10199	4	51838	62041	63721.75	28.4603

From: Nancy Clusen  
 Sent: Wednesday, May 23, 2018 3:43 PM  
 To: Sabrina Rahman <SRahman@Mathematica-Mpr.com>  
 Subject: RE: HEDIS 2018: Weighting Class Construction

Hi Sabrina,  
 I think I might try combining 1104 and 1105.  
 Nancy

\*/

```
*HEDIS 2018;
***combine conus/oconus together;
data merged;
set Aldata /*Aloconus*/;
/*****\
Cell Collapse (if needed):
\*****/
*if Pcell_A1='1001' then Pcell_A1='1002';
*else if Pcell_A1='1101' then Pcell_A1='1102';
if Pcell_A1='105' then Pcell_A1='104';
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;

*Q2FY2018 Update Title below based on current quarter cutoff decision;
title3 "Check for CELLSA1 Data Set (using pctlpts =20 50 75 for conus and
33.33 66.66 for 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 various 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_num*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 *****;
```

## H.10 - HEDISFY2018\Programs\Weighting\NewWeights\adjwt2.sas - Calculate the nonresponse adjusted weight

```
*****
*****
*** Program: Adjwt2.sas
*** Task   : 40309.41H
*** 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 yr = 2018; *HEDIS Year;

libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly;
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal";

title1 "Program: Adjwt2.sas (HEDIS &yr.)";
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||cell index.
adjustment stage: 1-unknown eligibility adjustment stage,
                  2 - nonresponse adjustment stage
cell index: 01- #of terminal nodes
*****;
data merged;
set merged;
length Pcell_A2 $4;

/*HEDIS 2018: Weighting cell created based on A2 tree*/

if AGE_GRP4 in ('4') then pcell_a2='201';
else if AGE_GRP4 in ('3') then do;
  if PATC_GRP in ('NADD','DEPACT') then pcell_a2='202';
  else if PATC_GRP in ('ACTDTY') then pcell_a2='203';
end;
else if AGE_GRP4 in ('2') then do;
  if PATC_GRP in ('NADD','DEPACT') then pcell_a2='204';
  else if PATC_GRP in ('ACTDTY') then pcell_a2='205';
end;
if AGE_GRP4 in ('1') then pcell_a2='206';
run;

title3 'Check the construction of weighting classes';
proc freq data=merged;
tables Pcell_A2/missing list;
run;

/*HEDIS-2018*/
title3 'Check the Construction of Weighting Classes';
proc freq data=merged;
tables pcell_a2*AGE_GRP4*PATC_GRP/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.11 - HEDISFY2018\Programs\Weighting\NewWeights\adjwtp.sas - Calculate the final adjusted weight

```

*****
**
*** Program: adjwtp.sas
*** Task   : 40309.41H
*** 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 yr = 2018; *HEDIS Year;

*libname inr  "/sasdata/Projects/40309_HCS_Restricted/DATA/&QUARTER."
access=readonly; *Extract.sas7bdat;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; * adjwt1.sas7bdat, adjwt2.sas7bdat;
libname inv9
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; * selectq.sas7bdat;
libname in_f
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; * framea.sas7bdat;
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal";

title1 "Program: Adjwtp.sas (HEDIS &yr.)";
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 SERVAFV SEXSMPL STRATUM SVCSMPL
        WEB TNEXREG DBENCAT Stratum_H)
    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;
        end;
    end;

```

```

        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 Adjwt 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;
prodadjts = 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 prodadjts adjwt cellcnt
sumadjwt;
sum cellcnt sumadjwt;
run;

proc freq data=sub_chk noprint;
tables prodadjts/missing list out=prodadjts;
run;

title3 "Univariate of Prodadjts = adj1 * adj2";
proc univariate data=prodadjts normal ;
var prodadjts;
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 *****;

```

## H.12.A - HEDISFY2018\Programs\Weighting\NewWeights\postwt.sas - Do the poststratification

```
*****
*****
*** Program: postwt.sas
*** Task   : 40309.41H
*** 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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

Title1 "Program: postwt.sas (HEDIS &yr.)";
Title2 "Purpose: Do the poststratification";

libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */
libname inv9
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"; /*
postwt.sas7bdat */
```

```

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/NewWe
ights/calpoststr.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/NewWe
ights/design_effects_unequal_weights.sas";

%let GEOCELLLIST =
'0124','0029','0089','0110','0125','0123','0091','0060','0024','0117',
'0039','0108','0032','0109','0045','0052','0049','0126','0038','0048',
'0079','0069','0067','0280','0047','0370','0009','0057','0096','0055',
'0095','0120','0042','0330','0385','0014','0010','0078','0105','0006',
'0252','0098','0100','0066','0033','0122','0061','0051','0326','0121',
'0103','0119','0058';

***Sample***;
data framea;
*set inv9.framea_HEDIS;
set inv9.framea;
length postcell $5;

stratum_H=substr(stratum,1,5);
if com_geo in (&GEOCELLLIST.) then Flag_list_of_53=1;

postcell= substr(stratum_h,1,5); *Creating Postcell from HEDIS 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';

*Restricted to 53 HEDIS places ONLY;
IF (Flag_list_of_53=1);

run;

Title1 "Freq of Zone (Data=Frame)";
proc freq data=framea;

```

```

tables zone/list missing;
run;

Title3 "Checking the Construction of PostCell";
Title4 " Postcell=substr(stratum_H,1,5)";
proc freq data=framea;
tables stratum*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 Flag_list_of_53) ;
by MPRID;
if A and B;
run;

Title1 "Freq of Flag_list_of_53 in adjwt (HEDIS Sample)";
Proc Freq data=adjwt;
tables Flag_list_of_53/List Missing;
Run;

*****
***
*** Do the Poststratification
*****
***;
options compress=yes;
%calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell,
preadjwtp=adjwt, psratio=ps, postwt=postwt, outdata=OUT.postwt);

*****
***
*** 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);
%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;

*****
***
*** 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;

title4 "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;

Title1 "Note: 426525 is the population total for zone4 for list of 53 places
in HEDIS";
Title2 "      1706378 is the population total for all four zones";
Title3 "      Zone created using the permanent random numbers (PRNs)";
Title4 "      Check Readme for detail";
%procmeans(weightvar= bwt adjwt1 adjwt2 adjwt postwt, classvar=fnstatus);

*Note: Here, Some of wts up to ADJWT is 426525 instead of 1706378.
-For 53 HEDIS places, erroneous weighted HEDIS to zone4 population (426525).
-The correct HCSDB POP count for 53 HEDIS Places for all four zone
(1706378).
-Zone used permanent random no.,it's a probabily sample so we are good to
move forward.
-Because of time,re-runing Postwt with correct total after discussing with
Nancy and Eric.

For Detail Please Check:
...\HCSDB\HEDISFY2018\Programs\Sampling\READ_ME_about_HEDIS_SamplingWeight.t
xt;

```

```

*****
*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 ENBGSMPLE Groups ***;
title3 'Design Effects for ENBGSMPLE';
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 *****;
```

## H.12.B - HEDISFY2018\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 (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";
title4 "where fnstatus=11";
proc univariate data=&outdata.;
var &postwt.;
where fnstatus=11;
run;
%mend calpoststr;

```

**H.12.C - HEDISFY2018\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.13 - HEDISFY2018\Programs\Weighting\NewWeights\repwtp.sas - Create the replicate weights

```
*****
* PROGRAM: Repwtp.SAS
* TASK:    2011 DOD QUARTERLY HEALTH CARE SURVEY (40309.41H)
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY USING THE NEW
WEIGHTING METHOD.
* WRITTEN: 12/30/1999 BY Keith Ranthbun
* Modified Sabrina R. for 2018 HEDIS Weighting
*
* INPUTS:  Postwt.sas7bdat - Final Weights file
*          Framea.sas7bdat
*
* OUTPUTS: Repwtp.sas7bdat - Replicate Weights File
*****
;
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 hcsdb_quarter=Q2FY2018;
%let yr = 2018; *HEDIS Year;

Title1 "Program: repwtp.sas (&Yr.)";
Title2 "Purpose: Calculate the replicate weights";

*** Set up the input and output paths. ***;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* postwt.sas7bdat */
libname inv6
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* framea.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"; /*
repwtp.sas7bdat */

%let GEOCELLLIST =
'0124','0029','0089','0110','0125','0123','0091','0060','0024','0117',
'0039','0108','0032','0109','0045','0052','0049','0126','0038','0048',
'0079','0069','0067','0280','0047','0370','0009','0057','0096','0055',
'0095','0120','0042','0330','0385','0014','0010','0078','0105','0006',
```

```

'0252','0098','0100','0066','0033','0122','0061','0051','0326','0121',
'0103','0119','0058';

%MACRO PROCESS(DOMAIN1,DOMAIN2,DOMAIN3,reps);

*****
* calculate the population counts to be used in the poststratification
*****;
data framea;
*set inv6.framea_HEDIS;
set inv9.framea;
length POSTCELL $5;

stratum_H=substr(stratum,1,5);
if com_geo in (&GEOCELLLIST.) then Flag_list_of_53=1;
postcell= substr(stratum_h,1,5); *Creating Postcell from HEDIS Sampling
Stratum;

*Restricted to 53 HEDIS places ONLY;
IF (Flag_list_of_53=1);

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=mpridsa1;
by &domain1.;
run;

proc sort data=cellsa1;
by &domain1.;
run;

data adj_one;
merge mpridsa1 cellsa1;
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.repwtp;
*****;
proc sort data=OUT.repwtp out=sorted;
by stratum_h mprid;
run;

Title4 "Proc Print of Data=Repwtp (obs=500)";
proc print data=sorted (obs=500);
var stratum_h mprid SUBSET fnstatus postwt wrwt1-wrwt5;
run;

PROC MEANS DATA=OUT.repwtp n sum;
VAR postwt 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 WRWT1-WRWT&reps. fnstatus &domain1. &domain2.
&domain3. com_geo;
RUN;

title4 "Check the replicate weights -- for all cases";
PROC MEANS DATA=OUT.repwtp 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.repwtp 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.repwtp;
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 ql, 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.repwtp (drop = postwt com_geo);
set in.repwtp;
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;

PROC CONTENTS DATA=OUT.repwtp;
run;

%MEND process;

%PROCESS(pcell_a1, pcell_a2, postcell, 60);

proc printto;
run;

***** The end *****;

```

**H.14 - HEDISFY2018\Programs\Weighting\combine\_HEDIS\_Q2\combine\_HEDIS\_Q2.sas - combine weights across HCSDB Q2 and HEDIS**

```

*****
*****
*** Program: combine_HEDIS_Q2.sas
*** Task   : 40309.41H
*** Purpose: combine weights from HCSDB Q2t and HEDIS
***
*** Inputs : same and frame for HCSDB and HEDIS
***
*** Outputs: HCSDB2018Q2_Frame_w_postcell_new.sas7bdat (same as Q2FY2018
frame with add vars)
***           Adjwtp.sas7bdat (Q2_HE_Sample_w_all_stratum_npc)
***
*** Written: Sabrina R. for HEDIS 2018 06/18/2018
*****
*****;
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;

*set up libraries for frame and sample for HCSDB Q2 and HEDIS;
Libname HE
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data/AFinal";

Libname Q2  "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2018/Data/AFinal";
LIBNAME Q2t "/sasdata/Projects/40309_HCS/DATA/HCSDB/Q2FY2018t/Data/AFinal";

LIBNAME OUT
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY2018/Data/AFinal/combine_HEDI
S_Q2";

*import the final weight and frame datasets for both HEDIS and HCSDB;
Data HE_f (keep=mprid stratum_H com_geo geocell postcell_H
rename=(com_geo=com_geo_H geocell=geocell_H));
set he.framea_HEDIS;
length postcell_H $5;
postcell_H=substr(stratum_h,1,5);
Run;

Data HE_s(rename=(postcell=postcell_H));
Set he.repwtp;

```

```

Run;

Data Q2_f(keep=mprid stratum com_geo geocell postcell_q2
          rename=(com_geo=com_geo_q2 geocell=geocell_q2
stratum=stratum_Q2));
set Q2.framea;
length postcell_q2 $5;
postcell_q2=substr(stratum,1,5);
run;

Data Q2t_s(rename=(postcell=postcell_q2));
Set Q2t.repwtp;
run;

*Reading Framea data from HEDIS folder. This is same as
HCSDB frame, just has to additional seperate stratum created
for HEDIS. ;
Data Framea_from_HEDIS(Keep=MPRID Stratum
                       Rename=(stratum=stratum_as_q2_created_in_he));
Set he.framea;
Run;

*Reading Q2 Sample;
Data Q2_Sample;
Set Q2.sample;
run;

*Reading HEDIS Final Sample file;
Data HE_sample01;
set he.sampla01;
run;

*****
*Merging ALL 'Stratum' variables with HEDIS Sample:
*****;
Proc Sort Data=HE_s;           By MPRID; Run;
Proc Sort Data=Framea_from_HEDIS; By MPRID; Run;
Proc Sort Data=Q2_f;           By MPRID; Run;
Proc Sort Data=HE_f;           By MPRID; Run;

Data Merged_HE_FS_Q2F;
Merge HE_s(in=A Drop=POSTCELL_H) FrameA_from_HEDIS(in=B) Q2_f(in=C)
HE_f(in=D) Q2t_s(in=E Keep=MPRID);
By MPRID;
If A then Flag_HEs=1;
If B then Flag_Framea_in_HE_Folder=1;
If C then Flag_Q2f=1;
If D then Flag_HEf=1;
IF E then Flag_Q2ts=1;
Run;

Title1 "Checking File Merge";
Proc Freq Data=Merged_HE_FS_Q2F;
Tables Flag_Q2f*Flag_Framea_in_HE_Folder*Flag_HEf*Flag_HEs*Flag_Q2ts/List
Missing nopercnt;
Run;

```

```

/*
                FLAG_FRAMEA_
Cumulative
FLAG_Q2F      IN_HE_FOLDER  FLAG_HEF  FLAG_HES  FLAG_Q2TS
Frequency     Frequency
-----
1
6866724      6866724      1      .      .      .
1
100761      6967485      1      .      .      1
1
364304      7331789      1      1      .      .
1
62221      7394010      1      1      1      .

```

```

Reading:
  'STRATUM_Q2' from q2 frame
  'stratum_as_q2_created_in_he' - from framea created in hedis sampling
  'stratum_h' from hedis frame
*/

```

```

Title1 "CrossTab of Stratum variables in HE Sample file:";
Title2 " stratum_Q2 = HCSDB Q2 sampling stratum";
Title3 " stratum_as_Q2_created_in_he = HCSDB like stratum created in HEDIS";
Proc Freq Data=Merged_HE_FS_Q2F;
Tables STRATUM_Q2*stratum_as_q2_created_in_he/List Missing nopercnt;
where (Flag_HES=1) and (stratum_Q2~=stratum_as_q2_created_in_he);
Run;

```

```

*****
*Creating HE Sample file with all variables:
*****;
Data HE_Sample_w_all_stratum; *62221;
Set Merged_HE_FS_Q2F;
If Flag_HES=1;
Run;

```

```

title "we should not have any output ";
proc freq data=HE_Sample_w_all_stratum;
tables stratum_Q2*stratum_H*stratum_as_q2_created_in_he/list missing;
where stratum_Q2='' or stratum_H='' or stratum_as_q2_created_in_he='';
run;

```

```

*****
Merging ALL Stratum Variables with Q2 Sample:
*****;
Proc Sort Data=Q2t_s; By MPRID; Run;

```

```

Data Q2t_s2;
Merge Q2t_s(in=A) Q2_f(in=B) Framea_from_HEDIS(In=C);
By MPRID;
If A then Flag_Q2s=1;
If B then Flag_Q2f=1;

```

```

If C then Flag_Framea_in_HE_Folder=1;
Run;

Title1 "Checking File Merge before Creating Q2 - Sample with all Variables";
Proc Freq Data=Q2t_s2;
Tables Flag_Q2f*Flag_Framea_in_HE_Folder*Flag_Q2s/List Missing;
Run;

/*
Cumulative          FLAG_FRAMEA_
FLAG_Q2F            Cumulative
Frequency           IN_HE_FOLDER   FLAG_Q2S   Frequency   Percent
-----
-----
1                   1               .         7293249     98.64
7293249             98.64
1                   1               1         100761      1.36
7394010             100.00
*/

*****
*Creating Q2 Sample file with all variables:
*****;
Data Q2_Sample_w_all_stratum(Drop=Flag_Q2f Flag_Framea_in_HE_Folder);*100761
;
Set Q2t_s2;
*stratum_Q2=substr(stratum,1,5);
If FLAG_Q2s=1;
Run;

title "we should not have any output (data=Q2_Sample_w_all_stratum)";
proc freq data=Q2_Sample_w_all_stratum;
tables stratum_Q2*stratum_as_q2_created_in_he/list missing;
where stratum_Q2='' or stratum_as_q2_created_in_he='';
run;

*****
Merging Q2 stratum with HEDIS frame:
*****;
Proc Sort Data=HE_f;          By MPRID; Run;

Data HEf_Q2f;
Merge HE_f(in=A)Q2_f(in=B) Framea_from_HEDIS(in=C);
By MPRID;
If A then Flag_HEf=1;
If B then Flag_Q2f=1;
If C then Flag_Framea_in_HE_Folder=1;
Run;

Title1 "Checking File Merge";
Proc Freq Data=HEf_Q2f;
Tables Flag_Q2f*Flag_HEf*Flag_Framea_in_HE_Folder/List Missing;
Run;

/*
Cumulative          FLAG_FRAMEA_
Cumulative

```



FLAG_Q2F Frequency	FLAG_HEF Percent	IN_HE_FOLDER	Frequency	Percent
1	.	1	6967485	94.23
6967485	94.23			
1	1	1	426525	5.77
7394010	100.00			

```

Title1 "CrossTab of Stratum where (stratumQ2~=stratum)";
Title2 " stratum = coming from HCSDB Q2 frame";
Title3 " stratum_as_q2_created_in_he = created in HEDIS with some additonal
ind. stratum)";
Proc Freq Data=HEf_Q2f;
Tables stratum_Q2*stratum_as_q2_created_in_he/List Missing;
where (Flag_HEf=1) and (stratum_Q2~=stratum_as_q2_created_in_he);
Run;

```

/\*Checking HEDIS Frame:

Cumulative STRATUM_Q2 Percent	STRATUM_AS_Q2_ CREATED_IN_HE	Frequency	Percent	Cumulative Frequency
1011801 17.35	1037001	653	17.35	653
1900101 63.60	1032601	1741	46.25	2394
1900103 82.39	1032603	707	18.78	3101
1900106 98.62	1032606	611	16.23	3712
1900201 99.23	1032601	23	0.61	3735
1900203 99.26	1032603	1	0.03	3736
1900206 99.31	1032606	2	0.05	3738
1900301 99.71	1032601	15	0.40	3753
1900303 99.73	1032603	1	0.03	3754

```

*****
*Creating HE Frame file with all variables:
*****;
Data HE_Frame_w_all_stratum(Drop=Flag_Q2f  Flag_Framea_in_HE_Folder);
*426525;
Set HEf_Q2f;
If Flag_HEf=1;
Run;

```

title "we should not have any output ";

```
proc freq data=HE_Frame_w_all_stratum;
tables stratum_Q2*stratum_H*stratum_as_q2_created_in_he/list missing;
where stratum_Q2='' or stratum_H='' or stratum_as_q2_created_in_he='';
run;
```

\*\*\*\*\*

HCSDB Frame with ALL Stratum:

\*\*\*\*\*;

```
Proc Sort Data=Q2_f; By MPRID; Run; *stratum;
Proc Sort Data=Framea_from_HEDIS; By MPRID; Run; *stratum;
Proc Sort Data=HE_f; By MPRID; Run;
```

Data Merged\_Q2F\_Freamea\_HE\_f;

```
Merge Q2_f(In=A)
      FrameA_from_HEDIS(in=B)
      HE_f(In=C)
      Q2t_s(in=D Keep=MPRID)
      HE_s(In=E Keep=MPRID);
```

```
By MPRID;
If A then Flag_Q2f=1;
If B then Flag_Framea_in_HE_Folder=1;
If C then Flag_HEf=1;
If D then Flag_Q2ts=1;
If E then Flag_HEs=1;
Run;
```

Title1 "Checking File Merge";

```
Proc Freq Data=Merged_Q2F_Freamea_HE_f;
Tables Flag_Q2f*Flag_Framea_in_HE_Folder*Flag_Q2ts*Flag_HEf*Flag_HEs
```

```
Flag_Q2f*Flag_Framea_in_HE_Folder*Flag_HEf
/List Missing;
Run;
```

/\*

Cumulative FLAG_Q2F Frequency	FLAG_FRAMEA_ Cumulative IN_HE_FOLDER Percent	FLAG_Q2TS Frequency	FLAG_HEF Percent	FLAG_HES
1		1	.	.
6866724	92.87	6866724	92.87	.
1		1	.	1
364304	4.93	7231028	97.80	.
1		1	.	1
62221	0.84	7293249	98.64	.
1		1	1	.
100761	1.36	7394010	100.00	.

Cumulative FLAG_Q2F Frequency	FLAG_FRAMEA_ Cumulative IN_HE_FOLDER Percent	FLAG_HEF	Frequency	Percent
1				
6866724	92.87			
1				
364304	4.93			
1				
62221	0.84			
1				
100761	1.36			

```

1          1          .          6967485          94.23
6967485    94.23
1          1          1          426525          5.77
7394010    100.00
*/

```

```
*****
```

```
*Creating Q2 Frame file with all variables:
```

```
*****;
```

```
Data Q2_Frame_w_all_stratum(Drop=Flag_Framea_in_HE_Folder); *7394010;
```

```
Set HEf_Q2f;
```

```
If Flag_Q2f=1;
```

```
Run;
```

```
title1 "we should not have any output ";
```

```
title2 "where stratum_Q2=' ' or stratum_as_q2_created_in_he=' '";
```

```
proc freq data=Q2_Frame_w_all_stratum;
```

```
tables stratum_Q2*stratum_H*stratum_as_q2_created_in_he/list missing;
```

```
where stratum_Q2=' ' or stratum_as_q2_created_in_he=' ';
```

```
run;
```

```
title1 "If stratum_H=. Then cases are not in HEDIS frame: ";
```

```
proc freq data=Q2_Frame_w_all_stratum;
```

```
tables FLAG_HEf*stratum_H/list missing;
```

```
where stratum_H=' ';
```

```
run;
```

```
*****
```

```
Creating POSTCELL_NEW in Q2 Frame/Sample and HEDIS Sample:
```

```
*****
```

```
Note:
```

```
We need to find
```

```
frame total for 19001 excluding 10326
```

```
frame total for 10118 excluding 10370
```

```
most frame count from hcscdb
```

```
10326 and 10370 coming from hedis TOT_HE <----
```

```
calculate 19001 and 10118 for Hcscdb excluding
```

```
(TOT_HE)- hedis one has correct count
```

```
frame count for 19001 and 10118
```

```
*****;
```

```
Data Q2_Frame_w_all_stratum_V2;
```

```
Set Q2_Frame_w_all_stratum;
```

```
length postcell_like_q2_in_he $5;
```

```
*postcell like q2 in hedis;
```

```
postcell_like_q2_in_he=substr(stratum_as_q2_created_in_he,1,5);
```

```
Run;
```

```
*Construction of POSTCELL_NEW in Q2 Sample;;
```

```
Data Q2_Sample_w_all_stratum_V2;
```

```
Set Q2_Sample_w_all_stratum;
```

```
length postcell_like_q2_in_he $5;
```

```
*postcell like q2 in hedis;
```

```
postcell_like_q2_in_he=substr(stratum_as_q2_created_in_he,1,5);
```

```

Run;

*****
*Construction of POSTCELL_NEW in Q2 Frame:
*****;
%Macro CreatePC(Infile=, Outfile=, Text=);

title1 "Checking &Text. before creating POSTCELL_NEW:";
title2 "We shouldn't not have any output.(HEDIS ONLY Postcell)";
proc freq data=&infile. ;
tables postcell_q2*postcell_like_q2_in_he/List missing nopercnt;
where postcell_q2 in ('10370','10326');
run;

title2 "where postcell_q2='10118'";
proc freq data=&infile.;
tables postcell_q2*postcell_like_q2_in_he/List missing nopercnt;
where postcell_q2='10118';
run;

title2 "where postcell_q2 in ('19001','19002','19003','19004')";
proc freq data=Q2_Frame_w_all_stratum_V2 ;
tables postcell_q2*postcell_like_q2_in_he/List missing nopercnt;
where postcell_q2 in ('19001','19002','19003','19004');
run;

*Creating Postcell_new;
Data &Outfile.;
Set &infile.;

*create 10370 postcell in Q2 frame;
if POSTCELL_Q2='10118' then do;
  if postcell_like_q2_in_he='10118' Then postcell_new='10118';
  else if postcell_like_q2_in_he='10370' Then postcell_new='10370';
  flag1=1;
end;

*create 10326 postcell in Q2 frame;
if POSTCELL_Q2='19001' then do;
  if postcell_like_q2_in_he='19001' Then postcell_new='19001';
  else if postcell_like_q2_in_he='10326' Then postcell_new='10326';
  flag2=1;
end;

if POSTCELL_Q2='19002' then do;
  if postcell_like_q2_in_he='19002' Then postcell_new='19002';
  else if postcell_like_q2_in_he='10326' Then postcell_new='10326';
  flag3=1;
end;

if POSTCELL_Q2='19003' then do;
  if postcell_like_q2_in_he='19003' Then postcell_new='19003';
  else if postcell_like_q2_in_he='10326' Then postcell_new='10326';
  flag4=1;
end;

if POSTCELL_Q2='19004' then do;

```

```

if postcell_like_q2_in_he='19004' Then postcell_new='19004';
else if postcell_like_q2_in_he='10326' Then postcell_new='10326';
flag5=1;
end;

if POSTCELL_NEW='' Then POSTCELL_NEW=postcell_like_q2_in_he;
run;

Title1 "Check to make sure there is no missing Postcell_New";
proc freq data=&Outfile.;
tables flag1*flag2*flag3*flag4/List missing nopercnt;
where POSTCELL_NEW='';
run;

Title1 "Checking Construction of postcell_new";
proc freq data=&Outfile.;
tables
postcell_q2*postcell_like_q2_in_he*postcell_new*flag1*flag2*flag3*flag4/List
missing nopercnt;
where (flag1~=. or flag2~=. or flag3~=. or flag4~=.);
run;
%Mend CreatePC;

%CreatePC(Infile=Q2_Frame_w_all_stratum_V2,
          Outfile=Q2_Frame_w_all_stratum_V3,
          Text=Q2 Frame);

%CreatePC(Infile=Q2_Sample_w_all_stratum_V2,
          Outfile=Q2_Sample_w_all_stratum_V3,
          Text=Q2 Sample);

*****
Checking Pcell_A1 and Pcell_A2 in HEDIS Sample file:
*****;
Title1 "Freq of Pcell_A1 and Pcell_A2 in HEDIS file before making changes";
proc freq data=HE_Sample_w_all_stratum;
tables pcell_A1*pcell_A2*fnstatus/List Missing;
run;

*****
Creating POSTCELL_NEW in HEDIS Sample Files:
*****;
*'postcell_he' in HEDIS Sample is created from
'stratum_as_q2_created_in_he';

Data HE_Sample_w_all_stratum_V2;
Set HE_Sample_w_all_stratum;
length postcell_new $5;
postcell_new=postcell_H;
run;

/*
Title1 "Freq of Pcell_A1 and Pcell_A2 in HCSDB";
proc freq data=Q2_Sample_w_all_stratum_V3;
tables Pcell_A1 Pcell_A2/List missing;
Run;

```

```

*/

*****
Combining HEDIS and HCSDB Sample:
*****;
Data Q2_HE_Sample_w_all_stratum_npc; *62221+100761=162982;
Set Q2_Sample_w_all_stratum_V3
    HE_Sample_w_all_stratum_V2;
Run;

Title1 "Checking Combine Sample (HEDIS+Q2Hcsdb):";
Proc Freq Data=Q2_HE_Sample_w_all_stratum_npc;
Tables FLAG_HES/List Missing;
Run;

*****
*Check for Nancy 06/22/2018:
*****;
Proc Sort Data=Q2_Frame_w_all_stratum_V3 Out=chkQ2f_npc; By MPRID; Run;
Proc Sort Data=Q2_Sample_w_all_stratum_V3 Out=chkQ2s_npc; By MPRID; Run;
Proc Sort Data=HE_Sample_w_all_stratum_V2 Out=chkHES_npc; By MPRID; Run;

Proc Sort Data=Q2.framea Out=chkQ2f(keep=mprid enrid pcm
patcat); By MPRID; Run;
Proc Sort Data=Q2.sample Out=chkQ2s(keep=mprid enrid pcm
patcat); By MPRID; Run;
Proc Sort Data=he.sampla01 Out=chkHES(keep=mprid enrid pcm
patcat); By MPRID; Run;

Data chkQ2f_v2;
Merge chkQ2f_npc(in=A) chkQ2f(in=B);
by MPRID;
If A then flagA=1;
If B then flagB=1;
Run;

Data chkQ2s_v2;
Merge chkQ2s_npc(in=A) chkQ2s(in=B);
by MPRID;
If A then flagA=1;
If B then flagB=1;
Run;

Data chkHES_v2;
Merge chkHES_npc(in=A) chkHES(in=B);
by MPRID;
If A then flagA=1;
If B then flagB=1;
Run;

%macro chk2(infile=, text=, pcn=);
Title1 "postcell_new=&pcn. (&TEXT):";
Title2 "===== ";
proc freq data=&infile.;
tables postcell_new*POSTCELL_Q2*enrid*pcm/list missing;
where postcell_new in ("&pcn.");

```

```

run;

Title1 "POSTCELL_Q2=&pcn. (&TEXT):";
proc freq data=&infile.;
tables postcell_new*POSTCELL_Q2*enrid*pcm/list missing;
where POSTCELL_Q2 in ("&pcn.");
run;
%mend chk2;

/*
*Q2 FRAME;
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=10118);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=10370);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=10326);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=19001);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=19002);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=19003);
%chk2(infile=chkQ2f_v2, text=Q2 Frame, pcn=19004);

*Q2 SAMPLE;
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=10118);

Title1 "postcell in 10118 (Checking Postwt in Q2 folder)";
proc freq data=q2.postwt;
tables postcell*pcm/list missing;
where postcell in ("10118");
run;

%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=10370);
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=10326);
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=19001);
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=19002);
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=19003);
%chk2(infile=chkQ2s_v2, text=Q2 Sample, pcn=19004);

*HEDIS SAMPLE;
%chk2(infile=chkHES_v2, text=HE Sample, pcn=10118);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=10370);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=10326);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=19001);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=19002);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=19003);
%chk2(infile=chkHES_v2, text=HE Sample, pcn=19004);

these additional checking outputs saved below:
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\HEDISFY2018\Programs
\Weighting\combine_HEDIS_Q2\Output\output_4_selected_postcell.txt
*/

*****
Summary Table:
*****;
Proc Freq Data=Q2_Frame_w_all_stratum_V3 noprint;
Tables Postcell_new/List Missing Out=F1(Drop=Percent
Rename=(Count=pcn_q2f));
run;
Proc Freq Data=Q2_Sample_w_all_stratum_V3 noprint;

```

```

Tables Postcell_new/List Missing Out=F2(Drop=Percent
Rename=(Count=pcn_q2s));
run;
Proc Freq Data=HE_Sample_w_all_stratum_V2 noprint;
Tables Postcell_new/List Missing Out=F3(Drop=Percent
Rename=(Count=pcn_HES));
run;

```

```

Data SummaryT;
Merge F1(in=A) F2(in=B) F3(in=C);
By Postcell_new;
If A then flagQ2f=1;
If B then flagQ2s=1;
If C then FlagHE=1;
If PCN_HES=. Then PCN_HES=0;
TOT_S= PCN_Q2S+PCN_HES;
Run;

```

```

Proc Freq Data=SummaryT;
Tables flagQ2f*flagQ2s*FlagHE/list missing;
Run;

```

```

/*

```

Cumulative FLAGQ2F Percent	FLAGQ2S	FLAGHE	Frequency	Percent	Cumulative Frequency
-----					
1	1	.	74	58.27	74
58.27					
1	1	1	53	41.73	127
100.00					
*/					

```

*****
* Start to summing the WEIGHT VARIABLE
*****;
%MACRO PROCESS(INPT=, DOMAIN1=, wtvar=, no=, txt=);
title3 "Un-Weighted Counts:";
proc freq data=&inpt.;
table fnstatus/ list missing;
run;

```

```

Proc Sort Data=&INPT.; By &DOMAIN1.; Run;

```

```

Data cellsa&no. (keep=sum&txt. cellcnt &domain1. );
SET &INPT.;
BY &DOMAIN1.;
IF FIRST.&DOMAIN1. THEN DO;
    CELLCNT = 0;
    SUM&txt.= 0.0;
END;

CELLCNT + 1;

```



```

*****
* Accumulate total weight sum
*****;
SUM&txt. + &wtvar.;

RETAIN SUM&txt. CELLCNT MPRID;

IF LAST.&DOMAIN1. THEN DO;
    OUTPUT CELLSA&no.;
END;
RUN;
/*
title3 "Check for CELLSA1 Data Set:";
proc print data=cellsa&no.;
sum CELLCNT    SUM&txt.;
run;
*/
%MEND PROCESS;

%PROCESS(INPT=Q2_HE_Sample_w_all_stratum_npc,
        DOMAIN1=Postcell_new,
        wtvar=FWRWT,
        no=1,
        txt=CombFWRWT);

*****
Summary Table:
*****;
Data SummaryT2;
Merge SummaryT(in=A) cellsa1(in=B);
by postcell_new;
If A;
Diff=(SUMCOMBFWRWT-PCN_Q2F);
Run;

*****
Checking FNSTATUS=11 Cases:
*****;
Proc Freq Data=Q2_Sample_w_all_stratum_V3 noprint;
Tables Postcell_new/List Missing Out=Fnstatus11_q2(drop=percent
                                                    rename=(count=respQ2));
where fnstatus=11;
run;
Proc Freq Data=HE_Sample_w_all_stratum_V2 noprint;
Tables Postcell_new/List Missing Out=Fnstatus11_HE(drop=percent
                                                    rename=(count=respHE));
where fnstatus=11;
run;

*****
Summary Table:
*****;
Data Summary;
Merge SummaryT2(in=A) Fnstatus11_q2(in=B) Fnstatus11_HE(in=C);
By Postcell_new;
if respQ2=. Then respQ2=0;

```

```

if respHE=. Then respHE=0;
If A;
Run;

Title1 "Summary Table";
Title2 " here, pcn_Q2f, PCN_Q2S, PCN_HES = postcell_new (pcn) counts";
Title3 "      TOT_S      = PCN_Q2S+PCN_HES (same as CELLCNT)";
Title4 "      SUMCombFWRWT = sum of the final wt (fwrwt) in combine file";
Title5 "      Diff      = (SUMCOMBFWRWT-PCN_Q2F)";
Title6 "      FLAGHE     = 1 for HEDIS sample";
Title7 "      respQ2     = number of resp (fnstatus=11) in Q2 sample";
Title8 "      respHE     = number of resp (fnstatus=11) in HE sample";
Proc Print Data=Summary;
Var Postcell_new
PCN_Q2f   PCN_Q2s   PCN_HES   TOT_S   /*FLAGQ2F   FLAGQ2S   */
CELLCNT   SUMCombFWRWT   Diff   FLAGHE   respQ2   respHE;
Sum
PCN_Q2F   PCN_Q2S   TOT_S   PCN_HES   /*FLAGQ2F   FLAGQ2S   */
CELLCNT   SUMCombFWRWT   FLAGHE   respQ2   respHE;
Run;

*****
Merging variables below w/ Q2FY2018 HCSDB Frame (framea.sas7bdat):
- Postcell_new
- postcell_like_q2_in_he
- POSTCELL_Q2
- stratum_h
*****;
Proc Sort Data=Q2.framea Out=Q2Framea; By MPRID; Run;
Proc Sort Data=Q2_Frame_w_all_stratum_V3; By MPRID; Run;

Data HCSDB2018Q2_Frame_w_postcell_new;
Merge Q2Framea(in=A)
      Q2_Frame_w_all_stratum_V3(in=B
      Drop=Flag1 Flag2 Flag3 Flag4 Flag5);
By MPRID;
If A then flagA=1;
If B then flagB=1;
Run;

Title1 "Checking file merge";
Proc Freq Data=HCSDB2018Q2_Frame_w_postcell_new;
Tables FlagA*flagB
      FLAG_Q2F*FLAG_HEF/list missing;
Run;

*****
Merging Some Variables from Q2 Frame with Combine Sample file:
*****;
Proc Sort Data=Q2_HE_Sample_w_all_stratum_npc; By MPRID; Run;
Proc Sort Data=Q2Framea; By MPRID; Run;

Data Q2_HE_Sample_w_all_stratum_npc2;
Merge Q2_HE_Sample_w_all_stratum_npc(in=A Drop=FLAG1-FLAG5)
      Q2Framea(In=B Keep=MPRID PCM PATCAT /*TNEXS_GRP*/ ENBGSMPL Com_geo
geocell);

```

```

By MPRID;
If A;
Run;

*****
Output Q2 HCSDB Frame with Postcell_new
Output (HEDIS+Q2) Combine Sample
*****;
Data out.HCSDB2018Q2_Frame_w_postcell_new
      (Drop=FLAGA FLAGB GEOCELL_H GEOCELL Rename=(FLAG_Q2F=InHCSDB
FLAG_HEF=InHEDIS));
Set HCSDB2018Q2_Frame_w_postcell_new;
Run;

*****
*Output Combine Q2 and HEDIS sample file:
*****;
Data out.Adjwtp(
Drop=
FLAG_Q2f
FLAG_Q2Ts
FLAG_HEF
FLAG_FRAMEA_IN_HE_FOLDER
/*FWRWT1-FWRWT60
PCELL_A1
PCELL_A2
POSTCELL_LIKE_Q2_IN_HE*/
COM_GEO
GEOCELL
GEOCELL_H
Rename=(FLAG_Q2S=InHCSDB
      FLAG_HEs =InHEDIS));
Set Q2_HE_Sample_w_all_stratum_npc2;
Run;

Title1 "Freq of Flags in HCSDB Q2 Frame:";
proc freq data=out.HCSDB2018Q2_Frame_w_postcell_new;
tables InHCSDB*InHEDIS/list missing;
run;

Title1 "Freq of Flags in Combine Sample:";
proc freq data=out.Adjwtp;
tables InHCSDB*InHEDIS/list missing;
run;
/*
Files below created ONLY internally:
HE_Sample_w_all_stratum_V2
Q2_Sample_w_all_stratum_V3
HE_Frame_w_all_stratum;
*/

Title1 "Proc Contents of final output files";
Proc Contents Data=out.HCSDB2018Q2_Frame_w_postcell_new; Run;
Proc Contents Data=out.Adjwtp ; Run;

proc printto;
run;

```

**H.15 - HEDISFY2018\Programs\Weighting\combine\_HEDIS\_Q2\postwt\_combine\_HEDIS\_Q2.sas**  
**- do the poststratification of the combined weights**

```

*****
*****
*** Program: postwt.sas
*** Task   : 40309.41H
*** Purpose: Do the poststratification to force weighted counts to
population counts in certain domain.
*** Inputs : hcsdb2018q2_frame_w_postcell_new.sas7bdat
***       : adjwtp.FLAG_Q2S
*** Outputs: postwt.sas7bdat: final weight data after poststratification
*** Written: Haixia Xu on 12/27/2006
*** Modified: Sabrina R. for Annual Weight 2018
*****
*****;
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=Q2FY2018;
%let yr = 2018;

Title2 "Purpose: Do the poststratification";

*** Set up the input and output paths. ***;
libname in
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal/combine_HEDI
S_Q2" access=readonly; /* adjwtp.sas7bdat */
libname inQ2 "/sasdata/Projects/40309_HCS/DATA/HCSDB/&quarter./Data/AFinal"
access=readonly; /* framea.sas7bdat - use Q2 frame here since HEDIS is a
subset*/
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal/combine_HEDI
S_Q2"; /* postwt.sas7bdat */

%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/combi
ne_HEDIS_Q2/calpoststr.sas";
%include
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/combi
ne_HEDIS_Q2/design_effects_unequal_weights.sas";

```

```

LIBNAME OUT2
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Programs/Weighting/combi
ne_HEDIS_Q2/Output";

libname inHE
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal";

%let HE_LIST =
'10124','10029','10089','10110','10125','10123','10091','10060','10024','101
17',
'10039','10108','10032','10109','10045','10052','10049','10126','10038','100
48',
'10079','10069','10067','10280','10047','10370','10009','10057','10096','100
55',
'10095','10120','10042','10330','10385','10014','10010','10078','10105','100
06',
'10252','10098','10100','10066','10033','10122','10061','10051','10326','101
21',
'10103','10119','10058';

*HCSDB Frame;
data framea;
set in.hcsdb2018q2_frame_w_postcell_new;
length postcell $6;
*annual: for Q2 combined with HEDIS, use Postcell_new in input file
above;
postcell= postcell_new; *Postcell = Postcell_new;

*****
*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;

*Reading combine sample file and sorting for merging;
proc sort data=in.adjwtp out=sorted_adjwt;
by MPRID;

```

```

run;

*Creating a flag for 53 places in HEDIS;
data
sorted_adjwt2/*(Rename=(STRATUM_AS_Q2_CREATED_IN_HE=Stratum_C))*/;
set sorted_adjwt;
If postcell_new in (&HE_LIST.) Then List53=1;
run;

*****
Checking Frame to make sure Postcell_new looks good
Postcell_new created in previous program by creating HEDIS stratum
from HCSDB. We will create final postcell in combine file using
Postcell_new (Postcell=Postcell_new) in Frame.
*****;
Title1 "(Data=Frame) Checking count for selected postcell";
Title2 " - where postcell_q2=10118";
Proc Freq data=framea;
tables postcell_Q2*postcell_like_q2_in_HE*Postcell Postcell/list missing
nopercent;
where postcell_q2='10118';
run;

/*
POSTCELL_Q2      POSTCELL_LIKE_
Q2_IN_HE          POSTCELL      Frequency      Cumulative
-----
10118            10118            10118          7831           7831
10118            10370            10370          2663           10494
*/

Title1 " - where postcell_q2=(19001,19002,19003,19004)";
Proc Freq data=framea;
tables postcell_Q2*postcell_like_q2_in_HE*Postcell Postcell/list missing
nopercent;
where postcell_q2 in ('19001','19002','19003','19004');
run;

/*
POSTCELL_Q2      POSTCELL_LIKE_
Q2_IN_HE          POSTCELL      Frequency      Cumulative
-----
19001            10326            10326          11844          11844
19001            19001            19001          102209         114053
19002            10326            10326           109            114162
19002            19002            19002          88591          202753
19003            10326            10326           91             202844
19003            19003            19003          114203         317047
19004            10326            10326           32             317079
19004            19004            19004          57959          375038 */

```

```

*Sorting frame;
proc sort data=framea;
by MPRID;
run;

*****

```

```

Checking Selected Stratum in Combine Sample file before updating postcell:
*****;

```

```

    Title1 "(Data=Sample)Checking Special Cases ('10326','10370')";
    Title2 "where fnstatus in (11,31,32) and postcell_new in
('10326','10370')";
proc freq data=sorted_adjwt2;
tables inHEDIS*POSTCELL_NEW*POSTCELL_Q2/list missing nopercnt;
where postcell_new in ('10326','10370') ;
run;

```

```

/*
INHEDIS      POSTCELL_NEW      POSTCELL_Q2      Frequency      Cumulative
-----
.      10326      19001      172      172 <--go back
to 19001
.      10326      19002      2      174 <--go back
to 19002
.      10326      19003      1      175 <--go back
to 19003
.      10326      19004      1      176 <--go back
to 19004
.      10370      10118      108      284 <--go back
to 10118
1      10326      19001      1158      1442 -->remain
10326
1      10326      19002      11      1453 -->remain
10326
1      10326      19003      8      1461 -->remain
10326
1      10326      19004      7      1468 -->remain
10326
1      10370      10118      653      2121 -->remain
10370
*/

```

```

Title1 "Checking Cases where Postcell_new in ('10370','10326') and
Fnstatus=11 and inHEDIS=.";
Proc Freq Data=Adjwt;
Tables inHEDIS*Postcell*Postcell_Q2*Postcell_New*Fnstatus/List Missing
nopercnt;
where Postcell_new in ('10370','10326') and Fnstatus=11 and inHEDIS=.;
Run;

```

```

*Updating Postcell in Combine sample;
Data adjwt;
Set sorted_adjwt2;

```

```

length postcell $6;
postcell= postcell_new;

```

```

If InHEDIS=. and
Postcell_Q2 in ('10118','19001','19002','19003','19004') Then Do;
If Postcell_Q2='19001' Then Postcell='19001';
Else If Postcell_Q2='19002' Then Postcell='19002';
Else If Postcell_Q2='19003' Then Postcell='19003';
Else If Postcell_Q2='19004' Then Postcell='19004';
Else If Postcell_Q2='10118' Then Postcell='10118';

```

```

    Flag1=1;
End;

Run;

Title1 "Freq of Flag1:";
Title2 " - Flag=1 where we updated postcell";
Proc Freq Data=adjwt;
Tables Flag1/List Missing;
Run;

Title1 "Checking Cases where Postcell_new in ('10370','10326') and
Fnstatus=11";
Proc Freq Data=Adjwt;
Tables inHEDIS*Postcell*Postcell_Q2*Postcell_New*Fnstatus/List Missing
nopercent;
where Postcell_new in ('10370','10326') and Fnstatus=11;
Run;

Title1 "(Data=Adjwt) Checking Postcell Update";
Title2 " - where Postcell~=Postcell_new";
Proc Freq Data=adjwt;
Tables Flag1*InHEDIS*Postcell*Postcell_Q2*Postcell_new/List Missing
nopercent;
where Postcell~=Postcell_new;
Run;

Title1 "Checking selected postcell count BEFORE merging with frame for
additional variables";
Proc Freq data=adjwt;
tables postcell/list missing;
where postcell in ('10370','10326','10118','19001','19002','19003','19004');
Run;

*****
Checking PCM:
*****;
Title1 "(Data=Framea) Checking PCM in 53 HEDIS places";
Proc Freq Data=framea;
Tables PCM*Patcat/List Missing;
where Postcell in (&HE_List.);
Run;

Title1 "(Data=Framea) Checking PCM where postcell~=53 HEDIS places";
Proc Freq Data=framea;
Tables PCM*Patcat/List Missing;
where Postcell not in (&HE_List.);
Run;

*note:
    10370 and 10326          -----> HEDIS Only
    10118, 19001-19004      -----> HCSDB Only;

data adjwt;
merge adjwt(in=A) framea(in=B keep=mprid /*postcell*/ group
                    tnex_grp tnexreg);
by MPRID;

```



```

        if A and B;
        run;

/*
  Title1 "Checking selected postcell count AFTER merging with frame for
additional variables";
  Proc Freq data=adjwt;
  tables postcell/list missing;
  where postcell in
('10370','10326','10118','19001','19002','19003','19004');
  Run;
*/

        title1 "Checking Crosstab of Flags (Data=Combine Sample)";
        proc freq data=adjwt;
        tables list53*inHCSDB*inHEDIS/list missing;
        run;

        *****
*****
        *** Do the Poststratification
        *****
*****;
        options compress=yes;
        Title1 "Post-stratification";
        Title2 "ps=popcnt/wtcnt";
        %calpoststr(smpldata=adjwt, frmedata=framea, domain=postcell,
preadjwts=fwrwt, psratio=ps, postwt=postwt, outdata=/*out.*/postwt);

        *note:
          10370 and 10326      -----> HEDIS Only
          10118, 19001-19004  -----> HCSDB Only;

        *****
Output Postwt Data:
        *****;
Data Out.Postwt;
Set Postwt;
Label
POSTCELL      = 'Final Postcell for combine file'
POSTCELL_H    = 'Postcell used in HEDIS Weighting'
POSTCELL_NEW  = 'Postcell before created final postcell'
POSTCELL_Q2   = 'Postcell used in HCSDB Weighting'
POSTWT        = 'Postwt in combine file'
STRATUM_AS_Q2_CREATED_IN_HE = 'Stratum for combine file';
Run;

Title1 "Checking Post-Stratification Output:";
Proc Print Data=CNT_SF noobs;
  where postcell in
('10326','10370','10118','19001','19002','19003','19004');
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_AS_Q2_CREATED_IN_HE,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;

*****
*****
*** 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;

title6 "weighted info by &classvar. using &weightvar. as weight";
proc print data=print;
sum _freq_ bwt_sum /*adjwt1_sum adjwt2_sum adjwt_sum*/ fwrwt_sum
postwt_sum;
run;
%mend procmeans;

*For HEDIS2018, Sum of BWT 426525 is the population total for zone4
for list of 53 places in HEDIS. 1706378 is the correct pop total
for all four zones. Check ReadMe file for detail.;

```

```

Title1 " Here, Some of BWT for HCSDB is 7394010, HEDIS is counted as
426525 instead of 1706378";
Title2 " -For 53 HEDIS places, erroneous weighted HEDIS to zone4
population (426525) only";
Title3 " -(7394010+426525=7820535)we have, correct num. is
(7394010+1706378=9100388)";
Title4 " -Zone use permanent random no.,it's a probabily sample,bcz
of time, rerun hedis postwt repwt";
Title5 " -In Table below, sum of wts for BWT and FWRWT not matching,
HEDIS BWT is the reason";
%procmeans(weightvar= bwt fwrwt 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 20 largest Postwts (obs=20)";
Proc print data=chk (obs=20);
var postcell postwt ps /*adjwt adjwt2 adj2 adjwt1 adj1 */ fwrwt 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;
*/

Title1 "Freq of FNSTATUS";
Proc Freq data=out.postwt;
Tables fnstatus InHedis*fnstatus/list missing;
run;

Title1 "Freq of FNSTATUS (where fnstatus=11)";
Proc Freq data=out.postwt;
Tables InHedis*fnstatus/list missing;
where fnstatus=11;
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 );
*variables not in file;
*%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 );

title1 'Design Effects Overall';
proc print data = deff_overall noobs;
run;

*** For postcell ***;
title1 "Design Effects for postcell";
proc print data= deff_postcell;
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;

*****
Summary:
*****;
proc freq data=framea noprint;
tables Postcell/list missing out=cntf(Drop=Percent Rename=(Count=Fcnt));

```

```

run;
proc freq data=adjwt noprint;
tables Postcell/list missing out=cnts(Drop=Percent Rename=(Count=Scnt));
run;
proc freq data=adjwt noprint;
tables Postcell/list missing out=cntw(Drop=Percent Rename=(Count=wcnt));
weight fwrwt;
run;
data fs;
merge cntf(in=A) cnts(in=B) cntw(in=C);
by postcell;
if A ;
run;
data fs2;
set fs;
if postcell in (&HE_LIST.) Then List53=1;
If postcell in ('10326','10370') Then SpecialCase=1;
run;

Title1 "Summary Table:";
data out2.summary_updated;
merge fs2(in=A) DEFF_POSTCELL(in=B keep=postcell DESIGN_EFFECT
rename=(DESIGN_EFFECT=DE_postcell));
by postcell;
If A;
run;
Proc Sort data=out2.summary_updated out=Summary2 ; by decending DE_Postcell;
Run;
Proc Print Data=Summary2 noobs;
Var POSTCELL FCNT SCNT WCNT LIST53 SPECIALCASE DE_POSTCELL;
Run;
Title1 "Checking Selected Postcells::";
Title2 " - where postcell=(10326,10370,10118,19001-19004)";
Proc Print Data=Summary2 noobs;
Var POSTCELL FCNT SCNT WCNT LIST53 SPECIALCASE DE_POSTCELL;
where postcell in ('10326','10370','10118','19001','19002','19003','19004');
Run;

title3 "Contents of OUT.postwt";
proc contents data=out.postwt;
run;

proc printto;
run;

***** The end *****;

```

## H.16 -

### HEDISFY2018\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 (40309.41H)
* 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
*          hcsdb2018q2_frame_w_postcell_new.sas7bdat (same as
Framea.sas7bdat)
*
* OUTPUTS: Repwtp.sas7bdat - Replicate Weights File
*****;
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 = Q2FY2018;
%let yr       = 2018;

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/HEDISFY&yr./Data/AFinal/combine_HEDI
S_Q2" access=readonly; /* adjwtp.sas7bdat */
libname out
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal/combine_HEDI
S_Q2"; /* postwt.sas7bdat */

libname in2
"/sasdata/Projects/40309_HCS/DATA/HCSDB/HEDISFY&yr./Data/AFinal"
access=readonly; /* adjwtp.sas7bdat */

/*
proc freq data=IN.postwt;
```

```

tables pcell_a1*fnstatus
      pcell_a2*fnstatus/list missing;
run;
*/

*macro variable;
%let Stratum_Var = STRATUM_AS_Q2_CREATED_IN_HE;
%let pc_Var      = postcell;

```

```

data framea;
Set in.hcsdb2018q2_frame_w_postcell_new;
length POSTCELL $6;
postcell= Postcell_new;
run;

```

```

/**Note:
      In Frame, Postcell=Postcell_new
      In Sample, Postcell~=Postcell_new for cases below.
      All other places, two variables are same.

```

Cumulative		Cumulative			
POSTCELL	POSTCELL_NEW	Frequency	Percent	Frequency	Percent
-					
10118	10370	108	38.03	108	38.03
19001	10326	172	60.56	280	98.59
19002	10326	2	0.70	282	99.30
19003	10326	1	0.35	283	99.65
19004	10326	1	0.35	284	100.00

```

%MACRO PROCESS(DOMAIN1=,DOMAIN2=,DOMAIN3=,reps=); *(pcell_a1, pcell_a2,
postcell, 60);

```

```

*****
* calculate the population counts to be used in the poststratification
*****;
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_Var. INHCSDB INHEDIS) OUT=postwt;
  BY &Stratum_Var. MPRID ;
RUN;

```

```

*****
* Append SUBSET index (I) to each observation
*****;
DATA SUBSETS;

```



```

SET postwt;
BY &Stratum_Var. 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.repwtp;  
*****;
```

```

proc sort data=OUT.repwtp out=sorted;
by &Stratum_Var. mprid;
run;

Title4 "Proc Print of Data=Repwtp (obs=500)";
proc print data=sorted (obs=500);
var &Stratum_Var. mprid SUBSET fnstatus postwt wrwt1-wrwt5;
run;

PROC MEANS DATA=OUT.repwtp n sum;
VAR postwt 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 WRWT1-WRWT&reps. fnstatus &domain1. &domain2.
&domain3. /*com_geo*/;
RUN;

title4 "Check the replicate weights -- for all cases";
PROC MEANS DATA=OUT.repwtp 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.repwtp 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.repwt2;
  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.repwt2 (drop = postwt /*com_geo*/);
set in.repwt2;
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_O*/)
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(DOMAIN1=pcell_a1, DOMAIN2=pcell_a2, DOMAIN3=&pc_Var., reps=60);

proc printto;
run;

```

## H.17 -

### HEDISFY2018\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 (40309.41H)
* 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=2018;

/*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/HEDISFY2018/Data/AFinal/combine_HEDI
S_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/Q1FY&year./Programs/Weighting/NewWei
ghts/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: 40309.41H)";
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 2018: 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 inhedis
inhcsdb);
quarter=2;
if InHEDIS=. Then InHEDIS=0;
if InHCSDB=. Then InHCSDB=0;
label quarter = 'Dod quarter indicator';
format _all_;
run;

Title1 "CrossTab of HEDIS - HCSDB flag:";
Proc Freq Data=repwtq2;
Tables InHCSDB*InHedis/List Missing;
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,for Q1 and Q3";
proc freq data=repwt;
    table quarter*INHEDIS*INHCSDB quarter*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 cfwf cfwf1-cfwf180;
output out=sums sum(cfwf cfwf1-cfwf180) = cfwf cfwf1-cfwf180;
RUN;

proc transpose data=sums out=t_sums;
VAR cfwf cfwf1-cfwf180;
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);

```

```

*=====;
*Note from Q3FY2018 smplA1A2:
As we know, the new contract reduces the number of regions to two.
East Region(merges current N and S) and West Region (same as before).
But in this transition period, we currently still have data for three
TRICARE regions in the United States: North, South, and West.
In our Q3 data, we have to fix region for (D_HEALTH=23 and 24).
We can put d_health=24 to WEST.
We need to assign d_health=23 to 'N' and 'S' if the are not 'N' or 'S'
based on MASTCD or Random Assignment.
We did a similar work for Q3FY2018 NonResponse Sampling. We can pull
that info and do the same for rest.

```

Instead of framea, reading smplA1A2 from Q3 folder for FY2018;

```

Data merged3(Keep=MPRID Conus conus_old Tnex_Grp COM_GEO D_HEALTH ENBGSMPL
SERVAFF TNEXREG TNEX_GRP);
set inf3.smplA1A2;
conus_old=conus;
conus_new=conus*1;
drop conus;
rename conus_new=conus;
run;

```

```

Title1 "Checking character to numeric";
Proc Freq Data=merged3;
Tables conus*conus_old/List Missing;
Run;

Proc Sort Data=merged3; by MPRID; Run;

data merged123;
set merged1 merged2 merged3(Drop=conus_old);
by mprid;
run;

/*
proc contents data=merged3; run;
*/

proc sort data=out.crepwt(keep=mprid fnstatus bwt fwrwt cfwt inhcsdb inhedis
quarter) out=crepwt;
by mprid;
run;

data merged;
merge crepwt(in=A) merged123(in=B);
by mprid;
if a and b;
run;

/*
Title1 "Freq of Selected Variables";
proc freq data=merged3;
Tables conus*tnex_grp*d_health/list missing;
run;
Title1 "Freq of Selected Variables";
proc freq data=REPWTQ3;
Tables inHEDIS*conus*tnex_grp*quarter/list missing;
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 2018 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    = 2018;
%LET YEARP1  = 2017;
%LET YEARP2  = 2016;
%LET PATH =
N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\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="East-North Air Force",FOLDER=North);
%RUNBYREG(REG="East-North Army",FOLDER=North);

```

```
%RUNBYREG(REG="East-North Navy",FOLDER=North);
%RUNBYREG(REG="East-North Other",FOLDER=North);
%RUNBYREG(REG="East-North Joint Service",FOLDER=North);

%RUNBYREG(REG="East-South Air Force",FOLDER=South);
%RUNBYREG(REG="East-South Army",FOLDER=South);
%RUNBYREG(REG="East-South Navy",FOLDER=South);
%RUNBYREG(REG="East-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;
    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;

```

```

        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;
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,.l
og));
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.l
st));

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 = 2018;

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=("East-North Air Force","East-North Army","East-North
Navy","East-North Other","East-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,.l
og));
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.l
st));

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 = 2018;

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,.l
og));
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.l
st));

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 = 2018;

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=("East-South Air Force","East-South Army","East-South
Navy","East-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,.l
og));
%let
lstname=%sysfunc(tranwrd(%sysfunc(compress(&_sasprogramfile,"")),.sas,.l
st));

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 = 2018;

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      = 2018;
%LET YEARP1    = 2017;
%LET YEARP2    = 2016;
%LET YOURSAY= MTF;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\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=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=FHCC-Formerly NHC Great Lakes,NAME=FHCC-
FormerlyNHCGreatLakes.xlsb,NAME2=FHCC-
FormerlyNHCGreatLakes,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=NavalHlthClinicNewEngla
nd,FOLDER=North);
%RUNWD(AREA=Walter Reed Natl Mil Med
Cntr,NAME=WalterReedNatlMilMedCntr.xlsb,NAME2=WalterReedNatlMilMedCntr,FO
LDER=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=East-North Region-Air force,NAME=East-NorthRegion-  
Airforce.xlsb,NAME2=East-NorthRegion-Airforce,FOLDER=North);  
%RUNWD(AREA=East-North Region-Other,NAME=East-NorthRegion-  
Other.xlsb,NAME2=East-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      = 2018;
%LET YEARP1    = 2017;
%LET YEARP2    = 2016;
%LET YOURSAY=  MTF;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDb\&YEAR.\Programs\ConsumerWatc
h;
%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=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,FO
LDER=Overseas);
%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      = 2018;
%LET YEARP1    = 2017;
%LET YEARP2    = 2016;
%LET YOURSAY=  MTF;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWate
h;
%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=Bayne-Jones ACH-Ft. Polk,NAME=Bayne-JonesACH-
Ft.Polk.xlsb,NAME2=Bayne-JonesACH-Ft.Polk,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=NavalHealthClinicC
harleston,FOLDER=South);
*%RUNWD(AREA=Reynolds ACH-Ft. Sill,NAME=ReynoldsACH-
Ft.Sill.xlsb,NAME2=ReynoldsACH-Ft.Sill,FOLDER=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=East-South Region-Air force,NAME=East-SouthRegion-
Airforce.xlsb,NAME2=East-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: Automate 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      = 2018;
%LET YEARP1    = 2017;
%LET YEARP2    = 2016;
%LET YOURSAY=  MTF;
%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDb\&YEAR.\Programs\ConsumerWate
h;
%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=L. Wood ACH-Ft. Leonard Wood,NAME=L.WoodACH-
Ft.LeonardWood.xlsb,NAME2=L.WoodACH-Ft.LeonardWood,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=NH CampPendleton.xlsb,NAME2=NH CampPendleton,FOLDER=West);
%RUNWD(AREA=NH LeMoore,NAME=NH LeMoore.xlsb,NAME2=NH LeMoore,FOLDER=West);
%RUNWD(AREA=NH Oak
Harbor,NAME=NH OakHarbor.xlsb,NAME2=NH OakHarbor,FOLDER=West);
%RUNWD(AREA=NH Twentynine
Palms,NAME=NH TwentyninePalms.xlsb,NAME2=NH TwentyninePalms,FOLDER=West);
%RUNWD(AREA=NH C Hawaii,NAME=NH C Hawaii.xlsb,NAME2=NH C Hawaii,FOLDER=West);
%RUNWD(AREA=NH C San
Diego,NAME=NH C SanDiego.xlsb,NAME2=NH C SanDiego,FOLDER=West);
%RUNWD(AREA=R W Bliss AHC-Ft. Huachuca,NAME=R W BlissAHC-
Ft. Huachuca.xlsb,NAME2=R W BlissAHC-Ft. Huachuca,FOLDER=West);
%RUNWD(AREA=TRICARE Outpatient-Chula Vista,NAME=TRICARE Outpatient-
Chula Vista.xlsb,NAME2=TRICARE Outpatient-Chula Vista,FOLDER=West);
%RUNWD(AREA=Tripler AMC-Ft. Shafter,NAME=Tripler AMC-
Ft. Shafter.xlsb,NAME2=Tripler AMC-Ft. Shafter,FOLDER=West);
%RUNWD(AREA=Weed ACH-Ft. Irwin,NAME=Weed ACH-Ft. Irwin.xlsb,NAME2=Weed ACH-
Ft. Irwin,FOLDER=West);
%RUNWD(AREA=William Beaumont AMC-Ft. Bliss,NAME=William Beaumont AMC-
Ft. Bliss.xlsb,NAME2=William Beaumont AMC-Ft. Bliss,FOLDER=West);

```

```

/*--dont need to run for pdf report--;
%RUNWD(AREA=West Region-Air force,NAME=West Region-
Airforce.xls,NAME2=West Region-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 COMPRESS=NO ERRORS=2 MPRINT NOCENTER NOFMterr SPOOL
SYMBOLGEN;

LIBNAME LIBRARY '..\..\Data\fmtlib';
LIBNAME INT    '..\loadweb';

/*****/
/* TIME PERIOD MACROS */
/*****/

%LET YEAR      = 2018;
%LET YEARP1    = 2017;
%LET YEARP2    = 2016;
%LET YOURSAY=  MTF;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\&YEAR.\Programs\ConsumerWatc
h;
%LET RATEPATH=..\..\Data\Response_Rate\xcatch;

%INCLUDE "consumerwatch-Cmacro-word.inc";
%RUNWD(AREA=USA MHS,NAME2=USAMHS,FOLDER=USAMHS);

```

**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;

OPENWRD=SINGLE||"[FileOpen.Name="||DOUBLE||"&PATH.\templateAnnual.docm"||
DOUBLE||"]"||SINGLE;

SAVEWRD=SINGLE||"[FileSaveAs.Name="||DOUBLE||"&PATH.\&FOLDER.\&NAME2..doc
m"||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 doesn'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\2018\Programs\ConsumerWatch;

*%INCLUDE "APPENDIX.INC";
%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\Programs\ConsumerWatch\APPE
NDIX.INC";
%LET Y1=*FY*2016;
%LET Y2=*FY*2017;
%LET Y3=*FY*2018;

/*
%APPENDIX(NAME=375thMedGrp-Scott,NAME2=375th Med Grp-Scott,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=FHCC-FormerlyNHCGreatLakes,NAME2=FHCC-Formerly NHC Great
Lakes,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=NHCCherryPoint,NAME2=NHC Cherry Point,FOLDER=North);
%APPENDIX(NAME=NHCPatuxentRiver,NAME2=NHC Patuxent River,FOLDER=North);
%APPENDIX(NAME=NHCQuantico,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\2018\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\Programs\ConsumerWatch\APPE
NDIX.INC";
%LET Y1=*FY*2016;
%LET Y2=*FY*2017;
%LET Y3=*FY*2018;

/*
%APPENDIX(NAME=18thMedGrp-KadenaAB,NAME2=18th Med Grp-Kadena
AB,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=NH Yokosuka, 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\2018\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\Programs\ConsumerWatch\APPE
NDIX.INC";
%LET Y1=*FY*2016;
%LET Y2=*FY*2017;
%LET Y3=*FY*2018;

%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=Bayne-JonesACH-Ft.Polk,NAME2=Bayne-Jones ACH-Ft.
Polk,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=NH Pensacola,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=ReynoldsACH-Ft.Sill,NAME2=Reynolds ACH-Ft.
Sill,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);
%APPENDIX(NAME=East-SouthRegion-Airforce,NAME2=East-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\2018\Programs\ConsumerWatch;

%INCLUDE
"N:\Project\40309_HCS\SASGRID\DATA\HCSDB\2018\Programs\ConsumerWatch\APPE
NDIX.INC";
%LET Y1=*FY*2016;
%LET Y2=*FY*2017;
%LET Y3=*FY*2018;

%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=L.WoodACH-Ft.LeonardWood,NAME2=L. Wood ACH-Ft. Leonard
Wood,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=NBH Bremerton,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=NBMSanDiego,NAME2=NBH 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\2018\Programs\ConsumerWatch;

%INCLUDE "&PATH.\APPENDIX.INC";
*%INCLUDE "&PATH.\APPENDIX_DOCX.INC";
%LET Y1=*FY*2016;
%LET Y2=*FY*2017;
%LET Y3=*FY*2018;

%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 textualign=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=[BACKGROUND=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 - Q3FY2018\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=2018;          *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.\Prog
rams\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=EAST-NORTH,FOLDER=East-North);
%RUNCW(AREA=JOINT SERVICE,FOLDER=JointService);
%RUNCW(AREA=Overseas Europe,FOLDER=Europe);
%RUNCW(AREA=EAST-SOUTH,FOLDER=East-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 - Q3FY2018\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
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 DEFIND MACRO VARIABLE &POP IN SAS PROGRAMS:
*           DIRECT CARE CONSUMDER WATCH: &POP=='Prime Enrollees'
*           PURCHASE CARE CONSUMDER WATCH: &POP=='Enrollees with Civilian
PCM'
* MODIFIED 7/30/2007 BY LUCY LU
*           UNIFY THE PERDIOD MACRO VARIABLES WITH BENEFICIARY REPORT
CARDS PROGRAMS
*           CURRNT ==> PERIOD4

```

```

*          CURRNTQ ===> PERIOD4Q
*          PREV1   ===> PERIOD3
*          PREV1Q  ===> PERIOD3Q
*          PREV2   ===> PERIOD2
*          PREV2Q  ===> PERION2Q
*          PREV3   ===> PERIOD1
*          PREV3Q  ===> PERIOND1Q
* 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. DELTED 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;

```

```

SAVEXLS=SINGLE || "[SAVE.AS(" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER..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(5);
  PUT '[ERROR(FALSE)]';
  PUT &SAVEXLS;
  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=TAB1_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;
        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;
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 PAP '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); *FROM CONSUMER WATCH. LLU  
10/8/04;  
BY BENEFIT TIMEPD REGION;
```

```
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 - Q3FY2018\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 2017 to March 2018; *FISCAL YEAR PRIOR TO
CURRENT QUARTER;
%LET YEAR=2018;                *CURRENT FISCAL YEAR;
%LET QUARTER3=third;          *CURRENT QUARTER;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QUARTER.FY&YEAR.\Programs\
ConsumerWatch;
%LET RATEPATH=..\..\Data\Afinal\Response_Rate;

%INCLUDE "consumerwatch_macro_word.inc";

*%RUNWD(FOLDER=USAMHS,NAME=USA MHS,YOURSAY=USA MHS);
*%RUNWD(FOLDER=AirForce,NAME=Air Force,YOURSAY=your service);
%RUNWD(FOLDER=Army,YOURSAY=your service);
%RUNWD(FOLDER=East-North,YOURSAY=your region);
%RUNWD(FOLDER=East-South,YOURSAY=your region);
%RUNWD(FOLDER=Europe,YOURSAY=your region);
%RUNWD(FOLDER=JointService,NAME=Joint Service,YOURSAY=your service);
%RUNWD(FOLDER=Navy,YOURSAY=your service);
%RUNWD(FOLDER=Pacific,YOURSAY=your region);
%RUNWD(FOLDER=West,YOURSAY=your region);*/

```

**I.6.B - Q3FY2018\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;

    OPENWRD=SINGLE || "[FileOpen.Name=" || DOUBLE || "&PATH.\template.docm" || DOUBLE
    || "]" || SINGLE;

    SAVEWRD=SINGLE || "[FileSaveAs.Name=" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER..DO
    CM" || 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;
  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 - Q3FY2018\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 QTR=3;
%LET YEAR=2018;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QTR.FY&YEAR.\Programs\Cons
umerWatch;

* note q1- q4 is var names and not reflect real quarters;
* insert column names from preventive care table;

%LET Q1=Qtr 4*FY*2017;
%LET Q2=Qtr 1*FY*2018;
%LET Q3=Qtr 2*FY*2018;
%LET Q4=Qtr 3*FY*2018;

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 MISSOEVER
              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 MISSEVER
    ;
    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=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 / "Qtr/Yr" 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 / "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=USAMHS);
```

```
%APPENDIX(FOLDER=Europe);
```

```
%APPENDIX(FOLDER=Army);
```

```
%APPENDIX(FOLDER=East-North);
```

```
%APPENDIX(FOLDER=West);
```

```
%APPENDIX(FOLDER=East-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 2018 TRICARE PURCHASED CARE CONSUMER WATCH – QUARTERS I-III**

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**J.1.A - Q3FY2018\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 CARE 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  ==> PERIOD2Q
*          PREV3   ==> PERIOD1
*          PREV3Q  ==> PERIOD1Q
* 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=2018;      *CURRENT FISCAL YEAR;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&CURRENTQ.FY&CURRENTY.\Program
s\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=EAST-NORTH);
%RUNCW(FOLDER=EAST-SOUTH);
%RUNCW(FOLDER=WEST);

```

**J.1.B -**

**Q3FY2018\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 DEFIND MACRO VARIABLE &POP IN SAS PROGRAMS:
*           DIRECT CARE CONSUMDER WATCH: &POP=='Prime Enrollees'
*           PURCHASE CARE CONSUMDER 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 PURCAHSE 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 (QAUARTER/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.xlsb"||DOUB
LE||")]"||SINGLE;

```

```

SAVEXLS=SINGLE || "[SAVE.AS(" || DOUBLE || "&PATH.\&FOLDER.\&FOLDER._PurchasedCare
.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(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;
    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'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;

    /*
    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 -**

**Q3FY2018\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=2018;        *CURRENT FISCAL YEAR;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QUARTER.FY&YEAR.\Programs\Pur
chasedConsumerWatch;

%INCLUDE "consumerwatch_PURCHASEDCARE_macro_word.inc";

*%RUNWD(FOLDER=USAMHS,NAME=USA MHS,YOURSAY=USA MHS);
*%RUNWD(FOLDER=East-North,YOURSAY=your region);
%RUNWD(FOLDER=East-South,YOURSAY=your region);
*%RUNWD(FOLDER=West,YOURSAY=your region);
```

**J.2.B -**

**Q3FY2018\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" || DOUBLE || ")]" || SINGLE;

    OPENWRD=SINGLE || "[FileOpen.Name=" || DOUBLE || "&PATH.\Template_purchasedcare.docm" || DOUBLE || "]" || 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 - Q3FY2018\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 QTR=3;
%LET YEAR=2018;

%LET
PATH=N:\Project\40309_HCS\SASGRID\DATA\HCSDB\Q&QTR.FY&YEAR.\Programs\Purchas
edConsumerWatch;

* note q1- q4 is var names and not reflect real quarters;
* insert column names from preventive care table;
%LET Q1=Qtr 4*FY*2017;
%LET Q2=Qtr 1*FY*2018;
%LET Q3=Qtr 2*FY*2018;
%LET Q4=Qtr 3*FY*2018;

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 MISSOEVER
          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 MISSEVER
              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}^ln
&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=East-North);
*%APPENDIX(FOLDER=West);
*%APPENDIX(FOLDER=East-South);

```