2003 Health Care Survey of DoD Beneficiaries:

Adult Technical Manual

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Introduction

The 2003 Adult Health Care Survey of Department of Defense Beneficiaries (HCSDB) is the primary tool with which the TRICARE Management Activity (TMA) of the Assistant Secretary of Defense (Health Affairs) monitors the opinions and experiences of military health system (MHS) beneficiaries. The HCSDB was conducted annually from 1995 to 2000, at which time the survey was fielded quarterly. 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 2010*?

- 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 is a quarterly mail survey of a representative sample of MHS beneficiaries. It is sponsored by the TRICARE Management Activity 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). The DoD Defense Manpower Data Center (DMDC) prepares the sampling frame, which consists of selected variables 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.

Each quarter, Mathematica Policy Research, Inc. (MPR, Washington, D.C.) prepares a sample of 45,000 adult beneficiaries. National Research Corporation (NRC) fields the survey each quarter. MPR analyzes the survey data, reports on the results, and prepares this document, the "2003 Health Survey of DoD Beneficiaries: Adult Technical Manual", and the Health Care Survey of DoD Beneficiaries: Annual Report.

This manual is designed to be used as a reference by analysts in OASD (HA) as they interpret the survey findings and prepare briefings. The 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. The manual enables an analyst to link each cell in each table (or chart) in the reports to the associated question in the Adult questionnaire and/or to

the variable in the survey database. The manual also enables an analyst to follow, and replicate if desired, the processing of the raw survey data through each step in the production of the final database.

A. OVERVIEW OF THE HCSDB

1. Sample Design

The 2003 adult sample design is based on three sample stratifications--enrollment type, beneficiary type, and geographic area. *Enrollment type* is defined by whether or not the beneficiary is enrolled in TRICARE Prime. Unlike in previous surveys, we did not create separate strata for beneficiaries enrolled in Prime with a military primary care manager (PCM) and beneficiaries enrolled in Prime with a civilian PCM.

Beneficiary type is defined as active duty, active duty family members, retirees and family members under age 65, and non-active duty beneficiaries and their family members age 65 and over. Compared with previous surveys, this stratification causes a larger proportion of the sample to be allocated to active duty personnel and their family members, and a smaller proportion of the sample to be allocated to retirees.

The *geographic area* stratification depends on enrollment type. Those enrolled in Prime who have a military PCM typically receive much of their health care from a military treatment facility (MTF), that is a military hospital or clinic. The geographic stratification for such beneficiaries is determined by the MTF that bears the financial responsibility for the beneficiary's health care. This stratification does not depend on the location of the beneficiary's residence, although most such beneficiaries live within the catchment area of the responsible MTF.

Those enrolled in Prime with a civilian PCM typically receive much of their health care from a TRICARE contractor. The geographic stratification for these beneficiaries is the catchment area in which they live.

Those not enrolled in Prime typically receive much of their care through TRICARE Extra/Standard (CHAMPUS) or through a non-MHS health plan. The service area they live in determines the geographic stratification. Conceptually, the service area is the health care market area in which the beneficiary resides. Operationally, the service area is the group of catchment areas in the metropolitan area the beneficiary lives in. For beneficiaries who do not live in a metropolitan area, the service area is the same as the catchment area they live in.

As with last year's survey, more military clinics, as opposed to military hospitals, were included in the list of geographic areas. This means that a larger proportion of the 2003 sample is allocated to beneficiaries who receive much of their health care from a military clinic, and a smaller proportion is allocated to those receiving much of their care from a military hospital.

2. 2003 Adult HCSDB

The HCSDB questionnaire was converted from an annual to a quarterly survey in 2000, and is fielded in each quarter to a representative sample of MHS beneficiaries. The adult questionnaire for Quarters I-IV is reproduced in Appendix A. The 2003 survey consists of an unchanging core questionnaire with different 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 2002 HCSDB and this year's survey is the 2003 HSCDB. 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 - IV**
Each quarter in 2003, we sent surveys to a random sample of 45,000 adult MHS beneficiaries. By the end of the fielding period in Quarter I, we received completed surveys from 31 percent of the sample. In Quarter II, 29 percent of the sample members returned completed surveys while in Quarter III, 26 percent of the sample members returned completed surveys. In Quarter IV, we received complete surveys from 26 percent of the beneficiaries sampled. Information pertaining to how we developed these response rates is presented in Chapter 4.

It should be noted that the above cited response rates do not reflect late arriving responses from the surveys fielded in the first three 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 32 percent for Quarter I, 29 percent for Quarter II, 28 percent for Quarter III, and 29 percent for the combined annual dataset.

4. **Database Development**
MPR edits 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, MPR 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**
MPR analyzed the data and produced several reports explaining the findings on topics such as 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.USD.mil:

- 2003 TRICARE Beneficiary Reports

- 2003 TRICARE Consumer Watch

- Health Care Survey of DoD Beneficiaries: Annual Report

B. ORGANIZATION OF THIS MANUAL

Chapter 2 presents the procedures used in fielding the survey. Chapter 3 explains how the database was developed. It covers naming conventions, editing procedures, record selection criteria, descriptions of all variable types, definitions of each constructed variable, the development of satisfaction and health status scales, and weighting procedures. Chapter 4 describes how the database was analyzed. This includes rules for developing response rates, the development of table and chart specifications for the Health Care Survey of DoD Beneficiaries: Annual Report, an explanation of the dependent variables and independent variables, and the methodology for estimating the variance of estimates. The manual concludes with a series of technical appendices:

- Appendix A: Annotated questionnaire – Quarters I-IV survey questionnaire annotated with database variable names

- Appendix B: Survey Fielding Letters – Letters sent to the respondents

- Appendix C: Plan for Data Quality – Coding Scheme – Quarters I-IV

- Appendix D: A table mapping MTFs to the catchment area and region. The table also indicates the type of facility, such as teaching hospital or clinic, and the service affiliation of the MTF.

- Appendix E: Response rate tables for selected domains

- Appendix F: Technical Description of the 2003 TRICARE Beneficiary Reports

- Appendix G: SAS Code for File Development

- Appendix H: SAS Code for Statistical and Web Specifications for the 2003 TRICARE Beneficiary Reports

- Appendix I: SAS Code for 2003 TRICARE Consumer Watch

- Appendix J: The SUDAAN code for calculating variance estimates

- Appendix K: Recoding of Prenatal Care Variables

- Appendix L: Health Care Survey of DoD Beneficiaries: Annual Report

Chapter

2

Survey of Adults

This chapter presents information on the survey administration cycle for the Quarters I-IV, 2003 Adult Health Care Survey of DoD Beneficiaries (HCSDB), with specific details on the survey mailing cycle and the number of surveys received.

A. SURVEY OPERATIONS ACTIVITIES

The operational support for mailing the survey involved four mailings to beneficiaries between December 3, 2002 and February 6, 2003 in Quarter I, March 4, 2003 and May 8, 2003 in Quarter II, June 3, 2003 and August 7, 2003 in Quarter III, and September 3, 2003 and November 7, 2003 in Quarter IV. Targeted mailings and re-mailings have been integrated into the mailing administration in order to increase response rates. The mailings process is as follows: notification letter, first survey mailing, reminder/thank you post card, and second survey mailing. The notification letter was a short letter of explanation encouraging beneficiaries to participate. The first and second surveys were mailed with a cover letter of explanation and an option to complete the survey on-line. The reminder/thank you post card was mailed between the first and second surveys, reminding beneficiaries to complete the survey and thanking those beneficiaries who had completed the survey. Examples of these are available in Appendix B. All mailings have been completed. The field period closed on March 3, 2003 in Quarter I, June 5, 2003 in Quarter II, September 2, 2003 in Quarter III, and December 2, 2003 in Quarter IV. Surveys from Quarter I, II, and III that arrived after the end of the field period were included in the final annual dataset, but they are not reflected in this chapter.

B. ADDRESS UPDATE ACTIVITIES PRIOR TO AND DURING SURVEY ADMINISTRATION

The sample file was received from Mathematica Policy Research (MPR) on November 14, 2002 in Quarter I, February 12, 2003 in Quarter II, May 20, 2003 in Quarter III and August 7, 2003 in Quarter IV. The file contained 45,000 records of DoD beneficiaries and 76 variables constructed from the Defense Enrollment Eligibility Reporting System (DEERS). The file was sent to an NCOA vendor for address updating on November 14, 2002 in Quarter I, February 12, 2003 in Quarter II, May 20, 2003 in Quarter III and August 10, 2003 in Quarter IV. National Research Corporation (NRC) sent a copy of all sample records to an outside vendor to receive address hygiene services and to be interfaced with the National Change of Address (NCOA) database to obtain updated address information. The NCOA vendor returned the updated address file and this information, along with the sample file from MPR, were loaded into NRC's proprietary software system known as Qualysis. Qualysis is NRC's "quality process" software and business discipline that standardizes and automates the entire survey process from data quality checks to the scanning of returned surveys.

The Configuration Manager module in Qualysis contains the layout for all mail items (e.g., the survey, cover letters, thankyou/reminder postcards), mail methodology, and cover letter personalization. For the notification letter mailing step, the address provided by the NCOA vendor was utilized when available. Records that were not updated by the NCOA vendor were mailed to one of the three DEERS addresses: residential address, sponsor address,

and unit address. When possible, the residential address was given preference over the sponsor address and likewise the sponsor address was given preference over the unit address. When all records had been assigned an address for the notification letter mailing step, Qualysis began generating the personalized letters. The notification letter was mailed on December 3, 2002 in Quarter I, March 4, 2003 in Quarter II, June 3, 2003 in Quarter III, and September 3, 2003 in Quarter IV.

The updating of addresses is a continuous process throughout the survey administration cycle. During survey administration, address updates are obtained from multiple sources:

- Self report by beneficiaries (via telephone, voice mail, or fax).
- Address correction information from the United States Postal Service (USPS).
- Out of date forwarding address information from the USPS.
- Mail items returned by the USPS as non-deliverable.

Updated address information was added to Qualyisis through the use of the DoD Beneficiary Update System (DoDBUS), an interface created by NRC developers to allow new address information to be entered into Qualysis and to track changes when using the DEERS supplied addresses.

Address information received directly from the beneficiary was considered the most accurate and was the first address used whenever possible. Beneficiaries were provided with toll free telephone and toll free fax phone numbers and voice mail option to use in order to update their addresses. Collect calls were also available if a beneficiary could not access the toll free telephone number. The telephone and fax numbers were printed on the notification letter, the reminder/thank you card, and the cover letter that accompanied the first survey.

The United States Postal Service also provided address update information in the form of Address Correction Services. This service is accessed by the use of the "Address Service Requested" indicia on the notification letter and the outer envelopes of the first and second surveys. Many post offices returned updated address information on diskettes, which are loaded into Qualysis. Post offices that did not have access to this technology returned copies of the mail piece with the old and new addresses provided. This information was entered into Qualysis through the DoDBUS.

The DoDBUS also provided the interface to enter non-deliverable mail pieces and mark the address used for that mail step as invalid. If other addresses were available, the DoDBUS operator would choose the next available address for the next mail step. When all addresses had been exhausted, the record was marked as a "final non-deliverable" and no further mailings were attempted. Second surveys that were returned as non-deliverable were also marked as "final non-deliverables" as it was the final mail step in this methodology.

Based on data from the final returns data set, a total of 2,465 beneficiaries in Quarter I, 2,350 beneficiaries in Quarter II, 1,646 beneficiaries in Quarter III and 1,664 beneficiaries in Quarter IV, did not have sufficient addresses information and were not included in any of the mail steps. The remaining beneficiaries were mailed the notification letter. Prior to mailing the first survey, NRC removed any beneficiaries who were marked as "final non-deliverable" or any beneficiary who contacted NRC and refused to participate or was found to be ineligible. First surveys were mailed on January 2, 2003 in Quarter I, April 3, 2003 in Quarter II, July 3, 2003 in Quarter III, and October 3, 2003 in Quarter IV. The reminder/thank you card was mailed on January 16, 2003 in Quarter I, April 17, 2003 in Quarter II, July 17, 2003 in Quarter III, and October 17, 2003 in Quarter IV. The reminder card was sent to all beneficiaries who received the first survey, with the exception of those beneficiaries whose first survey was returned or accessed the on-line survey, and their record marked as "final non-deliverable". Second surveys were mailed on February 6, 2003 in Quarter I, May 8, 2003 in Quarter II, August 7, 2003 in Quarter III, and November 7, 2003 in Quarter IV. Second surveys were mailed to all beneficiaries who did not return a first survey or on-line survey, and whose records had not been marked as "final non-deliverable".

Table 2.1 summarizes address sources by each of the four beneficiary categories. This table shows the source of the last address used in sending a mailing piece to a beneficiary. As in past years, the largest number of invalid addresses fell in the Active Duty category. It has been speculated that this is due, in part, to this group being mobile. However, the table also clearly shows that DEERS supplied addresses were used 83% of the time.

TABLE 2.1

FREQUENCY OF ADDRESS SOURCE BY BENEFICIARY CATEGORY – QUARTERS I-IV

	Active Duty	Active Duty Dependents	Retirees and Family Members < 65	Retirees and Family Members > 65	Total
No valid address (disqualified after NCOA)	584 0.32%	23 0.01%	38 0.02%	39 0.02%	684 0.38%
Bad Address (disqualified by postal cleaning software)	4,769 2.65%	1,485 .83%	715 0.40%	224 0.12%	7,192 4.00%
Phone call/Voice mail	163 0.09%	126 0.07%	141 0.08%	91 0.05%	521 0.29%
ACR	6,030 3.35%	3442 1.91%	810 0.45%	183 0.10%	10,465 5.81%
Fax	49 0.03%	22 0.01%	41 0.02%	11 0.01%	123 0.07%
NCOA	5,614 3.12%	4312 2.40%	2030 1.13%	417 0.23%	12,373 6.87%
DEERS Unit	6,024 3.35%	0 0.00%	5 0.00%	0 0.00%	6,029 3.35%
DEERS Residential	64,814 36.00%	34,145 18.97%	30,703 17.06%	11,187 6.22%	140,849 78.25%
DEERS Sponsor	0 0.00%	1,335 0.74%	377 0.21%	42 0.02%	1,754 0.97%
ODF	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Electronic ACR	5 0.00%	3 0.00%	1 0.00%	0 0.00%	9 0.00%
Total					180,000 100.00%

Table 2.2 summarizes the address sources for returned surveys included in Quarters I-IV of the 2003 Adult HCSDB data file. The data shows that over 90% of the returned surveys were mailed to the residential beneficiary address supplied by DEERS.

TABLE 2.2

FREQUENCY OF ADDRESS SOURCES FOR RETURNED SURVEYS – QUARTERS I-IV, 2003

Address Type	Frequency (n)	Percent of Returns
DEERS Residential	44,867	88.62%
DEERS Sponsor	185	0.37%
DEERS Unit	328	0.65%
Phone/Voice Mail	257	0.51%
NCOA	3187	6.30%
Fax	56	0.11%
ACR & ODF	1749	3.45%
Electronic ACR	0	0.00%
Total	50,629	100.00%

Note: If beneficiaries returned more than one completed survey, both surveys were included in the numbers in Table 2.2.

C. LETTER PROCESSING PROCEDURES

A vital component to effective management and monitoring of the data collection process is the Survey Control System (SCS). The SCS ensures that data are accurate, integrated, and available during all phases of the survey administration. NRC's unique identifier known as a "lithocode" links all records in the SCS to the original sample file. The lithocode is a unique identification number assigned by Qualysis at the time that letters or surveys are generated. A new lithocode number is created for each mail step. These lithocodes are stored for each beneficiary in a table in the SCS. This allows NRC staff to determine whether a returned survey is a first or second survey and identify instances where a beneficiary may return both the first and second survey. The lithocode also allows the surveys to be monitored without use of a beneficiary's social security number or other information that could identify the beneficiary. Lithocodes are used to identify the beneficiary when returned surveys are scanned, whenever beneficiaries are removed from future mailings due to refusal/ineligibility or no valid address, and when addresses are updated or changed in DoDBUS.

D. ON-LINE PROCESSING PROCEDURES

In addition to receiving a mail survey, beneficiaries are given the option of completing the survey via a secure internet web site. The cover letter that accompanies the first and second mail surveys contains an internet URL and unique password that allows beneficiaries to complete the survey on-line. All passwords provided to beneficiaries are randomly generated by NRC and consist of three alpha and four numeric characters. Similar to lithocodes, the passwords are unique to each beneficiary and allow the surveys to be monitored without the use of a beneficiary's social security number or any other personal identifying information. Upon completion or early termination of the on-line survey, the beneficiary does not have the ability to access the on-line survey again. All questions on the on-line survey are identical to the mail survey. However, the questions on the on-line survey are presented individually on a screen by screen basis and skip patterns are programmed into the survey.

E. SURVEY ADMINISTRATION TIMELINE

The HCSDB mailing process was designed so that each beneficiary with a usable address could receive up to four documents: a notification letter, a first survey, a reminder/thank you card, and a second survey. If a beneficiary returned a first survey or accessed the on-line version, a second survey was not sent. If a beneficiary identified themselves as refusing to participate or as ineligible, they were removed from future mail steps as well. Beneficiaries who were marked as "final non-deliverable" were also removed from future mail steps.

A total of 42,535 notification letters were mailed on December 3, 2002 in Quarter I while 42,650 notification letters were mailed on March 4, 2003 in Quarter II, 43,354 notification letters were mailed on June 3, 2003 in Quarter III, and 43,349 notification letters were mailed on September 3, 2003 in Quarter IV. Immediately following each of these mailings, NRC staff began entering address changes and updating records to indicate beneficiaries who identified themselves as refusing to participate or as ineligible to participate. There were 470 records marked as "final non-deliverable" and 46 records marked as refused/ineligible prior to mailing the first survey in Quarter I, 4,063 records marked as "final non-deliverable" and 452 records marked as refused/ineligible prior to mailing the first survey in Quarter II, 2,913 records marked as "final non-deliverable" and 324 records marked as refused/ineligible prior to mailing the first survey in Quarter III, and 3,221 records marked as "final non-deliverable" and 357 records marked as refused/ineligible prior to mailing the first survey in Quarter IV. The survey is a 16-page booklet accompanied by a cover letter of explanation and a postage paid return envelope. A total of 42,019 first surveys were mailed to beneficiaries on January 2, 2003 in Quarter I, 38,135 first surveys were mailed to beneficiaries on April 3, 2003 in Quarter II, 40,117 first surveys were mailed to beneficiaries on July 3, 2003 in Quarter III, and 39,771 first surveys were mailed to beneficiaries on October 3, 2003 in Quarter IV.

In Quarter I, the reminder/thank you card was sent to 35,729 beneficiaries on January 16, 2003. The number of reminder/thank you cards was reduced by 378 records marked as "final non-deliverables", 67 records marked as refused/ineligible, and 5,845 records marked due to beneficiaries who returned the first survey. In Quarter II, the reminder/thank you card was sent to 32,349 beneficiaries on April 17, 2003. The number of reminder/thank you cards was reduced by 675 records marked as "final non-deliverables", 160 records marked as refused/ineligible, and 4,951 records marked due to beneficiaries who returned the first survey. In Quarter III, the reminder/thank you card was sent to 35,610 beneficiaries on July 17, 2003. The number of reminder/thank you cards was reduced by 454 records marked as "final non-deliverables", 114 records marked as refused/ineligible, and 3,939 records marked due to beneficiaries who returned the first survey. In Quarter IV, the reminder/thank you card was sent to 34,730 beneficiaries on October 17, 2003. The number of reminder/thank you cards was reduced by 256 records marked as "final non-deliverables", 153 records marked as refused/ineligible, and 4,623 records marked due to beneficiaries who returned the first survey.

In Quarter I, the second survey was mailed to 30,572 beneficiaries on February 6, 2003. This number was reduced by 567 records marked as "final non-deliverables", 55 records marked as refused/ineligible, and 4,535 records marked due to beneficiaries who returned the first survey. In Quarter II, the second survey was mailed to 27,617 beneficiaries on May 8, 2003. This number was reduced by 616 records marked as "final non-deliverables", 62 records marked as refused/ineligible, and 4,054 records marked due to beneficiaries who returned the first survey. In Quarter III, the second survey was mailed to 31,113 beneficiaries on August 7, 2003. This number was reduced by 213 records marked as "final non-deliverables", 22 records marked as refused/ineligible, and 4,284 records marked due to beneficiaries who returned the first survey. In Quarter IV, the second survey was mailed to 30,715 beneficiaries on November 7, 2003. This number was reduced by 633 records marked as "final non-deliverables", 71 records marked as refused/ineligible, and 3,311 records marked due to beneficiaries who returned the first survey.

Each quarter, prior to the mailing of the first survey, 20 questionnaires were completed by NRC staff and scanned into the SCS. Additionally, 10 on-line questionnaires were completed by NRC

staff. Copies of the mail questionnaires and a data set which included the mail and on-line test files were sent to the analysis contractor to determine if the file was readable, scanned correctly for the mail version and programmed correctly for the on-line version.

Table 2.3 summarizes the HCSDB mailings. Data includes the date of each mail step, the quantity mailed in each step, and the number of records that were removed prior to the next mail step.

TABLE 2.3.1

MAILING TIMELINE – QUARTER I, 2003

Mail Step	Action	Records Removed	Sample
	Total Sample Size		45,000
	Subtract no address	224	
	Subtract bad address	2,241	
	Total: beneficiaries not receiving a pre note		-2,465
Notification Letter	Mailed on 12/03/02		42,535
	Subtract PND	470	
	Subtract ineligible/refused	46	
	Total		-516
First Survey	Mailed on 01/02/03		42,019
	Subtract PND	378	
	Subtract ineligible/refused	67	
	Subtract 1st surveys received	5,845	
	Total		-6,290
Reminder/Thank You Post Card	Mailed on 01/09/02		35,729
	Subtract PND	567	
	Subtract ineligible/refused	55	
	Subtract 1st Surveys received	4,535	
	Total		-5,157
Second Survey	Mailed on 02/06/03		30,572

TABLE 2.3.2

Mailing Timeline – Quarter II, 2003

Mail Step	Action	Records Removed	Sample
	Total Sample Size		**45,000**
	Subtract no address	234	
	Subtract bad address	2,116	
	Total: beneficiaries not receiving a pre note		2,350
Notification Letter	Mailed on 03/04/03		**42,650**
	Subtract PND	4,063	
	Subtract ineligible/refused	452	
	Total		4,515
First Survey	Mailed on 04/03/03		**38,135**
	Subtract PND	675	
	Subtract ineligible/refused	160	
	Subtract 1st Surveys received		
	Total		5,786
Reminder/Thank You Post Card	Mailed on 04/17/03		**32,349**
	Subtract PND	616	
	Subtract ineligible/refused	62	
	Subtract 1st Surveys received	4054	
	Total		4,732
Second Survey	Mailed on 05/08/03		**27,617**

TABLE 2.3.3

Mailing Timeline – Quarter III, 2003

Mail Step	Action	Records Removed	Sample
	Total Sample Size		**45,000**
	Subtract no address	166	
	Subtract bad address	1,480	
	Total: beneficiaries not receiving a pre note		1,646
Notification Letter	Mailed on 06/03/03		**43,354**
	Subtract PND	2,913	
	Subtract ineligible/refused	324	
	Total		3,237
First Survey	Mailed on 07/03/03		**39,586**
	Subtract PND	454	
	Subtract ineligible/refused	114	
	Subtract 1st Surveys received	3,939	
	Total		4,507
Reminder/Thank You Post Card	Mailed on 07/17/03		**35,610**
	Subtract PND	213	
	Subtract ineligible/refused	22	
	Subtract 1st Surveys received	4,284	
	Total		4,497
Second Survey	Mailed on 08/07/03		**31,113**

TABLE 2.3.4

Mailing Timeline – Quarter IV, 2003

Mail Step	Action	Records Removed	Sample
	Total Sample Size		**45,000**
	Subtract no address	138	
	Subtract bad address	1,513	
	Total: beneficiaries not receiving a pre note		1,651
Notification Letter	Mailed on 09/03/03		**43,349**
	Subtract PND	3,221	
	Subtract ineligible/refused	357	
	Total		3,578
First Survey	Mailed on 10/03/03		**39,771**
	Subtract PND	256	
	Subtract ineligible/refused	153	
	Subtract 1st Surveys received	4,623	
	Total		5,041
Reminder/Thank You Post Card	Mailed on 10/17/03		**34,730**
	Subtract PND	633	
	Subtract ineligible/refused	71	
	Subtract 1st Surveys received	3,311	
	Total		4,015
Second Survey	Mailed on 11/07/03		**30,715**

F. PROCESSING AND CLASSIFICATION OF INCOMING SURVEYS

MAIL SURVEYS

Returned surveys were visually checked for any written comments prior to scanning. Refusal or ineligibility comments were entered into Qualysis using the DoDBUS. Any other comments were referred to the Account Director to be forwarded to the DoD Task Manager.

Each morning, NRC staff open non-deliverables and update address changes or "final non-deliverable" status for each record. Surveys are scanned using software called FAQSS. The Scanner Interface module of Qualysis receives the information from FAQSS and identifies the beneficiary and their responses to the survey questions.

Surveys must be imported from the Qualysis directory into the FAQSS System by running a "create text definitions files" from the scanner interface application. During the import process, the surveys are run through three passes. In the first pass, the lithocode is read. Any unread lithocodes are manually entered. The system then creates a lithocode list. From the complete lithocode list, Qualysis exports the text definition files to match the lithocodes. Lastly, FAQSS separates the files into batches and moves them into the processing queue.

The next step in scanning is batch processing. This template is used by the processor to find response areas and to read the responses as valid or spurious. If the system is not 99 percent certain of a response, it is sent to a data editing workstation.

Any questionable marks as detected by the processor are brought up at the data editing station for review by an editor. The editor decides if the mark is a valid response and enters the appropriate system instructions. If the editor is unable to determine the response, a "non-response" instruction is entered. From scanner interface, a transfer results application is applied which moves the scanning files into the Qualysis database and logs the transaction. A final check is then performed to ensure that all surveys have been entered in the Qualysis database.

Throughout the administration of HCSDB, all records are marked with a final disposition code known as FLAG_FIN. Some records (such as no valid addresses) can be marked prior to the first mail step. Other records cannot be marked until all mail steps have been completed. The FLAG_FIN variables and their descriptions are

- FLAG_FIN=1
  Returned survey – survey was completed and returned.

- FLAG_FIN=2
  Returned ineligible – survey was returned with at least one question marked and information that the beneficiary was ineligible. The information indicating ineligibility may have come by phone, fax, or the survey itself.

- FLAG_FIN=3
  Returned blank – temporarily ill or incapacitated. Survey was returned blank along with information that the beneficiary was temporarily ill or incapacitated. These sample members were eligible.

- FLAG_FIN=4
  Returned blank – deceased. Survey was returned blank along with information that the beneficiary was deceased. These sample members were ineligible.

- FLAG_FIN=5
  Returned blank – incarcerated or permanently incapacitated. Survey was returned blank along with information that the beneficiary was incarcerated or permanently hospitalized. These sample members were ineligible.

- FLAG_FIN=6
  Returned blank – left military or divorced after 07/31/02[1], retired. Survey was returned blank along with information that the beneficiary left the military after 07/31/02[1], divorced after 07/31/02[1], or retired. These sample members were eligible.

- FLAG_FIN=7
  Returned blank – not eligible on 07/31/02[1]. Survey was returned blank along with information that the beneficiary was not eligible for Military Health System Plan on 07/31/02[1]. These sample members were ineligible.

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[1] 07/31/02 in Quarter I, 10/31/02 in Quarter II, 01/31/03 in Quarter III, and 04/30/03 in Quarter IV

- FLAG_FIN=8
  Returned blank – other eligible. Survey was returned blank along with a reason given by the sample member. These sample members were eligible.

- FLAG_FIN=9
  Returned blank – no reason. Survey was returned blank without an explanation. These sample members were eligible.

- FLAG_FIN=10
  No return – temporarily ill or incapacitated. Survey was not returned and beneficiary was temporarily ill or incapacitated. These sample members were eligible.

- FLAG_FIN=11
  No return – active refuser. Survey was not returned and beneficiary refused to take part in the survey. These sample members were eligible.

- FLAG_FIN=12
  No return – deceased. Survey was not returned and beneficiary deceased. These sample members were ineligible.

- FLAG_FIN=13
  No return – incarcerated or permanently incapacitated. Survey was not returned, beneficiary was incarcerated or permanently hospitalized. These sample members were ineligible.

- FLAG_FIN=14
  No return – left military or divorced after 07/31/02[1], retired. Survey was not returned, beneficiary left service after 07/31/02[1], divorced after 07/31/02[1], or retired. These sample members were eligible.

- FLAG_FIN=15
  No return – not eligible on 07/31/02[1]. Survey was not returned, beneficiary was not eligible for Military Health System Plan on 07/31/02[1]. These sample members were ineligible.

- FLAG_FIN=16
  No return – other eligible. Survey was not returned, beneficiary gave other reason for not completing the survey. These sample members were eligible.

- FLAG_FIN=17
  No return – no reason. Survey was not returned, beneficiary gave no reason.

- FLAG_FIN=18
  PND – no address remaining. All addresses were attempted, mailing was returned PND.

- FLAG_FIN=19
  PND – address remaining at the close of field. At the close of field, the last address used was found invalid, next available was not attempted.

- FLAG_FIN=20
  Original Non-Locatable – no address at start of mailing. Substantially incomplete or blank address field before the survey was administered, no mailings attempted.

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[1] 07/31/02 in Quarter I, 10/31/02 in Quarter II, 01/31/03 in Quarter III, and 04/30/03 in Quarter IV

- FLAG_FIN=21
  Beneficiary provides written documentation declining to participate but doesn't specify a reason.

- FLAG_FIN=22
  Beneficiary indicates they are hospitalized but without providing any way to determine whether incapacity is temporary or permanent. Therefore, eligibility determination can not be made.

- FLAG_FIN=23
  Returned blank – deployed. Survey was returned blank along with information that the beneficiary was deployed.

- FLAG_FIN=24
  No return – deployed. Survey was not returned, beneficiary was deployed.

Table 2.4 documents the final disposition of the survey sample by each beneficiary group. The ENBGSMPL variable was used to create the beneficiary groups. The ENBGSMPL variable has values 1-10. The value of 1 is = Active Duty; values of 2, 3, & 4 = Active Duty Dependents, values of 5, 6, & 7 = Retired and Family Members < 65; and values of 8, 9, & 10 = Retired and Family Members > 65.

ON-LINE SURVEYS

At the conclusion of the fielding period, all on-line data is transferred into a database format file. A data check program using SAS statistical software is run to ensure that all values in the file correspond with the values in the annotated questionnaire sent by the analysis contractor. The file is then matched back to the original sample file to obtain the beneficiaries MPRID identifier using the unique passwords generated by NRC. A value of 1 is then assigned to the FLAG_FIN field as the on-line surveys are all considered returned. Next, the on-line data is merged with the mail data and a field is created to identify the two surveys. Finally, in cases where beneficiaries completed both the mail survey and on-line survey, the on-line survey is considered the second returned survey.

TABLE 2.4

FREQUENCY AND PERCENT DISTRIBUTION OF FINAL DISPOSITION OF
SURVEY SAMPLE BY BENEFICIARY GROUP – QUARTERS I-IV

Final Survey Disposition	Active Duty	Active Duty Dependents	Retirees and Family Members < 65	Retirees and Family Members > 65	Total
Returned non-blank survey	12,551 6.97%	10,577 5.88%	16,026 8.90%	8,717 4.84%	47,871 26.60%
Returned – ineligible	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – temp ill or incapacitated	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – deceased	0 0.00%	0 0.00%	0 0.00%	1 0.00%	1 0.00%
Blank – incarcerated or perm incapacitated	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – left military or divorced after 07/31/02[1]	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – not eligible for MHS on 07/31/02[1]	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – other eligible	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – no reason	60 0.03%	31 0.02%	57 0.03%	53 0.03%	201 0.11%
No return – temp ill or incapacitated	0 0.00%	0 0.00%	0 0.00%	1 0.00%	1 0.00%
No return – active refuser	26 0.01%	27 0.01%	19 0.01%	9 0.00%	81 0.05%
No return – deceased	2 0.00%	3 0.00%	17 0.01%	74 0.04%	96 0.05%
No return – incarcerated or perm incapacitated	1 0.00%	4 0.00%	23 0.01%	36 0.02%	63 0.04%
No return – left military or divorced after 07/31/02[1]	22 0.01%	14 0.01%	9 0.01%	1 0.00%	46 0.03%
No return – not eligible on 07/31/02[1]	5 0.00%	44 0.02%	33 0.02%	1 0.00%	83 0.05%
No return – other eligible	1 0.00%	13 0.01%	6 0.00%	8 0.00%	28 0.02%
No return – no reason given	52,559 29.19%	26,133 14.52%	15,524 8.62%	2,538 1.41%	96,754 53.75%
PND – no address remaining	15,458 8.59%	5,299 2.94%	2,011 1.12%	404 0.22%	23,172 12.87%
PND – address remaining	1,429 0.79%	1,097 0.61%	237 0.13%	38 0.02%	2,801 1.56%
Original Non-Locatable – no address at start	5,650 3.14%	1,645 0.91%	892 0.50%	312 0.17%	8,499 4.72%
Beneficiary writes and refuses participation	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Hospitalized – unknown if temp or perm incapacitated	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Blank – deployed	1 0.00%	0 0.00%	0 0.00%	0 0.00%	1 0.00%
No return – deployed	287 0.16%	7 0.00%	7 0.01%	1 0.00%	302 0.17%
Total					180,000 100.00%

* Note: This table does not include duplicate surveys.

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[1] 07/31/02 in Quarter I, 10/31/02 in Quarter II, 01/31/03 in Quarter III and 04/30/03 in Quarter IV

The data in Table 2.5 displays the number of first and second surveys returned.

TABLE 2.5

RETURNED SURVEYS BY SURVEY TYPE – QUARTERS I-IV, 2003

Survey Indicator	First Survey	Second Survey	Total
Returned non-blank survey	40,031 78.84%	10,223 20.14%	50,254 98.98%
Returned non-blank duplicate survey	0 0.00%	518 1.02%	518 1.02%
Total	40,031 78.84%	10,741 21.16%	50,772 100.00%

Note: This table includes duplicate surveys.

Chapter

3

Database

This chapter explains the process of developing the raw survey data into a final database free of inconsistencies and ready for analysis. We discuss the design of the database; cleaning, editing, and implementing the Coding Scheme; record selection; and constructing variables.

A. DATABASE DESIGN

The 2003 Adult HCSDB consists of variables from various sources. When NRC delivers the file to MPR after fielding the sample, the following types of variables are present:

- DEERS information on beneficiary group, social security number, sex, age, etc.

- Sampling variables used to place beneficiaries in appropriate strata

- Core and supplemental questionnaire responses

- NRC information from fielding the sample, such as scan date and flags developed during the fielding to assist us in determining eligibility

MPR removes all identifying information such as SSN so that respondants can not be identified and adds the following types of variables to the database:

- Updated DEERS variables from the time of data collection to be used for post-stratification

- Coding Scheme flags

- Constructed variables for analysis

- Weights

In addition, MPR updated and cleaned the questionnaire responses using the coding scheme tables found in Appendix C. The final public-use file of the combined annual dataset will contain only the recoded responses; this will help users to avoid using an uncleaned response for analysis. We structured the final database so that all variables from a particular source are grouped by position. Table 3.1 lists all variables in the annual database by source and briefly describes these sources. For specific information on variable location within the database, refer to the "2003 Adult Health Care Survey of DoD Beneficiaries: Adult Codebook and User's Guide."

1. **Data Sources**
   a. **DEERS**

DMDC provided the sampling frame to MPR 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

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

c.   Questionnaire Responses

These variables represent the cleaned values for all responses to the questionnaire. The original values scanned in by NRC are cleaned and recoded as necessary to ensure that responses are consistent throughout the questionnaire. The coding scheme tables found in Appendix C are the basis for insuring data quality.

d.   Survey Fielding Variables

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

e.   Coding Scheme Flags

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

f.   Constructed Variables

MPR 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 3.D.

g.   Weights

MPR 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

Weighting procedures are discussed in section 3.E.

TABLE 3.1

VARIABLES IN THE 2003 ADULT HCSDB DATA FILE – ANNUAL FILE

SAMPLING VARIABLES	
MPRID	- Unique MPR Identifier
SVCSMPL	- Branch of Service Sampling Variable
SEXSMPL	- Sex Sampling Variable
STRATUM	- Sampling STRATUM
CACSMPL	- Catchment Area
ENBGSMPL	- Enrollment by beneficiary category
MPCSMPL	- Military Personnel Category
NHFF	- Stratum Sample Size
SERVAREA	- Service Area
DCATCH	- Catchment Area
DMIS_ID	- DMIS ID
E1	- Eligibility indicator for period = 1
E2	- Eligibility indicator for period = 2
E3	- Eligibility indicator for period = 3
E4	- Eligibility indicator for period = 4
E5	- Eligibility indicator for period = 5
E6	- Eligibility indicator for period = 6
E7	- Eligibility indicator for period = 7
E8	- Eligibility indicator for period = 8
E9	- Eligibility indicator for period = 9
E10	- Eligibility indicator for period = 10
E11	- Eligibility indicator for period = 11
E12	- Eligibility indicator for period = 12
DEERS VARIABLES	
SERVAFF	- Service Affiliation
MRTLSTAT	- Marital Status
RACEETHN	- Race/Ethnic Code
PNSEXCD	- Person Gender
LEGDDSCD	- DDS Code
DAGEQY	- Age at time of data collection
PCM	- Primary Manager Code (Civilian or Military)
DBENCAT	- Beneficiary Category
DMEDELG	- Medical Privilege Code
DSPONSVC	- Derived Sponsor Branch of Service
MBRRELCD	- Member Relationship Code
MEDTYPE	- Medicare Type
PATCAT	- Aggregated Beneficiary Category
PNLCATCD	- Personnel Category Code (Duty Status)
FIELDAGE	- Age at start of fielding period
QUESTIONNAIRE RESPONSES	
H03001	- Are you the person listed on envelope
H03002A	- Health plan(s) covered: TRICARE Prime
H03002C	- Health plan(s) covered: TRICARE Ext/Stnd
H03002F	- Health plan(s) covered: MEDICARE
H03002G	- Health plan(s) covered: FEHBP
H03002H	- Health plan(s) covered: Medicaid
H03002I	- Health plan(s) covered: Civilian HMO
H03002J	- Health plan(s) covered: Other civilian
H03002K	- Health plan(s) covered: USFHP
H03002L	- Health plan(s) covered: Not sure

H03002M	- Health plan(s) covered: Veterans
H03002N	- Health plan(s) covered: TRICARE Plus
H03002O	- Health plan(s) covered: TRICARE For Life
H03003	- Currently Covered Medicare Part A
H03004	- Currently Covered Medicare Part B
H03005	- Currently Covered Medicare Supplemental
H03006	- Which health plan did you use most in the past 12 months?
H03007	- Years in a row with health plan
H03008	- When joined health plan received new personal Doctor
H03009	- Health plan: problem to get a personal doctor or nurse you are happy with
H03010	- Have one person you think of as personal doctor
H03011	- Rating of your personal doctor or nurse
H03012	- In last year: you or a doctor or nurse think you needed to see a specialist
H03013	- In last year: how much of a problem to get a referral to see a specialist
H03014	- In last year: did you see a specialist
H03015	- Rating of specialist seen in last year
H03016	- In last year: specialist saw was the same as personal doctor
H03017	- In last year: called a doctor's office or clinic during regular office hours to get help or advice for yourself
H03018	- In last year: when you called during regular office hours how often got help or advice you needed
H03019	- In last year: made any appointment for regular or routine health care
H03020	- In last year: how often made appointments for regular or routine health care as soon as you wanted
H03021	- In last year: days between appointment for regular or routine care and actually seeing a provider
H03022	- In last year: illness/injury needed care right away
H03023	- In last year: when needed care right away for an illness or injury got care as soon as wanted
H03024	- In last year: wait between trying to get care and actually seeing a provider for an illness or injury
H03025	- In last year: times went to an emergency room for own care
H03026	- In last year: times went to a doctors office or clinic for yourself (not counting times went to an emergency room)
H03027	- In last year: problem to get necessary care
H03028	- In last year: problem with delays in healthcare while waiting for approval from health plan
H03029	- In last year: wait more than 15 minutes past appointment time to see a doctor
H03030	- In last year: how often office staff at a doctor's office or clinic treat you with courtesy and respect
H03031	- In last year: how often office staff at a doctor's office or clinic as helpful as expected
H03032	- In last year: how often doctors or other health providers listen carefully to you
H03033	- In last year: how often doctors or other health providers explain things in way you could understand
H03034	- In last year: how often doctors or other health providers show respect for what you had to say
H03035	- In last year: how often doctors or other health providers spend enough time with you
H03036	- Rating of all healthcare in last year
H03037	- In last year: prescriptions that were written by a civilian provider but were filled at a military pharmacy
H03038	- In last year: facility used most for health care
H03039	- In last year: sent in any claims to your health plan
H03040	- In last year: health plan handled claims in a reasonable time
H03041	- In last year: how often health plan handled claims correctly
H03042	- In last year: before went for care knew amount to pay

H03043	- In last year: look for any information in written materials from health plan
H03044	- In last year: problem to find or understand information in the written materials
H03045	- In last year: called health plan's customer service to get information or help
H03046	- In last year: problem to get the help you needed when called health plan's customer service
H03047	- Called or written health plan with a complaint or problem
H03048	- How long for health plan to resolve complaint
H03049	- Complaint or problem settled to satisfaction
H03050	- In last year: have any experiences with paperwork for your health plan
H03051	- In last year: how much problem with paperwork for your health plan
H03052	- Rating of all experience with health plan
H03053	- In next year: likely to disenroll in TRICARE Prime
H03054	- Not sick/pregnant: last medical or physical exam or checkup
H03055	- Blood pressure: when last reading
H03056	- Blood pressure: know if blood pressure is too high or not
H03057	- When did you last have a cholesterol screening
H03058	- When did you last have a flu shot
H03059	- Smoked at least 100 cigarettes in life
H03060	- Smoke everyday, some days, or not at all
H03061	- How long since you quit smoking
H03062	- Last year: number of visits advised to quit smoking
H03063	- Are you male or female
H03064	- Male: Last prostate disease exam or blood test
H03065	- Female: Last have a Pap smear test
H03066	- Female: Are you under age 40
H03067	- Female: Last time breasts checked mammography
H03068	- Female: Last time breast exam by professional
H03069	- Female: Been pregnant in last year or pregnant now
H03070	- Female: In what trimester is your pregnancy
H03071	- Female: Trimester first received prenatal care
H03072	- In general how would you rate your overall health
H03073	- Limited in any way in any activities because of any impairment or health problem
H03074	- Last 30 days: Number of Days when your physical health not good
H03075	- Last 30 days: Number of Days when your mental health not good
H03076	- Last 30 days: Number of Days when poor physical/mental health kept you from doing usual activities
H03077	- Last 30 days: Number of Days when pain made it hard to do your usual activities
H03078	- Last 30 days: Number of Days when you have felt sad, blue, or depressed
H03079	- Last 30 days: Number of Days when you have felt worried, tense or anxious
H03080	- Last 30 days: Number of Days when you did not get enough rest or sleep
H03081	- Last 30 days: Number of Days when you have felt very healthy and full of energy
H03082	- Are you Spanish/Hispanic/Latino
SREDA	- Highest grade completed
SRRACEA	- Race: White
SRRACEB	- Race: Black or African American
SRRACEC	- Race: American Indian or Alaska Native
SRRACED	- Race: Asian
SRRACEE	- Race: Native Hawaiian/other Pacific Islanders
SRAGE	- What is your age now?
S03B01	- In last year: Number briefings on TRICARE eligibility, benefits, services offered at your MTF
S03F01	- In last year: Healthcare received at military facility (MTF)
S03F02	- MTF physical condition vs civilian healthcare facilities
S03O01	- Female: Saw same doctor or midwife for the majority of your prenatal visits

S03O02	- Female: Doctor/midwife encouraged you to include family members to help prepare for baby's arrival
S03O03	- Female: Problem for you to make appointments for prenatal visits
S03O04	- Female: Did you try to get training to prepare for breastfeeding
S03O05	- Female: Rate the training for breastfeeding that you received
S03O06	- Female: Physician or midwife worked with you to develop a birth plan
S03R01	- In last year: Prescriptions filled at military pharmacy
S03R02	- Rating of customer service at military pharmacy
S03R03	- In last year: Discussed medication and treatment with military pharmacist
S03R04	- In last year: Time waited for filled prescription at military pharmacy
S03V01	- In last year: Amount of healthcare from TRICARE civilian network(TCN)
S03V02	- In last year: Problem getting wanted healthcare from TCN
S03V03	- In last year: Problem finding convenient doctor from TCN
S03V04	- In last year: Problem finding convenient TCN lab or x-ray facility
S03V05	- In last year: Learn physician whom you wanted to see left TCN
S03V06	- In last year: Problem finding convenient doctor from TCN
S03V07	- In last year: Problem finding specialist in Civilian network
S03C01	- General Doctor,specialist,physician assistant, or nurse
S03C02	- Months/years been going to personal Doctor
S03C03	- Physical or mental condition that interferes with your work
S03C04	- Doctor undrstnds how your health problems affect your daily life
S03C05	- In last year: # of times you went to a specialist
S03C06	- In last year were any decisions made about your health care
S03C07	- In last year: involved as much as you wanted with your health care decisions
S03C08	- In last year: how much of a problem to agree on best care
S03C09	- In last year: did you need special medical equipment
S03C10	- In last year: How much of a problem was it to get special medical equipment
S03C11	- In last year: did you need special therapy
S03C12	- In last year: how much of a problem was it to get special therapy
S03C13	- In last year: did you need home health care or assistance
S03C14	- In last year: how much of a problem to get care or assistance needed
S03C15	- Need help with personal care needs
S03C16	- Need help with routine needs
S03C17	- Physical or mental condition that interferes with independence
S03C18	- Rating of equipment, services, or help provided
S03C19	- In last year: patient overnight or longer
S03C20	- Have a Physical or mental condition that has lasted 3 months
S03C21	- In last year: seen Doctor more than twice for condition lasting > 3 months
S03C22	- Taking prescription medications for at least 3 months
S03Y01	- In last 90 days: Have you filled a prescription
S03Y02	- Distance traveled, home to MTF pharmacy
S03Y03	- In last 90 days:Prscrptn filled at MTF pharmacy
S03Y04	- In last 90 days:Info. rcvd about new prscrptn medcn, MTF
S03Y05	- In last 90 days:How oftn filled prscrptn wait is >30min, MTF
S03Y06A	- prscrptn filled, MTF:There for medical appointment
S03Y06B	- prscrptn filled, MTF:Visiting Military installation for other reason
S03Y06C	- prscrptn filled, MTF:Conveniently located
S03Y06D	- prscrptn filled, MTF:Pharmacy has free prscrptn drugs
S03Y06E	- prscrptn filled, MTF:I like service
S03Y06F	- prscrptn filled, MTF:My doctor recommended MTF pharmacy
S03Y06G	- prscrptn filled, MTF:Better information and instructions
S03Y06H	- prscrptn filled, MTF:Trust prscrptn filled correctly
S03Y07	- Rating of MTF pharmacy where prscrptn is filled
S03Y08	- Dist:home, work to TRICARE retail network(TRN) pharmacy
S03Y09	- In last 90 days:prescription filled at TRN pharmacy
S03Y10	- In last 90 days:Info. rcvd about new prscrptn medcn, TRN
S03Y11	- In last 90 days:How oftn filled prscrptn wait is >30min, TRN

S03Y12	- In last 90 days:TRN filled prescription, taken >=90 days
S03Y13A	- prscrptn flld, TRN:Don't know how get drugs thru mail order phrmcy
S03Y13B	- prscrptn filled, TRN:Not comfortable getting drugs by mail
S03Y13C	- prscrptn filled, TRN:Conveniently located
S03Y13D	- prscrptn filled, TRN:Mail order phrmcy doesn't have needed medctn
S03Y13E	- prscrptn filled, TRN:like service
S03Y13F	- prscrptn filled, TRN:better information/instructions
S03Y13G	- prscrptn filled, TRN:MTF phrmcy doesn't have the medication
S03Y13H	- prscrptn filled, TRN:trust fill correctly
S03Y14	- Rating of TRN pharmacy where prescription filled
S03Y15	- In last 90 days:prscrptn filled at Non-network civilian(NNC) phrmcy
S03Y16	- In last 90 days:Info. rcvd about new prscrptn medcn, NNC
S03Y17	- In last 90 days:filed claims for NNC filled prscrptns
S03Y18A	- claim problems, NNC:none
S03Y18B	- claim problems, NNC:instrctn difficult
S03Y18C	- claim problems, NNC:dffcult obtaining form
S03Y18D	- claim problems, NNC:>20 days to process
S03Y19A	- prscrptn filled, NNC:other health insurance
S03Y19B	- prscrptn filled, NNC:traveling
S03Y19C	- prscrptn filled, NNC:not conveniently located
S03Y19D	- prscrptn filled, NNC:in network?
S03Y19E	- prscrptn filled, NNC:prefer non-network pharmacy
S03Y19F	- prscrptn filled, NNC:difference unknown
S03Y20	- Rating of NNC pharmacy where prescription filled
S03Y21	- In lst 90 dys:prscrptn filled at Tricare mail order(TMO) phrmcy
S03Y22	- In lst 90 dys:How oftn filled prscrptn wait <=14dys, TMO
S03Y23	- In last 90 days:Order refills via Express Scripts website(ESW)
S03Y24	- In last 90 days:Problem ordering refills via ESW
S03Y25	- Rating of Tricare mail order pharmacy
S03G01	- Current mobilizd member of Natl Guard/Resv, or family member
S03G02	- Before rsrvst famly member was mobilized:covrd by civilian health insurance
S03G03	- Reservist employer pay all/part of your civilian health insurance premium
S03G04	- Describe coverage:TRICARE/Civilian
S03G05	- Problem getting info about TRICARE benefits when reservist in family is mobilized
S03G06	- Personal Dr/Nurse is a member of TRICARE's Civilian network
S03G07	- Since reservist mobilzd:more difficult to see personal doctor you want to see
S03G08	- Since reservist mobilzd:more difficult to see specialist you want to see
S03G09	- Before your currnt mobilzation: Were you covered by civilian health insurance
S03G10	- Have you kept your civilian insurance coverage
S03G11	- Your employer now pays all/part of your civilian health insurance premium
S03G12	- For which operation are you or the reservist in family currently mobilizd
S03G13	- When were you or the reservist in your family mobilized for this operation
S03G14	- How long did the initial mobilization orders state the mobilization would last

NRC SURVEY FIELDING VARIABLES	
FLAG_FIN	- Final Disposition
DUPFLAG	- Multiple Response Indicator
ONTIME	- Responded Within 8 weeks of Mail-Out
TRICKDUP	- Ontime and after fielding period indicator
WEB	- Web survey indicator

CODING SCHEME FLAGS AND COUNTS	
N1	- Coding Scheme Note 1
N2	- Coding Scheme Note 2
N3	- Coding Scheme Note 3
N3A	- Coding Scheme Note 3A
N4	- Coding Scheme Note 4
N5	- Coding Scheme Note 5

N5A	- Coding Scheme Note 5A
N6	- Coding Scheme Note 6
N7	- Coding Scheme Note 7
N8	- Coding Scheme Note 8
N9	- Coding Scheme Note 9
N9A	- Coding Scheme Note 9A
N9B	- Coding Scheme Note 9B
N9C	- Coding Scheme Note 9C
N9D	- Coding Scheme Note 9D
N9E	- Coding Scheme Note 9E
N9F	- Coding Scheme Note 9F
N9G	- Coding Scheme Note 9G
N9H	- Coding Scheme Note 9H
N9I	- Coding Scheme Note 9I
N9J	- Coding Scheme Note 9J
N9K	- Coding Scheme Note 9K
N9L	- Coding Scheme Note 9L
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
N18A	- Coding Scheme Note 18A
N18B	- Coding Scheme Note 18B
N18C	- Coding Scheme Note 18C
N18D	- Coding Scheme Note 18D
N19	- Coding Scheme Note 19
N19A	- Coding Scheme Note 19A
N20A	- Coding Scheme Note 20A
N20B	- Coding Scheme Note 20B
N20C	- Coding Scheme Note 20C
N20D	- Coding Scheme Note 20D
N21	- Coding Scheme Note 21
N22	- Coding Scheme Note 22
N23	- Coding Scheme Note 23
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_8	- Count of: Multiple response error
MISS_9	- Count of: No response - invalid skip
MISS_TOT	- Total number of missing responses

CONSTRUCTED VARIABLES

FNSTATUS	- Final Status
KEYCOUNT	- Number of Key Questions Answered
QUARTER	- Survey Quarter
XENRLLMT	- Enrollment in TRICARE Prime
XENR_PCM	- Enrollment by PCM type
XINS_COV	- Insurance Coverage
XREGION	- Region
XCATCH	- Catchment Area (Reporting)
CONUS	- CONUS/OCONUS Indicator
OUTCATCH	- Out of Catchment Area Indicator

XSEXA	- Male or Female (Recode)
XBNFGRP	- Constructed Beneficiary Group
KDISENRL	- Intention to disenroll
KMILOFFC	- Office wait of 15 min or more at Military facility
KCIVOFFC	- Office wait of 15 min or more at Civilian facility
KBGPRB1	- Big problem getting referrals to specialist
KBGPRB2	- Big problem getting necessary care
KMILOPQY	- Outpatient visits to Military facility
KCIVOPQY	- Outpatient visits to Civilian facility
KCIVINS	- Beneficiary covered by civilian insurance
KPRSCPTN	- 7 or more civilian prescriptions filled by military pharmacy
KBRSTCR	- Women age 40 and over ever had mammogram and breast exam
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 know results
HP_FLU	- Age 65 and older flu shot in last 12 months
HP_PROS	- Men age 50 or over prostrate exam in last 12 months
HP_GP	- General physical exam in last 12 months
HP_BRST	- Women age 40 and over breast exam in last 12 months
HP_CHOL	- Cholesterol screening in last 5 years
HP_SMOKE	- Advised to quit smoking in last 12 months
HP_SMOKH	- Smoker under HEDIS definition
HP_CESS	- Had smoking cessation counseling

WEIGHTS	
ADJ_CELL	- Adjusted STRATUM cell
BWT	- Basic Sampling Weight
WRWT	- Final Weight
CWRWT	- Combined Annual Final Weight

2. **Variable Naming Conventions**

To preserve continuity with survey data from previous years, MPR followed the same variable naming conventions for the core questions used for the 1996, 1997, 1998, 1999, 2000, and 2002 survey data. Variable naming conventions for the 2003 Adult HCSDB core and supplemental questions, shown in Table 3.2 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 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".

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 2003 conventions for missing variables are the same as the 2002 conventions. All missing value conventions used in the 2003 HCSDB are shown in Table 3.3

TABLE 3.2

NAMING CONVENTIONS FOR 2003 HCSDB VARIABLES – QUARTERS I-IV
(VARIABLES REPRESENTING SURVEY QUESTIONS)

1st Character: Survey Type	2nd – 3rd Characters: Survey Year	4th – 6th Characters: Question #	Additional Characters: Additional Information
H= Health Beneficiaries (18 and older, Adult Questionnaire) -------------------------------- S = Supplemental Question	03	001 to 082 -------------------------------- Quarter I R01-R04 – Supplemental questions about military pharmacies. F01-F02 – Supplemental questions about military facilities. V01-V05 – Supplemental questions about TRICARE's civilian network. B01 – Supplemental question about briefings on TRICARE. O01-O06 – Supplemental questions about prenatal care. Quarter II C01-C22 – Supplemental questions about beneficiaries' chronic conditions V01-V02, V04-V07 – Supplemental questions about TRICARE's civilian network. Quarter III Y01-Y25 – Supplemental questions about beneficiaries' filling prescriptions V01-V02, V04-V07 – Supplemental questions about TRICARE's civilian network. Quarter IV G01-G14 – Supplemental questions about reservists V01-V02, V04-V07 – Supplemental questions about TRICARE's civilian network.	A to O are used to label responses associated with a multiple response question _O denotes an original version of a recoded variable --------------------------------

1st Characters: Variable Group	Additional Characters: Additional Information
SR=Self-reported demographic data	Descriptive text, e.g., SREDA
N=Coding scheme notes	Number referring to Note, e.g., N2
X=Constructed independent variable	Descriptive text, e.g., XREGION
HP=Constructed *Healthy People 2010* 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)

TABLE 3.3

CODING OF MISSING DATA AND "NOT APPLICABLE" RESPONSES

ASCII or Raw Source Data	Edited and Cleaned SAS Data	Description
Numeric	Numeric	
-9	.	No response
-8	.A	Multiple response error
-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

- Checks for multiple responses to any question that should have one response

- 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.   Scan Review
NRC spot checked the scanned results from the original survey to verify the accuracy of the scanning process and made any necessary corrections by viewing the returned survey.

2.   Additional NRC Editing and Coding
In preparing the database for MPR, NRC used variable names and response values provided by MPR in the annotated questionnaires (see Appendix A). NRC delivered to MPR a database in SAS format. In this database, any questions with no response were encoded with a SAS missing value code of '.'. Also, as part of the scanning procedure, NRC entered the SAS missing value of '.A' for any question with multiple responses where a single response was required.

3.   Duplicate or Multiple Surveys
At this stage, NRC delivered to MPR a file containing one record for every beneficiary in the sample, plus additional records for every duplicate survey or multiple surveys received from any beneficiary. These duplicates and multiples were eliminated during record selection, and only the most complete questionnaire in the group was retained in the final database. Record selection is discussed in Section 3.C.

4.   Removal of Sensitive or Confidential Information
The file that MPR received from NRC 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.

5.   Initial Frequencies
MPR 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. MPR examined these frequencies and cross-tabulations, using the results to adapt and modify the cleaning and editing specifications as necessary.

6.   Data Cleaning and Recoding of Variables
MPR's plan for data quality for each quarter is found in the 2003 Adult Coding Scheme. It contains detailed instructions for all editing procedures used to correct data inconsistencies and errors. The Coding Scheme tables are found in Appendix C. These tables outline in detail the approach for recoding self-reported fields, doing 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.

In Quarter I, responses to questions on prenatal care (H03069 to H03071) were affected by a questionnaire misprint. Edits were changed to capture lost information. A description of changes to the edits and the effect of the misprint are contained in Appendix K.

The SAS program implementing the coding scheme is found in Appendix G.

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, active duty status, and TRICARE enrollment) we used the questionnaire responses unless they were missing; in which case, 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 gender. 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 rather than the recoded self-reported information for active duty status and TRICARE enrollment.

b. Skip Pattern Checks

At several points in the survey, the respondent should skip certain questions. If the response pattern is inconsistent with the skip pattern, each response in the series will be checked to determine which are most accurate, given the answers to other questions. Questions that are 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 2003 Adult Coding Scheme (see Appendix C) 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

NRC initially encoded any question with missing responses to a SAS missing value code of '.'. After verifying skip patterns, MPR 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 multiple responses, incomplete grids, and questions that should not have been answered is shown in Table 3.3.

Occasionally, missing questionnaire responses can be inferred by examining other responses. For example, if a respondent fails to answer H03017 about getting advice or help over the phone from his/her doctor's office or clinic, but goes on to answer how often he/she received help or advice, then we assume that the answer to H03017 should have been "yes". Using this technique, we recoded some missing questionnaire responses to legitimate responses.

d. Multiple Response Errors

If a respondent gives more than one answer to a question that should have only one answer, the response to that question was coded with a SAS missing value of '.A'.

Using an approach similar to that used for missing values, we examined other questionnaire responses in an attempt to infer what the respondent intended for those questions with multiple marks. For example, if there are multiple responses to H03017 "In the last 12 months, did you call a doctor's office or clinic *during regular office hours* to get help or advice *for yourself*?" and the response to H03018 indicates that the respondent usually got the medical advice they needed for themselves, we assume that the response to H03017 should have been "yes".

e.   Logic Checks

Most logic problems are due to inconsistent skip patterns, for example, when a male answers a question intended for women only. Other 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.

7.   Quality Assurance

MPR created an edit flag for each Coding Scheme table that indicates what, if any, edits were made in the cleaning and editing process. This logic was also used in previous years; variables such as N5 (see Appendix C) 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, MPR 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. MPR reviewed these tabulations for each variable in the survey. If necessary, the earlier edit procedures were modified and the Coding Scheme program rerun. 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 NRC for each sampled beneficiary. This information is contained in the FLAG_FIN variable which is described in Table 3.4

TABLE 3.4

FLAG_FIN VARIABLE FOR 2003 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 reference date, or retired	Eligible
7	Returned blank	Information sent that beneficiary was not eligible on reference date	Ineligible
8	Returned blank	Blank form accompanied by reason for not participating	Eligible
9	Returned blank	No reason given	----
10	No return	Temporarily ill or incapacitated. Information came in by phone	Eligible
11	No return	Active refuser. Information came in by phone	Eligible
12	No return	Deceased. Information came in by phone	Ineligible
13	No return	Incarcerated or permanently incapacitated. Information came in by phone	Ineligible
14	No return	Left military or divorced after reference date, or retired. Information came in by phone	Eligible
15	No return	Not eligible on reference date. Information came in by phone	Ineligible
16	No return	Other eligible. Information came in by phone	Eligible
17	No return	No reason	---
18	PND	No address remaining	---
19	PND	Address remaining at the close of field	---
20	Original Non-Locatable	No address at start of mailing	---
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	---
23	Returned blank	Deployed	Eligible
24	No return	Deployed	Eligible

Using the above variables in Table 3.4, 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)

- **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 (including legitimate skip responses):

- G1-1. Complete Questionnaire Returned

- G1-2. Incomplete Questionnaire Returned

G1-1 consists of eligible respondents who answered "enough" questions to be classified as having completed the questionnaire. G1-2 consists of eligible respondents who answered only a few questions. To determine if a questionnaire is complete, 26 key questions were chosen. These key questions were adapted from the complete questionnaire rule for the CAHPS 2.0. The key survey variables are: H03006, H03008, H03009, H03010, H03011, H03012, H03014, H03015, H03017, H03018, H03019, H03022, H03023, H03025, H03026, H03027, H03029, H03036, H03038, H03043, H03045, H03050, H03052, H03072, SREDA, and H03082. If fourteen or more of these key items are completed, then the questionnaire can be counted as complete.

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 this information, we can calculate the location rate (see Section 4.A).

With a code (FNSTATUS) for the final response/eligible status, we classified all sampled beneficiaries using the following values of FNSTATUS:

- 11 for G1-1

- 12 for G1-2

- 20 for Group 2

- 30 for Group 3

- 41 for G4-1

- 42 for G4-2

There were altogether 907 duplicate questionnaires in the four data sets NRC delivered. All duplicates were classified into one of the above six groups. We then retained the one questionnaire for each beneficiary that had the most "valid" information for the usual record selection process. For example, if two returned questionnaires from the same beneficiary have FNSTATUS code values of 11, 12, 20, 41, or 42, we retained the questionnaire with the smaller value. However, if one of a pair of questionnaires belongs to Group 3 (FNSTATUS = 3, i.e., ineligible), then we regarded the questionnaire as being ineligible.

Only beneficiaries with FNSTATUS = 11 were retained. All other records were dropped. In Quarters I-IV, we retained 51,942 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. In Table 3.1 there is a list of all constructed variables for 2003. 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 G.

1.   Demographic Variables
a.   Region (XREGION)

Catchment area codes (CACSMPL) are used to classify beneficiaries into specific regions. The XREGION variable partitions all catchment areas into non-overlapped regions so that we can report catchment-level estimates in the catchment reports. The regions are defined as follows:

1 = Northeast

2 = Mid-Atlantic

3 = Southeast

4 = Gulfsouth

5 = Heartland

6 = Southwest

7,8 = Central

9 = Southern California

10 = Golden Gate

11 = Northwest

12 = Hawaii

13 = Europe

14 = Western Pacific Command (Asia)

15 = TRICARE Latin America

16 = Alaska

.= Unassigned (CACSMPL = 9999)

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

```
/* XREGION -HEALTH CARE REGIONS */

IF    CACSMPL IN (0035, 0036, 0037, 0066, 0067,
            0068, 0069, 0081, 0086, 0100,
            0123, 0306, 0310, 0321, 0326,
            0330, 0385, 0413, 6201, 9901) THEN XREGION= 1;
ELSE IF CACSMPL IN (0089, 0090, 0091, 0092, 0120,
            0121, 0122, 0124, 0335, 0378, 0387, 0432,
            0433, 0508, 7143, 7286, 7294, 9902) THEN XREGION= 2;
ELSE IF CACSMPL IN (0039, 0041, 0045, 0046, 0047,
            0048, 0049, 0050, 0051, 0101,
            0103, 0104, 0105, 0337, 0356,
            0422, 0511, 9903) THEN XREGION= 3;
ELSE IF CACSMPL IN (0001, 0002, 0003, 0004, 0038,
```

```
                    0042, 0043, 0073, 0074, 0107,
                    0297, 7139, 9904) THEN XREGION= 4;
    ELSE IF CACSMPL IN (0055, 0056, 0060, 0061, 0095,
                    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, 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, 0248, 5205, 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= .;
```

b.   Continental United States (CONUS)

XREGION is used to classify beneficiaries either in the continental United States (CONUS) or overseas (OCONUS).

Assign indicator of CONUS based on XREGION. CONUS stands for
Contential United States but it includes both Alaska and Hawaii.

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

c.   Out of Catchment Area (OUTCATCH)

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

Assign indicator of OUTCATCH based on CACSMPL.

```
/* 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      */
```

d.   Gender of Beneficiary (XSEXA)

XSEXA is constructed using self reported sex, gender identified on the DEERS database, and answers to gender specific questions.

```
/** Note 20 - gender H03063, SEX, H03064, H03065--H03071, XSEXA */



/* 1/21/98 use SRSEX & responses to gender specific questions
   if there is discrepancy between SRSEX and SEX */
/* set imputed MALE, FMALE based on gender specific questions */


 ARRAY fmaleval H03065 H03066 H03067 H03068 H03069 H03070 H03071;


 IF H03064 > 0 THEN MALE=1;    /* prostate */
 ELSE MALE = 0;

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


 IF H03063=. OR H03063=.A THEN DO;
   IF (SEX='F' AND MALE AND FMALE) THEN DO;
     N20b=1;
     XSEXA=2;
   END;
   ELSE IF (SEX='F' AND MALE=0 AND FMALE=0) THEN DO;
     N20b=2;
     XSEXA=2;
   END;
   ELSE IF (SEX='M' AND MALE AND FMALE) THEN DO;
     N20b=3;
     XSEXA=1;
   END;
   ELSE IF (SEX='M' AND MALE=0 AND FMALE=0) THEN DO;
     N20b=4;
     XSEXA=1;
   END;
   ELSE IF MALE AND NOT FMALE THEN DO;
     N20b=5;
     XSEXA=1;
   END;
   ELSE IF FMALE AND NOT MALE THEN DO;
     N20b=6;
     XSEXA=2;
   END;
   ELSE IF (SEX='Z' AND MALE AND FMALE) THEN DO;
     N20b=7;
     XSEXA=.;
   END;
```

```
              ELSE IF (SEX='Z' AND MALE=0 AND FMALE=0) THEN DO;
                N20b=8;
                XSEXA=.;
              END;
            END;
            ELSE IF (H03063=1) THEN DO;
              IF MALE AND NOT FMALE THEN DO;
                N20b=9;
                XSEXA=1;
              END;
              ELSE IF NOT MALE AND FMALE THEN DO;
                IF SEX='F' THEN DO;
                  N20b=10;
                  XSEXA=2;
                END;
                ELSE DO;
                  N20b=11;
                  XSEXA=1;
                END;
              END;
              ELSE IF MALE AND FMALE THEN DO;
                N20b=12;
                XSEXA=1;
              END;
              ELSE IF MALE=0 AND FMALE=0 THEN DO;
                N20b=13;
                XSEXA=1;
              END;
            END;
            ELSE IF (H03063=2) THEN DO;
              IF NOT MALE AND FMALE THEN DO;
                N20b=14;
                XSEXA=2;
              END;
              ELSE IF MALE AND NOT FMALE THEN DO;
                IF SEX='M' THEN DO;
                  N20b=15;
                  XSEXA=1;
                END;
                ELSE DO;
                  N20b=16;
                  XSEXA=2;
                END;
              END;
              ELSE IF MALE AND FMALE THEN DO;
                N20b=17;
                XSEXA=2;
              END;
              ELSE IF MALE=0 AND FMALE=0 THEN DO;
                N20b=18;
                XSEXA=2;
              END;
            END;
```

e.   Beneficiary Group (XBNFGRP)

We redefined beneficiary groups to exclude active duty personnel and active duty family members who are age 65 or older. 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 FIELDAGE  >= 65 AND ENBGSMPL IN (1, 2, 3, 4) THEN XBNFGRP = .;
  ELSE IF ENBGSMPL = 1 THEN XBNFGRP = 1;
  ELSE IF ENBGSMPL IN (2, 3, 4) THEN XBNFGRP = 2;
  ELSE IF ENBGSMPL IN (5, 6, 7) THEN XBNFGRP = 3;
  ELSE IF ENBGSMPL IN (8, 9, 10) THEN XBNFGRP = 4;
```

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 data, 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) — they 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 18 <= FIELDAGE < 65 THEN DO;
   IF ENBGSMPL = 1 THEN XENRLLMT = 1;            /*  Active duty (<65) */
   ELSE IF ENBGSMPL IN (2, 3, 5, 6) THEN XENRLLMT = 2;   /*  Non-active duty enrolled
(<65)*/
   ELSE IF ENBGSMPL IN (4, 7) THEN XENRLLMT = 3;       /*  Not Enrolled (<65)*/
 END;
 ELSE IF FIELDAGE  > = 65 THEN DO;
   IF ENBGSMPL = 10 THEN XENRLLMT = 4;            /*  Not Enrolled (65+)*/
   IF ENBGSMPL IN (8, 9) THEN XENRLLMT = 5;        /*  Enrolled (65+)   */
 END;
```

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

This variable, similar to the previous variable XENRLLMT, separates the 'other enrollees' 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 six 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 18 <= FIELDAGE < 65 THEN DO;
  IF ENBGSMPL = 1 THEN XENR_PCM = 1;           /*  Active duty (<65)      */
  ELSE IF ENBGSMPL IN (3, 6) THEN XENR_PCM = 2;  /*  Enrolled (<65) - mil PCM */
  ELSE IF ENBGSMPL IN (2, 5) THEN XENR_PCM = 3;  /*  Enrolled (<65) - civ PCM */
  ELSE IF ENBGSMPL IN (4, 7) THEN XENR_PCM = 4;  /*  Not Enrolled (<65)      */
END;
 ELSE IF FIELDAGE > = 65 THEN DO;
  IF ENBGSMPL = 10 THEN XENR_PCM = 5;          /*  Not Enrolled (65+)     */
  IF ENBGSMPL = 9 THEN XENR_PCM = 6;           /*  Enrolled (65+)-mil PCM  */
  IF ENBGSMPL = 8 THEN XENR_PCM = 7;           /*  Enrolled (65+)-civ PCM  *//
 END;
```

c.   Most–Used Health Plan (XINS_COV)

The respondent's most–used health plan comes directly from Question 6 (unless the respondent is active duty) and the respondent's age. All active duty personnel are automatically enrolled in Prime. The eight categories for this variable are as follows:

1 = Active duty, under 65
2 = Other TRICARE Prime enrollees, under 65
3 = TRICARE Standard/Extra (CHAMPUS)
4- = Medicare Part A and/or Part B
5 = Other civilian health insurance or civilian HMO
6 = Prime, 65 or over
7 = TRICARE Plus and Medicare
8 = Veterans Administration (VA)
 . = Unknown

```
 /* XINS_COV--INSURANCE COVERAGE */
 IF XENRLLMT = 1 THEN XINS_COV =1;                    /* Prime <65-Active Duty */
  ELSE IF 18 <= FIELDAGE  < 65 AND H03006 IN (1) THEN XINS_COV = 2; /* Prime <65-Non-active
Duty */
  ELSE IF H03006 = 3 THEN XINS_COV = 3;                    /* Standard/Extra */
  ELSE IF H03006 = 11 THEN XINS_COV = 7;                    /* Plus and Medicare */
  ELSE IF H03006 = 4 THEN XINS_COV = 4;                 /* Medicare*/
  ELSE IF H03006 IN (5,6, 7, 8, 9) THEN XINS_COV = 5;       /* Other civilian health insurance*/
  ELSE IF H03006 = 10 THEN XINS_COV = 8;                 /* Veterans Administration (VA) */
  ELSE IF (FIELDAGE>= 65 AND XENRLLMT = 5 and H03006 = 1) THEN XINS_COV = 6;   /* Prime,
>= 65 */
```

ELSE IF H03003=1 AND H03004=1 AND H03006 NE .N THEN XINS_COV = 4;   /* NEW Q2 Medicare/Medicaid */

d.   Types of Coverage (KCIVINS)

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

- Is the respondent covered by Civilian insurance (KCIVINS)

This variables has the following values:

1 = Yes
2 = No
 .= Unknown

/* KCIVINS--IS BENEFICIARY COVERED BY PRIVATE CIVILIAN INSURANCE */
IF H03002G=1 OR H03002I=1 OR H03002J=1 THEN KCIVINS=1;   /* YES */
  ELSE KCIVINS=2;   /* NO */

3.   Satisfaction Measures
     a.   Enrollment Intentions (KDISENRL)

If a respondent is enrolled in TRICARE Prime, he or she is asked about the likelihood of disenrolling (H03053). A binary variable is created to group the responses to the enrollment questions into these categories:

1 = response of likely or very likely
2 = all other valid responses
. = missing response

/* KDISENRL--INTENTION TO DISNEROLL */
IF H03053 IN (4, 5) THEN KDISENRL = 1;   /* Yes */
  ELSE IF H03053 IN (1, 2, 3, .D) THEN KDISENRL = 2;   /* No */

4.   Access to Care (KMILOFFC, KCIVOFFC, KBGPRB1, KBGPRB2)
Some of the survey questions on access relate to a TRICARE performance standard. For these questions, we constructed binary variables, separately for beneficiaries using military and civilian facilities, to approximate the TRICARE standard. Table 3.5 presents those standards that were analyzed in the reports. The new variables have the following values:

1 = Standard was met
2 = Standard was not met
= Missing information

TABLE 3.5

TRICARE STANDARDS FOR ACCESS

Access Measure	TRICARE Standard	Variable Name	Relevant Question
Waiting Room Wait	Within 15 minutes	KMILOFFC, KCIVOFFC	H03029

```
/* KMILOFFC--OFFICE WAIT OF MORE THAN 15 MINUTES AT MILITARY FACILITES
   KCIVOFFC--OFFICE WAIT OF MORE THAN 15 MINUTES AT CIVILIAN FACILITES */
IF H03038 = 1 THEN DO;                     /* Military */
  IF H03029 IN (3,4) THEN KMILOFFC = 1;          /* Yes */
  ELSE IF H03029 IN (1,2) THEN KMILOFFC = 2;        /* No */
END;
  ELSE IF H03038 IN (2, 3, 4) THEN DO;          /* Civilian */
    IF H03029 IN (3,4) THEN KCIVOFFC = 1;        /* Yes */
    ELSE IF H03029 IN (1,2) THEN KCIVOFFC = 2;      /* No */
  END;
```

H03013 asks how much of a problem, if any, it was to get a referral to a specialist. The responses to this question are regrouped by a binary variable KBGPRB1. KBGPRB1 looks at these two categories:

1 = Those who reported a "big problem"
2 = Those who reported not a "big problem"
. = Missing response

```
/* KBGPRB1--BIG PROBLEM GETTING REFERRALS TO SPECIALISTS */
IF H03013 = 1 THEN KBGPRB1 = 1;                 /* YES */
  ELSE IF H03013 IN (2,3) THEN KBGPRB1 = 2;         /* NO */
```

Similarly, variable KBGPRB2 was constructed. H03027 asks about how much of a problem, if any, it was to get the care you or a doctor believed necessary. The responses to this question are regrouped by a binary variable KBGPRB2. KBGPRB2 looks at these two categories:

1 = Those who reported a "big problem"
2 = Those who reported not a "big problem"
. = Missing response

```
/* KBGPRB2--BIG PROBLEM GETTING NECESSARY CARE */
IF H03027 = 1 THEN KBGPRB2 = 1;                 /* YES */
  ELSE IF H03027 IN (2,3) THEN KBGPRB2 = 2;         /* NO */
```

5.   **Preventive Care (KBRSTCR, HP_PRNTL, HP_MAMOG, HP_MAM50, HP_PAP, HP_BP, HP_FLU, HP_PROS, HP_GP, HP_CHOL, HP_SMOKE, HP_BRST)**
As in some of the access analyses, preventive care analyses incorporated either a TRICARE standard or a federal Healthy People 2010 objective. 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 3.6 for the list of the variables developed for analysis of preventive care; these variables will be compared to the TRICARE standard or Healthy People 2010 Goal. The new 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 3.6

PREVENTIVE CARE STANDARDS

Preventive Care Delivered	Question Number – Q1	Variable Name	Received Service In Recommended Time Period (Numerator)	Population Involved (Denominator)	Standard
Blood Pressure Check	55 & 56	HP_BP	Number with care in the past 24 months and know the results	Adults	95% within past 2 years
Cholesterol Screening	57	HP_CHOL	Number with care in the past 60 months	Adults	80% in the past 60 months
Flu Shot	58	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	65	HP_PAP	Number with care in the past 36 months	Adult females	90% in the past 36 months
Mammography	67	HP_MAMOG	Number with care in the past 24 months	Females age 40 and over	70% in the past 24 months
Mammography	67	HP_MAM50	Number with care in the past 24 months	Females age 50 and over	70% in the past 24 months
Breast Exam	68	HP_BRST	Number with care in the past 12 months	Females age 40 and over	60% in the past 12 months
Prostate Exam	64	HP_PROS	Number with care in the past two years	Males age 50 and over	All males age 50 and over an annual exam and PSA blood test[1]
Smoking Counseling	62	HP_SMOKE	Number with care in the past 12 months	All current adult smokers and those who quit smoking within the past year	None
Prenatal Care	71	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	90% had care in first trimester

[1] Not in Healthy People 2010 standards

```
/* KBRSTCR--WOMEN 40>=, EVER HAD MAMMOGRAM & EVER HAD BREAST EXAM */
IF XSEXA = 2 AND FIELDAGE  >= 40 THEN DO;
   IF (H03067 IN (5, 4, 3, 2) AND H03068 IN (5, 4, 3, 2)) THEN KBRSTCR = 1;  /* Yes */
   ELSE IF (H03067 = 1 OR H03068=1)  THEN KBRSTCR = 2;              /* No */
END;

/* HP_PRNTL--IF PREGNANT LAST YEAR, RECEIVED PRENATAL CARE IN 1ST TRIMESTER
*/
IF H03069 IN (1,2) THEN DO;                       /*  Pregnant in last 12 months   */
   IF H03071 = 4 THEN HP_PRNTL = 1;                 /*  Yes   */
      ELSE IF (H03070 = 1 AND H03071 = 1) THEN HP_PRNTL = .;   /* <3 months pregnant now */
      ELSE IF H03071 IN (1,2,3) THEN HP_PRNTL = 2;           /*  No */
END;

/* HP_MAMOG--FOR WOMEN AGE 40 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS
*/
IF XSEXA = 2 AND FIELDAGE  >= 40 THEN DO;
   IF H03067 IN (5, 4) THEN HP_MAMOG = 1;          /* Yes */
```

```
      ELSE IF H03067 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 FIELDAGE  >= 50 THEN DO;
      IF H03067 IN (5, 4) THEN HP_MAM50 = 1;         /* Yes */
      ELSE IF H03067 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 H03065 IN (4, 5) THEN HP_PAP = 1;           /* Yes */
      ELSE IF H03065 IN (1, 2, 3) THEN HP_PAP = 2;      /* No */
   END;


   /* HP_BP--HAD BLOOD PRESSURE SCREENING IN LAST 2 YEARS AND KNOW RESULT */
   IF H03055 IN (2,3) AND H03056 IN (1,2) THEN HP_BP = 1;  /* Yes    */
      ELSE IF H03055 = 1 THEN HP_BP = 2;                 /* No     */
      ELSE IF H03055 < 0 OR H03056 < 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 FIELDAGE >= 65 THEN DO;
      IF H03058 = 4 THEN HP_FLU = 1;               /*  Yes */
      ELSE IF H03058 IN (1, 2, 3) THEN HP_FLU = 2;     /*  No */
   END;


   /* HP_PROS--FOR MEN AGE 50 AND OVER, HAD PROSTATE EXAM W/IN PAST 12 MONTHS
   */
   IF XSEXA = 1 AND FIELDAGE  >= 50 THEN DO;
      IF H03064 = 5 THEN HP_PROS = 1;               /*  Yes */
      ELSE IF H03064 IN (1, 2, 3, 4) THEN HP_PROS = 2;  /*  No */
   END;


   /* HP_CHOL--HAD CHOLESTEROL SCREENING IN PAST 5 YEARS */
   IF H03057 IN (3, 4, 5) THEN HP_CHOL = 1;          /*  Yes  */
      ELSE IF H03057 IN (1, 2) THEN HP_CHOL = 2;       /*  No   */


   /* HP_SMOKE--ADVISED TO QUIT SMOKING IN PAST 12 MONTHS */
   IF H03062 IN (2, 3, 4, 5) THEN HP_SMOKE = 1;       /*  Yes  */
      ELSE IF H03062 = 1 THEN HP_SMOKE = 2;           /*  No   */


   /* HP_BRST--BREAST EXAM IN PAST 12 MONTHS */
   IF XSEXA=2 AND FIELDAGE >= 40 THEN DO;
      IF H03068 = 5 THEN HP_BRST = 1;               /*  Yes  */
      ELSE IF H03068 IN (1, 2, 3, 4) THEN HP_BRST = 2;  /*  No   */
   END;


   /* Add code for smoking and smoking cessation counseling according to the HEDIS */
   /* definition.  Smoking variable is HP_SMOKH and smoking cessation counseling   */
   /* is HP_CESS.                                  */
   IF H03059 IN (1,2) THEN DO;
      IF H03059=1 AND (H03060=3 OR H03060=4 OR (H03060=2 AND H03061=3)) THEN
   HP_SMOKH=1;      /* Yes */
      ELSE IF H03059=2 OR H03060 > 0 THEN HP_SMOKH=2;                     /* No  */
   END;
```

```
IF HP_SMOKH=1 AND H03026>1 AND H03062>0 THEN DO;
  IF H03062>1 THEN HP_CESS=1;                              /* Yes */
  ELSE HP_CESS=2;                                          /* No */
END;
```

6.   Utilization
a.   Outpatient Utilization (KMILOPQY, KCIVOPQY)

H03026 contains the total outpatient visits. This is called KMILOPQY 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 H03038 = 1 THEN DO;
  KMILOPQY=H03026;
  KCIVOPQY=1;
END;
ELSE IF H03038 IN  (2, 3, 4) THEN DO;
  KCIVOPQY=H03026;
  KMILOPQY=1;
END;
ELSE IF H03038 = 5 THEN DO;
  KMILOPQY=1;
  KCIVOPQY=1;
END;
```

b.   Use of Military Pharmacies to Fill Civilian Prescriptions (KPRSCPTN)

KPRSCPTN is a binary variable created to indicate if a respondent had 6 or more prescriptions that were written by a civilian provider but were filled by a military pharmacy.

```
/* KPRSCPTN--6 OR MORE CIVILIAN PRESCRIPTIONS FILLED BY A MILITARY PHARMACY
*/
IF H03037 IN (3,4,5) THEN KPRSCPTN = 1;      /* YES */
  ELSE IF H03037 IN (1,2) THEN KPRSCPTN = 2;    /* NO */
```

E.   WEIGHTING PROCEDURES

Quarterly and Annual estimates based on the 2003 HCSDB must account for the survey's complex sample design and for possible bias due to nonresponse. As part of sample selection, MPR constructed sampling weights (BWT) that reflect the differential selection probabilities used to sample beneficiaries across strata. Nonresponse can also lead to distortions of the respondent sample with respect to the total population of DoD health care beneficiaries. Adjustments were made to the sampling weights, BWT, to compensate for such distortions, using a weighting class method. We also generated replicate weights for the final database so that users have the option of obtaining variance estimates with a replication method as well as the Taylor series method. This section presents these weighting procedures for the 2003 Adult HCSDB.

1.   Constructing the Sampling Weight

2003 HEALTH CARE SURVEY OF DOD BENEFICIARIES

The sampling weight was constructed on the basis of the sample design. In the 2003 Adult HCSDB, stratified sampling was used to select the samples 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 probabilities of selection across strata. Sample sizes were driven by predetermined precision requirements. For further details of the 2003 adult sample design, see *2003 Health Care Survey of DoD Beneficiaries: Quarters 1 and 2 2003 Adult Sampling Report* (2003). Our first step in weighting was to construct sampling weights that reflect these unequal sampling rates. 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 or:

(1)
$$W_s(h, i) = \frac{N(h)}{n(h)}$$

where:

$W_s(h,i)$ is the sampling weight for the *i*-th sampled beneficiary within the *h*-th stratum,

$N(h)$ is the total number of beneficiaries in the *h*-th stratum, and
$n(h)$ is the number of sampled beneficiaries from stratum *h*.

The sum of the sampling weights over selections *i*, from the *h*-th stratum equals the total population size of the *h*-th stratum or $N(h)$.

2. Adjustment for Total Nonresponse

Survey estimates obtained from respondent data only can be biased with respect to describing characteristics of the total population (Lessler and Kalsbeek 1992). The choice of an appropriate method depends on the response mechanism that underlies the study population. To reduce this bias, we developed procedures to compensate for the potential bias due to nonresponse. We adjusted for nonresponse independently within classes, with the assumptions that both response and characteristics directly or indirectly related to survey variables are homogeneous within classes. Two types of nonresponse were associated with the 2003 Adult HCSDB:

- Unit or total nonresponse occurs when a sampled beneficiary did not respond to the survey questionnaire (e.g., refusals, no questionnaire returned, blank questionnaire returned, bad address).

- Item nonresponse occurs when a question that should have been answered is 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 2003 Adult HCSDB. To account for unit or total nonresponse, we implemented a weighting class adjustment.

3. Weighting Class Adjustments

Weighting class adjustments were made by partitioning the sample into groups, called *weighting classes*, and then adjusting the weights of respondents 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.

The 2003 Adult HCSDB weighting classes were defined on the basis of the stratification variables: TRICARE Prime enrollment status, beneficiary group, and geographic area.

Nonresponse adjustment factors for the 2003 Adult 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 — completed 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 = 30)

d=4   Eligibility unknown — no questionnaire or eligibility data (FNSTATUS = 41 or 42)

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 and defined as:

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

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 0 otherwise,

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

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

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

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

Note that since d=4 cases have adjustment factors of zero; they also have adjusted weights of zero.

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 c from the previous step 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:

$$(4) \qquad A_{wc2}(c,1) = \frac{\sum\limits_{i \in S(c)} I_1(i)W_{wc1}(c,i) + \sum\limits_{i \in S(c)} I_2(i)W_{wc1}(c,i)}{\sum\limits_{i \in S(c)} I_1(i)W_{wc1}(c,i)}$$

By definition, all d=3 ineligible beneficiaries "respond," so the d=3 adjustment factor is 1, or $A_{wc2}(c,3)$=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:

$$(5) \qquad W_{wc2}(c,d,i) = A_2(c,d) W_{wc1}(c,d,i)$$

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) remained unchanged, or $W_{wc2}(c,3,i)=W_{wc1}(c,3,i)$.

4. Calculation of Combined Annual Weights

A dataset combining the four consecutive quarterly data was constructed. Since there were a total of 1842 late respondents who were not included in the Quarters I–III 2003 files, the first three quarters were re-weighted before they were merged into the combined annual dataset. The new Quarters I–III datasets contain the responses of respondents who "trickled" in past the deadline for the survey. In addition, a few additional changes were made in re-weighting the data in order to provide consistent small cell collapsements among the quarters. First, we uniformly collapsed small cells for all four quarters. Collapsing cells uniformly across all quarters ensures that all quarters, ultimately, contain identical catchment areas and identical final adjusted cells. We applied the Quarter IV general collapsing rules for small cells to all four quarters. After implementing the above mentioned changes to the data and obtaining new weights, the Quarters I–III datasets and the Quarter IV dataset were merged to form a combined annual dataset with data for all four quarters.

Because combined sample sizes are sufficiently large to provide statistically reliable estimates with this combined dataset, users will be able to calculate survey estimates for finer domains, such as catchment areas. Construction of an appropriate weight will allow users to consider the combined data as the data 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 four quarters into a combined data set.

The method used for combining the four quarters and calculating combined estimates assumes that the variance in estimates from one quarter to the next is merely due sampling variation. That is, combined estimates can be calculated from the four independent samples by averaging the estimates for the four quarters. 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. 2003).

We calculated the final survey weight for each quarter within the combined dataset. Without the loss of generality, let us denote the current quarter by Q4. Then, the combined dataset would include the four quarterly datasets: Q1, Q2, Q3, and Q4. Let us denote quarterly final survey weights by WQ1, WQ2, WQ3, and WQ4. To retain the sum of the weights from the combined data as the population count, we average the population over the four quarters, by rescaling each quarterly survey weights to meet the following condition:

$$(6) \qquad WCOM = q_i x WQi$$

where q_i is between 0 and 1 with the constraint $q_1 + q_2 + q_3 + q_4 = 1$. We can make choice of q_1 based on various assumptions. We have decided that each quarterly contribution should be equal. If we assume an equal relationship among the quarters, then, each q_1 is as follows:

$$q_1 = 0.25; \ q_2 = 0.25; \ q_3 = 0.25; \ q_4 = 0.25$$

Then, the weight for the combined annual data will be *WCOM* in (6).

The final data file retains the quarterly sampling stratum variables and quarterly weight as well as the combined weight. The file also contains an indicator variable for the quarters. From this combined dataset, one can calculate both combined data and revised quarterly estimates.

5.   Calculation of Jackknife Replicates

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. Software for replication methods requires either replicate weights or sample design information, including the sampling weight and stratification information. WesVarPC® (Brick et al. 1996) is a publicly available package for replication methods which may be used to produce variance estimates. WesVarPC allows jackknife variance estimation for two primary sampling units per stratum up to 100 strata, or up to 256 replicates without stratification. However, the design for the 2003 HCSDB for adults involves 387 adjustment cells. To use WesVarPC, we modified the design to create fewer strata. The two options for doing this are to (1) form fewer than 256 replicates by ignoring stratification, or (2) form replicates by collapsing strata to fewer than 100 and by assigning each unit to one of two pseudo primary sampling units (PSUs). For either option, the entire weighting process as described in the previous sections must be applied for each jackknife replicate.

We use option 1 to construct the quarterly jackknife replicates as follows. First, the entire file of sampled beneficiaries is sorted in sample selection order in which the stratification variables are used in the sorting process. 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, the same number of different jackknife replicates as subsamples is defined. The entire weighting process as 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. Then, the series of jackknife replicate weights (WRWT1-WRWT60) is attached to the final data in order to construct jackknife replication variance estimates. These replicate weights should be used to estimates variances of quarterly estimates.

We also constructed 240 jackknife replicates for combined estimates by calculating the weights in a manner similar to the one described above. For the combined data, a jackknife replicate was obtained by using the quarterly jackknife replicate weights and the quarterly analysis weights. To compute the replicate weights for the combined file from quarter q_i (where $i = 1$ to 4) we used the quarterly replicate weight $WRWT_j$ where $j = 1$ to 60 and the quarterly weight WQ_k (where $k = 1$ to 4) for all cases where i is not equal to k. Therefore, we have four times sixty or 240 jackknife replicates. For each replicate each quarter contributes an equal 25 percent toward the total weight. For example, for the first replicate, we used the replicates weights associated with the first replicate in quarter 1, $WRWT_1$, and the final quarterly weights for quarters 2, 3, and 4, WQ_2, WQ_3, and WQ_4. The combined replicate weight is then calculated as:

(9)   If quarter $i = 1$, then $$CWRWT_1 = 0.25 \times WRWT_1$$

Otherwise $$CWRWT_1 = 0.25 \times WQ_i$$

Like the analysis weight, each replicate weight (CWRWT1-CWRWT240) for the combined data set was trimmed. The same procedure described above was used for each replicate weight. These

trimmed replicate weights are the final variables needed for jackknife variance estimation for combined annual estimates.

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Chapter
4
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Analysis

This chapter explains how the HCSDB variables were processed during the analysis phase of the project. It covers the procedure 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 rates for the 2003 Adult HCSDB were calculated in the same way as they were calculated in 2002. The procedure is based on the guidelines established by the Council of American Survey Research Organization (CASRO 1982) in 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 give the same result. However, the 2003 HCSDB used different sampling rates across strata. So, it is useful to show both "unweighted" and "weighted" response rates. We calculated these two response rates in the same way. As presented in Chapter 3, all sampled beneficiaries were completely classified into these four main (six detailed) groups: Group 1 (G1-1 and G1-2), Group 2, Group 3, and Group 4 (G4-1 and G4-2):

- 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: ineligible

- 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[1] ($\hat{N}_i$ 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, G4-1, and G4-2, where we denote the unweighted counts by $n_{1,1}$, $n_{1,2}$, $n_{4,1}$, and $n_{4,2}$, and the weighted counts by $\hat{N}_{1,1}, \hat{N}_{1,2}, \hat{N}_{4,1}, \text{and} \hat{N}_{4,2}$. 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)

$$l = \left(\frac{n_1 + n_2}{n_1 + n_2 + n_3} \right) n_{4,1} \qquad \text{and} \qquad l_w = \left(\frac{\hat{N}_1 + \hat{N}_2}{\hat{N}_1 + \hat{N}_2 + \hat{N}_3} \right) \hat{N}_{4,1}$$

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)

$$LR = \frac{n_1 + n_2 + l}{n_1 + n_2 + n_4 \left(\frac{n_1 + n_2}{n_1 + n_2 + n_3} \right)} \qquad \text{and} \qquad LR_w = \frac{\hat{N}_1 + \hat{N}_2 + l_w}{\hat{N}_1 + \hat{N}_2 + \hat{N}_4 \left(\frac{\hat{N}_1 + \hat{N}_2}{\hat{N}_1 + \hat{N}_2 + \hat{N}_3} \right)}.$$

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

(3)

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

---

[1]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.

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)

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

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. While analysts prefer weighted rates that reflect the estimated proportion of respondents among all population beneficiaries, operational staff often is interested in getting unweighted measures. All tables include unweighted and weighted values under columns headed "Unweighted" and "Weighted", respectively. In the following, we focus on discussing unweighted response rates for domains of interest.

Table 4.1 includes response rates for the 2003 Adult HCSDB for all quarters of 2003 as well as for the combined annual dataset (for a further discussion of the combined process, please see section E.4 at the end of this chapter). It also contains response rates by beneficiary groups, and by enrollment status.

- Overall: The overall unweighted response rate for the combined 2003 Adult HCSDB was about 29 percent (which is found in Table 4.1 in the row of "Overall"). This rate is somewhat lower than 30 percent rate achieved in the combined 2002 Adult HCSDB.

- Beneficiary group and enrollment status: All response rates calculated by beneficiary group and enrollment status show similar patterns to the 2002 survey, i.e., active duty beneficiaries had the lowest response rates and beneficiaries 65 years and older had the highest rate.[1]

- The response rates for the first three quarters include late respondents (respondents whose surveys "trickled-in" after the deadline). Therefore, the first three quarters have a higher level of response than the fourth quarter.

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[1] 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.

TABLE 4.1

RESPONSE RATES OVERALL AND BY ENROLLEE BENEFICIARY GROUP: QUARTERS I-IV, 2003

	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Overall	32.4	48.3	29.4	44.6	28.2	43.6	26.0	41.0	29.0	44.3
Active duty	19.5	18.3	16.5	15.8	15.9	15.1	14.2	13.6	16.5	15.6
Active duty family, enrollee	32.3	32.1	30.0	31.1	28.5	29.4	26.0	26.6	29.2	29.8
Active duty family, non-enrollee	22.2	24.9	21.0	23.2	19.3	21.3	18.1	19.6	20.2	22.1
Retired,<65,enrollee	59.1	60.8	54.9	56.1	52.7	55.8	48.7	51.1	53.8	55.8
Retired,<65,non-enrollee	49.3	53.1	43.5	45.9	43.8	47.5	39.9	43.0	44.2	47.4
Retired,65+	76.4	78.1	73.4	74.6	72.8	73.3	70.9	73.1	73.4	74.7

RR =Unweighted data
RR$_W$ =Weighted data

For domains of special interest, Appendix E contains tables showing response rates and weighted response rates for each quarter and the combined dataset. We summarize results about response rates for selected domains as follows:

- Regions: Response rates across regions range from 13 percent for Western Pacific Command to 37 percent for Golden Gate (Table E.1).

- Sex: Response rate for men is 25 percent as compared to 34 percent for women. (Table E.2).

- Conus: Response rate for CONUS is 31 percent as compared to 15 percent for OCONUS. (Table E.3).

- Catchment areas: Combined response rates across catchment areas range from 9 percent for Kadena AFB to 44 percent for Patrick AFB. (Table E.5).

- Beneficiary groups by sex: Women respond at a higher rate than do men for both active duty and active duty family members, 20 percent versus 16 percent and 28 percent versus 15 percent, respectively. The opposite pattern emerges for retirees, survivors and family members 65 and older. The response rates for retirees less than 65 are 50 percent for men versus 48 percent for women. (Table E.7).

- Beneficiary group by service affiliation (Army, Navy, Air Force, Marine Corps, Coast Guard): Among service affiliations, the smallest combined response rate comes from active duty in the Marine Corps with 10 percent and the largest from beneficiaries under 65 from the Air Force with 76 percent (Table E.8).

B. VARIANCE ESTIMATION

Due to the complex sample design, variance estimation for the 2003 HCSDB is not simple, and may be most easily achieved using one of two methods. The first, the Taylor Series Linearization via SUDAAN™ (Shah et al. 1996), is a direct variance estimation method, which may be used to calculate the standard errors (the square root of the variance) of estimates. For the 2003 HCSDB analyses, we used the Taylor series linearization method. 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 2003 HCSDB.

1.   Taylor Series Linearization

MPR uses Taylor series linearization to produce standard errors for the estimates from the 2003 HCSDB. For most sample designs, including the 2003 HCSDB, design-based variance estimates for linear estimators of totals and means can be obtained with explicit formulas. Estimators for nonlinear parameters, such as ratios, do not have exact expressions for the variance. The Taylor series linearization method approximates 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 need to identify stratum as well as the final analysis weight for each data record. We included these variables on the final database. For variance estimation, we use 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 based on 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 in calculating standard errors.

Some of the reported estimates are composite scale scores that are linear functions of individual estimates. The sampling variances for these scale estimates can be directly obtained from the usual design-based variance estimation formula by incorporating the covariance terms among individual items within the scale.

(5)   Let $\bar{y} = \dfrac{\sum_{h=1}^{L} \sum_{i=1}^{n_h} W_{hi} Y_{hi}}{\sum_h \sum_i W_{hi}}$

denote an estimator of a composite scale where the individual composite measure for beneficiary (*h*, *i*) consists of *r* items is thus denoted as:

(6) $Y_{hi} = \sum_{j=1}^{r} X_{hi,j} / r$.

Then, a customary variance estimator of $\bar{y}$ is the sum of the item variances and covariances among item estimates:

(7) $v(\bar{y}) = \dfrac{1}{r^2} \left\{ \sum_{j=1}^{r} \mathrm{var}(\bar{x}_j) + \sum_{j \neq j'} \mathrm{cov}(\bar{x}_j, \bar{x}_{j'}) \right\}$,

Variance components can be obtained from the usual survey specific software such as SUDAAN and WesVarPC, described above.

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 was a population, and many smaller samples are drawn from the original sample (Lohr, pages 298-308). The 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 above procedure, jackknife replicate standard errors can be produced using custom written software or 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 are given in Wolter (1985). Like other replication methods, the jackknife variance estimation can be easily implemented for any form of estimate without further algebraic work.

C. SIGNIFICANCE TESTS

In certain charts in the adult report cards and the Health Care Survey of DoD Beneficiaries: Annual Report statistical testing is done to show which columns of the chart (values of the independent variable) are statistically different from all CONUS regions as a whole. Positional arrows show if a region is statistically better than the CONUS regions (an arrow pointing up) or statistically worse than the CONUS regions (an arrow pointing down); if there is no arrow, there is no statistical difference.

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

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

For instance, μ_1 might represent the characteristic of interest for the active duty group while μ_2 might represent the same characteristic for all CONUS regions.

With large sample sizes, the estimator $\overline{y}_1 - \overline{y}_2$ is approximately distributed as a normal distribution with mean zero and variance $\sigma^2_{\overline{y}_1 - \overline{y}_2}$ under the null hypothesis. In testing the hypothesis, a test Statistic T is thus calculated as:

$$T = \frac{\overline{y}_1 - \overline{y}_2}{\hat{\sigma}_{\overline{y}_1 - \overline{y}_2}}.$$

With $\alpha = 0.05$, the null hypothesis should be rejected if $|T| > 1.96$. The denominator of T, the standard error of $\overline{y}_1 - \overline{y}_2$, can be calculated as the square root of the variance estimator $\hat{\sigma}^2_{\overline{y}_1 - \overline{y}_2}$:

$$\hat{\sigma}^2_{\overline{y}_1 - \overline{y}_2} = \text{var}(\overline{y}_1) + \text{var}(\overline{y}_2) - 2\,\text{cov}(\overline{y}_1, \overline{y}_2).$$

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, Active Duty MTF group is not independent with the CONUS regions because these two domains share Active

duty group within the CONUS regions. So the covariance term should be incorporated in calculating the variance estimator of the estimator of the difference. With suitable algebra and program modification, these covariance terms were calculated for all such cases. All detailed programs are included in Appendices H.

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, that control for characteristics beyond the health care provider's control. Based on previous work with satisfaction scales derived from CAHPS, it appears that satisfaction increases with age and decreases with poor health across social classes and insurance types. Besides controlling for these factors, the methodology used:

- 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 methodology used is an adaptation of that found in CAHPS 2.0 Survey and Reporting Kit (DHHS, 1999)

The model used for this adjustment is:

$$Y_{ijkl} = \beta_{1l}A_{1l} + \beta_{2l}A_{2l} + ... + \beta_{7l}A_{7l} + \beta_{8l}P_l + \varepsilon_{ijkl},$$

where Y_{ijkl} is a dependent variable, β_{ql}'s are parameters to be estimated, A_{ql}'s are age dummy variables (A_{ql} = 1 if the beneficiary is in age group q, and 0 otherwise; A_l = age 18-24, A_2 = age 24-34, A_3 = age 35-44, A_4 = age 45-54, A_5 = age 55-64, A_6 = age 65-74, and A_7 = age 75 and older), P_l is health status. The subscripts i, j, k and l refer to the region, MTF, and beneficiary, and beneficiary in enrollment group, respectively.

Given 15 regions and J+1 catchment areas, the specifications that we use are:

$$\varepsilon_{ijkl} = \delta_{0l} + \delta_{1l}R_{1l} + \delta_{2l}R_{2l} + ... + \delta_{15l}R_{15l} + w_{ijkl},$$

where R_i 's are regional dummy variables (R_{il} = 1 if the beneficiary is in region i and beneficiary group l, and 0 otherwise), and

$$\varepsilon_{ijkl} = \gamma_{0l} + \gamma_{1l}H_{1l} + \gamma_{2l}H_{2l} + ... + \gamma_{Jl}H_{Jl} + w_{ijkl},$$

where H_{ij} '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 first specification is used when catchment area values are not reported, and the second when catchment areas are reported.

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

$$\overline{y_i} = \hat{\delta}_0 + \hat{\delta}_i + \hat{\beta}_1 \hat{A}_1 + \hat{\beta}_2 \hat{A}_2 + ... + \hat{\beta}_7 \hat{A}_7 + \hat{\beta}_8 \hat{P},$$

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 means of the variable P. For beneficiary group l, the adjusted regional value is:

$$\overline{y_{il}} = \hat{\delta}_{0l} + \hat{\delta}_{il} + \hat{\beta}_{1l} \hat{A} + \hat{\beta}_{2l} \hat{A}_{2l} + ... + \hat{\beta}_{7l} \hat{A}_{7l} + \hat{\beta}_{8l} \hat{P}_l,$$

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:

$$\overline{y_{ijl}} = \hat{\gamma}_{0l} + \hat{\gamma}_{ijl} + \hat{\beta}_{1l} \hat{A}_{1l} + \hat{\beta}_{2l} \hat{A}_{2l} + ... + \hat{\beta}_{7l} \hat{A}_{7l} + \hat{\beta}_{8l} \hat{P}_l,$$

while the regional value can be calculated as:

$$\overline{y_{il}} = \hat{\gamma}_{0l} + \overline{\hat{\gamma}}_{il} + \hat{\beta}_{1l} \hat{A}_{1l} + \hat{\beta}_{2l} \hat{A}_{2l} + ... + \hat{\beta}_{7l} \hat{A}_{7l} + \hat{\beta}_{8l} \hat{P}_l,$$

where $\overline{\hat{\gamma}}_{il}$ is the weighted mean for all catchment areas in Region i.

Standard errors then can be estimated as the standard error of residuals for catchment areas or regions using SUDAAN. 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 for questions making up the composites, in which each question is equally weighted.

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

$$y = \alpha + \beta_1 A_1 + \beta_2 A_7 + ... + \beta_7 A_7 + \beta_8 P$$

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

$$\hat{y}_l = \hat{\alpha} + \hat{\beta}_1 \overline{A}_{1l} + \hat{\beta}_2 \overline{A}_{2l} + ... + \hat{\beta}_7 \overline{A}_{7l} + \hat{\beta}_8 \overline{P}_l$$

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 in comparison to many beneficiary groups. We accomplish this by recentering 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 recentering 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 recentering factor is zero. The recentering factor is added to 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 total score.

1. Composites and Ratings

The preventive care composite is calculated as $P_i = \Sigma w_i r_i$, 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

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

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*. The value n_i is calculated using sampling weights. 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).

2. Total Score

The total score, T, is a weighted average of 11 scales shown in the Beneficiary Reports. $T = \Sigma w_i S_i$, where S_i is a composite or rating score calculated for a geographic area such as a region. The total weight is $w_i = f_i p_i$.

The weights f_i come from $F(1) = \Sigma f_i S_i$, where $F(1)$ is the first component identified in principal components analysis. For an observation to be included, all variables must be non-missing. These weights are the same for all enrollment groups and beneficiary groups. The total score $T = \Sigma w_i S_i$, where S_i are composite scores or rating scores and $w_i = f_i$ are factor weights for CAHPS composites or ratings based on principal components analysis using NCBD data. The factor analysis is performed over ratings and composites calculated for health plans. Composite scores from the benchmark data are

$$S_{hi} = (1/n_i) \, \Sigma(q_{hj}/k_{hj}),$$

where k_{hj} is the number of people in health plan h responding to question j, q_{hj} is the number in health plan h giving a favorable response to j in composite *i*. Ratings are

$$S_{hi} = q_{hi}/k_{hi}$$

the proportion responding favorably. These values are adjusted for age and health status.

The weights f_i come from $F(1) = \Sigma f_i S_{hi}$, where $F(1)$ is the first component identified in principal components analysis. The preventive care composite receives a weight of 1/11.

F. TESTS FOR TREND

In the Beneficiary Reports (see below), we use linear regression to estimate and test for statistical significance a quarterly rate of change. Our estimate for the rate of change is

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

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

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

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

where σ_i is the standard error for quarter i. 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 4 quarters $p = \text{Prob}(\text{abs}(T/S) > 0, n)$.

G. DEPENDENT AND INDEPENDENT VARIABLES

Dependent, or outcome, variables represent the research questions the survey is designed to answer. For example, beneficiary satisfaction and access are dependent variables in this analysis. The research questions are listed in Chapter I. Generally, dependent variables form the rows of the tables and the vertical axis of the charts.

Independent, or explanatory, variables do not directly represent research questions, but they may help to explain the 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. Independent variables form the columns of the tables and the horizontal axis of the charts.

In analyzing the relationship between dependent and independent variables, MPR produced charts and tables that are found in the reports described below. Beginning with the HCSDB in a SAS format, MPR programmers developed 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., per cents, means, and standard errors). These statistical values were moved directly from SAS programs 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: 2003 TRICARE Beneficiary Reports, the TRICARE Consumer Watch, and the Health Care Survey of DoD Beneficiaries: Annual Report. The 2003 TRICARE Beneficiary Reports and the TRICARE Consumer Watch are presented on a quarterly basis 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 four quarters of survey data.

1.   **2003 TRICARE Beneficiary Reports**
   a.   **Purpose**

The purpose of the Beneficiary Reports is to provide Lead Agents and MTF commanders with a comprehensive description of TRICARE beneficiaries' satisfaction with care, access to care, and use of preventive care, in comparison 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 and for CONUS 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 four quarters and previous years and presents results by catchment area and region.

   b.   **Beneficiary Report Production**

   1.   **Content**

The quarterly Beneficiary Report present 12 scores for all beneficiary groups and all enrollment by region and CONUS MHS overall. Scores are presented in the following areas: getting needed care, getting care quickly, courteous and helpful office staff, how well doctors communicate, customer service, claims processing, rating of the health plan, health care, personal doctor, and specialist, and preventive care standards. The first 6 scores are CAHPS composites, which group together responses to several related survey questions. The CAHPS composite questions are shown in Appendix F. The scores are presented in relation to national benchmarks.

The four ratings of health care and health care providers are: health plan, health care, PCM, and specialist. 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 TMA Standard Composite is based on how beneficiaries compare preventive care services offered through the MHS with the Healthy People 2010 goals. Preventive care indicators include prenatal care, hypertension, mammography and Pap smears.

A total score combines the other 11 scales into a global performance rating.

   2.   **Format**

   a.   **Programming Specifications**

Data for the Beneficiary Reports is arranged in a SAS data set, consisting of records indexed by region, 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 their existence and directions of significant differences. The benchmark record contains national mean values, where available, for a comparable non-MHS population.

The data file serves as the basis for the electronic reports and quality assurance. The file for the 2003 HCSDB is updated each quarter and referenced by the report card application. In each quarter, a separate annual and quarterly file is created. The quarterly and annual reports are coded with HTML and a program generates the information in the form of a data set corresponding to the cells in the tables of the reports described below. Appendix H contains the programs to generate the Beneficiary Reports.

b. Web Specifications

Quarterly Beneficiary Reports are published in a tabular, interactive, HTML format on TRICARE's website, allowing users to "drill down" in 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 CONUS 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 regions and CONUS MHS. Significant differences between the scores and the benchmark are indicated by color, bolding and italics. 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 2003 HCSDB by region for all beneficiary groups and enrollment groups. Another set shows scores for the questions that make up the composite, along with composites or ratings from prior years. The third set of tables shows scores for the catchment areas that make up the MHS regions.

2. TRICARE Consumer Watch
a. Purpose

Like the TRICARE Beneficiary Reports, the TRICARE Consumer Watch is targeted to Lead Agents and MTF commanders. TRICARE Consumer Watch presents key results from the quarterly HCSDB in a graphical format. The exhibits present TRICARE beneficiaries' experiences with their health care and health plan and utilization rates for preventive services. Each quarter, the Consumer Watch contains a special report on a specific aspect of health care affecting TRICARE beneficiaries. The TRICARE Consumer Watch is produced on a quarterly basis for all regions and three service affiliations. In the fourth quarter, the TRICARE Consumer Watch is produced for all catchment areas.

b. 2003 TRICARE Consumer Watch Production

1. Content

The Consumer Watch contains graphs presenting three ratings and six composite scores. These graphs are based on data from the Beneficiary Reports. Beneficiaries are asked to rate their experiences with their health care and health plan, and their personal provider on a scale of 0 to 10 where 0 is the worst and 10 is the best. Composite scores evaluate beneficiaries' experiences with: getting needed care, getting care quickly, courteous and helpful office staff, how well doctors communicate, customer service, and claims processing. Using data from the National CAHPS Benchmarking Database, 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 2010 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.

Another graph depicts current Prime enrollees' intent to disenroll from TRICARE Prime. This graph compares the percentage of retirees or family members of active duty or retirees who plan to

disenroll for each region and CONUS. Each quarter, the special report section highlights a certain health care topic.

2. Format

a. Programming Specifications

Data for the Consumer Watch is arranged in a SAS data set, and consists of records indexed by region, catchment area, enrollment group, and beneficiary category. Scores for the rating and composite graphs utilize the same programs as 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.

b. Report Production Specifications

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

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), in general, and TMA, in particular, 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 and child HCSDB for 2003 and previous years.

b. Procedures for Report Production

1. Content

The report contains six chapters:

- Experiences with TRICARE
- Health Care Ratings
- Personal Doctors
- Preventive Care
- Children's Health Care, and
- Care of Chronic Conditions

2. Programming Specification

Programs for calculation of 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 NCBD. The benchmarks readjusted for age and health status using the methods described in Chapter 4, 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 and 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 B

SURVEY FIELDING LETTERS

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

December 3, 2002

#BWNHNMP
** 0060421-A12345 **
PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense is very interested in what you think about your healthcare. In a few weeks, you will get the *2003 Health Care Survey of DoD Beneficiaries Questionnaire* that asks about your healthcare. By answering the survey questions, you will provide important information to help us improve the healthcare services for our entire military community. Your feedback will make a difference.

You are among only a few military beneficiaries who are being sent this survey. I hope you will take the time to fill it out and send it back in the enclosed envelope. Your responses are important to us even if you do not receive your healthcare through the military healthcare system. Of course, what you have to say is private.

If your address above is incorrect, please telephone the Survey Operations Center at 1-800 -866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are toll free.

Thank you in advance for your help!

Sincerely,

Thomas F. Carrato
Executive Director

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

January 2, 2003

#BWNHNMP
** 0107077-A12345 **

PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! I am very interested in your opinions about your healthcare. Enclosed is the *2003 Health Care Survey of DoD Beneficiaries Questionnaire.* This is your opportunity to tell the Department of Defense how well your health needs are being met. Your answers will provide important information to help us improve the healthcare services for our entire military community. Your feedback will make a difference.

You are among only a few military beneficiaries who are being sent this survey. To get accurate results, we need to get survey responses from you and others who were selected to complete this this voluntary survey. Your responses are important to us even if you do not receive your healthcare through the military healthcare system. Of course, what you have to say is private.

We hope you will take this chance to tell us about your healthcare. Please return the completed survey in the enclosed postage-paid envelope within the next 7 days. If your address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address at 1-800-733-5751. All calls to these numbers are toll free.

Thank you in advance for your help!

Sincerely,

Thomas F. Carrato
Executive Director

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS/TRICARE MANAGEMENT ACTIVITY
SURVEY PROCESSING CENTER
C/O NATIONAL RESEARCH CORPORATION
PO BOX 82660
LINCOLN, NE 68501-9465

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PAID
LINCOLN, NE
PERMIT #1116

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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

MILITARY HEALTHCARE SURVEY

T R I C A R E

The Department of Defense recently sent you a copy of the *2003 Health Care Survey of DoD Beneficiaries Questionnaire*. Your reactions, attitudes and concerns about your health care are very important to us. This survey is part of an effort to identify where improvements may be needed in the health care system.

If you have already returned your questionnaire, thank you very much for your help. If you have not yet had a chance to respond, we are anxious to hear from you. It would be greatly appreciated if you would take a few minutes to complete the questionnaire and return it in the postage-paid envelope at your earliest possible convenience.

If you did not receive the survey or if you need another copy, please call the Project Officer at 1-800 -866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.). All calls to this number are toll free.

Thank you for taking the time to complete this important survey.

Thomas F. Carrato
Executive Director
TRICARE Management Activity

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

February 6, 2003

#BWNHNMP
** 0200389-A12345 **
lllllllllllllllllllllllllllllllllllllll
PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense recently sent you the *2003 Health Care Survey of DoD Beneficiaries Questionnaire.* Your answers will provide important information to help us improve the healthcare services for our entire military community. If you have sent back a completed survey, thank you! Your answers will help us serve you better.

Please fill out the enclosed survey that asks about your healthcare in the last 12 months. To get accurate results, we need to get answers from you and others who were asked to take part in this voluntary survey. Your responses are important to us even if you do not receive your healthcare from the military healthcare system. Your responses will remain private.

If the address above is incorrect, please telephone the Survey Operations Center at 1-800-866 -1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to have it corrected. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are toll free.

We hope you will take this chance to give us your feedback. Thank you in advance for your help to improve healthcare for everyone.

Sincerely,

Thomas F. Carrato
Executive Director

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

March 11, 2002

#BWNHNMP
** 0060421-A12345 **

PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense is very interested in what you think about your healthcare. In a few weeks, you will get a survey in the mail that asks about your healthcare. By answering the survey questions, you will provide important information to help us improve the healthcare services for our entire military community. Your feedback will make a difference.

You are among only a few military beneficiaries who are being sent this survey. I hope you will take the time to fill it out and send it back in the enclosed envelope. Your responses are important to us even if you do not receive your healthcare through the military healthcare system. Of course, what you have to say is private.

If your address above is incorrect, please telephone the Survey Operations Center at 1-800 -866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are toll free.

Thank you in advance for your help!

Sincerely,

Thomas F. Carrato
Executive Director

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

April 10, 2002

#BWNHNMP
** 0107077-A12345 **

PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! I am very interested in your opinions about your healthcare. The enclosed survey is your opportunity to tell the Department of Defense how well your health needs are being met. Your answers will provide important information to help us improve the healthcare services for our entire military community. Your feedback will make a difference.

You are among only a few military beneficiaries who are being sent this survey. To get accurate results, we need to get survey responses from you and others who were selected to complete this this voluntary survey. Your responses are important to us even if you do not receive your healthcare through the military healthcare system. Of course, what you have to say is private.

We hope you will take this chance to tell us about your healthcare. Please return the completed survey in the enclosed postage-paid envelope within the next 7 days. If your address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address at 1-800-733-5751. All calls to these numbers are toll free.

Thank you in advance for your help!

Sincerely,

Thomas F. Carrato
Executive Director

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS/TRICARE MANAGEMENT ACTIVITY
SURVEY PROCESSING CENTER
C/O NATIONAL RESEARCH CORPORATION
PO BOX 82660
LINCOLN, NE 68501-9465

#BWNHNMP
** 0153733-A12345 **

PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

MILITARY HEALTHCARE SURVEY

TRICARE

Recently you should have received a questionnaire inviting you to express your opinions on health care provided by the Military Health System. Your reactions, attitudes and concerns about your health care are very important to us. This survey is part of an effort to identify where improvements may be needed in the health care system.

If you have already returned your questionnaire, thank you very much for your help. If you have not yet had a chance to respond, we are anxious to hear from you. It would be greatly appreciated if you would take a few minutes to complete the questionnaire and return it in the postage-paid envelope at your earliest possible convenience.

If you did not receive the survey or if you need another copy, please call the Project Officer at 1-800 -866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.). All calls to this number are toll free.

Thank you for taking the time to complete this important survey.

Thomas F. Carrato
Executive Director
TRICARE Management Activity

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3206

TRICARE
MANAGEMENT
ACTIVITY

May 8, 2002

#BWNHNMP
** 0200389-A12345 **

PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense recently sent you a copy of the *Military Healthcare Survey*. Your voluntary cooperation with this survey is very important. Your answers will provide important information to help us improve the healthcare services for our entire military community. If you have sent back a completed survey, thank you! Your answers will help us serve you better.

Please fill out the enclosed survey that asks about your healthcare in the last 12 months. To get accurate results, we need to get answers from you and others who were asked to take part in this voluntary survey. Your responses are important to us even if you do not receive your healthcare from the military healthcare system. Your responses will remain private.

If the address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to have it corrected. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are toll free.

We hope you will take this chance to give us your feedback. Thank you in advance for your help to improve healthcare for everyone.

Sincerely,

Thomas F. Carrato
Executive Director

Sample Notification Letter, Quarter III

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

TRICARE
MANAGEMENT
ACTIVITY

June 3, 2003

#BWNHNMP
** 0060421-A12345 **
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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a world
-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care
experiences. In a few weeks, you will receive the *Health Care Survey of Department of Defense Beneficiaries* in
the mail that includes questions about the health care services you have received in the past 12 months. Your
views are important to us and your opinions count. By completing the survey, you will provide important
information that will help us improve the health care services for the entire DoD health care community. Please
take advantage of this opportunity to share your opinions by participating in the survey.

Taking part in this survey is voluntary. You are among only a few beneficiaries randomly selected to
participate. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care
you receive within our military facilities. **Even if you do not receive health care from a military facility, please
still complete the survey.** All the information from the survey is private.

If your address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821
(within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM
EST to give your correct address. You also can send this letter via facsimile with your correct address to 1-800
-733-5751. All calls to these numbers are free.

Thank you for your service to our country, and thank you in advance for your help!

Sincerely,

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

Sample First Survey Cover Letter, Quarter III

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

TRICARE
MANAGEMENT
ACTIVITY

July 3, 2003

#BWNHNMP
** 0107077-A12345 **
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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

   We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a
world-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care
experiences. By completing the *Health Care Survey of DoD Beneficiaries*, your responses will provide
important information that will help us improve the health care services for the entire DoD health care
community. Please take advantage of this opportunity to share your opinions by participating in the survey.

   Enclosed is a survey that asks your opinions about the health care services you received in the past 12
months. You may also complete the questionnaire on-line by connecting to **http://iquest.telesage.com/dod
-ben-adult.** Your personal password is **123ABC.** Your views are important to us and your opinions count. As
an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive
within our military facilities. **Even if you did not receive your health care from a military facility, we still ask that
you complete the survey.**

   Taking part in this survey is voluntary. You are among only a few beneficiaries who were randomly
selected to participate. All your contact information and what you have to say is private.

   Please return the completed survey in the enclosed postage-paid envelope within the next 7 days. If your
address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the
U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to
give your correct address. You also can send this letter via facsimile with your correct address to 1-800-733
-5751. All calls to these numbers are free.

   Thank you for your service to our country. Your experience as a military beneficiary needs to be heard.
Thank you for your help.

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS/TRICARE MANAGEMENT ACTIVITY
SURVEY PROCESSING CENTER
C/O NATIONAL RESEARCH CORPORATION
PO BOX 82660
LINCOLN, NE 68501-9465

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1ST CLASS
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PERMIT #1116

#BWNHNMP
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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

WE NEED YOUR HELP!

HELLO!

Recently, we mailed you the *Health Care Survey of DoD Beneficiaries*, a DoD-sponsored survey of all military beneficiaries. Since we have not heard from you, we would like to remind you to take advantage of this opportunity to share your opinions about your health care experiences by completing the survey.

Taking part in this survey is voluntary. You are among only a few military beneficiaries randomly selected to participate. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. Even if you did not receive your health care from a military facility, **please still complete the survey.** All your contact information and what you have to say is private.

If you did not receive the survey or if you need another copy, please call 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.). All calls to this number are free.

THANK YOU!

Richard D. Guerin, Ph.D.
Director, Health Program Analysis and Evaluation

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

TRICARE
MANAGEMENT
ACTIVITY

August 7, 2003

#BWNHNMP
** 0200389-A12345 **
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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a world-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care experiences. Since we have not heard from you we would like to follow up with you about the letter and survey we recently sent you. We hope that you will take advantage of this opportunity to share your health care experiences by participating in the survey. By completing the enclosed *Health Care Survey of DoD Beneficiaries*, you will provide important information that will help us improve the health care services for the entire DoD health care community.

Enclosed is a survey that asks your opinions about the health care services you have received in the past 12 months. You may also complete the questionnaire on-line by connecting to **http://fiquest.telesage.com/dod -ben-adult**. Your personal password is **123ABC**. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. **Even if you did not receive your health care services from a military facility, please still complete the survey.** Your views are important to us and your opinions count.

Taking part in this survey is voluntary. You are among only a few beneficiaries who were randomly selected to participate. All your contact information and what you have to say is private.

If the address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to have it corrected. You also can send this letter via facsimile with your correct address to 1-800 -733-5751. All calls to these numbers are toll free.

Thank you for your service to our country. Your experience as a military beneficiary needs to be heard. Please take the time to respond.

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

APPENDIX A

Sample Notification Letter, Quarter IV

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

TRICARE
MANAGEMENT
ACTIVITY

September 3, 2003

#BWNHNMP
** 0060421-A12345 **
PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a world-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care experiences. In a few weeks, you will receive the *Health Care Survey of Department of Defense Beneficiaries* in the mail that includes questions about the health care services you have received in the past 12 months. Your views are important to us and your opinions count. By completing the survey, you will provide important information that will help us improve the health care services for the entire DoD health care community. Please take advantage of this opportunity to share your opinions by participating in the survey.

Taking part in this survey is voluntary. You are among only a few beneficiaries randomly selected to participate. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. **Even if you do not receive health care from a military facility, please still complete the survey.** All the information from the survey is private.

If your address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are free.

Thank you for your service to our country, and thank you in advance for your help!

Sincerely,

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

TRICARE
MANAGEMENT
ACTIVITY

October 3, 2003

#BWNHNMP
** 0107077-A12345 **
Illlululululull...I..I..Illlulululllluulluulllulul
PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a world-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care experiences. By completing the *Health Care Survey of DoD Beneficiaries,* your responses will provide important information that will help us improve the health care services for the entire DoD health care community. Please take advantage of this opportunity to share your opinions by participating in the survey.

Enclosed is a survey that asks your opinions about the health care services you received in the past 12 months. You may also complete the questionnaire on-line by connecting to **http://iquest.telesage.com/dod-ben-adult.** Your personal password is **123ABC.** Your views are important to us and your opinions count. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. **Even if you did not receive your health care from a military facility, we still ask that you complete the survey.**

Taking part in this survey is voluntary. You are among only a few beneficiaries who were randomly selected to participate. All your contact information and what you have to say is private.

Please return the completed survey in the enclosed postage-paid envelope within the next 7 days. If your address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to give your correct address. You also can send this letter via facsimile with your correct address to 1-800-733-5751. All calls to these numbers are free.

Thank you for your service to our country. Your experience as a military beneficiary needs to be heard. Thank you for your help.

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

RCS: DD-HA(A) 1942
Expires: 25 July 2006

Sample Reminder/Thank You Postcard, Quarter IV

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS/TRICARE MANAGEMENT ACTIVITY
SURVEY PROCESSING CENTER
C/O NATIONAL RESEARCH CORPORATION
PO BOX 82660
LINCOLN, NE 68501-9465

PRESORTED
1ST CLASS
U.S. POSTAGE
PAID
LINCOLN, NE
PERMIT #1116

#BWNHNMP
** 0153733-A12345 **
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PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

WE NEED YOUR HELP!

HELLO!

Recently, we mailed you the *Health Care Survey of DoD Beneficiaries*, a DoD-sponsored survey of all military beneficiaries. Since we have not heard from you, we would like to remind you to take advantage of this opportunity to share your opinions about your health care experiences by completing the survey.

Taking part in this survey is voluntary. You are among only a few military beneficiaries randomly selected to participate. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. Even if you did not receive your health care from a military facility, **please still complete the survey.** All your contact information and what you have to say is private.

If you did not receive the survey or if you need another copy, please call 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.). All calls to this number are free.

THANK YOU!

Richard D. Guerin, Ph.D.
Director, Health Program Analysis and Evaluation

Sample Second Survey Cover Letter, Quarter IV

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS

|||||||||||||||||||

TRICARE
MANAGEMENT
ACTIVITY

November 7, 2003

#BWNHNMP
** 0200389-A12345 **
||||||||||||||||||||||||||||||||||||||||||||||||||
PVT JONATHON WILKENSONS I
1245 Q ST STE 400
LINCOLN, NE 68508-1430

Dear PVT Jonathon Wilkensons I:

We need your help! The Department of Defense (DoD) is requesting your cooperation in completing a world-wide survey of all DoD health care beneficiaries aimed at understanding and improving your health care experiences. Since we have not heard from you we would like to follow up with you about the letter and survey we recently sent you. We hope that you will take advantage of this opportunity to share your health care experiences by participating in the survey. By completing the enclosed *Health Care Survey of DoD Beneficiaries*, you will provide important information that will help us improve the health care services for the entire DoD health care community.

Enclosed is a survey that asks your opinions about the health care services you have received in the past 12 months. You may also complete the questionnaire on-line by connecting to **http://iquest.telesage.com/dod -ben-adult**. Your personal password is **123ABC**. As an eligible military beneficiary, your benefits under TRICARE include both civilian care and care you receive within our military facilities. **Even if you did not receive your health care services from a military facility, please still complete the survey.** Your views are important to us and your opinions count.

Taking part in this survey is voluntary. You are among only a few beneficiaries who were randomly selected to participate. All your contact information and what you have to say is private.

If the address above is incorrect, please telephone the Survey Operations Center at 1-800-866-1821 (within the U.S.) or call collect at 1-402-475-5003 (outside the U.S.) between the hours of 9:00 AM and 7:00 PM EST to have it corrected. You also can send this letter via facsimile with your correct address to 1-800 -733-5751. All calls to these numbers are toll free.

Thank you for your service to our country. Your experience as a military beneficiary needs to be heard. Please take the time to respond.

Richard D. Guerin, Ph.D.
Director
Health Program Analysis and Evaluation

RCS: DD-HA(A) 1942
Expires: 25 July 2006

APPENDIX C

CODING SCHEME AND CODING TABLES – QUARTERS I-IV

2003 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB)
CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS Numeric	ASCII/EBCDIC Numeric	Description
.	-9	NO RESPONSE
.A	-8	Multiple response error
.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 '.', multiple responses '.A', and incomplete grids '.I' are encoded prior to implementation of the Coding Scheme Notes (see below).

Coding Table for Note 1:
    H03006, H03007

N1	H03006 is:	H03007 is:	H03006 is coded as:	H03007 is coded as:	*
1	1-11, health plan, -5, not sure	Marked, missing, or multiple response	Stands as original value	Stands as original value	
2	-6, no usage in past 12 months	Marked or multiple response	Stands as original value	.C, question should be skipped	F
3	-6, no usage in past 12 months	Missing response	Stands as original value	.N, valid skip	F
4	Missing response	Marked, missing, or multiple response	Stands as original value	Stands as original value	
5	Multiple response	Marked or multiple response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	-6: Did not use any health plan in the last 12 months	.N, valid skip	B

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

Coding Table for Note 2:
H03008, H03009

N2	H03008 is:	H03009 is:	H03008 is coded as:	H03009 is coded as:	*
1	1: yes	1-3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't get a new doctor	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1- 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't get a new doctor	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 3:
H03010, H03011

N3	H03010 is:	H03011 is:	H03010 is coded as:	H03011 is coded as:	*
1	1: yes	0-10, missing, or multiple response	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	-6, I don't have a personal doctor or nurse	2: no	.C, question should be skipped	B F
3	2: no, missing, or multiple response	0-10 or multiple response	1: yes	Stands as original value	B
4	2: no	-6, I don't have a personal doctor or nurse, or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 4:
H03012, H03013

N4	H03012 is:	H03013 is:	H03012 is coded as:	H03013 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need to see a specialist	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need to see a specialist	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 5:
H03014, H03015, H03016

N5	H03014 is:	H03015, H03016 Are:	H03014 is coded as:	H03015, H03016 Are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 5:
H03015 and H0316 are both missing.

Definition of "blank or NA" in Coding Table for Note 5:
H03015 and H03016 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 5:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 6:
H03017, H03018

N6	H03017 is:	H03018 is:	H03017 is coded as:	H03018 is coded as:	*
1	1: yes	1-4: how often, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: no calls	2: no	.C, question should be skipped	B F
3	2: no, missing or multiple response	1-4: how often, multiple response	1: yes	Stands as original value	B
4	2: no	-6: no calls or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 7:
H03019, H03020, H03021

N7	H03019 is:	H03020 & H03021 are:	H03019 is coded as:	H03020 & H03021 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 7:
Responses to H03020 and H03021 are both missing.

Definition of "blank or NA" in Coding Table for Note 7:
Responses to H03020 and H03021 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 7:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 8:
H03022, H03023, H03024

N8	H03022 is:	H03023 & H03024 are:	H03022 is coded as:	H03023 & H03024 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 8:
Responses to H03023 and H03024 are both missing.

Definition of "blank or NA" in Coding Table for Note 8:
Responses to H03023 and H03024 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 8:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 9:
H03026, H03027-H03036

N9	H03026 is:	H03027- H03036 are:	H03026 is coded as:	H03027- H03036 are coded as:	*
1	1: None	At least one is "marked", "All are blank", or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
2	2-7, missing, or multiple response	"Blank or NA"	1: None	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2-7	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
4	Missing response	"All are blank"	Stands as original value	Stand as original value	
5	Multiple response	"All are blank"	1: None	.N, valid skip	B
6	Missing or Multiple response	At least one is "marked"	Stands as original value	Stands 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 H03027-H03036 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9:
Responses to H03027-H03036 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

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:
S03R01, S03R02-S03R04

N10	S03R01 is:	S03R02-S03R04 Are:	S03R01 is coded as:	S03R02-S03R04 Are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 10:
S03R02-S03R04 are all missing.

Definition of "blank or NA" in Coding Table for Note 10:
S03R02-S03R04 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 10:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 12:
S03F01, S03F02

N4	S03F01 is:	S03F02 is:	S03F01 is coded as:	S03F02 is coded as:	*
1	1: yes	1, 2, 3,4,5,6, missing, or multiple response	Stands as original value	Stands as original value	
2	2: no, missing, or multiple response	1, 2, 3,4,5,6, multiple response	1: yes	Stands as original value	B
3	2: no	Missing	Stands as original value	.N, valid skip	F
4	Missing response	Missing response	Stands as original value	Stands as original value	
5	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 13:
S03V01, S03V02-S03V05

N10	S03V01 is:	S03V02-S03V05 Are:	S03V01 is coded as:	S03V02-S03V05 Are coded as:	*
1	1,2,3,4: some or no healthcare	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1,2,3: at least some healthcare, missing, or multiple response	"Blank or NA"	-6: didn't need healthcare in past 12 months	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	4: no healthcare	"Blank or NA"	Stands as original value	Stands as original value	
4	-6: didn't need healthcare in past 12 months	At least one is "marked" , "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 response	"All are blank"	Stands as original value	Stands as original value	
6	Multiple response	"All are blank"	-6, didn't need healthcare in past 12 months	.N, valid skip	B
7	Missing or Multiple response	At least one is "marked"	Stands as original value	Stands as original value	

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

Definition of "all are blank" in Coding Table for Note 13:
S03V02-S03V05 are all missing.

Definition of "blank or NA" in Coding Table for Note 13:
S03V02-S03V05 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 13:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 14:
H03039, H03040-H03042

N14	H03039 is:	H03040-H03042 are:	H03039 is coded as:	H03040-H03042 are coded as:	*
1	1: yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2: no, missing, or multiple response	At least one is "marked" or "blank or don't know"	1: yes	Stand as original value	B
4	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	
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 14:
Responses to H03040-H03042 are all missing.

Definition of "blank or NA" in Coding Table for Note 14:
Responses to H03040-H03042 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 14:
Responses to H03040-H03042 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "marked" in Coding Table for Note 14:
Any pattern of marks outside the definitions "all are blank," "blank or NA," or "blank or don't know."

Table for Note 15:
H03043, H03044

N15	H03043 is:	H03044 is:	H03043 is coded as:	H03044 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't look for information in health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't look for information in health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 16:
H03045, H03046

N16	H03045 is:	H03046 is:	H03045 is coded as:	H03046 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't call health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't call health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 17:
H03047, H03048, H03049

N17	H03047 is:	H03048 & H03049 are:	H03047 is coded as:	H03048 & H03049 are coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 17:
Responses to H03048 an H03049 are both missing.

Definition of "blank or NA" in Coding Table for Note 17:
Responses to H03048 and H03049 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 17:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 18:
H03050, H03051

N18	H03050 is:	H03051 is:	H03050 is coded as:	H03051 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't have any experience	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't have any experience	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 19A:
H03026, H03062

N19A	H03026 is:	H03062 is:	H03026 is coded as:	H03062 is coded as:	*
1	1: none	Missing, or multiple response	Stands as original value	-6: no visits in the last 12 months	F
2	1: none	1-5, -6	Stands as original value	Stands as original value	
3	2-7, missing, or multiple response	1-5, -6, missing, or multiple response	Stands as original value	Stands as original value	

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

Coding Table for Note 19:
   H03059--H03062

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
1	1: ever smoked	3 or 4: still smoke	Marked or multiple response	Any value	Stands as original value	Stands as original value	.C, question should be skipped	Stands as original value	F
2	1: ever smoked	3 or 4: still smoke	Missing response	Any value	Stands as original value	Stands as original value	.N, valid skip	Stands as original value	F
3	1: ever smoked	2: quit	2: quit >1 year ago or – 5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
4	1: ever smoked	2: quit	2: quit >1 year ago or -5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	F
5	1: ever smoked	2: quit	3: quit <1 year ago, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
6	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	Stands as original value	2: quit	Stands as original value	.C, question should be skipped	F B
7	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	2: quit	Stands as original value	.N, valid skip	F B
8	1: ever smoked	-5: don't know, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	2: quit	Stands as original value	Stands as original value	B
9	1: ever smoked	-5:don't know, missing, or multiple response	-5: don't know, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
10	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Marked or multiple response	Any value	1: ever smoked	Stands as original value	.C, question should be skipped	Stands as original value	B F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
11	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Missing response	Any value	1: ever smoked	Stands as original value	.N, valid skip	Stands as original value	B
12	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Marked or multiple response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.C, question should be skipped	F
13	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Missing response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.N, valid skip	F
14	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Marked or multiple response	Stands as original value	.C, question should be skipped	.N, valid skip	.C, question should be skipped	F
15	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Missing response	Stands as original value	.C, question should be skipped	.N, valid skip	.N, valid skip	F
16	2: never or -5: don't know	Missing response	Marked or multiple response	Marked or multiple response	Stands as original value	.N, valid skip	.C, question should be skipped	.C, question should be skipped	F
17	2: never or -5: don't know	Missing response	Marked or multiple response	Missing response	Stands as original value	.N, valid skip	.C, question should be skipped	.N, valid skip	F
18	2: never or -5: don't know	Missing response	Missing response	Marked or multiple response	Stands as original value	.N, valid skip	.N, valid skip	.C, question should be skipped	F
19	2: never or -5: don't know	Missing response	Missing response	Missing response	Stands as original value	.N, valid skip	.N, valid skip	.N, valid skip	F
20	Missing or multiple response	2: quit, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	.C, question should be skipped	Stands as original value	Stands as original value	F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
21	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	1: ever smoked	Stands as original value	Stands as original value	.C, question should be skipped	B F
22	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	.C, question should be skipped	Stands as original value	.N, valid skip	F
23	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	
24	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
25	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	2-5: some visits	1: ever smoked	Stands as original value	Stands as original value	Stands as original value	B
26	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	1: none, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
27	Missing or multiple response	-5: don't know	Marked or multiple response	Marked or multiple response	Stands as original value	Stands as original value	.C, question should be skipped	.C, question should be skipped	F
28	Missing or multiple response	-5: don't know	Marked or multiple response	Missing response	Stands as original value	Stands as original value	.C, question should be skipped	.N, valid skip	F
29	Missing or multiple response	-5: don't know	Missing response	Missing response	Stands as original value	Stands as original value	.N, valid skip	.N, valid skip	
30	Missing or multiple response	-5: don't know	Missing response	Marked or multiple response	Stands as original value	Stands as original value	.N, valid skip	.C, question should be skipped	F

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

Coding Table for Note 20:

Note 20 (Part A):
H03069, H03070, H03071

N20A	H03069 is:	H03070 is:	H03071 is:	H03069 is coded as:	H03070 is coded as:	H03071 is coded as:	*
1	1: Yes, currently pregnant	Missing	Marked, or multiple response	2: No, but have been in past year	.N, valid skip	Stands as original value	F
2	1: Yes, currently pregnant	Any response	Missing	Stands as original value	Stands as original value	Stands as original value	
3	1: Yes, currently pregnant	Marked, multiple response	Any response	Stands as original value	Stands as original value	Stands as original value	
4	2, 3, Missing, Multiple	Any response	Any response	Stands as original value	Stands as original value	Stands as original value	

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

Note 20(Part B):
H03063, SEX, XSEXA, H03064-H03071, S03O01-S03O06

N20B	H03063:	SEX is:	H03064 IS:	H03065--H03071, S03O01-S03O06 are:	XSEXA is coded as:
1	Missing or multiple response	F	Marked	Any marked	2, female
2	Missing or multiple response	F	Missing or multiple response	All missing or multiple response	2, female
3	Missing or multiple response	M	Marked	Any marked	1, male
4	Missing or multiple response	M	Missing or multiple response	All missing or multiple response	1, male
5	Missing or multiple response	Any value	Marked	All missing or multiple response	1, male
6	Missing or multiple response	Any value	Missing or multiple response	Any marked	2, female
7	Missing or multiple response	Z	Marked	Any marked	., missing value
8	Missing or multiple response	Z	Missing or multiple response	All missing or multiple response	., missing value
9	1, male	Any value	Marked	All missing or multiple response	1, male
10	1, male	F	Missing or multiple response	Any marked	2, female
11	1, male	M or Z	Missing or multiple response	Any marked	1, male
12	1, male	Any value	Marked	Any marked	1, male
13	1, male	Any value	Missing or multiple response	All missing or multiple response	1, male
14	2, female	Any value	Missing or multiple response	Any marked	2, female
15	2, female	M	Marked	All missing or multiple response	1, male
16	2, female	F or Z	Marked	All missing or multiple response	2, female
17	2, female	Any value	Marked	Any marked	2, female
18	2, female	Any value	Missing or multiple response	All missing or multiple response	2, female

SEX 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 (H03063), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 20 (Part C):
XSEXA, H03064

N20C	XSEXA is:	H03064 is:	H03064 is coded as:	*
1	1: Male	Marked, missing, or multiple response	Stands as original value	
2	2: Female	Marked or multiple response	.C, question should be skipped	F
3	2: Female	Missing response	.N, valid skip	F
4	Missing	Any response	Missing value	F

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

Note 20 (Part D):
XSEXA, H03065 - H03071, S03O01-S03O06

N20D	XSEXA is:	H03065--H03071, S03O01-S03O06 are:	H03065 --H03071, S03O01-S03O06 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"	Stands 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 20c:
All variables H03065--H03071, S03O01-S03O06 are missing.

Definition of "marked" in Coding Table for Note 20c:
Any pattern of marks outside the definition "all are blank."

Coding Table for Note 21
XSEXA, AGE, H03066, H03067, H03068

N21	XSEXA is:	AGE is:	H03066 is:	H03067 & H03068 are:	H03066 is coded as:	H03067 & H03068 are coded as:	*
1	1: Male	Any value	.C, question should be skipped, or .N, valid skip	C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Marked, missing, or multiple response	Stands as original value	Stand as original value	
3	2: Female	Any value	1: under 40	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
4	2: Female	Any value	Multiple response	Marked or multiple response	2: > 40	Stand as original value	
5	2: Female	Any value	Multiple response	Missing	1: < 40	.N, valid skip	B F
6	2: Female	Any value	Missing	Marked or multiple response	2: > 40	Stand as original value	B
7	2: Female	< 40	Missing	Missing	1: < 40	.N, valid skip	F
8	2: Female	>=40	Missing	Missing	1: < 40	.N, valid skip	B
9	2: Female	Missing	Missing	Missing	Stands as original value	Stand as original value	
10	Missing	Any value	Missing	Missing	Stands as original value	Stand as original value	

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

Coding Table for Note 22:
XSEXA, H03069, H03070, H03071, S03O01-S03O06

N22	XSEXA is:	H03069 is:	H03070 is:	H03071, S03O01-S03O06 are:	H03069 is coded as:	H03070 is coded as:	H03071, S03O01-S03O06 are coded as:	*
1	1: Male	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: pregnant now	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	
3	2: female	2: pregnant in last 12 months	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	2: Female	3: not pregnant in past 12 months	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	2: Female	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	1: pregnant now	Stands as original value	Stands as original value	B
6	2: Female	Missing response	Missing response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	
7	2: Female	Multiple response	Missing response	Marked, missing or multiple response	3: not pregnant in past 12 months	.N, valid skip	.N, valid skip if missing; .C, question should be skipped if marked	B F
8	Missing	Missing or multiple response	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	

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

2003 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB)
CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS Numeric	ASCII/EBCDIC Numeric	Description
.	-9	NO RESPONSE
.A	-8	Multiple response error
.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 '.', multiple responses '.A', and incomplete grids '.I' are encoded prior to implementation of the Coding Scheme Notes (see below).

Coding Table for Note 1:
   H03006, H03007

N1	H03006 is:	H03007 is:	H03006 is coded as:	H03007 is coded as:	*
1	1-11, health plan, -5, not sure	Marked, missing, or multiple response	Stands as original value	Stands as original value	
2	-6, no usage in past 12 months	Marked or multiple response	Stands as original value	.C, question should be skipped	F
3	-6, no usage in past 12 months	Missing response	Stands as original value	.N, valid skip	F
4	Missing response	Marked, missing, or multiple response	Stands as original value	Stands as original value	
5	Multiple response	Marked or multiple response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	-6: Did not use any health plan in the last 12 months	.N, valid skip	B

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

Coding Table for Note 2:
   H03008, H03009

N2	H03008 is:	H03009 is:	H03008 is coded as:	H03009 is coded as:	*
1	1: yes	1-3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't get a new doctor	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1- 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't get a new doctor	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 3:
H03010, S03C01-S03C04, H03011

N3	H03010 is:	S03C01-S03C04, H03011 is:	H03010 is coded as:	S03C01-S03C04, H03011 is coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or no or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stands as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 3:
Responses to S03C01-S03C04 and H03011 are all missing.

Definition of "blank or no or NA" in Coding Table for Note 3:
All of the following are true: S03C03 is either '2' or missing, S03C01, S03C02, S03C04, and H03011 are a combination of not applicable (-6) or missing.

Definition of "marked" in Coding Table for Note 3:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 3A:
S03C03, S03C04

N3A	S03C03 is:	S03C04 is:	S03C03 is coded as:	S03C04 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	1, 2, missing, or multiple response	Stands as original value	Stands as original value	
3	1: yes, missing, or multiple response	-6: don't have health problems or don't have personal doctor or nurse	2: No	.C, question should be skipped	B
4	2: no, missing, or multiple response	1, 2, multiple	1: yes	Stands as original value	B
5	2: no	Missing, or –6: don't have health problems or don't have personal doctor or nurse	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
6	Missing response	Missing response	Stands as original value	Stands as original value	
7	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 4:
H03012, H03013

N4	H03012 is:	H03013 is:	H03012 is coded as:	H03013 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need to see a specialist	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need to see a specialist	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 5:
H03014, S03C05, H03015, H03016

N5	H03014 is:	S03C05, H03015, H03016 Are:	H03014 is coded as:	S03C05, H03015, H03016 Are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 5:
S03C05, H03015 and H0316 are both missing.

Definition of "blank or NA" in Coding Table for Note 5:
S03C05, H03015 and H03016 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 5:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 5A:
S03C05, H03015 & H03016

N5A	S03C05 is:	H03015 & H03016 are:	S03C05 is coded as:	H03015 & H03016 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	-6: None	"All are blank" or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
3	-6: None, missing, or multiple response	At least one is "marked"	Stands as original value	Stand as original value	
4	1-6, missing, or multiple response	"Blank or NA"	-6: None	.N, valid skip if missing, .C, question should be skipped if marked	B
5	1-6	At least one is "marked" or "All are blank"	Stands as original value	Stand as original value	
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	-6:None	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 5A:
Both H03015 and H03016 are missing.

Definition of "blank or NA" in Coding Table for Note 5A:
Responses to questions H03015 and H03016 are either both not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 5A:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 6:
H03017, H03018

N6	H03017 is:	H03018 is:	H03017 is coded as:	H03018 is coded as:	*
1	1: yes	1-4: how often, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: no calls	2: no	.C, question should be skipped	B F
3	2: no, missing or multiple response	1-4: how often, multiple response	1: yes	Stands as original value	B
4	2: no	-6: no calls or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 7:
H03019, H03020, H03021

N7	H03019 is:	H03020 & H03021 are:	H03019 is coded as:	H03020 & H03021 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 7:
Responses to H03020 and H03021 are both missing.

Definition of "blank or NA" in Coding Table for Note 7:
Responses to H03020 and H03021 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 7:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 8:
H03022, H03023, H03024

N8	H03022 is:	H03023 & H03024 are:	H03022 is coded as:	H03023 & H03024 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 8:
Responses to H03023 and H03024 are both missing.

Definition of "blank or NA" in Coding Table for Note 8:
Responses to H03023 and H03024 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 8:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 9:
H03026, H03027-H03036, S03C06-S03C08

N9	H03026 is:	H03027- H03036, S03C06-S03C08 are:	H03026 is coded as:	H03027- H03036, S03C06-S03C08 are coded as:	*
1	1: None	At least one is "marked", "All are blank", or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
2	2-7, missing, or multiple response	"Blank or NA"	1: None	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2-7	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
4	Missing response	"All are blank"	Stands as original value	Stand as original value	
5	Multiple response	"All are blank"	1: None	.N, valid skip	B
6	Missing or Multiple Response	At least one is "Marked"	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 H03027-H03036, S03C06-S03C08 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9:
Responses to H03027-H03036, S03C06-S03C08 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

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 9A:
S03C06, S03C07, S03C08

N9A	S03C06 is:	S03C07 & S03C08 are:	S03C06 is coded as:	S03C07 & S03C08 are coded as:	*
1	.N, valid skip .C, question should be skipped	.N, valid skip .C, question should be skipped	Stands as original value	Stand as original value	
2	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
3	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B
4	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
5	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	F
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 9A:
Responses to S03C07 and S03C08 are both missing.

Definition of "Blank or NA" in Coding Table for Note 9A:
Responses to S03C07 and S03C08 are either both not applicable (-6) or a combination of missing response and not applicable (-6).

Definition of "marked" in Coding Table for Note 9A:
Any pattern of marks outside the definitions "all are blank" and "Blank or No or NA."

Coding Table for Note 9B:
S03C09, S03C10

N9B	S03C09 is:	S03C10 is:	S03C09 is coded as:	S03C10 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need special medical equipment	2: No	.C, question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need special medical equipment	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	

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

Coding Table for Note 9C:
S03C11, S03C12

N9C	S03C11 is:	S03C12 is:	S03C11 is coded as:	S03C12 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need special therapy	2: No	.C, question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need special therapy	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	

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

Coding Table for Note 9D:
S03C13, S03C14

N9D	S03C13 is:	S03C14 is:	S03C13 is coded as:	S03C14 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need home healthcare	2: No	.C, question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need home healthcare	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 13:
S03V01, S03V02, S03V04-S03V07

N13	S03V01 is:	S03V02, S03V04-S03V07 Are:	S03V01 is coded as:	S03V02, S03V04-S03V07 Are coded as:	*
1	1,2,3,4: some or no healthcare	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1,2,3: at least some healthcare, missing, or multiple response	"Blank or NA"	-6: didn't need healthcare in past 12 months	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	4: no healthcare	"Blank or NA"	Stands as original value	Stands as original value	
4	-6: didn't need healthcare in past 12 months	At least one is "marked", "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 response	"All are blank"	Stands as original value	Stands as original value	
6	Multiple response	"All are blank"	-6, didn't need healthcare in past 12 months	.N, valid skip	B
7	Missing or Multiple response	At least one is "marked"	Stands as original value	Stands as original value	

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

Definition of "all are blank" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are all missing.

Definition of "blank or NA" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 13:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 14:
H03039, H03040-H03042

N14	H03039 is:	H03040-H03042 are:	H03039 is coded as:	H03040-H03042 are coded as:	*
1	1: yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	Stand as original value	
2	1: yes, -5: don't know, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2: no, -5: don't know, missing, or multiple response	At least one is "marked" or "blank or don't know"	1: yes	Stand as original value	B
4	2: no, -5: don't know	"Blank or NA" or "all are blank"	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 14:
Responses to H03040-H03042 are all missing.

Definition of "blank or NA" in Coding Table for Note 14:
Responses to H03040-H03042 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 14:
Responses to H03040-H03042 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "marked" in Coding Table for Note 14:
Any pattern of marks outside the definitions "all are blank," "blank or NA," or "blank or don't know."

Table for Note 15:
H03043, H03044

N15	H03043 is:	H03044 is:	H03043 is coded as:	H03044 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't look for information in health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't look for information in health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 16:
H03045, H03046

N16	H03045 is:	H03046 is:	H03045 is coded as:	H03046 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't call health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't call health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 17:
H03047, H03048, H03049

N17	H03047 is:	H03048 & H03049 are:	H03047 is coded as:	H03048 & H03049 are coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 17:
Responses to H03048 an H03049 are both missing.

Definition of "blank or NA" in Coding Table for Note 17:
Responses to H03048 and H03049 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 17:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 18:
H03050, H03051

N18	H03050 is:	H03051 is:	H03050 is coded as:	H03051 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't have any experience	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't have any experience	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 19:
H03059--H03062

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
1	1: ever smoked	3 or 4: still smoke	Marked or multiple response	Any value	Stands as original value	Stands as original value	.C, question should be skipped	Stands as original value	F
2	1: ever smoked	3 or 4: still smoke	Missing response	Any value	Stands as original value	Stands as original value	.N, valid skip	Stands as original value	F
3	1: ever smoked	2: quit	2: quit >1 year ago or – 5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
4	1: ever smoked	2: quit	2: quit >1 year ago or -5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	F
5	1: ever smoked	2: quit	3: quit <1 year ago, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
6	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	Stands as original value	2: quit	Stands as original value	.C, question should be skipped	F B
7	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	2: quit	Stands as original value	.N, valid skip	F B
8	1: ever smoked	-5: don't know, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	2: quit	Stands as original value	Stands as original value	B
9	1: ever smoked	-5:don't know, missing, or multiple response	-5: don't know, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
10	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Marked or multiple response	Any value	1: ever smoked	Stands as original value	.C, question should be skipped	Stands as original value	B F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
11	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Missing response	Any value	1: ever smoked	Stands as original value	.N, valid skip	Stands as original value	B
12	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Marked or multiple response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.C, question should be skipped	F
13	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Missing response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.N, valid skip	F
14	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Marked or multiple response	Stands as original value	.C, question should be skipped	.N, valid skip	.C, question should be skipped	F
15	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Missing response	Stands as original value	.C, question should be skipped	.N, valid skip	.N, valid skip	F
16	2: never or -5: don't know	Missing response	Marked or multiple response	Marked or multiple response	Stands as original value	.N, valid skip	.C, question should be skipped	.C, question should be skipped	F
17	2: never or -5: don't know	Missing response	Marked or multiple response	Missing response	Stands as original value	.N, valid skip	.C, question should be skipped	.N, valid skip	F
18	2: never or -5: don't know	Missing response	Missing response	Marked or multiple response	Stands as original value	.N, valid skip	.N, valid skip	.C, question should be skipped	F
19	2: never or -5: don't know	Missing response	Missing response	Missing response	Stands as original value	.N, valid skip	.N, valid skip	.N, valid skip	F
20	Missing or multiple response	2: quit, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	.C, question should be skipped	Stands as original value	Stands as original value	F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
21	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	1: ever smoked	Stands as original value	Stands as original value	.C, question should be skipped	B F
22	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	.C, question should be skipped	Stands as original value	.N, valid skip	F
23	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	
24	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
25	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	2-5: some visits	1: ever smoked	Stands as original value	Stands as original value	Stands as original value	B
26	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	1: none, -6::no visits, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
27	Missing or multiple response	-5: don't know	Marked or multiple response	Marked or multiple response	Stands as original value	Stands as original value	.C, question should be skipped	.C, question should be skipped	F
28	Missing or multiple response	-5: don't know	Marked or multiple response	Missing response	Stands as original value	Stands as original value	.C, question should be skipped	.N, valid skip	F
29	Missing or multiple response	-5: don't know	Missing response	Missing response	Stands as original value	Stands as original value	.N, valid skip	.N, valid skip	
30	Missing or multiple response	-5: don't know	Missing response	Marked or multiple response	Stands as original value	Stands as original value	.N, valid skip	.C, question should be skipped	F

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

Coding Table for Note 20:

Note 20 (Part B):
H03063, SEX, XSEXA, H03064-H03071

N20B	H03063:	SEX is:	H03064 IS:	H03065--H03071 are:	XSEXA is coded as:
1	Missing or multiple response	F	Marked	Any marked	2, female
2	Missing or multiple response	F	Missing or multiple response	All missing or multiple response	2, female
3	Missing or multiple response	M	Marked	Any marked	1, male
4	Missing or multiple response	M	Missing or multiple response	All missing or multiple response	1, male
5	Missing or multiple response	Any value	Marked	All missing or multiple response	1, male
6	Missing or multiple response	Any value	Missing or multiple response	Any marked	2, female
7	Missing or multiple response	Z	Marked	Any marked	., missing value
8	Missing or multiple response	Z	Missing or multiple response	All missing or multiple response	., missing value
9	1, male	Any value	Marked	All missing or multiple response	1, male
10	1, male	F	Missing or multiple response	Any marked	2, female
11	1, male	M or Z	Missing or multiple response	Any marked	1, male
12	1, male	Any value	Marked	Any marked	1, male
13	1, male	Any value	Missing or multiple response	All missing or multiple response	1, male
14	2, female	Any value	Missing or multiple response	Any marked	2, female
15	2, female	M	Marked	All missing or multiple response	1, male
16	2, female	F or Z	Marked	All missing or multiple response	2, female
17	2, female	Any value	Marked	Any marked	2, female
18	2, female	Any value	Missing or multiple response	All missing or multiple response	2, female

SEX 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 (H03063), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 20 (Part C):
XSEXA, H03064

N20C	XSEXA is:	H03064 is:	H03064 is coded as:	*
1	1: Male	Marked, missing, or multiple response	Stands as original value	
2	2: Female	Marked or multiple response	.C, question should be skipped	F
3	2: Female	Missing response	.N, valid skip	F
4	Missing	Any response	Missing value	F

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

Note 20 (Part D):
XSEXA, H03065 - H03071

N20D	XSEXA is:	H03065--H03071 are:	H03065 --H03071 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"	Stands 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 20d:
All variables H03065--H03071 are missing.

Definition of "marked" in Coding Table for Note 20d:
Any pattern of marks outside the definition "all are blank."

Coding Table for Note 21
XSEXA, AGE, H03066, H03067, H03068

N21	XSEXA is:	AGE is:	H03066 is:	H03067 & H03068 are:	H03066 is coded as:	H03067 & H03068 are coded as:	*
1	1: Male	Any value	.C, question should be skipped, or .N, valid skip	C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Marked, missing, or multiple response	Stands as original value	Stand as original value	
3	2: Female	Any value	1: under 40	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
4	2: Female	Any value	Multiple response	Marked or multiple response	2: > 40	Stand as original value	
5	2: Female	Any value	Multiple response	Missing	1: < 40	.N, valid skip	B F
6	2: Female	Any value	Missing	Marked or multiple response	2: > 40	Stand as original value	B
7	2: Female	< 40	Missing	Missing	1: < 40	.N, valid skip	F
8	2: Female	>=40	Missing	Missing	1: < 40	.N, valid skip	B
9	2: Female	Missing	Missing	Missing	Stands as original value	Stand as original value	
10	Missing	Any value	Missing	Missing	Stands as original value	Stand as original value	

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

Coding Table for Note 22:
XSEXA, H03069, H03070, H03071

N22	XSEXA is:	H03069 is:	H03070 Is:	H03071 are:	H03069 is coded as:	H03070 is coded as:	H03071 are coded as:	*
1	1: Male	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: pregnant now	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	
3	2: female	2: pregnant in last 12 months	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	2: Female	3: not pregnant in past 12 months	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	2: Female	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	1: pregnant now	Stands as original value	Stands as original value	B
6	2: Female	Missing response	Missing response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	
7	2: Female	Multiple response	Missing response	Marked, missing or multiple response	3: not pregnant in past 12 months	.N, valid skip	.N, valid skip if missing; .C, question should be skipped if marked	B F
8	Missing	Missing or multiple response	Marked, missing or multiple response	Marked, missing or multiple response	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:
S03C20, S03C21, S03C22

N23	S03C020 is:	S03C21 & S03C22 are:	S03C20 is coded as:	S03C21 & S03C22 are coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	N, valid skip if missing; .C, question should be skipped if marked	B
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 23:
Responses to S03C21 and S03C22 are both missing.

Definition of "Blank or NA" in Coding Table for Note 23:
Responses to S03C21 and S03C22 are either both not applicable (-6) or a combination of missing response and not applicable (-6).

Definition of "marked" in Coding Table for Note 23:
Any pattern of marks outside the definitions "all are blank" and "Blank or No or NA."

CODING SCHEME AND CODING TABLES - QUARTER III

2003 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB)
CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS Numeric	ASCII/EBCDIC Numeric	Description
.	-9	NO RESPONSE
.A	-8	Multiple response error
.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 '.', multiple responses '.A', and incomplete grids '.I' are encoded prior to implementation of the Coding Scheme Notes (see below).

Coding Table for Note 1:
  H03006, H03007

N1	H03006 is:	H03007 is:	H03006 is coded as:	H03007 is coded as:	*
1	1-11, health plan, -5, not sure	Marked, missing, or multiple response	Stands as original value	Stands as original value	
2	-6, no usage in past 12 months	Marked or multiple response	Stands as original value	.C, question should be skipped	F
3	-6, no usage in past 12 months	Missing response	Stands as original value	.N, valid skip	F
4	Missing response	Marked, missing, or multiple response	Stands as original value	Stands as original value	
5	Multiple response	Marked or multiple response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	-6: Did not use any health plan in the last 12 months	.N, valid skip	B

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

Coding Table for Note 2:
  H03008, H03009

N2	H03008 is:	H03009 is:	H03008 is coded as:	H03009 is coded as:	*
1	1: yes	1-3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't get a new doctor	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1- 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't get a new doctor	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 3:
H03010, H03011

N3	H03010 is:	H03011 is:	H03010 is coded as:	H03011 is coded as:	*
1	1: yes	0-10, missing, or multiple response	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	-6, I don't have a personal doctor or nurse	2: no	.C, question should be skipped	B F
3	2: no, missing, or multiple response	0-10 or multiple response	1: yes	Stands as original value	B
4	2: no	-6, I don't have a personal doctor or nurse, or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 4:
H03012, H03013

N4	H03012 is:	H03013 is:	H03012 is coded as:	H03013 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need to see a specialist	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need to see a specialist	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 5:
H03014, H03015, H03016

N5	H03014 is:	H03015, H03016 Are:	H03014 is coded as:	H03015, H03016 Are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 5:
H03015 and H0316 are both missing.

Definition of "blank or NA" in Coding Table for Note 5:
H03015 and H03016 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 5:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 6:
H03017, H03018

N6	H03017 is:	H03018 is:	H03017 is coded as:	H03018 is coded as:	*
1	1: yes	1-4: how often, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: no calls	2: no	.C, question should be skipped	B F
3	2: no, missing or multiple response	1-4: how often, multiple response	1: yes	Stands as original value	B
4	2: no	-6: no calls or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 7:
H03019, H03020, H03021

N7	H03019 is:	H03020 & H03021 are:	H03019 is coded as:	H03020 & H03021 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 7:
Responses to H03020 and H03021 are both missing.

Definition of "blank or NA" in Coding Table for Note 7:
Responses to H03020 and H03021 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 7:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 8:
H03022, H03023, H03024

N8	H03022 is:	H03023 & H03024 are:	H03022 is coded as:	H03023 & H03024 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 8:
Responses to H03023 and H03024 are both missing.

Definition of "blank or NA" in Coding Table for Note 8:
Responses to H03023 and H03024 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 8:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 9:
H03026, H03027-H03036

N9	H03026 is:	H03027- H03036 are:	H03026 is coded as:	H03027- H03036 are coded as:	*
1	1: None	At least one is "marked", "All are blank", or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
2	2-7, missing, or multiple response	"Blank or NA"	1: None	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2-7	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
4	Missing response	"All are blank"	Stands as original value	Stand as original value	
5	Multiple response	"All are blank"	1: None	.N, valid skip	B
6	Missing or Multiple Response	At least one is "Marked"	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 H03027-H03036 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9:
Responses to H03027-H03036 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

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 9E:
S03Y01, S03Y02 - S03Y25

N9E	S03Y01 is:	S03Y02 - S03Y25 are:	S03Y01 is coded as:	S03Y02 - S03Y25 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 9E:
Responses to S03Y02-S03Y25 are both missing.

Definition of "blank or NA" in Coding Table for Note 9E:
Responses to S03Y02-S03Y25 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 9E:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 9F:
S03Y03, S03Y04, S03Y05- S03Y07

N9F	S03Y03 is:	S03Y04 is:	S03Y05 - S03Y07 are:	S03Y03 is coded as:	S03Y04 is coded as:	S03Y05 - S03Y07 are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	Stands as original value	
2	1, 3: yes, new prescription (only or and refills)	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	Stand as original value	Stand as original value	
3	2: yes, refills only	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	4: no	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	3: Yes, both new prescriptions and refills	Stand as original value	Stand as original value	B
6	Missing or multiple response	Missing response	Marked, missing or multiple response	Stands as original value	Stand 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 9F:
Responses to S03Y04-S03Y07 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9F:
Responses to S03Y04-S03Y07 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

Definition of "marked" in Coding Table for Note 9F:
Any pattern of marks outside the definitions "all are blank" and "Blank or NA."

Coding Table for Note 9G:
S03Y09, S03Y10, S03Y11-S03Y14

N9G	S03Y09 is:	S03Y10 is:	S03Y11 - S03Y14 are:	S03Y09 is coded as:	S03Y10 is coded as:	S03Y11 - S03Y14 are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	Stands as original value	
2	1, 3: yes, new prescription (only or and refills)	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	Stand as original value	Stand as original value	
3	2: yes, refills only	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	4: no	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	3: Yes, both new prescriptions and refills	Stand as original value	Stand as original value	B
6	Missing or multiple response	Missing response	Marked, missing or multiple response	Stands as original value	Stand 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 9G:
Responses to S03Y10-S03Y14 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9G:
Responses to S03Y10-S03Y14 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

Definition of "marked" in Coding Table for Note 9G:
Any pattern of marks outside the definitions "all are blank" and "Blank or NA."

Coding Table for Note 9H:
S03Y12, S03Y13A-S03Y13H

N9H	S03Y12 is:	S03Y13A-S03Y13H Are:	S03Y12 is coded as:	S03Y13A-S03Y13H Are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	
2	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
3	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
4	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
5	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
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 9H:
S03Y13A-S03Y13H are both missing.

Definition of "blank or NA" in Coding Table for Note 9H:
S03Y13A-S03Y13H are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 9H:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 9I:
S03Y15, S03Y16, S03Y17-S03Y20

N9I	S03Y15 is:	S03Y16 is:	S03Y17 - S03Y20 are:	S03Y15 is coded as:	S03Y16 is coded as:	S03Y17 - S03Y20 are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	Stands as original value	
2	1, 3: yes, new prescription (only or and refills)	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	Stand as original value	Stand as original value	
3	2: yes, refills only	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	4: no	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	3: Yes, both new prescriptions and refills	Stand as original value	Stand as original value	B
6	Missing or multiple response	Missing response	Marked, missing or multiple response	Stands as original value	Stand 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 9I:
Responses to S03Y16-S03Y20 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9I:
Responses to S03Y16-S03Y20 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

Definition of "marked" in Coding Table for Note 9I:
Any pattern of marks outside the definitions "all are blank" and "Blank or NA."

Coding Table for Note 9J:
S03Y17, S03Y18A-S03Y18D

N9J	S03Y17 is:	S03Y18A-S03Y18D Are:	S03Y17 is coded as:	S03Y18A-S03Y18D Are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	
2	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
3	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
4	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
5	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
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 9J:
S03Y18A-S03Y18D are both missing.

Definition of "blank or NA" in Coding Table for Note 9J:
S03Y18A-S03Y18D are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 9J:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 9K:
S03Y21, S03Y22-S03Y25

N9K	S03Y21 is:	S03Y22-S03Y25 Are:	S03Y21 is coded as:	S03Y22-S03Y25 Are coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	
2	1, 2, 3: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
3	1, 2, 3: yes, missing, or multiple response	"Blank or NA"	4:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
4	4: no, missing, or multiple response	At least one is "marked"	3: yes, both new prescription and refills	Stand as original value	B
5	4: 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
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	4: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 9K:
S03Y22-S03Y25 are both missing.

Definition of "blank or NA" in Coding Table for Note 9K:
S03Y22-S03Y25 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 9K:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 9L:
S03Y23, S03Y24

N9L	S03Y23 is:	S03Y24 is:	S03Y23 is coded as:	S03Y24 is coded as:	*
1	.N, valid skip or .C, question should not have been answered	.N, valid skip or .C, question should not have been answered	Stands as original value	Stands as original value	
2	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
3	1: yes, missing, or multiple response	-6: didn't use Express Scripts website	2: No	.C question should be skipped	B
4	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
5	2: no	Missing, or –6: didn't use Express Scripts website	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
6	Missing response	Missing response	Stands as original value	Stands as original value	
7	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 13:
S03V01, S03V02, S03V04-S03V07

N13	S03V01 is:	S03V02, S03V04-S03V07 Are:	S03V01 is coded as:	S03V02, S03V04-S03V07 Are coded as:	*
1	1,2,3,4: some or no healthcare	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1,2,3: at least some healthcare, missing, or multiple response	"Blank or NA"	-6: didn't need healthcare in past 12 months	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	4: no healthcare	"Blank or NA"	Stands as original value	Stands as original value	
4	-6: didn't need healthcare in past 12 months	At least one is "marked" , "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 response	"All are blank"	Stands as original value	Stands as original value	
6	Multiple response	"All are blank"	-6, didn't need healthcare in past 12 months	.N, valid skip	B F
7	Missing or Multiple response	At least one is "marked"	Stands as original value	Stands as original value	

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

Definition of "all are blank" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are all missing.

Definition of "blank or NA" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 13:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 14:
H03039, H03040-H03042

N14	H03039 is:	H03040-H03042 are:	H03039 is coded as:	H03040-H03042 are coded as:	*
1	1: yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	Stand as original value	
2	1: yes, -5: don't know, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B
3	2: no, -5: don't know, missing, or multiple response	At least one is "marked" or "blank or don't know"	1: yes	Stand as original value	B
4	2: no, -5: don't know	"Blank or NA" or "all are blank"	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 14:
Responses to H03040-H03042 are all missing.

Definition of "blank or NA" in Coding Table for Note 14:
Responses to H03040-H03042 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 14:
Responses to H03040-H03042 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "marked" in Coding Table for Note 14:
Any pattern of marks outside the definitions "all are blank," "blank or NA," or "blank or don't know."

Table for Note 15:
H03043, H03044

N15	H03043 is:	H03044 is:	H03043 is coded as:	H03044 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't look for information in health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't look for information in health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 16:
H03045, H03046

N16	H03045 is:	H03046 is:	H03045 is coded as:	H03046 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't call health plan	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't call health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 17:
H03047, H03048, H03049

N17	H03047 is:	H03048 & H03049 are:	H03047 is coded as:	H03048 & H03049 are coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 17:
Responses to H03048 an H03049 are both missing.

Definition of "blank or NA" in Coding Table for Note 17:
Responses to H03048 and H03049 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 17:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 18:
H03050, H03051

N18	H03050 is:	H03051 is:	H03050 is coded as:	H03051 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't have any experience	2: No	.C question should be skipped	B
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't have any experience	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B

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

Coding Table for Note 19:
H03059--H03062

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
1	1: ever smoked	3 or 4: still smoke	Marked or multiple response	Any value	Stands as original value	Stands as original value	.C, question should be skipped	Stands as original value	F
2	1: ever smoked	3 or 4: still smoke	Missing response	Any value	Stands as original value	Stands as original value	.N, valid skip	Stands as original value	F
3	1: ever smoked	2: quit	2: quit >1 year ago or – 5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
4	1: ever smoked	2: quit	2: quit >1 year ago or -5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	F
5	1: ever smoked	2: quit	3: quit <1 year ago, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
6	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	Stands as original value	2: quit	Stands as original value	.C, question should be skipped	F B
7	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	2: quit	Stands as original value	.N, valid skip	F B
8	1: ever smoked	-5: don't know, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	2: quit	Stands as original value	Stands as original value	B
9	1: ever smoked	-5:don't know, missing, or multiple response	-5: don't know, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
10	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Marked or multiple response	Any value	1: ever smoked	Stands as original value	.C, question should be skipped	Stands as original value	B F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
11	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Missing response	Any value	1: ever smoked	Stands as original value	.N, valid skip	Stands as original value	B
12	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Marked or multiple response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.C, question should be skipped	F
13	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Missing response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.N, valid skip	F
14	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Marked or multiple response	Stands as original value	.C, question should be skipped	.N, valid skip	.C, question should be skipped	F
15	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Missing response	Stands as original value	.C, question should be skipped	.N, valid skip	.N, valid skip	F
16	2: never or -5: don't know	Missing response	Marked or multiple response	Marked or multiple response	Stands as original value	.N, valid skip	.C, question should be skipped	.C, question should be skipped	F
17	2: never or -5: don't know	Missing response	Marked or multiple response	Missing response	Stands as original value	.N, valid skip	.C, question should be skipped	.N, valid skip	F
18	2: never or -5: don't know	Missing response	Missing response	Marked or multiple response	Stands as original value	.N, valid skip	.N, valid skip	.C, question should be skipped	F
19	2: never or -5: don't know	Missing response	Missing response	Missing response	Stands as original value	.N, valid skip	.N, valid skip	.N, valid skip	F
20	Missing or multiple response	2: quit, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	.C, question should be skipped	Stands as original value	Stands as original value	F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
21	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	1: ever smoked	Stands as original value	Stands as original value	.C, question should be skipped	B F
22	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	.C, question should be skipped	Stands as original value	.N, valid skip	F
23	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	
24	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
25	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	2-5: some visits	1: ever smoked	Stands as original value	Stands as original value	Stands as original value	B
26	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	1: none, -6::no visits, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
27	Missing or multiple response	-5: don't know	Marked or multiple response	Marked or multiple response	Stands as original value	Stands as original value	.C, question should be skipped	.C, question should be skipped	F
28	Missing or multiple response	-5: don't know	Marked or multiple response	Missing response	Stands as original value	Stands as original value	.C, question should be skipped	.N, valid skip	F
29	Missing or multiple response	-5: don't know	Missing response	Missing response	Stands as original value	Stands as original value	.N, valid skip	.N, valid skip	
30	Missing or multiple response	-5: don't know	Missing response	Marked or multiple response	Stands as original value	Stands as original value	.N, valid skip	.C, question should be skipped	F

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

Coding Table for Note 20:

Note 20 (Part B):
H03063, SEX, XSEXA, H03064-H03071

N20B	H03063:	SEX is:	H03064 IS:	H03065--H03071 are:	XSEXA is coded as:
1	Missing or multiple response	F	Marked	Any marked	2, female
2	Missing or multiple response	F	Missing or multiple response	All missing or multiple response	2, female
3	Missing or multiple response	M	Marked	Any marked	1, male
4	Missing or multiple response	M	Missing or multiple response	All missing or multiple response	1, male
5	Missing or multiple response	Any value	Marked	All missing or multiple response	1, male
6	Missing or multiple response	Any value	Missing or multiple response	Any marked	2, female
7	Missing or multiple response	Z	Marked	Any marked	., missing value
8	Missing or multiple response	Z	Missing or multiple response	All missing or multiple response	., missing value
9	1, male	Any value	Marked	All missing or multiple response	1, male
10	1, male	F	Missing or multiple response	Any marked	2, female
11	1, male	M or Z	Missing or multiple response	Any marked	1, male
12	1, male	Any value	Marked	Any marked	1, male
13	1, male	Any value	Missing or multiple response	All missing or multiple response	1, male
14	2, female	Any value	Missing or multiple response	Any marked	2, female
15	2, female	M	Marked	All missing or multiple response	1, male
16	2, female	F or Z	Marked	All missing or multiple response	2, female
17	2, female	Any value	Marked	Any marked	2, female
18	2, female	Any value	Missing or multiple response	All missing or multiple response	2, female

SEX 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 (H03063), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 20 (Part C):
XSEXA, H03064

N20C	XSEXA is:	H03064 is:	H03064 is coded as:	*
1	1: Male	Marked, missing, or multiple response	Stands as original value	
2	2: Female	Marked or multiple response	.C, question should be skipped	F
3	2: Female	Missing response	.N, valid skip	F
4	Missing	Any response	Missing value	F

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

Note 20 (Part D):
XSEXA, H03065 - H03071

N20D	XSEXA is:	H03065--H03071 are:	H03065 --H03071 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"	Stands 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 20d:
All variables H03065--H03071 are missing.

Definition of "marked" in Coding Table for Note 20d:
Any pattern of marks outside the definition "all are blank."

Coding Table for Note 21
XSEXA, AGE, H03066, H03067, H03068

N21	XSEXA is:	AGE is:	H03066 is:	H03067 & H03068 are:	H03066 is coded as:	H03067 & H03068 are coded as:	*
1	1: Male	Any value	.C, question should be skipped, or .N, valid skip	C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Marked, missing, or multiple response	Stands as original value	Stand as original value	
3	2: Female	Any value	1: under 40	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
4	2: Female	Any value	Multiple response	Marked or multiple response	2: > 40	Stand as original value	
5	2: Female	Any value	Multiple response	Missing	1: < 40	.N, valid skip	B F
6	2: Female	Any value	Missing	Marked or multiple response	2: > 40	Stand as original value	B
7	2: Female	< 40	Missing	Missing	1: < 40	.N, valid skip	F
8	2: Female	>=40	Missing	Missing	1: < 40	.N, valid skip	B
9	2: Female	Missing	Missing	Missing	Stands as original value	Stand as original value	
10	Missing	Any value	Missing	Missing	Stands as original value	Stand as original value	

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

Coding Table for Note 22:
XSEXA, H03069, H03070, H03071

N22	XSEXA is:	H03069 is:	H03070 Is:	H03071 are:	H03069 is coded as:	H03070 is coded as:	H03071 are coded as:	*
1	1: Male	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: pregnant now	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	
3	2: female	2: pregnant in last 12 months	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	2: Female	3: not pregnant in past 12 months	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	2: Female	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	1: pregnant now	Stands as original value	Stands as original value	B
6	2: Female	Missing response	Missing response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	
7	2: Female	Multiple response	Missing response	Marked, missing or multiple response	3:not pregnant in past 12 months	.N, valid skip	.N, valid skip if missing; .C, question should be skipped if marked	B F
8	Missing	Missing or multiple response	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	

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

CODING SCHEME AND CODING TABLES – QUARTER IV

2003 HEALTH CARE SURVEY OF DOD BENEFICIARIES (HCSDB)
CODING SCHEME AND CODING TABLES

BASIC SAS AND ASCII/EBCDIC MISSING DATA AND NOT APPLICABLE CODES

SAS Numeric	ASCII/EBCDIC Numeric	Description
.	-9	NO RESPONSE
.A	-8	Multiple response error
.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 '.', multiple responses '.A', and incomplete grids '.I' are encoded prior to implementation of the Coding Scheme Notes (see below).

Coding Table for Note 1:
   H03006, H03007

N1	H03006 is:	H03007 is:	H03006 is coded as:	H03007 is coded as:	*
1	1-11, health plan, -5, not sure	Marked, missing, or multiple response	Stands as original value	Stands as original value	
2	-6, no usage in past 12 months	Marked or multiple response	Stands as original value	.C, question should be skipped	F
3	-6, no usage in past 12 months	Missing response	Stands as original value	.N, valid skip	F
4	Missing response	Marked, missing, or multiple response	Stands as original value	Stands as original value	
5	Multiple response	Marked or multiple response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	-6: Did not use any health plan in the last 12 months	.N, valid skip	B F

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

Coding Table for Note 2:
H03008, H03009

N2	H03008 is:	H03009 is:	H03008 is coded as:	H03009 is coded as:	*
1	1: yes	1-3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't get a new doctor	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1- 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't get a new doctor	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 3:
H03010, H03011

N3	H03010 is:	H03011 is:	H03010 is coded as:	H03011 is coded as:	*
1	1: yes	0-10, missing, or multiple response	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	-6, I don't have a personal doctor or nurse	2: no	.C, question should be skipped	B F
3	2: no, missing, or multiple response	0-10 or multiple response	1: yes	Stands as original value	B
4	2: no	-6, I don't have a personal doctor or nurse, or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 4:
H03012, H03013

N4	H03012 is:	H03013 is:	H03012 is coded as:	H03013 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't need to see a specialist	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't need to see a specialist	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 5:
H03014, H03015, H03016

N5	H03014 is:	H03015, H03016 Are:	H03014 is coded as:	H03015, H03016 Are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B F

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

Definition of "all are blank" in Coding Table for Note 5:
H03015 and H0316 are both missing.

Definition of "blank or NA" in Coding Table for Note 5:
H03015 and H03016 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 5:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 6:
H03017, H03018

N6	H03017 is:	H03018 is:	H03017 is coded as:	H03018 is coded as:	*
1	1: yes	1-4: how often, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: no calls	2: no	.C, question should be skipped	B F
3	2: no, missing or multiple response	1-4: how often, multiple response	1: yes	Stands as original value	B
4	2: no	-6: no calls or missing	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 7:
H03019, H03020, H03021

N7	H03019 is:	H03020 & H03021 are:	H03019 is coded as:	H03020 & H03021 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B F

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

Definition of "all are blank" in Coding Table for Note 7:
Responses to H03020 and H03021 are both missing.

Definition of "blank or NA" in Coding Table for Note 7:
Responses to H03020 and H03021 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 7:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 8:
H03022, H03023, H03024

N8	H03022 is:	H03023 & H03024 are:	H03022 is coded as:	H03023 & H03024 are coded as:	*
1	1: yes	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2:no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
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 response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B F

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

Definition of "all are blank" in Coding Table for Note 8:
Responses to H03023 and H03024 are both missing.

Definition of "blank or NA" in Coding Table for Note 8:
Responses to H03023 and H03024 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 8:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 9:
H03026, H03027-H03036

N9	H03026 is:	H03027- H03036 are:	H03026 is coded as:	H03027- H03036 are coded as:	*
1	1: None	At least one is "marked", "All are blank", or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
2	2-7, missing, or multiple response	"Blank or NA"	1: None	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2-7	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
4	Missing response	"All are blank"	Stands as original value	Stand as original value	
5	Multiple response	"All are blank"	1: None	.N, valid skip	B F
6	Missing or Multiple Response	At least one is "Marked"	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 H03027-H03036 are all missing.

Definition of "Blank or NA" in Coding Table for Note 9:
Responses to H03027-H03036 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

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 13:
S03V01, S03V02, S03V04-S03V07

N13	S03V01 is:	S03V02, S03V04-S03V07 Are:	S03V01 is coded as:	S03V02, S03V04-S03V07 Are coded as:	*
1	1,2,3,4: some or no healthcare	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
2	1,2,3: at least some healthcare, missing, or multiple response	"Blank or NA"	-6: didn't need healthcare in past 12 months	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	4: no healthcare	"Blank or NA"	Stands as original value	Stands as original value	
4	-6: didn't need healthcare in past 12 months	At least one is "marked", "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 response	"All are blank"	Stands as original value	Stands as original value	
6	Multiple response	"All are blank"	-6, didn't need healthcare in past 12 months	.N, valid skip	B F
7	Missing or Multiple response	At least one is "marked"	Stands as original value	Stands as original value	

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

Definition of "all are blank" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are all missing.

Definition of "blank or NA" in Coding Table for Note 13:
S03V02, S03V04-S03V07 are either not applicable (-6), or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 13:
Any pattern of marks outside the definitions "all are blank" and "blank or NA."

Coding Table for Note 14:
H03039, H03040-H03042

N14	H03039 is:	H03040-H03042 are:	H03039 is coded as:	H03040-H03042 are coded as:	*
1	1: yes	At least one is "marked", "all are blank" or "blank or don't know"	Stands as original value	Stand as original value	
2	1: yes, -5: don't know, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, -5: don't know, missing, or multiple response	At least one is "marked" or "blank or don't know"	1: yes	Stand as original value	B
4	2: no, -5: don't know	"Blank or NA" or "all are blank"	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B F

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

Definition of "all are blank" in Coding Table for Note 14:
Responses to H03040-H03042 are all missing.

Definition of "blank or NA" in Coding Table for Note 14:
Responses to H03040-H03042 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 14:
Responses to H03040-H03042 are either all don't know (-5) or a combination of missing and don't know (-5).

Definition of "marked" in Coding Table for Note 14:
Any pattern of marks outside the definitions "all are blank," "blank or NA," or "blank or don't know."

Table for Note 15:
H03043, H03044

N15	H03043 is:	H03044 is:	H03043 is coded as:	H03044 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't look for information in health plan	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't look for information in health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 16:
H03045, H03046

N16	H03045 is:	H03046 is:	H03045 is coded as:	H03046 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't call health plan	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1, 2, 3, multiple response	1: yes	Stands as original value	B
4	2: no	Missing, or –6: didn't call health plan	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

Coding Table for Note 17:
H03047, H03048, H03049

N17	H03047 is:	H03048 & H03049 are:	H03047 is coded as:	H03048 & H03049 are coded as:	*
1	1: yes	At least one is "marked" or "all are blank"	Stands as original value	Stand as original value	
2	1: yes, missing, or multiple response	"Blank or NA"	2: no	.N, valid skip if missing; .C, question should be skipped if marked	B F
3	2: no, missing, or multiple response	At least one is "marked"	1: yes	Stand as original value	B
4	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	F
5	Missing response	"All are blank"	Stands as original value	Stand as original value	
6	Multiple response	"All are blank"	2: no	.N, valid skip	B F

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

Definition of "all are blank" in Coding Table for Note 17:
Responses to H03048 an H03049 are both missing.

Definition of "blank or NA" in Coding Table for Note 17:
Responses to H03048 and H03049 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 17:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 18**:
H03050, H03051

N18	H03050 is:	H03051 is:	H03050 is coded as:	H03051 is coded as:	*
1	1: yes	1, 2, 3, missing, or multiple response	Stands as original value	Stands as original value	
2	1: yes, missing, or multiple response	-6: didn't have any experience	2: No	.C question should be skipped	B F
3	2: no, missing, or multiple response	1, 2, 3, multiple response	Stands as original value	.C question should be skipped	F
4	2: no	Missing, or –6: didn't have any experience	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	2: no	.N, valid skip	B F

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

** In Quarter 4, 2003, the questionnaire was fielded with questions H03050, H03051, H03052, H03053 mistakenly ordered in the following way:
H03051, H03052, H03053, H03050.
As a result, beneficiaries with no paperwork experience in H03050 were directed to indicate that they had no paperwork problems in H03051, contrary to the intent of the questions. Note 18 has been modified to eliminate their responses to H03051.

Coding Table for Note 18A:
S03G01, S03G02-S03G08, S03G09- S03G14

N18 A	S03G01 is:	S03G02-S03G08 is:	S03G09 - S03G14 are:	S03G01 is coded as:	S03G02-S03G08 are coded as:	S03G09 - S03G14 are coded as:	*
1	2: yes, family of reservist	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	Stand as original value	Stand as original value	
2	1: yes, mobilized reservist	Marked, missing, or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
3	3: no	Marked, missing, or multiple response	Marked, missing or multiple response	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 or multiple response	At least one is "marked"	Marked, missing or multiple response	Stands as original value	Stand as original value	Stand as original value	
5	Missing or multiple response	"All are blank"	Marked, missing or multiple response	Stands as original value	Stand 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 18A:
Responses to S03G02-S03G14 are all missing.

Definition of "Blank or NA" in Coding Table for Note 18A:
Responses to S03G02-S03G14 are either all not applicable (-6) or a combination of missing response and not applicable (-6)

Definition of "marked" in Coding Table for Note 18A:
Any pattern of marks outside the definitions "all are blank" and "Blank or NA."

Coding Table for Note 18B:
S03G02, S03G03

N18B	S03G02 is:	S03G03 is:	S03G02 is coded as:	S03G04 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	2: yes through reservist	1, 2, missing, or multiple response	Stands as original value	Stands as original value	
3	1: yes through own policy; 3: no, missing, or multiple response	1, 2, Multiple	2: yes through reservist	Stands as original value	B
4	1: yes through own policy; 3: no	Missing	Stands as original value	.N, valid skip if missing	F
5	Missing response	Missing response	Stands as original value	Stands as original value	
6	Multiple response	Missing response	Stands as original value	Stands as original value	

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

Coding Table for Note 18C:
S03G04, S03G05-S03G11

N18C	S03G04 is:	S03G05-S03G11 are:	S03G04 is coded as:	S03G05-S03G11 are coded as:	*
1	.N, valid skip, or .C, question should be skipped	Any response	Stands as original value	Stands as original value	
2	1-2: TRICARE coverage	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
3	1-2: TRICARE coverage, -5: don't know, missing, or multiple response	"Blank or NA"	3: Only Civilian Coverage	.N, valid skip if missing; .C, question should be skipped if marked	B F
4	-5:Don't know	At least one is "marked"	Stands as original value	Stand as original value	
5	3: Only Civilian Coverage,-5:Don't know	"All are blank" or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
6	3: Only Civilian Coverage, missing, or multiple response	At least one is "marked"	Stands as original value	Stand as original value	
7	Missing response	"All are blank"	Stands as original value	Stand as original value	
8	Multiple response	"All are blank"	Stands as original value	Stands as original value	

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

Definition of "all are blank" in Coding Table for Note 18C:
Responses to S03G05-S03G11 are both missing.

Definition of "blank or NA" in Coding Table for Note 18C:
Responses to S03G05-S03G11 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 18C:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 18D:
S03G09, S03G10-S03G11

N18D	S03G09 is:	S03G10-S03G11 are:	S03G09 is coded as:	S03G10-S03G11 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	Stands as original value	
2	1:Yes, mine	"All are blank" or at least one is "marked"	Stands as original value	Stand as original value	
3	1:Yes, mine, missing, or multiple response	"All are blank"	3: No	.N, valid skip if missing; .C, question should be skipped if marked	B F
4	2-3, missing, or multiple response	At least one is "marked"	1:Yes, mine	Stand as original value	B
5	2-3	"All are blank" or "blank or NA"	Stands as original value	.N, valid skip if missing, .C, question should be skipped if marked	F
6	Missing response	"All are blank"	Stands as original value	Stand as original value	
7	Multiple response	"All are blank"	3: No	.N, valid skip	B

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

Definition of "all are blank" in Coding Table for Note 18D:
Responses to S03G10-S03G11 are both missing.

Definition of "blank or NA" in Coding Table for Note 18D:
Responses to S03G10-S03G11 are either all not applicable (-6) or a combination of not applicable (-6) and missing.

Definition of "marked" in Coding Table for Note 18D:
Any pattern of marks outside the definitions "all are blank" and "blank or NA"

Coding Table for Note 19:
    H03059--H03062

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
1	1: ever smoked	3 or 4: still smoke	Marked or multiple response	Any value	Stands as original value	Stands as original value	.C, question should be skipped	Stands as original value	F
2	1: ever smoked	3 or 4: still smoke	Missing response	Any value	Stands as original value	Stands as original value	.N, valid skip	Stands as original value	F
3	1: ever smoked	2: quit	2: quit >1 year ago or – 5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
4	1: ever smoked	2: quit	2: quit >1 year ago or -5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	F
5	1: ever smoked	2: quit	3: quit <1 year ago, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
6	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	Stands as original value	2: quit	Stands as original value	.C, question should be skipped	F B
7	1: ever smoked	-5: don't know, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	2: quit	Stands as original value	.N, valid skip	F B
8	1: ever smoked	-5: don't know, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	2: quit	Stands as original value	Stands as original value	B
9	1: ever smoked	-5:don't know, missing, or multiple response	-5: don't know, missing, or multiple response	Any value	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
10	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Marked or multiple response	Any value	1: ever smoked	Stands as original value	.C, question should be skipped	Stands as original value	B F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
11	2: never, -5: don't know, missing, or multiple response	3 or 4: still smoke	Missing response	Any value	1: ever smoked	Stands as original value	.N, valid skip	Stands as original value	B
12	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Marked or multiple response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.C, question should be skipped	F
13	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Marked or multiple response	Missing response	Stands as original value	.C, question should be skipped	.C, question should be skipped	.N, valid skip	F
14	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Marked or multiple response	Stands as original value	.C, question should be skipped	.N, valid skip	.C, question should be skipped	F
15	2: never or -5: don't know	2: quit, -5: don't know, or multiple response	Missing response	Missing response	Stands as original value	.C, question should be skipped	.N, valid skip	.N, valid skip	F
16	2: never or -5: don't know	Missing response	Marked or multiple response	Marked or multiple response	Stands as original value	.N, valid skip	.C, question should be skipped	.C, question should be skipped	F
17	2: never or -5: don't know	Missing response	Marked or multiple response	Missing response	Stands as original value	.N, valid skip	.C, question should be skipped	.N, valid skip	F
18	2: never or -5: don't know	Missing response	Missing response	Marked or multiple response	Stands as original value	.N, valid skip	.N, valid skip	.C, question should be skipped	F
19	2: never or -5: don't know	Missing response	Missing response	Missing response	Stands as original value	.N, valid skip	.N, valid skip	.N, valid skip	F
20	Missing or multiple response	2: quit, missing, or multiple response	3: quit <1 year ago	Any value	Stands as original value	.C, question should be skipped	Stands as original value	Stands as original value	F

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

Coding Table for Note 19 continued:

N19	H03059 Is:	H03060 is:	H03061 is:	H03062 is:	H03059 is coded as:	H03060 is coded as:	H03061 is coded as:	H03062 is coded as:	*
21	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Marked or multiple response	1: ever smoked	Stands as original value	Stands as original value	.C, question should be skipped	B F
22	Missing or multiple response	2: quit, missing, or multiple response	2: quit >1 year ago	Missing response	Stands as original value	.C, question should be skipped	Stands as original value	.N, valid skip	F
23	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Missing response	Stands as original value	Stands as original value	Stands as original value	.N, valid skip	
24	Missing or multiple response	2: quit, missing, or multiple response	-5: don't know	Marked or multiple response	Stands as original value	Stands as original value	Stands as original value	.C, question should be skipped	F
25	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	2-5: some visits	1: ever smoked	Stands as original value	Stands as original value	Stands as original value	B
26	Missing or multiple response	2: quit, missing, or multiple response	Missing or multiple response	1: none, -6::no visits, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	Stands as original value	
27	Missing or multiple response	-5: don't know	Marked or multiple response	Marked or multiple response	Stands as original value	Stands as original value	.C, question should be skipped	.C, question should be skipped	F
28	Missing or multiple response	-5: don't know	Marked or multiple response	Missing response	Stands as original value	Stands as original value	.C, question should be skipped	.N, valid skip	F
29	Missing or multiple response	-5: don't know	Missing response	Missing response	Stands as original value	Stands as original value	.N, valid skip	.N, valid skip	
30	Missing or multiple response	-5: don't know	Missing response	Marked or multiple response	Stands as original value	Stands as original value	.N, valid skip	.C, question should be skipped	F

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

Coding Table for Note 20:

Note 20 (Part B):
H03063, SEX, XSEXA, H03064-H03071

N20B	H03063:	SEX is:	H03064 IS:	H03065--H03071 are:	XSEXA is coded as:
1	Missing or multiple response	F	Marked	Any marked	2, female
2	Missing or multiple response	F	Missing or multiple response	All missing or multiple response	2, female
3	Missing or multiple response	M	Marked	Any marked	1, male
4	Missing or multiple response	M	Missing or multiple response	All missing or multiple response	1, male
5	Missing or multiple response	Any value	Marked	All missing or multiple response	1, male
6	Missing or multiple response	Any value	Missing or multiple response	Any marked	2, female
7	Missing or multiple response	Z	Marked	Any marked	., missing value
8	Missing or multiple response	Z	Missing or multiple response	All missing or multiple response	., missing value
9	1, male	Any value	Marked	All missing or multiple response	1, male
10	1, male	F	Missing or multiple response	Any marked	2, female
11	1, male	M or Z	Missing or multiple response	Any marked	1, male
12	1, male	Any value	Marked	Any marked	1, male
13	1, male	Any value	Missing or multiple response	All missing or multiple response	1, male
14	2, female	Any value	Missing or multiple response	Any marked	2, female
15	2, female	M	Marked	All missing or multiple response	1, male
16	2, female	F or Z	Marked	All missing or multiple response	2, female
17	2, female	Any value	Marked	Any marked	2, female
18	2, female	Any value	Missing or multiple response	All missing or multiple response	2, female

SEX 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 (H03063), any responses to gender-specific questions, and the gender of the sample beneficiary from DEERS.

Note 20 (Part C):
XSEXA, H03064

N20C	XSEXA is:	H03064 is:	H03064 is coded as:	*
1	1: Male	Marked, missing, or multiple response	Stands as original value	
2	2: Female	Marked or multiple response	.C, question should be skipped	F
3	2: Female	Missing response	.N, valid skip	F
4	Missing	Any response	Missing value	F

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

Note 20 (Part D):
XSEXA, H03065 - H03071

N20D	XSEXA is:	H03065--H03071 are:	H03065 --H03071 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"	Stands 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 20d:
All variables H03065--H03071 are missing.

Definition of "marked" in Coding Table for Note 20d:
Any pattern of marks outside the definition "all are blank."

Coding Table for Note 21
XSEXA, AGE, H03066, H03067, H03068

N21	XSEXA is:	AGE is:	H03066 is:	H03067 & H03068 are:	H03066 is coded as:	H03067 & H03068 are coded as:	*
1	1: Male	Any value	.C, question should be skipped, or .N, valid skip	C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	
2	2: Female	Any value	2: 40 or over	Marked, missing, or multiple response	Stands as original value	Stand as original value	
3	2: Female	Any value	1: under 40	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	F
4	2: Female	Any value	Multiple response	Marked or multiple response	2: > 40	Stand as original value	
5	2: Female	Any value	Multiple response	Missing	1: < 40	.N, valid skip	B F
6	2: Female	Any value	Missing	Marked or multiple response	2: > 40	Stand as original value	B
7	2: Female	< 40	Missing	Missing	1: < 40	.N, valid skip	F
8	2: Female	>=40	Missing	Missing	1: < 40	.N, valid skip	B
9	2: Female	Missing	Missing	Missing	Stands as original value	Stand as original value	
10	Missing	Any value	Missing	Missing	Stands as original value	Stand as original value	

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

Coding Table for Note 22:
XSEXA, H03069, H03070, H03071

N22	XSEXA is:	H03069 is:	H03070 Is:	H03071 are:	H03069 is coded as:	H03070 is coded as:	H03071 are coded as:	*
1	1: Male	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	.C, question should be skipped, or .N, valid skip	Stands as original value	Stands as original value	Stands as original value	
2	2: Female	1: pregnant now	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	Stands as original value	Stands as original value	
3	2: female	2: pregnant in last 12 months	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	Stands as original value	F
4	2: Female	3: not pregnant in past 12 months	Marked, missing, or multiple response	Marked, missing, or multiple response	Stands as original value	.N, valid skip if missing; .C, question should be skipped if marked	.N, valid skip if missing; .C, question should be skipped if marked	F
5	2: Female	Missing or multiple response	Marked, or multiple response	Marked, missing or multiple response	1: pregnant now	Stands as original value	Stands as original value	B
6	2: Female	Missing response	Missing response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	
7	2: Female	Multiple response	Missing response	Marked, missing or multiple response	3:not pregnant in past 12 months	.N, valid skip	.N, valid skip if missing; .C, question should be skipped if marked	B F
8	Missing	Missing or multiple response	Marked, missing or multiple response	Marked, missing or multiple response	Stands as original value	Stands as original value	Stands as original value	

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

APPENDIX D

MAPPING THE MILITARY TREATMENT FACILITY (MTF) TO THE CATCHMENT AREA

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0001	0074	COLUMBUS AFB	411
0001	0416	MOBILE	76
0001	0001	REDSTONE ARSENAL	634
0003	0003	FT. RUCKER	1055
0004	0004	MAXWELL AFB	1217
0005	0203	EIELSON AFB	373
0005	0204	FT. RICHARDSON	196
0005	0005	FT. WAINWRIGHT	813
0005	7044	JUNEAU	22
0005	0417	KETCHIKAN	26
0005	0130	KODIAK	74
0005	7047	SITKA	11
0006	0006	ELMENDORF AFB	1382
0008	0008	FT. HUACHUCA	1221
0009	0009	LUKE AFB	1649
0010	0010	DAVIS MONTHAN AFB	1239
0013	0013	LITTLE ROCK AFB	1337
0014	0418	ALAMEDA	54
0014	0015	BEALE AFB	183
0014	7083	HUMBOLDT BAY	5
0014	0419	PETALUMA	34
0014	0014	TRAVIS AFB	1767
0019	0019	EDWARDS AFB	515
0019	0248	LOS ANGELES AFS	404
0019	0018	VANDENBERG AFB	440
0024	0209	BARSTOW	11
0024	0024	CAMP PENDLETON	1863
0024	0208	CAMP PENDLETON	134
0024	0210	CAMP PENDLETON	43
0024	1657	CAMP PENDLETON	57
0024	1659	CAMP PENDLETON	18
0024	6216	CAMP PENDLETON	74
0024	0026	PORT HUENEME	174
0024	0269	YUMA	70
0028	0319	FALLON	121
0028	0028	LEMOORE	979
0029	0231	CORONADO	125
0029	0233	CORONADO	67
0029	0239	EL CENTRO	10
0029	0029	SAN DIEGO	1738
0029	0230	SAN DIEGO	30
0029	0232	SAN DIEGO	107
0029	0407	SAN DIEGO	64
0029	0414	SAN DIEGO	2
0029	0701	SAN DIEGO	106
0029	6207	SAN DIEGO	69
0029	6215	SAN DIEGO	102
0030	0212	CHINA LAKE	92
0030	0030	TWENTYNINE PALMS	1335
0032	0032	FT. CARSON	1144
0032	7293	FT. CARSON	376
0032	7300	FT. CARSON	219
0032	1526	PUEBLO	8
0033	0252	PETERSON AFB	465
0033	0033	USAF ACADEMY	907
0035	0328	BALLSTON SPA	282

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0035	0035	GROTON	604
0035	0034	NEW LONDON	97
0035	0100	NEWPORT	468
0036	0036	DOVER AFB	1214
0037	7298	ARLINGTON ANNEX	72
0037	0256	PENTAGON	338
0037	0037	WASHINGTON DC	1426
0037	0420	WASHINGTON DC	42
0038	0422	CLEARWATER	47
0038	0316	GULFPORT	88
0038	0317	MERIDIAN	50
0038	0107	MILLINGTON	100
0038	0261	MILTON	59
0038	0297	NEW ORLEANS	58
0038	0436	NEW ORLEANS	38
0038	1990	NEW ORLEANS	51
0038	0265	PANAMA CITY	25
0038	0654	PASCAGOULA	37
0038	0038	PENSACOLA	1264
0038	0260	PENSACOLA	67
0038	0262	PENSACOLA	52
0038	0513	PENSACOLA	24
0039	0421	AIR STATION MIAMI	13
0039	0275	ALBANY	22
0039	0276	ATHENS	14
0039	0277	ATLANTA	23
0039	0039	JACKSONVILLE	1583
0039	0266	JACKSONVILLE	120
0039	0517	KEY WEST	62
0039	0337	KINGS BAY	118
0039	0405	MAYPORT	161
0039	7048	MIAMI BEACH	15
0039	0050	MOODY AFB	177
0042	0042	EGLIN AFB	1545
0043	0043	TYNDALL AFB	1183
0045	0045	MACDILL AFB	1908
0046	0046	PATRICK AFB	1031
0047	7239	FT GORDON	64
0047	8924	FT. BUCHANAN	94
0047	0047	FT. GORDON	899
0047	1550	FT. GORDON	55
0047	7197	FT. GORDON	165
0047	0273	FT. MCPHERSON	258
0048	0048	FT. BENNING	1457
0048	1316	FT. BENNING	269
0048	1551	FT. BENNING	171
0048	1552	FT. BENNING	48
0048	1560	LAWSON AFB	38
0049	0049	FT. STEWART	1224
0049	1562	FT. STEWART	157
0049	1563	FT. STEWART	124
0049	1564	FT. STEWART	146
0049	0272	HUNTER AB	297
0051	0051	ROBINS AFB	1289
0052	0052	FT. SHAFTER	1416
0052	7043	HONOLULU	31
0052	0437	SCHOFIELD BARRACKS	212

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0052	0534	SCHOFIELD BARRACKS	359
0053	0053	MOUNTAIN HOME AFB	1259
0055	0055	SCOTT AFB	1558
0056	0056	GREAT LAKES	1844
0056	1660	GREAT LAKES	24
0056	1959	GREAT LAKES	96
0057	7289	FORT RILEY	472
0057	0057	FT. RILEY	1011
0058	0058	FT. LEAVENWORTH	624
0058	7297	KANSAS CITY	113
0058	0076	WHITEMAN AFB	564
0059	0059	MCCONNELL AFB	981
0059	0338	VANCE AFB	327
0060	7307	FT CAMPBELL	677
0060	0060	FT. CAMPBELL	1173
0060	1506	FT. CAMPBELL	197
0061	0061	FT. KNOX	1459
0061	1237	FT. MCCOY	104
0061	0290	ROCK ISLAND ARSENAL	7
0061	0313	SELFRIDGE AB	41
0062	0062	BARKSDALE AFB	1341
0064	0064	FT. POLK	1278
0064	0423	NEW ORLEANS	27
0066	0066	ANDREWS AFB	1347
0066	0413	BOLLING AFB	251
0066	0068	PATUXENT RIVER	183
0067	0522	ANDREWS AFB	25
0067	0384	ARLINGTON	1
0067	0424	BALTIMORE	9
0067	0067	BETHESDA	1551
0067	0404	BMC SUGAR GROVE	6
0067	0322	COLTS NECK	27
0067	0386	DAHLGREN	60
0067	0347	HATBORO	42
0067	0301	INDIAN HEAD	31
0067	0401	LAKEHURST	14
0067	0348	MECHANICSBURG	13
0067	0703	WASHINGTON DC	72
0069	0308	ABERDEEN PROVING GROUND	210
0069	0306	ANNAPOLIS	232
0069	0525	ANNAPOLIS	110
0069	0352	CARLISLE BARRACKS	225
0069	0545	EDGEWOOD	15
0069	0309	FT. DETRICK	144
0069	0069	FT. MEADE	710
0073	0073	KEESLER AFB	1350
0075	0075	FT. LEONARD WOOD	1447
0078	0078	OFFUTT AFB	1281
0079	0079	NELLIS AFB	1296
0083	0085	CANNON AFB	437
0083	0083	KIRTLAND AFB	805
0086	0081	FT. MONMOUTH	214
0086	0086	WEST POINT	1192
0086	1815	WEST POINT	251
0089	0430	ELIZABETH CITY	20
0089	7294	FORT BRAGG	465
0089	0089	FT. BRAGG	1255

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0089	7143	FT. BRAGG	366
0089	7286	FT. BRAGG-NC	269
0089	0335	POPE AFB	183
0090	0090	SEYMOUR JOHNSON AFB	1302
0091	0091	CAMP LEJEUNE	2086
0091	0333	CAMP LEJEUNE	8
0091	1662	CAMP LEJEUNE	8
0091	1663	CAMP LEJEUNE	20
0091	1664	CAMP LEJEUNE	5
0091	1992	CAMP LEJEUNE	32
0092	0092	CHERRY POINT	1165
0095	0095	WRIGHT-PATTERSON AFB	1186
0096	0093	GRAND FORKS AFB	296
0096	0094	MINOT AFB	500
0096	0096	TINKER AFB	902
0098	0097	ALTUS AFB	153
0098	0098	FT. SILL	1331
0101	0101	SHAW AFB	1082
0103	0103	CHARLESTON	931
0103	0356	CHARLESTON AFB	348
0103	0511	GOOSE CREEK	394
0104	0104	BEAUFORT	1146
0104	0360	BEAUFORT	47
0104	0358	PARRIS ISLAND	123
0105	0105	FT. JACKSON	1378
0108	0108	FT. BLISS	1014
0108	1617	FT. BLISS	524
0108	0084	HOLLOMAN AFB	232
0108	0327	WHITE SANDS MISSILE RANGE	26
0109	0363	BROOKS AFB	42
0109	0363	BROOKS CITY-BASE	36
0109	0109	FT. SAM HOUSTON	1543
0110	7236	FORT HOOD	455
0110	6014	FT HOOD	368
0110	0110	FT. HOOD	1114
0110	1592	FT. HOOD	468
0110	1597	FT. HOOD	74
0110	1599	FT. HOOD	84
0110	1601	FT. HOOD	48
0112	0112	DYESS AFB	923
0112	0364	GOODFELLOW AFB	446
0113	0113	SHEPPARD AFB	1236
0117	0117	LACKLAND AFB	1459
0117	0114	LAUGHLIN AFB	81
0118	0118	CORPUS CHRISTI	619
0118	0370	DALLAS	64
0118	0370	FORT WORTH	241
0118	0656	INGLESIDE	240
0118	0369	KINGSVILLE	164
0119	0119	HILL AFB	831
0119	0077	MALMSTROM AFB	514
0120	0120	LANGLEY AFB	1631
0120	0432	PORTSMOUTH	49
0120	0433	YORKTOWN	16
0121	0121	FT. EUSTIS	1229
0121	0122	FT. LEE	295
0121	0372	FT. MONROE	59

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0121	0464	FT. STORY	26
0123	6200	FAIRFAX	182
0123	0123	FT. BELVOIR	1390
0123	0390	FT. MYER	161
0123	6201	WOODBRIDGE	264
0124	6221	TRICARE OUTPATIENT CHESAPEAKE	55
0124	0519	CHESAPEAKE	17
0124	0378	NORFOLK	175
0124	0508	NORFOLK	214
0124	6214	NORFOLK	61
0124	0124	PORTSMOUTH	1683
0124	0380	PORTSMOUTH	11
0124	0382	VIRGINIA BEACH	22
0124	0387	VIRGINIA BEACH	189
0124	0381	YORKTOWN	15
0125	0431	ASTORIA	9
0125	0125	FT. LEWIS	1688
0125	1646	FT. LEWIS	147
0125	1649	FT. LEWIS	101
0125	0395	MCCHORD AFB	168
0125	0247	MONTEREY	153
0125	0434	PORT ANGELES	10
0126	0126	BREMERTON	1062
0126	0398	BREMERTON	24
0126	7138	EVERETT	100
0126	0435	SEATTLE	58
0126	1656	SILVERDALE	181
0127	0127	OAK HARBOR	1210
0128	0128	FAIRCHILD AFB	1136
0128	7045	NORTH BEND	64
0129	7200	BUCKLEY AFB	329
0129	0106	ELLSWORTH AFB	581
0129	0129	F.E. WARREN AFB	526
0131	0131	FT. IRWIN	1394
0131	0206	YUMA PROVING GROUND	31
0280	0281	BARBERS POINT	31
0280	1987	CAMP H.M. SMITH	35
0280	0285	KANEOHE	411
0280	0280	PEARL HARBOR	871
0280	0284	WAHIAWA	37
0287	0287	HICKAM AFB	1426
0321	0426	BOSTON	78
0321	0299	BRUNSWICK	555
0321	0425	CAPE COD	103
0321	0310	HANSCOM AFB	572
0321	0321	PORTSMOUTH	204
0321	0298	WINTER HARBOR	3
0326	0428	CAPE MAY	57
0326	0326	MCGUIRE AFB	1486
0330	0330	FT. DRUM	404
0330	7113	FT. DRUM	1223
0366	0366	RANDOLPH AFB	1105
0385	0385	QUANTICO	1071
0385	1670	QUANTICO	82
0385	1671	QUANTICO	196
0606	1144	BABENHAUSEN	72
0606	1145	BUEDINGEN	66

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0606	8996	BUTZBACH	120
0606	8998	DARMSTADT	191
0606	1135	FRIEDBERG	158
0606	8995	HANAU	280
0606	0606	HEIDELBERG	463
0606	8987	HEIDELBERG	206
0606	1003	MANNHEIM	237
0606	7152	SANDHOFEN	60
0607	8977	BRUSSELS	23
0607	8992	DEXHEIM	68
0607	1128	KAISERSLAUTERN	136
0607	0607	LANDSTUHL	463
0607	1154	LIVORNO	38
0607	1126	LUDWIGSBURG	418
0607	0614	SHAPE	135
0607	0611	VICENZA	242
0607	1147	WIESBADEN	340
0609	0808	AVIANO AB	306
0609	1013	BAMBERG	190
0609	1235	GIEBELSTADT	74
0609	1016	GRAFENWOEHR	67
0609	1019	HOHENFELS/AMBERG	111
0609	1014	ILLESHEIM	58
0609	1015	KATTERBACH	147
0609	1127	KITZINGEN	189
0609	1124	SCHWEINFURT	281
0609	1017	VILSECK	221
0609	0609	WUERZBURG	353
0612	1156	CAMP STANLEY	172
0612	8921	CHUN CHON	36
0612	8913	KOREA	64
0612	1158	MUNSAN	154
0612	8910	PUSAN	25
0612	8903	PYONGTAEK	221
0612	0612	SEOUL	455
0612	8916	SEOUL	350
0612	8907	TAEGU	87
0612	1157	TONGDUCHON	495
0612	8912	UIJONGBU	137
0612	8917	WONGJU	38
0616	5197	BASE SAN JUAN	50
0616	7042	BORINQUEN	54
0616	0616	CEIBA	967
0616	0615	GUANTANAMO BAY	168
0616	0851	SAN JUAN	11
0617	1170	BAHRAIN	192
0617	1153	CAPODICHINO	166
0617	0874	GAETA	98
0617	0635	INCIRLIK AB	192
0617	0825	IZMIR	27
0617	0623	KEFLAVIK	190
0617	0855	LA MADDALENA	69
0617	0629	LAJES FLD	113
0617	6760	LARISSA	2
0617	0617	NAPLES	202
0617	0624	NAS SIGONELLA	331
0617	0618	ROTA	300

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
0617	0858	SOUDA BAY	37
0620	0620	AGANA	648
0620	0802	ANDERSEN AFB	433
0620	0872	NAVCAMS WESTPAC	40
0620	0871	NAVSTA	230
0621	0862	CAMP FOSTER	361
0621	0861	FUTENMA	232
0621	0621	OKINAWA	545
0621	1269	OKINAWA	201
0621	7032	OKINAWA	179
0621	7033	OKINAWA	218
0621	7107	OKINAWA	59
0622	0853	ATSUGI	311
0622	7288	BRANCH MEDICAL ANNEX HARIO SASEBO J	18
0622	8939	CHINHAE	17
0622	0625	MCAS IWAKUNI	205
0622	0852	SASEBO	324
0622	8938	YOKOHAMA	7
0622	0622	YOKOSUKA	1375
0633	7234	MENWITH HILL MEDICAL CENTER	53
0633	7235	426ST ABS MED AID STATION	11
0633	8931	LONDON	97
0633	0653	RAF CROUGHTON	88
0633	0633	RAF LAKENHEATH	1092
0633	1179	RAF ST MAWGAN NEWQUA	37
0633	0814	RAF UPWOOD	122
0638	0637	KUNSAN AB	403
0638	0638	OSAN AB	1227
0640	0610	CAMP ZAMA	170
0640	0639	MISAWA	696
0640	0640	YOKOTA AB	684
0804	0804	KADENA AB	1600
0805	0799	GEILENKIRCHEN AB	345
0805	0805	SPANGDAHLEM AB	1223
0806	8982	BAD AIBLING	39
0806	0806	RAMSTEIN AB	1429
0806	0800	RHEIN MAIN AB	145
7139	7139	HURLBURT FIELD	1593
9901	0781	NORTHEAST WEST VIRGINIA	34
9901	0907	CONNECTICUT	201
9901	0908	DELAWARE	109
9901	0920	MAINE	204
9901	0921	MARYLAND	151
9901	0922	MASSACHUSETTS	330
9901	0930	NEW HAMPSHIRE	98
9901	0931	NEW JERSEY	324
9901	0933	NEW YORK	593
9901	0995	NORTHERN VIRGINIA	65
9901	0939	PENNSYLVANIA	701
9901	0940	RHODE ISLAND	83
9901	0946	VERMONT	44
9902	0934	NORTH CAROLINA	609
9902	0996	SOUTHERN VIRGINIA	308
9903	0987	EASTERN FLORIDA	847
9903	0911	GEORGIA	665
9903	0941	SOUTH CAROLINA	214

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
9904	0787	GEORGIA-FORMER NOBLE CATCHMENT	6
9904	0901	ALABAMA	505
9904	0989	EASTERN LOUISIANA	199
9904	0925	MISSISSIPPI	267
9904	0943	TENNESSEE	487
9904	0988	WESTERN FLORIDA	100
9905	0782	WESTERN WEST VIRGINIA	139
9905	0783	EASTERN MISSOURI-ST LOUIS AREA	29
9905	0789	IOWA-QUAD CITIES AREA	13
9905	0914	ILLINOIS	241
9905	0915	INDIANA	367
9905	0918	KENTUCKY	184
9905	0923	MICHIGAN	411
9905	0936	OHIO	439
9905	0950	WISCONSIN	247
9906	0904	ARKANSAS	380
9906	0993	EASTERN TEXAS	1641
9906	0937	OKLAHOMA	416
9906	0990	WESTERN LOUISIANA	246
9907	0785	ARIZONA-EXCLUDING YUMA AREA	209
9907	0929	NEVADA	91
9907	0932	NEW MEXICO	182
9908	0784	WESTERN MISSOURI	281
9908	0788	IOWA-EXCLUDING QUAD CITIES	133
9908	0906	COLORADO	255
9908	0917	KANSAS	224
9908	0924	MINNESOTA	270
9908	0927	MONTANA	105
9908	0928	NEBRASKA	60
9908	0935	NORTH DAKOTA	58
9908	0942	SOUTH DAKOTA	76
9908	0974	SOUTHERN IDAHO	107
9908	0945	UTAH	201
9908	0951	WYOMING	60
9909	0786	YUMA ARIZONA AREA	78
9909	0986	SOUTHERN CALIFORNIA	832
9910	0985	NORTHERN CALIFORNIA	672
9911	0973	NORTHERN IDAHO	24
9911	0938	OREGON	372
9911	0948	WASHINGTON	438
9912	0902	ALASKA	41
9912	0912	HAWAII	30
9913	0976	AFRICA	7
9913	0979	BELGIUM	5
9913	0957	GERMANY	88
9913	0958	GREECE	2
9913	0960	ITALY	23
9913	0977	MIDEAST	10
9913	0982	OTHER EUROPE	5
9913	0966	SPAIN	1
9913	0967	TURKEY	1
9913	0968	UNITED KINGDOM	23
9914	0961	JAPAN	30
9914	0965	KOREA	14
9914	0983	OTHER PACIFIC	93
9914	0963	PHILIPPINES	3

CACSMPL	DMISID	CATCHMENT AREA	# SAMPLE FROM DMISID
9914	0978	SOUTHEAST ASIA	6
9915	0975	U.S. VIRGIN ISLANDS	16
9915	0969	CANADA	10
9915	0971	CENTRAL AMERICA	22
9915	0970	OTHER CARIBBEAN	7
9915	0953	PUERTO RICO	313
9915	0972	SOUTH AMERICA	26
9999	6863	BONN	1
9999	6707	BUECHEL	2
9999	6747	CAIRO	1
9999	6825	DAMASCUS	1
9999	6768	DUBLIN	2
9999	6711	GHEDI AB	2
9999	6875	ISTANBUL	1
9999	6870	JUBAIL	1
9999	6708	KALKAR	1
9999	6703	KLEIN BROGEL	5
9999	6845	KUWAIT CITY	1
9999	6819	MADRID	2
9999	6714	MORON AS	2
9999	6807	MOSCOW	2
9999	6713	MUSCAT	1
9999	6773	NAIROBI	1
9999	6841	NAMRU	2
9999	6742	NICOSIA	1
9999	6799	OSLO	1
9999	6753	PARIS	1
9999	6743	PRAGUE	1
9999	6868	PRINCE SULTAN AIR BASE	1
9999	6791	RABAT	1
9999	6873	RIYADAH	1
9999	6732	SOFIA	1
9999	6756	TBILISI	1
9999	6769	TEL AVIV	1
9999	6794	THE HAGUE	1
9999	0999	UNKNOWN LOCATION	842
9999	6725	VIENNA	1
9999	6796	VOLKEL	3
9999	6741	ZAGREB	1

APPENDIX E

RESPONSE RATE TABLES

TABLE E.1

RESPONSE RATE BY REGION

	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
Northeast	37.1	54.1	33.3	46.4	30.9	47.2	28.5	45.2	32.4	48.2
Mid-Atlantic	32.0	41.9	27.5	37.1	26.6	36.8	26.3	36.6	28.1	38.1
Southeast	35.4	51.7	33.4	49.7	32.4	48.5	29.5	43.9	32.7	48.5
Gulfsouth	38.2	52.9	36.3	52.9	31.9	49.3	30.1	46.4	34.1	50.3
Heartland	37.5	54.7	33.7	48.6	32.9	47.6	29.5	44.5	33.4	48.8
Southwest	35.2	52.5	31.1	46.6	28.4	45.1	26.7	41.2	30.4	46.4
Central 7	35.1	50.4	33.6	49.0	32.4	47.8	30.5	46.0	32.9	48.3
Central 8	36.8	54.7	33.5	49.5	31.1	47.5	29.1	45.7	32.6	49.2
Southern California	28.6	41.4	25.7	39.9	26.2	39.1	23.9	37.9	26.1	39.6
Golden Gate	39.1	53.5	40.3	56.2	36.3	50.9	33.2	49.3	37.2	52.5
Northwest	37.5	52.0	34.9	49.0	33.0	49.9	30.1	44.4	33.9	48.8
Hawaii	31.2	37.1	31.2	38.7	28.3	34.3	26.7	33.8	29.3	36.0
Europe	18.5	18.9	14.0	14.8	16.9	17.0	13.4	12.9	15.7	15.9
Western Pacific Command	14.2	15.8	11.2	12.6	14.6	15.0	11.6	11.7	12.9	13.8
TRICARE Latin America	25.9	36.1	22.9	36.2	23.7	32.6	16.3	20.7	22.1	30.8
Alaska	28.8	32.8	29.9	33.1	27.4	30.9	26.2	29.6	28.1	31.6

RR=Unweighted
RR_W=Weighted

TABLE E.2

RESPONSE RATES BY SEX

	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
Male	28.4	45.1	25.0	41.3	24.0	40.0	22.1	38.3	24.9	41.1
Female	37.6	51.9	35.3	48.2	33.8	47.6	31.1	44.0	34.4	47.9

TABLE E.3

RESPONSE RATES BY CONUS/OCONUS INDICATOR

	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
Not in Conus	16.9	19.1	13.2	15.6	16.3	17.7	12.7	13.2	14.8	16.4
In Conus	35.3	50.6	32.4	46.8	30.5	45.6	28.4	43.0	31.6	46.4

TABLE E.4

RESPONSE RATES BY BENEFICIARY CATEGORY

	Q1-2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
Active Duty and Guard/Reserve	19.5	18.3	16.5	15.8	15.9	15.1	14.2	13.6	16.5	15.6
Dependent of Active Duty & Guard/Reserve	28.6	30.4	26.8	29.4	25.2	27.4	23.1	24.8	25.9	27.9
Retiree/Depend of Retir/Surviv/Other <65	53.9	55.7	48.9	49.4	48.2	50.5	44.2	45.9	48.9	50.4
Retiree/Depend of Retir/Surviv/Other 65+	76.4	78.1	73.4	74.6	72.8	73.3	70.9	73.1	73.4	74.7

TABLE E.5

RESPONSE RATES BY COMBINED GEOGRAPHIC AREA

CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
		RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
0001	Redstone Ars/Ft McClellan	38.2	46.8	39.1	46.2	34.4	44.4	27.6	36.3	34.9	43.4
0003	Ft. Rucker	39.6	49.2	39.2	46.8	34.2	44.6	37.4	48.6	37.6	47.3
0004	Maxwell AFB	42.1	46.8	43.0	45.5	32.6	37.4	28.9	32.0	36.6	40.3
0005	Ft. Wainwright	18.9	18.6	25.6	24.8	21.3	21.1	22.7	22.3	22.1	21.7
0006	Elmendorf AFB/Ft Wainwright	39.8	43.5	34.5	39.4	34.2	38.2	30.1	35.0	34.7	39.0
0008	Ft. Huachuca	32.7	40.5	29.4	37.1	32.0	37.9	26.4	33.0	30.1	37.1
0009	Luke AFB	38.3	56.3	35.9	54.0	34.8	51.9	35.4	49.4	36.1	52.9
0010	Davis-Monthan AFB	34.4	42.3	31.8	38.7	35.3	43.8	27.3	33.9	32.2	39.7
0013	Little Rock AFB	35.4	40.6	28.4	32.0	23.4	27.1	25.0	31.4	28.0	32.7
0014	Travis AFB	36.6	49.8	37.0	49.0	34.6	45.4	32.3	45.1	35.1	47.3
0019	Edwards AFB	31.1	35.0	30.1	34.5	29.7	33.0	30.4	33.3	30.3	33.9
0024	NH Camp Pendleton/Ft Irwin	24.7	35.3	21.2	32.0	20.4	29.8	22.2	31.8	22.1	32.2
0028	NH LeMoore	37.8	43.5	35.3	41.2	29.6	35.1	26.8	30.6	32.4	37.5
0029	NMC San Diego	27.5	39.3	25.9	36.7	25.4	34.2	23.5	35.3	25.6	36.4
0030	NH 29-Palms	30.0	31.3	24.8	25.5	28.6	29.7	18.2	19.6	25.4	26.5
0032	Evans ACH-Ft. Carson	27.6	38.4	24.0	34.3	23.5	35.6	23.0	32.2	24.5	35.0
0033	USAF Acad. Hospital	43.5	55.9	38.2	47.5	41.0	48.4	30.2	39.6	38.4	47.9
0035	NACC Groton	30.3	34.0	27.6	32.0	24.5	28.8	27.3	32.1	27.4	31.7
0036	Dover AFB	39.5	46.3	33.8	40.1	29.8	34.4	33.3	38.4	34.1	39.7
0037	Walter Reed AMC	38.8	49.8	37.9	43.7	36.5	46.6	30.8	38.3	36.0	44.6
0038	NH Pensacola	31.8	44.5	29.7	43.8	28.6	36.5	27.3	38.2	29.3	40.7
0039	NH Jacksonville/Key West	30.9	41.6	30.6	42.3	31.8	42.1	26.2	36.3	29.9	40.5
0042	Eglin AFB	41.2	56.1	34.6	45.3	32.6	49.2	32.4	44.3	35.2	48.7
0043	Tyndall AFB	39.0	46.0	35.0	40.5	32.6	38.2	24.9	30.2	32.9	38.5
0045	MacDill AFB	43.7	57.6	42.0	55.7	39.4	51.8	35.7	49.8	40.2	53.7
0046	Patrick AFB	46.3	53.9	48.8	57.9	42.6	51.3	37.6	47.3	43.8	52.6
0047	Ft. Gordon	34.3	42.8	32.2	40.9	31.4	42.1	29.8	36.1	31.9	40.4
0048	Ft. Benning	25.7	37.9	21.9	34.3	21.0	30.7	22.5	33.0	22.8	34.0
0049	Ft. Stewart	25.2	31.5	22.9	30.0	18.9	24.0	17.8	21.2	21.0	26.3
0051	Robins AFB	32.7	36.4	34.4	38.5	31.2	34.1	24.5	29.2	30.6	34.5
0052	Tripler AMC	30.0	35.8	30.8	37.7	25.1	31.0	22.2	27.7	27.0	33.0
0053	Mountain Home AFB	32.6	38.2	30.3	35.9	30.5	36.0	27.3	32.4	30.2	35.6
0055	Scott AFB	42.3	56.2	35.5	47.7	36.8	47.9	33.6	45.8	37.0	49.4
0056	NH Great Lakes	22.5	29.6	24.0	31.2	22.8	29.0	23.0	32.1	23.1	30.4
0057	Ft. Riley	32.8	34.1	27.2	28.5	26.3	28.4	22.5	25.3	26.8	28.8
0058	Ft. Leavenworth	40.2	45.0	38.6	43.6	31.1	35.5	33.1	39.1	35.7	40.8
0059	McConnell AFB	30.8	36.9	28.4	34.5	20.9	27.2	26.9	32.9	26.8	32.8

CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
		RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$
0060	Ft. Campbell	24.6	29.6	22.1	27.8	24.2	29.6	17.7	23.6	22.1	27.6
0061	Ft. Knox	37.1	50.2	34.3	44.8	31.6	40.5	27.3	34.5	32.6	42.0
0062	Barksdale AFB	31.4	36.8	22.7	29.1	19.8	25.3	23.3	27.7	24.3	29.7
0064	Ft. Polk	28.4	30.8	28.1	29.6	23.9	25.7	21.5	22.8	25.4	27.2
0066	Andrews AFB	39.6	51.2	34.2	44.3	36.6	45.8	26.6	36.8	34.2	44.5
0067	NNMC Bethesda	41.3	49.7	39.2	46.7	34.0	48.2	31.1	42.3	36.4	46.7
0069	Ft. Meade	38.5	44.7	33.3	39.2	27.9	32.6	25.1	32.4	31.2	37.0
0073	Keesler AFB	38.6	48.1	35.4	47.0	26.3	37.7	30.5	40.3	32.7	43.2
0075	Ft. Leonard Wood	36.1	41.4	30.1	37.8	31.0	33.9	22.4	27.4	29.4	34.9
0078	Offutt AFB	45.2	52.0	41.9	50.5	39.3	46.7	37.6	44.4	41.0	48.4
0079	Nellis AFB	44.0	52.5	45.1	54.6	37.6	48.6	34.4	42.3	40.3	49.4
0083	Kirtland AFB	31.0	35.6	29.1	35.7	25.0	31.5	30.5	36.9	28.9	34.9
0086	West Point	36.7	47.5	31.2	43.5	31.1	40.4	30.0	42.8	32.3	43.5
0089	Ft. Bragg	26.1	33.2	22.7	31.9	22.1	30.0	22.1	28.7	23.3	30.9
0090	Seymour Johnson AFB	29.4	35.6	24.8	32.4	24.0	29.1	24.8	31.1	25.7	32.0
0091	NH Camp Lejeune	26.2	30.9	21.3	24.2	22.6	26.1	17.2	19.8	21.8	25.2
0092	NH Cherry Point	34.1	38.5	33.6	36.8	31.3	35.1	31.9	34.4	32.7	36.2
0095	Wright Patterson AFB	51.2	60.1	43.4	52.0	39.2	45.7	35.8	43.0	42.4	50.1
0096	Tinker AFB	30.4	35.8	29.1	33.7	25.7	29.9	25.0	28.6	27.6	31.9
0098	Ft. Sill	29.8	36.4	28.1	36.1	16.6	21.5	21.7	28.5	24.0	30.6
0101	Shaw AFB	41.8	47.6	35.1	40.2	36.0	42.3	32.0	37.5	36.2	41.9
0103	NH Charleston	33.8	48.0	28.1	39.1	32.0	45.0	31.5	42.7	31.4	43.7
0104	NH Beaufort	29.3	30.9	26.2	27.2	30.7	34.7	28.2	31.5	28.6	31.0
0105	Ft. Jackson	31.8	43.8	29.7	40.6	28.0	41.1	30.1	41.7	29.9	41.8
0108	Ft. Bliss	27.7	39.3	27.6	41.0	25.5	37.8	23.2	33.5	25.9	37.8
0109	Brooke AMC-Ft. Sam Houston	37.9	55.4	38.6	54.2	35.6	52.1	33.7	48.2	36.5	52.4
0110	Ft. Hood	25.7	34.6	22.5	29.7	20.3	26.2	15.2	22.3	20.9	28.1
0112	Dyess AFB	32.3	38.0	26.5	33.5	25.4	29.9	21.9	25.7	26.5	31.7
0113	Laughlin AFB/Sheppard AFB	35.1	39.6	33.6	37.9	20.4	24.6	27.7	32.7	29.2	33.7
0117	Lackland AFB	32.5	45.4	29.4	40.1	31.4	42.9	25.1	34.5	29.6	40.8
0118	NH Corpus Christi	31.2	36.4	28.5	31.2	30.2	35.2	26.3	30.6	29.1	33.3
0119	Hill AFB	31.1	34.7	33.4	36.8	29.8	35.8	25.8	30.7	30.0	34.4
0120	Langley AFB	38.1	45.9	31.5	39.5	27.8	36.7	30.0	36.5	31.8	39.6
0121	Ft. Eustis	36.1	47.0	31.1	39.1	29.3	39.1	31.9	40.8	32.1	41.5
0123	Ft. Belvoir	42.7	51.3	43.5	52.0	37.5	45.5	35.1	44.1	39.8	48.2
0124	NMC Portsmouth	29.5	37.1	26.1	33.0	26.1	33.7	23.3	30.4	26.2	33.5
0125	Madigan AMC-Ft. Lewis	33.2	46.3	30.9	40.4	29.0	43.0	24.3	34.7	29.4	41.0
0126	NH Bremerton	31.9	38.2	31.4	38.2	30.8	38.2	31.7	38.5	31.4	38.3
0127	NH Oak Harbor	36.5	39.2	36.1	39.6	31.6	34.1	29.0	31.7	33.3	36.1
0128	Fairchild AFB	40.1	47.0	33.6	42.2	29.7	36.8	25.0	31.0	32.1	39.1
0129	F.E. Warren AFB	33.1	38.6	27.7	33.0	24.9	29.1	27.2	30.9	28.2	32.8

CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
		RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W	RR	RR_W
0131	Ft. Irwin	24.8	29.1	16.2	18.7	19.4	23.4	15.4	19.1	18.9	22.6
0280	Pearl Harbor	31.7	33.1	29.0	31.0	28.7	30.1	30.4	31.9	30.0	31.5
0287	NMCL Pearl Harbor/Hickam	32.0	33.9	32.6	35.2	31.3	33.5	27.0	28.8	30.7	32.8
0321	NACC Portsmouth New Hamp.	32.7	34.1	26.3	27.7	28.8	30.6	25.1	26.2	28.3	29.6
0326	McGuire AFB/Ft. Dix	26.8	29.2	25.8	26.9	16.9	17.7	15.0	15.4	21.0	21.3
0330	Ft. Drum	19.7	20.6	18.1	19.7	12.4	14.3	12.1	13.5	15.5	16.7
0366	Randolph AFB	44.4	50.1	32.0	37.1	37.3	42.5	35.5	42.7	37.3	43.0
0385	NMCL Quantico	29.9	35.6	27.9	32.8	25.1	27.9	22.9	27.0	26.5	30.7
0606	Landstuhl AMC/other German	18.6	19.9	11.7	13.0	16.2	17.0	8.2	9.1	13.7	14.7
0607	Landstuhl	18.2	18.7	19.1	19.6	14.2	14.7	12.4	14.4	16.0	16.8
0609	Wuerzburg	15.5	15.4	14.5	14.5	13.3	13.6	8.7	8.9	13.0	13.1
0612	Seoul	15.1	14.8	14.0	13.9	12.8	12.8	8.9	8.8	12.7	12.5
0616	NH Guantanamo/Roosevelt Rds	23.6	26.3	21.6	25.4	24.1	28.0	16.0	18.7	21.4	24.6
0617	Naples	14.3	14.1	12.6	13.3	15.5	16.0	14.3	13.9	14.2	14.3
0620	Agana	23.2	26.8	22.4	25.5	20.1	23.4	18.8	23.5	21.1	24.8
0621	Okinawa	12.6	13.9	11.7	12.6	10.9	11.7	7.8	8.3	10.9	11.6
0622	NH Yokosuka/other Asian	12.8	13.5	8.9	9.2	11.8	12.5	11.3	11.4	11.2	11.7
0633	RAF Lakenheath/other Europe	19.7	20.1	12.6	13.4	21.0	21.9	13.3	13.5	16.7	17.2
0638	Kunsan AB/Osan AB	11.8	12.4	4.7	4.5	11.1	11.3	12.3	12.6	9.9	10.3
0640	Yokota AB	22.4	22.4	12.4	12.6	23.7	24.0	12.6	12.8	17.8	18.0
0804	Kadena AFB	4.5	5.1	3.5	3.7	15.2	15.6	11.8	12.8	8.7	9.4
0805	Spangdahlem AB	24.0	24.0	12.0	12.3	19.6	20.4	20.4	21.4	19.0	19.5
0806	Spangdahlem/Ramstein AFB	21.4	22.3	16.0	16.4	20.8	22.1	18.5	18.5	19.2	19.9
7139	Hurlburt Field	30.0	31.1	27.8	29.6	22.9	24.9	22.7	23.6	25.9	27.2
9901	Out/Area-Reg 1	50.1	62.6	40.6	50.3	43.8	54.6	42.7	54.7	44.3	55.5
9902	Out/Area-Reg 2	51.5	58.5	44.1	53.5	41.5	51.7	45.1	57.7	45.6	55.5
9903	Out/Area-Reg 3	55.6	64.2	55.4	63.0	52.3	61.3	45.9	55.5	52.4	61.1
9904	Out/Area-Reg 4	46.5	57.4	48.7	61.0	45.1	57.4	39.6	52.1	44.8	56.8
9905	Out/Area-Reg 5	54.1	63.4	47.6	55.9	45.4	55.5	42.1	52.4	47.3	56.7
9906	Out/Area-Reg 6	54.5	64.7	48.1	57.5	47.6	57.3	42.7	52.5	48.4	58.1
9907	Out/Area-Reg 7	44.1	56.9	43.5	52.6	53.6	57.3	49.2	58.0	47.3	56.2
9908	Out/Area-Reg 8	50.1	64.7	47.1	58.0	43.2	55.7	44.2	56.1	46.1	58.4
9909	Out/Area-Reg 9	42.4	53.9	47.1	56.0	45.1	58.4	41.7	52.2	44.1	55.1
9910	Out/Area-Reg 10	49.4	59.3	58.9	64.8	51.7	59.0	46.0	56.8	51.5	60.0
9911	Out/Area-Reg 11	56.7	65.6	52.9	63.8	55.2	65.8	50.4	58.8	53.7	63.3
9912	Out/Area-Reg 12	36.8	60.0	57.9	65.2	53.3	72.3	77.8	82.5	56.3	70.6
9913	Out/Area-Europe	13.3	27.7	8.3	14.8	16.1	21.8	12.2	18.0	12.1	20.7
9914	Out/Area-Pacific	9.1	27.7	33.3	25.9	15.2	18.1	14.3	16.0	18.5	21.6
9915	Out/Area-Latin America & Can	33.7	39.8	27.8	40.9	22.6	34.3	17.1	21.4	24.6	33.2

RESPONSE RATES BY COMBINED GEOGRAPHIC AREA

Region	CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
			RR	RR_w	RR	RR_w	RR	RR_w	RR	RR_w	RR	RR_w
Northeast	0035	NACC Groton	30.3	34.0	27.6	32.0	24.5	28.8	27.3	32.1	27.4	31.7
Region 1	0036	Dover AFB	39.5	46.3	33.8	40.1	29.8	34.4	33.3	38.4	34.1	39.7
	0037	Walter Reed AMC	38.8	49.8	37.9	43.7	36.5	46.6	30.8	38.3	36.0	44.6
	0066	Andrews AFB	39.6	51.2	34.2	44.3	36.6	45.8	26.6	36.8	34.2	44.5
	0067	NNMC Bethesda	41.3	49.7	39.2	46.7	34.0	48.2	31.1	42.3	36.4	46.7
	0069	Ft. Meade	38.5	44.7	33.3	39.2	27.9	32.6	25.1	32.4	31.2	37.0
	0086	West Point	36.7	47.5	31.2	43.5	31.1	40.4	30.0	42.8	32.3	43.5
	0123	Ft. Belvoir	42.7	51.3	43.5	52.0	37.5	45.5	35.1	44.1	39.8	48.2
	0321	NACC Portsmouth New Hamp.	32.7	34.1	26.3	27.7	28.8	30.6	25.1	26.2	28.3	29.6
	0326	McGuire AFB/Ft. Dix	26.8	29.2	25.8	26.9	16.9	17.7	15.0	15.4	21.0	21.3
	0330	Ft. Drum	19.7	20.6	18.1	19.7	12.4	14.3	12.1	13.5	15.5	16.7
	0385	NMCL Quantico	29.9	35.6	27.9	32.8	25.1	27.9	22.9	27.0	26.5	30.7
	9901	Out/Area-Reg 1	50.1	62.6	40.6	50.3	43.8	54.6	42.7	54.7	44.3	55.5
Mid-Atlantic	0089	Ft. Bragg	26.1	33.2	22.7	31.9	22.1	30.0	22.1	28.7	23.3	30.9
Region 2	0090	Seymour Johnson AFB	29.4	35.6	24.8	32.4	24.0	29.1	24.8	31.1	25.7	32.0
	0091	NH Camp Lejeune	26.2	30.9	21.3	24.2	22.6	26.1	17.2	19.8	21.8	25.2
	0092	NH Cherry Point	34.1	38.5	33.6	36.8	31.3	35.1	31.9	34.4	32.7	36.2
	0120	Langley AFB	38.1	45.9	31.5	39.5	27.8	36.7	30.0	36.5	31.8	39.6
	0121	Ft. Eustis	36.1	47.0	31.1	39.1	29.3	39.1	31.9	40.8	32.1	41.5
	0124	NMC Portsmouth	29.5	37.1	26.1	33.0	26.1	33.7	23.3	30.4	26.2	33.5
	9902	Out/Area-Reg 2	51.5	58.5	44.1	53.5	41.5	51.7	45.1	57.7	45.6	55.5
Southeast	0039	NH Jacksonville/Key West	30.9	41.6	30.6	42.3	31.8	42.1	26.2	36.3	29.9	40.5
Region 3	0045	MacDill AFB	43.7	57.6	42.0	55.7	39.4	51.8	35.7	49.8	40.2	53.7
	0046	Patrick AFB	46.3	53.9	48.8	57.9	42.6	51.3	37.6	47.3	43.8	52.6
	0047	Ft. Gordon	34.3	42.8	32.2	40.9	31.4	42.1	29.8	36.1	31.9	40.4
	0048	Ft. Benning	25.7	37.9	21.9	34.3	21.0	30.7	22.5	33.0	22.8	34.0
	0049	Ft. Stewart	25.2	31.5	22.9	30.0	18.9	24.0	17.8	21.2	21.0	26.3
	0051	Robins AFB	32.7	36.4	34.4	38.5	31.2	34.1	24.5	29.2	30.6	34.5
	0101	Shaw AFB	41.8	47.6	35.1	40.2	36.0	42.3	32.0	37.5	36.2	41.9
	0103	NH Charleston	33.8	48.0	28.1	39.1	32.0	45.0	31.5	42.7	31.4	43.7
	0104	NH Beaufort	29.3	30.9	26.2	27.2	30.7	34.7	28.2	31.5	28.6	31.0
	0105	Ft. Jackson	31.8	43.8	29.7	40.6	28.0	41.1	30.1	41.7	29.9	41.8
	9903	Out/Area-Reg 3	55.6	64.2	55.4	63.0	52.3	61.3	45.9	55.5	52.4	61.1

Region	CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
			RR	RR$_w$	RR	RR$_w$	RR	RR$_w$	RR	RR$_w$	RR	RR$_w$
Gulfsouth	0001	Redstone Ars/Ft McClellan	38.2	46.8	39.1	46.2	34.4	44.4	27.6	36.3	34.9	43.4
Region 4	0003	Ft. Rucker	39.6	49.2	39.2	46.8	34.2	44.6	37.4	48.6	37.6	47.3
	0004	Maxwell AFB	42.1	46.8	43.0	45.5	32.6	37.4	28.9	32.0	36.6	40.3
	0038	NH Pensacola	31.8	44.5	29.7	43.8	28.6	36.5	27.3	38.2	29.3	40.7
	0042	Eglin AFB	41.2	56.1	34.6	45.3	32.6	49.2	32.4	44.3	35.2	48.7
	0043	Tyndall AFB	39.0	46.0	35.0	40.5	32.6	38.2	24.9	30.2	32.9	38.5
	0073	Keesler AFB	38.6	48.1	35.4	47.0	26.3	37.7	30.5	40.3	32.7	43.2
	7139	Hurlburt Field	30.0	31.1	27.8	29.6	22.9	24.9	22.7	23.6	25.9	27.2
	9904	Out/Area-Reg 4	46.5	57.4	48.7	61.0	45.1	57.4	39.6	52.1	44.8	56.8
Heartland	0055	Scott AFB	42.3	56.2	35.5	47.7	36.8	47.9	33.6	45.8	37.0	49.4
Region 5	0056	NH Great Lakes	22.5	29.6	24.0	31.2	22.8	29.0	23.0	32.1	23.1	30.4
	0060	Ft. Campbell	24.6	29.6	22.1	27.8	24.2	29.6	17.7	23.6	22.1	27.6
	0061	Ft. Knox	37.1	50.2	34.3	44.8	31.6	40.5	27.3	34.5	32.6	42.0
	0095	Wright Patterson AFB	51.2	60.1	43.4	52.0	39.2	45.7	35.8	43.0	42.4	50.1
	9905	Out/Area-Reg 5	54.1	63.4	47.6	55.9	45.4	55.5	42.1	52.4	47.3	56.7
Southwest	0013	Little Rock AFB	35.4	40.6	28.4	32.0	23.4	27.1	25.0	31.4	28.0	32.7
Region 6	0062	Barksdale AFB	31.4	36.8	22.7	29.1	19.8	25.3	23.3	27.7	24.3	29.7
	0064	Ft. Polk	28.4	30.8	28.1	29.6	23.9	25.7	21.5	22.8	25.4	27.2
	0096	Tinker AFB	30.4	35.8	29.1	33.7	25.7	29.9	25.0	28.6	27.6	31.9
	0098	Ft. Sill	29.8	36.4	28.1	36.1	16.6	21.5	21.7	28.5	24.0	30.6
	0109	Brooke AMC-Ft. Sam Houston	37.9	55.4	38.6	54.2	35.6	52.1	33.7	48.2	36.5	52.4
	0110	Ft. Hood	25.7	34.6	22.5	29.7	20.3	26.2	15.2	22.3	20.9	28.1
	0112	Dyess AFB	32.3	38.0	26.5	33.5	25.4	29.9	21.9	25.7	26.5	31.7
	0113	Laughlin AFB/Sheppard AFB	35.1	39.6	33.6	37.9	20.4	24.6	27.7	32.7	29.2	33.7
	0117	Lackland AFB	32.5	45.4	29.4	40.1	31.4	42.9	25.1	34.5	29.6	40.8
	0118	NH Corpus Christi	31.2	36.4	28.5	31.2	30.2	35.2	26.3	30.6	29.1	33.3
	0366	Randolph AFB	44.4	50.1	32.0	37.1	37.3	42.5	35.5	42.7	37.3	43.0
	9906	Out/Area-Reg 6	54.5	64.7	48.1	57.5	47.6	57.3	42.7	52.5	48.4	58.1
Central	0008	Ft. Huachuca	32.7	40.5	29.4	37.1	32.0	37.9	26.4	33.0	30.1	37.1
Region 7	0009	Luke AFB	38.3	56.3	35.9	54.0	34.8	51.9	35.4	49.4	36.1	52.9
	0010	Davis-Monthan AFB	34.4	42.3	31.8	38.7	35.3	43.8	27.3	33.9	32.2	39.7
	0079	Nellis AFB	44.0	52.5	45.1	54.6	37.6	48.6	34.4	42.3	40.3	49.4
	0083	Kirtland AFB	31.0	35.6	29.1	35.7	25.0	31.5	30.5	36.9	28.9	34.9
	0108	Ft. Bliss	27.7	39.3	27.6	41.0	25.5	37.8	23.2	33.5	25.9	37.8
	9907	Out/Area-Reg 7	44.1	56.9	43.5	52.6	53.6	57.3	49.2	58.0	47.3	56.2

Region	CACSMPL	Catchment Area	Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
			RR	RR$_w$	RR	RR$_w$	RR	RR$_w$	RR	RR$_w$	RR	RR$_w$
Central	0032	Evans ACH-Ft. Carson	27.6	38.4	24.0	34.3	23.5	35.6	23.0	32.2	24.5	35.0
Region 8	0033	USAF Acad. Hospital	43.5	55.9	38.2	47.5	41.0	48.4	30.2	39.6	38.4	47.9
	0053	Mountain Home AFB	32.6	38.2	30.3	35.9	30.5	36.0	27.3	32.4	30.2	35.6
	0057	Ft. Riley	32.8	34.1	27.2	28.5	26.3	28.4	22.5	25.3	26.8	28.8
	0058	Ft. Leavenworth	40.2	45.0	38.6	43.6	31.1	35.5	33.1	39.1	35.7	40.8
	0059	McConnell AFB	30.8	36.9	28.4	34.5	20.9	27.2	26.9	32.9	26.8	32.8
	0075	Ft. Leonard Wood	36.1	41.4	30.1	37.8	31.0	33.9	22.4	27.4	29.4	34.9
	0078	Offutt AFB	45.2	52.0	41.9	50.5	39.3	46.7	37.6	44.4	41.0	48.4
	0119	Hill AFB	31.1	34.7	33.4	36.8	29.8	35.8	25.8	30.7	30.0	34.4
	0129	F.E. Warren AFB	33.1	38.6	27.7	33.0	24.9	29.1	27.2	30.9	28.2	32.8
	9908	Out/Area-Reg 8	50.1	64.7	47.1	58.0	43.2	55.7	44.2	56.1	46.1	58.4
Southern California	0019	Edwards AFB	31.1	35.0	30.1	34.5	29.7	33.0	30.4	33.3	30.3	33.9
Region 9	0024	NH Camp Pendleton/Ft Irwin	24.7	35.3	21.2	32.0	20.4	29.8	22.2	31.8	22.1	32.2
	0029	NMC San Diego	27.5	39.3	25.9	36.7	25.4	34.2	23.5	35.3	25.6	36.4
	0030	NH 29-Palms	30.0	31.3	24.8	25.5	28.6	29.7	18.2	19.6	25.4	26.5
	0131	Ft. Irwin	24.8	29.1	16.2	18.7	19.4	23.4	15.4	19.1	18.9	22.6
	9909	Out/Area-Reg 9	42.4	53.9	47.1	56.0	45.1	58.4	41.7	52.2	44.1	55.1
Golden Gate	0014	Travis AFB	36.6	49.8	37.0	49.0	34.6	45.4	32.3	45.1	35.1	47.3
Region 10	0028	NH LeMoore	37.8	43.5	35.3	41.2	29.6	35.1	26.8	30.6	32.4	37.5
	9910	Out/Area-Reg 10	49.4	59.3	58.9	64.8	51.7	59.0	46.0	56.8	51.5	60.0
Northwest	0125	Madigan AMC-Ft. Lewis	33.2	46.3	30.9	40.4	29.0	43.0	24.3	34.7	29.4	41.0
Region 11	0126	NH Bremerton	31.9	38.2	31.4	38.2	30.8	38.2	31.7	38.5	31.4	38.3
	0127	NH Oak Harbor	36.5	39.2	36.1	39.6	31.6	34.1	29.0	31.7	33.3	36.1
	0128	Fairchild AFB	40.1	47.0	33.6	42.2	29.7	36.8	25.0	31.0	32.1	39.1
	9911	Out/Area-Reg 11	56.7	65.6	52.9	63.8	55.2	65.8	50.4	58.8	53.7	63.3
Hawaii	0052	Tripler AMC	30.0	35.8	30.8	37.7	25.1	31.0	22.2	27.7	27.0	33.0
Region 12	0280	Pearl Harbor	31.7	33.1	29.0	31.0	28.7	30.1	30.4	31.9	30.0	31.5
	0287	NMCL Pearl Harbor/Hickam	32.0	33.9	32.6	35.2	31.3	33.5	27.0	28.8	30.7	32.8
	9912	Out/Area-Reg 12	36.8	60.0	57.9	65.2	53.3	72.3	77.8	82.5	56.3	70.6
Europe	0606	Landstuhl AMC/other German	18.6	19.9	11.7	13.0	16.2	17.0	8.2	9.1	13.7	14.7
	0607	Landstuhl	18.2	18.7	19.1	19.6	14.2	14.7	12.4	14.4	16.0	16.8
	0609	Wuerzburg	15.5	15.4	14.5	14.5	13.3	13.6	8.7	8.9	13.0	13.1
	0617	Naples	14.3	14.1	12.6	13.3	15.5	16.0	14.3	13.9	14.2	14.3
	0633	RAF Lakenheath/other Europe	19.7	20.1	12.6	13.4	21.0	21.9	13.3	13.5	16.7	17.2
	0805	Spangdahlem AB	24.0	24.0	12.0	12.3	19.6	20.4	20.4	21.4	19.0	19.5
	0806	Spangdahlem/Ramstein AFB	21.4	22.3	16.0	16.4	20.8	22.1	18.5	18.5	19.2	19.9
	9913	Out/Area-Europe	13.3	27.7	8.3	14.8	16.1	21.8	12.2	18.0	12.1	20.7

TABLE E.6 (CONTINUED)

Region	CACSMPL	Catchment Area	Q1 2003 RR	Q1 2003 RR$_w$	Q2 2003 RR	Q2 2003 RR$_w$	Q3 2003 RR	Q3 2003 RR$_w$	Q4 2003 RR	Q4 2003 RR$_w$	COMBINED RR	COMBINED RR$_w$
Western Pacific Command	0612	Seoul	15.1	14.8	14.0	13.9	12.8	12.8	8.9	8.8	12.7	12.5
	0620	Agana	23.2	26.8	22.4	25.5	20.1	23.4	18.8	23.5	21.1	24.8
	0621	Okinawa	12.6	13.9	11.7	12.6	10.9	11.7	7.8	8.3	10.9	11.6
	0622	NH Yokosuka/other Asian	12.8	13.5	8.9	9.2	11.8	12.5	11.3	11.4	11.2	11.7
	0638	Kunsan AB/Osan AB	11.8	12.4	4.7	4.5	11.1	11.3	12.3	12.6	9.9	10.3
	0640	Yokota AB	22.4	22.4	12.4	12.6	23.7	24.0	12.6	12.8	17.8	18.0
	0804	Kadena AFB	4.5	5.1	3.5	3.7	15.2	15.6	11.8	12.8	8.7	9.4
	9914	Out/Area-Pacific	9.1	27.7	33.3	25.9	15.2	18.1	14.3	16.0	18.5	21.6
TRICARE Latin America	0616	NH Guantanamo/Roosevelt Rds	23.6	26.3	21.6	25.4	24.1	28.0	16.0	18.7	21.4	24.6
	9915	Out/Area-Latin America & Can	33.7	39.8	27.8	40.9	22.6	34.3	17.1	21.4	24.6	33.2
Alaska	0005	Ft. Wainwright	18.9	18.6	25.6	24.8	21.3	21.1	22.7	22.3	22.1	21.7
	0006	Elmendorf AFB/Ft Wainwright	39.8	43.5	34.5	39.4	34.2	38.2	30.1	35.0	34.7	39.0

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TABLE E.7

RESPONSE RATES BY BENEFICIARY CATEGORY AND SEX

		Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
		RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$
Active Duty and Guard/Reserve	Male	19.1	17.8	15.9	14.9	15.2	14.4	13.8	13.0	16.0	15.0
	Female	22.0	21.5	20.1	20.8	19.4	18.9	16.6	16.7	19.5	19.4
Dependent of Active Duty & Guard/Reserve	Male	17.2	17.7	14.2	14.8	15.5	16.4	12.3	12.6	14.8	15.4
	Female	30.3	32.0	28.7	31.1	26.6	28.8	24.7	26.3	27.6	29.5
Retiree/Depend of Retir/Surviv/Other <65	Male	55.1	56.7	49.5	50.3	48.6	50.3	45.6	48.3	49.7	51.4
	Female	52.9	54.7	48.4	48.7	47.8	50.6	43.0	43.7	48.0	49.4
Retiree/Depend of Retir/Surviv/Other 65+	Male	78.8	79.7	74.9	75.3	76.2	75.5	73.3	75.0	75.8	76.4
	Female	74.1	76.5	71.9	73.8	69.7	71.2	68.6	71.3	71.1	73.1

TABLE E.8

RESPONSE RATES BY BENEFICIARY CATEGORY AND SERVICE

		Q1 2003		Q2 2003		Q3 2003		Q4 2003		COMBINED	
Beneficiary Category	Service	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$	RR	RR$_W$
Active Duty and Guard/Reserve	Army	18.4	17.6	15.8	15.1	14.1	13.7	11.8	11.9	14.9	14.5
	Navy	18.4	17.5	16.5	15.5	15.8	15.7	13.9	12.7	16.2	15.4
	Marine Corps	12.5	11.6	9.6	10.0	10.3	9.5	9.4	9.3	10.4	10.1
	Air Force	22.6	23.1	18.5	18.8	18.6	18.7	17.4	17.9	19.3	19.6
	Coast Guard	21.1	17.1	20.5	18.3	17.0	16.9	21.0	20.5	19.9	18.2
Dependent of Active Duty & Guard/Reserve	Army	25.3	27.9	25.4	28.4	22.3	24.8	21.3	23.5	23.5	26.0
	Navy	28.9	30.6	25.6	29.6	26.0	29.6	23.6	25.2	26.1	28.8
	Marine Corps	26.9	29.6	27.5	30.4	26.1	28.1	22.4	25.4	25.7	28.3
	Air Force	31.8	33.2	28.1	28.9	27.4	28.5	24.2	24.5	27.9	28.8
	Coast Guard	35.3	33.7	36.2	39.4	30.2	32.9	31.4	37.6	33.3	35.9
Retiree/Depend of Retir/Surviv/Other <65	Army	72.3	74.5	71.5	73.0	71.3	72.4	42.4	43.5	70.7	72.4
	Navy	75.6	75.8	74.7	75.7	70.0	70.7	46.6	48.0	73.5	74.9
	Marine Corps	79.4	82.5	71.0	71.0	75.6	74.3	39.2	42.1	73.3	74.9
	Air Force	79.9	81.6	75.1	76.3	75.8	75.9	45.3	48.0	75.9	76.9
	Coast Guard	90.9	84.4	66.7	65.0	63.4	64.3	45.5	43.5	74.8	70.4
Retiree/Depend of Retir/Surviv/Other 65+	Army	52.4	54.9	48.5	48.8	47.9	50.1	67.8	70.1	47.9	49.3
	Navy	54.1	55.8	50.0	50.8	48.3	50.8	73.4	77.3	49.8	51.3
	Marine Corps	51.3	52.0	43.1	42.2	44.2	42.3	67.8	72.1	44.4	44.4
	Air Force	55.5	57.0	49.4	50.1	49.1	52.7	72.7	73.5	49.9	52.0
	Coast Guard	57.4	54.9	59.4	54.7	46.5	40.1	82.0	69.2	52.1	48.1

APPENDIX F

TECHNICAL DESCRIPTION OF THE 2003 TRICARE BENEFICIARY REPORTS

The beneficiary reports will present 12 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, courteous and helpful office staff, how well doctors communicate, customer service, claims processing, rating of the health plan, health care, personal doctor, and specialist, and preventive care standards. A combined score will enable the user to rank providers based on a weighted combination of 11 scores. These 11 scores are made up of three different types, described in TABLE F.1: CAHPS composites, ratings, and TMA standard composites. A trend page will compare composites and ratings with values from previous quarters, calculate a quarterly trend, and test the trend for statistical significance.

TABLE F.1

CONTENT OF THE 2003 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 doctors' offices, their experience with customer service representatives, and their experience with claims processing. Scores will be 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, will be presented relative to national benchmarks.
TMA STANDARD COMPOSITES
Only one TMA standard composite score is reported. The score is based on how the preventive care that beneficiaries received compares with Healthy People 2010 standards. Preventive care indicators to be combined are prenatal care, hypertension screening, mammography, and Pap smears.

TABLE F.2 lists the questions and response choices for the CAHPS composites in the beneficiary reports. Question numbers refer to the CAHPS 2.0H 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 will be 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, PCM, and specialist. These ratings are measures of overall beneficiary satisfaction. Questions about these aspects of care ask 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 mean will be multiplied by 100 so that the score will be presented on a scale of 0 to 100.

TABLE F.2

CAHPS 2.0 H QUESTIONS AND RESPONSE CHOICES
EXPRESSED AS COMPOSITE SCORES AND RATINGS

ADULT QUESTIONNAIRE CAHPS 2.0H	GETTING NEEDED CARE	RESPONSE CHOICE
Q6	With the choices your health plan gave you, how much of a problem, if any, was it to get a personal doctor or nurse you are happy with?	A big problem A small problem Not a problem
Q10	In the last 12 months, how much of a problem, if any, was it to get a referral to a specialist that you needed to see?	A big problem A small problem Not a problem
Q24	In the last 12 months, how much of a problem, if any, was it to get the care you or a doctor believed necessary?	A big problem A small problem Not a problem
Q25	In the last 12 months, how much of a problem, if any, were delays in health care while you waited for approval from your health plan?	A big problem A small problem Not a problem
	GETTING CARE QUICKLY	
Q15	In the last 12 months, when you called during regular office hours, how often did you get the help or advice you needed?	Never Sometimes Usually Always
Q17	In the last 12 months, how often did you get an appointment for regular or routine care as soon as you wanted?	Never Sometimes Usually Always
Q20	In the last 12 months, when you needed care right away for an illness or injury, how often did you get care as soon as you wanted?	Never Sometimes Usually Always
Q26	In the last 12 months, how often did you wait in the doctor's office or clinic more than 15 minutes past your appointment time to see the person you went to see?	Never Sometimes Usually Always

ADULT QUESTIONNAIRE CAHPS 2.0H	HOW WELL DOCTORS COMMUNICATE	RESPONSE CHOICE
Q29	In the last 12 months, how often did doctors or other health providers listen carefully to you?	Never Sometimes Usually Always
Q30	In the last 12 months, how often did doctors or other health providers explain things in a way you could understand?	Never Sometimes Usually Always
Q31	In the last 12 months, how often did doctors or other health providers show respect for what you had to say?	Never Sometimes Usually Always
Q32	In the last 12 months, how often did doctors or other health providers spend enough time with you?	Never Sometimes Usually Always
	COURTEOUS AND HELPFUL OFFICE STAFF	
Q27	In the last 12 months, how often did office staff at a doctor's office or clinic treat you with courtesy and respect?	Never Sometimes Usually Always
Q28	In the last 12 months, how often were office staff at a doctor's office or clinic as helpful as you thought they should be?	Never Sometimes Usually Always
	CUSTOMER SERVICE	
Q39	In the last 12 months, how much of a problem, if any, was it to find or understand information in the written materials?	A big problem A small problem Not a problem
Q41	In the last 12 months, how much of a problem, if any, was it to get the help you needed when you called your health plan's customer service?	A big problem A small problem Not a problem
Q46	In the last 12 months, how much of a problem, if any, did you have with paperwork for your health plan?	A big problem A small problem Not a problem

ADULT QUESTIONNAIRE CAHPS 2.0H	CLAIMS PROCESSING	RESPONSE CHOICE
Q35	In the last 12 months, how often did your health plan handle your claims in a reasonable time?	Never Sometimes Usually Always
Q36	In the last 12 months, how often did your health plan handle your claims correctly?	Never Sometimes Usually Always

	RATING OF ALL HEALTH CARE	
Q33	We want to know your rating of all your health care in the last 12 months from all doctors and other health providers. Use any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible. How would you rate all your health care?	0 Worst health care possible 1 2 3 4 5 6 7 8 9 10 Best health care possible

	RATING OF HEALTH PLAN	
Q47	We want to know your rating of all your experience with your health plan. Use any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible. How would you rate your health plan now?	0 Worst health plan possible 1 2 3 4 5 6 7 8 9 10 Best health plan possible

ADULT QUESTIONNAIRE CAHPS 2.0H	RATING OF PERSONAL DOCTOR	RESPONSE CHOICE
Q8	We want to know your rating of your personal doctor or nurse. Use any number from 0 to 10, where 0 is the worst possible doctor or nurse possible and 10 is the best personal doctor or nurse possible. How would you rate your personal doctor or nurse now?	0 Worst personal doctor or nurse possible 1 2 3 4 5 6 7 8 9 10 Best personal doctor or nurse possible
	RATING OF SPECIALIST	
Q12	We want to know your rating of the specialist you saw most often in the last 12 months, including a personal doctor, if he or she was a specialist. Use any number from 0 to 10, where 0 is the worst possible specialist possible and 10 is the best specialist possible. How would you rate your 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 will measure MHS performance in terms of meeting TMA's goals for the provision of preventive services. The composite will be calculated by combining the responses to individual questions pertaining to these goals. Questions and responses from the present version of the 2003 HCSDB that will be incorporated into the preventive care composite are presented in TABLE F.3. The denominator of an individual's composite score will consist of the number of questions to which that individual responded. The numerator will consist of the number of questions for which the response falls into a "desirable" category, where the desirable categories are as indicated. When individual scores are combined, the resulting composite will be weighted by the number of questions to which that individual has responded. Therefore, the weight a particular question receives in the composite score will be based on the number of responses it "receives". A respondent's weight will reflect the number of questions to which he/she responds. The resulting proportion will be presented as a percentage.

TABLE F.3

QUESTIONS AND RESPONSE CHOICES ON PREVENTIVE CARE
EXPRESSED AS A STANDARD TMA COMPOSITE

2003 Q1 ADULT HCSDB QUESTION	COMPOSITE PREVENTIVE CARE	RESPONSE CHOICES
Q67	When did you last have a blood pressure reading?	Less than 12 months ago 1 to 2 years ago More than 2 years ago
Q68	Do you know if your blood pressure is too high?	Yes, it is too high No, it is not too high Don't know
Q69	When did you last have a cholesteral screening, that is, a test to determine the level of cholesteral in your blood?	Less than 2 months ago 1 to 2 years ago More than 2 but less than 5 years ago 5 or more years ago Never had a cholesteral screening
Q77	When did you last have a Pap smear test?	Within the last 12 months 1 to 3 years ago More than 3 but less than 5 years ago 5 or more years ago Never had a Pap smear test
Q79	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
Q83	In which trimester did you first receive prenatal care?	First trimester Second trimester Third trimester Did not receive prenatal care

APPENDIX G

SAS CODE FOR FILE DEVELOPMENT

1.   Q4_2003\PROGRAMS\WEIGHTING\MERGENRC.SAS - Combine Item Response Data from NRC with the MPR sampling and DEERS variables.

```
* PROGRAM:  MERGENRC.SAS
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
* PURPOSE:  COMBINE ITEM RESPONSE DATA FROM NRC WITH THE MPR SAMPLING AND
*           DEERS VARIABLES.  ALSO, CONSTRUCT XREGION AND CONUS.
* WRITTEN:  01/31/2001 BY KEITH RATHBUN
*
* MODIFIED: 1) 03/13/2002 BY KEITH RATHBUN for 2002 survey: Added MPCSMPL,
*              SERVAREA and DCATCH.  Drop SUBDEMO.
*           2) 03/11/2003 BY KEITH RATHBUN for 2003 survey: Removed the
*              processing involving the FLAG_FIN file.  NRC now sends
*              all records regardless of FLAG_FIN.
*
* INPUTS:   1) QnyyA.SD2 - Quarterly DOD Health Survey Data from NRC
*              where n = Quarter Number
*                   yy = Survey Administration Year
*           3) BWT.SD7 - MPR Sampling and DEERS variables
*           4) SAMPLA02.SD2 - DEERS variables
*
* OUTPUTS:  1) MERGENRC.SD2 - Quarterly DOD Health Survey Data
*              (Combined NRC, MPR, and DEERS variables)
*
* INCLUDES: 1) CONSVAR0.SAS - Construct XREGION and CONUS based on CACSMPL.
*
****************************************************************************;
LIBNAME  INBWT       "..\..\DATA\afinal";
LIBNAME  IN    V612 "..\..\DATA\afinal";
LIBNAME  OUT   v612 "..\..\DATA\afinal";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

****************************************************************************
* Define fielding start date so AGE can be recalculated based on DOB.
* Also assign quarter and number of eligibility periods.
****************************************************************************;
%LET FIELDATE = 10012003; * mmddyyyy;
%LET FIELDLBL = October 1st 2003;
%LET QUARTER  = Q4 2003;
%LET NUMPD    = 12; *Add 1 to number of Quarters processed each quarter;

****************************************************************************
* SORT the NRC-Provided file and the original sample (BWT).
****************************************************************************;
PROC SORT DATA=IN.Q403A OUT=NRCFILE; BY MPRID; RUN;
DATA NRCFILE;
   LENGTH MPRID $8;
   SET NRCFILE;
RUN;

PROC SORT DATA=INBWT.BWT OUT=BWT; BY MPRID; RUN;

****************************************************************************
* Attach DEERS variables to the combined file that were ommited from the
* BWT file.
****************************************************************************;
PROC SORT DATA=IN.SAMPLA02 OUT=SAMPLA02
        (KEEP=MPRID DAGEQY DBENCAT DCATCH DMEDELG DSPONSVC LEGDDSCD MBRRELCD
              MEDTYPE MRTLSTAT PATCAT PCM RACEETHN
              PNLCATCD PNBRTHDT PAYPLNCD E1-E&NUMPD);
   BY MPRID;
RUN;

****************************************************************************
* Attach the original sampling variables to the combined file.
****************************************************************************;
DATA MERGENRC;
   MERGE BWT(DROP=XREGION) NRCFILE(in=in2) SAMPLA02(in=in1);
   BY MPRID;
   FLAG_FIN = COMPRESS(FLAG_FIN); *Trim off the blanks;
   ****************************************************************************
```

```
      * The following code from Don/Nancy/Esther was added to fix CACSMPL
      * 2002 data for Q1.  Do not remove this code.
      ***************************************************************************;
      ***** Replace CACSMPL 6992 with its DCATCH *****;
      IF CACSMPL = '6992' THEN GEOCELL = DCATCH;
      IF CACSMPL = '6992' THEN CACSMPL = GEOCELL;
      ***** Replace out of area catchment areas *****;
      IF CACSMPL IN ('0999') THEN CACSMPL='9999';
      IF CACSMPL IN ('0934') THEN CACSMPL='9902';
      ELSE IF CACSMPL IN ('0933') THEN CACSMPL='9901';
      ELSE IF CACSMPL IN ('0911') THEN CACSMPL='9903';
      ***************************************************************************
      * The following code from Don/Nancy/Esther was added to fix CACSMPL
      * 2002 data for Q2.
      ***************************************************************************;
      IF CACSMPL = '0985' THEN CACSMPL = '9910';
      IF CACSMPL = '0989' THEN CACSMPL = '9904';
      ***************************************************************************
      * DROP variables that are not needed.
      ***************************************************************************;
      DROP LITHOCD  SURVTYPE SVCCD GEOSMPL GEOCELL EBG_COM EBSMPL BOTHSURV
           D_FAC D_HEALTH D_INSTAL D_PAR;
      ***************************************************************************
      * Construct XREGION and CONUS.
      ***************************************************************************;
      %INCLUDE "CONSVAR0.SAS";
      ***************************************************************************
      * 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;

      LENGTH XREGION 3.
             CONUS   3. ;

      LABEL  CACSMPL  = 'CACSMPL – Catchment Area'
             XREGION  = 'XREGION – Region'
             CONUS    = 'CONUS - CONUS/OCONUS Indicator'
             BWT      = 'BWT - Basic Sampling Weight'
             ENBGSMPL = 'ENBGSMPL - Beneficiary/Enrollment Status'
             NHFF     = 'NHFF - Stratum Sample Size'
             SERVAREA = 'Service Area'
             SEXSMPL  = 'SEXSMPL – Sex'
             STRATUM  = 'Stratum'
             SVCSMPL  = 'SVCSMPL - Branch of Service'
             FLAG_FIN = 'Final Disposition'
           ;
    IF IN2 AND NOT IN1 THEN
        PUT "ERROR: MPRID Not Found in both the NRC and MPR files, MPRID = " MPRID;

RUN;

DATA OUT.MERGENRC;
   SET MERGENRC;
   BY MPRID;
   ***********************************************************************
   * Construct MPCSMPL.
   ***********************************************************************;
   IF PAYPLNCD = 'MO' THEN
```

```
      MPCSMPL = 2;
   ELSE IF PAYPLNCD = 'MW' THEN
      MPCSMPL = 3;
   ELSE
      MPCSMPL = 1;
   ************************************************************************
   * Calculate FIELDAGE based on PNBRTHDT using fielding period
   * starting date.
   ***********************************************************************;
   FIELDATE = INPUT("&FIELDATE",mmddyy8.);
   DOB = SUBSTR(PNBRTHDT,5,2) || SUBSTR(PNBRTHDT,7,2) || SUBSTR(PNBRTHDT,1,4);
   BRTHDATE = INPUT(DOB,mmddyy8.);

   FIELDAGE = PUT(INT((FIELDATE - BRTHDATE)/365.25),Z3.);
   LABEL MPCSMPL  = "MPCSMPL - Military Personnel Category";
   LABEL FIELDAGE = "Age as of &FIELDLBL";
   LABEL DCATCH   = "Catchment Area";

   LENGTH QUARTER $7;
   QUARTER = "&QUARTER";
   LABEL  QUARTER  = 'Survey Quarter';

   LENGTH ONTIME $3;
   ONTIME = "YES";
   LABEL ONTIME = "Responded Within 8 weeks of Mail-Out";

   DROP FIELDATE DOB BRTHDATE PNBRTHDT PAYPLNCD;
RUN;

TITLE1 "Quarterly DOD Health Survey - Combine NRC, MPR and DEERS variables (8860-300)";
TITLE2 "Program Name: MERGENRC.SAS By Keith Rathbun";
TITLE3 "Program Inputs: QnyyA.SD2, BWT.SD7, SAMPLA02.SD2 -- Program Output: MERGENRC.SD2";

PROC CONTENTS; RUN;

PROC FREQ DATA=OUT.MERGENRC(DROP=MPRID PRN);
TABLES WEB FLAG_FIN DAGEQY*FIELDAGE XREGION*CACSMPL XREGION*CONUS _ALL_ /MISSING LIST;
RUN;
```

2.A   Q1_2003\PROGRAMS\CODINGSCHEME\CSCHM03Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 1 CY2003.

```
*****************************************************************************;
*  Program:  Cschm03q.sas
*  Written:  06/04/2001
*   Author:  C. Rankin
*
*    Input:  MERGENRC.SD2 - Merged MPR Sampling, DEERS, and NRC Response Data
*   Output:  CSCHM03Q.SD2 - Coding scheme file
*
* Modified:  9/20/2001 - Recodes removed (stored in recodes_old.sas)
*           10/31/2001 - Revised notes 16 and 17 (became notes 26 and 27)
*            3/22/2002 - Updated Variable names for Q1 2002 and added
*                        Include file RENAME.SAS to change the variable
*                        names from 01 to 02. Skipping 01 designation to make
*                        survey reflect year of fielding
*            5/09/2002 - Change to logic in TFL supplement
*            3/17/2003 - Updated Variables names for Q1 2003
*            4/11/2003 - Added note 19a to accomodate Q1 2003 error where
*                        an option on most of the questionnaires was omitted for
*                        H03062
*  Purpose:  Apply Coding Scheme Specifications to DoD Health Care Survey
*            Response Data, check for consistency in responses and skip
*            patterns
*  Include
*    files: Cschm03q.fmt
*
*****************************************************************************;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES PAGENO=1 SOURCE SOURCE2;
*OPTIONS OBS=100;

LIBNAME LIBRARY v612 "..\..\DATA\AFINAL\FMTLIB";
LIBNAME IN      v612 "..\..\DATA\AFINAL";
LIBNAME OUT     v612 "..\..\DATA\AFINAL";

%LET INDATA=MERGENRC;
%LET OUTDATA=CSCHM03Q;
%LET PERIOD=January, 2003 to December, 2003;


/* Variable names in survey -- become recoded varibles */

%Let varlist1 =

 H03001    H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
 H03002K   H03002L  H03002M  H03002N  H03002O  H03003   H03004   H03005
 H03006    H03007   H03008   H03009   H03010   H03011   H03012   H03013
 H03014    H03015   H03016   H03017   H03018   H03019   H03020   H03021
 H03022    H03023   H03024   H03025   H03026   H03027   H03028   H03029
 H03030    H03031   H03032   H03033   H03034   H03035   H03036   H03037
 S03R01    S03R02   S03R03   S03R04
 H03038
 S03F01    S03F02   S03V01   S03V02   S03V03   S03V04   S03V05
 H03039    H03040   H03041   H03042   H03043   H03044   H03045
 H03046    H03047   H03048   H03049   H03050   H03051   H03052
 S03B01
 H03053    H03054   H03055   H03056   H03057   H03058   H03059   H03060
 H03061    H03062   H03063   H03064   H03065   H03066   H03067   H03068
 H03069    H03070   H03071
 S03O01    S03O02   S03O03   S03O04   S03O05   S03O06
 H03072    H03073   H03074   H03075   H03076   H03077   H03078   H03079
 H03080    H03081
 SREDA
 H03082
 SRRACEA   SRRACEB  SRRACEC  SRRACED  SRRACEE  SRAGE
 ;

/* _O variables are the original values from the survey response */

%Let varlist2 =
```

```
   H03001_O   H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
   H03002KO  H03002LO  H03002MO  H03002NO  H03002OO  H03003_O  H03004_O  H03005_O
   H03006_O  H03007_O  H03008_O  H03009_O  H03010_O  H03011_O  H03012_O  H03013_O
   H03014_O  H03015_O  H03016_O  H03017_O  H03018_O  H03019_O  H03020_O  H03021_O
   H03022_O  H03023_O  H03024_O  H03025_O  H03026_O  H03027_O  H03028_O  H03029_O
   H03030_O  H03031_O  H03032_O  H03033_O  H03034_O  H03035_O  H03036_O  H03037_O
   S03R01_O  S03R02_O  S03R03_O  S03R04_O
   H03038_O
   S03F01_O  S03F02_O  S03V01_O  S03V02_O  S03V03_O  S03V04_O  S03V05_O
   H03039_O  H03040_O  H03041_O  H03042_O  H03043_O  H03044_O  H03045_O
   H03046_O  H03047_O  H03048_O  H03049_O  H03050_O  H03051_O  H03052_O
   S03B01_O
   H03053_O  H03054_O  H03055_O  H03056_O  H03057_O  H03058_O  H03059_O  H03060_O
   H03061_O  H03062_O  H03063_O  H03064_O  H03065_O  H03066_O  H03067_O  H03068_O
   H03069_O  H03070_O  H03071_O
   S03O01_O  S03O02_O  S03O03_O  S03O04_O  S03O05_O  S03O06_O
   H03072_O  H03073_O  H03074_O  H03075_O  H03076_O  H03077_O  H03078_O  H03079_O
   H03080_O  H03081_O
   SREDA_O
   H03082_O
   SRRACEAO SRRACEBO SRRACECO SRRACEDO SRRACEEO SRAGE_O
   ;

TITLE  "DoD 2003 Survey Form A -- &PERIOD";
TITLE2 "Apply Coding Scheme";

DATA OUT.CSCHM03Q;

   SET IN.MERGENRC;

RUN;




DATA OUT.CSCHM03Q;

   LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
   INFORMAT &VARLIST2. 4.;
   %INCLUDE "CSCHM03Q.FMT";


/* label and format statements for original variables */

/*IF YOU DID NOT NEED TO CHANGE THE VARIABLE NAMES IN ABOVE DATASTEP,
  THIS FILE SHOULD BE IN.MERGENRC INSTEAD OF OUT.CSCHM03Q*/

   SET OUT.CSCHM03Q(Rename=(S03001=S03O01 S03002=S03O02 S03003=S03O03
                            S03004=S03O04 S03005=S03O05 S03006=S03O06)) ;




*************************************************************;
**** Recodes for invalid responses:**************************;
*************************************************************;

*****THE FOLLOWING RECODE IS FOR Q1 2003 ONLY******************;
*****
*****Per the following email from Bruce Doll to Keith Rathbun**;
******* Secondly, I need to inform you of some changes made to the Q103 survey.  ***;
******* During the mailing of the first survey, questions #74 (H03062) and *********;
******* #81 (H03069) were missing a response choice.  #74 did not have the *********;
******* response option of  "I had no visit in the last 12 months", which  *********;
******* is coded as -6.  #81 did not have the response option, "No, I am    *********;
******* not currently pregnant, but have been pregnant in the past 12 months",******;
******* coded as a 2.  However, on the second survey, both these questions had******;
******* these response choices included.  In the dataset for Q103, I separated******;
******* these questions into two variables to differentiate between the first ******;
******* and second surveys.  Therefore, H03062a and H03069a were the responses******;
******* for the first survey, whereas H03062b and H03069b were the responses *******;
******* for the second survey.                                              *******;
******************on March 25, 2003*****************************;
```

```
   IF H03062a NE . THEN H03062=H03062a;
   IF H03062b NE . THEN H03062=H03062b;

   IF H03069a NE . THEN H03069=H03069a;
   IF H03069b NE . THEN H03069=H03069b;


   DROP H03062a H03062b H03069a H03069b;


**********************************************************************;


/* This is a version of the coding scheme and coding tables for the
   2003 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                             */

   SEX=PNSEXCD;
   AGE=INPUT(DAGEQY,8.);
   DROP SEX AGE;

   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)= -8 THEN RECODE(I)=.A;
           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;
           ELSE RECODE(I)=RECODE(I);
       END;
   END;
   DROP I;



/* recode selected responses to be 1=marked, 2=unmarked */

   ARRAY   MARKED(*) H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
                     H03002K  H03002L  H03002M  H03002N  H03002O  SRRACEA  SRRACEB
                     SRRACEC  SRRACED  SRRACEE
                      ;

   ARRAY INFORMAT(*) H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
                     H03002KO  H03002LO  H03002MO  H03002NO  H03002OO  SRRACEAO  SRRACEBO
                     SRRACECO  SRRACEDO  SRRACEEO
                      ;


   DO J=1 TO DIM(INFORMAT);
       IF INFORMAT(J) NOT IN (.,-9) THEN MARKED(J)=1;
       ELSE MARKED(J)=2;
   END;
   DROP J;

   FORMAT H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
          H03002K  H03002L  H03002M  H03002N  H03002O  SRRACEA  SRRACEB
          SRRACEC  SRRACED  SRRACEE
          MARKED.;


**********************************************************************;
```

```
/*  skip coding scheme for all surveys not returned  **/

  IF FLAG_FIN NE '1' THEN GOTO NOSURVEY;

/** Note 1 -- H03006, H03007 health plan usage  **/

  IF H03006 > 0 OR H03006 =.D THEN N1=1;
  ELSE IF H03006=.N  THEN DO;
     IF H03007 NOT=. THEN DO;
        N1=2;
        H03007=.C;
     END;
     ELSE DO;
        N1=3;
        H03007=.N;
     END;
  END;
  ELSE IF H03006=.   THEN N1=4;
  ELSE IF H03006=.A  THEN DO;
     IF H03007 NOT=. THEN N1=5;
     ELSE DO;
        H03006=.N;
        H03007=.N;
        N1=6;
     END;
  END;


/** Note2  -- H03008, H03009: Personal doctor or nurse **/

  IF H03008=1 AND H03009 IN (1,2,3,.,.A) THEN N2=1;
  ELSE IF H03008 IN (1,.,.A) AND H03009=.N THEN DO;
     H03008=2;
     H03009=.C;
     N2=2;
  END;
  ELSE IF H03008 IN (2,.,.A) AND (H03009 GT 0 OR H03009 IN(.A)) THEN DO;
     H03008=1;
     N2=3;
  END;
  ELSE IF H03008=2 AND H03009 IN (.N,.) THEN DO;
     IF H03009=. THEN H03009=.N;
     ELSE H03009=.C;
     N2=4;
  END;
  ELSE IF H03008=. AND H03009=. THEN N2=5;
  ELSE IF H03008=.A AND H03009=. THEN DO;
     H03008=2;
     H03009=.N;
     N2=6;
  END;


/** Note 3 -- H03010, H03011:  Personal doctor or nurse **/

  IF H03010 = 1 AND (H03011 GE 0 OR H03011 IN (.,.A)) THEN N3=1;
  ELSE IF H03010 IN (1,.,.A) AND H03011=.N THEN DO;
     N3=2;
     H03010=2;
     H03011=.C;
  END;
  ELSE IF H03010 IN (2,.,.A) AND (H03011 GE 0 OR H03011=.A) THEN DO;
     H03010=1;
     N3=3;
  END;
  ELSE IF H03010=2 AND H03011 IN (.N,.)  THEN DO;
     N3=4;
     IF H03011=. THEN H03011=.N;
     ELSE H03011=.C;
  END;
```

```
   ELSE IF H03010=. AND  H03011=. THEN N3=5;
   ELSE IF H03010=.A AND H03011=. THEN DO;
      H03010=2;
      N3=6;
      H03011=.N;
   END;




/** Note 4 -- H03012, H03013:  needed to see a specialist in last 12 months **/

   IF H03012=1 AND H03013 IN (1,2,3,.,.A) THEN N4=1;
   ELSE IF H03012 IN (1,.,.A) AND H03013=.N THEN DO;
      H03012=2;
      H03013=.C;
      N4=2;
   END;
   ELSE IF H03012 IN (2,.,.A) AND H03013 IN (1,2,3,.A) THEN DO;
      H03012=1;
      N4=3;
   END;
   ELSE IF H03012=2 AND H03013 IN (.,.N) THEN DO;
      IF H03013=. THEN H03013=.N;
      ELSE H03013=.C;
      N4=4;
   END;
   ELSE IF H03012=.  AND H03013=.  THEN N4=5;
   ELSE IF H03012=.A AND H03013=.  THEN DO;
      H03012=2;
      H03013=.N;
      N4=6;
   END;




/** Note 5 -- H03014,H03015,H03016: saw a specialist in last 12 months **/

   ARRAY NOTE5 H03015 H03016;
   N5MARK=0;
   N5NMISS=0;

   DO OVER NOTE5;
      IF NOTE5 NE . THEN N5NMISS+1;
      IF NOTE5 NOT IN (.N,.) THEN N5MARK+1;
   END;

   IF H03014=1 AND (N5NMISS=0 OR N5MARK>0) THEN N5=1;
   ELSE IF H03014 IN (1,.,.A) AND N5NMISS>0 AND N5MARK=0 THEN DO;
      H03014=2;
      N5=2;
      DO OVER NOTE5;
         IF NOTE5=. THEN NOTE5=.N;
         ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014 IN (2,.,.A) AND N5MARK>0 THEN DO;
      H03014=1;
       N5=3;
   END;
   ELSE IF H03014=2 AND (N5NMISS=0 OR (N5NMISS>0 AND N5MARK=0)) THEN DO;
      N5=4;
      DO OVER NOTE5;
         IF NOTE5=. THEN NOTE5=.N;
         ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014=. AND  N5NMISS=0 THEN N5=5;
   ELSE IF H03014=.A AND N5NMISS=0 THEN DO;
      H03014=2;
      N5=6;
      DO OVER NOTE5;
         NOTE5=.N;
```

```
      END;
    END;

  DROP N5NMISS N5MARK;




/** Note 6 -- called a doctor's office:  H03017, H03018 **/

  IF H03017=1 AND H03018 IN (1,2,3,4,.,.A) THEN N6=1;
  ELSE IF H03017 IN (1,.,.A) AND H03018=.N THEN DO;
     H03017=2;
     H03018=.C;
     N6=2;
  END;
  ELSE IF H03017 IN (2,.,.A) AND H03018 IN (1,2,3,4,.A) THEN DO;
     H03017=1;
     N6=3;
  END;

  ELSE IF H03017=2 AND H03018 IN (.,.N) THEN DO;
     IF H03018=. THEN H03018=.N;
     ELSE H03018=.C;
     N6=4;
  END;
  ELSE IF H03017=.  AND H03018=.  THEN N6=5;
  ELSE IF H03017=.A AND H03018=.  THEN DO;
     H03017=2;
     N6=6;
     H03018=.N;
  END;


/** Note 7 -- H03019,H03020,H03021:  regular or routine healthcare **/

  ARRAY NOTE7 H03020 H03021;
  N7MARK=0;
  N7NMISS=0;

  DO OVER NOTE7;
     IF NOTE7 NE . THEN N7NMISS+1;
     IF NOTE7 NOT IN (.N,.) THEN N7MARK+1;
  END;

  IF H03019=1 AND (N7NMISS=0 OR N7MARK>0) THEN N7=1;
  ELSE IF H03019 IN (1,.,.A) AND N7NMISS>0 AND N7MARK=0 THEN DO;
     H03019=2;
     N7=2;
     DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
     END;
  END;
  ELSE IF H03019 IN (2,.,.A) AND N7MARK>0 THEN DO;
     H03019=1;
     N7=3;
  END;
  ELSE IF H03019=2 AND (N7NMISS=0 OR (N7NMISS>0 AND N7MARK=0)) THEN DO;
     N7=4;
     DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
     END;
  END;
  ELSE IF H03019=.  AND  N7NMISS=0 THEN N7=5;
  ELSE IF H03019=.A AND N7NMISS=0 THEN DO;
     H03019=2;
     N7=6;
     DO OVER NOTE7;
        NOTE7=.N;
     END;
  END;
```

```
   DROP N7NMISS N7MARK;


/** Note 8 -- H03022,H03023,H03024:  illness or injury **/

  ARRAY NOTE8 H03023 H03024;
  N8MARK=0;
  N8NMISS=0;

  DO OVER NOTE8;
     IF NOTE8 NE . THEN N8NMISS+1;
     IF NOTE8 NOT IN (.N,.) THEN N8MARK+1;
  END;

  IF H03022=1 AND (N8NMISS=0 OR N8MARK>0) THEN N8=1;
  ELSE IF H03022 IN (1,.,.A) AND N8NMISS>0 AND N8MARK=0 THEN DO;
     H03022=2;
     N8=2;
     DO OVER NOTE8;
        IF NOTE8=. THEN NOTE8=.N;
        ELSE NOTE8=.C;
     END;
  END;
  ELSE IF H03022 IN (2,.,.A) AND N8MARK>0 THEN DO;
     H03022=1;
     N8=3;
  END;
  ELSE IF H03022=2 AND (N8NMISS=0 OR (N8NMISS>0 AND N8MARK=0)) THEN DO;
     N8=4;
     DO OVER NOTE8;
        IF NOTE8=. THEN NOTE8=.N;
        ELSE NOTE8=.C;
     END;
  END;
  ELSE IF H03022=.  AND N8NMISS=0 THEN N8=5;
  ELSE IF H03022=.A AND N8NMISS=0 THEN DO;
     H03022=2;
     N8=6;
     DO OVER NOTE8;
        NOTE8=.N;
     END;
  END;

  DROP N8NMISS N8MARK;



/** Note 9 -- H03026, H03027-H03036: doctor's office or clinic **/

  ARRAY NOTE9   H03027-H03036;
  N9MARK=0;
  N9NMISS=0;

  DO OVER NOTE9;
     IF NOTE9 NE . THEN N9NMISS+1;
     IF NOTE9 NOT IN (.N,.) THEN N9MARK+1;
  END;

  IF H03026=1 THEN DO;
     N9=1;
     DO OVER NOTE9;
        IF NOTE9=. THEN NOTE9=.N;
        ELSE NOTE9=.C;
     END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7,.,.A) AND N9NMISS>0 AND N9MARK=0 THEN DO;
     H03026=1;
     N9=2;
     DO OVER NOTE9;
        IF NOTE9=. THEN NOTE9=.N;
        ELSE NOTE9=.C;
     END;
```

```
   END;
   ELSE IF H03026 IN (2,3,4,5,6,7) AND (N9NMISS=0 OR N9MARK>0) THEN N9=3;
   ELSE IF H03026=.  AND N9NMISS=0 THEN N9=4;
   ELSE IF H03026=.A AND N9NMISS=0 THEN DO;
      H03026=1;
      N9=5;
      DO OVER NOTE9;
         NOTE9=.N;
      END;
   END;
   ELSE IF H03026 IN (.,.A) AND N9MARK>0 THEN N9=6;

   DROP N9NMISS N9MARK;



/** Note 10 -- S03R01, S03R02-S03R04:  Prescriptions filled at military pharmacy**/

   ARRAY NOTE10 S03R02-S03R04;
   N10MARK=0;
   N10NMISS=0;

   DO OVER NOTE10;
      IF NOTE10 NE . THEN N10NMISS+1;
      IF NOTE10 NOT IN (.N,.) THEN N10MARK+1;
   END;

   IF S03R01=1 AND (N10NMISS=0 OR N10MARK>0) THEN N10=1;
   ELSE IF S03R01 IN (1,.,.A) AND N10NMISS>0 AND N10MARK=0 THEN DO;
      S03R01=2;
      N10=2;
      DO OVER NOTE10;
         IF NOTE10=. THEN NOTE10=.N;
         ELSE NOTE10=.C;
      END;
   END;
   ELSE IF S03R01 IN (2,.,.A) AND N10MARK>0  THEN DO;
      S03R01=1;
      N10=3;
   END;
   ELSE IF S03R01=2 AND (N10NMISS=0 OR (N10NMISS>0 AND N10MARK=0)) THEN DO;
      N10=4;
      DO OVER NOTE10;
         IF NOTE10=. THEN NOTE10=.N;
         ELSE NOTE10=.C;
      END;
   END;
   ELSE IF S03R01=.  AND N10NMISS=0 THEN N10=5;
   ELSE IF S03R01=.A AND N10NMISS=0 THEN DO;
      S03R01=2;
      N10=6;
      DO OVER NOTE10;
         NOTE10=.N;
      END;
   END;

   DROP N10NMISS N10MARK;




/** Note 12 -- S03F01, S03F02: healthcare received at a military facility**/

   IF S03F01=1 AND S03F02 IN (1,2,3,4,5,6,.,.A) THEN N12=1;
   ELSE IF S03F01 IN (2,.,.A) AND S03F02 IN (1,2,3,4,5,6,.A) THEN DO;
      S03F01=1;
      N12=2;
   END;
   ELSE IF S03F01=2 AND S03F02 IN (.) THEN DO;
      S03F02=.N;
      N12=3;
   END;
   ELSE IF S03F01=.  AND S03F02=.  THEN N12=4;
```

```
    ELSE IF S03F01=.A AND S03F02=.  THEN DO;
       S03F01=2;
       N12=5;
       S03F02=.N;
    END;



/** Note 13 -- S03V01, S03V02-S03V05: health care received from TRICARE civilian network **/

  ARRAY NOTE13 S03V02-S03V05;
  N13MARK=0;
  N13NMISS=0;

  DO OVER NOTE13;
     IF NOTE13 NE . THEN N13NMISS+1;
     IF NOTE13 NOT IN (.N,.) THEN N13MARK+1;
  END;

  IF S03V01 IN (1,2,3,4) AND (N13NMISS=0 OR N13MARK>0) THEN N13=1;
  ELSE IF S03V01 IN (1,2,3,.,.A) AND N13NMISS>0 AND N13MARK=0 THEN DO;
     N13=2;
     S03V01=.N;
     DO OVER NOTE13;
        IF NOTE13=. THEN NOTE13=.N;
        ELSE NOTE13=.C;
     END;
  END;
  ELSE IF S03V01=4 AND N13NMISS>0 AND N13MARK=0  THEN DO;
     N13=3;
     DO OVER NOTE13;
        NOTE13=.N;
     END;
  END;
  ELSE IF S03V01=.N AND (N13NMISS=0 OR (N13NMISS>0 AND N13MARK=0) OR N13MARK>0)
  THEN DO;
     N13=4;
     DO OVER NOTE13;
        IF NOTE13=. THEN NOTE13=.N;
        ELSE NOTE13=.C;
     END;
  END;
  ELSE IF S03V01=.  AND N13NMISS=0 THEN N13=5;
  ELSE IF S03V01=.A AND N13NMISS=0 THEN DO;
     S03V01=.N;
     N13=6;
     DO OVER NOTE13;
        NOTE13=.N;
     END;
  END;
  ELSE IF S03V01 IN (.,.A) AND N13MARK>0 THEN N13=7;

  DROP N13NMISS N13MARK;



/** Note 14 -- H03039, H03040-H03042: claims to health plan **/

  ARRAY NOTE14 H03040-H03042;
  N14MARK=0;
  N14NMISS=0;
  N14NDK=0;

  DO OVER NOTE14;
     IF NOTE14 NE . THEN N14NMISS+1;
     IF NOTE14 NOT IN (.N,.) THEN N14MARK+1;
     IF NOTE14 NOT IN (.,.D) THEN N14NDK+1;
  END;

  IF H03039=1 AND (N14NMISS=0 OR (N14MARK>0 and N14NDK>0) or N14NDK=0) THEN N14=1;
  ELSE IF H03039 IN (1,.,.A) AND N14NMISS>0 AND N14MARK=0 THEN DO;
     N14=2;
     H03039=2;
```

```
      DO OVER NOTE14;
          IF NOTE14=. THEN NOTE14=.N;
          ELSE NOTE14=.C;
      END;
  END;
  ELSE IF H03039 IN (2,.,.A) AND ((N14MARK>0 AND N14NDK>0) OR N14NMISS=0 OR N14NDK=0) THEN DO;
      H03039=1;
      N14=3;
  END;
  ELSE IF H03039 IN (2) AND (N14NMISS=0 OR (N14NMISS>0 AND N14MARK=0)) THEN DO;
      N14=4;
      DO OVER NOTE14;
          IF NOTE14=. THEN NOTE14=.N;
          ELSE NOTE14=.C;
      END;
  END;
  ELSE IF H03039=.  AND N14NMISS=0 THEN N14=5;
  ELSE IF H03039=.A AND N14NMISS=0 THEN DO;
      H03039=2;
      N14=6;
      DO OVER NOTE14;
          NOTE14=.N;
      END;
  END;

  DROP N14NMISS N14MARK N14NDK;




/** NOTE15  -- H03043, H03044: **/

  IF H03043=1 AND H03044 IN (1,2,3,.,.A) THEN N15=1;
  ELSE IF H03043 IN (1,.,.A) AND H03044=.N THEN DO;
      H03043=2;
      H03044=.C;
      N15=2;
  END;
  ELSE IF H03043 IN (2,.,.A) AND H03044 IN (1,2,3,.A) THEN DO;     /* JMA per Daisy's suggestion
3/20/03  */
      H03043=1;
      N15=3;
  END;
  ELSE IF H03043=2 AND H03044 IN (.N,.) THEN DO;
      IF H03044=. THEN H03044=.N;
      ELSE H03044=.C;
      N15=4;
  END;
  ELSE IF H03043=. AND H03044=. THEN N15=5;
  ELSE IF H03043=.A AND H03044=. THEN DO;
      H03043=2;
      H03044=.N;
      N15=6;
  END;


/** NOTE16 -- H03045, H03046: health plan's customer service **/

  IF H03045=1 AND H03046 IN (1,2,3,.,.A) THEN N16=1;
  ELSE IF H03045 IN (1,.,.A) AND H03046=.N THEN DO;
      H03045=2;
      H03046=.C;
      N16=2;
  END;
  ELSE IF H03045 IN (2,.,.A) AND H03046 IN (1,2,3,.A) THEN DO;     /* JMA per Daisy's suggestion
3/20/03  */
      H03045=1;
      N16=3;
  END;
  ELSE IF H03045=2 AND H03046 IN (.N,.) THEN DO;
      IF H03046=. THEN H03046=.N;
      ELSE H03046=.C;
      N16=4;
```

```
   END;
   ELSE IF H03045=. AND H03046=. THEN N16=5;
   ELSE IF H03045=.A AND H03046=. THEN DO;
      H03045=2;
      H03046=.N;
      N16=6;
   END;


/** Note 17 -- H03047, H03048, H03049:  complaint or problem  **/

   ARRAY NOTE17 H03048 H03049;
   N17MARK=0;
   N17NMISS=0;

   DO OVER NOTE17;
      IF NOTE17 NE . THEN N17NMISS+1;
      IF NOTE17 NOT IN (.N,.) THEN N17MARK+1;
   END;

   IF H03047=1 AND (N17NMISS=0 OR N17MARK>0) THEN N17=1;
   ELSE IF H03047 IN (1,.,.A) AND N17NMISS>0 AND N17MARK=0 THEN DO;
      H03047=2;
      N17=2;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047 IN (2,.,.A) AND N17MARK>0 THEN DO;
      H03047=1;
      N17=3;
   END;
   ELSE IF H03047=2 AND (N17NMISS=0 OR (N17NMISS>0 AND N17MARK=0)) THEN DO;
      N17=4;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047=.  AND N17NMISS=0 THEN N17=5;
   ELSE IF H03047=.A AND N17NMISS=0 THEN DO;
      H03047=2;
      N17=6;
      DO OVER NOTE17;
         NOTE17=.N;
      END;
   END;

   DROP N17NMISS N17MARK;



/** NOTE18  -- H03050, H03051: paperwork  **/

   IF H03050=1 AND H03051 IN (1,2,3,.,.A) THEN N18=1;
   ELSE IF H03050 IN (1,.,.A) AND H03051=.N THEN DO;
      H03050=2;
      H03051=.C;
      N18=2;
   END;
   ELSE IF H03050 IN (2,.,.A) AND H03051 IN (1,2,3,.A) THEN DO;
      H03050=1;
      N18=3;
   END;
   ELSE IF H03050=2 AND H03051 IN (.N,.)THEN DO;
      IF H03051=. THEN   H03051=.N;
      ELSE H03051=.C;
      N18=4;
   END;
   ELSE IF H03050=.  AND H03051=. THEN N18=5;
   ELSE IF H03050=.A AND H03051=. THEN DO;
      H03050=2;
```

```
        H03051=.N;
        N18=6;
    END;



/** NOTE19A -- H03026, H03062: smoking  **/
/** only for this quarter!!!!!          **/

    IF H03026=1 AND H03062 IN (., .A) THEN DO;
        H03062= .N;
        N19A=1;
    END;
    ELSE IF H03026=1 AND H03062 NOT IN (., .A) THEN DO;
        N19A=2;
    END;
    ELSE IF H03026 NE 1 THEN N19A=3;




/** Note 19 -- smoking:  H03059 - H03062  **/

    IF H03059=1 and H03060 IN (3,4) THEN DO;  /* still smoke */
        IF H03061 NE . THEN DO;
            H03061=.C;
            N19=1;
        END;
        ELSE IF H03061=. THEN DO;
            H03061=.N;
            N19=2;
        END;
    END;
    ELSE IF H03059=1 AND H03060=2 THEN DO;            /* quit */
        IF H03061 IN (2,.D) AND H03062 NE . THEN DO;   /* > 1 year ago */
            H03062 =.C;
            N19=3;
        END;
        ELSE IF H03061 IN (2,.D) AND H03062=. THEN DO;
            H03062 =.N;
            N19=4;
        END;
        ELSE IF H03061 IN (3,.,.A) THEN N19=5;       /* < 1 year ago */
    END;
    ELSE IF H03059=1 AND H03060 IN (.D,.,.A) THEN DO;  /* don't know */
        IF H03061=2 AND H03062 NE . THEN DO;          /* > 1 year ago */
            H03060=2;
            H03062=.C;
            N19=6;
        END;
        ELSE IF H03061=2 AND H03062 = . THEN DO;
            H03060=2;
            H03062=.N;
            N19=7;
        END;
        ELSE IF H03061=3 THEN DO;             /* < 1 year ago */
            H03060=2;
            N19=8;
        END;
        ELSE IF H03061 IN (.D,.,.A) THEN N19=9;  /* don't know */
    END;
    ELSE IF H03059 IN (2,.D,.,.A) AND H03060 IN (3,4) THEN DO; /*never smoke*/
        IF H03061 NE . THEN DO;
            H03059=1;
            H03061=.C;
            N19=10;
        END;
        ELSE IF H03061=. THEN DO;
            H03059=1;
            H03061=.N;
            N19=11;
        END;
    END;
```

```
ELSE IF H03059 IN (2,.D) AND H03060 IN (2,.D,.A) THEN DO; /*never smoke*/
   IF H03061 NE . AND H03062 NE . THEN DO;
      H03060 =.C;
      H03061 =.C;
      H03062 =.C;
      N19=12;
   END;
   ELSE IF H03061 NE . AND H03062=. THEN DO;
      H03060=.C;
      H03061=.C;
      H03062=.N;
      N19=13;
   END;
   ELSE IF H03061=. AND H03062 NE . THEN DO;
      H03060=.C;
      H03061=.N;
      H03062=.C;
      N19=14;
   END;
   ELSE IF H03061=. AND H03062=. THEN DO;
      H03060=.C;
      H03061=.N;
      H03062=.N;
      N19=15;
   END;
END;
ELSE IF H03059 IN (2,.D) AND H03060= . THEN DO; /*never smoke*/
   IF H03061 NE . AND H03062 NE . THEN DO;
      H03060=.N;
      H03061=.C;
      H03062=.C;
      N19=16;
   END;
   ELSE IF H03061 NE . AND H03062=. THEN DO;
      H03060=.N;
      H03061=.C;
      H03062=.N;
      N19=17;
   END;
   ELSE IF H03061=. AND H03062 NE . THEN DO;
      H03060=.N;
      H03061=.N;
      H03062=.C;
      N19=18;
   END;
   ELSE IF H03061=. AND H03062=. THEN DO;
      H03060=.N;
      H03061=.N;
      H03062=.N;
      N19=19;
   END;
END;
ELSE IF H03059 IN (.A, .) AND H03060 IN (2,.,.A) THEN DO; /*MRE/blank*/
   IF H03061=3 THEN DO;
      H03061=.C; /* Per Eric 4/22/03 */
      N19=20;
   END;
   ELSE IF H03061=2 AND H03062 NE . THEN DO;
      H03059 =1;
      H03062 =.C;
      N19=21;
   END;
   ELSE IF H03061=2 AND H03062=. THEN DO;
      H03061=.C; /* per Eric instruction 4/22/03 */
      N19=22;
   END;
   ELSE IF H03061=.D AND H03062=. THEN DO;
      H03062=.N;
      N19=23;
   END;
   ELSE IF H03061=.D AND H03062 NE . THEN DO;
      H03062=.C;
      N19=24;
```

```
        END;
      ELSE IF H03061 IN (.,.A) AND H03062 IN (2,3,4,5) THEN DO;
          H03059=1;
          N19=25;
      END;
      ELSE IF H03061 IN (.,.A) AND H03062 IN (1,.,.A) THEN N19=26;
      ELSE IF H03061 IN (.,.A) AND H03062=.N THEN N19=26; /*JMA-FOR Q1 2003 only      */
                                                          /*taking care of the update */
                                                          /*created by NOTE19A        */
  END;
  ELSE IF H03059 IN (.A,.) AND H03060=.D THEN DO; /*MRE/blank*/
      IF H03061 NE . AND H03062 NE .  THEN DO;
          H03061=.C;
          H03062=.C;
          N19=27;
      END;
      ELSE IF H03061 NE . AND H03062=.  THEN DO;
          H03061=.C;
          H03062=.N;
          N19=28;
      END;
      IF H03061=. AND H03062=.  THEN DO;
          H03061=.N;
          H03062=.N;
          N19=29;
      END;
      ELSE IF H03061=. AND H03062 NE .  THEN DO;
          H03061=.N;
          H03062=.C;
          N19=30;
      END;
  END;


/** Note 20 - gender H03063, SEX, H03064, H03065--H03071, XSEXA */

/* Note 20a - ONLY for Q1 2003
 *The change involves the prenatal care questions H03069, H03070 and H03071. ****
 *Because response 2 (not pregnant but pregnant in the last 12 months) was     ****
 *not available for the first fielding wave, many who would responded 2        ****
 *appear to have responded 1 (pregnant) and then left the followup question, ****
 *"in which trimester is your pregnancy?" blank.  They then responded to      ****
 *question H03071.                                                            ****
 *Eric thinks their responses to H03069 should be reassigned to 2.            ****
 */

  IF H03069=1 AND H03070=. AND H03071 IN (1, 2, 3, 4, .A)
  THEN DO;
    H03069=2;
    H03070=.N;
    N20a=1;
  END;
  ELSE IF H03069=1 AND H03071 IN (., .A)  THEN N20a=2;
  ELSE IF H03069=1 AND H03070 IN (1, 2, 3, .A) THEN N20a=3;
  ELSE IF H03069 IN (2, 3, ., .A)      THEN N20a=4;




/* 1/21/98 use SRSEX & responses to gender specific questions
   if there is discrepancy between SRSEX and SEX */
/* set imputed MALE, FMALE based on gender specific questions */


  ARRAY fmaleval H03065 H03066 H03067 H03068 H03069 H03070 H03071
                 S03O01 S03O02 S03O03 S03O04 S03O05 S03O06;


  IF H03064 > 0 THEN MALE=1;     /* prostate */
  ELSE MALE = 0;

  cntfmale=0;
  DO OVER fmaleval;              /* mammogram/pap smear/PREGNANT*/
```

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```
         IF fmaleval>0 THEN cntfmale=cntfmale+1;
   END;
   IF cntfmale>0 THEN FMALE=1;
   ELSE FMALE = 0;

/*
   IF H03065>0 OR H03066>0 OR H03067>0 OR H03068>0 OR H03069>0
      OR H03070>0 OR H03071>0  THEN FMALE=1;
   ELSE FMALE = 0;
*/

   IF H03063=. OR H03063=.A THEN DO;
      IF (SEX='F' AND MALE AND FMALE) THEN DO;
         N20b=1;
         XSEXA=2;
      END;
      ELSE IF (SEX='F' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=2;
         XSEXA=2;
      END;
      ELSE IF (SEX='M' AND MALE AND FMALE) THEN DO;
         N20b=3;
         XSEXA=1;
      END;
      ELSE IF (SEX='M' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=4;
         XSEXA=1;
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         N20b=5;
         XSEXA=1;
      END;
      ELSE IF FMALE AND NOT MALE THEN DO;
         N20b=6;
         XSEXA=2;
      END;
      ELSE IF (SEX='Z' AND MALE AND FMALE) THEN DO;
         N20b=7;
         XSEXA=.;
      END;
      ELSE IF (SEX='Z' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=8;
         XSEXA=.;
      END;
   END;
   ELSE IF (H03063=1) THEN DO;
      IF MALE AND NOT FMALE THEN DO;
         N20b=9;
         XSEXA=1;
      END;
      ELSE IF NOT MALE AND FMALE THEN DO;
         IF SEX='F' THEN DO;
            N20b=10;
            XSEXA=2;
         END;
         ELSE DO;
            N20b=11;
            XSEXA=1;
         END;
      END;
      ELSE IF MALE AND FMALE THEN DO;
         N20b=12;
         XSEXA=1;
      END;
      ELSE IF MALE=0 AND FMALE=0 THEN DO;
         N20b=13;
         XSEXA=1;
      END;
   END;
   ELSE IF (H03063=2) THEN DO;
      IF NOT MALE AND FMALE THEN DO;
        N20b=14;
        XSEXA=2;
```

```
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         IF SEX='M' THEN DO;
           N20b=15;
           XSEXA=1;
         END;
         ELSE DO;
            N20b=16;
            XSEXA=2;
         END;
      END;
      ELSE IF MALE AND FMALE THEN DO;
         N20b=17;
         XSEXA=2;
      END;
      ELSE IF MALE=0 AND FMALE=0 THEN DO;
         N20b=18;
         XSEXA=2;
      END;
   END;

/* Note 20c - gender vs prostate */

   IF XSEXA=1 THEN N20c=1;     /* male    */
   ELSE IF XSEXA=2 THEN DO;    /* female  */
      IF H03064 NE . THEN DO;
         N20c=2;
         H03064=.C;
      END;                     /*inconsistent resp */
      ELSE DO;
         N20c=3;
         H03064=.N;
      END;                     /* valid skip   */
   END;
   ELSE IF XSEXA=. THEN DO;    /*  missing sex */
      N20c=4;
      H03064=.;
   END;

/* Note 20d - gender vs mammogram/paps */
/*   REDEFINE FMALE TO LOOK ONLY AT MAMMOGRAM OR PAP SMEAR ENTRIES  */

   ARRAY NOTE20d H03065 H03066 H03067 H03068 H03069 H03070 H03071
        S03O01 S03O02 S03O03 S03O04 S03O05 S03O06 ;

   cntfmale=0;
   DO OVER note20d;            /* mammogram/pap smear/PREGNANT*/
      IF note20d NE . THEN cntfmale=cntfmale+1;
   END;
   IF cntfmale>0 THEN FMALE=1;
   ELSE FMALE = 0;

/*  IF H03065 NE . OR H03066 NE . OR H03067 NE . OR H03068 NE . OR
     H03069 NE . OR H03070 NE . OR H03071 NE . THEN FMALE=1;
   ELSE FMALE = 0;
*/
   IF XSEXA=1 THEN DO;   /* male */
      IF FMALE=0 THEN DO;
         N20d=1;
         DO OVER NOTE20d;
           NOTE20d=.N;
         END;
      END; /* inconsistent response */
      ELSE IF FMALE=1 THEN DO;
         N20d=2;
         DO OVER NOTE20d;
           IF NOTE20d=. THEN NOTE20d = .N;
           ELSE NOTE20d=.C;
         END;
      END;    /* valid skip */
   END;
   ELSE IF XSEXA=2 THEN  N20d=3; /* female */
   ELSE IF XSEXA=. THEN DO;      /*  missing sex  */
```

```
      N20d=4;
      DO OVER NOTE20d;
         NOTE20d=.;
      END;
   END;



   DROP MALE FMALE CNTFMALE;


/* Note 21 - breast exam for female 40 or over  */
/* Note 1999 -- no self reported age variable  */
/* Note no dob variable  -- macro not used      */

   IF XSEXA=1 THEN DO;  /* male */
      IF  (H03066=.C OR H03066=.N) AND (H03067=.C OR H03067=.N)
      AND (H03068=.C OR H03068=.N)  THEN N21 = 1;
   END;
   ELSE IF XSEXA=2 THEN DO;
      IF H03066=2 THEN N21=2;          /* female 40 or over */
      ELSE IF H03066=1 THEN DO;   /* female < 40 */
         IF H03067 NE . THEN H03067=.C;
         ELSE H03067=.N;
         IF H03068 NE . THEN H03068=.C;
         ELSE H03068=.N;
         N21=3;
      END;
      ELSE IF H03066=.A THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=4;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
            H03066=1;
            H03067=.N;
            H03068=.N;
            N21=5;
         END;
      END;
      ELSE IF H03066=. THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=6;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
            IF AGE<40 THEN DO;
               H03066 = 1;
               H03067=.N;
               H03068=.N;
               N21=7;
            END;
            ELSE IF AGE >= 40 THEN DO;
               H03066=1;
               H03067=.N;
               H03068=.N;
               N21=8;
            END;
            ELSE IF AGE=. THEN N21=9;
         END;
      END;
   END;
   ELSE IF XSEXA=. THEN N21=10;



/* Note 22 - gender vs Pregnancy */

   IF XSEXA=1 THEN N22=1;           /* male     */
   ELSE IF XSEXA=2 THEN DO;         /* female   */
      IF H03069=1 THEN N22=2;       /* pregnant */
      ELSE IF H03069=2 THEN DO;
         IF H03070=. THEN H03070 = .N;
```

```
        ELSE H03070=.C;
        N22=3;
     END;
     ELSE IF H03069=3 THEN DO;
        IF H03070=. THEN H03070 = .N;
        ELSE H03070=.C;
        IF H03071=. THEN H03071=.N;
        ELSE H03071=.C;
        IF S03O01=. THEN S03O01 = .N;/* jma Added S03O01-S03O06 for Q1 2003 */
        ELSE S03O01=.C;
        IF S03O02=. THEN S03O02 = .N;
        ELSE S03O02=.C;
        IF S03O03=. THEN S03O03 = .N;
        ELSE S03O03=.C;
        IF S03O04=. THEN S03O04 = .N;
        ELSE S03O04=.C;
        IF S03O05=. THEN S03O05 = .N;
        ELSE S03O05=.C;
        IF S03O06=. THEN S03O06 = .N;
        ELSE S03O06=.C;
        N22=4;
     END;
     ELSE IF H03069 IN (., .A) THEN DO;
        IF H03070 NE . THEN DO;
           H03069=1;
           N22=5;
        END;
        ELSE IF H03070=. THEN DO;
           IF H03069=. THEN N22=6;
           ELSE IF H03069=.A THEN DO;
              H03069=3;
              H03070=.N;
              IF H03071=. THEN H03071=.N;
              ELSE H03071=.C;
              IF S03O01=. THEN S03O01 = .N;/* jma Added S03O01-S03O06 for Q1 2003 */
              ELSE S03O01=.C;
              IF S03O02=. THEN S03O02 = .N;
              ELSE S03O02=.C;
              IF S03O03=. THEN S03O03 = .N;
              ELSE S03O03=.C;
              IF S03O04=. THEN S03O04 = .N;
              ELSE S03O04=.C;
              IF S03O05=. THEN S03O05 = .N;
              ELSE S03O05=.C;
              IF S03O06=. THEN S03O06 = .N;
              ELSE S03O06=.C;
              N22=7;
           END;
        END;

     END;
  END;
  ELSE IF XSEXA=. AND H03069 IN (.,.A) THEN N22=8;


NOSURVEY:

/* missing values */

  ARRAY MISS MISS_9 MISS_8 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 -8) THEN MISS_8 = MISS_8 + 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;
```

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```
        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 FORMAT;
    VALUE GRID
      0='0'
      1-9999='>=1' ;
    VALUE $GRIDB
      1-5 = '1-5' ;
    VALUE $AGE
      018-039='<40'
      040-120='>=40';
    VALUE SCALE
      0-10='0-10';
    VALUE MARK
      1-6='Marked' ;
    VALUE MARKB
      2-7='Marked';

    VALUE MARKC
     1='1'
     2-HIGH='>1';

RUN;

/*
PROC FREQ data=out.cschm03q;
   TABLES H03060*H03061/missing list ;
RUN;

PROC FREQ data=out.cschm03q;
   TABLES H03062a H03062b H03062_O H03062 H03069a H03069b H03069_O H03069/missing ;
RUN;
*/

proc contents data=out.cschm03q;
run;
```

2.B.   Q2_2003\PROGRAMS\CODINGSCHEME\CSCHM03Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 2 CY2003.

```
****************************************************************************;
*  Program:  Cschm03q.sas
*  Written:  06/04/2001
*   Author:  C. Rankin
*
*    Input:  MERGENRC.SD2 - Merged MPR Sampling, DEERS, and NRC Response Data
*   Output:  CSCHM03Q.SD2 - Coding scheme file
*
* Modified:  9/20/2001 - Recodes removed (stored in recodes_old.sas)
*           10/31/2001 - Revised notes 16 and 17 (became notes 26 and 27)
*            3/22/2002 - Updated Variable names for Q1 2002 and added
*                        Include file RENAME.SAS to change the variable
*                        names from 01 to 02. Skipping 01 designation to make
*                        survey reflect year of fielding
*            5/09/2002 - Change to logic in TFL supplement
*            3/17/2003 - Updated Variables names for Q1 2003
*            4/11/2003 - Added note 19a to accomodate Q1 2003 error where
*                        an option on most of the questionnaires was omitted for
*                        H03062
*            5/27/2003 - Updated Variable names for Q2 2003
*  Purpose:  Apply Coding Scheme Specifications to DoD Health Care Survey
*            Response Data, check for consistency in responses and skip
*            patterns
*  Include
*    files:  Cschm03q.fmt
*
****************************************************************************;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES PAGENO=1 SOURCE SOURCE2;
*OPTIONS OBS=100;

LIBNAME LIBRARY v612 "..\..\DATA\AFINAL\FMTLIB";
LIBNAME IN      v612 "..\..\DATA\AFINAL";
LIBNAME OUT     v612 "..\..\DATA\AFINAL";

%LET INDATA=MERGENRC;
%LET OUTDATA=CSCHM03Q;
%LET PERIOD=April, 2003 to March, 2004;


/* Variable names in survey -- become recoded varibles */

%Let varlist1 =

 H03001   H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
 H03002K  H03002L  H03002M  H03002N  H03002O  H03003   H03004   H03005
 H03006   H03007   H03008   H03009   H03010
 S03C01   S03C02   S03C03   S03C04
 H03011   H03012   H03013   H03014
 S03C05
 H03015   H03016   H03017   H03018   H03019   H03020   H03021
 H03022   H03023   H03024   H03025   H03026   H03027   H03028   H03029
 H03030   H03031   H03032   H03033   H03034   H03035
 S03C06   S03C07   S03C08
 H03036   H03037   H03038
 S03C09   S03C10   S03C11   S03C12   S03C13   S03C14
 S03V01   S03V02   S03V04   S03V05   S03V06   S03V07
 H03039   H03040   H03041   H03042   H03043   H03044   H03045
 H03046   H03047   H03048   H03049   H03050   H03051   H03052
 H03053   H03055   H03056   H03057   H03058   H03059   H03060
 H03061   H03062   H03063   H03064   H03065   H03066   H03067   H03068
 H03069   H03070   H03071
 H03072   H03073   H03074   H03075   H03076   H03077   H03078   H03079
 H03080   H03081
 S03C15   S03C16   S03C17   S03C18
 S03C19   S03C20   S03C21   S03C22
 SREDA
 H03082
 SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE  SRAGE
```

```
 ;

/* _O variables are the original values from the survey response */

%Let varlist2 =
 H03001_O   H03002AO   H03002CO   H03002FO   H03002GO   H03002HO   H03002IO   H03002JO
 H03002KO   H03002LO   H03002MO   H03002NO   H03002OO   H03003_O   H03004_O   H03005_O
 H03006_O   H03007_O   H03008_O   H03009_O   H03010_O
 S03C01_O   S03C02_O   S03C03_O   S03C04_O
 H03011_O   H03012_O   H03013_O   H03014_O
 S03C05_O
 H03015_O   H03016_O    H03017_O    H03018_O    H03019_O    H03020_O    H03021_O
 H03022_O   H03023_O    H03024_O    H03025_O    H03026_O    H03027_O    H03028_O    H03029_O
 H03030_O   H03031_O    H03032_O    H03033_O    H03034_O    H03035_O
 S03C06_O   S03C07_O    S03C08_O
 H03036_O   H03037_O    H03038_O
 S03C09_O   S03C10_O    S03C11_O    S03C12_O    S03C13_O    S03C14_O
 S03V01_O   S03V02_O    S03V04_O    S03V05_O    S03V06_O    S03V07_O
 H03039_O   H03040_O    H03041_O    H03042_O    H03043_O    H03044_O    H03045_O
 H03046_O   H03047_O    H03048_O    H03049_O    H03050_O    H03051_O    H03052_O
 H03053_O   H03055_O    H03056_O    H03057_O    H03058_O    H03059_O    H03060_O
 H03061_O   H03062_O    H03063_O    H03064_O    H03065_O    H03066_O    H03067_O    H03068_O
 H03069_O   H03070_O    H03071_O
 H03072_O   H03073_O    H03074_O    H03075_O    H03076_O    H03077_O    H03078_O    H03079_O
 H03080_O   H03081_O
 S03C15_O   S03C16_O    S03C17_O    S03C18_O
 S03C19_O   S03C20_O    S03C21_O    S03C22_O
 SREDA_O
 H03082_O
 SRRACEAO   SRRACEBO   SRRACECO   SRRACEDO   SRRACEEO   SRAGE_O
 ;

TITLE  "DoD 2003 Survey Form A -- &PERIOD";
TITLE2 "Apply Coding Scheme";

DATA OUT.CSCHM03Q;

  SET IN.MERGENRC;

RUN;




DATA OUT.CSCHM03Q;

  LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
  INFORMAT &VARLIST2. 4.;
  %INCLUDE "CSCHM03Q.FMT";


/* label and format statements for original variables */

/*IF YOU DID NOT NEED TO CHANGE THE VARIABLE NAMES IN ABOVE DATASTEP,
  THIS FILE SHOULD BE IN.MERGENRC INSTEAD OF OUT.CSCHM03Q*/

   SET OUT.CSCHM03Q;



****************************************************************;
**** Recodes for invalid responses:****************************;
****************************************************************;

/* This is a version of the coding scheme and coding tables for the
   2003 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                             */
```

```
   SEX=PNSEXCD;
   AGE=INPUT(DAGEQY,8.);
   DROP SEX AGE;

   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)= -8 THEN RECODE(I)=.A;
             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;
             ELSE RECODE(I)=RECODE(I);
        END;
   END;
   DROP I;



/* recode selected responses to be 1=marked, 2=unmarked */

   ARRAY   MARKED(*) H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
                     H03002K  H03002L  H03002M  H03002N  H03002O  SRRACEA  SRRACEB
                     SRRACEC  SRRACED  SRRACEE
                      ;

   ARRAY INFORMAT(*) H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
                     H03002KO  H03002LO  H03002MO  H03002NO  H03002OO  SRRACEAO  SRRACEBO
                     SRRACECO  SRRACEDO  SRRACEEO
                     ;


   DO J=1 TO DIM(INFORMAT);
      IF INFORMAT(J) NOT IN (.,-9) THEN MARKED(J)=1;
      ELSE MARKED(J)=2;
   END;
   DROP J;

   FORMAT H03002A   H03002C   H03002F   H03002G   H03002H   H03002I   H03002J
          H03002K   H03002L   H03002M   H03002N   H03002O   SRRACEA   SRRACEB
          SRRACEC   SRRACED   SRRACEE
          MARKED.;


**********************************************************************;

/*  skip coding scheme for all surveys not returned  **/

   IF FLAG_FIN NE '1' THEN GOTO NOSURVEY;

/** Note 1 -- H03006, H03007 health plan usage  **/

   IF H03006 > 0 OR H03006 =.D THEN N1=1;
   ELSE IF H03006=.N  THEN DO;
      IF H03007 NOT=. THEN DO;
         N1=2;
         H03007=.C;
      END;
      ELSE DO;
         N1=3;
         H03007=.N;
      END;
   END;
   ELSE IF H03006=.    THEN N1=4;
   ELSE IF H03006=.A  THEN DO;
      IF H03007 NOT=. THEN N1=5;
      ELSE DO;
         H03006=.N;
```

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```
        H03007=.N;
        N1=6;
    END;
  END;



/** Note2  -- H03008, H03009: Personal doctor or nurse **/

  IF H03008=1 AND H03009 IN (1,2,3,.,.A) THEN N2=1;
  ELSE IF H03008 IN (1,.,.A) AND H03009=.N THEN DO;
     H03008=2;
     H03009=.C;
     N2=2;
  END;
  ELSE IF H03008 IN (2,.,.A) AND (H03009 GT 0 OR H03009 IN(.A)) THEN DO;
     H03008=1;
     N2=3;
  END;
  ELSE IF H03008=2 AND H03009 IN (.N,.) THEN DO;
     IF H03009=. THEN H03009=.N;
     ELSE H03009=.C;
     N2=4;
  END;
  ELSE IF H03008=. AND H03009=. THEN N2=5;
  ELSE IF H03008=.A AND H03009=. THEN DO;
     H03008=2;
     H03009=.N;
     N2=6;
  END;



/** Note 3 -- H03010, S03C01-S03C04, H03011:  Personal doctor or nurse **/

  ARRAY NOTE3  H03011 S03C01-S03C04;
  ARRAY NOTE3B H03011 S03C01 S03C02 S03C04;
  N3NMISS=0;
  N3MARK=0;

  DO OVER NOTE3;
     IF NOTE3 NOT=. THEN N3NMISS+1 ;
  END;
  DO OVER NOTE3B;
     IF NOTE3B NOT IN (.,.N) THEN N3MARK+1;
  END;

  IF S03C03 NOT IN (2, .) THEN N3MARK+1;
  IF H03010 = 1 AND (N3NMISS=0 OR N3MARK>0) THEN N3=1;
  ELSE IF H03010 IN (1,.,.A) AND N3NMISS>0 AND N3MARK=0 THEN DO;
     N3=2;
     H03010=2;
     DO OVER NOTE3;
        IF NOTE3=. THEN NOTE3=.N;
        ELSE NOTE3=.C;
     END;
  END;
  ELSE IF H03010 IN (2,.,.A) AND N3MARK>0 THEN DO;
     H03010=1;
     N3=3;
  END;
  ELSE IF H03010=2 AND (N3NMISS=0 OR (N3NMISS>0 AND N3MARK=0)) THEN DO;
     N3=4;
     DO OVER NOTE3;
        IF NOTE3=. THEN NOTE3=.N;
        ELSE NOTE3=.C;
     END;
  END;
  ELSE IF H03010=. AND  N3NMISS=0 THEN N3=5;
  ELSE IF H03010=.A AND N3NMISS=0 THEN DO;
     H03010=2;
     N3=6;
     DO OVER NOTE3;
```

```
        NOTE3=.N;
      END;
  END;

  DROP N3NMISS N3MARK;


/** Note 3a -- S03C03,S03C04: ability to work **/

  IF S03C03 IN (.N, .C) AND S03C04 IN (.N,.C) THEN N3a=1;
  ELSE IF S03C03=1 AND S03C04 IN (1,2,.,.A) THEN N3a=2;
  ELSE IF S03C03 IN (1,.,.A) AND S03C04=.N THEN DO;
     S03C03=2;
     S03C04=.C;
     N3a=3;
  END;
  ELSE IF S03C03 in (2,.,.A) AND S03C04 IN (1,2,.A) THEN DO;
     S03C03=1;
     N3a=4;
  END;
  ELSE IF S03C03 =2 AND S03C04 IN (.,.N) THEN DO;
     IF S03C04=. THEN S03C04=.N;
     ELSE S03C04=.C;
     N3a=5;
  END;
  ELSE IF S03C03=. AND S03C04=. THEN N3a=6;
  ELSE IF S03C03=.A AND S03C04=. THEN DO;
     S03C03=2;
     S03C04=.N;
     N3a=7;
  END;

/** Note 4 -- H03012, H03013:  needed to see a specialist in last 12 months **/

  IF H03012=1 AND H03013 IN (1,2,3,.,.A) THEN N4=1;
  ELSE IF H03012 IN (1,.,.A) AND H03013=.N THEN DO;
     H03012=2;
     H03013=.C;
     N4=2;
  END;
  ELSE IF H03012 IN (2,.,.A) AND H03013 IN (1,2,3,.A) THEN DO;
     H03012=1;
     N4=3;
  END;
  ELSE IF H03012=2 AND H03013 IN (.,.N) THEN DO;
     IF H03013=. THEN H03013=.N;
     ELSE H03013=.C;
     N4=4;
  END;
  ELSE IF H03012=.  AND H03013=.  THEN N4=5;
  ELSE IF H03012=.A AND H03013=.  THEN DO;
     H03012=2;
     H03013=.N;
     N4=6;
  END;



/** Note 5 -- H03014,S03C05, H03015,H03016: saw a specialist in last 12 months **/

  ARRAY NOTE5 S03C05 H03015 H03016;
  N5MARK=0;
  N5NMISS=0;

  DO OVER NOTE5;
     IF NOTE5 NE . THEN N5NMISS+1;
     IF NOTE5 NOT IN (.N,.) THEN N5MARK+1;
  END;

  IF H03014=1 AND (N5NMISS=0 OR N5MARK>0) THEN N5=1;
  ELSE IF H03014 IN (1,.,.A) AND N5NMISS>0 AND N5MARK=0 THEN DO;
     H03014=2;
     N5=2;
```

```
      DO OVER NOTE5;
          IF NOTE5=. THEN NOTE5=.N;
          ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014 IN (2,.,.A) AND N5MARK>0 THEN DO;
      H03014=1;
       N5=3;
   END;
   ELSE IF H03014=2 AND (N5NMISS=0 OR (N5NMISS>0 AND N5MARK=0)) THEN DO;
      N5=4;
      DO OVER NOTE5;
          IF NOTE5=. THEN NOTE5=.N;
          ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014=. AND  N5NMISS=0 THEN N5=5;
   ELSE IF H03014=.A AND N5NMISS=0 THEN DO;
      H03014=2;
      N5=6;
      DO OVER NOTE5;
          NOTE5=.N;
      END;
   END;

   DROP N5NMISS N5MARK;

/** Note 5A -- S03C05,H03015,H02016:  saw a specialist in last 12 months **/

   ARRAY NOTE5A H03015 H03016;
   N5AMARK=0;
   N5ANMISS=0;

   DO OVER NOTE5A;
       IF NOTE5A NE . THEN N5ANMISS+1;
       IF NOTE5A NOT IN (.N,.) THEN N5AMARK+1;
   END;

   IF S03C05 IN (.N,.C) AND H03015 IN (.N,.C) AND H03016 IN (.N,.C) THEN N5A=1;
   ELSE IF S03C05=.N AND (N5ANMISS=0 OR (N5ANMISS>0 AND N5AMARK=0)) THEN DO;
      N5A=2;
      DO OVER NOTE5A;
          IF NOTE5A=. THEN NOTE5A=.N;
          ELSE NOTE5A=.C;
      END;
   END;
   ELSE IF S03C05 IN (.N,.,.A) AND N5AMARK>0 THEN N5A=3;
   ELSE IF S03C05 IN (1,2,3,4,5,6,.,.A) AND (N5ANMISS>0 AND N5AMARK=0) THEN DO;
      S03C05=.N;
      N5A=4;
      DO OVER NOTE5A;
          IF NOTE5A=. THEN NOTE5A=.N;
          ELSE NOTE5A=.C;
      END;
   END;
   ELSE IF S03C05 IN (1,2,3,4,5,6) AND (N5ANMISS=0 OR N5AMARK>0) THEN N5A=5;
   ELSE IF S03C05=.  AND N5ANMISS=0 THEN N5A=6;
   ELSE IF S03C05=.A AND N5ANMISS=0 THEN DO;
      S03C05=.N;
      N5A=7;
      DO OVER NOTE5A;
          NOTE5A=.N;
      END;
   END;

   DROP N5ANMISS N5AMARK;



/** Note 6 -- called a doctor's office:  H03017, H03018 **/

   IF H03017=1 AND H03018 IN (1,2,3,4,.,.A) THEN N6=1;
   ELSE IF H03017 IN (1,.,.A) AND H03018=.N THEN DO;
```

```
        H03017=2;
        H03018=.C;
        N6=2;
     END;
     ELSE IF H03017 IN (2,.,.A) AND H03018 IN (1,2,3,4,.A) THEN DO;
        H03017=1;
        N6=3;
     END;

     ELSE IF H03017=2 AND H03018 IN (.,.N) THEN DO;
        IF H03018=. THEN H03018=.N;
        ELSE H03018=.C;
        N6=4;
     END;
     ELSE IF H03017=.  AND H03018=.  THEN N6=5;
     ELSE IF H03017=.A AND H03018=.  THEN DO;
        H03017=2;
        N6=6;
        H03018=.N;
     END;


/** Note 7 -- H03019,H03020,H03021:  regular or routine healthcare **/

  ARRAY NOTE7 H03020 H03021;
  N7MARK=0;
  N7NMISS=0;

  DO OVER NOTE7;
     IF NOTE7 NE . THEN N7NMISS+1;
     IF NOTE7 NOT IN (.N,.) THEN N7MARK+1;
  END;

  IF H03019=1 AND (N7NMISS=0 OR N7MARK>0) THEN N7=1;
  ELSE IF H03019 IN (1,.,.A) AND N7NMISS>0 AND N7MARK=0 THEN DO;
     H03019=2;
     N7=2;
     DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
     END;
  END;
  ELSE IF H03019 IN (2,.,.A) AND N7MARK>0 THEN DO;
     H03019=1;
     N7=3;
  END;
  ELSE IF H03019=2 AND (N7NMISS=0 OR (N7NMISS>0 AND N7MARK=0)) THEN DO;
     N7=4;
     DO OVER NOTE7;
        IF NOTE7=. THEN NOTE7=.N;
        ELSE NOTE7=.C;
     END;
  END;
  ELSE IF H03019=.  AND  N7NMISS=0 THEN N7=5;
  ELSE IF H03019=.A AND N7NMISS=0 THEN DO;
     H03019=2;
     N7=6;
     DO OVER NOTE7;
        NOTE7=.N;
     END;
  END;

  DROP N7NMISS N7MARK;


/** Note 8 -- H03022,H03023,H03024:  illness or injury **/

  ARRAY NOTE8 H03023 H03024;
  N8MARK=0;
  N8NMISS=0;

  DO OVER NOTE8;
     IF NOTE8 NE . THEN N8NMISS+1;
```

```
        IF NOTE8 NOT IN (.N,.) THEN N8MARK+1;
      END;

   IF H03022=1 AND (N8NMISS=0 OR N8MARK>0) THEN N8=1;
   ELSE IF H03022 IN (1,.,.A) AND N8NMISS>0 AND N8MARK=0 THEN DO;
      H03022=2;
      N8=2;
      DO OVER NOTE8;
         IF NOTE8=. THEN NOTE8=.N;
         ELSE NOTE8=.C;
      END;
   END;
   ELSE IF H03022 IN (2,.,.A) AND N8MARK>0 THEN DO;
      H03022=1;
      N8=3;
   END;
   ELSE IF H03022=2 AND (N8NMISS=0 OR (N8NMISS>0 AND N8MARK=0)) THEN DO;
      N8=4;
      DO OVER NOTE8;
         IF NOTE8=. THEN NOTE8=.N;
         ELSE NOTE8=.C;
      END;
   END;
   ELSE IF H03022=.  AND N8NMISS=0 THEN N8=5;
   ELSE IF H03022=.A AND N8NMISS=0 THEN DO;
      H03022=2;
      N8=6;
      DO OVER NOTE8;
         NOTE8=.N;
      END;
   END;

   DROP N8NMISS N8MARK;



/** Note 9 -- H03026, H03027-H03036 S03C06-S03C08: doctor's office or clinic **/

 ARRAY NOTE9   H03027-H03036 S03C06-S03C08;
 ARRAY NOTE9B  H03027-H03036 S03C07 S03C08;

 N9MARK=0;
 N9NMISS=0;

 DO OVER NOTE9;
    IF NOTE9 NE . THEN N9NMISS+1;
 END;

 DO OVER NOTE9B;
    IF NOTE9B NOT IN (.N,.) THEN N9MARK+1;
 END;

 IF S03C06 NOT IN (2, .) THEN N9MARK+1;

  IF H03026=1 THEN DO;
     N9=1;
     DO OVER NOTE9;
        IF NOTE9=. THEN NOTE9=.N;
        ELSE NOTE9=.C;
     END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7,.,.A) AND N9NMISS>0 AND N9MARK=0 THEN DO;
     H03026=1;
     N9=2;
     DO OVER NOTE9;
        IF NOTE9=. THEN NOTE9=.N;
        ELSE NOTE9=.C;
     END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7) AND (N9NMISS=0 OR N9MARK>0) THEN N9=3;
  ELSE IF H03026=.  AND N9NMISS=0 THEN N9=4;
  ELSE IF H03026=.A AND N9NMISS=0 THEN DO;
     H03026=1;
```

```
      N9=5;
      DO OVER NOTE9;
         NOTE9=.N;
      END;
   END;
   ELSE IF H03026 IN (.,.,.A) AND N9MARK>0 THEN N9=6;

   DROP N9NMISS N9MARK;

/** Note 9a -- S03C06,S03C07,S03C08: decisions about healthcare **/

   ARRAY NOTE9a S03C07 S03C08;
   N9aMARK=0;
   N9aNMISS=0;

   DO OVER NOTE9a;
      IF NOTE9a NE . THEN N9aNMISS+1;
   END;

   DO OVER NOTE9a;
      IF NOTE9a NOT IN (.N,.) THEN N9aMARK+1;
   END;

   IF S03C06 IN (.N,.C) THEN N9a=1;
   ELSE IF S03C06=1 AND (N9aNMISS=0 OR N9aMARK>0) THEN N9a=2;
   ELSE IF S03C06 IN (1,.,.A) AND N9aNMISS>0 AND N9aMARK=0 THEN DO;
      S03C06=2;
      N9a=3;
      DO OVER NOTE9a;
         IF NOTE9a=. THEN NOTE9a=.N;
         ELSE NOTE9a=.C;
      END;
   END;
   ELSE IF S03C06 IN (2,.,.A) AND N9aMARK>0 THEN DO;
      S03C06=1;
      N9a=4;
   END;
   ELSE IF S03C06=2 AND (N9aNMISS=0 OR (N9aNMISS>0 AND N9aMARK=0)) THEN DO;
      N9a=5;
      DO OVER NOTE9a;
         IF NOTE9a=. THEN NOTE9a=.N;
         ELSE NOTE9a=.C;
      END;
   END;
   ELSE IF S03C06=.  AND N9aNMISS=0 THEN N9a=6;
   ELSE IF S03C06=.A AND N9aNMISS=0 THEN DO;
      S03C06=2;
      N9a=7;
      DO OVER NOTE9a;
         NOTE9a=.N;
      END;
   END;

   DROP N9aNMISS N9aMARK;


/** Note9b  -- S03C09, S03C9a: special medical equipment **/

   IF S03C09=1 AND S03C10 IN (1,2,3,.,.A) THEN n9b=1;
   ELSE IF S03C09 IN (1,.,.A) AND S03C10=.N THEN DO;
      S03C09=2;
      S03C10=.C;
      n9b=2;
   END;
   ELSE IF S03C09 IN (2,.,.A) AND S03C10 in (1, 2, 3, .A) THEN DO;
      S03C09=1;
      n9b=3;
   END;
   ELSE IF S03C09=2 AND S03C10 IN (.N,.) THEN DO;
      IF S03C10=. THEN S03C10=.N;
      ELSE S03C10=.C;
      n9b=4;
   END;
```

```
   ELSE IF S03C09=. AND S03C10=. THEN n9b=5;
   ELSE IF S03C09=.A AND S03C10=. THEN DO;
      S03C09=2;
      S03C10=.N;
      n9b=6;
   END;


/** Note9c  -- S03C11, S03C12: special therapy **/

   IF S03C11=1 AND S03C12 IN (1,2,3,.,.A) THEN n9c=1;
   ELSE IF S03C11 IN (1,.,.A) AND S03C12=.N THEN DO;
      S03C11=2;
      S03C12=.C;
      n9c=2;
   END;
   ELSE IF S03C11 IN (2,.,.A) AND S03C12 IN (1,2,3,.A) THEN DO;
      S03C11=1;
      n9c=3;
   END;
   ELSE IF S03C11=2 AND S03C12 IN (.N,.) THEN DO;
      IF S03C12=. THEN S03C12=.N;
      ELSE S03C12=.C;
      n9c=4;
   END;
   ELSE IF S03C11=. AND S03C12=. THEN n9c=5;
   ELSE IF S03C11=.A AND S03C12=. THEN DO;
      S03C11=2;
      S03C12=.N;
      n9c=6;
   END;


/** Note9d  -- S03C13, S03C14: home health care or assistance **/

   IF S03C13=1 AND S03C14 IN (1,2,3,.,.A) THEN n9d=1;
   ELSE IF S03C13 IN (1,.,.A) AND S03C14=.N THEN DO;
      S03C13=2;
      S03C14=.C;
      n9d=2;
   END;
   ELSE IF S03C13 in (2,.,.A) AND S03C14 IN (1,2,3, .A) THEN DO;
      S03C13=1;
      n9d=3;
   END;
   ELSE IF S03C13=2 AND S03C14 IN (.,.N) THEN DO;
      IF S03C14=. THEN S03C14=.N;
      ELSE S03C14=.C;
      n9d=4;
   END;
   ELSE IF S03C13=.  AND S03C14=. THEN n9d=5;
   ELSE IF S03C13=.A AND S03C14=.         THEN DO;
      S03C13=2;
      S03C14=.N;
      n9d=6;
   END;



/** Note 13 -- S03V01, S03V02 S03V04-S03V07: health care received from TRICARE civilian network
**/

   ARRAY NOTE13 S03V02 S03V04-S03V07;
   N13MARK=0;
   N13NMISS=0;

   DO OVER NOTE13;
      IF NOTE13 NE . THEN N13NMISS+1;
      IF NOTE13 NOT IN (.N,.) THEN N13MARK+1;
   END;

   IF S03V01 IN (1,2,3,4) AND (N13NMISS=0 OR N13MARK>0) THEN N13=1;
   ELSE IF S03V01 IN (1,2,3,.,.A) AND N13NMISS>0 AND N13MARK=0 THEN DO;
```

```
            N13=2;
            S03V01=.N;
            DO OVER NOTE13;
                IF NOTE13=. THEN NOTE13=.N;
                ELSE NOTE13=.C;
            END;
        END;
        ELSE IF S03V01=4 AND N13NMISS>0 AND N13MARK=0  THEN DO;
            N13=3;
            DO OVER NOTE13;
                NOTE13=.N;
            END;
        END;
        ELSE IF S03V01=.N AND (N13NMISS=0 OR (N13NMISS>0 AND N13MARK=0) OR N13MARK>0)
        THEN DO;
            N13=4;
            DO OVER NOTE13;
                IF NOTE13=. THEN NOTE13=.N;
                ELSE NOTE13=.C;
            END;
        END;
        ELSE IF S03V01=.  AND N13NMISS=0 THEN N13=5;
        ELSE IF S03V01=.A AND N13NMISS=0 THEN DO;
            S03V01=.N;
            N13=6;
            DO OVER NOTE13;
                NOTE13=.N;
            END;
        END;
        ELSE IF S03V01 IN (.,.A) AND N13MARK>0 THEN N13=7;

        DROP N13NMISS N13MARK;




    /** Note 14 -- H03039, H03040-H03042: claims to health plan **/

         ARRAY NOTE14 H03040-H03042;
        N14MARK=0;
        N14NMISS=0;
        N14NDK=0;

        DO OVER NOTE14;
            IF NOTE14 NE . THEN N14NMISS+1;
            IF NOTE14 NOT IN (.N,.) THEN N14MARK+1;
            IF NOTE14 NOT IN (.,.D) THEN N14NDK+1;
        END;

        IF H03039=1 AND (N14NMISS=0 OR (N14MARK>0 and N14NDK>0) or N14NDK=0) THEN N14=1;
        ELSE IF H03039 IN (1,.,.A,.D) AND N14NMISS>0 AND N14MARK=0 THEN DO;
            N14=2;
            H03039=2;
            DO OVER NOTE14;
                IF NOTE14=. THEN NOTE14=.N;
                ELSE NOTE14=.C;
            END;
        END;
        ELSE IF H03039 IN (2,.,.A,.D) AND ((N14MARK>0 AND N14NDK>0) OR N14NMISS=0 OR N14NDK=0) THEN DO;
            H03039=1;
            N14=3;
        END;
        ELSE IF H03039 IN (2,.D) AND (N14NMISS=0 OR (N14NMISS>0 AND N14MARK=0)) THEN DO;
            N14=4;
            DO OVER NOTE14;
                IF NOTE14=. THEN NOTE14=.N;
                ELSE NOTE14=.C;
            END;
        END;
        ELSE IF H03039=.  AND N14NMISS=0 THEN N14=5;
        ELSE IF H03039=.A AND N14NMISS=0 THEN DO;
            H03039=2;
            N14=6;
            DO OVER NOTE14;
```

```
        NOTE14=.N;
     END;
  END;

  DROP N14NMISS N14MARK N14NDK;




/** NOTE15  -- H03043, H03044: **/

  IF H03043=1 AND H03044 IN (1,2,3,.,.A) THEN N15=1;
  ELSE IF H03043 IN (1,.,.A) AND H03044=.N THEN DO;
     H03043=2;
     H03044=.C;
     N15=2;
  END;
  ELSE IF H03043 IN (2,.,.A) AND H03044 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
     H03043=1;
     N15=3;
  END;
  ELSE IF H03043=2 AND H03044 IN (.N,.) THEN DO;
     IF H03044=. THEN H03044=.N;
     ELSE H03044=.C;
     N15=4;
  END;
  ELSE IF H03043=. AND H03044=. THEN N15=5;
  ELSE IF H03043=.A AND H03044=. THEN DO;
     H03043=2;
     H03044=.N;
     N15=6;
  END;


/** NOTE16 -- H03045, H03046: health plan's customer service **/

  IF H03045=1 AND H03046 IN (1,2,3,.,.A) THEN N16=1;
  ELSE IF H03045 IN (1,.,.A) AND H03046=.N THEN DO;
     H03045=2;
     H03046=.C;
     N16=2;
  END;
  ELSE IF H03045 IN (2,.,.A) AND H03046 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
     H03045=1;
     N16=3;
  END;
  ELSE IF H03045=2 AND H03046 IN (.N,.) THEN DO;
     IF H03046=. THEN H03046=.N;
     ELSE H03046=.C;
     N16=4;
  END;
  ELSE IF H03045=. AND H03046=. THEN N16=5;
  ELSE IF H03045=.A AND H03046=. THEN DO;
     H03045=2;
     H03046=.N;
     N16=6;
  END;


/** Note 17 -- H03047, H03048, H03049:  complaint or problem  **/

  ARRAY NOTE17 H03048 H03049;
  N17MARK=0;
  N17NMISS=0;

  DO OVER NOTE17;
     IF NOTE17 NE . THEN N17NMISS+1;
     IF NOTE17 NOT IN (.N,.) THEN N17MARK+1;
  END;

  IF H03047=1 AND (N17NMISS=0 OR N17MARK>0) THEN N17=1;
```

```
   ELSE IF H03047 IN (1,.,.A) AND N17NMISS>0 AND N17MARK=0 THEN DO;
       H03047=2;
       N17=2;
       DO OVER NOTE17;
           IF NOTE17=. THEN NOTE17=.N;
           ELSE NOTE17=.C;
       END;
   END;
   ELSE IF H03047 IN (2,.,.A) AND N17MARK>0 THEN DO;
       H03047=1;
       N17=3;
   END;
   ELSE IF H03047=2 AND (N17NMISS=0 OR (N17NMISS>0 AND N17MARK=0)) THEN DO;
       N17=4;
       DO OVER NOTE17;
           IF NOTE17=. THEN NOTE17=.N;
           ELSE NOTE17=.C;
       END;
   END;
   ELSE IF H03047=.  AND N17NMISS=0 THEN N17=5;
   ELSE IF H03047=.A AND N17NMISS=0 THEN DO;
       H03047=2;
       N17=6;
       DO OVER NOTE17;
           NOTE17=.N;
       END;
   END;

   DROP N17NMISS N17MARK;



/** NOTE18  -- H03050, H03051: paperwork  **/

   IF H03050=1 AND H03051 IN (1,2,3,.,.A) THEN N18=1;
   ELSE IF H03050 IN (1,.,.A) AND H03051=.N THEN DO;
       H03050=2;
       H03051=.C;
       N18=2;
   END;
   ELSE IF H03050 IN (2,.,.A) AND H03051 IN (1,2,3,.A) THEN DO;
       H03050=1;
       N18=3;
   END;
   ELSE IF H03050=2 AND H03051 IN (.N,.)THEN DO;
       IF H03051=. THEN  H03051=.N;
       ELSE H03051=.C;
       N18=4;
   END;
   ELSE IF H03050=.  AND H03051=. THEN N18=5;
   ELSE IF H03050=.A AND H03051=. THEN DO;
       H03050=2;
       H03051=.N;
       N18=6;
   END;



/** Note 19 -- smoking:  H03059 - H03062  **/

   IF H03059=1 and H03060 IN (3,4) THEN DO;  /* still smoke */
       IF H03061 NE . THEN DO;
           H03061=.C;
           N19=1;
       END;
       ELSE IF H03061=. THEN DO;
           H03061=.N;
           N19=2;
       END;
   END;
   ELSE IF H03059=1 AND H03060=2 THEN DO;          /* quit */
       IF H03061 IN (2,.D) AND H03062 NE . THEN DO;   /* > 1 year ago */
           H03062 =.C;
```

```
               N19=3;
            END;
            ELSE IF H03061 IN (2,.D) AND H03062=. THEN DO;
               H03062 =.N;
               N19=4;
            END;
            ELSE IF H03061 IN (3,.,.A) THEN N19=5;        /* < 1 year ago */
         END;
         ELSE IF H03059=1 AND H03060 IN (.D,.,.A) THEN DO;  /* don't know */
            IF H03061=2 AND H03062 NE . THEN DO;         /* > 1 year ago */
               H03060=2;
               H03062=.C;
               N19=6;
            END;
            ELSE IF H03061=2 AND H03062 = . THEN DO;
               H03060=2;
               H03062=.N;
               N19=7;
            END;
            ELSE IF H03061=3 THEN DO;                 /* < 1 year ago */
               H03060=2;
               N19=8;
            END;
            ELSE IF H03061 IN (.D,.,.A) THEN N19=9;   /* don't know */
         END;
         ELSE IF H03059 IN (2,.D,.,.A) AND H03060 IN (3,4) THEN DO; /*never smoke*/
            IF H03061 NE . THEN DO;
               H03059=1;
               H03061=.C;
               N19=10;
            END;
            ELSE IF H03061=. THEN DO;
               H03059=1;
               H03061=.N;
               N19=11;
            END;
         END;
         ELSE IF H03059 IN (2,.D) AND H03060 IN (2,.D,.A) THEN DO; /*never smoke*/
            IF H03061 NE . AND H03062 NE . THEN DO;
               H03060 =.C;
               H03061 =.C;
               H03062 =.C;
               N19=12;
            END;
            ELSE IF H03061 NE . AND H03062=. THEN DO;
               H03060=.C;
               H03061=.C;
               H03062=.N;
               N19=13;
            END;
            ELSE IF H03061=. AND H03062 NE . THEN DO;
               H03060=.C;
               H03061=.N;
               H03062=.C;
               N19=14;
            END;
            ELSE IF H03061=. AND H03062=. THEN DO;
               H03060=.C;
               H03061=.N;
               H03062=.N;
               N19=15;
            END;
         END;
         ELSE IF H03059 IN (2,.D) AND H03060= . THEN DO; /*never smoke*/
            IF H03061 NE . AND H03062 NE . THEN DO;
               H03060=.N;
               H03061=.C;
               H03062=.C;
               N19=16;
            END;
            ELSE IF H03061 NE . AND H03062=. THEN DO;
               H03060=.N;
               H03061=.C;
```

```
            H03062=.N;
            N19=17;
       END;
       ELSE IF H03061=. AND H03062 NE . THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.C;
            N19=18;
       END;
       ELSE IF H03061=. AND H03062=. THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.N;
            N19=19;
       END;
    END;
    ELSE IF H03059 IN (.A, .) AND H03060 IN (2,.,.A) THEN DO; /*MRE/blank*/
       IF H03061=3 THEN DO;
            H03061=.C; /* Per Eric 4/22/03 */
            N19=20;
       END;
       ELSE IF H03061=2 AND H03062 NE . THEN DO;
            H03059 =1;
            H03062 =.C;
            N19=21;
       END;
       ELSE IF H03061=2 AND H03062=. THEN DO;
            H03061=.C; /* per Eric instruction 4/22/03 */
            N19=22;
       END;
       ELSE IF H03061=.D AND H03062=. THEN DO;
            H03062=.N;
            N19=23;
       END;
       ELSE IF H03061=.D AND H03062 NE . THEN DO;
            H03062=.C;
            N19=24;
       END;
       ELSE IF H03061 IN (.,.A) AND H03062 IN (2,3,4,5) THEN DO;
            H03059=1;
            N19=25;
       END;
       ELSE IF H03061 IN (.,.A) AND H03062 IN (1,.N,.,.A) THEN N19=26;
    END;
    ELSE IF H03059 IN (.A,.) AND H03060=.D THEN DO; /*MRE/blank*/
       IF H03061 NE . AND H03062 NE .  THEN DO;
            H03061=.C;
            H03062=.C;
            N19=27;
       END;
       ELSE IF H03061 NE . AND H03062=.  THEN DO;
            H03061=.C;
            H03062=.N;
            N19=28;
       END;
       IF H03061=. AND H03062=.  THEN DO;
            H03061=.N;
            H03062=.N;
            N19=29;
       END;
       ELSE IF H03061=. AND H03062 NE .  THEN DO;
            H03061=.N;
            H03062=.C;
            N19=30;
       END;
    END;
  END;


/** Note 20 - gender H03063, SEX, H03064, H03065--H03071, XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
   if there is discrepancy between SRSEX and SEX */
/* set imputed MALE, FMALE based on gender specific questions */
```

```
ARRAY fmaleval H03065 H03066 H03067 H03068 H03069 H03070 H03071;


IF H03064 > 0 THEN MALE=1;        /* prostate */
ELSE MALE = 0;

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


IF H03063=. OR H03063=.A THEN DO;
   IF (SEX='F' AND MALE AND FMALE) THEN DO;
      N20b=1;
      XSEXA=2;
   END;
   ELSE IF (SEX='F' AND MALE=0 AND FMALE=0) THEN DO;
      N20b=2;
      XSEXA=2;
   END;
   ELSE IF (SEX='M' AND MALE AND FMALE) THEN DO;
      N20b=3;
      XSEXA=1;
   END;
   ELSE IF (SEX='M' AND MALE=0 AND FMALE=0) THEN DO;
      N20b=4;
      XSEXA=1;
   END;
   ELSE IF MALE AND NOT FMALE THEN DO;
      N20b=5;
      XSEXA=1;
   END;
   ELSE IF FMALE AND NOT MALE THEN DO;
      N20b=6;
      XSEXA=2;
   END;
   ELSE IF (SEX='Z' AND MALE AND FMALE) THEN DO;
      N20b=7;
      XSEXA=.;
   END;
   ELSE IF (SEX='Z' AND MALE=0 AND FMALE=0) THEN DO;
      N20b=8;
      XSEXA=.;
   END;
END;
ELSE IF (H03063=1) THEN DO;
   IF MALE AND NOT FMALE THEN DO;
      N20b=9;
      XSEXA=1;
   END;
   ELSE IF NOT MALE AND FMALE THEN DO;
      IF SEX='F' THEN DO;
         N20b=10;
         XSEXA=2;
      END;
      ELSE DO;
         N20b=11;
         XSEXA=1;
      END;
   END;
   ELSE IF MALE AND FMALE THEN DO;
      N20b=12;
      XSEXA=1;
   END;
   ELSE IF MALE=0 AND FMALE=0 THEN DO;
      N20b=13;
      XSEXA=1;
   END;
```

```
      END;
    ELSE IF (H03063=2) THEN DO;
      IF NOT MALE AND FMALE THEN DO;
        N20b=14;
         XSEXA=2;
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         IF SEX='M' THEN DO;
           N20b=15;
            XSEXA=1;
         END;
         ELSE DO;
            N20b=16;
             XSEXA=2;
         END;
      END;
      ELSE IF MALE AND FMALE THEN DO;
         N20b=17;
          XSEXA=2;
      END;
      ELSE IF MALE=0 AND FMALE=0 THEN DO;
         N20b=18;
          XSEXA=2;
      END;
    END;

/* Note 20c - gender vs prostate */

  IF XSEXA=1 THEN N20c=1;    /* male    */
  ELSE IF XSEXA=2 THEN DO;   /* female  */
     IF H03064 NE . THEN DO;
        N20c=2;
        H03064=.C;
     END;                    /*inconsistent resp */
     ELSE DO;
        N20c=3;
        H03064=.N;
     END;                    /* valid skip   */
  END;
  ELSE IF XSEXA=. THEN DO;   /*  missing sex */
     N20c=4;
     H03064=.;
  END;

/* Note 20d - gender vs mammogram/paps */
/*   REDEFINE FMALE TO LOOK ONLY AT MAMMOGRAM OR PAP SMEAR ENTRIES  */

  ARRAY NOTE20d H03065 H03066 H03067 H03068 H03069 H03070 H03071 ;

  cntfmale=0;
  DO OVER NOTE20d;              /* mammogram/pap smear/PREGNANT*/
     IF NOTE20d NE . THEN cntfmale=cntfmale+1;
  END;
  IF cntfmale>0 THEN FMALE=1;
  ELSE FMALE = 0;

  IF XSEXA=1 THEN DO;   /* male */
     IF FMALE=0 THEN DO;
        N20d=1;
        DO OVER NOTE20d;
           NOTE20d=.N;
        END;
     END; /* inconsistent response */
     ELSE IF FMALE=1 THEN DO;
        N20d=2;
        DO OVER NOTE20d;
           IF NOTE20d=. THEN NOTE20d = .N;
           ELSE NOTE20d=.C;
        END;
     END;   /* valid skip */
  END;
  ELSE IF XSEXA=2 THEN  N20d=3; /* female */
  ELSE IF XSEXA=. THEN DO;      /*  missing sex  */
```

```
      N20d=4;
      DO OVER NOTE20d;
         NOTE20d=.;
      END;
   END;



   DROP MALE FMALE CNTFMALE;


/* Note 21 - breast exam for female 40 or over  */
/* Note 1999 -- no self reported age variable  */
/* Note no dob variable  -- macro not used      */

   IF XSEXA=1 THEN DO;  /* male */
      IF  (H03066=.C OR H03066=.N) AND (H03067=.C OR H03067=.N)
      AND (H03068=.C OR H03068=.N)  THEN N21 = 1;
   END;
   ELSE IF XSEXA=2 THEN DO;
      IF H03066=2 THEN N21=2;          /* female 40 or over */
      ELSE IF H03066=1 THEN DO;   /* female < 40 */
         IF H03067 NE . THEN H03067=.C;
         ELSE H03067=.N;
         IF H03068 NE . THEN H03068=.C;
         ELSE H03068=.N;
         N21=3;
      END;
      ELSE IF H03066=.A THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=4;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
            H03066=1;
            H03067=.N;
            H03068=.N;
            N21=5;
         END;
      END;
      ELSE IF H03066=. THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=6;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
            IF AGE<40 THEN DO;
               H03066 = 1;
               H03067=.N;
               H03068=.N;
               N21=7;
            END;
            ELSE IF AGE >= 40 THEN DO;
               H03066=1;
               H03067=.N;
               H03068=.N;
               N21=8;
            END;
            ELSE IF AGE=. THEN N21=9;
         END;
      END;
   END;
   ELSE IF XSEXA=. THEN N21=10;



/* Note 22 - gender vs Pregnancy */

   IF XSEXA=1 THEN N22=1;            /* male     */
   ELSE IF XSEXA=2 THEN DO;          /* female   */
      IF H03069=1 THEN N22=2;       /* pregnant */
      ELSE IF H03069=2 THEN DO;
         IF H03070=. THEN H03070 = .N;
```

```
            ELSE H03070=.C;
            N22=3;
        END;
        ELSE IF H03069=3 THEN DO;
            IF H03070=. THEN H03070 = .N;
            ELSE H03070=.C;
            IF H03071=. THEN H03071=.N;
            ELSE H03071=.C;
            N22=4;
        END;
        ELSE IF H03069 IN (., .A) THEN DO;
            IF H03070 NE . THEN DO;
                H03069=1;
                N22=5;
            END;
            ELSE IF H03070=. THEN DO;
                IF H03069=. THEN N22=6;
                ELSE IF H03069=.A THEN DO;
                    H03069=3;
                    H03070=.N;
                    IF H03071=. THEN H03071=.N;
                    ELSE H03071=.C;
                    N22=7;
                END;
            END;
        END;

    END;
  END;
  ELSE IF XSEXA=. AND H03069 IN (.,.A) THEN N22=8;



/** Note 23 -- S03C20,S03C21,S03C22: Physical/Mental Conditions **/

  ARRAY NOTE20 S03C21 S03C22;
  N23MARK=0;
  N23NMISS=0;

  DO OVER NOTE20;
      IF NOTE20 NE . THEN N23NMISS+1;
  END;

  DO OVER NOTE20;
      IF NOTE20 NOT IN (.N,.) THEN N23MARK+1;
  END;

  IF S03C20=1 AND (N23NMISS=0 OR N23MARK>0) THEN N23=1;
  ELSE IF S03C20 IN (1,.,.A) AND N23NMISS>0 AND N23MARK=0 THEN DO;
      S03C20=2;
      N23=2;
      DO OVER NOTE20;
          IF NOTE20=. THEN NOTE20=.N;
          ELSE NOTE20=.C;
      END;
  END;
  ELSE IF S03C20 IN (2,.,.A) AND N23MARK>0 THEN DO;
      S03C20=1;
      N23=3;
  END;
  ELSE IF S03C20=2 AND (N23NMISS=0 OR (N23NMISS>0 AND N23MARK=0)) THEN DO;
      N23=4;
      DO OVER NOTE20;
          IF NOTE20=. THEN NOTE20=.N;
          ELSE NOTE20=.C;
      END;
  END;
  ELSE IF S03C20=.  AND N23NMISS=0 THEN N23=5;
  ELSE IF S03C20=.A AND N23NMISS=0 THEN DO;
      S03C20=2;
      N23=6;
      DO OVER NOTE20;
          NOTE20=.N;
      END;
```

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```
    END;

  DROP N23NMISS N23MARK;




  NOSURVEY:

/* missing values */

   ARRAY MISS MISS_9 MISS_8 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 -8) THEN MISS_8 = MISS_8 + 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 FORMAT;
    VALUE GRID
      0='0'
      1-9999='>=1' ;
    VALUE $GRIDB
      1-5 = '1-5' ;
    VALUE $AGE
      018-039='<40'
      040-120='>=40';
    VALUE SCALE
      0-10='0-10';
    VALUE MARK
      1-6='Marked' ;
    VALUE MARKB
      2-7='Marked';

    VALUE MARKC
     1='1'
    2-HIGH='>1';

RUN;


proc contents data=out.cschm03q;
run;
```

2.C. Q3_2003\PROGRAMS\CODINGSCHEME\CSCHM03Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 3 CY2003.

```
******************************************************************************;
*  Program:  Cschm03q.sas
*  Written:  06/04/2001
*   Author:  C. Rankin
*
*    Input:  MERGENRC.SD2 - Merged MPR Sampling, DEERS, and NRC Response Data
*   Output:  CSCHM03Q.SD2 - Coding scheme file
*
* Modified:  9/20/2001 - Recodes removed (stored in recodes_old.sas)
*           10/31/2001 - Revised notes 16 and 17 (became notes 26 and 27)
*            3/22/2002 - Updated Variable names for Q1 2002 and added
*                        Include file RENAME.SAS to change the variable
*                        names from 01 to 02. Skipping 01 designation to make
*                        survey reflect year of fielding
*            5/09/2002 - Change to logic in TFL supplement
*            3/17/2003 - Updated Variables names for Q1 2003
*            4/11/2003 - Added note 19a to accomodate Q1 2003 error where
*                        an option on most of the questionnaires was omitted for
*                        H03062
*            5/27/2003 - Updated Variable names for Q2 2003
*  Purpose:  Apply Coding Scheme Specifications to DoD Health Care Survey
*            Response Data, check for consistency in responses and skip
*            patterns
*  Include
*    files:  Cschm03q.fmt
*
******************************************************************************;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES PAGENO=1 SOURCE SOURCE2;
*OPTIONS OBS=100;

LIBNAME LIBRARY v612 "..\..\DATA\AFINAL\FMTLIB";
LIBNAME IN      v612 "..\..\DATA\AFINAL";
LIBNAME OUT     v612 "..\..\DATA\AFINAL";

%LET INDATA=MERGENRC;
%LET OUTDATA=CSCHM03Q;
%LET PERIOD=July, 2002 to June, 2003;


/* Variable names in survey -- become recoded varibles */

%Let varlist1 =

 H03001   H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
 H03002K  H03002L  H03002M  H03002N  H03002O  H03003   H03004   H03005
 H03006   H03007   H03008   H03009   H03010
 H03011   H03012   H03013   H03014
 H03015   H03016   H03017   H03018   H03019   H03020   H03021
 H03022   H03023   H03024   H03025   H03026   H03027   H03028   H03029
 H03030   H03031   H03032   H03033   H03034   H03035
 H03036   H03038
 S03Y01   S03Y02   S03Y03   S03Y04   S03Y05
 S03Y06A  S03Y06B  S03Y06C  S03Y06D  S03Y06E  S03Y06F  S03Y06G  S03Y06H
 S03Y07   S03Y08   S03Y09   S03Y10   S03Y11   S03Y12
 S03Y13A  S03Y13B  S03Y13C  S03Y13D  S03Y13E  S03Y13F  S03Y13G  S03Y13H
 S03Y14   S03Y15   S03Y16   S03Y17
 S03Y18A  S03Y18B  S03Y18C  S03Y18D
 S03Y19A  S03Y19B  S03Y19C  S03Y19D  S03Y19E  S03Y19F
 S03Y20   S03Y21   S03Y22   S03Y23   S03Y24   S03Y25
 S03V01   S03V02   S03V04   S03V05   S03V06   S03V07
 H03039   H03040   H03041   H03042   H03043   H03044   H03045
 H03046   H03047   H03048   H03049   H03050   H03051   H03052
 H03053   H03055   H03056   H03057   H03058   H03059   H03060
 H03061   H03062   H03063   H03064   H03065   H03066   H03067   H03068
 H03069   H03070   H03071
 H03072   H03073   H03074   H03075   H03076   H03077   H03078   H03079
 H03080   H03081
 SREDA
```

```
 H03082
 SRRACEA   SRRACEB   SRRACEC   SRRACED   SRRACEE   SRAGE
 ;

/*  _O variables are the original values from the survey response */

%Let varlist2 =
 H03001_O   H03002AO   H03002CO   H03002FO   H03002GO   H03002HO   H03002IO   H03002JO
 H03002KO   H03002LO   H03002MO   H03002NO   H03002OO   H03003_O   H03004_O   H03005_O
 H03006_O   H03007_O   H03008_O   H03009_O   H03010_O
 H03011_O   H03012_O   H03013_O   H03014_O
 H03015_O   H03016_O    H03017_O    H03018_O    H03019_O    H03020_O    H03021_O
 H03022_O   H03023_O    H03024_O    H03025_O    H03026_O    H03027_O    H03028_O    H03029_O
 H03030_O   H03031_O    H03032_O    H03033_O    H03034_O    H03035_O
 H03036_O   H03038_O
 S03Y01_O   S03Y02_O    S03Y03_O    S03Y04_O    S03Y05_O
 S03Y06AO   S03Y06BO    S03Y06CO    S03Y06DO    S03Y06EO    S03Y06FO
 S03Y06GO   S03Y06HO
 S03Y07_O   S03Y08_O    S03Y09_O    S03Y10_O    S03Y11_O    S03Y12_O
 S03Y13AO   S03Y13BO    S03Y13CO    S03Y13DO    S03Y13EO    S03Y13FO
 S03Y13GO   S03Y13HO
 S03Y14_O   S03Y15_O    S03Y16_O    S03Y17_O
 S03Y18AO   S03Y18BO    S03Y18CO    S03Y18DO
 S03Y19AO   S03Y19BO    S03Y19CO    S03Y19DO    S03Y19EO    S03Y19FO
 S03Y20_O   S03Y21_O    S03Y22_O    S03Y23_O    S03Y24_O    S03Y25_O
 S03V01_O   S03V02_O    S03V04_O    S03V05_O    S03V06_O    S03V07_O
 H03039_O   H03040_O    H03041_O    H03042_O    H03043_O    H03044_O    H03045_O
 H03046_O   H03047_O    H03048_O    H03049_O    H03050_O    H03051_O    H03052_O
 H03053_O   H03055_O    H03056_O    H03057_O    H03058_O    H03059_O    H03060_O
 H03061_O   H03062_O    H03063_O    H03064_O    H03065_O    H03066_O    H03067_O
 H03068_O   H03069_O    H03070_O    H03071_O
 H03072_O   H03073_O    H03074_O    H03075_O    H03076_O    H03077_O    H03078_O
 H03079_O   H03080_O    H03081_O
 SREDA_O
 H03082_O
 SRRACEAO   SRRACEBO   SRRACECO   SRRACEDO   SRRACEEO   SRAGE_O
 ;

TITLE  "DoD 2003 Survey Form A -- &PERIOD";
TITLE2 "Apply Coding Scheme";

DATA OUT.CSCHM03Q;

   SET IN.MERGENRC;

RUN;




DATA OUT.CSCHM03Q;

   LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
   INFORMAT &VARLIST2. 4.;
   %INCLUDE "CSCHM03Q.FMT";


/* label and format statements for original variables */

/*IF YOU DID NOT NEED TO CHANGE THE VARIABLE NAMES IN ABOVE DATASTEP,
  THIS FILE SHOULD BE IN.MERGENRC INSTEAD OF OUT.CSCHM03Q*/

    SET OUT.CSCHM03Q;




***************************************************************;
**** Recodes for invalid responses:***************************;
***************************************************************;



/* This is a version of the coding scheme and coding tables for the
   2003 HCSDB Form A.
```

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```
   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                             */

  SEX=PNSEXCD;
  AGE=INPUT(DAGEQY,8.);
  DROP SEX AGE;

  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)= -8 THEN RECODE(I)=.A;
           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;
           ELSE RECODE(I)=RECODE(I);
       END;
  END;
  DROP I;




/* recode selected responses to be 1=marked, 2=unmarked */

  ARRAY   MARKED(*) H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
                    H03002K  H03002L  H03002M  H03002N  H03002O
                    S03Y06A  S03Y06B  S03Y06C  S03Y06D  S03Y06E  S03Y06F  S03Y06G
                    S03Y06H
                    S03Y13A  S03Y13B  S03Y13C  S03Y13D  S03Y13E  S03Y13F  S03Y13G
                    S03Y13H
                    S03Y18A  S03Y18B  S03Y18C  S03Y18D
                    S03Y19A  S03Y19B  S03Y19C  S03Y19D  S03Y19E  S03Y19F
                    SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE

                     ;

  ARRAY INFORMAT(*) H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
                    H03002KO  H03002LO  H03002MO  H03002NO  H03002OO
                    S03Y06AO  S03Y06BO  S03Y06CO  S03Y06DO  S03Y06EO  S03Y06FO
                    S03Y06GO  S03Y06HO
                    S03Y13AO  S03Y13BO  S03Y13CO  S03Y13DO  S03Y13EO  S03Y13FO
                    S03Y13GO  S03Y13HO
                    S03Y18AO  S03Y18BO  S03Y18CO  S03Y18DO
                    S03Y19AO  S03Y19BO  S03Y19CO  S03Y19DO  S03Y19EO  S03Y19FO
                    SRRACEAO  SRRACEBO  SRRACECO  SRRACEDO  SRRACEEO
                    ;

  DO J=1 TO DIM(INFORMAT);
      IF INFORMAT(J) NOT IN (.,-9) THEN MARKED(J)=1;
      ELSE MARKED(J)=2;
  END;
  DROP J;

  FORMAT H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
         H03002K  H03002L  H03002M  H03002N  H03002O
         S03Y06A  S03Y06B  S03Y06C  S03Y06D  S03Y06E  S03Y06F  S03Y06G
         S03Y06H
         S03Y13A  S03Y13B  S03Y13C  S03Y13D  S03Y13E  S03Y13F  S03Y13G
         S03Y13H
         S03Y18A  S03Y18B  S03Y18C  S03Y18D
         S03Y19A  S03Y19B  S03Y19C  S03Y19D  S03Y19E  S03Y19F
         SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE
```

```
        MARKED.;


*********************************************************************;

/*  skip coding scheme for all surveys not returned  **/

   IF FLAG_FIN NE '1' THEN GOTO NOSURVEY;

/** Note 1 -- H03006, H03007 health plan usage  **/

   IF H03006 > 0 OR H03006 =.D THEN N1=1;
   ELSE IF H03006=.N  THEN DO;
      IF H03007 NOT=. THEN DO;
         N1=2;
         H03007=.C;
      END;
      ELSE DO;
         N1=3;
         H03007=.N;
      END;
   END;
   ELSE IF H03006=.   THEN N1=4;
   ELSE IF H03006=.A  THEN DO;
      IF H03007 NOT=. THEN N1=5;
      ELSE DO;
         H03006=.N;
         H03007=.N;
         N1=6;
      END;
   END;




/** Note2  -- H03008, H03009: Personal doctor or nurse **/

   IF H03008=1 AND H03009 IN (1,2,3,.,.A) THEN N2=1;
   ELSE IF H03008 IN (1,.,.A) AND H03009=.N THEN DO;
      H03008=2;
      H03009=.C;
      N2=2;
   END;
   ELSE IF H03008 IN (2,.,.A) AND (H03009 GT 0 OR H03009 IN(.A)) THEN DO;
      H03008=1;
      N2=3;
   END;
   ELSE IF H03008=2 AND H03009 IN (.N,.) THEN DO;
      IF H03009=. THEN H03009=.N;
      ELSE H03009=.C;
      N2=4;
   END;
   ELSE IF H03008=. AND H03009=. THEN N2=5;
   ELSE IF H03008=.A AND H03009=. THEN DO;
      H03008=2;
      H03009=.N;
      N2=6;
   END;




/** Note 3 -- H03010 H03011:  Personal doctor or nurse **/

   IF H03010 = 1 AND (H03011 GE 0 OR H03011 IN (.,.A)) THEN N3=1;
   ELSE IF H03010 IN (1,.,.A) AND H03011=.N THEN DO;
      N3=2;
      H03010=2;
      H03011=.C;
   END;
   ELSE IF H03010 IN (2,.,.A) AND (H03011 GE 0 OR H03011=.A) THEN DO;
      H03010=1;
      N3=3;
   END;
   ELSE IF H03010=2 AND H03011 IN (.N,.)  THEN DO;
```

```
      N3=4;
      IF H03011=. THEN H03011=.N;
      ELSE H03011=.C;
   END;
   ELSE IF H03010=. AND  H03011=. THEN N3=5;
   ELSE IF H03010=.A AND H03011=. THEN DO;
      H03010=2;
      N3=6;
      H03011=.N;
   END;


/** Note 4 -- H03012, H03013:  needed to see a specialist in last 12 months **/

   IF H03012=1 AND H03013 IN (1,2,3,.,.A) THEN N4=1;
   ELSE IF H03012 IN (1,.,.A) AND H03013=.N THEN DO;
      H03012=2;
      H03013=.C;
      N4=2;
   END;
   ELSE IF H03012 IN (2,.,.A) AND H03013 IN (1,2,3,.A) THEN DO;
      H03012=1;
      N4=3;
   END;
   ELSE IF H03012=2 AND H03013 IN (.,.N) THEN DO;
      IF H03013=. THEN H03013=.N;
      ELSE H03013=.C;
      N4=4;
   END;
   ELSE IF H03012=.  AND H03013=.  THEN N4=5;
   ELSE IF H03012=.A AND H03013=.  THEN DO;
      H03012=2;
      H03013=.N;
      N4=6;
   END;




/** Note 5 -- H03014, H03015,H03016: saw a specialist in last 12 months **/

   ARRAY NOTE5 H03015 H03016;
   N5MARK=0;
   N5NMISS=0;

   DO OVER NOTE5;
      IF NOTE5 NE . THEN N5NMISS+1;
      IF NOTE5 NOT IN (.N,.) THEN N5MARK+1;
   END;

   IF H03014=1 AND (N5NMISS=0 OR N5MARK>0) THEN N5=1;
   ELSE IF H03014 IN (1,.,.A) AND N5NMISS>0 AND N5MARK=0 THEN DO;
      H03014=2;
      N5=2;
      DO OVER NOTE5;
         IF NOTE5=. THEN NOTE5=.N;
         ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014 IN (2,.,.A) AND N5MARK>0 THEN DO;
      H03014=1;
       N5=3;
   END;
   ELSE IF H03014=2 AND (N5NMISS=0 OR (N5NMISS>0 AND N5MARK=0)) THEN DO;
      N5=4;
      DO OVER NOTE5;
         IF NOTE5=. THEN NOTE5=.N;
         ELSE NOTE5=.C;
      END;
   END;
   ELSE IF H03014=. AND  N5NMISS=0 THEN N5=5;
   ELSE IF H03014=.A AND N5NMISS=0 THEN DO;
      H03014=2;
      N5=6;
```

```
        DO OVER NOTE5;
           NOTE5=.N;
        END;
     END;

   DROP N5NMISS N5MARK;


/** Note 6 -- called a doctor's office:  H03017, H03018 **/

   IF H03017=1 AND H03018 IN (1,2,3,4,.,.A) THEN N6=1;
   ELSE IF H03017 IN (1,.,.A) AND H03018=.N THEN DO;
      H03017=2;
      H03018=.C;
      N6=2;
   END;
   ELSE IF H03017 IN (2,.,.A) AND H03018 IN (1,2,3,4,.A) THEN DO;
      H03017=1;
      N6=3;
   END;

   ELSE IF H03017=2 AND H03018 IN (.,.N) THEN DO;
      IF H03018=. THEN H03018=.N;
      ELSE H03018=.C;
      N6=4;
   END;
   ELSE IF H03017=.  AND H03018=.  THEN N6=5;
   ELSE IF H03017=.A AND H03018=.  THEN DO;
      H03017=2;
      N6=6;
      H03018=.N;
   END;


/** Note 7 -- H03019,H03020,H03021:  regular or routine healthcare **/

   ARRAY NOTE7 H03020 H03021;
   N7MARK=0;
   N7NMISS=0;

   DO OVER NOTE7;
      IF NOTE7 NE . THEN N7NMISS+1;
      IF NOTE7 NOT IN (.N,.) THEN N7MARK+1;
   END;

   IF H03019=1 AND (N7NMISS=0 OR N7MARK>0) THEN N7=1;
   ELSE IF H03019 IN (1,.,.A) AND N7NMISS>0 AND N7MARK=0 THEN DO;
      H03019=2;
      N7=2;
      DO OVER NOTE7;
         IF NOTE7=. THEN NOTE7=.N;
         ELSE NOTE7=.C;
      END;
   END;
   ELSE IF H03019 IN (2,.,.A) AND N7MARK>0 THEN DO;
      H03019=1;
      N7=3;
   END;
   ELSE IF H03019=2 AND (N7NMISS=0 OR (N7NMISS>0 AND N7MARK=0)) THEN DO;
      N7=4;
      DO OVER NOTE7;
         IF NOTE7=. THEN NOTE7=.N;
         ELSE NOTE7=.C;
      END;
   END;
   ELSE IF H03019=.  AND  N7NMISS=0 THEN N7=5;
   ELSE IF H03019=.A AND N7NMISS=0 THEN DO;
      H03019=2;
      N7=6;
      DO OVER NOTE7;
         NOTE7=.N;
      END;
   END;
```

```
   DROP N7NMISS N7MARK;


/** Note 8 -- H03022,H03023,H03024:  illness or injury **/

   ARRAY NOTE8 H03023 H03024;
   N8MARK=0;
   N8NMISS=0;

   DO OVER NOTE8;
      IF NOTE8 NE . THEN N8NMISS+1;
      IF NOTE8 NOT IN (.N,.) THEN N8MARK+1;
   END;

   IF H03022=1 AND (N8NMISS=0 OR N8MARK>0) THEN N8=1;
   ELSE IF H03022 IN (1,.,.A) AND N8NMISS>0 AND N8MARK=0 THEN DO;
      H03022=2;
      N8=2;
      DO OVER NOTE8;
         IF NOTE8=. THEN NOTE8=.N;
         ELSE NOTE8=.C;
      END;
   END;
   ELSE IF H03022 IN (2,.,.A) AND N8MARK>0 THEN DO;
      H03022=1;
      N8=3;
   END;
   ELSE IF H03022=2 AND (N8NMISS=0 OR (N8NMISS>0 AND N8MARK=0)) THEN DO;
      N8=4;
      DO OVER NOTE8;
         IF NOTE8=. THEN NOTE8=.N;
         ELSE NOTE8=.C;
      END;
   END;
   ELSE IF H03022=.  AND N8NMISS=0 THEN N8=5;
   ELSE IF H03022=.A AND N8NMISS=0 THEN DO;
      H03022=2;
      N8=6;
      DO OVER NOTE8;
         NOTE8=.N;
      END;
   END;

   DROP N8NMISS N8MARK;



/** Note 9 -- H03026, H03027-H03036: doctor's office or clinic **/

 ARRAY NOTE9   H03027-H03036;
  ARRAY NOTE9B  H03027-H03036;

  N9MARK=0;
  N9NMISS=0;

  DO OVER NOTE9;
     IF NOTE9 NE . THEN N9NMISS+1;
  END;

  DO OVER NOTE9B;
     IF NOTE9B NOT IN (.N,.) THEN N9MARK+1;
  END;


  IF H03026=1 THEN DO;
     N9=1;
     DO OVER NOTE9;
        IF NOTE9=. THEN NOTE9=.N;
        ELSE NOTE9=.C;
     END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7,.,.A) AND N9NMISS>0 AND N9MARK=0 THEN DO;
```

```
      H03026=1;
      N9=2;
      DO OVER NOTE9;
         IF NOTE9=. THEN NOTE9=.N;
         ELSE NOTE9=.C;
      END;
   END;
   ELSE IF H03026 IN (2,3,4,5,6,7) AND (N9NMISS=0 OR N9MARK>0) THEN N9=3;
   ELSE IF H03026=.  AND N9NMISS=0 THEN N9=4;
   ELSE IF H03026=.A AND N9NMISS=0 THEN DO;
      H03026=1;
      N9=5;
      DO OVER NOTE9;
         NOTE9=.N;
      END;
   END;
   ELSE IF H03026 IN (.,.A) AND N9MARK>0 THEN N9=6;

   DROP N9NMISS N9MARK;



/** Note 9E -- S03Y01,S03Y02-S03Y25:  Prescription Medicine **/

   ARRAY NOTE9E1 S03Y02-S03Y05 S03Y07-S03Y12
                 S03Y14-S03Y17 S03Y20-S03Y25;

   ARRAY NOTE9E2 S03Y06A--S03Y06H
                 S03Y13A--S03Y13H S03Y18A--S03Y18D
                 S03Y19A--S03Y19F;
   N9E1MARK=0;
   N9E1NMISS=0;
   N9E2MARK=0;
   N9E2NMISS=0;
   N9EMARK=0;
   N9ENMISS=0;


   DO OVER NOTE9E1;
      IF NOTE9E1 NE . THEN N9E1NMISS+1;
      IF NOTE9E1 NOT IN (.N,.) THEN N9E1MARK+1;
   END;
   DO OVER NOTE9E2;
      IF NOTE9E2 NOT IN (., 2) THEN N9E2NMISS+1;
      IF NOTE9E2 NOT IN (.N,.,2) THEN N9E2MARK+1;
   END;
   N9EMARK=N9E1MARK+N9E2MARK;
   N9ENMISS=N9E1NMISS+N9E2NMISS;

   IF S03Y01=1 AND (N9ENMISS=0 OR N9EMARK>0)
   THEN N9E=1;
   ELSE IF S03Y01 IN (1,.,.A) AND N9ENMISS>0 AND N9EMARK=0 THEN DO;
      S03Y01=2;
      N9E=2;
      DO OVER NOTE9E1;
         IF NOTE9E1=. THEN NOTE9E1=.N;
         ELSE NOTE9E1=.C;
      END;
      DO OVER NOTE9E2;
         IF NOTE9E2 IN (.,2) THEN NOTE9E2=.N;
         ELSE NOTE9E2=.C;
      END;
   END;
   ELSE IF S03Y01 IN (2,.,.A) AND N9EMARK>0 THEN DO;
      S03Y01=1;
      N9E=3;
   END;
   ELSE IF S03Y01=2 AND (N9ENMISS=0 OR (N9ENMISS>0 AND N9EMARK=0)) THEN DO;
      N9E=4;
      DO OVER NOTE9E1;
         IF NOTE9E1=. THEN NOTE9E1=.N;
         ELSE NOTE9E1=.C;
      END;
```

```
        DO OVER NOTE9E2;
            IF NOTE9E2 IN (.,2) THEN NOTE9E2=.N;
            ELSE NOTE9E2=.C;
        END;
    END;
    ELSE IF S03Y01=.  AND N9ENMISS=0 THEN N9E=5;
    ELSE IF S03Y01=.A AND N9ENMISS=0 THEN DO;
        S03Y01=2;
        N9E=6;
        DO OVER NOTE9E1;
            NOTE9E1=.N;
        END;
        DO OVER NOTE9E2;
            NOTE9E2=.N;
        END;
    END;

    DROP N9ENMISS N9EMARK N9E1NMISS N9E1MARK N9E2NMISS N9E2MARK;




/* Note 9F - S03Y03, S03Y04-S03Y05 S03Y06A-S03Y06H S03Y07
            Precription filled in at MTF pharmacy in last 90 days */

    ARRAY NOTE9F1   S03Y04-S03Y05 S03Y07;
    ARRAY NOTE9F2   S03Y06A--S03Y06H;
    N9F1MARK=0;
    N9F1NMISS=0;
    N9F2MARK=0;
    N9F2NMISS=0;
    N9FMARK=0;
    N9FNMISS=0;

    DO OVER NOTE9F1;
        IF NOTE9F1 NE . THEN N9F1NMISS+1;
        IF NOTE9F1 NOT IN (.N,.) THEN N9F1MARK+1;
    END;
    DO OVER NOTE9F2;
        IF NOTE9F2 NOT IN (., 2) THEN N9F2NMISS+1;
        IF NOTE9F2 NOT IN (.N,., 2) THEN N9F2MARK+1;
    END;
    N9FMARK=N9F1MARK+N9F2MARK;
    N9FNMISS=N9F1NMISS+N9F2NMISS;



IF S03Y03  IN (.N, .C) AND S03Y04  IN (.N, .C) AND S03Y05  IN (.N, .C) AND
    S03Y06A IN (.N, .C) AND S03Y06B IN (.N, .C) AND S03Y06C IN (.N, .C) AND
    S03Y06D IN (.N, .C) AND S03Y06E IN (.N, .C) AND S03Y06F IN (.N, .C) AND
    S03Y06G IN (.N, .C) AND S03Y06H IN (.N, .C) AND
    S03Y07 IN (.N, .C) THEN N9F=1;
ELSE DO;
    IF S03Y03 IN (1,3) THEN N9F=2;  /* Yes new only; yes new and refills */
    ELSE IF S03Y03=2 THEN DO;       /* Yes refills only */
        IF S03Y04=. THEN S03Y04 = .N;
        ELSE S03Y04=.C;
        N9F=3;
    END;
    ELSE IF S03Y03=4 THEN DO;       /* No */
        DO OVER NOTE9F1;
            IF NOTE9F1=. THEN NOTE9F1=.N;
            ELSE NOTE9F1=.C;
        END;
        DO OVER NOTE9F2;
            IF NOTE9F2 IN (.,2) THEN NOTE9F2=.N;
            ELSE NOTE9F2=.C;
        END;
        N9F=4;
    END;
    ELSE IF S03Y03 IN (., .A) THEN DO;
        IF S03Y04 NE . THEN DO;
            S03Y03=3;
```

```
            N9F=5;
        END;
        ELSE N9F=6;
    END;
END;
  DROP N9FNMISS N9FMARK N9F1NMISS N9F1MARK N9F2NMISS N9F2MARK;


/* Note 9G - S03Y09, S03Y10-S03Y12 S03Y13A-S03Y13H S03Y14
             Precription filled in at TRICARE retail network
             pharmacy in last 90 days */

  ARRAY NOTE9G1  S03Y10-S03Y12 S03Y14;
  ARRAY NOTE9G2  S03Y13A--S03Y13H;
  N9G1MARK=0;
  N9G1NMISS=0;
  N9G2MARK=0;
  N9G2NMISS=0;
  N9GMARK=0;
  N9GNMISS=0;

  DO OVER NOTE9G1;
     IF NOTE9G1 NE  .  THEN N9G1NMISS+1;
     IF NOTE9G1 NOT IN (.N,.) THEN N9G1MARK+1;
  END;
  DO OVER NOTE9G2;
     IF NOTE9G2 NOT IN (.,2) THEN N9G2NMISS+1;
     IF NOTE9G2 NOT IN (.N,.,2) THEN N9G2MARK+1;
  END;
  N9GMARK=N9G1MARK+N9G2MARK;
  N9GNMISS=N9G1NMISS+N9G2NMISS;


 IF S03Y09  IN (.N, .C) AND S03Y10  IN (.N, .C) AND S03Y11  IN (.N, .C) AND
    S03Y12  IN (.N, .C) AND S03Y13A IN (.N, .C) AND S03Y13B IN (.N, .C) AND
    S03Y13C IN (.N, .C) AND S03Y13D IN (.N, .C) AND S03Y13E IN (.N, .C) AND
    S03Y13F IN (.N, .C) AND S03Y13G IN (.N, .C) AND S03Y13H IN (.N, .C) AND
    S03Y14  IN (.N, .C)
THEN N9G=1;
ELSE DO;
     IF S03Y09 IN (1,3) THEN N9G=2;  /* Yes new only; yes new and refills */
       ELSE IF S03Y09=2 THEN DO;        /* Yes refills only */
          IF S03Y10=. THEN S03Y10 = .N;
          ELSE S03Y10=.C;
          N9G=3;
       END;
       ELSE IF S03Y09=4 THEN DO;        /* No */
          DO OVER NOTE9G1;
             IF NOTE9G1=. THEN NOTE9G1=.N;
             ELSE NOTE9G1=.C;
          END;
          DO OVER NOTE9G2;
             IF NOTE9G2 IN (.,2) THEN NOTE9G2=.N;
             ELSE NOTE9G2=.C;
          END;
          N9G=4;
       END;
     ELSE IF S03Y09 IN (., .A) THEN DO;
          IF S03Y10 NE . THEN DO;
             S03Y09=3;
             N9G=5;
          END;
          ELSE N9G=6;
     END;
END;
  DROP N9GNMISS N9GMARK N9G1NMISS N9G1MARK N9G2NMISS N9G2MARK;


/** Note 9H -- S03Y12, S03Y13A-S03Y13H: TRICARE retail network prescription fills
                                  take at least 90 days **/

  ARRAY NOTE9H S03Y13A--S03Y13H;
  N9HMARK=0;
```

```
    N9HNMISS=0;

  DO OVER NOTE9H;
      IF NOTE9H NOT IN (., 2) THEN N9HNMISS+1;
      IF NOTE9H NOT IN (.N,.,2) THEN N9HMARK+1;
  END;

 IF S03Y12  IN (.N, .C) AND S03Y13A IN (.N, .C) AND S03Y13B IN (.N, .C) AND
    S03Y13C IN (.N, .C) AND S03Y13D IN (.N, .C) AND S03Y13E IN (.N, .C) AND
    S03Y13F IN (.N, .C) AND S03Y13G IN (.N, .C) AND S03Y13H IN (.N, .C)
THEN N9H=1;
ELSE DO;
  IF S03Y12=1 AND (N9HNMISS=0 OR N9HMARK>0) THEN N9H=2;
  ELSE IF S03Y12 IN (1,.,.A) AND N9HNMISS>0 AND N9HMARK=0 THEN DO;
      S03Y12=2;
      N9H=3;
      DO OVER NOTE9H;
          IF NOTE9H IN (.,2) THEN NOTE9H=.N;
          ELSE NOTE9H=.C;
      END;
  END;
  ELSE IF S03Y12 IN (2,.,.A) AND N9HMARK>0 THEN DO;
      S03Y12=1;
       N9H=4;
  END;
  ELSE IF S03Y12=2 AND (N9HNMISS=0 OR (N9HNMISS>0 AND N9HMARK=0)) THEN DO;
      N9H=5;
      DO OVER NOTE9H;
          IF NOTE9H IN (.,2) THEN NOTE9H=.N;
          ELSE NOTE9H=.C;
      END;
  END;
  ELSE IF S03Y12=. AND  N9HNMISS=0 THEN N9H=6;
  ELSE IF S03Y12=.A AND N9HNMISS=0 THEN DO;
      S03Y12=2;
      N9H=7;
      DO OVER NOTE9H;
          NOTE9H=.N;
      END;
  END;
END;
  DROP N9HNMISS N9HMARK;


/* Note 9I - S03Y15, S03Y16-S03Y17 S03Y18A-S03Y18D
             S03Y19A-S03Y19F S03Y20
             Precription filled in non-network civilian
             pharmacy in last 90 days */

  ARRAY NOTE9I1  S03Y16-S03Y17 S03Y20;
  ARRAY NOTE9I2  S03Y18A--S03Y18D S03Y19A--S03Y19F;
  N9I1MARK=0;
  N9I1NMISS=0;
  N9I2MARK=0;
  N9I2NMISS=0;
  N9IMARK=0;
  N9INMISS=0;

  DO OVER NOTE9I1;
      IF NOTE9I1 NE . THEN N9I1NMISS+1;
      IF NOTE9I1 NOT IN (.N,.) THEN N9I1MARK+1;
  END;
  DO OVER NOTE9I2;
      IF NOTE9I2 NOT IN (., 2) THEN N9I2NMISS+1;
      IF NOTE9I2 NOT IN (.N,.,2) THEN N9I2MARK+1;
  END;
  N9IMARK=N9I1MARK+N9I2MARK;
  N9INMISS=N9I1NMISS+N9I2NMISS;


 IF S03Y15  IN (.N, .C) AND S03Y16  IN (.N, .C) AND S03Y17  IN (.N, .C) AND
    S03Y18A IN (.N, .C) AND S03Y18B IN (.N, .C) AND S03Y18C IN (.N, .C) AND
    S03Y18D IN (.N, .C) AND S03Y19A IN (.N, .C) AND S03Y19B IN (.N, .C) AND
```

```
      S03Y19C IN (.N, .C) AND S03Y19D IN (.N, .C) AND S03Y19E IN (.N, .C) AND
      S03Y19F IN (.N, .C) AND S03Y20  IN (.N, .C)
THEN N9I=1;
ELSE DO;
      IF S03Y15 IN (1,3) THEN N9I=2;  /* Yes new only; yes new and refills */
      ELSE IF S03Y15=2 THEN DO;       /* Yes refills only */
         IF S03Y16=. THEN S03Y16 = .N;
         ELSE S03Y16=.C;
         N9I=3;
      END;
      ELSE IF S03Y15=4 THEN DO;       /* No */
         DO OVER NOTE9I1;
            IF NOTE9I1=. THEN NOTE9I1=.N;
            ELSE NOTE9I1=.C;
         END;
         DO OVER NOTE9I2;
            IF NOTE9I2 IN (.,2) THEN NOTE9I2=.N;
            ELSE NOTE9I2=.C;
         END;
         N9I=4;
      END;
      ELSE IF S03Y15 IN (., .A) THEN DO;
         IF S03Y16 NE . THEN DO;
            S03Y15=3;
            N9I=5;
         END;
         ELSE N9I=6;
      END;
END;
  DROP N9INMISS N9IMARK N9I1NMISS N9I1MARK N9I2NMISS N9I2MARK;


/** Note 9J -- S03Y17, S03Y18A-S08Y18D: File Prescription claims
                                    filled at non-network pharmacies **/

  ARRAY NOTE9J S03Y18A--S03Y18D;
  N9JMARK=0;
  N9JNMISS=0;

  DO OVER NOTE9J;
      IF NOTE9J NOT IN (., 2)   THEN N9JNMISS+1;
      IF NOTE9J NOT IN (.N,.,2) THEN N9JMARK+1;
  END;

 IF S03Y17  IN (.N, .C) AND
     S03Y18A IN (.N, .C) AND S03Y18B IN (.N, .C) AND S03Y18C IN (.N, .C) AND
     S03Y18D IN (.N, .C)
THEN N9J=1;
ELSE DO;
   IF S03Y17=1 AND (N9JNMISS=0 OR N9JMARK>0) THEN N9J=2;
   ELSE IF S03Y17 IN (1,.,.A) AND N9JNMISS>0 AND N9JMARK=0 THEN DO;
      S03Y17=2;
      N9J=3;
      DO OVER NOTE9J;
         IF NOTE9J IN (.,2) THEN NOTE9J=.N;
         ELSE NOTE9J=.C;
      END;
   END;
   ELSE IF S03Y17 IN (2,.,.A) AND N9JMARK>0 THEN DO;
      S03Y17=1;
       N9J=4;
   END;
   ELSE IF S03Y17=2 AND (N9JNMISS=0 OR (N9JNMISS>0 AND N9JMARK=0)) THEN DO;
      N9J=5;
      DO OVER NOTE9J;
         IF NOTE9J IN (.,2) THEN NOTE9J=.N;
         ELSE NOTE9J=.C;
      END;
   END;
   ELSE IF S03Y17=. AND  N9JNMISS=0 THEN N9J=6;
   ELSE IF S03Y17=.A AND N9JNMISS=0 THEN DO;
      S03Y17=2;
      N9J=7;
```

```
      DO OVER NOTE9J;
         NOTE9J=.N;
      END;
   END;
END;
  DROP N9JNMISS N9JMARK;


/** Note 9K -- S03Y21-S03Y25:
              Precription filled through TRICARE mail order
              pharmacy in last 90 days */

  ARRAY NOTE9K S03Y22-S03Y25;
  N9KMARK=0;
  N9KNMISS=0;

  DO OVER NOTE9K;
     IF NOTE9K NE . THEN N9KNMISS+1;
     IF NOTE9K NOT IN (.N,.) THEN N9KMARK+1;
  END;

 IF S03Y21  IN (.N, .C) AND S03Y22  IN (.N, .C) AND S03Y23  IN (.N, .C) AND
    S03Y24  IN (.N, .C) AND S03Y25  IN (.N, .C)
THEN N9K=1;
ELSE DO;
  IF S03Y21 IN (1, 2, 3) AND (N9KNMISS=0 OR N9KMARK>0) THEN N9K=2;
  ELSE IF S03Y21 IN (1,2, 3, .,.A) AND N9KNMISS>0 AND N9KMARK=0 THEN DO;
     S03Y21=4;
     N9K=3;
     DO OVER NOTE9K;
        IF NOTE9K=. THEN NOTE9K=.N;
        ELSE NOTE9K=.C;
     END;
  END;
  ELSE IF S03Y21 IN (4,.,.A) AND N9KMARK>0 THEN DO;
     S03Y21=3;
     N9K=4;
  END;
  ELSE IF S03Y21=4 AND (N9KNMISS=0 OR (N9KNMISS>0 AND N9KMARK=0)) THEN DO;
     N9K=5;
     DO OVER NOTE9K;
        IF NOTE9K=. THEN NOTE9K=.N;
        ELSE NOTE9K=.C;
     END;
  END;
  ELSE IF S03Y21=.  AND N9KNMISS=0 THEN N9K=6;
  ELSE IF S03Y21=.A AND N9KNMISS=0 THEN DO;
     S03Y21=4;
     N9K=7;
     DO OVER NOTE9K;
        NOTE9K=.N;
     END;
  END;
END;
  DROP N9KNMISS N9KMARK;


/** Note 9L -- S03Y23, S03Y24:  tried to use Express Scripts website in
                               last 90 days **/

 IF S03Y23  IN (.N, .C) AND S03Y24  IN (.N, .C)
THEN N9L=1;
ELSE DO;
  IF S03Y23=1 AND S03Y24 IN (1,2,3,.,.A) THEN N9L=2;
  ELSE IF S03Y23 IN (1,.,.A) AND S03Y24=.N THEN DO;
     S03Y23=2;
     S03Y24=.C;
     N9L=3;
  END;
  ELSE IF S03Y23 IN (2,.,.A) AND S03Y24 IN (1,2,3,.A) THEN DO;
     S03Y23=1;
     N9L=4;
  END;
```

```
        ELSE IF S03Y23=2 AND S03Y24 IN (.,.N) THEN DO;
           IF S03Y24=. THEN S03Y24=.N;
           ELSE S03Y24=.C;
           N9L=5;
        END;
        ELSE IF S03Y23=.  AND S03Y24=.  THEN N9L=6;
        ELSE IF S03Y23=.A AND S03Y24=.  THEN DO;
           S03Y23=2;
           S03Y24=.N;
           N9L=7;
        END;
     END;


/** Note 13 -- S03V01, S03V02 S03V04-S03V07: health care received from TRICARE civilian network
**/

   ARRAY NOTE13 S03V02 S03V04-S03V07;
   N13MARK=0;
   N13NMISS=0;

   DO OVER NOTE13;
      IF NOTE13 NE . THEN N13NMISS+1;
      IF NOTE13 NOT IN (.N,.) THEN N13MARK+1;
   END;

   IF S03V01 IN (1,2,3,4) AND (N13NMISS=0 OR N13MARK>0) THEN N13=1;
   ELSE IF S03V01 IN (1,2,3,.,.A) AND N13NMISS>0 AND N13MARK=0 THEN DO;
      N13=2;
      S03V01=.N;
      DO OVER NOTE13;
         IF NOTE13=. THEN NOTE13=.N;
         ELSE NOTE13=.C;
      END;
   END;
   ELSE IF S03V01=4 AND N13NMISS>0 AND N13MARK=0  THEN DO;
      N13=3;
   END;
   ELSE IF S03V01=.N AND (N13NMISS=0 OR (N13NMISS>0 AND N13MARK=0) OR N13MARK>0)
   THEN DO;
      N13=4;
      DO OVER NOTE13;
         IF NOTE13=. THEN NOTE13=.N;
         ELSE NOTE13=.C;
      END;
   END;
   ELSE IF S03V01=.  AND N13NMISS=0 THEN N13=5;
   ELSE IF S03V01=.A AND N13NMISS=0 THEN DO;
      S03V01=.N;
      N13=6;
      DO OVER NOTE13;
         NOTE13=.N;
      END;
   END;
   ELSE IF S03V01 IN (.,.A) AND N13MARK>0 THEN N13=7;

   DROP N13NMISS N13MARK;


/** Note 14 -- H03039, H03040-H03042: claims to health plan **/

    ARRAY NOTE14 H03040-H03042;
   N14MARK=0;
   N14NMISS=0;
   N14NDK=0;

   DO OVER NOTE14;
      IF NOTE14 NE . THEN N14NMISS+1;
      IF NOTE14 NOT IN (.N,.) THEN N14MARK+1;
      IF NOTE14 NOT IN (.,.D) THEN N14NDK+1;
   END;
```

```
   IF H03039=1 AND (N14NMISS=0 OR (N14MARK>0 and N14NDK>0) or N14NDK=0) THEN N14=1;
   ELSE IF H03039 IN (1,.,.A,.D) AND N14NMISS>0 AND N14MARK=0 THEN DO;
       N14=2;
       H03039=2;
       DO OVER NOTE14;
           IF NOTE14=. THEN NOTE14=.N;
           ELSE NOTE14=.C;
       END;
   END;
   ELSE IF H03039 IN (2,.,.A,.D) AND ((N14MARK>0 AND N14NDK>0) OR (N14NMISS>0 AND N14NDK=0)) THEN
DO;
       H03039=1;
       N14=3;
   END;
   ELSE IF H03039 IN (2,.D) AND (N14NMISS=0 OR (N14NMISS>0 AND N14MARK=0)) THEN DO;
       N14=4;
       DO OVER NOTE14;
           IF NOTE14=. THEN NOTE14=.N;
           ELSE NOTE14=.C;
       END;
   END;
   ELSE IF H03039=.  AND N14NMISS=0 THEN N14=5;
   ELSE IF H03039=.A AND N14NMISS=0 THEN DO;
       H03039=2;
       N14=6;
       DO OVER NOTE14;
           NOTE14=.N;
       END;
   END;

   DROP N14NMISS N14MARK N14NDK;




/** NOTE15  -- H03043, H03044: **/

   IF H03043=1 AND H03044 IN (1,2,3,.,.A) THEN N15=1;
   ELSE IF H03043 IN (1,.,.A) AND H03044=.N THEN DO;
       H03043=2;
       H03044=.C;
       N15=2;
   END;
   ELSE IF H03043 IN (2,.,.A) AND H03044 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
       H03043=1;
       N15=3;
   END;
   ELSE IF H03043=2 AND H03044 IN (.N,.) THEN DO;
       IF H03044=. THEN H03044=.N;
       ELSE H03044=.C;
       N15=4;
   END;
   ELSE IF H03043=. AND H03044=. THEN N15=5;
   ELSE IF H03043=.A AND H03044=. THEN DO;
       H03043=2;
       H03044=.N;
       N15=6;
   END;


/** NOTE16 -- H03045, H03046: health plan's customer service **/

   IF H03045=1 AND H03046 IN (1,2,3,.,.A) THEN N16=1;
   ELSE IF H03045 IN (1,.,.A) AND H03046=.N THEN DO;
       H03045=2;
       H03046=.C;
       N16=2;
   END;
   ELSE IF H03045 IN (2,.,.A) AND H03046 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
       H03045=1;
```

```
      N16=3;
   END;
   ELSE IF H03045=2 AND H03046 IN (.N,.) THEN DO;
      IF H03046=. THEN H03046=.N;
      ELSE H03046=.C;
      N16=4;
   END;
   ELSE IF H03045=. AND H03046=. THEN N16=5;
   ELSE IF H03045=.A AND H03046=. THEN DO;
      H03045=2;
      H03046=.N;
      N16=6;
   END;


/** Note 17 -- H03047, H03048, H03049:  complaint or problem  **/

   ARRAY NOTE17 H03048 H03049;
   N17MARK=0;
   N17NMISS=0;

   DO OVER NOTE17;
      IF NOTE17 NE . THEN N17NMISS+1;
      IF NOTE17 NOT IN (.N,.) THEN N17MARK+1;
   END;

   IF H03047=1 AND (N17NMISS=0 OR N17MARK>0) THEN N17=1;
   ELSE IF H03047 IN (1,.,.A) AND N17NMISS>0 AND N17MARK=0 THEN DO;
      H03047=2;
      N17=2;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047 IN (2,.,.A) AND N17MARK>0 THEN DO;
      H03047=1;
      N17=3;
   END;
   ELSE IF H03047=2 AND (N17NMISS=0 OR (N17NMISS>0 AND N17MARK=0)) THEN DO;
      N17=4;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047=.  AND N17NMISS=0 THEN N17=5;
   ELSE IF H03047=.A AND N17NMISS=0 THEN DO;
      H03047=2;
      N17=6;
      DO OVER NOTE17;
         NOTE17=.N;
      END;
   END;

   DROP N17NMISS N17MARK;



/** NOTE18  -- H03050, H03051: paperwork  **/

   IF H03050=1 AND H03051 IN (1,2,3,.,.A) THEN N18=1;
   ELSE IF H03050 IN (1,.,.A) AND H03051=.N THEN DO;
      H03050=2;
      H03051=.C;
      N18=2;
   END;
   ELSE IF H03050 IN (2,.,.A) AND H03051 IN (1,2,3,.A) THEN DO;
      H03050=1;
      N18=3;
   END;
   ELSE IF H03050=2 AND H03051 IN (.N,.)THEN DO;
      IF H03051=. THEN  H03051=.N;
```

```
      ELSE H03051=.C;
      N18=4;
   END;
   ELSE IF H03050=.  AND H03051=. THEN N18=5;
   ELSE IF H03050=.A AND H03051=. THEN DO;
      H03050=2;
      H03051=.N;
      N18=6;
   END;



/** Note 19 -- smoking:  H03059 - H03062  **/

   IF H03059=1 and H03060 IN (3,4) THEN DO;  /* still smoke */
      IF H03061 NE . THEN DO;
         H03061=.C;
         N19=1;
      END;
      ELSE IF H03061=. THEN DO;
         H03061=.N;
         N19=2;
      END;
   END;
   ELSE IF H03059=1 AND H03060=2 THEN DO;           /* quit */
      IF H03061 IN (2,.D) AND H03062 NE . THEN DO;   /* > 1 year ago */
         H03062 =.C;
         N19=3;
      END;
      ELSE IF H03061 IN (2,.D) AND H03062=. THEN DO;
         H03062 =.N;
         N19=4;
      END;
      ELSE IF H03061 IN (3,.,.A) THEN N19=5;       /* < 1 year ago */
   END;
   ELSE IF H03059=1 AND H03060 IN (.D,.,.A) THEN DO;  /* don't know */
      IF H03061=2 AND H03062 NE . THEN DO;          /* > 1 year ago */
         H03060=2;
         H03062=.C;
         N19=6;
      END;
      ELSE IF H03061=2 AND H03062 = . THEN DO;
         H03060=2;
         H03062=.N;
         N19=7;
      END;
      ELSE IF H03061=3 THEN DO;             /* < 1 year ago */
         H03060=2;
         N19=8;
      END;
      ELSE IF H03061 IN (.D,.,.A) THEN N19=9;  /* don't know */
   END;
   ELSE IF H03059 IN (2,.D,.,.A) AND H03060 IN (3,4) THEN DO; /*never smoke*/
      IF H03061 NE . THEN DO;
         H03059=1;
         H03061=.C;
         N19=10;
      END;
      ELSE IF H03061=. THEN DO;
         H03059=1;
         H03061=.N;
         N19=11;
      END;
   END;
   ELSE IF H03059 IN (2,.D) AND H03060 IN (2,.D,.A) THEN DO; /*never smoke*/
      IF H03061 NE . AND H03062 NE . THEN DO;
         H03060 =.C;
         H03061 =.C;
         H03062 =.C;
         N19=12;
      END;
      ELSE IF H03061 NE . AND H03062=. THEN DO;
         H03060=.C;
```

```
            H03061=.C;
            H03062=.N;
            N19=13;
         END;
      ELSE IF H03061=. AND H03062 NE . THEN DO;
            H03060=.C;
            H03061=.N;
            H03062=.C;
            N19=14;
         END;
      ELSE IF H03061=. AND H03062=. THEN DO;
            H03060=.C;
            H03061=.N;
            H03062=.N;
            N19=15;
         END;
   END;
ELSE IF H03059 IN (2,.D) AND H03060= . THEN DO; /*never smoke*/
      IF H03061 NE . AND H03062 NE . THEN DO;
            H03060=.N;
            H03061=.C;
            H03062=.C;
            N19=16;
         END;
      ELSE IF H03061 NE . AND H03062=. THEN DO;
            H03060=.N;
            H03061=.C;
            H03062=.N;
            N19=17;
         END;
      ELSE IF H03061=. AND H03062 NE . THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.C;
            N19=18;
         END;
      ELSE IF H03061=. AND H03062=. THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.N;
            N19=19;
         END;
   END;
ELSE IF H03059 IN (.A, .) AND H03060 IN (2,.,.A) THEN DO; /*MRE/blank*/
      IF H03061=3 THEN DO;
            H03061=.C; /* Per Eric 4/22/03 */
            N19=20;
         END;
      ELSE IF H03061=2 AND H03062 NE . THEN DO;
            H03059 =1;
            H03062 =.C;
            N19=21;
         END;
      ELSE IF H03061=2 AND H03062=. THEN DO;
            H03061=.C; /* per Eric instruction 4/22/03 */
            N19=22;
         END;
      ELSE IF H03061=.D AND H03062=. THEN DO;
            H03062=.N;
            N19=23;
         END;
      ELSE IF H03061=.D AND H03062 NE . THEN DO;
            H03062=.C;
            N19=24;
         END;
      ELSE IF H03061 IN (.,.A) AND H03062 IN (2,3,4,5) THEN DO;
            H03059=1;
            N19=25;
         END;
      ELSE IF H03061 IN (.,.A) AND H03062 IN (1,.N,.,.A) THEN N19=26;
   END;
ELSE IF H03059 IN (.A,.) AND H03060=.D THEN DO; /*MRE/blank*/
      IF H03061 NE . AND H03062 NE .  THEN DO;
```

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```
                H03061=.C;
                H03062=.C;
                N19=27;
            END;
            ELSE IF H03061 NE . AND H03062=.  THEN DO;
                H03061=.C;
                H03062=.N;
                N19=28;
            END;
            IF H03061=. AND H03062=.  THEN DO;
                H03061=.N;
                H03062=.N;
                N19=29;
            END;
            ELSE IF H03061=. AND H03062 NE .  THEN DO;
                H03061=.N;
                H03062=.C;
                N19=30;
            END;
      END;


/** Note 20 - gender H03063, SEX, H03064, H03065--H03071, XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
    if there is discrepancy between SRSEX and SEX */
/* set imputed MALE, FMALE based on gender specific questions */


   ARRAY fmaleval H03065 H03066 H03067 H03068 H03069 H03070 H03071;


   IF H03064 > 0 THEN MALE=1;       /* prostate */
   ELSE MALE = 0;

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


   IF H03063=. OR H03063=.A THEN DO;
      IF (SEX='F' AND MALE AND FMALE) THEN DO;
         N20b=1;
         XSEXA=2;
      END;
      ELSE IF (SEX='F' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=2;
         XSEXA=2;
      END;
      ELSE IF (SEX='M' AND MALE AND FMALE) THEN DO;
         N20b=3;
         XSEXA=1;
      END;
      ELSE IF (SEX='M' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=4;
         XSEXA=1;
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         N20b=5;
         XSEXA=1;
      END;
      ELSE IF FMALE AND NOT MALE THEN DO;
         N20b=6;
         XSEXA=2;
      END;
      ELSE IF (SEX='Z' AND MALE AND FMALE) THEN DO;
         N20b=7;
         XSEXA=.;
      END;
      ELSE IF (SEX='Z' AND MALE=0 AND FMALE=0) THEN DO;
```

```
              N20b=8;
              XSEXA=.;
           END;
        END;
     ELSE IF (H03063=1) THEN DO;
        IF MALE AND NOT FMALE THEN DO;
           N20b=9;
           XSEXA=1;
        END;
        ELSE IF NOT MALE AND FMALE THEN DO;
           IF SEX='F' THEN DO;
              N20b=10;
              XSEXA=2;
           END;
           ELSE DO;
              N20b=11;
              XSEXA=1;
           END;
        END;
        ELSE IF MALE AND FMALE THEN DO;
           N20b=12;
           XSEXA=1;
        END;
        ELSE IF MALE=0 AND FMALE=0 THEN DO;
           N20b=13;
           XSEXA=1;
        END;
     END;
     ELSE IF (H03063=2) THEN DO;
        IF NOT MALE AND FMALE THEN DO;
           N20b=14;
           XSEXA=2;
        END;
        ELSE IF MALE AND NOT FMALE THEN DO;
           IF SEX='M' THEN DO;
             N20b=15;
             XSEXA=1;
           END;
           ELSE DO;
              N20b=16;
              XSEXA=2;
           END;
        END;
        ELSE IF MALE AND FMALE THEN DO;
           N20b=17;
           XSEXA=2;
        END;
        ELSE IF MALE=0 AND FMALE=0 THEN DO;
           N20b=18;
           XSEXA=2;
        END;
     END;

/* Note 20c - gender vs prostate */

  IF XSEXA=1 THEN N20c=1;     /* male    */
  ELSE IF XSEXA=2 THEN DO;    /* female  */
     IF H03064 NE . THEN DO;
        N20c=2;
        H03064=.C;
     END;                     /*inconsistent resp */
     ELSE DO;
        N20c=3;
        H03064=.N;
     END;                     /* valid skip   */
  END;
  ELSE IF XSEXA=. THEN DO;    /*  missing sex */
     N20c=4;
     H03064=.;
  END;

/* Note 20d - gender vs mammogram/paps */
/*   REDEFINE FMALE TO LOOK ONLY AT MAMMOGRAM OR PAP SMEAR ENTRIES  */
```

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```
   ARRAY NOTE20d H03065 H03066 H03067 H03068 H03069 H03070 H03071 ;

   cntfmale=0;
   DO OVER NOTE20d;              /* mammogram/pap smear/PREGNANT*/
      IF NOTE20d NE . THEN cntfmale=cntfmale+1;
   END;
   IF cntfmale>0 THEN FMALE=1;
   ELSE FMALE = 0;

   IF XSEXA=1 THEN DO;   /* male */
      IF FMALE=0 THEN DO;
         N20d=1;
         DO OVER NOTE20d;
            NOTE20d=.N;
         END;
      END; /* inconsistent response */
      ELSE IF FMALE=1 THEN DO;
         N20d=2;
         DO OVER NOTE20d;
            IF NOTE20d=. THEN NOTE20d = .N;
            ELSE NOTE20d=.C;
         END;
      END;    /* valid skip */
   END;
   ELSE IF XSEXA=2 THEN  N20d=3; /* female */
   ELSE IF XSEXA=. THEN DO;       /*  missing sex  */
      N20d=4;
      DO OVER NOTE20d;
         NOTE20d=.;
      END;
   END;



   DROP MALE FMALE CNTFMALE;


/* Note 21 - breast exam for female 40 or over  */
/* Note 1999 -- no self reported age variable  */
/* Note no dob variable  -- macro not used      */

   IF XSEXA=1 THEN DO;  /* male */
      IF  (H03066=.C OR H03066=.N) AND (H03067=.C OR H03067=.N)
      AND (H03068=.C OR H03068=.N)  THEN N21 = 1;
   END;
   ELSE IF XSEXA=2 THEN DO;
      IF H03066=2 THEN N21=2;          /* female 40 or over */
      ELSE IF H03066=1 THEN DO;   /* female < 40 */
         IF H03067 NE . THEN H03067=.C;
         ELSE H03067=.N;
         IF H03068 NE . THEN H03068=.C;
         ELSE H03068=.N;
         N21=3;
      END;
      ELSE IF H03066=.A THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=4;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
            H03066=1;
            H03067=.N;
            H03068=.N;
            N21=5;
         END;
      END;
      ELSE IF H03066=. THEN DO;
         IF H03067 NE . OR H03068 NE . THEN DO;
            H03066=2;
            N21=6;
         END;
         ELSE IF H03067=. AND H03068=. THEN DO;
```

```
                IF AGE<40 THEN DO;
                    H03066 = 1;
                    H03067=.N;
                    H03068=.N;
                    N21=7;
                END;
                ELSE IF AGE >= 40 THEN DO;
                    H03066=1;
                    H03067=.N;
                    H03068=.N;
                    N21=8;
                END;
                ELSE IF AGE=. THEN N21=9;
            END;
        END;
    END;
    ELSE IF XSEXA=. THEN N21=10;



/* Note 22 - gender vs Pregnancy */

  IF XSEXA=1 THEN N22=1;            /* male     */
  ELSE IF XSEXA=2 THEN DO;          /* female   */
      IF H03069=1 THEN N22=2;       /* pregnant */
      ELSE IF H03069=2 THEN DO;
          IF H03070=. THEN H03070 = .N;
          ELSE H03070=.C;
          N22=3;
      END;
      ELSE IF H03069=3 THEN DO;
          IF H03070=. THEN H03070 = .N;
          ELSE H03070=.C;
          IF H03071=. THEN H03071=.N;
          ELSE H03071=.C;
          N22=4;
      END;
      ELSE IF H03069 IN (., .A) THEN DO;
          IF H03070 NE . THEN DO;
              H03069=1;
              N22=5;
          END;
          ELSE IF H03070=. THEN DO;
              IF H03069=. THEN N22=6;
              ELSE IF H03069=.A THEN DO;
                  H03069=3;
                  H03070=.N;
                  IF H03071=. THEN H03071=.N;
                  ELSE H03071=.C;
                  N22=7;
              END;
          END;

      END;
  END;
  ELSE IF XSEXA=. AND H03069 IN (.,.A) THEN N22=8;




NOSURVEY:

/* missing values */

  ARRAY MISS MISS_9 MISS_8 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 -8) THEN MISS_8 = MISS_8 + 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 FORMAT;
    VALUE GRID
      0='0'
      1-9999='>=1' ;
    VALUE $GRIDB
      1-5 = '1-5' ;
    VALUE $AGE
      018-039='<40'
      040-120='>=40';
    VALUE SCALE
      0-10='0-10';
    VALUE MARK
      1-6='Marked' ;
    VALUE MARKB
      2-7='Marked';

    VALUE MARKC
     1='1'
     2-HIGH='>1';

RUN;


proc contents data=out.cschm03q;
run;
```

2.D. Q4_2003\PROGRAMS\CODINGSCHEME\CSCHM03Q.SAS - Implement Coding Scheme and Coding Tables for Quarter 4 CY2003.

```
***************************************************************************;
*  Program:  Cschm03q.sas
*  Written:  06/04/2001
*   Author:  C. Rankin
*
*    Input:  MERGENRC.SD2 - Merged MPR Sampling, DEERS, and NRC Response Data
*   Output:  CSCHM03Q.SD2 - Coding scheme file
*
* Modified:  9/20/2001 - Recodes removed (stored in recodes_old.sas)
*           10/31/2001 - Revised notes 16 and 17 (became notes 26 and 27)
*            3/22/2002 - Updated Variable names for Q1 2002 and added
*                        Include file RENAME.SAS to change the variable
*                        names from 01 to 02. Skipping 01 designation to make
*                        survey reflect year of fielding
*            5/09/2002 - Change to logic in TFL supplement
*            3/17/2003 - Updated Variables names for Q1 2003
*            4/11/2003 - Added note 19a to accomodate Q1 2003 error where
*                        an option on most of the questionnaires was omitted for
*                        H03062
*            5/27/2003 - Updated Variable names for Q2 2003
*           12/05/2003 - Updated Variable names for Q4 2003
*  Purpose:  Apply Coding Scheme Specifications to DoD Health Care Survey
*            Response Data, check for consistency in responses and skip
*            patterns
*  Include
*    files:  Cschm03q.fmt
*
***************************************************************************;

OPTIONS PS=80 LS=120 NOCENTER COMPRESS=YES PAGENO=1 SOURCE SOURCE2;
*OPTIONS OBS=100;

LIBNAME LIBRARY v612 "..\..\DATA\AFINAL\FMTLIB";
LIBNAME IN      v612 "..\..\DATA\AFINAL";
LIBNAME OUT     v612 "..\..\DATA\AFINAL";

%LET INDATA=MERGENRC;
%LET OUTDATA=CSCHM03Q;
%LET PERIOD=October, 2002 to September, 2003;

/* Variable names in survey -- become recoded varibles */

%Let varlist1 =

 H03001   H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
 H03002K  H03002L  H03002M  H03002N  H03002O  H03003   H03004   H03005
 H03006   H03007   H03008   H03009   H03010
 H03011   H03012   H03013   H03014
 H03015   H03016   H03017   H03018   H03019   H03020   H03021
 H03022   H03023   H03024   H03025   H03026   H03027   H03028   H03029
 H03030   H03031   H03032   H03033   H03034   H03035
 H03036   H03038
 S03V01   S03V02   S03V04   S03V05   S03V06   S03V07
 H03039   H03040   H03041   H03042   H03043   H03044   H03045
 H03046   H03047   H03048   H03049   H03050   H03051   H03052
 H03053
 S03G01   S03G02   S03G03   S03G04   S03G05
 S03G06   S03G07   S03G08   S03G09   S03G10   S03G11   S03G12
 S03G13   S03G14
 H03055   H03056   H03057   H03058   H03059   H03060
 H03061   H03062   H03063   H03064   H03065   H03066   H03067   H03068
 H03069   H03070   H03071
 H03072   H03073   H03074   H03075   H03076   H03077   H03078   H03079
 H03080   H03081
 SREDA
 H03082
 SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE  SRAGE
 ;
```

```
/* _O variables are the original values from the survey response */

%Let varlist2 =
 H03001_O  H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
 H03002KO  H03002LO  H03002MO  H03002NO  H03002OO  H03003_O  H03004_O  H03005_O
 H03006_O  H03007_O  H03008_O  H03009_O  H03010_O
 H03011_O  H03012_O  H03013_O  H03014_O
 H03015_O  H03016_O   H03017_O   H03018_O   H03019_O   H03020_O   H03021_O
 H03022_O  H03023_O   H03024_O   H03025_O   H03026_O   H03027_O   H03028_O   H03029_O
 H03030_O  H03031_O   H03032_O   H03033_O   H03034_O   H03035_O
 H03036_O  H03038_O
 S03V01_O  S03V02_O   S03V04_O   S03V05_O   S03V06_O   S03V07_O
 H03039_O  H03040_O   H03041_O   H03042_O   H03043_O   H03044_O   H03045_O
 H03046_O  H03047_O   H03048_O   H03049_O   H03050_O   H03051_O   H03052_O
 H03053_O
 S03G01_O  S03G02_O   S03G03_O   S03G04_O   S03G05_O
 S03G06_O  S03G07_O   S03G08_O   S03G09_O   S03G10_O   S03G11_O   S03G12_O
 S03G13_O  S03G14_O
 H03055_O  H03056_O   H03057_O   H03058_O   H03059_O   H03060_O
 H03061_O  H03062_O   H03063_O   H03064_O   H03065_O   H03066_O   H03067_O
 H03068_O  H03069_O   H03070_O   H03071_O
 H03072_O  H03073_O   H03074_O   H03075_O   H03076_O   H03077_O   H03078_O
 H03079_O  H03080_O   H03081_O
 SREDA_O
 H03082_O
 SRRACEAO  SRRACEBO  SRRACECO  SRRACEDO  SRRACEEO  SRAGE_O
 ;

TITLE  "DoD 2003 Survey Form A -- &PERIOD";
TITLE2 "Apply Coding Scheme";

DATA OUT.CSCHM03Q;

  SET IN.MERGENRC;

**********************************************************************;
* Code added by Natalie Justh 12/16/2003 to fix name of race variable;
**********************************************************************;

  RENAME SRACEA = SRRACEA;
  RENAME SRACEB = SRRACEB;
  RENAME SRACEC = SRRACEC;
  RENAME SRACED = SRRACED;
  RENAME SRACEE = SRRACEE;


RUN;




DATA OUT.CSCHM03Q;

  LENGTH &VARLIST1. &VARLIST2. 4. MPRID $8.;
  INFORMAT &VARLIST2. 4.;
  %INCLUDE "CSCHM03Q.FMT";


/* label and format statements for original variables */

/*IF YOU DID NOT NEED TO CHANGE THE VARIABLE NAMES IN ABOVE DATASTEP,
  THIS FILE SHOULD BE IN.MERGENRC INSTEAD OF OUT.CSCHM03Q*/

   SET OUT.CSCHM03Q;



****************************************************************;
**** Recodes for invalid responses:***************************;
****************************************************************;



/* This is a version of the coding scheme and coding tables for the
```

```
     2003 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                             */

  SEX=PNSEXCD;
  AGE=INPUT(DAGEQY,8.);
  DROP SEX AGE;

  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)= -8 THEN RECODE(I)=.A;
         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;
         ELSE RECODE(I)=RECODE(I);
      END;
  END;
  DROP I;



/* recode selected responses to be 1=marked, 2=unmarked */

  ARRAY   MARKED(*) H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
                    H03002K  H03002L  H03002M  H03002N  H03002O
                    SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE

                  ;

  ARRAY INFORMAT(*) H03002AO  H03002CO  H03002FO  H03002GO  H03002HO  H03002IO  H03002JO
                    H03002KO  H03002LO  H03002MO  H03002NO  H03002OO
                    SRRACEAO  SRRACEBO  SRRACECO  SRRACEDO  SRRACEEO
                    ;

  DO J=1 TO DIM(INFORMAT);
      IF INFORMAT(J) NOT IN (.,-9) THEN MARKED(J)=1;
      ELSE MARKED(J)=2;
  END;
  DROP J;

  FORMAT H03002A  H03002C  H03002F  H03002G  H03002H  H03002I  H03002J
         H03002K  H03002L  H03002M  H03002N  H03002O
         SRRACEA  SRRACEB  SRRACEC  SRRACED  SRRACEE
         MARKED.;


***********************************************************************;

/*  skip coding scheme for all surveys not returned  **/

  IF FLAG_FIN NE '1' THEN GOTO NOSURVEY;

/** Note 1 -- H03006, H03007 health plan usage  **/

  IF H03006 > 0 OR H03006 =.D THEN N1=1;
  ELSE IF H03006=.N  THEN DO;
      IF H03007 NOT=. THEN DO;
         N1=2;
         H03007=.C;
      END;
```

```
            ELSE DO;
                N1=3;
                H03007=.N;
            END;
        END;
        ELSE IF H03006=.   THEN N1=4;
        ELSE IF H03006=.A  THEN DO;
            IF H03007 NOT=. THEN N1=5;
            ELSE DO;
                H03006=.N;
                H03007=.N;
                N1=6;
            END;
        END;
    END;



/** Note2  -- H03008, H03009: Personal doctor or nurse **/

    IF H03008=1 AND H03009 IN (1,2,3,.,.A) THEN N2=1;
    ELSE IF H03008 IN (1,.,.A) AND H03009=.N THEN DO;
        H03008=2;
        H03009=.C;
        N2=2;
    END;
    ELSE IF H03008 IN (2,.,.A) AND (H03009 GT 0 OR H03009 IN(.A)) THEN DO;
        H03008=1;
        N2=3;
    END;
    ELSE IF H03008=2 AND H03009 IN (.N,.) THEN DO;
        IF H03009=. THEN H03009=.N;
        ELSE H03009=.C;
        N2=4;
    END;
    ELSE IF H03008=. AND H03009=. THEN N2=5;
    ELSE IF H03008=.A AND H03009=. THEN DO;
        H03008=2;
        H03009=.N;
        N2=6;
    END;



/** Note 3 -- H03010 H03011:  Personal doctor or nurse **/

    IF H03010 = 1 AND (H03011 GE 0 OR H03011 IN (.,.A)) THEN N3=1;
    ELSE IF H03010 IN (1,.,.A) AND H03011=.N THEN DO;
        N3=2;
        H03010=2;
        H03011=.C;
    END;
    ELSE IF H03010 IN (2,.,.A) AND (H03011 GE 0 OR H03011=.A) THEN DO;
        H03010=1;
        N3=3;
    END;
    ELSE IF H03010=2 AND H03011 IN (.N,.)  THEN DO;
        N3=4;
        IF H03011=. THEN H03011=.N;
        ELSE H03011=.C;
    END;
    ELSE IF H03010=. AND  H03011=. THEN N3=5;
    ELSE IF H03010=.A AND H03011=. THEN DO;
        H03010=2;
        N3=6;
        H03011=.N;
    END;


/** Note 4 -- H03012, H03013:  needed to see a specialist in last 12 months **/

    IF H03012=1 AND H03013 IN (1,2,3,.,.A) THEN N4=1;
    ELSE IF H03012 IN (1,.,.A) AND H03013=.N THEN DO;
        H03012=2;
```

```
        H03013=.C;
        N4=2;
     END;
     ELSE IF H03012 IN (2,.,.A) AND H03013 IN (1,2,3,.A) THEN DO;
        H03012=1;
        N4=3;
     END;
     ELSE IF H03012=2 AND H03013 IN (.,.N) THEN DO;
        IF H03013=. THEN H03013=.N;
        ELSE H03013=.C;
        N4=4;
     END;
     ELSE IF H03012=.  AND H03013=.  THEN N4=5;
     ELSE IF H03012=.A AND H03013=.  THEN DO;
        H03012=2;
        H03013=.N;
        N4=6;
     END;



/** Note 5 -- H03014, H03015,H03016: saw a specialist in last 12 months **/

     ARRAY NOTE5 H03015 H03016;
     N5MARK=0;
     N5NMISS=0;

     DO OVER NOTE5;
        IF NOTE5 NE . THEN N5NMISS+1;
        IF NOTE5 NOT IN (.N,.) THEN N5MARK+1;
     END;

     IF H03014=1 AND (N5NMISS=0 OR N5MARK>0) THEN N5=1;
     ELSE IF H03014 IN (1,.,.A) AND N5NMISS>0 AND N5MARK=0 THEN DO;
        H03014=2;
        N5=2;
        DO OVER NOTE5;
           IF NOTE5=. THEN NOTE5=.N;
           ELSE NOTE5=.C;
        END;
     END;
     ELSE IF H03014 IN (2,.,.A) AND N5MARK>0 THEN DO;
        H03014=1;
         N5=3;
     END;
     ELSE IF H03014=2 AND (N5NMISS=0 OR (N5NMISS>0 AND N5MARK=0)) THEN DO;
        N5=4;
        DO OVER NOTE5;
           IF NOTE5=. THEN NOTE5=.N;
           ELSE NOTE5=.C;
        END;
     END;
     ELSE IF H03014=. AND  N5NMISS=0 THEN N5=5;
     ELSE IF H03014=.A AND N5NMISS=0 THEN DO;
        H03014=2;
        N5=6;
        DO OVER NOTE5;
           NOTE5=.N;
        END;
     END;

     DROP N5NMISS N5MARK;


/** Note 6 -- called a doctor's office:  H03017, H03018 **/

     IF H03017=1 AND H03018 IN (1,2,3,4,.,.A) THEN N6=1;
     ELSE IF H03017 IN (1,.,.A) AND H03018=.N THEN DO;
        H03017=2;
        H03018=.C;
        N6=2;
     END;
     ELSE IF H03017 IN (2,.,.A) AND H03018 IN (1,2,3,4,.A) THEN DO;
```

```
         H03017=1;
         N6=3;
      END;

      ELSE IF H03017=2 AND H03018 IN (.,.N) THEN DO;
         IF H03018=. THEN H03018=.N;
         ELSE H03018=.C;
         N6=4;
      END;
      ELSE IF H03017=.  AND H03018=.  THEN N6=5;
      ELSE IF H03017=.A AND H03018=.  THEN DO;
         H03017=2;
         N6=6;
         H03018=.N;
      END;


/** Note 7 -- H03019,H03020,H03021:  regular or routine healthcare **/

   ARRAY NOTE7 H03020 H03021;
   N7MARK=0;
   N7NMISS=0;

   DO OVER NOTE7;
      IF NOTE7 NE . THEN N7NMISS+1;
      IF NOTE7 NOT IN (.N,.) THEN N7MARK+1;
   END;

   IF H03019=1 AND (N7NMISS=0 OR N7MARK>0) THEN N7=1;
   ELSE IF H03019 IN (1,.,.A) AND N7NMISS>0 AND N7MARK=0 THEN DO;
      H03019=2;
      N7=2;
      DO OVER NOTE7;
         IF NOTE7=. THEN NOTE7=.N;
         ELSE NOTE7=.C;
      END;
   END;
   ELSE IF H03019 IN (2,.,.A) AND N7MARK>0 THEN DO;
      H03019=1;
      N7=3;
   END;
   ELSE IF H03019=2 AND (N7NMISS=0 OR (N7NMISS>0 AND N7MARK=0)) THEN DO;
      N7=4;
      DO OVER NOTE7;
         IF NOTE7=. THEN NOTE7=.N;
         ELSE NOTE7=.C;
      END;
   END;
   ELSE IF H03019=.  AND  N7NMISS=0 THEN N7=5;
   ELSE IF H03019=.A AND N7NMISS=0 THEN DO;
      H03019=2;
      N7=6;
      DO OVER NOTE7;
         NOTE7=.N;
      END;
   END;

   DROP N7NMISS N7MARK;


/** Note 8 -- H03022,H03023,H03024:  illness or injury **/

   ARRAY NOTE8 H03023 H03024;
   N8MARK=0;
   N8NMISS=0;

   DO OVER NOTE8;
      IF NOTE8 NE . THEN N8NMISS+1;
      IF NOTE8 NOT IN (.N,.) THEN N8MARK+1;
   END;

   IF H03022=1 AND (N8NMISS=0 OR N8MARK>0) THEN N8=1;
   ELSE IF H03022 IN (1,.,.A) AND N8NMISS>0 AND N8MARK=0 THEN DO;
```

```
        H03022=2;
        N8=2;
        DO OVER NOTE8;
            IF NOTE8=. THEN NOTE8=.N;
            ELSE NOTE8=.C;
        END;
    END;
    ELSE IF H03022 IN (2,.,.A) AND N8MARK>0 THEN DO;
        H03022=1;
        N8=3;
    END;
    ELSE IF H03022=2 AND (N8NMISS=0 OR (N8NMISS>0 AND N8MARK=0)) THEN DO;
        N8=4;
        DO OVER NOTE8;
            IF NOTE8=. THEN NOTE8=.N;
            ELSE NOTE8=.C;
        END;
    END;
    ELSE IF H03022=.  AND N8NMISS=0 THEN N8=5;
    ELSE IF H03022=.A AND N8NMISS=0 THEN DO;
        H03022=2;
        N8=6;
        DO OVER NOTE8;
            NOTE8=.N;
        END;
    END;

    DROP N8NMISS N8MARK;


/** Note 9 -- H03026, H03027-H03036: doctor's office or clinic **/

 ARRAY NOTE9   H03027-H03036;
  ARRAY NOTE9B  H03027-H03036;

  N9MARK=0;
  N9NMISS=0;

  DO OVER NOTE9;
      IF NOTE9 NE . THEN N9NMISS+1;
  END;

  DO OVER NOTE9B;
      IF NOTE9B NOT IN (.N,.) THEN N9MARK+1;
  END;


  IF H03026=1 THEN DO;
      N9=1;
      DO OVER NOTE9;
          IF NOTE9=. THEN NOTE9=.N;
          ELSE NOTE9=.C;
      END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7,.,.A) AND N9NMISS>0 AND N9MARK=0 THEN DO;
      H03026=1;
      N9=2;
      DO OVER NOTE9;
          IF NOTE9=. THEN NOTE9=.N;
          ELSE NOTE9=.C;
      END;
  END;
  ELSE IF H03026 IN (2,3,4,5,6,7) AND (N9NMISS=0 OR N9MARK>0) THEN N9=3;
  ELSE IF H03026=.  AND N9NMISS=0 THEN N9=4;
  ELSE IF H03026=.A AND N9NMISS=0 THEN DO;
      H03026=1;
      N9=5;
      DO OVER NOTE9;
          NOTE9=.N;
      END;
  END;
  ELSE IF H03026 IN (.,.A) AND N9MARK>0 THEN N9=6;
```

```
   DROP N9NMISS N9MARK;


/** Note 13 -- S03V01, S03V02 S03V04-S03V07: health care received from TRICARE civilian network
**/

  ARRAY NOTE13 S03V02 S03V04-S03V07;
  N13MARK=0;
  N13NMISS=0;

  DO OVER NOTE13;
     IF NOTE13 NE . THEN N13NMISS+1;
     IF NOTE13 NOT IN (.N,.) THEN N13MARK+1;
  END;

  IF S03V01 IN (1,2,3,4) AND (N13NMISS=0 OR N13MARK>0) THEN N13=1;
  ELSE IF S03V01 IN (1,2,3,.,.A) AND N13NMISS>0 AND N13MARK=0 THEN DO;
     N13=2;
     S03V01=.N;
     DO OVER NOTE13;
        IF NOTE13=. THEN NOTE13=.N;
        ELSE NOTE13=.C;
     END;
  END;
  ELSE IF S03V01=4 AND N13NMISS>0 AND N13MARK=0  THEN DO;
     N13=3;
  END;
  ELSE IF S03V01=.N AND (N13NMISS=0 OR (N13NMISS>0 AND N13MARK=0) OR N13MARK>0)
  THEN DO;
     N13=4;
     DO OVER NOTE13;
        IF NOTE13=. THEN NOTE13=.N;
        ELSE NOTE13=.C;
     END;
  END;
  ELSE IF S03V01=.  AND N13NMISS=0 THEN N13=5;
  ELSE IF S03V01=.A AND N13NMISS=0 THEN DO;
     S03V01=.N;
     N13=6;
     DO OVER NOTE13;
        NOTE13=.N;
     END;
  END;
  ELSE IF S03V01 IN (.,.A) AND N13MARK>0 THEN N13=7;

  DROP N13NMISS N13MARK;



/** Note 14 -- H03039, H03040-H03042: claims to health plan **/

   ARRAY NOTE14 H03040-H03042;
  N14MARK=0;
  N14NMISS=0;
  N14NDK=0;

  DO OVER NOTE14;
     IF NOTE14 NE . THEN N14NMISS+1;
     IF NOTE14 NOT IN (.N,.) THEN N14MARK+1;
     IF NOTE14 NOT IN (.,.D) THEN N14NDK+1;
  END;

  IF H03039=1 AND (N14NMISS=0 OR (N14MARK>0 and N14NDK>0) or N14NDK=0) THEN N14=1;
  ELSE IF H03039 IN (1,.,.A,.D) AND N14NMISS>0 AND N14MARK=0 THEN DO;
     N14=2;
     H03039=2;
     DO OVER NOTE14;
        IF NOTE14=. THEN NOTE14=.N;
        ELSE NOTE14=.C;
     END;
  END;
```

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```
      ELSE IF H03039 IN (2,.,.A,.D) AND ((N14MARK>0 AND N14NDK>0) OR (N14NMISS>0 AND N14NDK=0)) THEN
DO;
         H03039=1;
         N14=3;
      END;
      ELSE IF H03039 IN (2,.D) AND (N14NMISS=0 OR (N14NMISS>0 AND N14MARK=0)) THEN DO;
         N14=4;
         DO OVER NOTE14;
            IF NOTE14=. THEN NOTE14=.N;
            ELSE NOTE14=.C;
         END;
      END;
      ELSE IF H03039=.  AND N14NMISS=0 THEN N14=5;
      ELSE IF H03039=.A AND N14NMISS=0 THEN DO;
         H03039=2;
         N14=6;
         DO OVER NOTE14;
            NOTE14=.N;
         END;
      END;

      DROP N14NMISS N14MARK N14NDK;




/** NOTE15  -- H03043, H03044: **/

      IF H03043=1 AND H03044 IN (1,2,3,.,.A) THEN N15=1;
      ELSE IF H03043 IN (1,.,.A) AND H03044=.N THEN DO;
         H03043=2;
         H03044=.C;
         N15=2;
      END;
      ELSE IF H03043 IN (2,.,.A) AND H03044 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
         H03043=1;
         N15=3;
      END;
      ELSE IF H03043=2 AND H03044 IN (.N,.) THEN DO;
         IF H03044=. THEN H03044=.N;
         ELSE H03044=.C;
         N15=4;
      END;
      ELSE IF H03043=. AND H03044=. THEN N15=5;
      ELSE IF H03043=.A AND H03044=. THEN DO;
         H03043=2;
         H03044=.N;
         N15=6;
      END;


/** NOTE16 -- H03045, H03046: health plan's customer service **/

      IF H03045=1 AND H03046 IN (1,2,3,.,.A) THEN N16=1;
      ELSE IF H03045 IN (1,.,.A) AND H03046=.N THEN DO;
         H03045=2;
         H03046=.C;
         N16=2;
      END;
      ELSE IF H03045 IN (2,.,.A) AND H03046 IN (1,2,3,.A) THEN DO;    /* JMA per Daisy's suggestion
3/20/03  */
         H03045=1;
         N16=3;
      END;
      ELSE IF H03045=2 AND H03046 IN (.N,.) THEN DO;
         IF H03046=. THEN H03046=.N;
         ELSE H03046=.C;
         N16=4;
      END;
      ELSE IF H03045=. AND H03046=. THEN N16=5;
      ELSE IF H03045=.A AND H03046=. THEN DO;
         H03045=2;
```

```
      H03046=.N;
      N16=6;
   END;


/** Note 17 -- H03047, H03048, H03049:  complaint or problem  **/

   ARRAY NOTE17 H03048 H03049;
   N17MARK=0;
   N17NMISS=0;

   DO OVER NOTE17;
      IF NOTE17 NE . THEN N17NMISS+1;
      IF NOTE17 NOT IN (.N,.) THEN N17MARK+1;
   END;

   IF H03047=1 AND (N17NMISS=0 OR N17MARK>0) THEN N17=1;
   ELSE IF H03047 IN (1,.,.A) AND N17NMISS>0 AND N17MARK=0 THEN DO;
      H03047=2;
      N17=2;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047 IN (2,.,.A) AND N17MARK>0 THEN DO;
      H03047=1;
      N17=3;
   END;
   ELSE IF H03047=2 AND (N17NMISS=0 OR (N17NMISS>0 AND N17MARK=0)) THEN DO;
      N17=4;
      DO OVER NOTE17;
         IF NOTE17=. THEN NOTE17=.N;
         ELSE NOTE17=.C;
      END;
   END;
   ELSE IF H03047=.  AND N17NMISS=0 THEN N17=5;
   ELSE IF H03047=.A AND N17NMISS=0 THEN DO;
      H03047=2;
      N17=6;
      DO OVER NOTE17;
         NOTE17=.N;
      END;
   END;

   DROP N17NMISS N17MARK;



/** NOTE18  -- H03050, H03051: paperwork  **/

/* CHANGED 1/13/2004 BY NATALIE JUSTH TO FIX N18=3  */
/* PROBLEM DUE TO RE-ORDERING IF QUESTIONNAIRE THAT */
/* ALTERED THE SKIP PATTERN FOR H03050 AND H03051    */

   IF H03050=1 AND H03051 IN (1,2,3,.,.A) THEN N18=1;
   ELSE IF H03050 IN (1,.,.A) AND H03051=.N THEN DO;
      H03050=2;
      H03051=.C;
      N18=2;
   END;
   ELSE IF H03050 IN (2,.,.A) AND H03051 IN (1,2,3,.A) THEN DO;
      *H03050=1; /* 1/13/2004 NMJ */
      H03051=.C;
      N18=3;
   END;
   ELSE IF H03050=2 AND H03051 IN (.N,.)THEN DO;
      IF H03051=. THEN  H03051=.N;
      ELSE H03051=.C;
      N18=4;
   END;
   ELSE IF H03050=.  AND H03051=. THEN N18=5;
   ELSE IF H03050=.A AND H03051=. THEN DO;
```

```
      H03050=2;
      H03051=.N;
      N18=6;
   END;


/* Note 18A - S03G01, S03G02-S03G14
            Mobilized Member of the National Guard or Reserve or family member */

  ARRAY NOTE18A1   S03G02-S03G08;
  ARRAY NOTE18A2   S03G02-S03G14;
  N18A1MARK=0;
  N18A1NMISS=0;
  N18A2MARK=0;
  N18A2NMISS=0;

  DO OVER NOTE18A1;
     IF NOTE18A1 NE . THEN N18A1NMISS+1;
     IF NOTE18A1 NOT IN (.N,.) THEN N18A1MARK+1;
  END;
  DO OVER NOTE18A2;
     IF NOTE18A2 NOT IN (.) THEN N18A2NMISS+1;
     IF NOTE18A2 NOT IN (.N,.) THEN N18A2MARK+1;
  END;


  IF S03G01 IN (2) THEN N18A=1;  /* Yes family of reservist */
  ELSE IF S03G01=1 THEN DO;      /* Yes reservist */
     DO OVER NOTE18A1;
        IF NOTE18A1=. THEN NOTE18A1=.N;
        ELSE NOTE18A1=.C;
     END;
     N18A=2;
  END;
  ELSE IF S03G01=3 THEN DO;      /* No */
     DO OVER NOTE18A2;
        IF NOTE18A2 IN (.) THEN NOTE18A2=.N;
        ELSE NOTE18A2=.C;
     END;
     N18A=3;
  END;
  ELSE IF S03G01 IN (., .A) THEN DO;
     IF N18A1MARK > 0 THEN N18A=4;
     ELSE N18A=5;
  END;
  DROP N18A1NMISS N18A1MARK N18A2NMISS N18A2MARK;


/** Note 18B -- S03G02,S03G03: Covered by civilian health insurance before
                               reservist in family was mobilized
 **/

  IF S03G02 IN (.N, .C) AND S03G03 IN (.N,.C) THEN N18B=1;
  ELSE IF S03G02=2 AND S03G03 IN (1,2,.,.A) THEN N18B=2;
  ELSE IF S03G02 in (1,3,.,.A) AND S03G03 IN (1, 2, .A) THEN DO;
     S03G02=2;
     N18B=3;
  END;
  ELSE IF S03G02 in (1,3) AND S03G03 IN (.) THEN DO;
     S03G03=.N;
     N18B=4;
  END;
  ELSE IF S03G02=. AND S03G03=. THEN N18B=5;
  ELSE IF S03G02=.A AND S03G03=. THEN N18B=6;


/** Note 18C -- S03G04,S03G05-S03G11:  Employer of reservist in family
                                       Pays all or part of the premium
 **/

  ARRAY NOTE18C  S03G05-S03G11;
  N18CMARK=0;
  N18CNMISS=0;
```

```
   DO OVER NOTE18C;
      IF NOTE18C NE . THEN N18CNMISS+1;
      IF NOTE18C NOT IN (.N,.) THEN N18CMARK+1;
   END;

   IF S03G04 IN (.N, .C) THEN N18C=1;
   ELSE IF S03G04 in (1,2) AND (N18CNMISS=0 OR N18CMARK>0) THEN N18C=2;
   ELSE IF S03G04 IN (1,2,.D,.,.A) AND N18CNMISS>0 AND N18CMARK=0 THEN DO;
      S03G04=3;
      N18C=3;
      DO OVER NOTE18C;
         IF NOTE18C=. THEN NOTE18C=.N;
         ELSE NOTE18C=.C;
      END;
   END;
   ELSE IF S03G04 IN (.D) AND N18CMARK>0  THEN DO;
      N18C=4;
   END;
   ELSE IF S03G04 IN (3,.D) AND (N18CNMISS=0 OR (N18CNMISS>0 AND N18CMARK=0)) THEN DO;
      N18C=5;
      DO OVER NOTE18C;
         IF NOTE18C=. THEN NOTE18C=.N;
         ELSE NOTE18C=.C;
      END;
   END;
   ELSE IF S03G04 IN (3,.,.A) AND (N18CMARK>0 OR N18CNMISS=0) THEN DO;
      N18C=6;
   END;
   ELSE IF S03G04=.  AND N18CNMISS=0 THEN N18C=7;
   ELSE IF S03G04=.A AND N18CNMISS=0 THEN N18C=8;


   DROP N18CNMISS N18CMARK;



/** Note 18D -- S03G09,S03G10,S03G11:  illness or injury **/

   ARRAY NOTE18D S03G10 S03G11;
   N18DMARK=0;
   N18DNMISS=0;

   DO OVER NOTE18D;
      IF NOTE18D NE . THEN N18DNMISS+1;
      IF NOTE18D NOT IN (.N,.) THEN N18DMARK+1;
   END;

   IF S03G09 IN (.N,.C) AND S03G10 IN (.N, .C) AND S03G11 IN (.N,.C)
   THEN N18D=1;
   IF S03G09=1 AND (N18DNMISS=0 OR N18DMARK>0) THEN N18D=2;
   ELSE IF S03G09 IN (1,.,.A) AND N18DNMISS>0 AND N18DMARK=0 THEN DO;
      S03G09=3;
      N18D=3;
      DO OVER NOTE18D;
         IF NOTE18D=. THEN NOTE18D=.N;
         ELSE NOTE18D=.C;
      END;
   END;
   ELSE IF S03G09 IN (2,3,.,.A) AND N18DMARK>0 THEN DO;
      S03G09=1;
      N18D=4;
   END;
   ELSE IF S03G09 IN (2,3) AND (N18DNMISS=0 OR (N18DNMISS>0 AND N18DMARK=0)) THEN DO;
      N18D=5;
      DO OVER NOTE18D;
         IF NOTE18D=. THEN NOTE18D=.N;
         ELSE NOTE18D=.C;
      END;
   END;
   ELSE IF S03G09=.  AND N18DNMISS=0 THEN N18D=6;
   ELSE IF S03G09=.A AND N18DNMISS=0 THEN DO;
```

```
         S03G09=3;
         N18D=7;
         DO OVER NOTE18D;
             NOTE18D=.N;
         END;
     END;

   DROP N18DNMISS N18DMARK;



/** Note 19 -- smoking:  H03059 - H03062  **/

   IF H03059=1 and H03060 IN (3,4) THEN DO;  /* still smoke */
       IF H03061 NE . THEN DO;
           H03061=.C;
           N19=1;
       END;
       ELSE IF H03061=. THEN DO;
           H03061=.N;
           N19=2;
       END;
   END;
   ELSE IF H03059=1 AND H03060=2 THEN DO;            /* quit */
       IF H03061 IN (2,.D) AND H03062 NE . THEN DO;    /* > 1 year ago */
           H03062 =.C;
           N19=3;
       END;
       ELSE IF H03061 IN (2,.D) AND H03062=. THEN DO;
           H03062 =.N;
           N19=4;
       END;
       ELSE IF H03061 IN (3,.,.A) THEN N19=5;       /* < 1 year ago */
   END;
   ELSE IF H03059=1 AND H03060 IN (.D,.,.A) THEN DO;  /* don't know */
       IF H03061=2 AND H03062 NE . THEN DO;         /* > 1 year ago */
           H03060=2;
           H03062=.C;
           N19=6;
       END;
       ELSE IF H03061=2 AND H03062 = . THEN DO;
           H03060=2;
           H03062=.N;
           N19=7;
       END;
       ELSE IF H03061=3 THEN DO;            /* < 1 year ago */
           H03060=2;
           N19=8;
       END;
       ELSE IF H03061 IN (.D,.,.A) THEN N19=9;  /* don't know */
   END;
   ELSE IF H03059 IN (2,.D,.,.A) AND H03060 IN (3,4) THEN DO; /*never smoke*/
       IF H03061 NE . THEN DO;
           H03059=1;
           H03061=.C;
           N19=10;
       END;
       ELSE IF H03061=. THEN DO;
           H03059=1;
           H03061=.N;
           N19=11;
       END;
   END;
   ELSE IF H03059 IN (2,.D) AND H03060 IN (2,.D,.A) THEN DO; /*never smoke*/
       IF H03061 NE . AND H03062 NE . THEN DO;
           H03060 =.C;
           H03061 =.C;
           H03062 =.C;
           N19=12;
       END;
       ELSE IF H03061 NE . AND H03062=. THEN DO;
           H03060=.C;
           H03061=.C;
```

```
            H03062=.N;
            N19=13;
        END;
        ELSE IF H03061=. AND H03062 NE . THEN DO;
            H03060=.C;
            H03061=.N;
            H03062=.C;
            N19=14;
        END;
        ELSE IF H03061=. AND H03062=. THEN DO;
            H03060=.C;
            H03061=.N;
            H03062=.N;
            N19=15;
        END;
    END;
    ELSE IF H03059 IN (2,.D) AND H03060= . THEN DO; /*never smoke*/
        IF H03061 NE . AND H03062 NE . THEN DO;
            H03060=.N;
            H03061=.C;
            H03062=.C;
            N19=16;
        END;
        ELSE IF H03061 NE . AND H03062=. THEN DO;
            H03060=.N;
            H03061=.C;
            H03062=.N;
            N19=17;
        END;
        ELSE IF H03061=. AND H03062 NE . THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.C;
            N19=18;
        END;
        ELSE IF H03061=. AND H03062=. THEN DO;
            H03060=.N;
            H03061=.N;
            H03062=.N;
            N19=19;
        END;
    END;
    ELSE IF H03059 IN (.A, .) AND H03060 IN (2,.,.A) THEN DO; /*MRE/blank*/
        IF H03061=3 THEN DO;
            H03061=.C; /* Per Eric 4/22/03 */
            N19=20;
        END;
        ELSE IF H03061=2 AND H03062 NE . THEN DO;
            H03059 =1;
            H03062 =.C;
            N19=21;
        END;
        ELSE IF H03061=2 AND H03062=. THEN DO;
            H03061=.C; /* per Eric instruction 4/22/03 */
            N19=22;
        END;
        ELSE IF H03061=.D AND H03062=. THEN DO;
            H03062=.N;
            N19=23;
        END;
        ELSE IF H03061=.D AND H03062 NE . THEN DO;
            H03062=.C;
            N19=24;
        END;
        ELSE IF H03061 IN (.,.A) AND H03062 IN (2,3,4,5) THEN DO;
            H03059=1;
            N19=25;
        END;
        ELSE IF H03061 IN (.,.A) AND H03062 IN (1,.N,.,.A) THEN N19=26;
    END;
    ELSE IF H03059 IN (.A,.) AND H03060=.D THEN DO; /*MRE/blank*/
        IF H03061 NE . AND H03062 NE .  THEN DO;
            H03061=.C;
```

```
            H03062=.C;
            N19=27;
         END;
         ELSE IF H03061 NE . AND H03062=.  THEN DO;
            H03061=.C;
            H03062=.N;
            N19=28;
         END;
         IF H03061=. AND H03062=.  THEN DO;
            H03061=.N;
            H03062=.N;
            N19=29;
         END;
         ELSE IF H03061=. AND H03062 NE .  THEN DO;
            H03061=.N;
            H03062=.C;
            N19=30;
         END;
      END;


/** Note 20 - gender H03063, SEX, H03064, H03065--H03071, XSEXA */

/* 1/21/98 use SRSEX & responses to gender specific questions
     if there is discrepancy between SRSEX and SEX */
/* set imputed MALE, FMALE based on gender specific questions */


   ARRAY fmaleval H03065 H03066 H03067 H03068 H03069 H03070 H03071;


   IF H03064 > 0 THEN MALE=1;      /* prostate */
   ELSE MALE = 0;

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


   IF H03063=. OR H03063=.A THEN DO;
      IF (SEX='F' AND MALE AND FMALE) THEN DO;
         N20b=1;
         XSEXA=2;
      END;
      ELSE IF (SEX='F' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=2;
         XSEXA=2;
      END;
      ELSE IF (SEX='M' AND MALE AND FMALE) THEN DO;
         N20b=3;
         XSEXA=1;
      END;
      ELSE IF (SEX='M' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=4;
         XSEXA=1;
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         N20b=5;
         XSEXA=1;
      END;
      ELSE IF FMALE AND NOT MALE THEN DO;
         N20b=6;
         XSEXA=2;
      END;
      ELSE IF (SEX='Z' AND MALE AND FMALE) THEN DO;
         N20b=7;
         XSEXA=.;
      END;
      ELSE IF (SEX='Z' AND MALE=0 AND FMALE=0) THEN DO;
         N20b=8;
```

```
            XSEXA=.;
         END;
      END;
   ELSE IF (H03063=1) THEN DO;
      IF MALE AND NOT FMALE THEN DO;
         N20b=9;
         XSEXA=1;
      END;
      ELSE IF NOT MALE AND FMALE THEN DO;
         IF SEX='F' THEN DO;
            N20b=10;
            XSEXA=2;
         END;
         ELSE DO;
            N20b=11;
            XSEXA=1;
         END;
      END;
      ELSE IF MALE AND FMALE THEN DO;
         N20b=12;
         XSEXA=1;
      END;
      ELSE IF MALE=0 AND FMALE=0 THEN DO;
         N20b=13;
         XSEXA=1;
      END;
   END;
   ELSE IF (H03063=2) THEN DO;
      IF NOT MALE AND FMALE THEN DO;
        N20b=14;
        XSEXA=2;
      END;
      ELSE IF MALE AND NOT FMALE THEN DO;
         IF SEX='M' THEN DO;
           N20b=15;
           XSEXA=1;
         END;
         ELSE DO;
            N20b=16;
            XSEXA=2;
         END;
      END;
      ELSE IF MALE AND FMALE THEN DO;
         N20b=17;
         XSEXA=2;
      END;
      ELSE IF MALE=0 AND FMALE=0 THEN DO;
         N20b=18;
         XSEXA=2;
      END;
   END;

/* Note 20c - gender vs prostate */

   IF XSEXA=1 THEN N20c=1;      /* male    */
   ELSE IF XSEXA=2 THEN DO;     /* female  */
      IF H03064 NE . THEN DO;
         N20c=2;
         H03064=.C;
      END;                      /*inconsistent resp */
      ELSE DO;
         N20c=3;
         H03064=.N;
      END;                      /* valid skip   */
   END;
   ELSE IF XSEXA=. THEN DO;   /*  missing sex */
      N20c=4;
      H03064=.;
   END;

/* Note 20d - gender vs mammogram/paps */
/*   REDEFINE FMALE TO LOOK ONLY AT MAMMOGRAM OR PAP SMEAR ENTRIES  */
```

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```
      ARRAY NOTE20d H03065 H03066 H03067 H03068 H03069 H03070 H03071 ;

    cntfmale=0;
    DO OVER NOTE20d;                 /* mammogram/pap smear/PREGNANT*/
       IF NOTE20d NE . THEN cntfmale=cntfmale+1;
    END;
    IF cntfmale>0 THEN FMALE=1;
    ELSE FMALE = 0;

    IF XSEXA=1 THEN DO;    /* male */
       IF FMALE=0 THEN DO;
          N20d=1;
          DO OVER NOTE20d;
             NOTE20d=.N;
          END;
       END; /* inconsistent response */
       ELSE IF FMALE=1 THEN DO;
          N20d=2;
          DO OVER NOTE20d;
             IF NOTE20d=. THEN NOTE20d = .N;
             ELSE NOTE20d=.C;
          END;
       END;    /* valid skip */
    END;
    ELSE IF XSEXA=2 THEN  N20d=3; /* female */
    ELSE IF XSEXA=. THEN DO;       /*  missing sex  */
       N20d=4;
       DO OVER NOTE20d;
          NOTE20d=.;
       END;
    END;



    DROP MALE FMALE CNTFMALE;


/* Note 21 - breast exam for female 40 or over  */
/* Note 1999 -- no self reported age variable   */
/* Note no dob variable  -- macro not used       */

    IF XSEXA=1 THEN DO;  /* male */
       IF  (H03066=.C OR H03066=.N) AND (H03067=.C OR H03067=.N)
       AND (H03068=.C OR H03068=.N)  THEN N21 = 1;
    END;
    ELSE IF XSEXA=2 THEN DO;
       IF H03066=2 THEN N21=2;          /* female 40 or over */
       ELSE IF H03066=1 THEN DO;    /* female < 40 */
          IF H03067 NE . THEN H03067=.C;
          ELSE H03067=.N;
          IF H03068 NE . THEN H03068=.C;
          ELSE H03068=.N;
          N21=3;
       END;
       ELSE IF H03066=.A THEN DO;
          IF H03067 NE . OR H03068 NE . THEN DO;
             H03066=2;
             N21=4;
          END;
          ELSE IF H03067=. AND H03068=. THEN DO;
             H03066=1;
             H03067=.N;
             H03068=.N;
             N21=5;
          END;
       END;
       ELSE IF H03066=. THEN DO;
          IF H03067 NE . OR H03068 NE . THEN DO;
             H03066=2;
             N21=6;
          END;
          ELSE IF H03067=. AND H03068=. THEN DO;
             IF AGE<40 THEN DO;
```

```
                    H03066 = 1;
                    H03067=.N;
                    H03068=.N;
                    N21=7;
                END;
                ELSE IF AGE >= 40 THEN DO;
                    H03066=1;
                    H03067=.N;
                    H03068=.N;
                    N21=8;
                END;
                ELSE IF AGE=. THEN N21=9;
            END;
        END;
    END;
    ELSE IF XSEXA=. THEN N21=10;


/* Note 22 - gender vs Pregnancy */

    IF XSEXA=1 THEN N22=1;           /* male    */
    ELSE IF XSEXA=2 THEN DO;         /* female  */
        IF H03069=1 THEN N22=2;      /* pregnant */
        ELSE IF H03069=2 THEN DO;
            IF H03070=. THEN H03070 = .N;
            ELSE H03070=.C;
            N22=3;
        END;
        ELSE IF H03069=3 THEN DO;
            IF H03070=. THEN H03070 = .N;
            ELSE H03070=.C;
            IF H03071=. THEN H03071=.N;
            ELSE H03071=.C;
            N22=4;
        END;
        ELSE IF H03069 IN (., .A) THEN DO;
            IF H03070 NE . THEN DO;
                H03069=1;
                N22=5;
            END;
            ELSE IF H03070=. THEN DO;
                IF H03069=. THEN N22=6;
                ELSE IF H03069=.A THEN DO;
                    H03069=3;
                    H03070=.N;
                    IF H03071=. THEN H03071=.N;
                    ELSE H03071=.C;
                    N22=7;
                END;
            END;
        END;

    END;
    END;
    ELSE IF XSEXA=. AND H03069 IN (.,.A) THEN N22=8;




NOSURVEY:

/* missing values */

    ARRAY MISS MISS_9 MISS_8 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 -8) THEN MISS_8 = MISS_8 + 1;
```

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```
          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 FORMAT;
     VALUE GRID
       0='0'
       1-9999='>=1' ;
     VALUE $GRIDB
       1-5 = '1-5' ;
     VALUE $AGE
       018-039='<40'
       040-120='>=40';
     VALUE SCALE
       0-10='0-10';
     VALUE MARK
       1-6='Marked' ;
     VALUE MARKB
       2-7='Marked';

     VALUE MARKC
       1='1'
       2-HIGH='>1';

 RUN;


 proc contents data=out.cschm03q;
 run;
```

3.   Q4_2003\PROGRAMS\WEIGHTING\SELECTQ.SAS - Create Record Selection Flag for Record Selection.

```
****************************************************************************
*
* PROGRAM:  SELECTQ.SAS
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
* PURPOSE:  ASSIGN FINAL STATUS FOR RECORD SELECTION PURPOSES.
* WRITTEN:  12/14/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 03/21/2002 BY KEITH RATHBUN, Updated for the 2002 survey.
*              Added FLAG_FIN = 23,24 for FNSTATUS = 20.
*
* INPUTS:   1) CSCHM03Q.SD2 - 2003 Quarterly DOD Health Survey Data
*
* OUTPUTS:  1) SELECTQ.SD2 - 2003 Quarterly DOD Health Survey Data w/FNSTATUS
*
****************************************************************************
*;
LIBNAME IN      V612 "..\..\DATA\AFINAL";
LIBNAME OUT     V612 "..\..\DATA\AFINAL";
LIBNAME LIBRARY V612 "..\..\DATA\AFINAL\FMTLIB";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

PROC SORT DATA=IN.CSCHM03Q OUT=TEMPA1; BY MPRID; RUN;

DATA TEMPA2 OUT.DUPSA;
   SET TEMPA1;
   BY MPRID;
   /****************************************************************************/
   /** KEY VARIABLES (Total=26)                                              **/
   /****************************************************************************/

   ARRAY KEYVAR H03006 H03008 H03009 H03010 H03011 H03012
                H03014 H03015 H03017 H03018 H03019 H03022 H03023 H03025
                H03026 H03027 H03029 H03036 H03038 H03043 H03045 H03050
                H03052 H03072 SREDA  H03082
                  ;
   ARRAY RACE(5) SRRACEA SRRACEB SRRACEC SRRACED SRRACEE;

   FLAGRACE = 0; DROP FLAGRACE;
   DO I = 1 TO DIM(RACE);
      IF RACE(I) EQ 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 13 THEN FNSTATUS = 11;
      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 = 30;
      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;

      IF DUPFLAG = 'YES' THEN OUTPUT OUT.DUPSA;
      ELSE OUTPUT TEMPA2;

RUN;

****************************************************************************
* Select the "most complete" questionaire 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 questionaire;
RUN;

DATA OUT.SELECTQ;
   SET TEMPA2 DEDUPED;
   LABEL FNSTATUS = "Final Status"
         DUPFLAG  = "Multiple Response Indicator"
         STRATUM  = "Sampling STRATUM"
         KEYCOUNT = "# Key Questions Answered (Out of 26)"
        ;
RUN;

TITLE1 "Quarterly DOD Health Survey FNSTATUS assignment (8860-300)";
TITLE2 "Program Name: SELECTQ.SAS By Keith Rathbun";
TITLE3 "Program Output: SELECTQ.SD2";

PROC CONTENTS DATA=OUT.SELECTQ; RUN;

PROC FREQ DATA=OUT.SELECTQ;
TABLES FNSTATUS KEYCOUNT FLAG_FIN
       FNSTATUS*KEYCOUNT*FLAG_FIN
   /MISSING LIST;
RUN;
```

4.   Q4_2003\PROGRAMS\CONSTRUCT\CONVARQ.SAS - Construct Variables for Analysis.

```
*******************************************************************************
* PROGRAM:   CONVARQ.SAS
* WRITTEN:    2/3/99 BY KELLY WHITE
* UPDATED:    2/29/2000 BY NATALIE JUSTH
* UPDATED:    11/16/2000 BY JOAN JAMES
* UPDATED FOR QUARTERLY 2001:  1/22/2001 BY NATALIE JUSTH
* UPDATED FOR QUARTER 2 2001:  6/5/2001 BY NATALIE JUSTH
*                              UPDATES NOTED WITH NJ_Q2
* UPDATED FOR QUARTER 3 2001:  8/20/2001 BY NATALIE JUSTH
* UPDATED FOR QUARTER 4 2001: 12/11/2001 BY NATALIE JUSTH, REMOVED KENRINTN
*           AND CHANGE DAGEQY TO FIELDAGE.
* UPDATED FOR QUARTER 1 2002:  4/01/2002 BY JACLYN WONG, REMOVED KMEDIGAP, KCOST_2
* UPDATED FOR QUARTER 2 2002:  6/19/2002 BY JACLYN WONG, REMOVED KPRSCPTN
* UPDATED FOR QUARTER 3 2002:  9/25/2002 BY JACLYN WONG
* UPDATED FOR QUARTER 1 2003:  BEGUN 3/13/2003 BY NATALIE JUSTH
* UPDATED FOR QUARTER 3 2003:  BEGUN 8/29/2003 BY NATALIE JUSTH
* UPDATED FOR QUARTER 4 2003:  12/18/2003 BY NATALIE JUSTH
*
* PURPOSE:   TO CREATE INDEPENDENT VARIABLES: XENRLLMT, XENR_PCM, XINS_COV,
*            XBNFGRP
*            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, KBRSTCR, HP_SMOKH, HP_CESS
*            TO CREATE OUTCATCH, RECODE LEGDDSCD
* INPUT:     ..\..\DATA\AFINAL\SELECTQ.SD2
* OUTPUT:    ..\..\DATA\AFINAL\CONVARQ.SD2
*******************************************************************************
*;

LIBNAME IN V612 '..\..\DATA\AFINAL';
LIBNAME LIBRARY V612 '..\..\DATA\AFINAL\FMTLIB';
OPTIONS PS=78 LS=124 ERRORS=2 CENTER ;
TITLE1 '2003 Quarter 4 Health Care Survey of DoD Beneficiaries Study - Adult Form A';
TITLE2 'CREATE CONSTRUCTED & OUTCOME MEASURE VARIABLES';


DATA IN.CONVARQ(KEEP=XENRLLMT XENR_PCM XINS_COV /*XQENROLL*/ XREGION ENBGSMPL XBNFGRP
                     KDISENRL KMILOFFC KCIVOFFC KBGPRB1 KBGPRB2
                     KMILOPQY KCIVOPQY HP_PRNTL HP_MAMOG HP_MAM50 HP_PAP HP_BP HP_FLU HP_PROS
                     MPRID KCIVINS /*HP_GP*/ HP_CHOL HP_BRST HP_SMOKE /*KPRSCPTN*/ KBRSTCR
                     OUTCATCH LEGDDSCD HP_SMOKH HP_CESS)
     CONVARQ;
   SET IN.SELECTQ;



LABEL
   XENRLLMT  =  "Enrollment in TRICARE Prime"
   XENR_PCM  =  "Enrollment by PCM type"
   XINS_COV  =  "Insurance Coverage"
  /*XQENROLL   =  "Enrllmnt accordng to questionre rspnse"*/
   XBNFGRP   =  "Constructed Beneficiary Group"
   KDISENRL  =  "Intention to disenroll      "
   KMILOFFC  =  "Office wait of more than 15 min-Mil"
   KCIVOFFC  =  "Office wait of more than 15 min-Civ"
   KBGPRB1   =  "Big problem getting referrals to spclst"
   KBGPRB2   =  "Big problem getting necessary care"
   KMILOPQY  =  "Outpatient visits-use Military fclty most"
   KCIVOPQY  =  "Outpatient visits-use Civilian fclty most"
  /*KPRSCPTN   =  "6 or > civ prscrptns filled by mil phmcy"*/
   HP_PRNTL  =  "Prgnt in lst 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_PROS   =  "Men 50>=, prostrate exam in lst 12 mnths"
  /*HP_GP      =  "General physical exam in last 12 mnths"*/
   HP_CHOL   =  "Cholesterol screening in last 5 yrs"
```

```
        HP_SMOKE    =  "Advised to quit smoking in last 12 mnths"
        HP_BRST     =  "Women >=40, breast exam in last 12 mnths"
        KCIVINS     =  "Beneficiary coverd by civilian insurance"
        KBRSTCR     =  "Women 40>= ever had mammogram & brst exm"
        OUTCATCH    =  "Out of catchment area indicator"
        HP_SMOKH    =  "Smoker under HEDIS definition"
        HP_CESS     =  "Had smoking cessation counseling"
        ;


    FORMAT
        XENRLLMT        ENROLL.
        XENR_PCM        PCM.
        XINS_COV        INSURE.
        /*XQENROLL      PCM.*/
        XBNFGRP         XBGC_S.
        KDISENRL        HAYNN.
        KMILOFFC        HAYNN.
        KCIVOFFC        HAYNN.
        KBGPRB1         HAYNN.
        KBGPRB2         HAYNN.
        KMILOPQY        HAGRID.
        KCIVOPQY        HAGRID.
        /*KPRSCPTN      HAYNN.*/
        HP_PRNTL        PRNTL.
        HP_MAMOG        HAYNN.
        HP_MAM50        HAYNN.
        HP_PAP          HAYNN.
        HP_BP           HAYNN2_.
        HP_FLU          HAYNN.
        HP_PROS         HAYNN.
        /*HP_GP         HAYNN.*/
        HP_CHOL         HAYNN.
        HP_SMOKE        HAYNN.
        HP_BRST         HAYNN.
        KCIVINS         HAYNN2_.
        KBRSTCR         HAYNN.
        OUTCATCH        OCATCH.
        LEGDDSCD        $DDSFMT.
        HP_SMOKH        SMOKE.
        HP_CESS         SMOKE.
        ;

    /* CREATE INDEPENDENT VARIABLES */

    /* XENRLLMT--ENROLLMENT STATUS */
    IF 18 <= FIELDAGE < 65 THEN DO;
        IF ENBGSMPL = 1 THEN XENRLLMT = 1;                      /*  Active duty (<65) */
        ELSE IF ENBGSMPL IN (2, 3, 5, 6) THEN XENRLLMT = 2;    /*  Non-active duty enrolled (<65)*/
        ELSE IF ENBGSMPL IN (4, 7) THEN XENRLLMT = 3;          /*  Not Enrolled (<65)*/
    END;
    ELSE IF FIELDAGE  > = 65 THEN DO;
        IF ENBGSMPL = 10 THEN XENRLLMT = 4;                    /*  Not Enrolled (65+)*/
        IF ENBGSMPL IN (8, 9) THEN XENRLLMT = 5;               /*  Enrolled (65+)    */
    END;

    /* XENR_PCM--ENROLLMENT BY PCM TYPE */
    IF 18 <= FIELDAGE < 65 THEN DO;
        IF ENBGSMPL = 1 THEN XENR_PCM = 1;            /*  Active duty (<65)        */
        ELSE IF ENBGSMPL IN (3, 6) THEN XENR_PCM = 2;  /*  Enrolled (<65) - mil PCM */
        ELSE IF ENBGSMPL IN (2, 5) THEN XENR_PCM = 3;  /*  Enrolled (<65) - civ PCM */
        ELSE IF ENBGSMPL IN (4, 7) THEN XENR_PCM = 4;  /*  Not Enrolled (<65)       */
    END;
     ELSE IF FIELDAGE > = 65 THEN DO;
        IF ENBGSMPL = 10 THEN XENR_PCM = 5;           /*  Not Enrolled (65+)      */
        IF ENBGSMPL = 9 THEN XENR_PCM = 6;            /*  Enrolled (65+)-mil PCM  */
        IF ENBGSMPL = 8 THEN XENR_PCM = 7;            /*  Enrolled (65+)-civ PCM  */  /*NJ_Q2*/
     END;

    /* XINS_COV--INSURANCE COVERAGE */
    IF XENRLLMT = 1 THEN XINS_COV =1;                           /* Prime <65-Active Duty */
      ELSE IF 18 <= FIELDAGE  < 65 AND H03006 IN (1) THEN XINS_COV = 2; /* Prime <65-Non-active Duty
    */
```

```
  ELSE IF H03006 = 3 THEN XINS_COV = 3;                                    /* Standard/Extra */
  ELSE IF H03006 = 11 THEN XINS_COV = 7;                                    /* Plus and Medicare */
  ELSE IF H03006 = 4 THEN XINS_COV = 4;                                /* Medicare*/
  ELSE IF H03006 IN (5,6, 7, 8, 9) THEN XINS_COV = 5;             /* Other civilian health
insurance*/
  ELSE IF H03006 = 10 THEN XINS_COV = 8;                                  /* Veterans Administration
(VA) */
  ELSE IF (FIELDAGE>= 65 AND XENRLLMT = 5 and H03006 = 1) THEN XINS_COV = 6;   /* Prime, >= 65 */
  ELSE IF H03003=1 AND H03004=1 AND H03006 NE .N THEN XINS_COV = 4;             /* NEW Q2
Medicare/Medicaid */


/* XQENROLL--ENROLLMENT ACCORDING TO QUESTIONNAIRE RESPONSES AND */
/* USING DEERS SAMPLING VALUES  */
/* H02012 IS NOT IN THE Q12003 Survey*/
/*IF ENBGSMPL = 1 AND 18 <= FIELDAGE < 65 THEN XQENROLL = 1; */  /* Active Duty (<65)*/

  /* ELSE IF 18 <= FIELDAGE < 65 AND H02012 = 1 THEN DO;
     IF H03013 = 1 THEN XQENROLL = 2;
      ELSE IF H03013 = 2 THEN XQENROLL = 3;

      ELSE IF H03013 = 3 THEN DO;
         IF ENBGSMPL IN (3, 6) THEN XQENROLL = 2;
         ELSE IF ENBGSMPL IN (2, 5) THEN XQENROLL = 3;
      END;
    END;
    ELSE IF H02012 NE 1 THEN DO;
       IF 18 <= FIELDAGE < 65 THEN XQENROLL = 4;
       ELSE IF FIELDAGE >= 65 THEN XQENROLL = 5;
    END;  */


/* XBNFGRP-Beneficiary Group that excludes those 65 and over-Active Duty
         and Family Members of Active Duty */
IF FIELDAGE  >= 65 AND ENBGSMPL IN (1, 2, 3, 4) THEN XBNFGRP = .;
   ELSE IF ENBGSMPL = 1 THEN XBNFGRP = 1;
   ELSE IF ENBGSMPL IN (2, 3, 4) THEN XBNFGRP = 2;
   ELSE IF ENBGSMPL IN (5, 6, 7) THEN XBNFGRP = 3;
   ELSE IF ENBGSMPL IN (8, 9, 10) THEN XBNFGRP = 4;

/* CREATE DEPENDENT VARIABLES */

/* KDISENRL--INTENTION TO DISNEROLL */
IF H03053  IN (4, 5) THEN KDISENRL = 1;               /* Yes */
   ELSE IF H03053  IN (1, 2, 3, .D) THEN KDISENRL = 2;    /* No  */

/* KMILOFFC--OFFICE WAIT OF MORE THAN 15 MINUTES AT MILITARY FACILITES
   KCIVOFFC--OFFICE WAIT OF MORE THAN 15 MINUTES AT CIVILIAN FACILITES */
IF H03038  = 1 THEN DO;                                /* Military */
   IF H03029  IN (3,4) THEN KMILOFFC = 1;              /* Yes */
   ELSE IF H03029  IN (1,2) THEN KMILOFFC = 2;         /* No  */
END;
   ELSE IF H03038 IN (2, 3, 4) THEN DO;                /* Civilian */
      IF H03029 IN (3,4) THEN KCIVOFFC = 1;            /* Yes */
      ELSE IF H03029  IN (1,2) THEN KCIVOFFC = 2;      /* No */
   END;

/* KBGPRB1--BIG PROBLEM GETTING REFERRALS TO SPECIALISTS */
IF H03013 = 1 THEN KBGPRB1 = 1;                              /* YES */
   ELSE IF H03013 IN (2,3) THEN KBGPRB1 = 2;                 /* NO  */

/* KBGPRB2--BIG PROBLEM GETTING NECESSARY CARE */
IF H03027 = 1 THEN KBGPRB2 = 1;                            /* YES */
    ELSE IF H03027 IN (2,3) THEN KBGPRB2 = 2;              /* NO  */

/* KMILOPQY--OUTPATIENT VISITS TO MILITARY FACILITY
   KCIVOPQY--OUTPATIENT VISITS TO CIVILIAN FACILITY */
IF H03038 = 1 THEN DO;
   KMILOPQY=H03026;
   KCIVOPQY=1;
END;
ELSE IF H03038 IN  (2, 3, 4) THEN DO;
   KCIVOPQY=H03026;
```

```
   KMILOPQY=1;
END;
ELSE IF H03038 = 5 THEN DO;
   KMILOPQY=1;
   KCIVOPQY=1;
END;


/* KPRSCPTN--6 OR MORE CIVILIAN PRESCRIPTIONS FILLED BY MILITARY PHARMACY */
/* H03037 NOT IN Q3 2003 QUESTIONNAIRE */
/*IF H03037 IN (3,4,5) THEN KPRSCPTN = 1;*/        /* YES */
/*   ELSE IF H03037 IN (1,2) THEN KPRSCPTN = 2; */    /* NO  */


/* HP_PRNTL--IF PREGNANT LAST YEAR, RECEIVED PRENATAL CARE IN 1ST TRIMESTER */
IF H03069 IN (1,2) THEN DO;                              /*  Pregnant in last 12 months
*/
   IF H03071 = 4 THEN HP_PRNTL = 1;                      /*   Yes   */
      ELSE IF (H03070 = 1 AND H03071 = 1) THEN HP_PRNTL = .;    /* <3 months pregnant now */
      ELSE IF H03071 IN (1,2,3) THEN HP_PRNTL = 2;            /*   No */
END;


/* HP_MAMOG--FOR WOMEN AGE 40 AND OVER, HAD MAMMOGRAM W/IN PAST 2 YEARS */
IF XSEXA = 2 AND FIELDAGE  >= 40 THEN DO;
   IF H03067 IN (5, 4) THEN HP_MAMOG = 1;          /* Yes */
   ELSE IF H03067 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 FIELDAGE  >= 50 THEN DO;
   IF H03067 IN (5, 4) THEN HP_MAM50 = 1;          /* Yes */
   ELSE IF H03067 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 H03065 IN (4, 5) THEN HP_PAP = 1;            /* Yes */
   ELSE IF H03065 IN (1, 2, 3) THEN HP_PAP = 2;       /* No  */
END;


/* HP_BP--HAD BLOOD PRESSURE SCREENING IN LAST 2 YEARS AND KNOW RESULT */
IF H03055 IN (2,3) AND H03056 IN (1,2) THEN HP_BP = 1;   /* Yes      */
   ELSE IF H03055 = 1 THEN HP_BP = 2;                     /* No       */
   ELSE IF H03055 < 0 OR H03056 < 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 FIELDAGE >= 65 THEN DO;
   IF H03058 = 4 THEN HP_FLU = 1;                  /*   Yes */
   ELSE IF H03058 IN (1, 2, 3) THEN HP_FLU = 2;      /*   No  */
END;


/* HP_PROS--FOR MEN AGE 50 AND OVER, HAD PROSTRATE EXAM W/IN PAST 12 MONTHS */
IF XSEXA = 1 AND FIELDAGE  >= 50 THEN DO;
   IF H03064 = 5 THEN HP_PROS = 1;                 /*   Yes */
   ELSE IF H03064 IN (1, 2, 3, 4) THEN HP_PROS = 2;  /*   No   */
END;


/* HP_GP--EXCEPT WHEN SICK OR PREGNANT, GENERAL PHYSICAL EXAM W/IN PAST 12 MONTHS */
/* REMOVED Q2 2003 BECAUSE H03054 NOT ON QUESTIONNAIRE */
/*IF H03054 = 5 THEN HP_GP = 1;*/                    /*   Yes    */
/*   ELSE IF H03054 IN (1, 2, 3, 4) THEN HP_GP = 2;*/    /*   No     */


/* HP_CHOL--HAD CHOLESTEROL SCREENING IN PAST 5 YEARS */
IF H03057 IN (3, 4, 5) THEN HP_CHOL = 1;            /*   Yes   */
   ELSE IF H03057 IN (1, 2) THEN HP_CHOL = 2;         /*   No    */


/* HP_SMOKE--ADVISED TO QUIT SMOKING IN PAST 12 MONTHS */
IF H03062 IN (2, 3, 4, 5) THEN HP_SMOKE = 1;        /*   Yes   */
   ELSE IF H03062 = 1 THEN HP_SMOKE = 2;             /*   No    */


/* HP_BRST--BREAST EXAM IN PAST 12 MONTHS */
IF XSEXA=2 AND FIELDAGE >= 40 THEN DO;
   IF H03068 = 5 THEN HP_BRST = 1;                  /*   Yes   */
   ELSE IF H03068 IN (1, 2, 3, 4) THEN HP_BRST = 2; /*   No    */
```

```
END;

/* KCIVINS--IS BENEFICIARY COVERED BY PRIVATE CIVILIAN INSURANCE */
IF H03002G=1 OR H03002I=1 OR H03002J=1 THEN KCIVINS=1;          /* YES */  /*NJ_Q2*/
   ELSE KCIVINS=2;                                              /* NO   */

/* KBRSTCR--WOMEN 40>=, EVER HAD MAMMOGRAM & EVER HAD BREAST EXAM */
IF XSEXA = 2 AND FIELDAGE  >= 40 THEN DO;
   IF (H03067 IN (5, 4, 3, 2) AND H03068 IN (5, 4, 3, 2)) THEN KBRSTCR = 1;   /* Yes */
   ELSE IF (H03067 = 1 OR H03068=1)  THEN KBRSTCR = 2;                        /* No */
END;

/* Add code for smoking and smoking cessation counseling according to the HEDIS */
/* definition.  Smoking variable is HP_SMOKH and smoking cessation counseling   */
/* is HP_CESS.                                                                   */
IF H03059 IN (1,2) THEN DO;
   IF H03059=1 AND (H03060=3 OR H03060=4 OR (H03060=2 AND H03061=3)) THEN HP_SMOKH=1;       /*
Yes */
   ELSE IF H03059=2 OR H03060 > 0 THEN HP_SMOKH=2;                                          /* No
*/
END;
IF HP_SMOKH=1 AND H03026>1 AND H03062>0 THEN DO;
   IF H03062>1 THEN HP_CESS=1;                                                              /*
Yes */
   ELSE HP_CESS=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        */

*************************************************************************************************
* Collapse/Recode the DEERS dependent suffix for each possible range of values
*************************************************************************************************;
IF      "01" LE LEGDDSCD LE "19" THEN LEGDDSCD = "01"; * 01-19 = 'Dependent Child';
ELSE IF "30" LE LEGDDSCD LE "39" THEN LEGDDSCD = "30"; * 30-39 = 'Spouse of Sponsor';
ELSE IF "40" LE LEGDDSCD LE "44" THEN LEGDDSCD = "40"; * 40-44 = 'Mother of Sponsor';
ELSE IF "45" LE LEGDDSCD LE "49" THEN LEGDDSCD = "45"; * 45-49 = 'Father of Sponsor';
ELSE IF "50" LE LEGDDSCD LE "54" THEN LEGDDSCD = "50"; * 50-54 = 'Mother in law of Sponsor';
ELSE IF "55" LE LEGDDSCD LE "59" THEN LEGDDSCD = "55"; * 55-59 = 'Father in law of Sponsor';
ELSE IF "60" LE LEGDDSCD LE "69" THEN LEGDDSCD = "60"; * 60-69 = 'Chidren where # > 19';


DATA CONVARQ2;
   SET CONVARQ;
   WHERE FNSTATUS=11;
RUN;

/* CHECK RECONSTRUCTED 2003 VARIABLES */
PROC FREQ DATA=CONVARQ2;
 TABLES XENRLLMT XENR_PCM XINS_COV /*XQENROLL*/ XREGION ENBGSMPL XBNFGRP
        KDISENRL KMILOFFC KCIVOFFC KBGPRB1 KBGPRB2
        KMILOPQY KCIVOPQY HP_PRNTL HP_MAMOG HP_MAM50 HP_PAP HP_BP HP_FLU KBRSTCR
        HP_PROS /*HP_GP*/ HP_CHOL HP_SMOKE HP_BRST KCIVINS /*KPRSCPTN*/ OUTCATCH LEGDDSCD
        HP_SMOKH HP_CESS
        / MISSING LIST;
 TITLE3 'ONE WAY FREQUENCIES ON 2003 RECONSTRUCTED VARIABLES';
 RUN;

/* CROSSTABS TO CHECK RECONSTRUCTION OF 2003 VARIABLES */
/* COLLAPSE AGE FOR CROSSTABS */
   PROC FORMAT;
     VALUE $AGE
            "018" -< "065" = "LESS THAN 65"
            "065" -< "120" = "65 OR OLDER"
            "O"       = "Out of range err"
            " "       = "Missing/unknown" ;
            RUN ;


   PROC FREQ DATA=CONVARQ2;
```

```
     TABLES FIELDAGE*ENBGSMPL*XENRLLMT
            FIELDAGE*ENBGSMPL*XENR_PCM
            FIELDAGE*XENRLLMT*H03006*H03003*H03004*XINS_COV
            XREGION*CACSMPL
            FIELDAGE*ENBGSMPL*XBNFGRP
            H03053*KDISENRL
            H03038*H03029*KMILOFFC*KCIVOFFC
            H03013*KBGPRB1
            H03027*KBGPRB2
            H03038*H03026*KMILOPQY
            H03038*H03026*KCIVOPQY
            /*H03037*KPRSCPTN*/
            H03069*H03070*H03071*HP_PRNTL
            XSEXA*H03065*HP_PAP
            H03055*H03056*HP_BP
            FIELDAGE*H03058*HP_FLU
            /*H03054*HP_GP*/
            H03057*HP_CHOL
            H03062*HP_SMOKE
            H03002I*H03002J*H03002G*KCIVINS
            OUTCATCH*CACSMPL
            H03059*H03060*H03061*HP_SMOKH
            HP_SMOKH*H03026*H03062*HP_CESS
            / MISSING LIST;
            FORMAT FIELDAGE $AGE.;
       TITLE3 'CROSSTABS ON NEW VARIABLES';
            RUN;

    PROC FREQ DATA=CONVARQ2;
       tables XREGION*CACSMPL
            / MISSING LIST;
       format _all_;
    run;

/* COLLAPSE FOR MAMMOGRAPHY, BREAST CANCER, AND PROSTRATE XTABS*/
    PROC FORMAT;
      VALUE $AGE2_
            "018" - "049" = "LESS THAN 50"
            "050" -< "120" = "50 OR OLDER"
            "O"       = "Out of range err"
            " "       = "Missing/unknown" ;

      VALUE $AGE3_
            "018" - "039" = "LESS THAN 40"
            "040" -< "120" = "40 OR OLDER"
            "O"       = "Out of range err"
            " "       = "Missing/unknown" ;
            RUN ;

        PROC FREQ DATA=CONVARQ2;
            TABLES XSEXA*FIELDAGE*H03067*HP_MAM50
                   XSEXA*FIELDAGE*H03064*HP_PROS
                   /MISSING LIST;
                   FORMAT FIELDAGE $AGE2_.;
        RUN;

        PROC FREQ DATA=CONVARQ2;
            TABLES XSEXA*FIELDAGE*H03067*HP_MAMOG
                   XSEXA*FIELDAGE*H03067*H03068*KBRSTCR
                   FIELDAGE*XSEXA*H03068*HP_BRST
                   /MISSING LIST;
                   FORMAT FIELDAGE $AGE3_.;
        RUN;

    PROC CONTENTS DATA=IN.CONVARQ;
    RUN;
```

5.   Q4_2003\PROGRAMS\CONSTRUCT\MERGEQ.SAS - Merge Constructed Variables onto Data File.

```
********************************************************************************
* PROGRAM:   MERGE.SAS
* WRITTEN:   1/28/00 BY KELLY WHITE
* MODIFIED:  3/1/00 BY NATALIE JUSTH
* MODIFIED:  11/16/00 BY JOAN JAMES
* MODIFIED:  1/30/01 BY NATALIE JUSTH
* MODIFIED:  6/6/01 BY NATALIE JUSTH FOR Q2 UPDATES
* MODIFIED:  8/20/01 BY NATALIE JUSTH FOR Q3 UPDATES
* MODIFIED: 12/13/01 BY NATALIE JUSTH FOR Q4 UPDATES
* MODIFIED: 2/11/02 By Daniele Beahm to delete H00077 variable and reassign format for
*           S00S01 variable
* MODIFIED: 4/11/02 By JACLYN WONG FOR Q1 UPDATES
* MODIFIED: 6/21/02 by JACLYN WONG FOR Q2 UPDATES
* MODIFIED: 7/1/2002 By Daniele Beahm to delete SF8 variables not used for Q2 2002
* MODIFIED: 10/16/2002 By Daniele Beahm to delete Q2 2002 Supplemental vars that were on the
*           Q3 2002 data file from NRC.
* MODIFIED: 01/02/2003 By Keith Rathbun: Added ONTIME variable to support the annual
*           version of the database (trickle indicator).  This ONTIME variable is
*           only applicable to the annual file and thus should be deleted for the
*           quarterly version of this program.
* MODIFIED: 3/24/02 BY JACLYN WONG FOR Q1 2003 UPDATES.  Added HP_SMOKH, HP_CESS, and KPRSCPTN
* MODIFIED: 8/29/03 by NATALIE JUSTH FOR Q3 2003 UPDATES
* MODIFIED: 12/19/03 by NATALIE JUSTH FOR Q4 2003 UPDATES
*
* PURPOSE:   TO MERGE FINAL FILES TOGETHER AND REORDER BY VARIABLE TYPE
*            To reorder variables within the record use a
*             LENGTH statement before the SET statement.
*             Make sure that MPRID is the first variable in the
*             record followed by:
*                         1)  other sampling variables
*                         2)  DEERS variables
*                         3)  Post-stratification vars
*                         4)  questionnaire responses
*                         5)  DRC variables
*                         6)  recoded questionnaire responses
*                         3)  coding scheme flags
*                         8)  constructed variables
*                         9)  weights  (NOT AVAILABLE FOR PRELIMINARY DATA)
* INPUT:     ..\..\DATA\AFINAL\SELECTQ.SD2
* INPUT:     ..\..\DATA\AFINAL\CONVARQ.SD2
* INPUT:     ..\..\DATA\AFINAL\CONVARSF.SD2
* OUTPUT:    ..\..\DATA\AFINAL\MERGEQ.SD2
* INCLUDE:   SERVAFF.SAS
*            TO MERGE ON VARIABLE SERVAFF
********************************************************************************
*;
LIBNAME IN      V612 '..\..\DATA\AFINAL';
LIBNAME OUT     V612 '..\..\DATA\AFINAL';
LIBNAME LIBRARY V612 '..\..\DATA\AFINAL\FMTLIB';

OPTIONS PS=78 LS=124 ERRORS=2 COMPRESS=YES ; *MPRINT;

%INCLUDE SERVAFF;

PROC SORT DATA=IN.SELECTQ OUT=SELECTQ;
   BY MPRID;
RUN;

PROC SORT DATA=IN.CONVARQ OUT=CONVARQ;
   BY MPRID;
RUN;

/*
PROC SORT DATA=IN.CONVARSF OUT=CONVARSF;
   BY MPRID;
RUN;
*/

PROC SORT DATA=IN.SERVAFF OUT=SERVAFF;
   BY MPRID;
```

```
RUN;

PROC FREQ DATA=SERVAFF;
   TABLES SERVAFF;
RUN;

DATA MERGEQ (DROP =
H03001_O
H03002AO
H03002CO
H03002FO
H03002GO
H03002HO
H03002IO
H03002JO
H03002KO
H03002LO
H03002MO
H03002NO
H03002OO
H03003_O
H03004_O
H03005_O
H03006_O
H03007_O
H03008_O
H03009_O
H03010_O
H03011_O
H03012_O
H03013_O
H03014_O
H03015_O
H03016_O
H03017_O
H03018_O
H03019_O
H03020_O
H03021_O
H03022_O
H03023_O
H03024_O
H03025_O
H03026_O
H03027_O
H03028_O
H03029_O
H03030_O
H03031_O
H03032_O
H03033_O
H03034_O
H03035_O
H03036_O
H03038_O
H03039_O
H03040_O
H03041_O
H03042_O
H03043_O
H03044_O
H03045_O
H03046_O
H03047_O
H03048_O
H03049_O
H03050_O
H03051_O
H03052_O
H03053_O
H03055_O
H03056_O
H03057_O
```

```
H03058_O
H03059_O
H03060_O
H03061_O
H03062_O
H03063_O
H03064_O
H03065_O
H03066_O
H03067_O
H03068_O
H03069_O
H03070_O
H03071_O
H03072_O
H03073_O
H03074_O
H03075_O
H03076_O
H03077_O
H03078_O
H03079_O
H03080_O
H03081_O
H03082_O

SREDA_O
SRRACEAO
SRRACEBO
SRRACECO
SRRACEDO
SRRACEEO
SRAGE_O

S03G01_O
S03G02_O
S03G03_O
S03G04_O
S03G05_O
S03G06_O
S03G07_O
S03G08_O
S03G09_O
S03G10_O
S03G11_O
S03G12_O
S03G13_O
S03G14_O
S03V01_O
S03V02_O
S03V04_O
S03V05_O
S03V06_O
S03V07_O
  );


    MERGE SELECTQ(in=hcsdb rename=(flag_fin=dummy)) CONVARQ SERVAFF; *CONVARSF;  *NO SF8
Variables;
    BY MPRID;
    if hcsdb;

/*MAKE FLAG_FIN IN Q4 CHARACTER*/
    LENGTH FLAG_FIN $5;
    FLAG_FIN=COMPRESS(DUMMY);
    DROP DUMMY;

FORMAT
    SERVAFF   $SERVAFF.
    ENBGSMPL  $ENBGS.
    XREGION   CREG.
    CONUS     CONUSMHS.
    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_8   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.
        MPRID    $8.          /*Remove extra format space ($43) provided by NRC*/
        ;
LABEL
        ENBGSMPL = "Enrollment by beneficiary category"
        SERVAFF  = "Service Affiliation"
        MPCSMPL  = "MPCSMPL - Military Personnel Category"
        E1       = "Elig ind for pd=1 (as of 31 July 2000)"
        E2       = "Elig ind for pd=2 (as of 30 Sept 2000)"
        E3       = "Elig ind for pd=3 (as of 31 Jan 2001)"
        E4       = "Elig ind for pd=4 (as of 31 Mar 2001)"
        E5       = "Elig ind for pd=5 (as of 31 Aug 2001)"
        E6       = "Elig ind for pd=6 (as of 30 Nov 2001)"
        E7       = "Elig ind for pd=7 (as of 28 Feb 2002)"
        E8       = "Elig ind for pd=8 (as of 31 May 2002)"
        E9       = "Elig ind for pd=9 (as of 31 Aug 2002)"
        E10      = "Elig ind for pd=10 (as of 30 Nov 2002)"
        E11      = "Elig ind for pd=11 (as of 28 Feb 2003)"
        E12      = "Elig ind for pd=12 (as of 31 May 2003)"
        WEB      = "Web survey indicator"
        ;

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     $ 4        /* sampling variable */
        ENBGSMPL    $ 2        /* sampling variable */
        MPCSMPL       8        /* sampling variable */
        NHFF          8        /* sampling variable */
        SERVAREA    $ 2        /* sampling variable */
        QUARTER     $ 7        /* sampling variable */
        PRN           8        /* sampling variable */
        DCATCH      $ 4        /* sampling variable */
        DMIS_ID     $ 9        /* sampling variable */
        E1          $ 1        /* sampling variable */
        E2          $ 1        /* sampling variable */
        E3          $ 1        /* sampling variable */
```

```
E4          $ 1             /* sampling variable */
E5          $ 1             /* sampling variable */
E6          $ 1             /* sampling variable */
E7          $ 1             /* sampling variable */
E8          $ 1             /* sampling variable */
E9          $ 1             /* sampling variable */
E10         $ 1             /* sampling variable */
E11         $ 1             /* sampling variable */
E12         $ 1             /* sampling variable */
SERVAFF     $ 1             /* sampling variable */
BWT           8             /* sampling variable */


MRTLSTAT    $ 1             /* DEERS variable    */
RACEETHN    $ 1             /* DEERS variable    */
PNSEXCD     $ 1             /* DEERS variable    */
LEGDDSCD    $ 2             /* DEERS variable    */
DAGEQY      $ 3             /* DEERS variable    */
FIELDAGE    $ 3             /* DEERS variable    */
PCM         $ 3             /* 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    */
PNLCATCD    $ 1             /* DEERS variable    */


H03001        4             /* questionnaire     */
H03002A       4             /* questionnaire     */
H03002C       4             /* questionnaire     */
H03002F       4             /* questionnaire     */
H03002G       4             /* questionnaire     */
H03002H       4             /* questionnaire     */
H03002I       4             /* questionnaire     */
H03002J       4             /* questionnaire     */
H03002K       4             /* questionnaire     */
H03002L       4             /* questionnaire     */
H03002M       4             /* questionnaire     */
H03002N       4             /* questionnaire     */
H03002O       4             /* questionnaire     */
H03003        4             /* questionnaire     */
H03004        4             /* questionnaire     */
H03005        4             /* questionnaire     */
H03006        4             /* questionnaire     */
H03007        4             /* questionnaire     */
H03008        4             /* questionnaire     */
H03009        4             /* questionnaire     */
H03010        4             /* questionnaire     */
H03011        4             /* questionnaire     */
H03012        4             /* questionnaire     */
H03013        4             /* questionnaire     */
H03014        4             /* questionnaire     */
H03015        4             /* questionnaire     */
H03016        4             /* questionnaire     */
H03017        4             /* questionnaire     */
H03018        4             /* questionnaire     */
H03019        4             /* questionnaire     */
H03020        4             /* questionnaire     */
H03021        4             /* questionnaire     */
H03022        4             /* questionnaire     */
H03023        4             /* questionnaire     */
H03024        4             /* questionnaire     */
H03025        4             /* questionnaire     */
H03026        4             /* questionnaire     */
H03027        4             /* questionnaire     */
H03028        4             /* questionnaire     */
H03029        4             /* questionnaire     */
H03030        4             /* questionnaire     */
H03031        4             /* questionnaire     */
H03032        4             /* questionnaire     */
H03033        4             /* questionnaire     */
```

```
H03034          4               /* questionnaire     */
H03035          4               /* questionnaire     */
H03036          4               /* questionnaire     */
H03038          4               /* questionnaire     */
H03039          4               /* questionnaire     */
H03040          4               /* questionnaire     */
H03041          4               /* questionnaire     */
H03042          4               /* questionnaire     */
H03043          4               /* questionnaire     */
H03044          4               /* questionnaire     */
H03045          4               /* questionnaire     */
H03046          4               /* questionnaire     */
H03047          4               /* questionnaire     */
H03048          4               /* questionnaire     */
H03049          4               /* questionnaire     */
H03050          4               /* questionnaire     */
H03051          4               /* questionnaire     */
H03052          4               /* questionnaire     */
H03053          4               /* questionnaire     */
H03055          4               /* questionnaire     */
H03056          4               /* questionnaire     */
H03057          4               /* questionnaire     */
H03058          4               /* questionnaire     */
H03059          4               /* questionnaire     */
H03060          4               /* questionnaire     */
H03061          4               /* questionnaire     */
H03062          4               /* questionnaire     */
H03063          4               /* questionnaire     */
H03064          4               /* questionnaire     */
H03065          4               /* questionnaire     */
H03066          4               /* questionnaire     */
H03067          4               /* questionnaire     */
H03068          4               /* questionnaire     */
H03069          4               /* questionnaire     */
H03070          4               /* questionnaire     */
H03071          4               /* questionnaire     */
H03072          4               /* questionnaire     */
H03073          4               /* questionnaire     */
H03074          4               /* questionnaire     */
H03075          4               /* questionnaire     */
H03076          4               /* questionnaire     */
H03077          4               /* questionnaire     */
H03078          4               /* questionnaire     */
H03079          4               /* questionnaire     */
H03080          4               /* questionnaire     */
H03081          4               /* questionnaire     */
H03082          4               /* questionnaire     */

SREDA           4               /* questionnaire     */
SRRACEA         4               /* questionnaire     */
SRRACEB         4               /* questionnaire     */
SRRACEC         4               /* questionnaire     */
SRRACED         4               /* questionnaire     */
SRRACEE         4               /* questionnaire     */
SRAGE           4               /* questionnaire     */



S03V01          4               /* supplemental      */
S03V02          4               /* supplemental      */
S03V04          4               /* supplemental      */
S03V05          4               /* supplemental      */
S03V06          4               /* supplemental      */
S03V07          4               /* supplemental      */
S03G01          4               /* supplemental      */
S03G02          4               /* supplemental      */
S03G03          4               /* supplemental      */
S03G04          4               /* supplemental      */
S03G05          4               /* supplemental      */
S03G06          4               /* supplemental      */
S03G07          4               /* supplemental      */
S03G08          4               /* supplemental      */
S03G09          4               /* supplemental      */
```

```
        S03G10        4            /* supplemental       */
        S03G11        4            /* supplemental       */
        S03G12        4            /* supplemental       */
        S03G13        4            /* supplemental       */
        S03G14        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 */

        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    */
        N9            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    */
        N18A          8            /* CS flag variable    */
        N18B          8            /* CS flag variable    */
        N18C          8            /* CS flag variable    */
        N18D          8            /* CS flag variable    */
        N19           8            /* CS flag variable    */
        N20B          8            /* CS flag variable    */
        N20C          8            /* CS flag variable    */
        N20D          8            /* CS flag variable    */
        N21           8            /* CS flag variable    */
        N22           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_8        8            /* CS Count            */
        MISS_9        8            /* CS Count            */
        MISS_TOT      8            /* CS Count            */

        XENRLLMT      8            /* constructed         */
        XENR_PCM      8            /* constructed         */
        XINS_COV      8            /* constructed         */
/*      XQENROLL      8 */         /* constructed         */
        XREGION       3            /* constructed         */
        CONUS         3            /* constructed         */
        OUTCATCH      8            /* constructed         */
        XSEXA         8            /* constructed         */
        XBNFGRP       8            /* constructed         */
        KDISENRL      8            /* constructed         */
        KMILOFFC      8            /* constructed         */
        KCIVOFFC      8            /* constructed         */
        KBGPRB1       8            /* constructed         */
        KBGPRB2       8            /* constructed         */
        KMILOPQY      8            /* constructed         */
        KCIVOPQY      8            /* constructed         */
        KCIVINS       8            /* constructed         */
/*      KPRSCPTN        8 */          /* constructed          */
        KBRSTCR       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_PROS         8              /* constructed        */
         /*HP_GP           8     */       /* constructed          */
         HP_BRST         8              /* constructed        */
         HP_CHOL         8              /* constructed        */
         HP_SMOKE        8              /* constructed        */
         HP_SMOKH        8              /* constructed        */
         HP_CESS         8              /* constructed        */
/*       SF8PF           8    */       /* constructed        */
/*       SF8RP           8    */       /* constructed        */
/*       SF8BP           8    */       /* constructed        */
/*       SF8GH           8    */       /* constructed        */
/*       SF8VT           8    */       /* constructed        */
/*       SF8SF           8    */       /* constructed        */
/*       SF8RE           8    */       /* constructed        */
/*       SF8MH           8    */       /* constructed        */
/*       PCS_8           8    */       /* constructed        */
/*       MCS_8           8    */       /* constructed        */
/*       KMID_H          8    */       /* constructed        */
/*       KMID_MH         8    */       /* constructed        */


         ;

      SET MERGEQ;

      RUN;

PROC CONTENTS DATA=OUT.MERGEQ POSITION;
    title  "HCSDB for Q4 2003, ordered by variable type";
    RUN;
```

6.a Q4_2003\PROGRAMS\WEIGHTING\ADJWT.SAS - Calculate Adjusted Weights - Quarterly.

```
***************************************************************
*** Project: DoD Quarterly Sampling - Nonresponse adjustments
***
*** Program: \DOD\Q4_2003\programs\weighting\adjwt.sas
***
*** TASK:    2003 QUARTERLY DOD HEALTH CARE SURVEY
*** PURPOSE: CALCULATE THE FINAL WEIGHT
***
*** WRITTEN: 11/09/1999 BY KEITH RATHBUN
*** Updated: 12/29/2003 by Haixia Xu
***
*** INPUTS:  selectq.SD2
*** OUTPUTS: adjwt.SD2
****************************************************************************
*;
LIBNAME IN_f v6      "F:\DOD\Q4_2003\Data\Afinal"  /*framea.sd2, sampla01.sd2*/;
LIBNAME IN   v6      "F:\DOD\Q4_2003\Data\AFinal";      /*selectq.sd2*/;
LIBNAME OUT  v6      "F:\DOD\Q4_2003\Data\Afinal"; /*adjwt.sd2*/;

OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOCENTER mprint mlogic symbolgen ;


%include "C:\MyFiles\macros\design_effects_unequal_weights.sas";

title1 'DoD Quarterly Survey of Health Beneficiaries';
title2 'Calculate the Final Weights';
title3 'Program: adjwt.SAS ';

****************************************************************************
* Calculate final weight based on user-specified domains.
****************************************************************************;
*** merge ebg_com back into selectq. ***;

  data selectq;
  set in.selectq;
  format _all_;
  run;

  data sampla01 (keep= mprid ebg_com);
  set in_f.sampla01;
  format _all_;
  run;

  proc sort data=selectq;
  by mprid;
  run;

  proc sort data=sampla01;
  by mprid;
  run;

  data out.merged;
  merge selectq sampla01(in=a) ;
  by mprid;
  if a;
  format _all_;
  run;

%MACRO PROCESS(DOMAIN,CAC, FORM,INPT);

  *** Initial Information. ***;

   title5 'FRAMEA.SD2 Count';

   proc freq data=in_f.framea;
   table enbgsmpl / list missing;
   run;

   title5 'mergeq.SD2 Counts Using BWT as the Weight';
```

```
   proc freq data=out.&inpt.;
   table enbgsmpl fnstatus / list missing;
   weight bwt;
   run;

   title5 'mergeq.SD2 Counts';

   proc freq data=out.&inpt.;
   table enbgsmpl fnstatus web*fnstatus/ list missing;
   run;

   *** Create the adjustment cells for nonresponse. ***;

   data &inpt. ;
   set out.&inpt.( keep =  MPRID FNSTATUS BWT ebg_com enbgsmpl xregion stratum &cac. cacsmpl);

  %include "F:\DOD\Q4_2003\programs\weighting\cac_coll.inc";
   run;


PROC SORT DATA=&inpt. OUT=&INPT.;
BY &DOMAIN.;
RUN;

*****************************************************************************
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****************************************************************************;
Data  cellsa1 (keep=sumbwt sumg1-sumg3 a1 cellcnt cntg1-cntg3 &domain.)
      mpridsa1 (keep=mprid fnstatus bwt &domain. ebg_com &cac. )
   ;
   SET &INPT.;
   BY &DOMAIN;

   IF FIRST.&DOMAIN. 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 (20,30) 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.&DOMAIN. THEN DO;
           A1 = SUMBWT/(SUMG1 + SUMG2);
           OUTPUT CELLSA1;
        END;

        OUTPUT MPRIDSA1;

RUN;


title5 'Check for CELLSA1 Data Set';

proc print data=cellsa1;
var &domain. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

proc print data=cellsa1;
where ( a1 > 7 ) or ( cntg1 + cntg2 < 10 );
var &domain. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

proc univariate data=cellsa1 normal ;
var a1;
run;

proc sort data=mpridsa1;
by &domain.;
run;

proc sort data=cellsa1;
by &domain.;
run;

data adj_one;
merge mpridsa1 cellsa1;
by &domain.;
if fnstatus in (11,12,20,30) then adj1 = a1;
   else adj1 = 0;
adj_wt1 = adj1 * bwt;
run;

title5 'Checks for ADJ_ONE Data Set';

proc freq data=adj_one;
table &domain.*fnstatus*adj1 / list missing;
run;

proc means data=adj_one n sum NOPRINT;
class fnstatus;
var adj_wt1;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

proc means data=adj_one n sum NOPRINT;
```

```
class ebg_com;
var adj_wt1;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

*****************************************************************************
* Calculate adjustment factor A2 for each cell.
* This is the Nonresponse adjustment and creates the final weight (wrwt).
*****************************************************************************;

proc sort data=adj_one;
by &domain.;
run;

DATA CELLSA2 (KEEP= &domain. NUMER DENOM numercnt denomcnt A2);
   set adj_one ;
   BY &domain.;

   IF FIRST.&domain. 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 + BWT*A1;
         numercnt + 1;
      end;

   IF FNSTATUS = 11 THEN
      do;
         DENOM + BWT*A1;
         denomcnt + 1;
      end;

   IF LAST.&domain. THEN DO;
      A2 = NUMER/DENOM;
      OUTPUT CELLSA2;
   END;

RUN;

title5 'Check for CELLSA2 Data Set';

proc print data=cellsa2;
var &domain. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

proc print data=cellsa2;
where ( a2 > 7 ) or ( denomcnt < 10 );
var &domain. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

proc univariate data=cellsa2 normal ;
var a2;
run;

proc sort data=adj_one;
by &domain.;
run;
```

```
proc sort data=cellsa2;
by &domain.;
run;

data adj_two;
merge adj_one cellsa2;
by &domain.;
if fnstatus = 11 then adj2 = a2;
   else if fnstatus = 30 then adj2 = 1;
   else adj2 = 0;
adjwt = adj2 * adj_wt1;
label adjwt = 'Adjusted Weight';
*KEEP MPRID fnstatus adj1 adj2 adjwt &domain. ebg_com ; * before the modification;
KEEP MPRID fnstatus adj1  adj2 adjwt &domain. ebg_com a1 a2 adj_wt1 ; *modified on 12/29/2003;
run;

title5 'Check for ADJ_TWO Data Set';

proc freq data=adj_two;
table &domain.*fnstatus*adj2 / list missing;
run;

proc means data=adj_two n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum sum;
where _type_=1;
run;

proc means data=adj_two n sum NOPRINT;
class ebg_com;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum sum;
where _type_=1;
run;

data adj_two;
set adj_two(drop=fnstatus ebg_com );
run;

**************************************************************************
* Sort the original data
**************************************************************************;

PROC SORT DATA=&INPT. OUT=&INPT.;
BY MPRID;
RUN;

**************************************************************************
* Sort the ADJ_TWO data set
**************************************************************************;

PROC SORT DATA=adj_two;
BY MPRID;
RUN;

**************************************************************************
* Append final weight variable (adjwt)
**************************************************************************;
DATA out.adjwt;
   MERGE adj_two &INPT.;
   BY MPRID;
RUN;
```

```
title5 'Sum of Adjwt By Final Status';

proc means data=out.adjwt n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum sum;
where _type_=1;
run;

title5 'Sum of Adjwt By ADJ_CELL';
proc means data=out.adjwt n sum NOPRINT;
class &domain.;
var bwt adjwt;
output out=print sum=sum;
run;

Proc print data=print noobs;
sum sum;
where _type_=1;
run;


proc sort data=out.adjwt out=chk;
by &domain. fnstatus;
run;

data sub_chk;
set chk(keep = &cac. stratum &domain. fnstatus bwt adj1 adj2 adjwt);
by &domain. 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;

title5 'Checks for Adjwt Dataset';

proc print data=sub_chk noobs;
var &domain. fnstatus bwt adj1 adj2 prodadjs adjwt cellcnt sumadjwt;
sum cellcnt sumadjwt;
run;

proc univariate data=sub_chk normal ;
where fnstatus=11;
var prodadjs;
run;

/* Removed on 12/24/2003 after Amang's QA;
proc univariate data=sub_chk normal ;
where fnstatus=11;
var adjwt;
run;
*/

title5 "Individual Level Adjwt";
proc univariate data=out.adjwt normal ;
where fnstatus=11;
var adjwt;
run;
```

```
**********************************************
/**Added on 12/29/2003 after Amang's QA**/
Find the individuals with the largest adjwt;
**********************************************;

title5 " Checking the individuals with the largest adjwt";
proc sort data=out.adjwt out=sorted;
by descending adjwt;
run;

data sorted;
set sorted;
prodadjs=a1*a2;
run;

proc print data=sorted (obs=200);
var stratum adj_cell BWT fnstatus a1 adj1 adj_wt1 a2 adj2 adjwt prodadjs;
run;

data OUT.adjwt;
set OUT.adjwt;
drop a1 a2 adj_wt1;
run;

**End of the modification**;

proc sort data=out.adjwt;
by xregion;
run;

title5 "Distribution of weights by region";
proc univariate data=out.adjwt normal ;
where fnstatus=11;
var adjwt;
by xregion;
run;


************************************;
*** Calculate the Design Effects ***;
************************************;

*create dataset of completes only;
data adjwt_fnl;
set out.adjwt;
where fnstatus=11;
run;

*Remove xregions of missing from design effects;
data adjwt_reg;
set adjwt_fnl;
where xregion~=.;
run;

%design_effects_unequal_weights ( adjwt_fnl, &cac.,  adjwt, deff_overall, deff_cac );
%design_effects_unequal_weights ( adjwt_fnl, ebg_com,  adjwt, deff_overall, deff_ebg );
%design_effects_unequal_weights ( adjwt_fnl, enbgsmpl, adjwt, deff_overall, deff_enb );
%design_effects_unequal_weights ( adjwt_reg, xregion,  adjwt, deff_overall, deff_reg );

title5 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For Catchment Area ***;

title5 "Design Effects for &cac.";
proc print data= deff_cac;
run;

*** For Enrollee/Beneficiary Groups ***;

title5 'Design Effects for ebg_com';
proc print data= deff_ebg;
```

```
run;

*** For ENBGSMPL Groups ***;

title5 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
run;

*** For XREGION Groups ***;

title5 'Design Effects for XREGION';
proc print data= deff_reg;
run;

****************************************************************************
* Calculate final weight based on user-specified parameters.
***************************************************************************;
%MEND PROCESS;
%PROCESS(adj_cell,cacsmpl,A,merged);
RUN;
```

6.B. Q4_2003\PROGRAMS\WEIGHTING\CAC_COLL.INC - Collapse Geographic Areas.

```
********************************************************************************************
*** Project:    2003 Health Care Survey of DoD Beneficiaries - Annual Adult Dataset
*** Purpose:    Geographic collapsements for 2003
*** Date:       June 20, 2003
*** Programmer: Esther M Friedman
*** Updated:    Dec 29, 2003 by Haixia Xu
*** Program:    cac_coll.inc -- include file used in adjwt.sas
*** Inputs:     selectq
***
********************************************************************************************;

adj_cell=stratum;

************************************************************************;
***************Additional Collapsement For Small Cells***************;
************************************************************************;
************************************************************************;

If substr(adj_cell,2,4) in
(0003,0005,0006,0009,0014,0024,0028,0030,0032,0033,0037,0038,0039,0042,0045,0047,0048,0049,

0052,0053,0055,0056,0057,0060,0061,0064,0066,0067,0073,0075,0078,0079,0086,0089,0092,0093,0095,00
98,0101,0103,0104,0105,0108,

0109,0110,0112,0113,0117,0120,0121,0125,0126,0127,0131,0606,0607,0609,0612,0616,0617,0620,0621,06
22,0633,0638,0640,0805,9990)
                and substr(adj_cell,6,2) in ('02','03')
then do; x=adj_cell;
        substr(x,6,2)='02';
        *put x;
        adj_cell = x;
end;

else If substr(adj_cell,2,4) in
(0001,0005,0006,0008,0010,0015,0019,0026,0029,0035,0036,0037,0046,0049,0053,0057,0058,0059,0060,0
062,0064,0066,0069,

0073,0075,0083,0084,0090,0092,0093,0096,0098,0104,0112,0113,0120,0121,0122,0125,0126,0127,0128,01
31,0306,0356,0606,0607,0609,0612,0616,0617,0620,
        0621,0622,0633,0638,0640,0805,9914,
0280,0032,0109,0117,0004,0118,0321,0326,0117,0118,0129,0287)
       and substr(adj_cell,6,2) in ('06')
then do; y=adj_cell;
        substr(y,6,2)='05';
        *put y;
        adj_cell = y;
end;

If substr(adj_cell,2,4) in
(0001,0005,0008,0010,0015,0019,0024,0026,0030,0035,0036,0046,0052,0056,0058,0059,0062,0069,0083,0
084,
0086,0090,0091,0092,0093,0096,0104,0108,0112,0122,0128,0131,0280,0287,0306,0326,0330,0356,0606,06
07,0609,0612,0616,0617,0620,
0621,0622,0633,0638,0640,0805,0806,0713,0991,0999, 0280, 0004,0118,0321,0326,0118,0129,0287)
        and substr(adj_cell,6,2) in ('04','05')
then do; z=adj_cell;
        substr(z,6,2)='04';
        *put z;
        adj_cell = z;
end;

If substr(adj_cell,2,4) in
(0330,0607,0609,0621,0622,0638,0640,0806,0713,0014,0612,0617,0622,0805,0806,7139,0612,0617,9990,0
804)
        and substr(adj_cell,6,2) in ('04','02')
then do; z2=adj_cell;
        substr(z2,6,2)='02';
        *put z2;
        adj_cell = z2;
end;
```

```
************************************************************************;
***********Additional Collapsements For Small Cells, Cont.*************;
*****************Added Quarter 01, 2002*****************************;
*************** and still small in q1 2003 ***************************;
************************************************************************;

If substr(adj_cell,2,4) in (0633)
        and substr(adj_cell,6,2) in ('04','02')
then do; z3=adj_cell;
        substr(z3,6,2)='02';
        *put z3;
        adj_cell = z3;
end;

If substr(adj_cell,2,4) in (9990)
        and substr(adj_cell,6,2) in ('01','02','05','06')
then do; z4=adj_cell;
        substr(z4,6,2)='02';
        *put z4;
        adj_cell = z4;
end;




*********************************************;
*    ADDED q1 2003 TO COLLAPSE SMALL CELLS    ;
*********************************************;
If adj_cell='0080401' then adj_cell='0064001';
If adj_cell='0080402' then adj_cell='0064002';

*added q2 2003;
If adj_cell='0063801' then adj_cell='0061201';
If adj_cell='0063802' then adj_cell='0061202';

*added q3 2003;
If adj_cell='0011301' then adj_cell='0011201';
If adj_cell='0011302' then adj_cell='0011202';
If adj_cell='0011304' then adj_cell='0011204';
If adj_cell='0011305' then adj_cell='0011204';

If adj_cell='0002801' then adj_cell='0003001';
If adj_cell='0002802' then adj_cell='0003002';
If adj_cell='0002804' then adj_cell='0003004';
If adj_cell='0002805' then adj_cell='0003004';
If adj_cell='0002806' then adj_cell='0003006';

*added q4 2004;
if adj_cell='0010502' then adj_cell='0010504';
if adj_cell='0060604' then adj_cell='0060602';
if adj_cell='0061602' then adj_cell='0061604';

if adj_cell='0062101' then adj_cell='0062201';
if adj_cell='0062102' then adj_cell='0062202';

if adj_cell='0004801' then adj_cell='0004901';
if adj_cell='0004802' then adj_cell='0004902';
if adj_cell='0004804' then adj_cell='0004904';
if adj_cell='0004805' then adj_cell='0004905';
if adj_cell='0004806' then adj_cell='0004905';

drop x y z z2 z3 z4;
run;
```

6.C. Q4_2003\PROGRAMS\WEIGHTING\REPWT.SAS - Calculate Replicated Weights - Quarterly.

```
*****************************************************************************
* PROGRAM: \DOD\Q4_2003\Programs\Weighting\repwt.SAS
* TASK:    2003 DOD QUARTERLY HEALTH CARE SURVEY
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY.
* WRITTEN: 12/30/1999 BY KEITH RATHBUN
* Updated: 12/29/2003 By Haixia Xu
* INPUTS:  adjwt.SD2 - Final Weights file
*
* OUTPUTS: repwt.SD2 - Replicate Weights File
*
*****************************************************************************
*;
LIBNAME IN  v6 "F:\DOD\Q4_2003\Data\Afinal";
LIBNAME OUT v6 "F:\DOD\Q4_2003\Data\Afinal";

OPTIONS PS=79 LS=132 COMPRESS=YES errors=0 NOCENTER /*mlogic mprint symbolgen*/;

%MACRO PROCESS(DOMAIN1,DOMAIN2,CAC, reps);

*****************************************************************************
* Sort the final weights file by user-specified domains
***************************************************************************;

PROC SORT DATA=IN.adjwt(KEEP=FNSTATUS MPRID BWT &DOMAIN1. &DOMAIN2. stratum ) OUT=adjwt;
     BY stratum &DOMAIN2.;
RUN;


*****************************************************************************
* Append SUBSET index (I) to each observation
***************************************************************************;
DATA SUBSETS;
   SET adjwt;
   BY stratum &DOMAIN2.;

   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. )
     ;
```

```
   SET subset;
   BY &DOMAIN1.;

   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 (20,30) 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 = SUMBBWT/(SUMG1 + SUMG2);
      OUTPUT CELLSA1;
   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 (11,12,20,30) then adj1 = a1;
   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 &domain1.;
run;

DATA CELLSA2 (KEEP= &domain1. NUMER DENOM numercnt denomcnt A2);
   set adj_one;
   BY &domain1.;

   IF FIRST.&domain1. 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 + BBWT*A1;
         numercnt + 1;
      end;

   IF FNSTATUS = 11 THEN
      do;
         DENOM + BBWT*A1;
         denomcnt + 1;
      end;

   IF LAST.&domain1. THEN DO;
      A2 = NUMER/DENOM;
      OUTPUT CELLSA2;
   END;

RUN;

proc sort data=adj_one;
by &domain1.;
run;

proc sort data=cellsa2;
by &domain1.;
run;

data subset&i.;
merge adj_one cellsa2;
by &domain1.;
if fnstatus = 11 then adj2 = a2;
   else if fnstatus = 30 then adj2 = 1;
   else adj2 = 0;
jkweight = adj2 * adj_wt1;
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.adjwt
         OUT=adjwt;
     BY MPRID;
RUN;

proc sort data=allsets;
by mprid;
run;

DATA OUT.repwt ;
   MERGE adjwt 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 "2003 DoD Quarterly Health Survey Final/Replicated Weights";
title2 "Checks for the Replicate Weights";
TITLE3 "Program Name: repwt.SAS";

*****************************************************
/** Added on 12/29/2003 after Amang's QA**/
Check the structure of the data set OUT.repwt;
*****************************************************;

proc sort data=OUT.repwt out=sorted;
by stratum &domain2.;
run;

proc print data=sorted (obs=500);
var stratum &domain2. SUBSET fnstatus wrwt1-wrwt5;
run;
** End of the modification;


PROC CONTENTS DATA=OUT.repwt;
run;

PROC MEANS DATA=OUT.repwt n sum;
VAR  adjwt WRWT1-WRWT&reps.;
RUN;
```

```
PROC SORT DATA=OUT.repwt;
BY MPRID;
RUN;

DATA OUT.repwt;
   SET OUT.repwt;
   BY MPRID;

   ARRAY WGTS(&reps.) WRWT1-WRWT&reps.;
   DO I = 1 TO &reps.; DROP I;
      IF WGTS(I) EQ . THEN WGTS(I) = 0;
   END;

   KEEP MPRID BWT adjwt WRWT1-WRWT&reps. fnstatus &domain1. &cac. cacsmpl adj_cell;
RUN;

PROC MEANS DATA=OUT.repwt n sum;
VAR  adjwt wrwt1-wrwt&reps.;
output out=sums sum(adjwt wrwt1-wrwt&reps.) = adjwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var adjwt wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var col1;
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 wrwt1-wrwt60;
output out = amang sum= / autoname;
run;

proc print data = amang;
run;

****************************************************************************
* CREATE FINAL REPWT DATASET FOR KEITH -- Rename adjwt to wrwt
****************************************************************************;

data out.repwt (drop = adjwt );
set in.repwt;
wrwt = adjwt;
label &domain1. = 'final adjusted cell';
label wrwt = 'Final Weight';
run;

PROC CONTENTS DATA=OUT.repwt;
run;



%MEND process;

%PROCESS(adj_cell, mprid, cacsmpl, 60);
```

7.A Q4_2003\PROGRAMS\RESPONSE_RATE\TABLE02.SAS - Calculate Response Rates - Quarterly.

```
 *****************************************************************************
* PROGRAM: \DOD\Q4_2003\Programs\Response_Rate\TABLE02.SAS
* TASK:    2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-210)
* PURPOSE: BUILD TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY
*          Quarterly DOD HEALTH CARE SURVEY 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
* INCLUDES: 1) TABLE02.IN1
*           2) TABLE02.IN2
* UPDATED:  12/22/2003 by Haixia Xu
*****************************************************************************;
*LIBRARIES;

LIBNAME IN4    v6 "F:\DOD\Q4_2003\Data\Afinal"; /* sampla01.sd2 */
LIBNAME DODIN4 v6 "F:\DOD\Q4_2003\Data\Afinal"; /* selectq.sd2 */


OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOCENTER NOFMTERR /*mprint mlogic*/;

%let period= dod\q4_2003;

%macro doit;
  %do qtr=4 %to 4;

*************************************************************************
* Merge sampla01 and selectq files to add ebg_com
*************************************************************************;

 data selectq;
 set DODIN&qtr..selectq;
 format _all_;
 run;

 proc sort data=selectq;
 by mprid;
 run;

 data sampla01 (keep=mprid ebg_com);
 set IN&qtr..sampla01;
 run;

 proc sort data=sampla01;
 by mprid;
 run;

  data IN&qtr..newmerge;
 merge sampla01 selectq;
 by mprid;
 run;

 proc contents data=IN&qtr..newmerge;
 run;


%MACRO PROCESS(INPT,FORM,LIB);


*************************************************************************
* Process OVERALL Summary of response rates
*************************************************************************
 ;
```

```
DATA _NULL_;
   SET IN&qtr..&INPT END=FINISHED;
   format _all_;
   IF _N_ = 1 THEN DO;
      SN   = 0;
      SN1  = 0;
      SN11 = 0;
      SN12 = 0;
      SN2  = 0;
      SN3  = 0;
      SN4  = 0;
      SN41 = 0;
      SN42 = 0;
      WN   = 0;
      WN1  = 0;
      WN11 = 0;
      WN12 = 0;
      WN2  = 0;
      WN3  = 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 = 30 THEN DO;
   SN3 + 1;
   WN3 + BWT;
END;
*****************************************************
* Accumulate group 4 weighted and unweighted counts
*****************************************************
;
ELSE IF FNSTATUS IN(41,42) THEN DO;
   SN4 + 1;
   WN4 + BWT;
   IF FNSTATUS = 42 THEN DO;
      SN42 + 1;
      WN42 + BWT;
   END;
   ELSE DO;
      SN41 + 1;
      WN41 + BWT;
   END;
END;
```

```
        DROP I;
        RETAIN
            SN
            SN1
            SN11
            SN12
            SN2
            SN3
            SN4
            SN41
            SN42
            WN
            WN1
            WN11
            WN12
            WN2
            WN3
            WN4
            WN41
            WN42
          ;

            IF FINISHED THEN GO TO FINISHED;

            RETURN;

        FINISHED:
            FILE "F:\DOD\Q&qtr._2003\Data\Afinal\Response_Rate\TABLE02&FORM..OUT" LRECL=132;
            PUT; PUT;
            PUT @001 "TABLE 2: OVERALL RESPONSE RATES SUMMARY";
            PUT @001 "12-22-2003, TASK: 8860-300";
            PUT;
            PUT "SUMMARY OF GROUP COUNTS: FORM &FORM";
            PUT;
            PUT @050 "UNWEIGHTED COUNT"
                @100 "WEIGHTED COUNT"
              ;
            PUT @040 'FLR'
                @050 'FCR'
                @060 'FRR'
                @070 'POP'
                @090 'FLR'
                @100 'FCR'
                @110 'FRR'
                @120 'POP'
              ;
            %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN2";
        RUN;
        %MEND PROCESS;

        *************************************************************************
        * Process Single Domain where domain1 is the variable of interest
        *************************************************************************;

        %MACRO PROCESS1(DOMAIN1,INPT,FORM,LIB);

        *LIBNAME LIBRARY &LIB;

        PROC SORT DATA=IN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1; RUN;


        DATA _NULL_;
            SET &INPT;
            format _all_;
            BY &DOMAIN1;
            FILE "F:\DOD\Q&qtr._2003\Data\Afinal\Response_Rate\&DOMAIN1..OUT" LRECL=132;
            LENGTH VARNAME1 $8;
            LENGTH VARIABLE $30;
            CALL VNAME(&DOMAIN1,VARNAME1);
            VARIABLE = VARNAME1;
            %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN1";
            IF LAST.&DOMAIN1 THEN DO;
```

```
      PUT @001 &DOMAIN1 @;
      %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN2";
   END; * DOMAIN;
RUN;
%MEND PROCESS1;

******************************************************************************
* Process Double Domain where domain1/domain2 are the variables of interest
******************************************************************************
;
%MACRO PROCESS2(DOMAIN1,DOMAIN2,INPT,FORM,LIB);

*LIBNAME LIBRARY &LIB;

PROC SORT DATA=IN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1 &DOMAIN2; RUN;

DATA _NULL_;
   format _all_;
   SET &INPT;
   BY &DOMAIN1 &DOMAIN2;
   FILE "F:\DOD\Q&qtr._2003\Data\Afinal\Response_Rate\&DOMAIN1&DOMAIN2..OUT" LRECL=132;
   LENGTH VARNAME1 $8;
   LENGTH VARNAME2 $8;
   LENGTH VARIABLE $30;
   CALL VNAME(&DOMAIN1,VARNAME1);
   CALL VNAME(&DOMAIN2,VARNAME2);
   VARIABLE = VARNAME1 || " " || VARNAME2;
   %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN1";
   IF LAST.&DOMAIN2 THEN DO;
      PUT @001 &DOMAIN1 @;
      PUT @025 &DOMAIN2 @;
      %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN2";
      SN   = 0;
      SN1  = 0;
      SN11 = 0;
      SN12 = 0;
      SN2  = 0;
      SN3  = 0;
      SN4  = 0;
      SN41 = 0;
      SN42 = 0;
      WN   = 0;
      WN1  = 0;
      WN11 = 0;
      WN12 = 0;
      WN2  = 0;
      WN3  = 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,LIB);

*LIBNAME LIBRARY &LIB;

PROC SORT DATA=IN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1 &DOMAIN2 &DOMAIN3; RUN;

DATA _NULL_;
   format _all_;
   SET &INPT;
   BY &DOMAIN1 &DOMAIN2 &DOMAIN3;
   FILE "F:\DOD\Q&qtr._2003\Data\Afinal\Response_Rate\&DOMAIN1&DOMAIN2&DOMAIN3..OUT" LRECL=132;
   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 "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN1";
    IF LAST.&DOMAIN3 THEN DO;
        PUT @001 &DOMAIN1 @;
        PUT @015 &DOMAIN2 @;
        PUT @035 &DOMAIN3 @;
        %INCLUDE "F:\DOD\Q&qtr._2003\Programs\Response_Rate\TABLE02.IN2";
        SN   = 0;
        SN1  = 0;
        SN11 = 0;
        SN12 = 0;
        SN2  = 0;
        SN3  = 0;
        SN4  = 0;
        SN41 = 0;
        SN42 = 0;
        WN   = 0;
        WN1  = 0;
        WN11 = 0;
        WN12 = 0;
        WN2  = 0;
        WN3  = 0;
        WN4  = 0;
        WN41 = 0;
        WN42 = 0;
    END; * DOMAIN;
RUN;

%MEND PROCESS3;


***********************************************************
* PROCESS OVERALL RESPONSE RATE TABULATION - FORM A
***********************************************************
;
%PROCESS(newmerge, A, "J:\&PERIOD\DATA\AFINAL\FMTLIB");

***********************************************************
* PROCESS SINGLE DOMAIN RESPONSE RATE TABULATION - FORM A
***********************************************************
;
%PROCESS1(xregion, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(conus, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(sexsmpl,  newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(raceethn,  newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(ebg_com,  newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(enbgsmpl, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(cacsmpl, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(patcat, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
***********************************************************
* PROCESS DOUBLE DOMAIN RESPONSE RATE TABULATION - FORM A
***********************************************************
;
%PROCESS2(patcat, svcsmpl, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS2(patcat, sexsmpl, newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
*%PROCESS2(patcat, raceethn,newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS2(xregion, cacsmpl,newmerge, "FORM A",
        "J:\&PERIOD\DATA\AFINAL\FMTLIB");
***********************************************************
```

```
* PROCESS TRIPLE DOMAIN RESPONSE RATE TABULATION - FORM A
*********************************************************
;
*%PROCESS3(XXXXXXXX, XXXXXXXX, XXXXXXXX, XXXXXXXX, "FORM A",
        *"D:\KEITH\&PERIOD\DATA\FMTLIB");

                %end; *end of do for each quarter;
                %mend doit;
                %doit;
run;

proc freq data=IN4.newmerge;
table patcat raceethn patcat*raceethn patcat*svcsmpl / list missing ;
run;
```

7.B. Q4_2003\PROGRAMS\RESPONSE_RATE\TABLE02.IN1 - Include file1 used to Calculate Response Rates - Quarterly.

```
****************************************************************************
*
* 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).
*
****************************************************************************
*;
IF _N_ = 1 THEN DO;
   PUT; PUT;
   PUT @001 "TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY";
   PUT @001 "12-22-2003, TASK: 8860-300";
   PUT;
   PUT "SUMMARY OF GROUP COUNTS: " &FORM;
   PUT "VARIABLE = " VARIABLE;
   PUT;
   PUT @050 "UNWEIGHTED COUNT"
       @100 "WEIGHTED COUNT"
      ;
   PUT @040 'FLR'
       @050 'FCR'
       @060 'FRR'
       @070 'POP'
       @090 'FLR'
       @100 'FCR'
       @110 'FRR'
       @120 'POP'
      ;
END;
IF FIRST.&DOMAIN1 THEN DO;
   SN   = 0;
   SN1  = 0;
   SN11 = 0;
   SN12 = 0;
   SN2  = 0;
   SN3  = 0;
   SN4  = 0;
   SN41 = 0;
   SN42 = 0;
   WN   = 0;
   WN1  = 0;
   WN11 = 0;
   WN12 = 0;
   WN2  = 0;
   WN3  = 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 = 30 THEN DO;
    SN3 + 1;
    WN3 + BWT;
END;
*****************************************************
* Accumulate group 4 weighted and unweighted counts
*****************************************************
;
ELSE IF FNSTATUS IN(41,42) THEN DO;
    SN4 + 1;
    WN4 + BWT;
    IF FNSTATUS = 42 THEN DO;
        SN42 + 1;
        WN42 + BWT;
    END;
    ELSE DO;
        SN41 + 1;
        WN41 + BWT;
    END;
END;

DROP I;
RETAIN
    SN
    SN1
    SN11
    SN12
    SN2
    SN3
    SN4
    SN41
    SN42
    WN
    WN1
    WN11
    WN12
    WN2
    WN3
    WN4
    WN41
    WN42
    ;
```

**7.C. Q4_2003\PROGRAMS\RESPONSE_RATE\TABLE02.IN2 - Include file2 used to Calculate Response Rates
        - Quarterly.**

```
*****************************************************************************
*
* 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.
*
*****************************************************************************
*;
   *Interim Response Rate;
   IRR1 = ((SN1 + SN2 + SN3)/SN)*(SN1/(SN1 + SN2));
   IRR2 = ((WN1 + WN2 + WN3)/WN)*(WN1/(WN1 + WN2));

   *Final Response Rate;
   FRR1 = ((SN1 + SN2 + SN3)/SN)*(SN1/(SN1+SN2))*(SN11/SN1);
   FRR2 = ((WN1 + WN2 + WN3)/WN)*(WN1/(WN1+WN2))*(WN11/WN1);

   *Final Location Rate;
   L = ((SN1 + SN2)/(SN1 + SN2 + SN3))*SN41;
   WL = ((WN1 + WN2)/(WN1 + WN2 + WN3))*WN41;
   FLR1 = (SN1 + SN2 + L)/(SN1 + SN2 + SN4*((SN1 + SN2)/(SN1 + SN2 + SN3)));
   FLR2 = (WN1 + WN2 + WL)/(WN1 + WN2 + WN4*((WN1 + WN2)/(WN1 + WN2 + WN3)));

   *Final Completion Rate;
   FCR1 = SN11/(SN1 + SN2 + L);
   FCR2 = WN11/(WN1 + WN2 + WL);
   PUT @040 FLR1  4.3
       @050 FCR1  4.3
       @060 FRR1  4.3
       @066 SN    7.0
       @090 FLR2  4.3
       @100 FCR2  4.3
       @110 FRR2  4.3
       @116 WN    7.0
     ;
```

8.   Q4_2003\PROGRAMS\WEIGHTING\ADDWGTSA.SAS - Merge Weights onto Data File - Quarterly.

```
****************************************************************************
*
* PROGRAM:  ADDWGTS.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (8860-210)
* PURPOSE:  MERGE THE FINAL WEIGHTS FILE WITH THE FINAL
*           QUESTIONNAIRE/SAMPLE FILE
*
* WRITTEN:  02/02/2001 BY KEITH RATHBUN
*
* INPUTS:   1) REPWT.SD2  - Final/Replicated Weights file - FORM A
*           2) MERGEQ.SD2 - Final FORM A Questionnaire/Sample File
*
* OUTPUTS:  1) HCSyyq_n.SD2 - 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
*
* MODIFIED: 1) 4/23/2002 - DKB added DROP statement to drop the permanent
*              random number variable (PRN) that does not need to be on the
*              final data file sent to DoD.
*
****************************************************************************
;
LIBNAME IN      V612 "..\..\DATA\AFINAL";
LIBNAME OUT     V612 "..\..\DATA\AFINAL";
LIBNAME LIBRARY V612 "..\..\DATA\AFINAL\FMTLIB";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

%MACRO PROCESS(DSNI_1=,DSNI_2=,DSNO=);
****************************************************************************
* Merge the final weights file with the final Questionnaire/Sample file
****************************************************************************;
PROC SORT DATA=IN.&DSNI_1 OUT=&DSNI_1; BY MPRID; RUN;
PROC SORT DATA=IN.&DSNI_2 OUT=&DSNI_2; BY MPRID; RUN;

DATA OUT.&DSNO (DROP=PRN);
   MERGE &DSNI_2(IN=IN2)
         &DSNI_1(IN=IN1);
   BY MPRID;
   IF FNSTATUS = 11;
   IF IN1 AND IN2;
   IF NOT (IN1 AND IN2) THEN PUT "ERROR: NO MATCHING MPRID WITH &DSNI_1..SD2 AND &DSNI_2..SD2";
   LABEL KEYCOUNT = "# of Key Questions Answered";
   LABEL WRWT    = "Final Weight";
   LABEL FLAG_FIN = 'Final Disposition';
RUN;


TITLE1 "DOD Quarterly Health Care Survey (8860-210)";
TITLE2 "Program Name: ADDWGTS.SAS By Keith Rathbun";
TITLE3 "Program Inputs: &DSNI_1..SD2 -- &DSNI_2..SD2";
TITLE4 "Program Outputs: &DSNO..SD2";
PROC CONTENTS; RUN;

%MEND PROCESS;

%PROCESS(DSNI_1=REPWT, DSNI_2=MERGEQ, DSNO=HCS034_1);
```

9.   Q4_2003\PROGRAMS\WEIGHTING\PROCCOPA.SAS - Create XPORT version from Database - Quarterly.

```
*****************************************************************************
*
* PROGRAM: PROCCOPA.SAS
* PURPOSE: Create XPORT file from SD2
* WRITTEN  April 26, 2000 BY Keith Rathbun
* TASK:    2002 Quarterly DoD Database Development (8860-300)
*
* INPUTS:  1) HCSyyq_v.SD2 - DoD Quarterly HCSDB for Adults dataset
*
* OUTPUTS: 1) HCSyyq_v.XPT - DoD Quarterly HCSDB for Adults dataset (XPORT)
*             where yy = 2-digit year
*                    q = Quarter Number
*                    v = Version Number
*
* NOTES:   1) Be sure to update the global parameters for the current
*             quarter (QTR) with the appropriate dataset name (DSN)
*             prior to running this program.
*
*****************************************************************************
* Define global parameters
*****************************************************************************;
%LET DSN = HCS034_1;
%LET QTR = ..\..\..\Q4_2003\;
*****************************************************************************
* Define SAS libraries and options
*****************************************************************************;
LIBNAME IN V612 "&QTR.DATA\AFINAL";
*****************************************************************************
* Define SAS Transport file
*****************************************************************************;
LIBNAME OUT XPORT "&QTR.DATA\AFINAL\&DSN..XPT";
*****************************************************************************
* Generate SAS Transport file
*****************************************************************************;
PROC COPY IN=IN  OUT=OUT ; * Converts input file to transport file;
         SELECT &DSN;      * Selects SD2 file to copy;
RUN;
```

10.A WEIGHTING\ADJWT.SAS - Calculate Adjusted Weights - Annual.

```
****************************************************************
*** Project: DoD Quarterly Sampling - Nonresponse adjustments
***
*** Program: F:\DOD\2003\Programs\weighting\adjwt.sas,
***
*** TASK:    2003 QUARTERLY DOD HEALTH CARE SURVEY
*** PURPOSE: CALCULATE THE FINAL WEIGHT FOR Q1-Q3 with trickles
***
*** 12/23/2003 by Esther M. Friedman
*** NOTE: Q3 2003 contains the addition of trickles AND web responses
          Both of which were not included in the original dataset
*** INPUTS:  selectq.SD2
*** OUTPUTS: adjwt.SD2
****************************************************************************
*;

title1 "Q3 web indicator, check that web responses are added into dataset";
Proc freq data="F:\DOD\Q3_2003t\Data\Afinal\selectq.sd2";
  tables web ontime web*ontime/list;
run;

%macro doit;
  %do qtr=1 %to 3;
LIBNAME IN_f       v6    "F:\DOD\Q&qtr._2003\Data\Afinal";               /* framea.sd2,
sampla01 */;
LIBNAME IN         v6    "F:\DOD\Q&qtr._2003t\Data\Afinal";             /* selectq.sd2 */;
LIBNAME INKEITH    v6    "F:\DOD\Q&qtr._2003\Data\Afinal";              /* selectq.sd2 --
before trickles */;
LIBNAME OUT        v6    "F:\DOD\Q&qtr._2003t\data\afinal";             /* adjwt.sd2 */;
LIBNAME Q4         v6    "F:\DOD\Q4_2003\Data\Afinal";                  /* TMA spreadsheet */

OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOCENTER spool mlogic symbolgen mprint;

*program calculates design effects for domains of interest;
%include "C:\MyFiles\macros\design_effects_unequal_weights.sas";

title1 "DoD Quarterly Survey of Health Beneficiaries --- Quarter &qtr. with trickles";
title2 'Calculate the Final Weights With Trickles';
title3 'Program: adjwt.SAS ';

**************************************************************************;
***  Use cacsmpl collapsements from q4 framea.sas to recreate
***  consistent definition of cacsmpl for all four quarters of 2003
**************************************************************************;
* Geocell assignment;
data frame (keep=dcatch geocell pcm enrid mprid);
 set in_f.extract;
if pcm='MTF' then do;
     if ('1976' <= enrid <= '1980' ) or ( '6301' <= enrid <= '6323' ) or
        ('6991' <= enrid <= '6994')   or ('6501' <=enrid <='6512') or
        ('7166' <= enrid <= '7195')
        then geocell=dcatch; *Administrative assignment--1976-1980 added q4 2003*;
     else if ('3031' <= enrid <= '3057')
        then geocell = dcatch; ***On the Ship***;
     else if enrid in ('0002', '5208', '0250', '0449', '0626', '0012') /* '0626' added q2 2003,
0012 added q4 2003*/
        then geocell = dcatch; ***Inactive***;
     ****************************************************************;
     else if ('0190' <= enrid <='0199') then geocell = dcatch;**BYDON;
     ****************************************************************;
     else geocell = enrid;
   end;
   else geocell=dcatch;
RUN;

%MACRO PROCESS2(TMA, outdata);

* Read in TMA spreadsheet from Q4;
data TMA (keep = geocell d_par d_fac d_instal d_health);
 set q4.TMA;
```

```
      rename facilit1=d_fac installa=d_instal;

      length d_par $4.;
      d_par = DMIS_PAR;

      length geocell $4.;
      geocell = DMIS_ID;

      length d_health $2.;
      d_health = HEALTH_S;
      run;

      proc sort data=TMA;
      by geocell;
      run;

      proc sort data=frame;
      by geocell;
      run;

      data frame2;
      merge frame (in=a) TMA (in=b);
      by geocell;
      if a;
      run;

      * Bring in q4 framea.sas cacsmpl collapsements for small cells;
      data frame2;
        set frame2;
      %include "F:\DOD\Q4_2003\Programs\frame_coll.inc";
      run;
      *********************************************************
      ********** end of code from framea.sas         ********
      *********************************************************;

      %MACRO PROCESS(DOMAIN,CAC, FORM,INPT);

      ***************************************************************************
      * Calculate final weight based on user-specified domains.
      ***************************************************************************;
      *** merge ebg_com back into selectq. ***;
        data selectq;
        set in.selectq;
        format _all_;
        run;

        data sampla01 (keep= mprid ebg_com);
        set in_f.sampla01;
        format _all_;
        run;

        proc sort data=selectq;
        by mprid;
        run;

        proc sort data=sampla01;
        by mprid;
        run;

        data out.merged;
        merge selectq (in=a) sampla01 (in=b);
        by mprid;
        if a and b;
        format _all_;
        run;


      * merge back com_geo and ebsmpl created above from framea.sas code;
      proc sort data=&outdata out=frame3 (keep=mprid com_geo);
      by mprid;
      run;

      Proc sort data=out.&inpt.;
```

```
by mprid;
run;

data &inpt.;
merge frame3 (in=a) out.&inpt. (in=b);
by mprid;
if b;
run;

   *program collapses enrollment beneficiary groups based on q4;
data &inpt. ;
   set  &inpt.;
%include "F:\DOD\Q4_2003\programs\ebg_coll.inc";
   run;

  *** Initial Information. ***;

   title5 'FRAMEA.SD2 Count';

   proc freq data=in_f.framea;
   table enbgsmpl / list missing;
   run;

   title5 'mergeq.SD2 Counts -- before addition of trickles';
   proc freq data=inKeith.selectq;
   table fnstatus / list missing;
   run;

   title5 'mergeq.SD2 Counts -- with trickles';
   proc freq data=&inpt.;
   table enbgsmpl fnstatus ONTIME fnstatus*ontime/ list missing;
   run;

   title5 'mergeq.SD2 Counts with trickles Using BWT as the Weight';
   proc freq data=&inpt.;
   table enbgsmpl fnstatus/ list missing;
   weight bwt;
   run;

*program collapses weighting adjustments cells due to small number of responses;
data &inpt. ;
   set  &inpt. ( keep = MPRID FNSTATUS BWT ebg_com enbgsmpl XREGION stratum &cac. com_geo
cacsmpl);
%include "F:\DOD\Q4_2003\Programs\cac_coll.inc";
   run;

PROC SORT DATA=&inpt. OUT=&INPT.;
BY &DOMAIN.;
RUN;

*****************************************************************************
* Calculate adjustment factor A1 for each cell.
* This is the Eligibility Determination adjustment.
*****************************************************************************;
Data  cellsa1 (keep=sumbwt sumg1-sumg3 a1 cellcnt cntg1-cntg3 &domain.)
      mpridsa1 (keep=mprid fnstatus bwt &domain. ebg_com &cac. )
    ;
   SET &INPT.;
   BY &DOMAIN;

   IF FIRST.&DOMAIN. 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 (20,30) 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.&DOMAIN. THEN DO;
        A1 = SUMBWT/(SUMG1 + SUMG2);
        OUTPUT CELLSA1;
     END;

     OUTPUT MPRIDSA1;

RUN;


title5 'Check for CELLSA1 Data Set';

proc print data=cellsa1;
var &domain. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

proc print data=cellsa1;
where ( a1 > 7 ) or ( cntg1 + cntg2 < 10 );
var &domain. cntg1-cntg3 cellcnt sumg1-sumg3 sumbwt a1;
sum cellcnt cntg1 cntg2 cntg3 sumbwt sumg1 sumg2 sumg3;
run;

proc univariate data=cellsa1 normal ;
var a1;
run;

proc sort data=mpridsa1;
by &domain.;
run;

proc sort data=cellsa1;
by &domain.;
run;
```

```
data adj_one;
merge mpridsa1 cellsa1;
by &domain.;
if fnstatus in (11,12,20,30) then adj1 = a1;
   else adj1 = 0;
adj_wt1 = adj1 * bwt;
run;

title5 'Checks for ADJ_ONE Data Set';

proc freq data=adj_one;
table &domain.*fnstatus*adj1 / list missing;
run;

proc means data=adj_one n sum NOPRINT;
class fnstatus;
var adj_wt1;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

proc means data=adj_one n sum NOPRINT;
class ebg_com;
var adj_wt1;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

*****************************************************************************
* Calculate adjustment factor A2 for each cell.
* This is the Nonresponse adjustment and creates the final weight (wrwt).
*****************************************************************************;

proc sort data=adj_one;
by &domain.;
run;

DATA CELLSA2 (KEEP= &domain. NUMER DENOM numercnt denomcnt A2);
   set adj_one ;
   BY &domain.;

   IF FIRST.&domain. 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 + BWT*A1;
         numercnt + 1;
      end;

   IF FNSTATUS = 11 THEN
      do;
         DENOM + BWT*A1;
         denomcnt + 1;
      end;

   IF LAST.&domain. THEN DO;
```

```
         A2 = NUMER/DENOM;
         OUTPUT CELLSA2;
      END;

RUN;


title5 'Check for CELLSA2 Data Set';

proc print data=cellsa2;
var &domain. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

proc print data=cellsa2;
where ( a2 > 7 ) or ( denomcnt < 10 );
var &domain. numercnt denomcnt numer denom a2;
sum numer denom numercnt denomcnt;
run;

proc univariate data=cellsa2 normal ;
var a2;
run;

proc sort data=adj_one;
by &domain.;
run;

proc sort data=cellsa2;
by &domain.;
run;

data adj_two;
merge adj_one cellsa2;
by &domain.;
if fnstatus = 11 then adj2 = a2;
   else if fnstatus = 30 then adj2 = 1;
   else adj2 = 0;
adjwt = adj2 * adj_wt1;
label adjwt = 'Adjusted Weight';
KEEP MPRID fnstatus adj1 adj2 adjwt &domain. ebg_com ;
run;

title5 'Check for ADJ_TWO Data Set';

proc freq data=adj_two;
table &domain.*fnstatus*adj2 / list missing;
run;

proc means data=adj_two n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

proc means data=adj_two n sum NOPRINT;
class ebg_com;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

data adj_two;
set adj_two(drop=fnstatus ebg_com );
run;
```

```
*****************************************************************************
* Sort the original data
*****************************************************************************;

PROC SORT DATA=&INPT. OUT=&INPT.;
BY MPRID;
RUN;

*****************************************************************************
* Sort the ADJ_TWO data set
*****************************************************************************;

PROC SORT DATA=adj_two;
BY MPRID;
RUN;

*****************************************************************************
* Append final weight variable (adjwt)
*****************************************************************************;
DATA out.adjwt;
   MERGE adj_two &INPT.;
   BY MPRID;
RUN;

title5 'Checks for adjwt Data Set';

proc means data=out.adjwt n sum NOPRINT;
class fnstatus;
var adjwt;
output out=print sum=sum;
run;

Proc print data=print;
sum sum;
where _type_=1;
run;

proc sort data=out.adjwt out=chk;
by &domain. fnstatus;
run;

data sub_chk;
set chk(keep = &cac. stratum &domain. fnstatus bwt adj1 adj2 adjwt);
by &domain. 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;
var &domain. fnstatus bwt adj1 adj2 prodadjs adjwt cellcnt sumadjwt;
sum cellcnt sumadjwt;
run;

proc univariate data=sub_chk normal ;
where fnstatus=11;
var prodadjs;
run;

title5 "individual level adjwt";
proc univariate data=out.adjwt normal ;
where fnstatus=11;
```

```
var adjwt;
run;

proc sort data=out.adjwt;
by XREGION;
run;

title5 "Distribution of weights by region";
proc univariate data=out.adjwt normal ;
where fnstatus=11;
var adjwt;
by XREGION;
run;

***********************************;
*** Calculate the Design Effects ***;
***********************************;

*create dataset of completes only;
data adjwt_fnl;
set out.adjwt;
where fnstatus=11;
run;

*Remove XREGIONs of missing from design effects;
data adjwt_reg;
set adjwt_fnl;
where XREGION~=.;
run;

%design_effects_unequal_weights ( adjwt_fnl, &cac.,  adjwt, deff_overall, deff_cac );
%design_effects_unequal_weights ( adjwt_fnl, ebg_com,  adjwt, deff_overall, deff_ebg );
%design_effects_unequal_weights ( adjwt_fnl, enbgsmpl, adjwt, deff_overall, deff_enb );
%design_effects_unequal_weights ( adjwt_reg, XREGION,  adjwt, deff_overall, deff_reg );

title5 'Design Effects Overall';
proc print data = deff_overall;
run;

*** For Catchment Area ***;

title5 "Design Effects for &cac.";
proc print data= deff_cac;
run;

*** For Enrollee/Beneficiary Groups ***;

title5 'Design Effects for ebg_com';
proc print data= deff_ebg;
run;

*** For ENBGSMPL Groups ***;

title5 'Design Effects for ENBGSMPL';
proc print data= deff_enb;
run;

*** For XREGION Groups ***;

title5 'Design Effects for XREGION';
proc print data= deff_reg;
run;

%MEND PROCESS;
%PROCESS(com_samp,com_geo,A,merged);
RUN;

%MEND process2;
%PROCESS2(TMA, t_framea);
RUN;

%end; *end of do for each quarter;
%mend doit;
```

```
%doit;
```

10.B. WEIGHTING\REPWT.SAS - Calculate Replicated Weights - Annual.

```
*******************************************************************************
* PROGRAM: repwt.SAS
* TASK:    2003 DOD QUARTERLY HEALTH CARE SURVEY
* PURPOSE: CALCULATE REPLICATE WEIGHTS FOR DOD SURVEY.
* WRITTEN: 12/30/1999 BY KEITH RATHBUN
* Updated: 12/30/2003 by Esther M Friedman
*
* INPUTS:  adjwt.SD2 - Final Weights file
*
* OUTPUTS: repwt.SD2 - Replicate Weights File
*
*******************************************************************************
*;

%macro doit;
  %do qtr=1 %to 3;

LIBNAME IN  v6 "F:\DOD\Q&qtr._2003t\data\afinal";
LIBNAME OUT v6 "F:\DOD\Q&qtr._2003t\data\afinal";

OPTIONS PS=79 LS=132 COMPRESS=YES errors=0 NOCENTER /*mlogic mprint symbolgen*/;

TITLE1 "Q&qtr. 2003 DoD Final/Replicated Weights with Trickles";

%MACRO PROCESS(DOMAIN1,DOMAIN2,CAC, reps);

*************************************************************************
* Sort the final weights file by user-specified domains
*************************************************************************;

PROC SORT DATA=IN.adjwt(KEEP=FNSTATUS MPRID BWT &DOMAIN1. &DOMAIN2. stratum) OUT=adjwt;
     BY stratum &DOMAIN2.;
RUN;


*************************************************************************
* Append SUBSET index (I) to each observation
*************************************************************************;
DATA SUBSETS;
   SET adjwt;
   BY stratum &DOMAIN2.;

   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.)
   ;
   SET subset;
   BY &DOMAIN1.;

   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 (20,30) 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 = SUMBBWT/(SUMG1 + SUMG2);
      OUTPUT CELLSA1;
   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 (11,12,20,30) then adj1 = a1;
    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 &domain1.;
run;

DATA CELLSA2 (KEEP= &domain1. NUMER DENOM numercnt denomcnt A2);
    set adj_one;
    BY &domain1.;

    IF FIRST.&domain1. 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 + BBWT*A1;
            numercnt + 1;
        end;

    IF FNSTATUS = 11 THEN
        do;
            DENOM + BBWT*A1;
            denomcnt + 1;
        end;

    IF LAST.&domain1. THEN DO;
        A2 = NUMER/DENOM;
        OUTPUT CELLSA2;
    END;

RUN;

proc sort data=adj_one;
by &domain1.;
run;

proc sort data=cellsa2;
by &domain1.;
run;

data subset&i.;
merge adj_one cellsa2;
by &domain1.;
if fnstatus = 11 then adj2 = a2;
    else if fnstatus = 30 then adj2 = 1;
    else adj2 = 0;
jkweight = adj2 * adj_wt1;
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 wrwt1-wrwt&reps. SUBSET;
      RUN;

      ***************************************************************************
      * Sort the original data, get the final weight (WRWT), append the
      * JackKnife/Replicated weights (WRWT1-WRWT60), and label variables.
      ***************************************************************************;
      PROC SORT DATA=IN.adjwt
                OUT=adjwt;
          BY MPRID;
      RUN;

      proc sort data=allsets;
      by mprid;
      run;

      DATA OUT.repwt ;
          MERGE adjwt 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;


TITLE2 "Checks for the Replicate Weights";
proc sort data=OUT.repwt out=sorted;
by stratum &domain2.;
run;

proc print data=sorted (obs=500);
var stratum &domain2. SUBSET fnstatus wrwt1-wrwt5;
run;

PROC CONTENTS DATA=OUT.repwt;
run;

PROC MEANS DATA=OUT.repwt n sum;
VAR  adjwt WRWT1-WRWT&reps.;
RUN;

PROC SORT DATA=OUT.repwt;
BY MPRID;
RUN;

DATA OUT.repwt;
```

```
   SET OUT.repwt;
   BY MPRID;

   ARRAY WGTS(&reps.) WRWT1-WRWT&reps.;
   DO I = 1 TO &reps.; DROP I;
      IF WGTS(I) EQ . THEN WGTS(I) = 0;
   END;

   KEEP MPRID BWT adjwt WRWT1-WRWT&reps. fnstatus &domain1. &cac. &domain1.;
RUN;

PROC MEANS DATA=OUT.repwt n sum;
VAR  adjwt wrwt1-wrwt&reps.;
output out=sums sum(adjwt wrwt1-wrwt&reps.) = adjwt wrwt1-wrwt&reps.;
RUN;

proc transpose data=sums out=t_sums;
var adjwt wrwt1-wrwt&reps.;
run;

proc univariate data=t_sums normal ;
var col1;
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 wrwt1-wrwt60;
output out = amang sum= / autoname;
run;

proc print data = amang;
run;

****************************************************************************
* Rename adjwt to wrwt
****************************************************************************;

data out.repwt (drop = adjwt);
set in.repwt;
wrwt = adjwt;
label &domain1. = 'Final Adjusted Cell';
label &cac.     = 'Catchment Area';
label wrwt      = 'Final Weight';
run;

PROC CONTENTS DATA=OUT.repwt;
run;

%MEND process;

%PROCESS(com_samp, mprid, com_geo, 60);


%end; *end of do for each quarter;
%mend doit;
%doit;
```

11.A RESPONSERATES\TABLE02.SAS - Calculate Response Rates - Annual.

```
****************************************************************************
*
* PROGRAM: TABLE02.SAS
* TASK:    2002 DOD HEALTH CARE SURVEY ANALYSIS (8860-210)
* PURPOSE: BUILD TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY
*          Quarterly DOD HEALTH CARE SURVEY 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
* INCLUDES: 1) TABLE02.IN1
*           2) TABLE02.IN2
****************************************************************************;
*LIBRARIES;

LIBNAME DODIN1  v6   "F:\DOD\Q1_2003t\Data\afinal";
LIBNAME IN1     v6   "F:\DOD\Q1_2003\Data\afinal";
LIBNAME DODIN2  v6   "F:\DOD\Q2_2003t\Data\afinal";
LIBNAME IN2     v6   "F:\DOD\Q2_2003\Data\afinal";
LIBNAME DODIN3  v6   "F:\DOD\Q3_2003t\Data\afinal";
LIBNAME IN3     v6   "F:\DOD\Q3_2003\Data\afinal";
LIBNAME DODIN4  v6   "F:\DOD\Q4_2003\Data\Afinal";
LIBNAME IN4     v6   "F:\DOD\Q4_2003\Data\Afinal";

OPTIONS PS=79 LS=132 COMPRESS=YES ERRORS=1 NOCENTER NOFMTERR /*mprint mlogic*/;

%let period= dod\q4_2002;

%macro doit;
  %do qtr=1 %to 3;

****************************************************************************
* Merge repwt and selectq files to add ebg_com
****************************************************************************;

 data selectq;
 set DODIN&qtr..selectq;
 format _all_;
 run;

 proc sort data=selectq;
 by mprid;
 run;

 proc sort data=IN&qtr..sampla01 out=sampla01 (keep=mprid ebg_com);
 by mprid;
 run;

 proc sort data=DODIN&qtr..repwt out=repwt (keep=mprid com_geo);
 by mprid;
 run;

 data DODIN&qtr..newmerge;
 merge sampla01 repwt selectq;
 by mprid;
 run;

 %MACRO PROCESS(INPT,FORM,LIB);

****************************************************************************
* Process OVERALL Summary of response rates
****************************************************************************
 ;
```

```
DATA _NULL_;
   SET DODIN&qtr..&INPT END=FINISHED;
   format _all_;
   IF _N_ = 1 THEN DO;
      SN   = 0;
      SN1  = 0;
      SN11 = 0;
      SN12 = 0;
      SN2  = 0;
      SN3  = 0;
      SN4  = 0;
      SN41 = 0;
      SN42 = 0;
      WN   = 0;
      WN1  = 0;
      WN11 = 0;
      WN12 = 0;
      WN2  = 0;
      WN3  = 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 = 30 THEN DO;
   SN3 + 1;
   WN3 + BWT;
END;
*****************************************************
* Accumulate group 4 weighted and unweighted counts
*****************************************************
;
ELSE IF FNSTATUS IN(41,42) THEN DO;
   SN4 + 1;
   WN4 + BWT;
   IF FNSTATUS = 42 THEN DO;
      SN42 + 1;
      WN42 + BWT;
   END;
   ELSE DO;
      SN41 + 1;
      WN41 + BWT;
   END;
END;
```

```
    DROP I;
    RETAIN
        SN
        SN1
        SN11
        SN12
        SN2
        SN3
        SN4
        SN41
        SN42
        WN
        WN1
        WN11
        WN12
        WN2
        WN3
        WN4
        WN41
        WN42
      ;

      IF FINISHED THEN GO TO FINISHED;

      RETURN;

    FINISHED:
      FILE "F:\DOD\Q&qtr._2003t\Data\afinal\TABLE02&FORM..OUT" LRECL=132;
      PUT; PUT;
      PUT @001 "TABLE 2: OVERALL RESPONSE RATES SUMMARY";
      PUT;
      PUT "SUMMARY OF GROUP COUNTS: FORM &FORM";
      PUT;
      PUT @050 "UNWEIGHTED COUNT"
          @100 "WEIGHTED COUNT"
          ;
      PUT @040 'FLR'
          @050 'FCR'
          @060 'FRR'
          @070 'POP'
          @090 'FLR'
          @100 'FCR'
          @110 'FRR'
          @120 'POP'
          ;
      %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN2";
    RUN;
    %MEND PROCESS;

    **************************************************************************
    * Process Single Domain where domain1 is the variable of interest
    *************************************************************************;

    %MACRO PROCESS1(DOMAIN1,INPT,FORM,LIB);

    *LIBNAME LIBRARY &LIB;

    PROC SORT DATA=DODIN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1; RUN;


    DATA _NULL_;
      SET &INPT;
      format _all_;
      BY &DOMAIN1;
      FILE "F:\DOD\Q&qtr._2003t\Data\afinal\&DOMAIN1..OUT" LRECL=132;
      LENGTH VARNAME1 $8;
      LENGTH VARIABLE $30;
      CALL VNAME(&DOMAIN1,VARNAME1);
      VARIABLE = VARNAME1;
      %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN1";
      IF LAST.&DOMAIN1 THEN DO;
         PUT @001 &DOMAIN1 @;
```

```
      %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN2";
   END; * DOMAIN;
RUN;
%MEND PROCESS1;

*****************************************************************************
* Process Double Domain where domain1/domain2 are the variables of interest
*****************************************************************************
;
%MACRO PROCESS2(DOMAIN1,DOMAIN2,INPT,FORM,LIB);

*LIBNAME LIBRARY &LIB;

PROC SORT DATA=DODIN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1 &DOMAIN2; RUN;

DATA _NULL_;
   format _all_;
   SET &INPT;
   BY &DOMAIN1 &DOMAIN2;
   FILE "F:\DOD\Q&qtr._2003t\Data\afinal\&DOMAIN1&DOMAIN2..OUT" LRECL=132;
   LENGTH VARNAME1 $8;
   LENGTH VARNAME2 $8;
   LENGTH VARIABLE $30;
   CALL VNAME(&DOMAIN1,VARNAME1);
   CALL VNAME(&DOMAIN2,VARNAME2);
   VARIABLE = VARNAME1 || " " || VARNAME2;
   %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN1";
   IF LAST.&DOMAIN2 THEN DO;
      PUT @001 &DOMAIN1 @;
      PUT @025 &DOMAIN2 @;
      %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN2";
      SN    = 0;
      SN1   = 0;
      SN11  = 0;
      SN12  = 0;
      SN2   = 0;
      SN3   = 0;
      SN4   = 0;
      SN41  = 0;
      SN42  = 0;
      WN    = 0;
      WN1   = 0;
      WN11  = 0;
      WN12  = 0;
      WN2   = 0;
      WN3   = 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,LIB);

*LIBNAME LIBRARY &LIB;

PROC SORT DATA=IN&qtr..&INPT OUT=&INPT ; BY &DOMAIN1 &DOMAIN2 &DOMAIN3; RUN;

DATA _NULL_;
  format _all_;
   SET &INPT;
   BY &DOMAIN1 &DOMAIN2 &DOMAIN3;
   FILE "F:\DOD\Q&qtr._2003t\Data\afinal\&DOMAIN1&DOMAIN2&DOMAIN3..OUT" LRECL=132;
   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 "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN1";
        IF LAST.&DOMAIN3 THEN DO;
            PUT @001 &DOMAIN1 @;
            PUT @015 &DOMAIN2 @;
            PUT @035 &DOMAIN3 @;
            %INCLUDE "F:\DOD\2003\Programs\ResponseRates\TABLE02.IN2";
            SN   = 0;
            SN1  = 0;
            SN11 = 0;
            SN12 = 0;
            SN2  = 0;
            SN3  = 0;
            SN4  = 0;
            SN41 = 0;
            SN42 = 0;
            WN   = 0;
            WN1  = 0;
            WN11 = 0;
            WN12 = 0;
            WN2  = 0;
            WN3  = 0;
            WN4  = 0;
            WN41 = 0;
            WN42 = 0;
        END; * DOMAIN;
RUN;

%MEND PROCESS3;


*************************************************************
* PROCESS OVERALL RESPONSE RATE TABULATION - FORM A
*************************************************************
;
%PROCESS(newmerge, A, "J:\&PERIOD\DATA\AFINAL\FMTLIB");

*************************************************************
* PROCESS SINGLE DOMAIN RESPONSE RATE TABULATION - FORM A
*************************************************************
;
%PROCESS1(xregion, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(conus, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(sexsmpl,  newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(raceethn,  newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(ebg_com,  newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(enbgsmpl, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(com_geo, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS1(patcat, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");

*************************************************************
* PROCESS DOUBLE DOMAIN RESPONSE RATE TABULATION - FORM A
*************************************************************
;
%PROCESS2(patcat, svcsmpl, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS2(patcat, sexsmpl, newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS2(patcat, raceethn,newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
%PROCESS2(xregion, com_geo,newmerge, "FORM A",
          "J:\&PERIOD\DATA\AFINAL\FMTLIB");
*************************************************************
```

```
* PROCESS TRIPLE DOMAIN RESPONSE RATE TABULATION - FORM A
**********************************************************
;
*%PROCESS3(XXXXXXXX, XXXXXXXX, XXXXXXXX, XXXXXXXX, "FORM A",
        *"D:\KEITH\&PERIOD\DATA\FMTLIB");

                %end; *end of do for each quarter;
                %mend doit;
                %doit;
run;
```

11.B. RESPONSERATES\TABLE02.IN1 - Include file1 used to Calculate Response Rates - Annual.

```
****************************************************************************
*
* 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).
*
****************************************************************************
*;
IF _N_ = 1 THEN DO;
   PUT; PUT;
   PUT @001 "TABLE 2: RESPONSE RATES BY DOMAIN SUMMARY";
   PUT;
   PUT "SUMMARY OF GROUP COUNTS: " &FORM;
   PUT "VARIABLE = " VARIABLE;
   PUT;
   PUT @050 "UNWEIGHTED COUNT"
       @100 "WEIGHTED COUNT"
       ;
   PUT @040 'FLR'
       @050 'FCR'
       @060 'FRR'
       @070 'POP'
       @090 'FLR'
       @100 'FCR'
       @110 'FRR'
       @120 'POP'
       ;
END;
IF FIRST.&DOMAIN1 THEN DO;
   SN   = 0;
   SN1  = 0;
   SN11 = 0;
   SN12 = 0;
   SN2  = 0;
   SN3  = 0;
   SN4  = 0;
   SN41 = 0;
   SN42 = 0;
   WN   = 0;
   WN1  = 0;
   WN11 = 0;
   WN12 = 0;
   WN2  = 0;
   WN3  = 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 = 30 THEN DO;
      SN3 + 1;
      WN3 + BWT;
   END;
   ****************************************************
   * Accumulate group 4 weighted and unweighted counts
   ****************************************************
   ;
   ELSE IF FNSTATUS IN(41,42) THEN DO;
      SN4 + 1;
      WN4 + BWT;
      IF FNSTATUS = 42 THEN DO;
         SN42 + 1;
         WN42 + BWT;
      END;
      ELSE DO;
         SN41 + 1;
         WN41 + BWT;
      END;
   END;

   DROP I;
   RETAIN
      SN
      SN1
      SN11
      SN12
      SN2
      SN3
      SN4
      SN41
      SN42
      WN
      WN1
      WN11
      WN12
      WN2
      WN3
      WN4
      WN41
      WN42
      ;
```

11.C. RESPONSERATES\TABLE02.IN2 - Include file2 used to Calculate Response Rates - Annual.

```
*****************************************************************************
*
* 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.
*
*****************************************************************************
*;
   *Interim Response Rate;
   IRR1 = ((SN1 + SN2 + SN3)/SN)*(SN1/(SN1 + SN2));
   IRR2 = ((WN1 + WN2 + WN3)/WN)*(WN1/(WN1 + WN2));

   *Final Response Rate;
   FRR1 = ((SN1 + SN2 + SN3)/SN)*(SN1/(SN1+SN2))*(SN11/SN1);
   FRR2 = ((WN1 + WN2 + WN3)/WN)*(WN1/(WN1+WN2))*(WN11/WN1);

   *Final Location Rate;
   L = ((SN1 + SN2)/(SN1 + SN2 + SN3))*SN41;
   WL = ((WN1 + WN2)/(WN1 + WN2 + WN3))*WN41;
   FLR1 = (SN1 + SN2 + L)/(SN1 + SN2 + SN4*((SN1 + SN2)/(SN1 + SN2 + SN3)));
   FLR2 = (WN1 + WN2 + WL)/(WN1 + WN2 + WN4*((WN1 + WN2)/(WN1 + WN2 + WN3)));

   *Final Completion Rate;
   FCR1 = SN11/(SN1 + SN2 + L);
   FCR2 = WN11/(WN1 + WN2 + WL);
   PUT @040 FLR1  4.3
       @050 FCR1  4.3
       @060 FRR1  4.3
       @066 SN 7.0
       @090 FLR2  4.3
       @100 FCR2  4.3
       @110 FRR2  4.3
       @116 WN    7.0
     ;
```

12. WEIGHTING\COMB2003.SAS - Combine quarterly datasets into one annual file.

```
******************************************************************************
*
*  PROGRAM:  COMB2003.SAS
*  TASK:     ANNUAL DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
*  PURPOSE:  Combine quarterly datasets into one annual file.
*
*  WRITTEN: 12/23/2002 BY KEITH RATHBUN.
*
*   INPUTS: 1) MERGEQ.SD2 - Q1-Q4 DOD HCS Analysis files (No Weights Added)
*           2) XWALK.SD2 - Most recent XWALK file
*
*   OUTPUT: 1) COMB2003.SD2 - 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.
*
******************************************************************************
* Assign data libraries and options
******************************************************************************;
LIBNAME INQ1    V612 "..\..\..\Q1_2003T\DATA\AFINAL";
LIBNAME INQ2    V612 "..\..\..\Q2_2003T\DATA\AFINAL";
LIBNAME INQ3    V612 "..\..\..\Q3_2003T\DATA\AFINAL";
LIBNAME INQ4    V612 "..\..\..\Q4_2003\DATA\AFINAL";
LIBNAME OUT     V612 "..\..\DATA";
LIBNAME LIBRARY V612 "..\..\..\Q4_2003\DATA\AFINAL\FMTLIB";
OPTIONS COMPRESS=YES LS=132 PS=79 NOCENTER NOFMTERR;

******************************************************************************
* Combine quarterly datasets with all of the "trickle" data into one file.
******************************************************************************;
DATA COMB2003;
   SET INQ1.HCS031_1(RENAME=(CACSMPL=XCACSMPL))
       INQ2.HCS032_1(RENAME=(CACSMPL=XCACSMPL))
       INQ3.HCS033_1(RENAME=(CACSMPL=XCACSMPL))
       INQ4.HCS034_1(RENAME=(CACSMPL=XCACSMPL))
       ;
   BY MPRID;
   LENGTH CACSMPL 8;
   CACSMPL = XCACSMPL; *Convert Catchment Area to numeric value;
   LABEL CACSMPL = "CACSMPL - Catchment Area ";
   DROP XCACSMPL;
   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=COMB2003 OUT=COMB2003(DROP=E1-E12) NODUPKEY; BY MPRID; RUN;

******************************************************************************
* Get eligibility indicators from most recent Q4 XWALK file and append
* them to the combined annual dataset.
******************************************************************************;
PROC SORT DATA=INQ4.XWALK OUT=ELIG(KEEP=MPRID E1-E12) NODUPKEY; BY MPRID; RUN;

DATA OUT.COMB2003;
   MERGE ELIG(IN=IN1) COMB2003(IN=IN2);
   BY MPRID;
   LABEL
     E1       = "Elig ind for pd=1 (as of 31 July 2000)"
     E2       = "Elig ind for pd=2 (as of 30 Sept 2000)"
     E3       = "Elig ind for pd=3 (as of 31 Jan 2001)"
     E4       = "Elig ind for pd=4 (as of 31 Mar 2001)"
     E5       = "Elig ind for pd=5 (as of 31 Aug 2001)"
```

```
      E6        = "Elig ind for pd=6 (as of 30 Nov 2001)"
      E7        = "Elig ind for pd=7 (as of 28 Feb 2002)"
      E8        = "Elig ind for pd=8 (as of 31 May 2002)"
      E9        = "Elig ind for pd=9 (as of 31 Aug 2002)"
      E10       = "Elig ind for pd=10 (as of 30 Nov 2002)"
      E11       = "Elig ind for pd=11 (as of 28 Feb 2003)"
      E12       = "Elig ind for pd=12 (as of 31 May 2003)"
    ;
   IF IN1 AND IN2;
RUN;


TITLE1 "Annual DOD Health Care Survey Database (8860-300)";
TITLE2 "Program Name: COMB2003.SAS By Keith Rathbun";
TITLE3 "Program Inputs: XWALK.SD2 and HCSyyq_1.SD2 - Q1-Q4 DOD HCS Sample and Analysis files";
TITLE4 "Program Output: COMB2003.SD2 - Combined quarterly datasets in one annual file";

PROC CONTENTS; RUN;
```

13.   WEIGHTING\ADDWGTS.SAS - Merge Weights onto Data File - Annual.

```
*****************************************************************************
*
* PROGRAM:  ADDWGTS.SAS
* TASK:     2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
* 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.
*
* INPUTS:   1) REPWT.SD2  - Final/Replicated Weights file - FORM A
*           2) COMB2003.SD2 - Combined Q1-Q4 FORM A Questionnaire/Sample File
*           3) STEP1Q.SD7 - CACSMPL redefined for annual reporting purposes
*
* OUTPUTS:  1) HCSyyA_n.SD2 - 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
*
* NOTES:    1) This program combines all of the quarterly input datasets
*              including trickles with the annual weights file.
*
*****************************************************************************;
LIBNAME INV8        "..\..\DATA";
LIBNAME IN     V612 "..\..\DATA";
LIBNAME OUT    V612 "..\..\DATA";
LIBNAME LIBRARY V612 "..\..\DATA\FMTLIB";

OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

%MACRO PROCESS(DSNI_1=,DSNI_2=,DSNO=);
*****************************************************************************
* Merge the final weights file with the final Questionnaire/Sample file
*****************************************************************************;
PROC SORT DATA=IN.&DSNI_1 OUT=&DSNI_1; BY MPRID; RUN;
PROC SORT DATA=IN.&DSNI_2 OUT=&DSNI_2; BY MPRID; RUN;

DATA &DSNO;
   MERGE &DSNI_2(IN=IN2 DROP=ADJ_CELL)
         &DSNI_1(IN=IN1 DROP=QUARTER RENAME=(CACSMPL=XCACSMPL));
   BY MPRID;
   IF FNSTATUS = 11;
   IF IN1 AND IN2;
   IF NOT (IN1 AND IN2) THEN PUT "ERROR: NO MATCHING MPRID WITH &DSNI_1..SD2 AND &DSNI_2..SD2";
   LABEL KEYCOUNT = "# of Key Questions Answered";
   LABEL ADJ_CELL = "ADJ_CELL - Adjusted STRATUM cell";
   LABEL CWRWT    = "Combined Annual Weight";
   *********************************************************************
   * Change CACSMPL to be numeric datatype for future use with SUDAAN.
   *********************************************************************;
   LABEL CACSMPL = "CACSMPL - Catchment Area (Sampling)";
   LENGTH CACSMPL 8;
   CACSMPL = XCACSMPL; DROP XCACSMPL;
   FORMAT CACSMPL CAC.;
   DROP COM_GEO COM_SAMP; *These are redundant.. same as CACSMPL and ADJ_CELL;

   FORMAT WEB web.;
   FORMAT e1 e2 e3 e4 e5 e6 e7 e8 e9 e10 e11 e12 $e_.;
RUN;


DATA OUT.&DSNO;
   *********************************************************************
```

```
    * 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 */
        DCATCH       $ 4          /* sampling variable */
        DMIS_ID      $ 9          /* sampling variable */
        E1           $ 1          /* sampling variable */
        E2           $ 1          /* sampling variable */
        E3           $ 1          /* sampling variable */
        E4           $ 1          /* sampling variable */
        E5           $ 1          /* sampling variable */
        E6           $ 1          /* sampling variable */
        E7           $ 1          /* sampling variable */
        E8           $ 1          /* sampling variable */
        E9           $ 1          /* sampling variable */
        E10          $ 1          /* sampling variable */
        E11          $ 1          /* sampling variable */
        E12          $ 1          /* sampling variable */

        SERVAFF      $ 1          /* DEERS variable    */
        MRTLSTAT     $ 1          /* DEERS variable    */
        RACEETHN     $ 1          /* DEERS variable    */
        PNSEXCD      $ 1          /* DEERS variable    */
        LEGDDSCD     $ 2          /* DEERS variable    */
        DAGEQY       $ 3          /* DEERS variable    */
        PCM          $ 3          /* DEERS variable    */
        /*TSPSITE     $ 10*/          /* 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    */
        PNLCATCD     $ 1          /* DEERS variable    */
        FIELDAGE     $ 3          /* DEERS variable    */

        H03001         4          /* Questionaire variable    */
        H03002A        4          /* Questionaire variable    */
        H03002C        4          /* Questionaire variable    */
        H03002F        4          /* Questionaire variable    */
        H03002G        4          /* Questionaire variable    */
        H03002H        4          /* Questionaire variable    */
        H03002I        4          /* Questionaire variable    */
        H03002J        4          /* Questionaire variable    */
        H03002K        4          /* Questionaire variable    */
        H03002L        4          /* Questionaire variable    */
        H03002M        4          /* Questionaire variable    */
        H03002N        4          /* Questionaire variable    */
        H03002O        4          /* Questionaire variable    */
        H03003         4          /* Questionaire variable    */
        H03004         4          /* Questionaire variable    */
        H03005         4          /* Questionaire variable    */
        H03006         4          /* Questionaire variable    */
        H03007         4          /* Questionaire variable    */
        H03008         4          /* Questionaire variable    */
        H03009         4          /* Questionaire variable    */
        H03010         4          /* Questionaire variable    */
        H03011         4          /* Questionaire variable    */
        H03012         4          /* Questionaire variable    */
        H03013         4          /* Questionaire variable    */
        H03014         4          /* Questionaire variable    */
        H03015         4          /* Questionaire variable    */
        H03016         4          /* Questionaire variable    */
        H03017         4          /* Questionaire variable    */
```

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H03018          4          /* Questionaire variable    */

H03019          4          /* Questionaire variable    */
H03020          4          /* Questionaire variable    */
H03021          4          /* Questionaire variable    */
H03022          4          /* Questionaire variable    */
H03023          4          /* Questionaire variable    */
H03024          4          /* Questionaire variable    */
H03025          4          /* Questionaire variable    */
H03026          4          /* Questionaire variable    */
H03027          4          /* Questionaire variable    */
H03028          4          /* Questionaire variable    */
H03029          4          /* Questionaire variable    */
H03030          4          /* Questionaire variable    */
H03031          4          /* Questionaire variable    */
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H03034          4          /* Questionaire variable    */
H03035          4          /* Questionaire variable    */
H03036          4          /* Questionaire variable    */
H03037          4          /* Questionaire variable    */
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H03039          4          /* Questionaire variable    */
H03040          4          /* Questionaire variable    */
H03041          4          /* Questionaire variable    */
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H03044          4          /* Questionaire variable    */
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H03049          4          /* Questionaire variable    */
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H03053          4          /* Questionaire variable    */
H03054          4          /* Questionaire variable    */
H03055          4          /* Questionaire variable    */
H03056          4          /* Questionaire variable    */
H03057          4          /* Questionaire variable    */
H03058          4          /* Questionaire variable    */
H03059          4          /* Questionaire variable    */
H03060          4          /* Questionaire variable    */
H03061          4          /* Questionaire variable    */
H03062          4          /* Questionaire variable    */
H03063          4          /* Questionaire variable    */
H03064          4          /* Questionaire variable    */
H03065          4          /* Questionaire variable    */
H03066          4          /* Questionaire variable    */
H03067          4          /* Questionaire variable    */
H03068          4          /* Questionaire variable    */
H03069          4          /* Questionaire variable    */
H03070          4          /* Questionaire variable    */
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H03073          4          /* Questionaire variable    */
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H03077          4          /* Questionaire variable    */
H03078          4          /* Questionaire variable    */
H03079          4          /* Questionaire variable    */
H03080          4          /* Questionaire variable    */
H03081          4          /* Questionaire variable    */
H03082          4          /* Questionaire variable    */

SREDA           4          /* Questionaire variable    */
SRRACEA         4          /* Questionaire variable    */
SRRACEB         4          /* Questionaire variable    */
SRRACEC         4          /* Questionaire variable    */
SRRACED         4          /* Questionaire variable    */
SRRACEE         4          /* Questionaire variable    */
```

```
SRAGE           4           /* Questionaire variable    */

S03B01          4           /* Q1 Supplement            */
S03F01          4           /* Q1 Supplement            */
S03F02          4           /* Q1 Supplement            */
S03O01          4           /* Q1 Supplement            */
S03O02          4           /* Q1 Supplement            */
S03O03          4           /* Q1 Supplement            */
S03O04          4           /* Q1 Supplement            */
S03O05          4           /* Q1 Supplement            */
S03O06          4           /* Q1 Supplement            */
S03R01          4           /* Q1 Supplement            */
S03R02          4           /* Q1 Supplement            */
S03R03          4           /* Q1 Supplement            */
S03R04          4           /* Q1 Supplement            */
S03V01          4           /* Q1 Supplement            */
S03V02          4           /* Q1 Supplement            */
S03V03          4           /* Q1 Supplement            */
S03V04          4           /* Q1 Supplement            */
S03V05          4           /* Q1 Supplement            */


S03V06          4           /* Q2 Supplement            */
S03V07          4           /* Q2 Supplement            */

S03C01          4           /* Q2 Supplement            */
S03C02          4           /* Q2 Supplement            */
S03C03          4           /* Q2 Supplement            */
S03C04          4           /* Q2 Supplement            */
S03C05          4           /* Q2 Supplement            */
S03C06          4           /* Q2 Supplement            */
S03C07          4           /* Q2 Supplement            */
S03C08          4           /* Q2 Supplement            */
S03C09          4           /* Q2 Supplement            */
S03C10          4           /* Q2 Supplement            */
S03C11          4           /* Q2 Supplement            */
S03C12          4           /* Q2 Supplement            */
S03C13          4           /* Q2 Supplement            */
S03C14          4           /* Q2 Supplement            */
S03C15          4           /* Q2 Supplement            */
S03C16          4           /* Q2 Supplement            */
S03C17          4           /* Q2 Supplement            */
S03C18          4           /* Q2 Supplement            */
S03C19          4           /* Q2 Supplement            */
S03C20          4           /* Q2 Supplement            */
S03C21          4           /* Q2 Supplement            */
S03C22          4           /* Q2 Supplement            */

S03Y01          4           /* Q3 Supplement            */
S03Y02          4           /* Q3 Supplement            */
S03Y03          4           /* Q3 Supplement            */
S03Y04          4           /* Q3 Supplement            */
S03Y05          4           /* Q3 Supplement            */
S03Y06A         4           /* Q3 Supplement            */
S03Y06B         4           /* Q3 Supplement            */
S03Y06C         4           /* Q3 Supplement            */
S03Y06D         4           /* Q3 Supplement            */

S03Y06E         4           /* Q3 Supplement            */
S03Y06F         4           /* Q3 Supplement            */
S03Y06G         4           /* Q3 Supplement            */
S03Y06H         4           /* Q3 Supplement            */
S03Y07          4           /* Q3 Supplement            */
S03Y08          4           /* Q3 Supplement            */
S03Y09          4           /* Q3 Supplement            */
S03Y10          4           /* Q3 Supplement            */
S03Y11          4           /* Q3 Supplement            */
S03Y12          4           /* Q3 Supplement            */
S03Y13A         4           /* Q3 Supplement            */
S03Y13B         4           /* Q3 Supplement            */
S03Y13C         4           /* Q3 Supplement            */
S03Y13D         4           /* Q3 Supplement            */
S03Y13E         4           /* Q3 Supplement            */
```

```
S03Y13F          4              /* Q3 Supplement                */
S03Y13G          4              /* Q3 Supplement                */
S03Y13H          4              /* Q3 Supplement                */
S03Y14           4              /* Q3 Supplement                */
S03Y15           4              /* Q3 Supplement                */
S03Y16           4              /* Q3 Supplement                */
S03Y17           4              /* Q3 Supplement                */
S03Y18A          4              /* Q3 Supplement                */
S03Y18B          4              /* Q3 Supplement                */
S03Y18C          4              /* Q3 Supplement                */
S03Y18D          4              /* Q3 Supplement                */
S03Y19A          4              /* Q3 Supplement                */
S03Y19B          4              /* Q3 Supplement                */
S03Y19C          4              /* Q3 Supplement                */
S03Y19D          4              /* Q3 Supplement                */
S03Y19E          4              /* Q3 Supplement                */
S03Y19F          4              /* Q3 Supplement                */
S03Y20           4              /* Q3 Supplement                */
S03Y21           4              /* Q3 Supplement                */
S03Y22           4              /* Q3 Supplement                */
S03Y23           4              /* Q3 Supplement                */
S03Y24           4              /* Q3 Supplement                */
S03Y25           4              /* Q3 Supplement                */


S03G01           4              /* Q4 Supplement                */
S03G02           4              /* Q4 Supplement                */
S03G03           4              /* Q4 Supplement                */
S03G04           4              /* Q4 Supplement                */
S03G05           4              /* Q4 Supplement                */
S03G06           4              /* Q4 Supplement                */
S03G07           4              /* Q4 Supplement                */
S03G08           4              /* Q4 Supplement                */
S03G09           4              /* Q4 Supplement                */
S03G10           4              /* Q4 Supplement                */
S03G11           4              /* Q4 Supplement                */
S03G12           4              /* Q4 Supplement                */
S03G13           4              /* Q4 Supplement                */
S03G14           4              /* Q4 Supplement                */

FLAG_FIN      $  5              /* NRC Suvey Fielding variable      */
DUPFLAG       $  3              /* NRC Suvey Fielding variable      */
ONTIME        $  3              /* NRC Suvey Fielding variable      */
TRICKDUP      $  3              /* NRC Suvey Fielding variable      */
WEB              8              /* NRC Suvey Fielding variable      */


N1               8              /* CS flag variable    */
N2               8              /* CS flag variable    */
N3               8              /* CS flag variable    */
N3A              8              /* CS flag variable    */
N4               8              /* CS flag variable    */
N5               8              /* CS flag variable    */
N5A              8              /* CS flag variable    */
N6               8              /* CS flag variable    */
N7               8              /* CS flag variable    */
N8               8              /* CS flag variable    */
N9               8              /* CS flag variable    */
N9A              8              /* CS flag variable    */
N9B              8              /* CS flag variable    */
N9C              8              /* CS flag variable    */
N9D              8              /* CS flag variable    */
N9E              8              /* CS flag variable    */
N9F              8              /* CS flag variable    */
N9G              8              /* CS flag variable    */
N9H              8              /* CS flag variable    */
N9I              8              /* CS flag variable    */
N9J              8              /* CS flag variable    */
N9K              8              /* CS flag variable    */
N9L              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     */
        N18A            8               /* CS flag variable     */
        N18B            8               /* CS flag variable     */
        N18C            8               /* CS flag variable     */
        N18D            8               /* CS flag variable     */
        N19             8               /* CS flag variable     */
        N19A            8               /* CS flag variable     */
        N20A            8               /* CS flag variable     */
        N20B            8               /* CS flag variable     */
        N20C            8               /* CS flag variable     */
        N20D            8               /* CS flag variable     */
        N21             8               /* CS flag variable     */
        N22             8               /* CS flag variable     */
        N23             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_8          8               /* CS Count             */
        MISS_9          8               /* CS Count             */
        MISS_TOT        8               /* CS Count             */

        FNSTATUS        8               /* constructed      */
        KEYCOUNT        8               /* constructed      */
        QUARTER      $ 7               /* constructed      */
        XENRLLMT        8               /* constructed      */
        XENR_PCM        8               /* constructed      */
        XINS_COV        8               /* constructed      */
/*      XQENROLL        8 */            /* constructed          */
        XREGION         3               /* constructed      */
        XCATCH          8               /* constructed      */
        CONUS           3               /* constructed      */
        OUTCATCH        8               /* constructed      */
        XSEXA           8               /* constructed      */
        XBNFGRP         8               /* constructed      */
        KDISENRL        8               /* constructed      */
        KMILOFFC        8               /* constructed      */
        KCIVOFFC        8               /* constructed      */
        KBGPRB1         8               /* constructed      */
        KBGPRB2         8               /* constructed      */
        KMILOPQY        8               /* constructed      */
        KCIVOPQY        8               /* constructed      */
        KCIVINS         8               /* constructed      */
        KPRSCPTN        8               /* constructed      */
        KBRSTCR         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_PROS         8               /* constructed      */
        HP_GP           8               /* constructed      */
        HP_BRST         8               /* constructed      */
        HP_CHOL         8               /* constructed      */
        HP_SMOKE        8               /* constructed      */
        HP_SMOKH        8               /* constructed      */
        HP_CESS         8               /* constructed      */
/*      SF8PF           3*/             /* constructed          */
/*      SF8RP           3*/             /* constructed          */
/*      SF8BP           3*/             /* constructed          */
/*      SF8GH           3*/             /* constructed          */
/*      SF8VT           3*/             /* constructed          */
/*      SF8SF           3*/             /* constructed          */
/*      SF8RE           3*/             /* constructed          */
/*      SF8MH           3*/             /* constructed          */
/*      PCS_8           4*/             /* constructed          */
/*      MCS_8           4*/             /* constructed          */
```

G-162

```
/*      KMID_H          3*/           /* constructed       */
/*      KMID_MH         3*/           /* constructed       */

        ADJ_CELL        8             /* constructed       */


        BWT             8             /* weights           */
        WRWT            8             /* weights           */
        WRWT1           8             /* weights           */
        WRWT2           8             /* weights           */
        WRWT3           8             /* weights           */
        WRWT4           8             /* weights           */
        WRWT5           8             /* weights           */
        WRWT6           8             /* weights           */
        WRWT7           8             /* weights           */
        WRWT8           8             /* weights           */
        WRWT9           8             /* weights           */
        WRWT10          8             /* weights           */
        WRWT11          8             /* weights           */
        WRWT12          8             /* weights           */
        WRWT13          8             /* weights           */
        WRWT14          8             /* weights           */
        WRWT15          8             /* weights           */
        WRWT16          8             /* weights           */
        WRWT17          8             /* weights           */
        WRWT18          8             /* weights           */
        WRWT19          8             /* weights           */
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        WRWT23          8             /* weights           */
        WRWT24          8             /* weights           */
        WRWT25          8             /* weights           */
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        WRWT27          8             /* weights           */
        WRWT28          8             /* weights           */
        WRWT29          8             /* weights           */
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        WRWT31          8             /* weights           */
        WRWT32          8             /* weights           */
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        WRWT34          8             /* weights           */
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        WRWT53          8             /* weights           */
        WRWT54          8             /* weights           */
        WRWT55          8             /* weights           */
        WRWT56          8             /* weights           */
        WRWT57          8             /* weights           */
        WRWT58          8             /* weights           */
        WRWT59          8             /* weights           */
        WRWT60          8             /* weights           */
        CWRWT           8             /* weights           */
        CWRWT1          8             /* weights           */
        CWRWT2          8             /* weights           */
        CWRWT3          8             /* weights           */
        CWRWT4          8             /* weights           */
```

```
CWRWT5          8           /* weights          */
CWRWT6          8           /* weights          */
CWRWT7          8           /* weights          */
CWRWT8          8           /* weights          */
CWRWT9          8           /* weights          */
CWRWT10         8           /* weights          */
CWRWT11         8           /* weights          */
CWRWT12         8           /* weights          */
CWRWT13         8           /* weights          */
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CWRWT69         8           /* weights          */
CWRWT70         8           /* weights          */
CWRWT71         8           /* weights          */
CWRWT72         8           /* weights          */
CWRWT73         8           /* weights          */
CWRWT74         8           /* weights          */
CWRWT75         8           /* weights          */
CWRWT76         8           /* weights          */
CWRWT77         8           /* weights          */
```

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CWRWT78       8              /* weights          */
CWRWT79       8              /* weights          */
CWRWT80       8              /* weights          */
CWRWT81       8              /* weights          */
CWRWT82       8              /* weights          */
CWRWT83       8              /* weights          */
CWRWT84       8              /* weights          */
CWRWT85       8              /* weights          */
CWRWT86       8              /* weights          */
CWRWT87       8              /* weights          */
CWRWT88       8              /* weights          */
CWRWT89       8              /* weights          */
CWRWT90       8              /* weights          */
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CWRWT99       8              /* weights          */
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CWRWT101      8              /* weights          */
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CWRWT146      8              /* weights          */
CWRWT147      8              /* weights          */
CWRWT148      8              /* weights          */
CWRWT149      8              /* weights          */
CWRWT150      8              /* weights          */
```

```
CWRWT151        8               /* weights               */
CWRWT152        8               /* weights               */
CWRWT153        8               /* weights               */
CWRWT154        8               /* weights               */
CWRWT155        8               /* weights               */
CWRWT156        8               /* weights               */
CWRWT157        8               /* weights               */
CWRWT158        8               /* weights               */
CWRWT159        8               /* weights               */
CWRWT160        8               /* weights               */
CWRWT161        8               /* weights               */
CWRWT162        8               /* weights               */
CWRWT163        8               /* weights               */
CWRWT164        8               /* weights               */
CWRWT165        8               /* weights               */
CWRWT166        8               /* weights               */
CWRWT167        8               /* weights               */
CWRWT168        8               /* weights               */
CWRWT169        8               /* weights               */
CWRWT170        8               /* weights               */
CWRWT171        8               /* weights               */
CWRWT172        8               /* weights               */
CWRWT173        8               /* weights               */
CWRWT174        8               /* weights               */
CWRWT175        8               /* weights               */
CWRWT176        8               /* weights               */
CWRWT177        8               /* weights               */
CWRWT178        8               /* weights               */
CWRWT179        8               /* weights               */
CWRWT180        8               /* weights               */
CWRWT181        8               /* weights               */
CWRWT182        8               /* weights               */
CWRWT183        8               /* weights               */
CWRWT184        8               /* weights               */
CWRWT185        8               /* weights               */
CWRWT186        8               /* weights               */
CWRWT187        8               /* weights               */
CWRWT188        8               /* weights               */
CWRWT189        8               /* weights               */
CWRWT190        8               /* weights               */
CWRWT191        8               /* weights               */
CWRWT192        8               /* weights               */
CWRWT193        8               /* weights               */
CWRWT194        8               /* weights               */
CWRWT195        8               /* weights               */
CWRWT196        8               /* weights               */
CWRWT197        8               /* weights               */
CWRWT198        8               /* weights               */
CWRWT199        8               /* weights               */
CWRWT200        8               /* weights               */
CWRWT201        8               /* weights               */
CWRWT202        8               /* weights               */
CWRWT203        8               /* weights               */
CWRWT204        8               /* weights               */
CWRWT205        8               /* weights               */
CWRWT206        8               /* weights               */
CWRWT207        8               /* weights               */
CWRWT208        8               /* weights               */
CWRWT209        8               /* weights               */
CWRWT210        8               /* weights               */
CWRWT211        8               /* weights               */
CWRWT212        8               /* weights               */
CWRWT213        8               /* weights               */
CWRWT214        8               /* weights               */
CWRWT215        8               /* weights               */
CWRWT216        8               /* weights               */
CWRWT217        8               /* weights               */
CWRWT218        8               /* weights               */
CWRWT219        8               /* weights               */
CWRWT220        8               /* weights               */
CWRWT221        8               /* weights               */
CWRWT222        8               /* weights               */
CWRWT223        8               /* weights               */
```

```
        CWRWT224        8               /* weights            */
        CWRWT225        8               /* weights            */
        CWRWT226        8               /* weights            */
        CWRWT227        8               /* weights            */
        CWRWT228        8               /* weights            */
        CWRWT229        8               /* weights            */
        CWRWT230        8               /* weights            */
        CWRWT231        8               /* weights            */
        CWRWT232        8               /* weights            */
        CWRWT233        8               /* weights            */
        CWRWT234        8               /* weights            */
        CWRWT235        8               /* weights            */
        CWRWT236        8               /* weights            */
        CWRWT237        8               /* weights            */
        CWRWT238        8               /* weights            */
        CWRWT239        8               /* weights            */
        CWRWT240        8               /* weights            */
      ;
   *KRR Updated 2/10/2004 to add XCACSMPL for reporting purposes;
   MERGE &DSNO INV8.STEP1Q(KEEP=MPRID CACSMPL RENAME=(CACSMPL=XCATCH));
   LABEL XCATCH = "XCATCH - Catchment Area (Reporting) ";
   FORMAT XCATCH CACR.;
   BY MPRID;
RUN;

TITLE1 "2003 DOD Quarterly Health Care Survey (8860-300)";
TITLE2 "Program Name: ADDWGTS.SAS By Keith Rathbun";
TITLE3 "Program Inputs: &DSNI_1..SD2 -- &DSNI_2..SD2";
TITLE4 "Program Outputs: &DSNO..SD2";
PROC CONTENTS POSITION; RUN;
PROC FREQ; TABLES HP_SMOKH HP_CESS / LIST MISSING; RUN;

%MEND PROCESS;

%PROCESS(DSNI_1=REPWT, DSNI_2=COMB2003, DSNO=HCS03A_1);
```

14.   WEIGHTING\PROCCOPA.SAS - Create XPORT version from Database - Annual.

```
*****************************************************************************
*
* PROGRAM: PROCCOPA.SAS
* PURPOSE: Create XPORT file from SD2
* WRITTEN  April 26, 2000 BY Keith Rathbun
* TASK:    2003 Annual DoD Database Development (8860-300)
*
* INPUTS:  1) HCSyyq_v.SD2 - DoD Quarterly HCSDB for Adults dataset
*
* OUTPUTS: 1) HCSyyq_v.XPT - DoD Quarterly HCSDB for Adults dataset (XPORT)
*             where yy = 2-digit year
*                    q = Quarter Number
*                    v = Version Number
*
* NOTES:   1) Be sure to update the global parameters for the current
*             quarter (QTR) with the appropriate dataset name (DSN)
*             prior to running this program.
*
*****************************************************************************
* Define global parameters
*****************************************************************************;
%LET DSN = HCS03A_1;
*****************************************************************************
* Define SAS libraries and options
*****************************************************************************;
LIBNAME IN V612 "..\..\DATA";
*****************************************************************************
* Define SAS Transport file
*****************************************************************************;
LIBNAME OUT XPORT "..\..\DATA\&DSN..XPT";
*****************************************************************************
* Generate SAS Transport file
*****************************************************************************;
PROC COPY IN=IN  OUT=OUT ; * Converts input file to transport file;
         SELECT &DSN;      * Selects SD2 file to copy;
RUN;
```

15. WEIGHTING\HCS03A_2.SAS - Merge final dataset with original sample to extract variables - Annual.

```
*****************************************************************************
*
* PROGRAM:  HCS03A_2.SAS
* TASK:     DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
* PURPOSE:  MERGE THE FINAL ADULT DATASET WITH THE ORIGINAL SAMPLE TO
*           EXTRACT THE DOB, ZIP CODE, RANK AND PAY GRADE VARIABLES
*
* WRITTEN:  05/02/2002 BY KEITH RATHBUN
*
* MODIFIED: 1) 02/13/2003 BY KEITH RATHBUN, Update for 2002 survey.
*           2) 02/10/2004 BY KEITH RATHBUN, Update for 2003 survey.
*
* INPUTS:  1) SAMPLA02.SD2 - Q1-Q4 2003 Adult Sample files
*          2) HCS03A_1.SD2 - Final 2003 Public-Use Adult (Form A) Dataset
*
*
* OUTPUTS: 1) HCS03A_2.SD2 - Final 2003 Private-Use Adult (Form A) Dataset
*             with private-use variables (MASTCD, MAPRZIP, MAPRZIPX,
*             PNBRTHDT, PGCD, PAYPLNCD, RANKCD, and DCATCH).
*          2) HCS03A_2.XPT - Final 2003 Private-Use Adult (Form A) Dataset
*
*****************************************************************************;
LIBNAME IN1     V612 "..\..\data";       * Location of Annual file;
LIBNAME OUT     V612 "..\..\data";       * Output Area;
LIBNAME LIBRARY V612 "..\..\data\fmtlib"; * Format Definitions;
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************
* Assign input and output dataset names.
*****************************************************************************;
%LET DSNI = HCS03A_1;
%LET DSNO = HCS03A_2;

*****************************************************************************
* Extract private-use variables and combine quarterly samples into one file.
*****************************************************************************;
%MACRO PROCESS(QTR=, SLOC=);
   LIBNAME IN2 V612 "&SLOC"; * Location of quarterly Adult sample files;
   DATA &QTR;
      SET IN2.SAMPLA02;
      KEEP MPRID ENRID MASTCD MAPRZIP MAPRZIPX PNBRTHDT PGCD PAYPLNCD RANKCD DCATCH;
   RUN;
   PROC SORT DATA=&QTR; BY MPRID; RUN;
%MEND PROCESS;

%PROCESS(QTR=Q1, SLOC=..\..\..\Q1_2003\DATA\AFINAL); *Quarter 1 2003 Sample;
%PROCESS(QTR=Q2, SLOC=..\..\..\Q2_2003\DATA\AFINAL); *Quarter 2 2003 Sample;
%PROCESS(QTR=Q3, SLOC=..\..\..\Q3_2003\DATA\AFINAL); *Quarter 3 2003 Sample;
%PROCESS(QTR=Q4, SLOC=..\..\..\Q4_2003\DATA\AFINAL); *Quarter 4 2003 Sample;

DATA TEMP;
   SET Q1 Q2 Q3 Q4;
   BY MPRID;
RUN;

*****************************************************************************
* Append private-use variables to the 2003 annual file.
*****************************************************************************;
DATA OUT.&DSNO;
   MERGE IN1.&DSNI(IN=IN1) TEMP(IN=IN2);
   BY MPRID;
   IF IN1 AND IN2; *KEEP only eligible respondents;
RUN;

TITLE1 "DOD Health Survey Private-Use file Creation (8860-300)";
TITLE2 "Program Name: &DSNO..SAS By Keith Rathbun";
TITLE3 "Program Output: &DSNO..SD2";
PROC CONTENTS; RUN;
```

```
****************************************************************************
* Define SAS Transport file
***************************************************************************;
LIBNAME KEITH XPORT "..\..\DATA\&DSNO..XPT";


****************************************************************************
* Generate SAS Transport file
***************************************************************************;
PROC COPY IN=OUT OUT=KEITH; * Converts input file to transport file;
          SELECT &DSNO;      * Selects SD2 file to copy;
RUN;
```

APPENDIX H

SAS CODE FOR STATISTICAL AND WEB SPECIFICATION FOR 2002 TRICARE CONSUMER REPORTS

1.A. Q4_2003\PROGRAMS\ReportCards\CAHPS_AdultQ42003\STEP1Q.SAS - Create and recode variables used in Adult Beneficiary Reports - 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 H03007>=2) THEN GROUP1 = 1
*                   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN GROUP2 = 1
*                   IF (XENR_PCM = 3,7     AND H03007>=2) THEN GROUP3 = 1
*                   IF XINS_COV IN (3,4,5)               THEN GROUP4 = 1
*                   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: 1) February 2001 By Keith Rathbun, Update for quarterly
*                adult report cards.  Removed permanent dataset ENTIRE.SD2.
*             2) August 2001 By Keith Rathbun, Updated DSN and LIBNAME
*                for 3rd quarter adult report cards.
*             3) OCTOBER 2001 BY DANIELE BEAHM, Because there was no post-
*                stratification done in Q3, changed all references of the
*                POSTSTR variable to ADJ_CELL
*             4) JANUARY 2002 BY DANIELE BEAHM, Modified group3 to include
*                XENR_PCM
*             5) April 2002 By Mike Scott, Updated variable names for 2002
*                survey.
*             6) July 2002 By Mike Scott: See Note #2.  Replaced variable
*                S02S01 with H03072 (new health status variable), deleted
*                code to recode S02S01 to H00077, and changed H00077/R00077
*                rename/recode to H03072/R03072 rename/recode.  The Hispanic/
*                Latino variable is not present.
*             7) January 2003 By Mike Scott, Changed ADJ_CELL to COM_SAMP.
*             8) March 2003 By Mike Scott, Updated variable names for 2003
*                survey.
*             9) June 2003 By Mike Scott, Updated for Q2 2003.
*            10) July 2003 By Mike Scott, Changed COM_SAMP to ADJ_CELL.
*            11) October 2003 By Mike Scott, Updated for Q3 2003.
*            12) January 2004 By Mike Scott, Updated for Q4 2003, and changed
*                DAGEQY to FIELDAGE.
*
*
*   INPUTS:   1) HCS032_1 - DoD Quarterly HCS Database   /*MJS 06/25/03*/
*
*   OUTPUTS:  1) GROUP1-8.SD2 - 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 H03072,
```

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```
*                and the Hispanic/Latino variable which was H02079 is now
*                H02077.
*
****************************************************************************;
OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMTERR NOOVP COMPRESS=YES;
LIBNAME OUT V612 "DATA";
LIBNAME IN1 V612 "..\..\..\DATA\AFINAL";

TITLE1    'Program Saved as: STEP1Q.SAS';

PROC CONTENTS DATA=IN1.HCS034_1;   /*MJS 01/07/04*/
RUN;

DATA ENTIRE;
    SET IN1.HCS034_1(KEEP=   /*MJS 01/07/04*/
                  MPRID
                  FIELDAGE   /*MJS 01/26/04*/
                  XREGION
                  CONUS
                  ENBGSMPL
                  SREDA
                  XSEXA
                  XBNFGRP
                  adj_cell
                  XINS_COV
                  XENR_PCM
                  WRWT
                  /* Getting Needed Care */
                  H03009
                  H03013
                  H03027
                  H03028
                  /* Getting Care Quickly */
                  H03018
                  H03020
                  H03023
                  H03029
                  /* How Well Doctors Communicate */
                  H03032
                  H03033
                  H03034
                  H03035
                  /* Courteous and Helpful Office Staff */
                  H03030
                  H03031
                  /* Customer Service */
                  H03044
                  H03046
                  H03051
                  /* Claims Processing */
                  H03040
                  H03041 /****************************/
                  H03072 /* Health Status            */
                  H03036 /* Health Care Rating       */
                  H03052 /* Health Plan Rating       */
                  H03011 /* Personal Doctor Rating   */
                  H03015 /* Specialist Rating        */
                  H03007 /* How Long in Health Plan  */
                         /****************************/
                  );
    FORMAT _ALL_;
    IF XREGION = .    THEN DELETE;
    IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;
                    /* Note:  use tmp_cell in step2q.sas */
    LENGTH TMP_CELL 8;
    TMP_CELL = adj_cell;
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;

* IF H02047=2 THEN H02048=1;
 ***************************************************************************
 * 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 (XINS_COV IN (1,2,6)  AND H03007>=2) THEN GROUP1 = 1;
   IF (XENR_PCM IN (1,2,6)  AND H03007>=2) THEN GROUP2 = 1;
   IF (XENR_PCM IN (3,7)    AND H03007>=2) THEN GROUP3 = 1;
   IF XINS_COV IN (3,4,5)   THEN GROUP4 = 1;
   IF XBNFGRP = 1           THEN GROUP5 = 1;
   IF XBNFGRP = 2           THEN GROUP6 = 1;
   IF XBNFGRP IN (3,4)      THEN GROUP7 = 1;

 ***************************************************************************
 * Reorder the codes for H03029.  H03029 is in reverse order.
 ***************************************************************************;
   IF H03029 = 1      THEN R03029 = 4;
   ELSE IF H03029 = 2 THEN R03029 = 3;
   ELSE IF H03029 = 3 THEN R03029 = 2;
   ELSE IF H03029 = 4 THEN R03029 = 1;
   ELSE IF H03029 < 0 THEN R03029 = .;
      IF R03029 > 1   THEN R03029 = R03029 - 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 H03018 = 1      THEN R03018 = 1;
   ELSE IF H03018 = 2 THEN R03018 = 1;
   ELSE IF H03018 = 3 THEN R03018 = 2;
   ELSE IF H03018 = 4 THEN R03018 = 3;
   ELSE IF H03018 < 0 THEN R03018 = .;

   IF H03020 = 1      THEN R03020 = 1;
   ELSE IF H03020 = 2 THEN R03020 = 1;
   ELSE IF H03020 = 3 THEN R03020 = 2;
   ELSE IF H03020 = 4 THEN R03020 = 3;
   ELSE IF H03020 < 0 THEN R03020 = .;
```

```
IF H03023 = 1      THEN R03023 = 1;
ELSE IF H03023 = 2 THEN R03023 = 1;
ELSE IF H03023 = 3 THEN R03023 = 2;
ELSE IF H03023 = 4 THEN R03023 = 3;
ELSE IF H03023 < 0 THEN R03023 = .;

IF H03030 = 1      THEN R03030 = 1;
ELSE IF H03030 = 2 THEN R03030 = 1;
ELSE IF H03030 = 3 THEN R03030 = 2;
ELSE IF H03030 = 4 THEN R03030 = 3;
ELSE IF H03030 < 0 THEN R03030 = .;

IF H03031 = 1      THEN R03031 = 1;
ELSE IF H03031 = 2 THEN R03031 = 1;
ELSE IF H03031 = 3 THEN R03031 = 2;
ELSE IF H03031 = 4 THEN R03031 = 3;
ELSE IF H03031 < 0 THEN R03031 = .;

IF H03032 = 1      THEN R03032 = 1;
ELSE IF H03032 = 2 THEN R03032 = 1;
ELSE IF H03032 = 3 THEN R03032 = 2;
ELSE IF H03032 = 4 THEN R03032 = 3;
ELSE IF H03032 < 0 THEN R03032 = .;

IF H03033 = 1      THEN R03033 = 1;
ELSE IF H03033 = 2 THEN R03033 = 1;
ELSE IF H03033 = 3 THEN R03033 = 2;
ELSE IF H03033 = 4 THEN R03033 = 3;
ELSE IF H03033 < 0 THEN R03033 = .;

IF H03034 = 1      THEN R03034 = 1;
ELSE IF H03034 = 2 THEN R03034 = 1;
ELSE IF H03034 = 3 THEN R03034 = 2;
ELSE IF H03034 = 4 THEN R03034 = 3;
ELSE IF H03034 < 0 THEN R03034 = .;

IF H03035 = 1      THEN R03035 = 1;
ELSE IF H03035 = 2 THEN R03035 = 1;
ELSE IF H03035 = 3 THEN R03035 = 2;
ELSE IF H03035 = 4 THEN R03035 = 3;
ELSE IF H03035 < 0 THEN R03035 = .;

IF H03040 = 1      THEN R03040 = 1;
ELSE IF H03040 = 2 THEN R03040 = 1;
ELSE IF H03040 = 3 THEN R03040 = 2;
ELSE IF H03040 = 4 THEN R03040 = 3;
ELSE IF H03040 < 0 THEN R03040 = .;

IF H03041 = 1      THEN R03041 = 1;
ELSE IF H03041 = 2 THEN R03041 = 1;
ELSE IF H03041 = 3 THEN R03041 = 2;
ELSE IF H03041 = 4 THEN R03041 = 3;
ELSE IF H03041 < 0 THEN R03041 = .;

**************************************************************************
* Recode variables to one missing condition ".".
* This also renames all the "H0xxxx" to "R0xxxx".
**************************************************************************;
R03009 = H03009;  IF R03009 < 0 THEN R03009 = .;
R03011 = H03011;  IF R03011 < 0 THEN R03011 = .;
R03013 = H03013;  IF R03013 < 0 THEN R03013 = .;
R03015 = H03015;  IF R03015 < 0 THEN R03015 = .;
R03027 = H03027;  IF R03027 < 0 THEN R03027 = .;
R03028 = H03028;  IF R03028 < 0 THEN R03028 = .;
R03036 = H03036;  IF R03036 < 0 THEN R03036 = .;
R03044 = H03044;  IF R03044 < 0 THEN R03044 = .;
R03046 = H03046;  IF R03046 < 0 THEN R03046 = .;
R03051 = H03051;  IF R03051 < 0 THEN R03051 = .;
R03052 = H03052;  IF R03052 < 0 THEN R03052 = .;
R03072 = H03072;  IF R03072 < 0 THEN R03072 = .;

**************************************************************************
* Create region dummies.
```

```
      *******************************************************************;
      IF XREGION NE . THEN DO;
         ARRAY REGDUMS (15) REG01 REG02 REG03 REG04 REG05 REG06 REG08
                            REG09 REG10 REG11 REG12 REG13 REG14 REG15 REG16;
         DO I = 1 TO 15;
            REGDUMS(I)=0;
         END;
         IF XREGION= 7  THEN XREGION = 8;  * Recode Region 7 into Region 8;
         IF        XREGION= 1  THEN REG01  =1;
         ELSE IF   XREGION= 2  THEN REG02  =1;
         ELSE IF   XREGION= 3  THEN REG03  =1;
         ELSE IF   XREGION= 4  THEN REG04  =1;
         ELSE IF   XREGION= 5  THEN REG05  =1;
         ELSE IF   XREGION= 6  THEN REG06  =1;
         ELSE IF   XREGION= 8  THEN REG08  =1;
         ELSE IF   XREGION= 9  THEN REG09  =1;
         ELSE IF   XREGION=10  THEN REG10  =1;
         ELSE IF   XREGION=11  THEN REG11  =1;
         ELSE IF   XREGION=12  THEN REG12  =1;
         ELSE IF   XREGION=13  THEN REG13  =1;
         ELSE IF   XREGION=14  THEN REG14  =1;
         ELSE IF   XREGION=15  THEN REG15  =1;
         ELSE IF   XREGION=16  THEN REG16  =1;
      END;

RUN;


*******************************************************************************
* Recode item responses to proportional values using CONVERT.SAS.
*******************************************************************************;
%INCLUDE "..\..\..\..\..\8687\PROGRAMS\REPORTCARDS\CONVERT.SAS";

%CONT1(DSN=ENTIRE, NUM=7,  Y=R03009 R03013 R03027 R03028
                             R03044 R03046 R03051);
%CONT2(DSN=ENTIRE, NUM=4,  Y=R03036 R03052 R03011 R03015);
%CONT3(DSN=ENTIRE, NUM=12, Y=R03018 R03020 R03023 R03029
                             R03032 R03033 R03034 R03035
                             R03030 R03031 R03040 R03041);

*******************************************************************************
* 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*/
       XREGION
       CONUS
       ENBGSMPL
       XSEXA
       ADJ_CELL   /*MJS 07/01/03 Changed from COM_SAMP*/
       XINS_COV
       XENR_PCM
       WRWT
       ;
RUN;

*******************************************************************************
* Print some of the recoded records.
*******************************************************************************;
PROC PRINT DATA=ENTIRE(OBS=60);
```

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```
      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
         XENR_PCM
         XBNFGRP
         GROUP1
         GROUP2
         GROUP3
         GROUP4
         GROUP5
         GROUP6
         GROUP7
         ;
RUN;

PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of recoded question variables';
   VAR H03009  R03009
       H03011  R03011
       H03013  R03013
       H03015  R03015
       H03018  R03018
       H03020  R03020
       H03023  R03023
       H03027  R03027
       H03028  R03028
       H03029  R03029
       H03030  R03030
       H03031  R03031
       H03032  R03032
       H03033  R03033
       ;
RUN;


PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of recoded question variables';
   VAR H03034  R03034
       H03035  R03035
       H03036  R03036
       H03040  R03040
       H03041  R03041
       H03044  R03044
       H03046  R03046
       H03051  R03051
       H03052  R03052
       H03072  R03072
       ;
RUN;

PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of recoded REGION variables';
   VAR XREGION
       REG01
       REG02
       REG03
       REG04
       REG05
       REG06
       REG08
       REG09
       REG10
```

```
            REG11
            REG12
            REG13
            REG14
            REG15
            ;
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
            H03009
            H03011
            H03013
            H03015
            H03018
            H03020
            H03023
            H03027
            H03028
            H03029
            H03030
            H03031
            H03032
            H03033
            H03034
            H03035
            H03036
            H03040
            H03041
            H03044
            H03046
            H03051
            H03052
            H03072
            ;
        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;
```

1.B. Q4_2003\PROGRAMS\ReportCards\CAHPS_AdultQ42003\STEP2Q.SAS - Calculate CAHPS Adjusted Scores - 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
*
*  Subgroup Definitions:
*  _____
*     Seven Subgroups           Definitions
*  _____
*  1. Prime enrollees          XINS_COV IN (1,2,6) AND H03007>=2
*  2. Enrollees w/mil PCM       XENR_PCM IN (1,2,6) AND H03007>=2
*  3. Enrollees w/civ PCM       XENR_PCM = 3        AND H03007>=2
*  4. Nonenrollees             XINS_COV IN (3,4,5)
*  5. Active duty              XBNFGRP = 1
*  6. Active duty dependents   XBNFGRP = 2
*  7. Retirees and dependents  XBNFGRP IN (3,4)
*
*  Previous Program:  STEP1Q.SAS
*
*  Modified: 1) 04/10/02 By Mike Scott, Updated variable names for 2002
*               survey.
*            2) 07/11/02 By Mike Scott, Changed R00077 to R03072, since
*               H02077 (health status) is back and was recoded to R03072
*               in STEP1Q.
*            3) 03/21/03 By Mike Scott, Updated variable names for 2003
*               survey.
*****************************************************************************;
OPTIONS NOCENTER LS=132 PS=79 SOURCE NOOVP COMPRESS=YES;
LIBNAME IN1  V612 "DATA";
LIBNAME IN2  V612 "..\..\..\DATA\AFINAL";
LIBNAME OUT  V612 "DATA";
LIBNAME OUT2 V612 "DATA\ADULTHATFILES";


*****************************************************************************
*****************************************************************************
* 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 = 23;


*****************************************************************************
* 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     = WRWT;
%LET IND_VAR1 = R03072;
%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 = R03009;
%LET DEPVAR2 = R03013;
%LET DEPVAR3 = R03027;
%LET DEPVAR4 = R03028;


****************************************************************************
* GETTING NEEDED CARE QUICKLY.
****************************************************************************;
%LET DEPVAR5 = R03018;
%LET DEPVAR6 = R03020;
%LET DEPVAR7 = R03023;
%LET DEPVAR8 = R03029;


****************************************************************************
* HOW WELL DOCTORS COMMUNICATE.
****************************************************************************;
%LET DEPVAR9  = R03032;
%LET DEPVAR10 = R03033;
%LET DEPVAR11 = R03034;
%LET DEPVAR12 = R03035;


****************************************************************************
* COURTEOUS AND HELPFUL OFFICE STAFF.
****************************************************************************;
%LET DEPVAR13 = R03030;
%LET DEPVAR14 = R03031;


****************************************************************************
* CUSTOMER SERVICE.
****************************************************************************;
%LET DEPVAR15 = R03044;
%LET DEPVAR16 = R03046;
%LET DEPVAR17 = R03051;


****************************************************************************
* CLAIMS PROCESSING.
****************************************************************************;
%LET DEPVAR18 = R03040;
%LET DEPVAR19 = R03041;


****************************************************************************
* RATING ALL HEALTH CARE: 0 - 10.
****************************************************************************;
%LET DEPVAR20 = R03036;


****************************************************************************
* RATING OF HEALTH PLAN: 0 - 10.
****************************************************************************;
%LET DEPVAR21 = R03052;


****************************************************************************
```

```
* RATING OF PERSONAL DR: 0 - 10.
******************************************************************************;
%LET DEPVAR22 = R03011;


******************************************************************************
* SPECIALITY CARE: 0 - 10.
******************************************************************************;
%LET DEPVAR23 = R03015;


%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 = IN2.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 'REGRSREG.INC';
     OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
                    PRED&IGRP RESID&IGRP XREGION &&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 XREGION &&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 'RISKARRY.INC';
    %INCLUDE '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=XREGION NEWADJST);
    SET ADJUST;
    %INCLUDE 'REGARRAY.INC';
    LENGTH NAME $8;
    DO I=1 TO DIM(REGRHS);
       CALL VNAME(REGRHS(I),NAME);
       XREGION=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 XREGION;
  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=XREGION REGCNT&IGRP REGWGT&IGRP);
      BY XREGION;
      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  XREGION;
     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 XREGION)
              REGFILE1(KEEP = ADJ&IGRP XREGION);
        BY XREGION;
        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 XREGION;
       DEPENDNT = "&&DEPVAR&IVAR";
       IF INS;
   RUN;

   PROC PRINT DATA=OUT.R_&&DEPVAR&IVAR;
        TITLE2 "Print of XREGION 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(16)  8 REGCNT01 - REGCNT16;
      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 XREGION group;
      * we will only use XREGIONs with more than than 2 obs;
      * I am using the region value as the subscript;
      * to make the code simpler and more readable;
      IF XREGION >= 1 AND XREGION <= 16  THEN DO;
         REGCNT(XREGION) = REGCNT(XREGION) + 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 16;
            IF(REGCNT(I) > 0) THEN DO;
               PUT  'REG' I Z2. REGCNT(I) 6.;
            END;
         END;
         PUT ' ';
```

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```
 %END;     *** of debug test;

*----------------------------------------------------------;
* This include is for the regression using regions;
* in this case we drop the last XREGION;
FILE '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;
DO I = 1 TO 16;   * 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 '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 '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 '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 '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 'REGARRAY.INC';
      PUT @10  "ARRAY REGRHS(*) $8";
      DO I = 1 TO 16;
         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 'RISKVARS.INC';
   %INCLUDE '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 'RISKARRY.INC';
    %INCLUDE '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 XREGIONs.
***************************************************;
%PUT ****************************************;
%PUT STARTING MACRO R_SUDAAN (XREGION);
%PUT ****************************************;

DATA &INFILE;
    SET &INFILE;
    IF XREGION > 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 (XREGION)';
        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 XREGION;
    SUBGROUP XREGION;
    LEVELS 16;
    OUTPUT  SEMEAN
          / TABLECELL=DEFAULT
            FILENAME=RS&DEP;
    RUN;

    DATA R&IGRP&&DEPVAR&IVAR;
        SET RS&DEP;
        KEEP XREGION SEMEAN;
        IF SEMEAN NE .;
        RENAME SEMEAN = SEMEAN&IGRP;
    RUN;
```

```
   PROC PRINT DATA=R&IGRP&&DEPVAR&IVAR;
       TITLE2 "Print XREGION 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);
```

```
****************************************************************************
* 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) 02/27/2001 By Keith Rathbun, Small changes to input DSNs to
*              accommodate the move of ALLSCORE.SAS functionality into the
*              STEP2Q.SAS program.
*           2) 01/08/2002 By Daniele Beahm, Changed versions in libname statements
*              so program can be run with SAS v8 and still produce SAS v612 datasets.
*           3) 04/10/2002 By Mike Scott, Updated variable names for 2002
*              survey.
*           4) 03/21/2003 By Mike Scott, Updated variable names for 2003
*              survey.
****************************************************************************;
OPTIONS NOCENTER LS=132 PS=78 SOURCE SOURCE2 MLOGIC MPRINT NOOVP COMPRESS=YES;
libname in  v612 "data";
libname in2 v612 "data\adulthatfiles";
libname out v612 "data";

 %MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,QCOUNT=);

  DATA _NULL_;
   %IF "&TYPE" = "R" %THEN %DO;
       CALL SYMPUT ('BYVAR','XREGION');
   %END; %ELSE
   %IF "&TYPE" = "C" %THEN %DO;
       CALL SYMPUT ('BYVAR','CACSMPL');
   %END;

 ****************************************;
 *   Create a Composite Score           ;
 ****************************************;
 DATA _NULL_;
     FILE '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 '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;
%if &i~=8 %then %do;
set in2.h&i.&var1(rename=(resid&i=r_&var1));
%end;
%else %do;
set in2.h5&var1(rename=(resid5=r_&var1)) in2.h6&var1(rename=(resid6=r_&var1))
in2.h7&var1(rename=(resid7=r_&var1));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var2(rename=(resid&i=r_&var2));
```

```
%end;
%else %do;
set in2.h5&var2(rename=(resid5=r_&var2)) in2.h6&var2(rename=(resid6=r_&var2))
in2.h7&var2(rename=(resid7=r_&var2));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var3(rename=(resid&i=r_&var3));
%end;
%else %do;
set in2.h5&var3(rename=(resid5=r_&var3)) in2.h6&var3(rename=(resid6=r_&var3))
in2.h7&var3(rename=(resid7=r_&var3));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var4(rename=(resid&i=r_&var4));
%end;
%else %do;
set in2.h5&var4(rename=(resid5=r_&var4)) in2.h6&var4(rename=(resid6=r_&var4))
in2.h7&var4(rename=(resid7=r_&var4));
%end;

%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;
proc corr  outp=outf noprint;
by &byvar;
var &n;
weight wrwt;
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 _name_="R_&&var&j" then
sde=sum(sde,r_val(i)*s_&&var&j*s_val(i));
%end;
end;
data sefin&compos._&i;
set final; by &byvar;
if first.&byvar then tv=0;
 tv+sde;
if last.&byvar then do;
sde&i=(tv**.5)/&qcount;
output;
end;
```

```
%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=R03009,var2=R03013,var3=R03027,var4=R03028,qcount=4);
%COMPOSIT (type=R,compos=2,var1=R03018,var2=R03020,var3=R03023,var4=R03029,qcount=4);
%COMPOSIT (type=R,compos=3,var1=R03032,var2=R03033,var3=R03034,var4=R03035,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R03030,var2=R03031,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R03044,var2=R03046,var3=R03051,qcount=3);
%COMPOSIT (type=R,compos=6,var1=R03040,var2=R03041,qcount=2);
```

2.A. Q4_2003\PROGRAMS\LOADWEB\CAHPS_AdultQ42003\LOADCAHQ.SAS - Convert CAHPS Scores into WEB layout - Quarterly.

```
********************************************************************
*
* PROGRAM:  LOADCAHQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* 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.SD2 - 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.SD2) will be run through the
*    MAKEHTMQ.SAS program to generate the WEB pages.
*
* MODIFIED:
*
* 1) 04/10/2002 BY MIKE SCOTT, Updated variable names for 2002 survey.
* 2) 03/21/2003 BY MIKE SCOTT, Updated variable names for 2003 survey.
* 3) 06/25/2003 BY MIKE SCOTT, Updated for Q2 2003.
* 4) 07/03/2003 BY MIKE SCOTT, Added TIMEPD variable to be set to the period
*    or 'Trend'.  Changed from setting BENTYPE to the period or 'Trend' to
*    setting to 'Composite'.
* 5) 10/21/2003 BY MIKE SCOTT, Updated for Q3 2003.
* 6) 01/07/2004 BY MIKE SCOTT, Updated for Q4 2003.
********************************************************************
* Assign data libraries and options
*******************************************************************;
LIBNAME IN   v612  "..\..\REPORTCARDS\CAHPS_ADULTQ42003\DATA";   /*MJS 01/07/04*/
LIBNAME OUT  v612  "DATA";
LIBNAME LIBRARY   "..\..\..\..\DATA\AFINAL\FMTLIB";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

********************************************************************
* Load Format definitions for CAHPS Individual and composite data sets.
*******************************************************************;
%INCLUDE "..\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 = "2003 Q4";   /*MJS 01/07/04*/

****************************************************************
```

```
* 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:
*
* _____
*    Adjusted Score           Definitions
*    Group Number
* _____
* 1. Prime enrollees          XINS_COV IN (1,2,6) AND H03007>=2
* 2. Enrollees w/mil PCM       XENR_PCM IN (1,2,6) AND H03007>=2
* 3. Enrollees w/civ PCM       XENR_PCM = 3        AND H03007>=2
* 4. Nonenrollees              XINS_COV IN (3,4,5)
* 5. Active duty               XBNFGRP = 1
* 6. Active duty dependents    XBNFGRP = 2
* 7. Retirees and dependents   XBNFGRP IN (3,4)
*
********************************************************************;
DATA &QUESTION;
   SET IN.&QUESTION;

   LENGTH MAJGRP  $30;
   LENGTH REGION  $15;
   LENGTH REGCAT  $26;
   LENGTH BENTYPE $50;
   LENGTH BENEFIT $34;
   LENGTH TIMEPD  $35;   ***MJS 07/03/03 Added line;

   ********************************************************************
   * Assign Region
   ********************************************************************;
   REGION  = PUT(XREGION,REGIONF.);
   ********************************************************************
   * Assign benefit and benefit type
   ********************************************************************;
   IF "&TYPE" = "INDIVIDUAL" THEN DO;
      IF DEPENDNT IN("R03036","R03052","R03011","R03015") 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(XREGION,REGIONF.);

   ********************************************************************
   * 1 = Prime Enrollees
   ********************************************************************;
   MAJGRP = PUT(1,MAJGRPF.);
   SCORE = ADJ1;
   SEMEAN = SEMEAN1;
   N_OBS = &PREFIX.CNT1;
   N_WGT = &PREFIX.WGT1;
   OUTPUT;
```

```
***********************************************************************
* 2 = Enrollees with Military PCM
**********************************************************************;
MAJGRP = PUT(2,MAJGRPF.);
SCORE = ADJ2;
SEMEAN = SEMEAN2;
N_OBS = &PREFIX.CNT2;
N_WGT = &PREFIX.WGT2;
OUTPUT;

***********************************************************************
* 3 = Enrollees with Civilian PCM
**********************************************************************;
MAJGRP = PUT(3,MAJGRPF.);
SCORE = ADJ3;
SEMEAN = SEMEAN3;
N_OBS = &PREFIX.CNT3;
N_WGT = &PREFIX.WGT3;
OUTPUT;

***********************************************************************
* 4 = Non-enrolled Beneficiaries
**********************************************************************;
MAJGRP = PUT(4,MAJGRPF.);
SCORE = ADJ4;
SEMEAN = SEMEAN4;
N_OBS = &PREFIX.CNT4;
N_WGT = &PREFIX.WGT4;
OUTPUT;

***********************************************************************
* 5 = Active Duty
**********************************************************************;
MAJGRP = PUT(5,MAJGRPF.);
SCORE = ADJ5;
SEMEAN = SEMEAN5;
N_OBS = &PREFIX.CNT5;
N_WGT = &PREFIX.WGT5;
OUTPUT;

***********************************************************************
* 6 = Active Duty Dependents
**********************************************************************;
MAJGRP = PUT(6,MAJGRPF.);
SCORE = ADJ6;
SEMEAN = SEMEAN6;
N_OBS = &PREFIX.CNT6;
N_WGT = &PREFIX.WGT6;
OUTPUT;

***********************************************************************
* 7 = Retirees and Dependents
**********************************************************************;
MAJGRP = PUT(7,MAJGRPF.);
SCORE = ADJ7;
SEMEAN = SEMEAN7;
N_OBS = &PREFIX.CNT7;
N_WGT = &PREFIX.WGT7;
OUTPUT;

***********************************************************************
* 8 = All Beneficiaries              ALL Beneficiaries
**********************************************************************;
MAJGRP = PUT(8,MAJGRPF.);
SCORE  = ADJ8;
SEMEAN = SEMEAN8;
N_OBS = &PREFIX.CNT8;
N_WGT = &PREFIX.WGT8;
OUTPUT;

KEEP MAJGRP
     REGION
     REGCAT
```

```
       BENTYPE
       BENEFIT
       TIMEPD   /*MJS 07/03/03 Added*/
       SCORE
       SEMEAN
       N_OBS
       N_WGT
       SIG
     ;
RUN;

%MEND;


****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS1,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03009,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03013,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03027,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03028,TYPE=INDIVIDUAL);


****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS2,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03018,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03020,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03023,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03029,TYPE=INDIVIDUAL);


****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS3,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03032,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03033,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03034,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03035,TYPE=INDIVIDUAL);


****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS4,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03030,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03031,TYPE=INDIVIDUAL);


****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS5,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03044,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03046,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03051,TYPE=INDIVIDUAL);


****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
****************************************************************************;
%PROCESS(QUESTION=RCOMPOS6,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03040,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03041,TYPE=INDIVIDUAL);


****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
****************************************************************************;
%PROCESS(QUESTION=R_R03036,TYPE=INDIVIDUAL);
```

```
*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03052,TYPE=INDIVIDUAL)


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03011,TYPE=INDIVIDUAL);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03015,TYPE=INDIVIDUAL);


*****************************************************************************
*****************************************************************************
* STACK up all of the files into one final output dataset.
*****************************************************************************
*****************************************************************************;
DATA OUT.LOADCAHQ;
   SET R_R03009
       R_R03013
       R_R03027
       R_R03028
       R_R03018
       R_R03020
       R_R03023
       R_R03029
       R_R03032
       R_R03033
       R_R03034
       R_R03035
       R_R03030
       R_R03031
       R_R03044
       R_R03046
       R_R03051
       R_R03040
       R_R03041
       R_R03036
       R_R03052
       R_R03011
       R_R03015
       RCOMPOS1
       RCOMPOS2
       RCOMPOS3
       RCOMPOS4
       RCOMPOS5
       RCOMPOS6
   ;
   IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: LOADCAHQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: CAHPS Individual and Composite data sets with adjusted scores";
TITLE4 "Program Outputs: LOADCAHQ.SD2 - Combined CAHPS Scores Database in WEB layout";

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

2.B. Q4_2003\PROGRAMS\LOADWEB\LOADCAHQ.INC - Format definitions for converting the Scores Database into the WEB layout - Quarterly.

```
*****************************************************************************
*
* PROGRAM:  LOADCAHQ.INC
* TASK:     QUARTERLY DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* 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 BENTYPF = 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.
*
* 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/Unknown"
   ;
   VALUE REGIONF
      0 = "CONUS MHS "
      1 = "Region 1  "
      2 = "Region 2  "
      3 = "Region 3  "
      4 = "Region 4  "
      5 = "Region 5  "
      6 = "Region 6  "
      8 = "Region 7/8"
      9 = "Region 9  "
     10 = "Region 10 "
     11 = "Region 11 "
     12 = "Region 12 "
     13 = "Europe    "
     14 = "Asia      "
     15 = "Latin America "
     16 = "Alaska    "
   ;
   VALUE $BENTYPF
```

```
 "1998    " = "1998                                  "
 "1999    " = "1999                                  "
 "2000    " = "2000                                  "
 "2001    " = "2001                                  "
 "2002    " = "2002                                  "
 "2003    " = "2003                                  "
 "2000 Q1 " = "January, 2000 to December, 2000       "
 "2000 Q2 " = "April, 2000 to March, 2001            "
 "2000 Q3 " = "July, 2000 to June, 2001              "
 "2000 Q4 " = "October, 2000 to September, 2001      "
 "2002 Q1 " = "January, 2001 to December, 2001       "
 "2002 Q2 " = "April, 2001 to March, 2002            "
 "2002 Q3 " = "July, 2001 to June, 2002              "
 "2002 Q4 " = "October, 2001 to September, 2002      "
 "2003 Q1 " = "January, 2002 to December, 2002       "
 "2003 Q2 " = "April, 2002 to March, 2003            "
 "2003 Q3 " = "July, 2002 to June, 2003              "
 "2003 Q4 " = "October, 2002 to September, 2003      "
 /*****************************/
 /* Admin. Year Defn.         */
 /* 2001       2002      2003 */
 /*****************************/
 "R00007  ", "R02009  ", "R03009  " = "Problems Getting Personal Doctor/Nurse    "
 "R00014  ", "R02016  ", "R03013  " = "Problems Getting Referral to Specialist   "
 "R00028  ", "R02030  ", "R03027  " = "Problems Getting Necessary Care           "
 "R00029  ", "R02031  ", "R03028  " = "Delays in Care while Awaiting Approval    "
 "R00019  ", "R02021  ", "R03018  " = "Advice over Telephone                     "
 "R00021  ", "R02023  ", "R03020  " = "Wait for Routine Visit                    "
 "R00024  ", "R02026  ", "R03023  " = "Wait for Urgent Care                      "
 "R00030  ", "R02032  ", "R03029  " = "Wait More than 15 Minutes Past Appointment "
 "R00033  ", "R02035  ", "R03032  " = "Listens Carefully                         "
 "R00034  ", "R02036  ", "R03033  " = "Explains so You can Understand            "
 "R00035  ", "R02037  ", "R03034  " = "Shows Respect                             "
 "R00036  ", "R02038  ", "R03035  " = "Spends Time with You                      "
 "R00031  ", "R02033  ", "R03030  " = "Courteous and Respectful                  "
 "R00032  ", "R02034  ", "R03031  " = "Helpful                                   "
 "R00048  ", "R02048  ", "R03044  " = "Problem Finding/Understanding Written Material"
 "R00050  ", "R02050  ", "R03046  " = "Problem Getting Help from Customer Service  "
 "R00055  ", "R02055  ", "R03051  " = "Problem with Paperwork                    "
 "R00044  ", "R02044  ", "R03040  " = "Claims Handled in a Reasonable Time       "
 "R00045  ", "R02045  ", "R03041  " = "Claims Handled Correctly                  "
 "R00037  ", "R02039  ", "R03036  " = "Health Care                               "
 "R00056  ", "R02056  ", "R03052  " = "Health Plan                               "
 "R00009  ", "R02011  ", "R03011  " = "Primary Care Manager                      "
 "R00016  ", "R02018  ", "R03015  " = "Specialty Care                            "
                        "PHYSIC  " = "Physical                                  "
                        "MENTAL  " = "Mental                                    "
 ;
 VALUE $BENEF
  "RCOMPOS1","CCOMPOS1","R00007","R00014","R00028","R00029",
                        "R02009","R02016","R02030","R02031",
                        "R03009","R03013","R03027","R03028"
  = "Getting Needed Care  "

  "RCOMPOS2","CCOMPOS2","R00019","R00021","R00024","R00030",
                        "R02021","R02023","R02026","R02032",
                        "R03018","R03020","R03023","R03029"
  = "Getting Care Quickly "

  "RCOMPOS3","CCOMPOS3","R00033","R00034","R00035","R00036",
                        "R02035","R02036","R02037","R02038",
                        "R03032","R03033","R03034","R03035"
  = "How Well Doctors Communicate "

  "RCOMPOS4","CCOMPOS4","R00031","R00032",
                        "R02033","R02034",
                        "R03030","R03031"
  = "Courteous and Helpful Office Staff "

  "RCOMPOS5","CCOMPOS5","R00048","R00050","R00055",
                        "R02048","R02050","R02055",
                        "R03044","R03046","R03051"
  = "Customer Service         "
```

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```
              "RCOMPOS6","CCOMPOS6","R00044","R00045",
                                "R02044","R02045",
                                "R03040","R03041"
              = "Claims Processing               "
              "RCOMPOS11","COMPOS11","MENTAL","PHYS"
              = "Health Status                    "
              /********************/
              /* Admin. Year Defn. */
              /* 2001       2002  */
              /********************/
              "R00037", "R02039", "R03036" = "Health Care                            "
              "R00056", "R02056", "R03052" = "Health Plan                            "
              "R00009", "R02011", "R03011" = "Primary Care Manager                   "
              "R00016", "R02018", "R03015" = "Specialty Care                         "
           ;
      VALUE BEN
       0 = 'Total'     /*** 12-13 MAB ***/
       1 = 'Getting Needed Care'
       2 = 'Getting Care Quickly'
       3 = 'Courteous and Helpful Office Staff'
       4 = 'How Well Doctors Communicate'
       5 = 'Customer Service'
       6 = 'Claims Processing'
       7 = 'Health Plan'
       8 = 'Health Care'
       9 = 'Primary Care Manager'
      10 = 'Specialty Care'
      11 = 'Preventive Care';

      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 = "Problems Getting Personal Doctor/Nurse"
       2 = "Problems Getting Referral to Specialist"
       3 = "Problems Getting Necessary Care"
       4 = "Delays in Care while Awaiting Approval"
       5 = "Composite";

      VALUE GETCAREQ
       1 = "Advice over Telephone"
       2 = "Wait for Routine Visit"
       3 = "Wait for Urgent Care"
       4 = "Wait More than 15 Minutes Past Appointment"
       5 = "Composite";

      VALUE CRTSHELP
       1 = "Courteous and Respectful"
       2 = "Helpful"
       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 = "Problem Finding/Understanding Written Material"
       2 = "Problem Getting Help from Customer Service"
       3 = "Problem with Paperwork"
       4 = "Composite";

      VALUE CLMSPROC
       1 = "Claims Handled in a Reasonable Time"
       2 = "Claims Handled Correctly"
```

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```
     3 = "Composite";

   VALUE PREVCARE
   1 = "Mammography"
   2 = "Pap Smear"
   3 = "Hypertension"
   4 = "Prenatal Care"
   5 = "Cholesterol Testing"
   6 = "Composite";
RUN;
```

3.A. Q1_2003\PROGRAMS\BENCHMARK\BENCHA01.SAS - Extract Adult CAHPS Questions from NCBD - Quarterly.

```
*****************************************************************************
*
* PROGRAM:   BENCHA01.SAS
* TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:   Extract 2003 Adult CAHPS Questions
*
* WRITTEN:   06/02/2000 BY KEITH RATHBUN
*
* INPUTS:    1) ADULT.SD2 - 1999 Adult CAHPS Questions
*
* OUTPUT:    1) BENCHA01.SD2 - 1999 Adult CAHPS Questions Renamed to be
*               consistent with the 1999 MPR DOD Survey.
*
* MODIFIED: 1) 12/19/2000 BY KEITH RATHBUN for Q1 2000 Survey.
*           2) 04/11/2002 BY MIKE SCOTT, Updated variable names for 2002
*              Survey.
*           3) 07/30/2002 BY MIKE SCOTT, Updated to use 2001 NCBD.
*           4) 03/21/2003 BY MIKE SCOTT, Updated for 2003 survey.
*           5) 05/06/2003 BY MIKE SCOTT, Updated for 2002 benchmarks.
*
* NOTES:
*
* 1) This program will generate the input for BENCHA02.SAS.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN      "..\..\..\Q1_2003\data\benchmark\adult2003";  /*MJS 05/06/03*/
LIBNAME OUT V612 "data";                                      /*Updated for 2002 benchmarks*/
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

DATA OUT.BENCHA01;
   SET IN.AC2002DB (RENAME=(BIRTHYY=YOB));
   FORMAT _ALL_;
   *******************************************
   * Getting Needed Care
   *******************************************;
   H03009  = AC06_02;                           /*MJS 05/06/03 Changed _01 to _02*/
   H03013  = AC10_02;
   H03027  = AC24_02;
   H03028  = AC25_02;
   *******************************************
   * Getting Care Quickly
   *******************************************;
   H03018  = AC15_02;
   H03020  = AC17_02;
   H03023  = AC20_02;
   H03029  = AC26_02;
   *******************************************
   * How Well Doctors Communicate
   *******************************************;
   H03032  = AC29_02;
   H03033  = AC30_02;
   H03034  = AC31_02;
   H03035  = AC32_02;
   *******************************************
   * Courteous and Helpful Office Staff
   *******************************************;
   H03030  = AC27_02;
   H03031  = AC28_02;
   *******************************************
   * Customer Service
   *******************************************;
   H03044  = AC39_02;
   H03046  = AC41_02;
   H03051  = AC46_02;
   *******************************************
   * Claims Processing
   *******************************************;
   H03040  = AC35_02;
```

```
   H03041   = AC36_02;
   *******************************************
   * Health Care Rating
   *******************************************;
   H03036   = AC33_02;
   *******************************************
   * Health Plan Rating
   *******************************************;
   H03052   = AC47_02;
   *******************************************
   * Personal Doctor Rating
   *******************************************;
   H03011   = AC08_02;
   *******************************************
   * Specialist Rating
   *******************************************;
   H03015   = AC12_02;
   *******************************************
   * Health Status
   *******************************************;
   H03072   = AC48_02;

   AGEGROUP = AGE;    *NEED TO USE USE THIS DIRECTLY (already grouped);   /*MJS 05/09/03 Updated
for Q1 2003*/
   XSEXA    = GENDER;                                                    /*MJS 05/09/03 Updated
for Q1 2003*/
   SREDHIGH = AC54_02;                                                   /*MJS 05/09/03 Updated
for Q1 2003*/
   if product in (7,9) then model=4;              /*MJS 05/06/03 product now numeric*/
   if product=3 then model=2;                     /*coded according to AC FORMATS.SAS*/
   if product=1 then model=1;
   if product=4 then model=6;
   if product=8 then model=5;
   if product=2 then model=3;
   product=planid;                                /*MJS 05/06/03 wesplnid now planid*/

 LABEL  H03009    = "AC06_02 - CAHPS variable"   /*MJS 05/06/03 Changed _01 to _02*/
        H03013    = "AC10_02 - CAHPS variable"
        H03027    = "AC24_02 - CAHPS variable"
        H03028    = "AC25_02 - CAHPS variable"
        H03018    = "AC15_02 - CAHPS variable"
        H03020    = "AC17_02 - CAHPS variable"
        H03023    = "AC20_02 - CAHPS variable"
        H03029    = "AC26_02 - CAHPS variable"
        H03032    = "AC29_02 - CAHPS variable"
        H03033    = "AC30_02 - CAHPS variable"
        H03034    = "AC31_02 - CAHPS variable"
        H03035    = "AC32_02 - CAHPS variable"
        H03030    = "AC27_02 - CAHPS variable"
        H03031    = "AC28_02 - CAHPS variable"
        H03044    = "AC39_02 - CAHPS variable"
        H03046    = "AC41_02 - CAHPS variable"
        H03051    = "AC46_02 - CAHPS variable"
        H03040    = "AC35_02 - CAHPS variable"
        H03041    = "AC36_02 - CAHPS variable"
        H03036    = "AC33_02 - CAHPS variable"
        H03052    = "AC47_02 - CAHPS variable"
        H03011    = "AC08_02 - CAHPS variable"
        H03015    = "AC12_02 - CAHPS variable"
        H03072    = "AC48_02 - CAHPS variable"
        AGEGROUP  = "AGE - CAHPS variable"       /*MJS 05/09/03 Updated for Q1 2003*/
        XSEXA     = "GENDER - CAHPS variable"    /*MJS 05/09/03 Updated for Q1 2003*/
        SREDHIGH  = "AC54_02 - CAHPS variable"   /*MJS 05/09/03 Updated for Q1 2003*/
        ;
 KEEP   H03009
        H03013
        H03027
        H03028
        H03018
        H03020
        H03023
        H03029
        H03032
        H03033
```

```
                  H03034
                  H03035
                  H03030
                  H03031
                  H03044
                  H03046
                  H03051
                  H03040
                  H03041
                  H03036
                  H03052
                  H03011
                  H03015
                  H03072
                  AGEGROUP
                  XSEXA
                  SREDHIGH
                  MODEL
                  PRODUCT
                  AC03_02
                  DISP
                  YOB
               ;
RUN;

TITLE1 "Extract 2003 Adult CAHPS Questions (DoD)";    /*MJS 03/21/03*/
TITLE2 "Program Name: BENCHA01.SAS By Keith Rathbun";
TITLE3 "Program Input: AC2002DB.sd2";                 /*MJS 05/06/03 Updated file name*/
TITLE4 "Program Output: BENCHA01.sd2";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES _ALL_ /MISSING LIST;
RUN;
```

3.B. Q1_2003\PROGRAMS\BENCHMARK\BENCHA02.SAS - Recode Adult CAHPS Questions from NCBD to be consistent with the HCSDB - Quarterly.

```
******************************************************************************
*
* PROGRAM:   BENCHA02.SAS
* TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:   Recode 2003 Adult CAHPS Questions
*
* WRITTEN:   06/02/2000 BY KEITH RATHBUN
*
* INPUT:     1) BENCHA01.SD2 - 2000 Adult CAHPS Questions Renamed to be
*               consistent with the 2002 MPR DOD Survey.
*
* OUTPUT:    1) BENCHA02.SD2 - Recoded 2000 Adult CAHPS Questions Renamed
*               to be consistent with the 2002 MPR DOD Survey.
*
* MODIFIED:  1) 12/19/2000 BY KEITH RATHBUN for Q1 2000 Survey.
*            2) 04/11/2002 BY MIKE SCOTT, Updated variable names for 2002
*               Survey.
*            3) 07/30/2002 BY MIKE SCOTT, Updated to use 2001 NCBD.
*            4) 03/21/2003 BY MIKE SCOTT, Updated for 2003 survey.
*            5) 05/06/2003 BY MIKE SCOTT, Changed labels from _01 to _02.
*
* 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     "data";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

DATA OUT.BENCHA02(rename=(nproduct=product));
   SET IN.BENCHA01;
     nproduct=product+0;
   ******************************************************************************
   * Reorder the code for H03029.
   * It is in reverse order.
   ******************************************************************************;
   IF H03029 = 1      THEN R03029 = 4;
   ELSE IF H03029 = 2 THEN R03029 = 3;
   ELSE IF H03029 = 3 THEN R03029 = 2;
   ELSE IF H03029 = 4 THEN R03029 = 1;
   ELSE IF H03029 < 0 THEN R03029 = .;
      IF R03029 > 1   THEN R03029 = R03029 - 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 H03020 = 1      THEN R03020 = 1;
   ELSE IF H03020 = 2 THEN R03020 = 1;
   ELSE IF H03020 = 3 THEN R03020 = 2;
   ELSE IF H03020 = 4 THEN R03020 = 3;
   ELSE IF H03020 < 0 THEN R03020 = .;

   IF H03018 = 1      THEN R03018 = 1;
   ELSE IF H03018 = 2 THEN R03018 = 1;
   ELSE IF H03018 = 3 THEN R03018 = 2;
   ELSE IF H03018 = 4 THEN R03018 = 3;
   ELSE IF H03018 < 0 THEN R03018 = .;

   IF H03023 = 1      THEN R03023 = 1;
   ELSE IF H03023 = 2 THEN R03023 = 1;
   ELSE IF H03023 = 3 THEN R03023 = 2;
   ELSE IF H03023 = 4 THEN R03023 = 3;
   ELSE IF H03023 < 0 THEN R03023 = .;
```

```
IF H03030 = 1       THEN R03030 = 1;
ELSE IF H03030 = 2 THEN R03030 = 1;
ELSE IF H03030 = 3 THEN R03030 = 2;
ELSE IF H03030 = 4 THEN R03030 = 3;
ELSE IF H03030 < 0 THEN R03030 = .;

IF H03031 = 1       THEN R03031 = 1;
ELSE IF H03031 = 2 THEN R03031 = 1;
ELSE IF H03031 = 3 THEN R03031 = 2;
ELSE IF H03031 = 4 THEN R03031 = 3;
ELSE IF H03031 < 0 THEN R03031 = .;

IF H03032 = 1       THEN R03032 = 1;
ELSE IF H03032 = 2 THEN R03032 = 1;
ELSE IF H03032 = 3 THEN R03032 = 2;
ELSE IF H03032 = 4 THEN R03032 = 3;
ELSE IF H03032 < 0 THEN R03032 = .;

IF H03033 = 1       THEN R03033 = 1;
ELSE IF H03033 = 2 THEN R03033 = 1;
ELSE IF H03033 = 3 THEN R03033 = 2;
ELSE IF H03033 = 4 THEN R03033 = 3;
ELSE IF H03033 < 0 THEN R03033 = .;

IF H03034 = 1       THEN R03034 = 1;
ELSE IF H03034 = 2 THEN R03034 = 1;
ELSE IF H03034 = 3 THEN R03034 = 2;
ELSE IF H03034 = 4 THEN R03034 = 3;
ELSE IF H03034 < 0 THEN R03034 = .;

IF H03035 = 1       THEN R03035 = 1;
ELSE IF H03035 = 2 THEN R03035 = 1;
ELSE IF H03035 = 3 THEN R03035 = 2;
ELSE IF H03035 = 4 THEN R03035 = 3;
ELSE IF H03035 < 0 THEN R03035 = .;

IF H03040 = 1       THEN R03040 = 1;
ELSE IF H03040 = 2 THEN R03040 = 1;
ELSE IF H03040 = 3 THEN R03040 = 2;
ELSE IF H03040 = 4 THEN R03040 = 3;
ELSE IF H03040 < 0 THEN R03040 = .;

IF H03041 = 1       THEN R03041 = 1;
ELSE IF H03041 = 2 THEN R03041 = 1;
ELSE IF H03041 = 3 THEN R03041 = 2;
ELSE IF H03041 = 4 THEN R03041 = 3;
ELSE IF H03041 < 0 THEN R03041 = .;

IF H03072 = 1         THEN R03072 = 5;
ELSE IF H03072 = 2    THEN R03072 = 4;
ELSE IF H03072 = 3    THEN R03072 = 3;
ELSE IF H03072 = 4    THEN R03072 = 2;
ELSE IF H03072 = 5    THEN R03072 = 1;
ELSE IF H03072>5|H03072<1 THEN R03072 = .;

*************************************************************************
* Recode variables to one missing condition "."
* This also makes all the "H000xx" to "R000xx".
*************************************************************************;
R03009 = H03009;  IF R03009 < 0 THEN R03009 = .;
R03011 = H03011;  IF R03011 < 0|r03011>10 THEN R03011 = .;
R03013 = H03013;  IF R03013 < 0 THEN R03013 = .;
R03015 = H03015;  IF R03015 < 0|r03015>10 THEN R03015 = .;
R03027 = H03027;  IF R03027 < 0 THEN R03027 = .;
R03028 = H03028;  IF R03028 < 0 THEN R03028 = .;
R03036 = H03036;  IF R03036 < 0|r03036>10 THEN R03036 = .;
R03044 = H03044;  IF R03044 < 0 THEN R03044 = .;
R03046 = H03046;  IF R03046 < 0 THEN R03046 = .;
R03051 = H03051;  IF R03051 < 0 THEN R03051 = .;
R03052 = H03052;  IF R03052 < 0|r03052>10 THEN R03052 = .;

LABEL R03009   = "AC06_02 - Recoded CAHPS variable"   /*MJS 05/06/03 Changed _01 to _02*/
      R03011   = "AC08_02 - Recoded CAHPS variable"
```

```
           R03013    = "AC10_02 - Recoded CAHPS variable"
           R03015    = "AC12_02 - Recoded CAHPS variable"
           R03018    = "AC15_02 - Recoded CAHPS variable"
           R03020    = "AC17_02 - Recoded CAHPS variable"
           R03023    = "AC20_02 - Recoded CAHPS variable"
           R03027    = "AC24_02 - Recoded CAHPS variable"
           R03028    = "AC25_02 - Recoded CAHPS variable"
           R03029    = "AC26_02 - Recoded CAHPS variable"
           R03030    = "AC27_02 - Recoded CAHPS variable"
           R03031    = "AC28_02 - Recoded CAHPS variable"
           R03032    = "AC29_02 - Recoded CAHPS variable"
           R03033    = "AC30_02 - Recoded CAHPS variable"
           R03034    = "AC31_02 - Recoded CAHPS variable"
           R03035    = "AC32_02 - Recoded CAHPS variable"
           R03036    = "AC33_02 - Recoded CAHPS variable"
           R03044    = "AC39_02 - Recoded CAHPS variable"
           R03046    = "AC41_02 - Recoded CAHPS variable"
           R03051    = "AC46_02 - Recoded CAHPS variable"
           R03052    = "AC47_02 - Recoded CAHPS variable"
           R03072    = "AC48_02 - Recoded CAHPS variable"
           R03040    = "AC35_02 - Recoded CAHPS variable"
           R03041    = "AC36_02 - Recoded CAHPS variable"

           nPRODUCT  = "Product ID - CAHPS variable";
       ;
       drop product;
RUN;

TITLE1 "Recode 2003 Adult CAHPS Questions (8860-410)";   /*MJS 03/21/03*/
TITLE2 "Program Name: BENCHA02.SAS By Keith Rathbun";
TITLE3 "Program Input: BENCHA01.SD2";
TITLE4 "Program Output: BENCHA02.SD2";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES  AGEGROUP
        XSEXA
        SREDHIGH
        MODEL
        R03009 * H03009
        R03011 * H03011
        R03013 * H03013
        R03015 * H03015
        R03018 * H03018
        R03020 * H03020
        R03023 * H03023
        R03027 * H03027
        R03028 * H03028
        R03029 * H03029
        R03030 * H03030
        R03031 * H03031
        R03032 * H03032
        R03033 * H03033
        R03034 * H03034
        R03035 * H03035
        R03036 * H03036
        R03044 * H03044
        R03046 * H03046
        R03051 * H03051
        R03052 * H03052
        R03072 * H03072
        R03040 * H03040
        R03041 * H03041
    /MISSING LIST;
RUN;
```

3.C. Q4_2003\PROGRAMS\BENCHMARK\BENCHA03.SAS - Calculate CAHPS Benchmark data for HCSDB - Quarterly.

```
***************************************************************************
*
* PROGRAM:  BENCHA03.SAS
* TASK:     2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:  Adjust 2003 Adult CAHPS Benchmarks
*
* WRITTEN:  June 2000 BY ERIC SCHONE
*
* INPUTS:   1) BENCHA02.SD2 - 2000 Adult CAHPS Questions Renamed to be
*              consistent with the 2000 MPR DOD Survey.
*           2) GROUP8.SD2 - CAHPS Group8 (all beneficiaries) Dataset
*
* OUTPUTS:  1) Benchmark Composite Scores Data Sets
*
* MODIFIED: 1) Nov 2000 BY ERIC SCHONE - Output permanent datasets with
*              scores and standard errors and process the rest of the
*              composites and ratings.
*           2) Dec 2000 BY KEITH RATHBUN - Update variable names for
*              Q1 2000 Survey.
*           3) Jan 2002 BY KEITH RATHBUN - Updated to run under SAS
*              version 8 (changed INTERCEP to INTERCEPT).
*           4) Apr 2002 BY MIKE SCOTT - Updated variable names for Q1
*              2002 Survey.
*           5) Jul 2002 BY MIKE SCOTT - Changed R00077 to R03072, since
*              H02077 (health status) is back and was renamed to R03072
*              in HSC022_1.sd2.
*           6) Mar 2003 BY MIKE SCOTT - Updated for 2003 survey.
*           7) May 2003 BY MIKE SCOTT - Changed ac03_01 to ac03_02.
*           8) Jun 2003 BY MIKE SCOTT - Updated for Q2 2003.
*           9) Oct 2003 BY MIKE SCOTT - Updated for Q3 2003.
*
* 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
***************************************************************************;
libname in  V612 '..\..\..\Q1_2003\Programs\Benchmark\Data';   /*MJS 06/26/03*/
libname in2 V612 '..\ReportCards\CAHPS_AdultQ42003\Data';        /*NMJ 1/07/04*/
libname out V612 'Data';

%let wgt=wrwt;

OPTIONS MLOGIC MPRINT NOCENTER 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;
 merge temp 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;

 ADJUST = ADJUST + intercept;
 &q._&l=adjust;

run;

%mend comb;

%macro adjust(x,y);



proc summary data=setup;
where &x>.;
 class product;

 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 product);
 if _n_=1 then set count2;
 set count;
 pweight=denom/_freq_;
run;

data temp;
 merge count  setup; by product;

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;

proc sort data=r_&x; by product;
run;

PROC DESCRIPT DATA=r_&x DESIGN=STRWR NOPRINT;
 WEIGHT pweight;
 SETENV DECWIDTH=4;
 NEST product / missunit;
 VAR R_&x;
 OUTPUT  SEMEAN / TABLECELL=DEFAULT
 FILENAME=s_&x;
RUN;

data s_&x(rename=(semean=s_&x));
 set s_&x(keep=semean);
 %do i=1 %to 8;
  %if &i=8 %then %do;

    data group8;
     set in2.group5 in2.group6 in2.group7;
    run;
    %comb(group8,&y,&x,8);
  %end;
  %else %do;
    %comb(in2.group&i,&y,&x,&i);
  %end;
 %end;


%mend adjust;

/* adjust all the variables */

%macro comp(compno,a,b,c,d);
 %if &a~= %then %do;
  %let n=r_&a;
  %let m=s_&a;
  %do i=1 %to 8;
   %let p&i=&a._&i;
  %end;
  %let grpnum=1;
   proc sort data=r_&a;
    by mpid;
   run;
 %end;
 %if &b~= %then %do;
  %let n=%str(&n r_&b);
  %let m=%str(&m s_&b);
  %do i=1 %to 8;
   %let p&i=%str(&&p&i &b._&i);
  %end;
  %let grpnum=2;
   proc sort data=r_&b;
    by mpid;
   run;
 %end;
 %if &c~= %then %do;
  proc sort data=r_&c;
   by mpid;
  run;
  %let grpnum=3;
  %let n=%str(&n r_&c);
  %do i=1 %to 8;
   %let p&i=%str(&&p&i &c._&i);
  %end;
  %let m=%str(&m s_&c); %end;

  %if &d~= %then %do;
   proc sort data=r_&d;
```

```
   by mpid;
  run;
  %let grpnum=4;
  %let n=%str(&n r_&d);
   %do i=1 %to 8;
    %let p&i=%str(&&p&i &d._&i);
   %end;

   %let m=%str(&m s_&d);
 %end;

data infile;
 merge &n;
 by mpid;
run;

proc corr outp=outf noprint;
 var &n;
 weight pweight;
run;

data final;
 if _n_=1 then do;
  %if &a~= %then %do;
   set s_&a;
  %end;
  %if &b~= %then %do;
   set s_&b;
  %end;
  %if &c~= %then %do;
   set s_&c;
  %end;
  %if &d~= %then %do;
   set s_&d;
  %end;
 end;
 set  outf;
 call symput('s'||compress(_n_),substr(_name_,3));
 where _type_='CORR';
run;

data final;
 set final;
 array r_val &n;
 array s_val &m;
 sde=0;
 do i=1 to dim(s_val);
  %do i=1 %to &grpnum;
   if _name_="r_&&s&i" then
   sde=sde+r_val(i)*s_&&s&i*s_val(i);
  %end;
 end;
run;

data sefin&compno;
 set final end=last;
 tv+sde;
 if last then do;
 sde=(tv**.5)/&grpnum;
 output;
end;

%do i=1 %to 8;
 data temp(keep=&&p&i);
  merge &&p&i;
 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;
 merge output temp;
run;

data out.comp&compno._&i;
   merge out&compno._&i
         sefin&compno;
run;

%end;

%mend comp;

/* create composites */
proc sort data=in.bencha02 out=setup;
 by product;
run;
data setup;
set setup;
if ^(model in (2,4));
if disp='M10' & ac03_02=1;    ***MJS 05/06/03 Changed _01 to _02;
data setup;
 set setup; by product;
 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;
run;
%INCLUDE "..\..\..\..\8687\PROGRAMS\REPORTCARDS\CONVERT.SAS";

%CONT1(DSN=SETUP, NUM=7,  Y=R03009 R03013 R03027 R03028
                           R03044 R03046 R03051);
%CONT2(DSN=SETUP, NUM=4,  Y=R03036 R03052 R03011 R03015);
%CONT3(DSN=SETUP, NUM=12, Y=R03018 R03020 R03023 R03029
                           R03032 R03033 R03034 R03035
                           R03030 R03031 R03040 R03041);
/* GETTING NEEDED CARE */
%adjust(r03009,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03013,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03027,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03028,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(1,r03009,r03013,r03027,r03028);

/* GETTING NEEDED CARE QUICKLY */
%adjust(r03018,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03020,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03023,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03029,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(2,r03018,r03020,r03023,r03029);

/* HOW WELL DOCTORS COMMUNICATE */
%adjust(r03032,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03033,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03034,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03035,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(3,r03032,r03033,r03034,r03035);

/* COURTEOUS AND HELPFUL OFFICE STAFF */
%adjust(r03030,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03031,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(4,r03030,r03031);
```

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```
/* CUSTOMER SERVICE */
%adjust(r03044,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03046,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03051,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(5,r03044,r03046,r03051);

/* CLAIMS PROCESSING */
%adjust(r03040,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03041,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(6,r03040,r03041);

/* RATING ALL HEALTH CARE: 0 - 10 */
%adjust(r03036,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(7,r03036);

/* RATING OF HEALTH PLAN: 0 - 10 */
%adjust(r03052,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(8,r03052);

/* RATING OF PERSONAL DR: 0 - 10 */
%adjust(r03011,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(9,r03011);

/* SPECIALTY CARE */
%adjust(r03015,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(10,r03015);
```

3.D. Q4_2003\PROGRAMS\BENCHMARK\BENCHA04.SAS - Convert the Benchmark Scores Database into the WEB layout - Quarterly.

```
*****************************************************************************
*
* PROGRAM:   BENCHA04.SAS
* TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* 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:  1) Dec 2000 bY Keith Rathbun: Updated variable names for
*               Q1 2000 Survey.  For the quarterly survey group 8 (all benes)
*               is being used as the benchmark for all groups (1-8).  Thus,
*               this group is copied and output to each of the other 7 groups.
*            2) 01/23/2002 by Mike Scott: Updated variable names to be consistent
*               with 2000 survey.
*            4) 04/15/2002 by Mike Scott - Updated variable names for
*               Q1 2002 Survey.
*            5) 03/21/2003 by Mike Scott - Updated for 2003 survey.
*            6) 06/26/2003 by Mike Scott - Updated for Q2 2003.
*            7) 07/03/2003 by Mike Scott - Added TIMEPD variable to be set to the period
*               or 'Trend'.  Changed from setting BENTYPE to the period or 'Trend' to
*               setting to 'Composite'.
*            8) 07/18/2003 by Mike Scott - Added TIMEPD to FREQ.
*            9) 10/21/2003 by Mike Scott - Updated for Q3 2003.
*
* 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.SD2) will be run through the
*    MAKEHTML.SAS program to generate the WEB pages.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN  V612 "DATA";
LIBNAME OUT V612 "DATA";
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) 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 H98043_R>=7
```

```
* 2. Enrollees w/mil PCM      XENR_PCM IN (1,2,6) AND H98043_R>=7
* 3. Enrollees w/civ PCM      XENR_PCM = 3        AND H98043_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 = "2003 Q4";   /*NMJ 1/07/04*/


******************************************************************************
* Convert benchmark scores datasets into WEB layout.
******************************************************************************;

   DATA COMP&CNUM._&Gnum;
      SET IN.COMP&CNUM._&GNUM;

      LENGTH MAJGRP  $30;
      LENGTH REGION  $15;
      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,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 = "Courteous and Helpful Office Staff";
      ELSE IF &CNUM = 5  THEN BENEFIT = "Customer Service";
      ELSE IF &CNUM = 6  THEN BENEFIT = "Claims Processing";
      ELSE IF &CNUM = 7  THEN BENEFIT = "Health Care";
      ELSE IF &CNUM = 8  THEN BENEFIT = "Health Plan";
      ELSE IF &CNUM = 9  THEN BENEFIT = "Primary Care Manager";
      ELSE IF &CNUM = 10 THEN BENEFIT = "Specialty Care";

      BENTYPE = "Composite";   ***MJS 07/03/03 Changed from BENTYPE = PUT(&YEAR,$BENTYPF.);
      TIMEPD = PUT(&YEAR,$BENTYPF.);   ***MJS 07/03/03 Added;

      *****************************************************************
      * Assign composite score and SEMEAN
      *****************************************************************;
      SCORE = TOTADJ;
      SEMEAN = SDE;

      *****************************************************************
      * Output composite score record for each REGION
      *****************************************************************;
      OUTPUT;

      *****************************************************************
```

```
      * Now, output the individual score records
      ***********************************************************************;
      IF &NVAR GT 1 THEN DO;
         ARRAY ITEMS &VARS;
         ARRAY SE    &SE;
         LENGTH NAME $8;
         DO I = 1 TO DIM(ITEMS); DROP I;
            CALL VNAME(ITEMS(I),NAME);
            NAME = SUBSTR(NAME,1,6);
            SCORE  = ITEMS(I);
            SEMEAN = SE(I);
            BENTYPE = PUT(NAME,$BENTYPF.);
            TIMEPD = PUT(&YEAR,$BENTYPF.);   ***MJS 07/03/03 Added;
            OUTPUT;
         END;
      END;

   KEEP MAJGRP
        REGION
        REGCAT
        BENTYPE
        BENEFIT
        TIMEPD   /*MJS 07/03/03 Added*/
        SEMEAN
        SCORE
        SIG
      ;
   RUN;


%MEND;

*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=8, NVAR=4, VARS=r03009_8 R03013_8 R03027_8 R03028_8,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);

*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=8, NVAR=4, VARS=R03018_8 R03020_8 R03023_8 R03029_8,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=8, NVAR=4, VARS=R03032_8 R03033_8 R03034_8 R03035_8,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);

*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=8, NVAR=2, VARS=R03030_8 R03031_8, SE=S_R03030 S_R03031);

*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=8, NVAR=3, VARS=R03044_8 R03046_8 R03051_8,
         SE=S_R03044 S_R03046 S_R03051);

*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=8, NVAR=2, VARS=R03040_8 R03041_8, SE=S_R03040 S_R03041);

*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
```

```
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=8, NVAR=1, VARS=R03036_8, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=8, NVAR=1, VARS=R03052_8, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=8, NVAR=1, VARS=R03011_8, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=8, NVAR=1, VARS=R03015_8, SE=S_R03015);


*****************************************************************************
*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=3, NVAR=4, VARS=r03009_3 R03013_3 R03027_3 R03028_3,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=3, NVAR=4, VARS=R03018_3 R03020_3 R03023_3 R03029_3,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=3, NVAR=4, VARS=R03032_3 R03033_3 R03034_3 R03035_3,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=3, NVAR=2, VARS=R03030_3 R03031_3, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=3, NVAR=3, VARS=R03044_3 R03046_3 R03051_3,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=3, NVAR=2, VARS=R03040_3 R03041_3, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=3, NVAR=1, VARS=R03036_3, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=3, NVAR=1, VARS=R03052_3, SE=S_R03052);


*****************************************************************************
```

```
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=9, GNUM=3, NVAR=1, VARS=R03011_3, SE=S_R03011);


******************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=10, GNUM=3, NVAR=1, VARS=R03015_3, SE=S_R03015);


******************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
******************************************************************************;
%PROCESS(CNUM=1, GNUM=4, NVAR=4, VARS=r03009_4 R03013_4 R03027_4 R03028_4,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


******************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
******************************************************************************;
%PROCESS(CNUM=2, GNUM=4, NVAR=4, VARS=R03018_4 R03020_4 R03023_4 R03029_4,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
******************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
******************************************************************************;
%PROCESS(CNUM=3, GNUM=4, NVAR=4, VARS=R03032_4 R03033_4 R03034_4 R03035_4,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


******************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
******************************************************************************;
%PROCESS(CNUM=4, GNUM=4, NVAR=2, VARS=R03030_4 R03031_4, SE=S_R03030 S_R03031);


******************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
******************************************************************************;
%PROCESS(CNUM=5, GNUM=4, NVAR=3, VARS=R03044_4 R03046_4 R03051_4,
         SE=S_R03044 S_R03046 S_R03051);


******************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
******************************************************************************;
%PROCESS(CNUM=6, GNUM=4, NVAR=2, VARS=R03040_4 R03041_4, SE=S_R03040 S_R03041);


******************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=7, GNUM=4, NVAR=1, VARS=R03036_4, SE=S_R03036);


******************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=8, GNUM=4, NVAR=1, VARS=R03052_4, SE=S_R03052);


******************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=9, GNUM=4, NVAR=1, VARS=R03011_4, SE=S_R03011);


******************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=10, GNUM=4, NVAR=1, VARS=R03015_4, SE=S_R03015);
```

```
*******************************************************************************
*******************************************************************************;
*******************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*******************************************************************************;
%PROCESS(CNUM=1, GNUM=5, NVAR=4, VARS=r03009_5 R03013_5 R03027_5 R03028_5,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*******************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*******************************************************************************;
%PROCESS(CNUM=2, GNUM=5, NVAR=4, VARS=R03018_5 R03020_5 R03023_5 R03029_5,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*******************************************************************************
*
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*******************************************************************************;
%PROCESS(CNUM=3, GNUM=5, NVAR=4, VARS=R03032_5 R03033_5 R03034_5 R03035_5,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*******************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*******************************************************************************;
%PROCESS(CNUM=4, GNUM=5, NVAR=2, VARS=R03030_5 R03031_5, SE=S_R03030 S_R03031);


*******************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*******************************************************************************;
%PROCESS(CNUM=5, GNUM=5, NVAR=3, VARS=R03044_5 R03046_5 R03051_5,
         SE=S_R03044 S_R03046 S_R03051);


*******************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*******************************************************************************;
%PROCESS(CNUM=6, GNUM=5, NVAR=2, VARS=R03040_5 R03041_5, SE=S_R03040 S_R03041);


*******************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*******************************************************************************;
%PROCESS(CNUM=7, GNUM=5, NVAR=1, VARS=R03036_5, SE=S_R03036);


*******************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*******************************************************************************;
%PROCESS(CNUM=8, GNUM=5, NVAR=1, VARS=R03052_5, SE=S_R03052);


*******************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*******************************************************************************;
%PROCESS(CNUM=9, GNUM=5, NVAR=1, VARS=R03011_5, SE=S_R03011);


*******************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*******************************************************************************;
%PROCESS(CNUM=10, GNUM=5, NVAR=1, VARS=R03015_5, SE=S_R03015);


*******************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*******************************************************************************;
%PROCESS(CNUM=1, GNUM=6, NVAR=4, VARS=r03009_6 R03013_6 R03027_6 R03028_6,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*******************************************************************************
```

```
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
********************************************************************************;
%PROCESS(CNUM=2, GNUM=6, NVAR=4, VARS=R03018_6 R03020_6 R03023_6 R03029_6,
        SE=S_R03018 S_R03020 S_R03023 S_R03029);
********************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
********************************************************************************;
%PROCESS(CNUM=3, GNUM=6, NVAR=4, VARS=R03032_6 R03033_6 R03034_6 R03035_6,
        SE=S_R03032 S_R03033 S_R03034 S_R03035);

********************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
********************************************************************************;
%PROCESS(CNUM=4, GNUM=6, NVAR=2, VARS=R03030_6 R03031_6, SE=S_R03030 S_R03031);

********************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
********************************************************************************;
%PROCESS(CNUM=5, GNUM=6, NVAR=3, VARS=R03044_6 R03046_6 R03051_6,
        SE=S_R03044 S_R03046 S_R03051);

********************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
********************************************************************************;
%PROCESS(CNUM=6, GNUM=6, NVAR=2, VARS=R03040_6 R03041_6, SE=S_R03040 S_R03041);

********************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
********************************************************************************;
%PROCESS(CNUM=7, GNUM=6, NVAR=1, VARS=R03036_6, SE=S_R03036);

********************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
********************************************************************************;
%PROCESS(CNUM=8, GNUM=6, NVAR=1, VARS=R03052_6, SE=S_R03052);

********************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
********************************************************************************;
%PROCESS(CNUM=9, GNUM=6, NVAR=1, VARS=R03011_6, SE=S_R03011);

********************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
********************************************************************************;
%PROCESS(CNUM=10, GNUM=6, NVAR=1, VARS=R03015_6, SE=S_R03015);

********************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
********************************************************************************;
%PROCESS(CNUM=1, GNUM=7, NVAR=4, VARS=r03009_7 R03013_7 R03027_7 R03028_7,
        SE=s_r03009 S_R03013 S_R03027 S_R03028);

********************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
********************************************************************************;
%PROCESS(CNUM=2, GNUM=7, NVAR=4, VARS=R03018_7 R03020_7 R03023_7 R03029_7,
        SE=S_R03018 S_R03020 S_R03023 S_R03029);
********************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
********************************************************************************;
%PROCESS(CNUM=3, GNUM=7, NVAR=4, VARS=R03032_7 R03033_7 R03034_7 R03035_7,
        SE=S_R03032 S_R03033 S_R03034 S_R03035);
```

```
*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=7, NVAR=2, VARS=R03030_7 R03031_7, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=7, NVAR=3, VARS=R03044_7 R03046_7 R03051_7,
        SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=7, NVAR=2, VARS=R03040_7 R03041_7, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=7, NVAR=1, VARS=R03036_7, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=7, NVAR=1, VARS=R03052_7, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=7, NVAR=1, VARS=R03011_7, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=7, NVAR=1, VARS=R03015_7, SE=S_R03015);


*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=2, NVAR=4, VARS=r03009_2 R03013_2 R03027_2 R03028_2,
        SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=2, NVAR=4, VARS=R03018_2 R03020_2 R03023_2 R03029_2,
        SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=2, NVAR=4, VARS=R03032_2 R03033_2 R03034_2 R03035_2,
        SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=2, NVAR=2, VARS=R03030_2 R03031_2, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
```

```
%PROCESS(CNUM=5, GNUM=2, NVAR=3, VARS=R03044_2 R03046_2 R03051_2,
         SE=S_R03044 S_R03046 S_R03051);

*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
****************************************************************************;
%PROCESS(CNUM=6, GNUM=2, NVAR=2, VARS=R03040_2 R03041_2, SE=S_R03040 S_R03041);

*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=7, GNUM=2, NVAR=1, VARS=R03036_2, SE=S_R03036);

*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=8, GNUM=2, NVAR=1, VARS=R03052_2, SE=S_R03052);

*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=9, GNUM=2, NVAR=1, VARS=R03011_2, SE=S_R03011);

*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=10, GNUM=2, NVAR=1, VARS=R03015_2, SE=S_R03015);

*************************************************************************************************
*********************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
****************************************************************************;
%PROCESS(CNUM=1, GNUM=1, NVAR=4, VARS=r03009_1 R03013_1 R03027_1 R03028_1,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);

*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
****************************************************************************;
%PROCESS(CNUM=2, GNUM=1, NVAR=4, VARS=R03018_1 R03020_1 R03023_1 R03029_1,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
****************************************************************************;
%PROCESS(CNUM=3, GNUM=1, NVAR=4, VARS=R03032_1 R03033_1 R03034_1 R03035_1,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);

*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
****************************************************************************;
%PROCESS(CNUM=4, GNUM=1, NVAR=2, VARS=R03030_1 R03031_1, SE=S_R03030 S_R03031);

*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
****************************************************************************;
%PROCESS(CNUM=5, GNUM=1, NVAR=3, VARS=R03044_1 R03046_1 R03051_1,
         SE=S_R03044 S_R03046 S_R03051);

*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
****************************************************************************;
%PROCESS(CNUM=6, GNUM=1, NVAR=2, VARS=R03040_1 R03041_1, SE=S_R03040 S_R03041);

*****************************************************************************
```

```
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=7, GNUM=1, NVAR=1, VARS=R03036_1, SE=S_R03036);


******************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=8, GNUM=1, NVAR=1, VARS=R03052_1, SE=S_R03052);


******************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=9, GNUM=1, NVAR=1, VARS=R03011_1, SE=S_R03011);


******************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=10, GNUM=1, NVAR=1, VARS=R03015_1, SE=S_R03015);


******************************************************************************
******************************************************************************
* 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
        COMP10_1 COMP10_2 COMP10_3 COMP10_4 COMP10_5 COMP10_6 COMP10_7 COMP10_8
    ;
    IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: BENCHA04.SAS By Keith Rathbun";
TITLE3 "Program Inputs: Benchmark Individual and Composite data sets with adjusted scores";
TITLE4 "Program Outputs: BENCHA04.SD2 - Combined Benchmark Scores Database in WEB layout";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES TIMEPD BENEFIT BENTYPE MAJGRP REGION REGCAT   /*MJS 07/18/03 Added TIMEPD*/
       REGION*REGCAT
       /MISSING LIST;
RUN;
```

4.A. Q4_2003\PROGRAMS\ReportCards\MPR_AdultQ42003\PRVCOMPQ.SAS - Calculate Preventive Care Composite Scores - Quarterly.

```
*******************************************************************
*  Project:    DoD Reporting and Analysis 8860-410
*  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:   10/25/01 By Daniele Beahm: Because no poststratification
*              was done for q3 2000, changed POSTSTR back to ADJ_CELL
*              04/09/02 modified macros the first three macros to create
*              temporary datasets (instead of writing permanent datasets)
*              07/15/02 By Mike Scott: Changed HCS021 to HCS022 for Q2 2002.
*              01/12/03 By Mike Scott: Changed ADJ_CELL to COM_SAMP.
*              03/21/03 By Mike Scott: Changed HCS024 to HCS031 for Q2 2002.
*              04/01/03 By Mike Scott: Replaced HP_FLU with HP_CHOL.
*              04/30/03 By Mike Scott: Changed COM_SAMP to ADJ_CELL.  Changed
*              CMPNUM1 from 4 to 5 and CMPNUM2 from 4 to 3.
*              06/13/03 By Eric Schone.  Changed composite mean & std err calculations
*              to use weights from 2000 input data.
*              07/23/03 By Mike Scott: Removed ..\PROGRAMS\ from INCLUDE.
*              10/21/03 By Mike Scott: Updated for Q3 2003.
*              01/07/04 By Mike Scott: Updated for Q4 2003.
*              02/02/04 By Mike Scott: Set PRVVAR6, PRVVAR7, and PRVVAR8 in DATA NORMDATA
*              to H03020, H03023, and H03029.
*  Purpose:    Calculate MPR Preventive Care Composites
*  Input:      \\DOD2\FILES\DOD\Q4_2003\DATA\AFINAL\HCS034_1.SD2
*  Output:     RFINAL.SD2
*              CFINAL.SD2
*              MFINAL.SD2
*  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;

LIBNAME IN  v612 "..\..\..\DATA\AFINAL";
LIBNAME IN2000  v612 "..\..\..\..\2000\dATA";
LIBNAME OUT v612 ".";
LIBNAME LIBRARY  "..\..\..\DATA\AFINAL\FMTLIB";

%LET WGT=WRWT;
%LET DEBUG=Y;        /** Set to Y for Debug print of datasets **/
%LET INDATA=HCS034_1;   /*MJS 01/07/04*/
%LET YRDATA=HCS034;      /*MJS 01/07/04*/


/***** The following parameters are used in the Variance ****/
/***** calcuation macro for region and catchment area    ****/

%LET GRPNUM=8;       /** number of groups          **/
%LET COMPNUM=8;      /** number of variables       **/
%LET REGNUM=16;      /** number of regions         **/
%LET CATCHNUM=9999; /** number of catchment areas **/

%LET CMPNUM1=5;    /** number of variables in first composite  **/   /*MJS 04/30/03 Changed
CMPNUM1 from 4 to 5*/
%LET CMPNUM2=3;    /** 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 ;
**** note -- these are the hp 2000 goals       ;

%LET GOALVAR1= .90;    /** HP Goal for prenatal care        **/
```

```
%LET GOALVAR2= .70;    /** HP Goal for Mammography        **/
%LET GOALVAR3= .90;    /** HP Goal for Papsmear          **/
%LET GOALVAR4= .95;    /** HP Goal for Blood Pressure check **/
%LET GOALVAR5= .90;    /** HP Goal for Cholesterol check  **/  /*MJS 04/01/03*/
%LET GOALVAR6= .90;    /** access goals                  **/
%LET GOALVAR7= .90;
%LET GOALVAR8= .98;

%INCLUDE "..\..\LOADWEB\LOADCAHQ.INC";   ***MJS 07/23/03 Removed ..\PROGRAMS\;

**************************************************************;
* Beneficiary group note
*    Eight groups              Definitions
* _____;
* 1. Prime enrollees           XINS_COV IN (1,2,6) AND H03007>=2
* 2. Enrollees w/mil PCM        XENR_PCM IN (1,2,6) AND H03007>=2
* 3. Enrollees w/civ PCM        XENR_PCM IN (3,7)   AND H03007>=2
* 4. Nonenrollees               XINS_COV IN (3,4,5)
* 5. Active duty                XBNFGRP = 1
* 6. Active duty dependents     XBNFGRP = 2
* 7. Retirees                   XBNFGRP IN (3,4)
* 8. All beneficiaries          ALL
**************************************************************;


/**** note -- output all data to a single dataset for macro */
/**** call                                                  */
/**** MACROS are no longer called for catchment areas       */


DATA normDATA(KEEP= XREGION CACSMPL cwrWT
                PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
                DENV1-DENV&COMPNUM);

  SET IN2000.hcs00a_1(KEEP=XINS_COV HP_CHOL  HP_BP   HP_MAMOG HP_PAP HP_PRNTL   /*MJS 04/01/03*/
                     XREGION  XENR_PCM XBNFGRP ENBGSMPL cwrWT   CACSMPL
                ADJ_CELL);   /*MJS 03/21/03*/
*  IF _N_ LE 100;                                                    /*MJS 04/30/03*/


*****************************************************************************
* 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 XREGION=7 THEN XREGION=8;
  IF XREGION IN (.,0)   THEN DELETE;
  IF CACSMPL IN (.,9999) THEN DELETE;
  IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;

  PRVVAR1=HP_PRNTL;        /** prenatal care  **/
  PRVVAR2=HP_MAMOG;        /** mammography    **/
  PRVVAR3=HP_PAP;          /** papsmear       **/
  PRVVAR4=HP_BP;           /** blood pressure **/
  PRVVAR5=HP_CHOL;         /** cholesterol    **/   /*MJS 04/01/03*/
  PRVVAR6=H03020;          /** access var 1   **/   /*MJS 02/02/04*/
  PRVVAR7=H03023;          /** access var 2   **/   /*MJS 02/02/04*/
  PRVVAR8=H03029;          /** access var 3   **/   /*MJS 02/02/04*/

/**** 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;

run;
DATA &YRDATA(KEEP=BGROUP MHS CONUS XREGION CACSMPL &WGT TMP_CELL
                  PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
                  DENV1-DENV&COMPNUM);

    SET IN.&INDATA(KEEP=XINS_COV HP_CHOL  HP_BP   HP_MAMOG HP_PAP HP_PRNTL   /*MJS 04/01/03*/
                       XREGION  XENR_PCM XBNFGRP ENBGSMPL &WGT   CACSMPL
                       ADJ_CELL H03020   H03023   H03029   H03007);   /*MJS 03/21/03*/
*  IF _N_ LE 100;                                                       /*MJS 04/30/03*/


*****************************************************************************
* 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
*****************************************************************************;

    CELLP=1;
    LENGTH TMP_CELL 8;
    TMP_CELL=ADJ_CELL;   /* make COM_SAMP a numeric variable */ /*MJS 04/30/03*/

    IF XREGION=7 THEN XREGION=8;
    IF XREGION IN (.,0)    THEN DELETE;
    IF CACSMPL IN (.,9999) THEN DELETE;
    IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;

    PRVVAR1=HP_PRNTL;          /** prenatal care  **/
    PRVVAR2=HP_MAMOG;          /** mammography    **/
    PRVVAR3=HP_PAP;            /** papsmear       **/
    PRVVAR4=HP_BP;             /** blood pressure **/
    PRVVAR5=HP_CHOL;           /** cholesterol    **/   /*MJS 04/01/03*/
    PRVVAR6=H03020;            /** access var 1   **/
    PRVVAR7=H03023;            /** access var 2   **/
    PRVVAR8=H03029;            /** access var 3   **/

/**** 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 */

*****************************************************************************
* Assign indicator of CONUS based on XREGION.  CONUS stands for
* Contential 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 CONUS=1;
    ELSE IF XREGION IN (13,14,15)                      THEN CONUS=0;
```

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```
   ELSE IF XREGION = .                                    THEN CONUS=.;

* Prime enrollees      *;

   IF (XINS_COV IN (1,2,6) AND H03007>=2) THEN DO;
      BGROUP=1;
      OUTPUT;
   END;

* Enrollees with military PCMs *;

   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN DO;
      BGROUP=2;
      OUTPUT;
   END;

* Enrollees with civilian PCMs *;

   IF (XENR_PCM IN (3,7) AND H03007>=2) THEN DO;
      BGROUP=3;
      OUTPUT;
   END;

* Nonenrollees *;

   IF XINS_COV IN (3,4,5) THEN DO;
      BGROUP=4;
      OUTPUT;
   END;

* Active duty       *;

   IF XBNFGRP = 1 THEN DO;
      BGROUP=5;
      OUTPUT;
   END;

* Active duty dependents  *;

   IF XBNFGRP = 2 THEN DO;
      BGROUP=6;
      OUTPUT;
   END;

* Retirees  *;

   IF XBNFGRP IN (3,4) THEN DO;
      BGROUP=7;
      OUTPUT;
   END;

* All beneficiaries *;

   BGROUP=8;
   OUTPUT;

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 NOPRINT DATA=&YRDATA;
    TABLE BGROUP*MHS*CONUS*XREGION*CACSMPL/MISSING LIST
    OUT=OBSCNT(DROP=PERCENT);
RUN;

PROC SORT DATA=&YRDATA; BY BGROUP MHS CONUS XREGION CACSMPL;
RUN;

DATA HCSDB FAILED;
   MERGE &YRDATA(IN=IN_ALL) OBSCNT(IN=IN_OBS);
   BY BGROUP MHS CONUS XREGION CACSMPL;
```

```
    IF COUNT < 2 THEN DO;
        PUT "Failed obs # criterion: XREGION=" XREGION "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      *****
***** (REGION, CACSMPL, MHS)                        *****
***** Note:  7/10/2000 use CONUS for MHS           *****
***** Note:  there are 8 variables and 8 groups    *****
********************************************************;

%MACRO A_SUDAAN(TABLEVAR);

*** set the number of levels in the proc descript ***;
*** for region or catchment                        ***;

 %IF %UPCASE(&TABLEVAR)=XREGION %THEN %DO;
     %LET ENDNUM=&REGNUM;
     %LET PREF=R;          /** dataset prefix for region data    **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CACSMPL %THEN %DO;
     %LET ENDNUM=&CATCHNUM;
     %LET PREF=C;          /** dataset prefix for catchement area data **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %LET PREF=M;

 %DO I=1 %TO &GRPNUM;      /** 8 groups    **/

     %DO J=1 %TO &COMPNUM;   /** 8 variables **/

         DATA INDATA&I.&J(KEEP=&WGT MHS CONUS XREGION CACSMPL
                               NUMV&J DENV&J TMP_CELL);
             SET HCSDB;
             WHERE XREGION > 0 AND BGROUP=&I AND DENV&J > 0;
             %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                 IF CONUS NE 1 THEN DELETE;  /* don't include all MHS */
             %END;
         RUN;

*** Calculate values for regions, catchment areas ****;

         %IF %UPCASE(&TABLEVAR) NE CONUS %THEN %DO;

             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;
```

```
           %END;
           %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;

**** No tables, levels, or subgroups needed ****;

              PROC DESCRIPT DATA=INDATA&I.&J DESIGN=STRWR NOPRINT;
                 WEIGHT &WGT;
                 SETENV DECWIDTH=4;
                 NEST TMP_CELL / MISSUNIT;
                 VAR NUMV&J;
                 OUTPUT SEMEAN/ TABLECELL=DEFAULT
                 FILENAME=&PREF.GRP&I.V&J;
              RUN;

           %END;

***** 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;
              %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                  CONUS=1;
              %END;
           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;
```

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```
  %END;

%MEND A_SUDAAN;

%A_SUDAAN (CONUS);
%A_SUDAAN (XREGION);
**%A_SUDAAN (CACSMPL);


**********************************************************
*** Next, calculate correlation coefficients        ***
*** and create a file for each analytical unit       ***
**********************************************************;

%MACRO GETCORR(BYVAR);

 %IF %UPCASE(&BYVAR)=XREGION %THEN %LET PREF=R;
 %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF %UPCASE(&BYVAR)=CONUS %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)=CONUS %THEN %DO;
          WHERE BGROUP=&I AND CONUS = 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;
 %END;

%MEND GETCORR;

%GETCORR(CONUS);
%GETCORR(XREGION);
**%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)=XREGION %THEN %LET PREF=R;
 %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF %UPCASE(&BYVAR)=CONUS %THEN %LET PREF=M;


 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 cwrwt;
    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 CONUS=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;
  GOALVAR7=&GOALVAR7;
  GOALVAR8=&GOALVAR8;

** 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&cmpnum1);
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&cmpnum1);
comp2=sum(of cmpv&start-cmpv&compnum);
 DROP WGTV1-WGTV&COMPNUM WTDV1-WTDV&COMPNUM
```

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```
        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(CONUS);
%GETPROP(XREGION);
**%GETPROP(CACSMPL);

*********************************************************
** 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                   *******
***  Region, Catchment, MHS                      *******
*********************************************************;

%MACRO GETSIG(BYVAR);

 %LET START = %EVAL(&CMPNUM1+1);
 %LET NEXT  = %EVAL(&CMPNUM1+2);

 %IF &BYVAR=XREGION %THEN %LET PREF=R;
 %ELSE %IF &BYVAR=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF &BYVAR=CONUS %THEN %LET PREF=M;

 DATA OUT.&PREF.FINAL(KEEP= MAJGRP REGION REGCAT GOALVAR1-GOALVAR&COMPNUM
                 SIGV1-SIGV&COMPNUM SCORV1-SCORV&COMPNUM
                 CPSIG1-CPSIG&COMPCNT CP1SE CP2SE
                 CSCOR1-CSCOR&COMPCNT CPBMK1-CPBMK&COMPCNT
                 SERRV1-SERRV&COMPNUM CP1SE CP2SE
                 COMP1 COMP2 PROPV1-PROPV&COMPNUM
                 DFSCR1-DFSCR&COMPNUM DF_CP1 DF_CP2
                 NOBSV1-NOBSV&COMPNUM CPOBS1-CPOBS&COMPCNT
                 DENV1-DENV&COMPNUM CPDEN1-CPDEN&COMPCNT);

      FORMAT MAJGRP $30. REGION $15. REGCAT $26.;
      %IF &PREF=C %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;
 %DO Z=1 %TO &COMPCNT;


           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=C %THEN %DO;
            REGCAT=PUT(CACSMPL, CATREP.);
            REGION=PUT(XREGION, REGIONF.);
        %END;
        %ELSE %IF &PREF=R %THEN %DO;
            REGION=PUT(XREGION, REGIONF.);
            REGCAT=PUT(XREGION, REGIONF.);
        %END;
        %ELSE %DO;
            REGION="CONUS MHS";
            REGCAT="CONUS MHS";
        %END;

      **** setup t statistics, degreees of freedom    **;
        ARRAY    TSTAT{&COMPNUM} T_V1-T_V&COMPNUM;
        ARRAY    BMARK{&COMPNUM} GOALVAR1-GOALVAR&COMPNUM;
        ARRAY  STNDERR{&COMPNUM} SERRV1-SERRV&COMPNUM;
        ARRAY  SERRSQR{&COMPNUM} SESQV1-SESQV&COMPNUM;
        ARRAY     DEGF{&COMPNUM} DFSCR1-DFSCR&COMPNUM;
        ARRAY    DENOM{&COMPNUM} DENV1-DENV&COMPNUM;
        ARRAY  PROPORT{&COMPNUM} PROPV1-PROPV&COMPNUM;
        ARRAY    SCORE{&COMPNUM} SCORV1-SCORV&COMPNUM;
        ARRAY   PVALUE{&COMPNUM} PVALV1-PVALV&COMPNUM;
        ARRAY      SIG{&COMPNUM} SIGV1-SIGV&COMPNUM;
        ARRAY     NOBS{&COMPNUM} NOBSV1-NOBSV&COMPNUM;
        array     norm{&compnum} nrmv1-nrmv&compnum;

      ** get the item variance, t-statistics, df, p-values **;
      ** and whether significant                          **;
        DO I=1 TO &COMPNUM;
            SERRSQR{I}=STNDERR{I}**2;  /* Item variance */
            SCORE{I}=PROPORT{I}*100;   /* Score (prop. * 100) */
            IF STNDERR{I} > 0 THEN TSTAT{I}=(PROPORT{I}-BMARK{I})/STNDERR{I};
            ELSE TSTAT{I}=.;
            DEGF{I}=NOBS{I}-1;
            PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
            IF PVALUE{I} GE .05 THEN SIG{I}=0;
            ELSE IF PVALUE{I} < .05 THEN DO;
                IF PROPORT{I} > BMARK{I} THEN SIG{I}=1;
                IF PROPORT{I} < BMARK{I} THEN SIG{I}=-1;
            END;
        END;
        DROP I;

      ** 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 sigificant       **;

      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(CONUS);
%GETSIG(XREGION);
**%GETSIG(CACSMPL);

ENDSAS;
```

4.B. Q4_2003\PROGRAMS\ReportCards\MPR_AdultQ42003\LOADMPRQ.SAS - Convert the MPR Scores Database into the WEB layout - Quarterly.

```
**************************************************************************
*
*  Project:    DoD Reporting and Analysis 8860-410
*  Program:    LOADMPRQ.SAS
*  Purpose:    Calculate MPR Preventive Care Composites
*  Date:       4/07/2000
*  Author:     Chris Rankin
*
*  Modified:   1) 05-08-2001 By Keith Rathbun, Added SEMEAN to LOADMPRQ.SD2
*                 to accommodate the Short Reports.  Condensed some code.
*              2) 07-15-2002 By Mike Scott, Changed PERIOD to = "April, 2001
*                 to March, 2002".
*              3) 03-21-2003 By Mike Scott, Changed PERIOD to = "January, 2001
*                 to December, 2002".
*              4) 04-30-2003 By Mike Scott, Changed CMPNUM1 from 4 to 5, and
*                 changed the upper limits of both DO loops from 5 to 6 because
*                 of the addition of Cholesterol Testing.
*              5) 06-23-2003 By Mike Scott, Changed setting BENTYPE from &PERIOD
*                 to Composite.  Added TIMEPD variable.
*              6) 06-26-2003 By Mike Scott, Updated for Q2 2003.
*              7) 10-21-2003 By Mike Scott, Updated for Q3 2003.
*              8) 01-07-2004 By Mike Scott, Updated for Q4 2003.
*
*    Input:    RFINAL.SD2
*              CFINAL.SD2
*              MFINAL.SD2
*
*    Output:   loadmprq.sd2
*
*    Note:     ***CHECK COMPNUM AND CMPNUM1 ASSIGNMENTS AND UPPER LIMIT OF DO LOOPS***
*
**************************************************************************;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2;

LIBNAME    INLIB V612 ".";
LIBNAME    OUT   V612 ".";
LIBNAME    LIBRARY    "..\..\..\DATA\AFINAL\FMTLIB";

%LET COMPNUM=8; /*** number of questions in both composites ***/
%LET CMPNUM1=5; /*** number of questions in first composite ***/ /*MJS 04/30/03 Changed 4 to 5*/

%LET PERIOD=October, 2002 to September, 2003;   /*MJS 01/07/04*/
%INCLUDE "..\..\LOADWEB\LOADCAHQ.INC";

****************************************************************;
*** Note -- take out access to care questions and composite ***;
****************************************************************;

data mfinal(keep=cpbmk1);
  set inlib.mfinal(keep=majgrp cpbmk1);
  where majgrp="All Beneficiaries";
run;

data mfinal;
  if _n_=1 then set mfinal;
  set inlib.mfinal(drop=cpbmk1) ;
run;

************************;
***** Benchmarks      **;
************************;

DATA BENCHMKS(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SIG);
    FORMAT  MAJGRP  $30. REGION  $15. REGCAT $26.
            BENEFIT $34. BENTYPE $50. TIMEPD $35.;   ***MJS 06/23/03 Added TIMEPD;
  SET MFINAL;

  ARRAY BENCHMK{*} GOALVAR1-GOALVAR&CMPNUM1 CPBMK1;
  DO I = 1 TO 6;   ***MJS 04/30/03 Changed 5 to 6;
```

```
      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";   ***MJS 04/30/03 Added Cholesterol;
      ELSE IF I = 6 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 = 0 TO 16; DROP REG;
         IF REG NE 7 THEN DO;
            MAJGRP = "Benchmark";
            REGION = PUT(REG,REGIONF.);
            REGCAT = PUT(REG,REGIONF.);
            OUTPUT;
         END;
      END;
   END;
RUN;


PROC FREQ DATA=BENCHMKS;
   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  $15. REGCAT $26.
             BENEFIT $34. BENTYPE $50. TIMEPD $35.;   ***MJS 06/23/03 Added TIMEPD;
   SET INLIB.MFINAL
       INLIB.RFINAL;


   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 6;   ***MJS 04/30/03 Changed 5 to 6;
      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";
      ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";   ***MJS 04/30/03 Added Cholesterol;
      ELSE IF I = 6 THEN BENTYPE = "Composite";   ***MJS 06/23/03 Changed &PERIOD to Composite;
      TIMEPD = "&PERIOD";   ***MJS 06/23/03 Added line;
      OUTPUT;
   END;
RUN;



DATA OUT.LOADMPRQ(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD SCORE SEMEAN SIG
                    N_OBS N_WGT);
```

```
   SET BENCHMKS SCORES;
RUN;
```

5.A. Q4_2003\PROGRAMS\LOADWEB\FAKEQ.SAS - Generate the WEB layout/template file - Quarterly.

```
*****************************************************************************
* PROJECT:  DOD Quarterly Survey, Consumer Reports (8860-410)
* PROGRAM:  FAKEQ.SAS
* PURPOSE:  Generate Fake Data for Report Cards
* AUTHOR:   Mark A. Brinkley
*
* MODIFIED: 1) July 2000 By Eric Schone to utilize CACRPT and CATREP
*              include files.
*           2) February 2001 By Keith Rathbun - More updates for
*              Quarterly report card format.  Made FAKE datastep into
*              a macro to handle multiple quarters.  Added QTR and
*              PERIOD parameters.
*           3) July 2001 By Mark Brinkley - Updated for
*              Quarterly 2 reports
*           4) April 2002 By Keith Rathbun - Updated DSN and %LET
*              statements for 2002 reports and added TREND records.
*              Removed Flu Shot.
*           5) July 2002 By Mike Scott - Updated DSN and %LET statements
*              for Q2 2002 reports.
*           6) March 2003 By Mike Scott - Updated for 2003 survey.
*           7) June 2003 By Mike Scott - Added TIMEPD variable to be set to the period
*              or 'Trend'.  Changed from setting BENTYPE to the period or 'Trend' to
*              setting to 'Composite'.  Updated for Q2 2003.
*           8) July 2003 BY Mike Scott - Above for K=7 through 10 in loop DO K=0 TO 11.
*              Added LOADCAHQ.INC.
*           9) October 2003 By Mike Scott - Updated for Q3 2003.
*          10) January 2004 By Mike Scott - Updated for Q4 2003.
*
* INCLUDES: 1) CACRPT.INC - Report Card Catchment Definitions
*           2) CATREP.INC - Report Card Catchment Format Defns
*
*****************************************************************************;
%LET NUMQTR = 5;   ***MJS 06/18/03 Changed 4 to 5;
%LET PERIOD1 = January, 2002 to December, 2002;     ***MJS 01/07/04;
%LET PERIOD2 = April, 2002 to March, 2003;          ***MJS 01/07/04;
%LET PERIOD3 = July, 2002 to June, 2003;            ***MJS 01/07/04;
%LET PERIOD4 = October, 2002 to September, 2003;    ***MJS 01/07/04;
%LET PERIOD5 = Trend;   ***MJS 06/18/03 Added line;

%INCLUDE "LOADCAHQ.INC";   ***MJS 07/07/03 Added;
LIBNAME OUT V612 ".";
LIBNAME IN  V612 "..\..\data\afinal";
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.HCS034_1(KEEP=XREGION);   ***MJS 01/07/04;
   CELLP=1;
   *****************************************************************************
   * CALCULATE CACSMPL FOR REPORT CARD BASED ON CELLP
   *****************************************************************************;
   %INCLUDE "CACRPT.INC";
RUN;

*****************************************************************************
* CACSMPL FORMAT DEFINITIONS FOR REPORT CARD
*****************************************************************************;
PROC FORMAT;
%INCLUDE "CATREP.INC";

PROC FORMAT;
   VALUE REG
      1  = 'Region 1'
```

```
           2  = 'Region 2'
           3  = 'Region 3'
           4  = 'Region 4'
           5  = 'Region 5'
           6  = 'Region 6'
           7  = 'Region 7/8'
           9  = 'Region 9'
          10 = 'Region 10'
          11 = 'Region 11'
          12 = 'Region 12'
          13 = 'Europe'
          14 = 'Asia'
          15 = 'Latin America'
          16 = 'Alaska';
RUN;


proc freq;
table xregion*cacsmpl/ noprint out=temp;
data temp;
length cafmt $26;
set temp end=last; by xregion;
caf=0;
where cacsmpl ne 9999;
if first.xregion & xregion ne 8 then do; cafmt=put(xregion,reg.); output; end;
cafmt=put(cacsmpl,catrep.); caf=1; if count>60 & cafmt ne 'INV' then output;
if last then do;
xregion=0; caf=0; cafmt='Benchmark'; output; caf=1; cafmt='CONUS MHS'; output;
end;
proc sort; by xregion caf cafmt;
data temp;
set temp end=last;

start=_n_; label=cafmt; type='N'; fmtname='ROWMAT';
if last then call symput('x',_n_);
proc format cntlin=temp;
proc print data=temp;


%MACRO FAKE;
DATA FAKE;

  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE TIMEPD I K;   ***MJS 06/18/03 Added TIMEPD;

  LENGTH MAJGRP  $ 30
         REGION  $ 15
         REGCAT  $ 26
         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;

     IF REGCAT="Benchmark" THEN REGION="Benchmark";
     ELSE IF REGCAT="CONUS MHS" THEN REGION="CONUS MHS";
     ELSE IF UPCASE(SUBSTR(REGCAT,1,6))="REGION" OR
             REGCAT="Alaska" OR
             REGCAT="Europe" OR
             REGCAT="Asia" OR
             REGCAT="Latin America" THEN REGION=REGCAT;


        DO K=0 TO 11;      ** 12 Benefits **;  /*** 12-13 MAB ***/

           BENEFIT=PUT(K,BEN.);

           IF K=0 THEN DO;                 /*** 12-13 MAB ***/
```

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```
                BENTYPE = "Composite";    ***MJS 06/18/03 Set BENTYPE to Composite;
                TIMEPD = "&PERIOD4";      ***MJS 06/18/03 Added TIMEPD;
                OUTPUT;

                /*%DO Q = &NUMQTR %TO &NUMQTR;
                    BENTYPE = "&&PERIOD&Q"; OUTPUT;   ***02-01-2001 KRR;
                %END;*/
            END;
            ELSE IF K=1 THEN DO;
                DO L=1 TO 5;                    ***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 5;                    ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                    BENTYPE=PUT(L,GETCAREQ.);   ***that replaced BENTYPE hard assignment;
                    %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop and changed
BENTYPE to TIMEPD;
                        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                    %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
                END;
            END;
            ELSE IF K=3 THEN DO;
                DO L=1 TO 3;                    ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                    BENTYPE=PUT(L,CRTSHELP.);   ***that replaced BENTYPE hard assignment;
                    %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop and changed
BENTYPE to TIMEPD;
                        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                    %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
                END;
            END;
            ELSE IF K=4 THEN DO;
                DO L=1 TO 5;                    ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                    BENTYPE=PUT(L,HOWWELL.);    ***that replaced BENTYPE hard assignment;
                    %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop and changed
BENTYPE to TIMEPD;
                        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                    %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
                END;
            END;
            ELSE IF K=5 THEN DO;
                DO L=1 TO 4;                    ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                    BENTYPE=PUT(L,CUSTSERV.);   ***that replaced BENTYPE hard assignment;
                    %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop and changed
BENTYPE to TIMEPD;
                        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                    %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
                END;
            END;
            ELSE IF K=6 THEN DO;
                DO L=1 TO 3;                    ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                    BENTYPE=PUT(L,CLMSPROC.);   ***that replaced BENTYPE hard assignment;
                    %DO Q = 1 %TO &NUMQTR;    ***MJS 06/18/03 Moved loop inside L loop and changed
BENTYPE to TIMEPD;
                        TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                    %END;    ***MJS 06/18/03 Deleted BENTYPE="Trend" and OUTPUT;
                END;
            END;
            ELSE IF K=7 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                    BENTYPE = "Composite";   ***MJS 07/07/03 Added;
                    TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/   ***MJS 07/07/03
Changed BENTYPE to TIMEPD;
                %END;                        ***MJS 07/07/03 Deleted BENTYPE="Trend" OUTPUT after
this line;
            END;
            ELSE IF K=8 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                    BENTYPE = "Composite";   ***MJS 07/07/03 Added;
```

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```
                   TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/   ***MJS 07/07/03
Changed BENTYPE to TIMEPD;
               %END;                              ***MJS 07/07/03 Deleted BENTYPE="Trend" OUTPUT after
this line;
           END;
           ELSE IF K=9 THEN DO;
               %DO Q = 1 %TO &NUMQTR;
                   BENTYPE = "Composite";   ***MJS 07/07/03 Added;
                   TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/   ***MJS 07/07/03
Changed BENTYPE to TIMEPD;
               %END;                              ***MJS 07/07/03 Deleted BENTYPE="Trend" OUTPUT after
this line;
           END;
           ELSE IF K=10 THEN DO;
               %DO Q = 1 %TO &NUMQTR;
                   BENTYPE = "Composite";   ***MJS 07/07/03 Added;
                   TIMEPD = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/   ***MJS 07/07/03
Changed BENTYPE to TIMEPD;
               %END;                              ***MJS 07/07/03 Deleted BENTYPE="Trend" OUTPUT after
this line;
           END;
           ELSE IF K=11 THEN DO;
               DO L=1 TO 6;                       ***MJS 06/18/03 Added L loop and BENTYPE PUT;
                   BENTYPE=PUT(L,PREVCARE.);   ***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;
         END;
       END;
     END;
   END;
RUN;
%MEND FAKE;
%FAKE;



/*** 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;


ENDSAS;
```

5.B. Q4_2003\PROGRAMS\LOADWEB\MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases into the WEB layout - Quarterly.

```
*******************************************************************************
*
* PROGRAM:  MERGFINQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:  Merge the final CAHPS and MPR Scores Databases
*           into the WEB layout preserving the order of the FAKEQ.SD2.
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from MERGFINL.SAS.
*
* INPUTS:   1) MPR and CAHPS Individual and Composite data sets with adjusted
*              scores, and benchmark data for quarterly DoD HCS.
*              - LOADMPRQ.SD2 - MPR Scores Database
*              - LOADCAHQ.SD2 - CAHPS Scores Database
*              - BENCHA04.SD2 - 2001 CAHPS Benchmark Database
*              - FAKEQ.SD2    - WEB Layout in Column order
*
* OUTPUT:   1) MERGFINQ.SD2 - Combined Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*              and composite data sets
*
* MODIFIED: 1) 07/15/2002 by Mike Scott: Updated libnames for Q2 2002.
*           2) 03/21/2003 by Mike Scott: Updated for 2003 survey.
*           3) 07/09/2003 by Mike Scott: Updated for Q2 2003.  Added TIMEPD to KEYs.
*           4) 07/23/2003 by Mike Scott: Added TIMEPD to FREQs and PRINT.
*           5) 10/21/2003 by Mike Scott: Updated for Q3 2003.
*           6) 01/07/2004 by Mike Scott: Updated for Q4 2003.
*
* 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
*  - BENCHA01-04.SAS  - Convert 2000 Benchmark Scores into WEB layout
*  - LOADCAHQ.SAS     - Convert Quarterly CAHPS Scores Database into WEB layout
*  - LOADMPRQ.SAS     - Convert Quarterly MPR Scores Database into WEB layout
*
* 2) The output file (MERGFINQ.SD2) will be run through the
*    MAKEHTMQ.SAS program to generate the WEB pages.
*
*******************************************************************************
* Assign data libraries and options
*******************************************************************************;
LIBNAME IN1 v612 ".";
LIBNAME IN2 v612 "CAHPS_ADULTQ42003\DATA";          ***MJS 01/07/04;
LIBNAME IN3 v612 "..\REPORTCARDS\MPR_ADULTQ42003";  ***MJS 01/07/04;
LIBNAME IN4 v612 "..\BENCHMARK\DATA";
LIBNAME OUT v612 ".";
OPTIONS PS=79 LS=232 COMPRESS=YES NOCENTER;   ***MJS 07/23/03 Changed LS from 132;

%INCLUDE "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 print data=order;
run;
```

```
PROC SORT DATA=ORDER; BY KEY; RUN;

****************************************************************************
* Merge the Scores Databases
****************************************************************************;
DATA MERGFINQ;
    SET IN2.LOADCAHQ(IN=INCAHPQ)
        IN3.LOADMPRQ(IN=INMPRQ )
        IN4.BENCHA04(IN=INBENQ );
    SVCAHPQ = INCAHPQ;
    SVMPRQ  = INMPRQ;
    SVBENQ  = INBENQ;
    LENGTH KEY $200;
    KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
          UPCASE(TRIM(MAJGRP))  || UPCASE(TRIM(REGCAT))  ||
          UPCASE(TRIM(REGION))  || UPCASE(TRIM(TIMEPD));   ***MJS 07/09/03 Added TIMEPD;
    KEYLEN=LENGTH(KEY);
    KEYTEST=LENGTH(BENEFIT)+LENGTH(BENTYPE)+LENGTH(MAJGRP)+LENGTH(REGION)+LENGTH(TIMEPD);
    OUTPUT;
    IF INBENQ THEN DO;
        IF MAJGRP = "All Beneficiaries" THEN DO;
            DO REG = 0 TO 16; DROP REG;
                IF REG NE 7 THEN DO;
                    MAJGRP = "Benchmark";
                    REGION = PUT(REG,REGIONF.);
                    REGCAT = PUT(REG,REGIONF.);
                    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;
            END;
        END;
    END;
    IF SCORE = . THEN DELETE;

RUN;

PROC SORT DATA=MERGFINQ; BY KEY; RUN;

proc print data=mergfinq;
run;

****************************************************************************
* Append ORDERing variable to the merged Scores database file
****************************************************************************;
DATA MERGFINQ MISSING;
    MERGE MERGFINQ(IN=IN1) ORDER(IN=IN2);
    BY KEY;

    LENGTH FLAG $30;
    IF IN1 AND IN2 THEN FLAG = "IN SCORES DB AND LAYOUT";
    ELSE IF    IN1 THEN FLAG = "IN SCORES DB ONLY";
    ELSE IF    IN2 THEN FLAG = "IN LAYOUT ONLY";

    LENGTH SOURCE $30;
    IF SVCAHPQ = 1 THEN SOURCE = "CAHPS      ";
    IF SVMPRQ  = 1 THEN SOURCE = "MPR        ";
    IF SVBENQ  = 1 THEN SOURCE = "BENCHMARK ";

    IF IN1 AND NOT IN2 THEN OUTPUT MISSING; *Missing from layout;
    IF IN1 THEN OUTPUT MERGFINQ;
RUN;

****************************************************************************
* Reorder file according to WEB layout
****************************************************************************;
PROC SORT DATA=MERGFINQ OUT=OUT.MERGFINQ; BY ORDER; RUN;

DATA FAKEQ;
    SET IN1.FAKEQ;
    ORDER = _N_;
RUN;
```

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```
DATA LAYONLY;
   MERGE FAKEQ(IN=IN1) OUT.MERGFINQ(IN=IN2 KEEP=ORDER);
   BY ORDER;
   IF IN1 AND NOT IN2;
RUN;


TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: MERGFINQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS Combined Scores data sets and WEB Layout";
TITLE4 "Program Outputs: MERGFINQ.SD2 - Merged Final Scores Database for input to MAKEHTML.SAS";

TITLE5 "MERGFINQ.SD2 Data source counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES SOURCE FLAG SVCAHPQ SVMPRQ SVBENQ
                   SVCAHPQ*SVMPRQ*SVBENQ
      /MISSING LIST;
RUN;

TITLE5 "MERGFINQ.SD2 Data attribute counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT TIMEPD   /*MJS 07/23/03 Added TIMEPD*/
       REGION*REGCAT
      /MISSING LIST;
RUN;

TITLE5 "LAYONLY.SD2 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.SD2)";
PROC PRINT DATA=MISSING;
VAR MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD;    ***MJS 07/23/03 Added TIMEPD;
RUN;
```

6.   Q4_2003\PROGRAMS\LOADWEB\CONUS_Q.SAS - Generate CAHPS CONUS scores and perform significance tests - Quarterly.

```
*****************************************************************************
*
*  PROGRAM:   CONUS_Q.SAS
*  TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
*  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 funtionality.
*
*  MODIFIED:  1) 04/10/2002 BY KEITH RATHBUN, Update for 2002 survey:
*                changed code to process 4 rolling quarters.
*             2) 04/30/2002 By Eric Schone, to calculate & test trend.
*             3) 07/17/2002 BY MIKE SCOTT, Updated %LET statements for
*                Q2 2002.
*             4) 03/21/2003 BY MIKE SCOTT, Updated for 2003 survey.
*             5) 07/08/2003 BY MIKE SCOTT, Updated for Q2 2003.  Changed BENTYPE="&PERIOD4"
*                to BENTYPE="Composite".  Added TIMEPD to KEY and FREQ.
*             6) 07/23/2003 BY MIKE SCOTT, Added TIMEPD constraint to DATA LASTQTR.
*             7) 10/21/2003 BY MIKE SCOTT, Updated for Q3 2003.
*             8) 01/07/2004 BY MIKE SCOTT, Updated for Q4 2003.
*             9) 01/28/2004 BY MIKE SCOTT, Updated LSTCONUS to point to Q3_2003t.
*
*    INPUTS:  1) MERGFINQ.SD2 - Scores Database in WEB Layout
*             2) FAKEQ.SD2 - Scores Database WEB Layout
*             3) CONUS_Q.SD2 - Previous Quarters' Combined CAHPS/MPR Scores Database in WEB layout
*
*    OUTPUT:  1) CONUS_Q.SD2 - Combined CAHPS/MPR Scores Database in WEB layout
*             2) LT30Q.SD2 - Records with <= 30 observations
*
*     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
*     - MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN1 V612 ".";
LIBNAME OUT V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************;
* Define GLOBAL parameters for last CONUSQ.SD2, rolling quarters, and
* input dataset name.
*
* IMPORTANT: Update these GLOBALS each quarter prior to rerunning program.
*****************************************************************************;
%LET LSTCONUS = ..\..\..\Q3_2003t\Loadweb;       ***MJS 01/28/04;
%LET PERIOD1  = January, 2002 to December, 2002;   ***MJS 01/07/04;
%LET PERIOD2  = April, 2002 to March, 2003;        ***MJS 01/07/04;
%LET PERIOD3  = July, 2002 to June, 2003;          ***MJS 01/07/04;
%LET PERIOD4  = October, 2002 to September, 2003;  ***MJS 01/07/04;
%LET DSN      = MERGFINQ;

*****************************************************************************;
* 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
             REGION NOT IN("Benchmark","CONUS MHS") AND
             REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %IF "&TYPE" = "COMPOSITE" %THEN %DO;
       WHERE BENTYPE = &BENTYPE AND "&MAJGRP" = MAJGRP AND REGION = REGCAT AND
             BENEFIT = "&BENEFIT" AND
             REGION NOT IN("Benchmark","CONUS MHS") AND
             REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %DO;
       PUT "ERROR: Invalid Type = &TYPE";
   %END;
RUN;


DATA TEMP;
   SET TEMP END=FINISHED;
      length key $200;
   IF _N_ = 1 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;
   ****************************************************************************
   * Skip over the Non-CONUS
   ****************************************************************************;
   IF REGION NOT IN("Asia","Europe","Latin America") THEN DO;
      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;
   END;
   IF FINISHED THEN GOTO FINISHED;
   RETURN;

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;

FINISHED:
   SCORE   = SUMSCOR1/SUMWGT1;
   SEMEAN  = SQRT(SUMSE2)/SUMWGT1;
   N_OBS   = N_OBS1;
   N_WGT   = SUMWGT1;
   SOURCE  = "CONUS";
   FLAG    = "CONUS";
   REGION  = "CONUS MHS";
   REGCAT  = "CONUS MHS";
   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;
RUN;

%IF &FLAG = 0 %THEN %DO;
   DATA FINAL;
      SET INIT TEMP;
   RUN;
%END;
%ELSE %DO;
   DATA FINAL;
      SET FINAL TEMP;
   RUN;
%END;
```

```
%LET FLAG = 1;

%MEND;

*****************************************************************************
* Create CONUS for Active Duty - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Active Duty,
TYPE=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 and Respectful                   ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment  ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for Active Duty Dependents - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Active Duty Dependents,
TYPE=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 and Respectful                   ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);


****************************************************************************
* Create CONUS for Enrollees with Civilian PCM - Individual
****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=Enrollees with Civilian
PCM, TYPE=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 and Respectful                      ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand                ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                       ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                             ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care               ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);


****************************************************************************
* Create CONUS for Enrollees with Military PCM - Individual
****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=Enrollees with Military
PCM, TYPE=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 and Respectful                      ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand                ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                       ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Listens Carefully                                  ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care               ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for Non-enrolled Beneficiaries - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=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 and Respectful                      ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand                ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                       ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                             ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care               ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for Prime Enrollees - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=Prime Enrollees,
TYPE=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 and Respectful                     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Retirees and Dependents - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Retirees and Dependents,
TYPE=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 and Respectful                     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for All Beneficiaries - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=All Beneficiaries,
TYPE=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 and Respectful                      ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand                ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                       ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                             ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care               ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,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 Courteous and Helpful Office Staff - Quarterly
*****************************************************************************;
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty                ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);   ***MJS 07/08/03 Changed
BENTYPE="&PERIOD4" to BENTYPE="Composite";
```

```
%PROCESS(BENTYPE="Composite", MAJGRP=Active Duty Dependents     ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Civilian PCM,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=Enrollees with Military PCM,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=Non-enrolled Beneficiaries ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=Prime Enrollees              ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=Retirees and Dependents     ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);
%PROCESS(BENTYPE="Composite", MAJGRP=All Beneficiaries           ,
TYPE=COMPOSITE,BENEFIT=Courteous and Helpful Office Staff);


*****************************************************************************
* 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 REGION = "Benchmark" AND SVMPRQ = 0;
RUN;
Data abnchmrk(keep=benefit bentype ascore);
set benchmrk;
where upcase(majgrp)='ALL BENEFICIARIES';
rename score=ascore;
proc sort; by benefit bentype;
proc sort data=benchmrk; by benefit bentype;
data benchmrk;
merge benchmrk abnchmrk; by benefit bentype;
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);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;
   REGION = "CONUS MHS";
   REGCAT = "CONUS MHS";

   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 = "CONUS_Q";
   FLAG   = "CONUS_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);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF N_OBS >= 30 AND TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;
   IF SIN;
   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;
      SET IN2.CONUS_Q;
      IF timepd IN ("&PERIOD1","&PERIOD2","&PERIOD3") AND
```

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```
        (REGION = REGCAT) AND
         BENEFIT IN ("Getting Needed Care",
                     "Getting Care Quickly",
                     "How Well Doctors Communicate",
                     "Courteous and Helpful Office Staff",
                     "Customer Service",
                     "Claims Processing",
                     "Health Care",
                     "Health Plan",
                     "Primary Care Manager",
                     "Specialty Care",
                     "Preventive Care") & TIMEPD NE "Trend";   ***MJS 07/23/03 Changed from
bentype not in ("Trend","Flu Shot");

      ***MJS 07/08/03 Added TIMEPD creation and setting until RUN;
      LENGTH TIMEPD $ 35;




    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 ne .;
if period<4|benefit="Preventive Care" then score=score/100;

proc sort data=trend;
by majgrp region regcat benefit bentype period;

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;
a_score=t_score/twgt;

a_period=t_period/twgt;
output;
end;

data trend(drop=score) btrend(keep=majgrp benefit bentype trend serr);
merge trend avg;  by majgrp region regcat benefit bentype;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit|first.bentype 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.bentype then do;
trend=t_score/t_period;
serr=sqrt(t_se/(t_period*twgt));


if region="Benchmark"|majgrp="Benchmark" then output btrend;
output trend;
end;
proc sort data=trend; by majgrp benefit bentype;
proc sort data=btrend; by majgrp benefit bentype;
data trend(rename=(trend=score));
merge trend btrend(rename=(trend=btrend serr=bserr));
by majgrp benefit bentype;
    length key $200;
if ^(region="Benchmark"|majgrp="Benchmark") then do;
ttrend=trend-btrend;
serr=sqrt((serr**2)+(bserr**2));
sig=0;
test= 2*(1-probt(abs(ttrend/serr),t_obs));
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;


proc sort data=trend(drop=t_obs twgt a_score a_period t_score t_se t_period serr
 bserr btrend ttrend order); by key;
 data trend ;
 merge trend(in=din) fakeq(in=cin); by key;
 if din;

data combine;
set combine trend;
proc sort; by key;
data combine dupe;
set combine; by key;
if ^(first.key & last.key) then output dupe;
output combine;
proc print data=dupe;




****************************************************************************
* 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;
   SET FAKEONLY COMBINE;
   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;
RUN;

PROC SORT DATA=CONUS_Q OUT=OUT.CONUS_Q; BY ORDER; RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: CONUS_Q.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MERGFINQ.SD2 - Scores Database in WEB Layout";
TITLE4 "Program Outputs: CONUS_Q.SD2 - CONUS 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;
```

7.   Q4_2003\PROGRAMS\LOADWEB\TOTAL_Q.SAS - Calculate CAHPS total scores and perform significance tests - Quarterly.

```
*****************************************************************************
*
*  PROGRAM:   TOTAL_Q.SAS
*  TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
*  PURPOSE:   Generate TOTAL scores and perform significance tests.
*
*  WRITTEN:   12/15/2000 BY KEITH RATHBUN
*
*  MODIFIED:  1) May 2001 BY ERIC SCHONE, Modified calculations for
*                Total Score.
*             2) July 2002 BY MIKE SCOTT, Updated PERIOD for Q2 2002 survey.
*             3) February 2003 BY MIKE SCOTT, Added code to change "Primary Care
*                Manager" in BENEFIT to "Personal Doctor".
*             4) May 2003 BY MIKE SCOTT, Updated for Q1 2003.
*                Added code to remove Civilian PCM.
*             5) July 2003 BY MIKE SCOTT, Updated for Q2 2003.  Changed BENTYPE to
*                TIMEPD when equal to PERIOD.  Added TIMEPD to KEEP, SORT, MERGE,
*                and FREQ statements and KEY assignments.
*             6) October 2003 BY MIKE SCOTT, Updated for Q3 2003.
*             7) January 2004 BY MIKE SCOTT, Updated for Q4 2003.
*
*    INPUTS:  1) CONUS_Q.SD2 - Scores Database in WEB Layout
*             2) FAKEQ.SD2 - Scores Database WEB Layout
*             3) FACTCOMP.SD2 - Total Scores (Part 1)
*
*    OUTPUT:  1) TOTAL_Q.SD2 - Combined CAHPS/MPR/TOTAL 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 1-8
*     - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
*     - MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases
*     - CONUS_Q.SAS  - Generate CAHPS CONUS scores and perform significance tests.
*     - FACTCOMP.SAS - Calculate total scores (Part 1)
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN1 V612 ".";
LIBNAME OUT V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************;
* Define GLOBAL parameters for current quarter reference period and
* input dataset name.
*
* IMPORTANT: Update the PERIOD parameter each quarter prior to rerunning
* this program.
*****************************************************************************;
%LET PERIOD = October, 2002 to September, 2003;   ***MJS 01/07/04 Updated for Q4 2003;
%LET DSN = CONUS_Q;

DATA INIT;
   SET IN1.&DSN;
   DELETE;
RUN;

PROC SORT DATA=IN1.FACTCOMP OUT=FACTCOMP; BY LAB; RUN;

PROC CONTENTS DATA=INIT;
TITLE 'CONUS_Q';
RUN;

PROC CONTENTS DATA=FACTCOMP;
TITLE 'FACTCOMP';
RUN;

*************************************************************************;
```

```
* Set first time flag for empty file creation purposes.
***************************************************************************;
%LET FLAG = 0;

***************************************************************************
***************************************************************************
*
* Process Macro Input Parameters:
*
* 1) MAJGRP = Major Group
* 2) REGION = Region
*
***************************************************************************;
%MACRO PROCESS(MAJGRP=, REGION=);
DATA TEMP(DROP=SUMSCOR1 SUMWGT1 SUMSE2) tsig(keep=benefit score);
    SET IN1.&DSN;
    WHERE (("&MAJGRP" = MAJGRP or majgrp="All Beneficiaries") AND
           ("&REGION" = REGION or region = "CONUS MHS") AND
           "&PERIOD" = TIMEPD AND bentype="Composite" /*MJS 07/31/03 Changed BENTYPE to TIMEPD*/
           & BENEFIT NE 'Total');
if majgrp="&majgrp" then output temp;
if region="CONUS MHS" & majgrp="All Beneficiaries" then output tsig;
RUN;
 data tsig(drop=score);
 set tsig;
   sigma=sqrt(score*(100-score));
 proc sort; by benefit;
 proc sort data=temp; by benefit region;
 data temp;
 merge temp tsig; by benefit;
 retain csore swgt 0;
 if first.benefit & region='CONUS MHS' then do;
 csore=score; swgt=n_wgt; end;
 proc sort; by benefit descending region;
 data temp(drop=tsore);
 set temp; by benefit;
 retain tsore twgt 0;
 if first.benefit & region='CONUS MHS' then do;
 tsore=score ;
 twgt=n_wgt;
 end;
  if region="&region" then do;
  if last.benefit then do;
   csore=tsore; swgt=twgt; end;

  output;
  end;

PROC SORT; BY BENEFIT; RUN;

DATA TEMP;
   MERGE TEMP FACTCOMP(RENAME=(LAB=BENEFIT)); BY BENEFIT;
   IF BENEFIT='Preventive Care' THEN VAR=1/11;
RUN;

DATA TEMP;
   SET TEMP END=FINISHED;
   IF _N_ = 1 THEN DO;
      SUMSCOR1 = 0;    RETAIN SUMSCOR1;
      SUMWGT1 = 0;     RETAIN SUMWGT1;
      SUMSE2 = 0;      RETAIN SUMSE2;
      SUMWGT2 = 0;     RETAIN SUMWGT2;
      N_OBS1 = 0;      RETAIN N_OBS1;
      tsig=0; retain tsig;
   END;
   IF SCORE  NE . AND N_WGT NE . and n_obs>29 THEN
    SUMSCOR1 = SUMSCOR1 + (var/sigma)*(SCORE);
    else sumscor1=sumscor1+(var/sigma)*(csore);
    if n_wgt ne . then SUMWGT1  = SUMWGT1  + VAR*n_wgt;
    tsig=tsig+sigma;
   IF SEMEAN NE . AND N_WGT NE . & n_obs>29 THEN SUMSE2 = SUMSE2 + (VAR*SEMEAN)**2;
   IF N_OBS  NE . THEN N_OBS1 + N_OBS;
   IF FINISHED THEN GOTO FINISHED;
   RETURN;
```

```
KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT TIMEPD SIG SCORE SEMEAN N_OBS N_WGT   /*MJS 07/31/03
Added TIMEPD*/
     FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;


FINISHED:
   SCORE   = tsig*SUMSCOR1/(11);
   SEMEAN  = SQRT(SUMSE2);
   N_OBS   = N_OBS1;
   N_WGT   = SUMWGT1;
   SOURCE  = "TOTAL";
   FLAG    = "TOTAL";
   BENEFIT = "Total";
   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;
   OUTPUT;
RUN;
*****************************************************************************;
* Set up empty or append records to template file.
*****************************************************************************;
%IF &FLAG = 0 %THEN %DO;
   DATA FINAL;
      SET INIT TEMP;
   RUN;
%END;
%ELSE %DO;
   DATA FINAL;
      SET FINAL TEMP;
   RUN;
%END;

%LET FLAG = 1;

%MEND PROCESS;


*****************************************************************************
* Create TOTAL for Active Duty
*****************************************************************************;
%PROCESS(MAJGRP=Active Duty, REGION=Region 1       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 2       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 3       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 4       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 5       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 6       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 7/8     );
%PROCESS(MAJGRP=Active Duty, REGION=Region 9       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 10      );
%PROCESS(MAJGRP=Active Duty, REGION=Region 11      );
%PROCESS(MAJGRP=Active Duty, REGION=Region 12      );
%PROCESS(MAJGRP=Active Duty, REGION=Europe         );
%PROCESS(MAJGRP=Active Duty, REGION=Asia           );
%PROCESS(MAJGRP=Active Duty, REGION=Latin America  );
%PROCESS(MAJGRP=Active Duty, REGION=Alaska         );
%PROCESS(MAJGRP=Active Duty, REGION=CONUS MHS      );


*****************************************************************************
* Create TOTAL for Active Duty Dependents
*****************************************************************************;
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 1         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 2         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 3         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 4         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 5         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 6         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 7/8       );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 9         );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 10        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 11        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 12        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Europe           );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Asia             );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Latin America    );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Alaska           );
```

```
      %PROCESS(MAJGRP=Active Duty Dependents, REGION=CONUS MHS              );

      ****************************************************************************
      * Create TOTAL for Enrollees with Civilian PCM
      ****************************************************************************;
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 1          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 2          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 3          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 4          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 5          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 6          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 7/8        );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 9          );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 10         );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 11         );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 12         );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Europe            );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Asia              );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Latin America     );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Alaska            );
      %PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=CONUS MHS         );


      ****************************************************************************
      * Create TOTAL for Enrollees with Military PCM - Individual
      ****************************************************************************;
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 1          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 2          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 3          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 4          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 5          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 6          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 7/8        );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 9          );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 10         );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 11         );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 12         );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Europe            );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Asia              );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Latin America     );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Alaska            );
      %PROCESS(MAJGRP=Enrollees with Military PCM, REGION=CONUS MHS         );


      ****************************************************************************
      * Create TOTAL for Non-enrolled Beneficiaries
      ****************************************************************************;
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 1           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 2           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 3           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 4           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 5           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 6           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 7/8         );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 9           );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 10          );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 11          );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Region 12          );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Europe             );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Asia               );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Latin America      );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=Alaska             );
      %PROCESS(MAJGRP=Non-enrolled Beneficiaries, REGION=CONUS MHS          );


      ****************************************************************************
      * Create TOTAL for Prime Enrollees
      ****************************************************************************;
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 1                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 2                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 3                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 4                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 5                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 6                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 7/8                    );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 9                      );
      %PROCESS(MAJGRP=Prime Enrollees, REGION=Region 10                     );
```

```
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 11                    );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 12                    );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Europe                       );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Asia                         );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Latin America                );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Alaska                       );
%PROCESS(MAJGRP=Prime Enrollees, REGION=CONUS MHS                    );


****************************************************************************
* Create TOTAL for Retirees and Dependents
****************************************************************************;
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 1             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 2             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 3             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 4             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 5             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 6             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 7/8           );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 9             );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 10            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 11            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 12            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Europe               );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Asia                 );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Latin America        );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Alaska               );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=CONUS MHS            );


****************************************************************************
* Create TOTAL for All Beneficiaries
****************************************************************************;
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 1                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 2                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 3                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 4                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 5                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 6                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 7/8                 );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 9                   );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 10                  );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 11                  );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Region 12                  );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Europe                     );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Asia                       );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Latin America              );
%PROCESS(MAJGRP=All Beneficiaries, REGION=Alaska                     );
%PROCESS(MAJGRP=All Beneficiaries, REGION=CONUS MHS                  );


****************************************************************************
* 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;
   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;


****************************************************************************
* Append BENCHMARK records to CAHPS records and perform significance tests
****************************************************************************;
DATA BENCHMRK(KEEP=MAJGRP BENEFIT BENTYPE TIMEPD SEMEAN SCORE);   ***MJS 07/31/03 Added TIMEPD;
   SET IN1.&DSN;
   WHERE REGION = "Benchmark" AND SVMPRQ = 0;
RUN;
PROC SORT DATA=BENCHMRK; BY MAJGRP BENEFIT BENTYPE TIMEPD; RUN;   ***MJS 07/31/03 Added TIMEPD;
```

```
PROC SORT DATA=FINAL; BY KEY; RUN;

DATA TOTAL_Q;
   MERGE FINAL(IN=IN1) FAKEQ(IN=IN2);
   BY KEY;
   IF IN1;
RUN;
PROC SORT DATA=TOTAL_Q; BY MAJGRP BENEFIT BENTYPE TIMEPD; RUN;   ***MJS 07/31/03 Added TIMEPD;

***************************************************************************
* Perform significance tests for TOTAL scores
***************************************************************************;
DATA SIGTESTS;
   MERGE TOTAL_Q(IN=SIN) BENCHMRK(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
   BY MAJGRP BENEFIT BENTYPE TIMEPD;   ***MJS 07/31/03 Added TIMEPD;

   TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF TEST < 0.05 THEN SIG = 1;
   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 07/31/03 Added TIMEPD;
   SOURCE = "TOTAL_Q";
   FLAG   = "TOTAL_Q";
   IF SIN;
RUN;
PROC SORT DATA=SIGTESTS; BY KEY; RUN;

PROC SORT DATA=IN1.&DSN OUT=PREVIOUS; BY KEY; RUN;

***************************************************************************
* Combine previously created records with the new file
***************************************************************************;
DATA COMBINE OUT.LT30Q;
   SET PREVIOUS SIGTESTS;
   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.LT30Q;
   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 TOTAL_Q;
   SET FAKEONLY COMBINE;
   BY KEY;
   IF BENEFIT = "Total" THEN DO;
      SIG = 0;
      IF REGION = "Benchmark" OR MAJGRP = "Benchmark" THEN SCORE = .A;
   END;
   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*/
```

```
    IF MAJGRP="Enrollees with Civilian PCM" THEN DELETE;      ***MJS 05/14/03 Removed Civilian PCM;
RUN;

PROC SORT DATA=TOTAL_Q OUT=OUT.TOTAL_Q; BY ORDER; RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: TOTAL_Q.SAS By Keith Rathbun";
TITLE3 "Program Inputs: FAKEQ.SD2, FACTCOMP.SD2, CONUS_Q.SD2 - CONUS Scores Database in WEB
Layout";
TITLE4 "Program Outputs: TOTAL_Q.SD2 - TOTAL Scores Database in WEB layout";

PROC FREQ;
TABLES SIG FLAG SOURCE BENEFIT BENTYPE MAJGRP REGION REGCAT TIMEPD   /*MJS 07/31/03 Added
TIMEPD*/
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

8. Q4_2003\PROGRAMS\LOADWEB\MAKEHTMQ.SAS - Generate HTML and XLS files for TRICARE Beneficiary Reports - Quarterly.

```
*======================================================================;
*   Programmer:  Mark A. Brinkley                                      ;
*        Title:  MAKEHTMQ.SAS                                          ;
*       Client:  8687-210                                              ;
*         Date:  06-01-2001                                            ;
*                                                                      ;
*      Purpose:  This program is designed to create                    ;
*                 report cards for the 2000 DOD project                ;
*                                                                      ;
*                                                                      ;
*  Input files:  TOTAL_Q.SD2                                           ;
* Output files:  HTML\                                                 ;
*                  456*3 F*.HTM Files (Frame version)                  ;
*                  456   P*.HTM Files (Printer friendly - no frames)   ;
*                  288   P*.XLS Files (Excel files)                    ;
*                  ------------------                                  ;
*                  2112                                                ;
*                                                                      ;
*                                                                      ;
*   ÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!       ;
*                                                                      ;
*     IF YOU MODIFY THIS PROGRAM THEN PLEASE INITIAL AND DOCUMENT      ;
*     YOUR CHANGES.  THOSE FAILING TO DO THIS WILL BE SEVERELY         ;
*     BEATEN.                                                          ;
*                                                                      ;
*   ÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!       ;
*                                                                      ;
*                                                                      ;
*                                                                      ;
* Modifications:                                                       ;
* 11-01-2000 - JSykes added pieces to create Excel Spreadsheets        ;
* 07-01-2001 - MAB modified for qtr 2                                  ;
* 10-25-2001 - C.Rankin moved link to printer friendly version         ;
*              from frame, created macro variable to include           ;
*              third row of subbenefit heading                         ;
* 11-01-2001 - D.Beahm changed splitpercent to splitpixel and adjusted;
*              the pixel size of the top frame to prevent scrolling    ;
*              she also added a <BR> before the printer icon to make   ;
*              sure it appears on it's own line                        ;
* 12-21-2001 - D.Beahm changed column widths for frame page a so that  ;
*              the column headers would line up with the data in frame;
*              page b. Also revised Excel code so benchmarks for the   ;
*              majorgrp are shaded dark red instead of blue            ;
* 04-18-2002 - Quarterly report cards will now show a rolling 4        ;
*              quarters of data for the trend. DKB updated the period  ;
*              BENTYPE references to account for this, this will need  ;
*              to be done each quarter. Also revised footnote          ;
*              to indicate that this is the 2002 Survey of Health Care;
*              Beneficiaries. This reflects a change from previous     ;
*              years, the survey year now refers to the processing     ;
*              year instead of the year for which data was collected. ;
*              Also changed image reference from QTR to COL, these     ;
*              new names for the qtr images reflects the column they   ;
*              are in instead of the quarter they represent           ;
* 06-19-2002 - Mark Brinkley                                           ;
*                 Updated for Q2_2002                                  ;
*                 Changed macro var PERIOD to CURRENTPERIOD            ;
*                 Added macro vars PERIOD1-PERIOD3                     ;
* 07-29-2002 - Daniele Beahm                                           ;
*                 Added links to trend pages. Clicking on the fielding;
*                 Period now takes you to the component page for that ;
*                 period and clicking on the Trend column header now  ;
*                 takes you to the Trend section of the help file     ;
* 02-04-2003 - Mike Scott                                              ;
*                 Changed "Primary Care Manager" to "Personal Doctor" ;
* 02-10-2003 - Mike Scott                                              ;
*                 Inserted LENGTH HREF $ 250 statements before         ;
*                 href = "string" statements so that href wouldn't be ;
*                 set by default                                       ;
* 02-14-2003 - Mike Scott                                              ;
```

```
*                Added code to avoid scores > 100              ;
* 04-30-2003 - Mike Scott                                      ;
*                Changed Preventive Care columns from 5 to 6 to ;
*                accommodate Cholesterol Testing.              ;
* 05-01-2003 - Mike Scott                                      ;
*                Updated periods for Q1 2003, and changed "2001 and ;
*                2002" to "2002 and 2003" and "2002 Health Care ;
*                Survey" to "2003 Health Care Survey".         ;
* 05-04-2003 - Mike Scott                                      ;
*                Removed Civilian PCM (var1=3 or majgrp=3), and ;
*                changed 4-8 references to 3-7.                ;
* 05-06-2003 - Mike Scott                                      ;
*                Changed 7-0-0 to 8-0-0.                       ;
* 05-13-2003 - Mike Scott                                      ;
*                Changed two widths.                           ;
* 05-14-2003 - Mike Scott                                      ;
*                Changed columns from 2-12 to 1-11 which is    ;
*                controlled by var3 - decreased var3's by 1 and ;
*                decreased K loops by 1.                       ;
* 07-03-2003 - Mike Scott                                      ;
*                Incorporated TIMEPD variable into program to run ;
*                with Q1 2003 TOTAL_Q rerun to include TIMEPD  ;
*                variable.                                      ;
* 07-30-2003 - Mike Scott                                      ;
*                Added else do section to correct header.      ;
* 07-31-2003 - Mike Scott                                      ;
*                Updated periods for Q2 2003.                  ;
* 08-01-2003 - Mike Scott                                      ;
*                Added code so periods would print on var3=7,8,9,10. ;
* 08-07-2003 - Regina Gramss                                            ;
*          Changed program to create additional trend pages    ;
*          for each sub-benefit: pages are now named with 4    ;
*          numbers (var4 has been added to all file name       ;
*           references) to compensate for additional layer     ;
*           of pages. All file references have been changed     ;
*           to include var4.                                    ;
* 01-28-2004 - Mike Scott                                      ;
*                Changed back to html being generated in HTML  ;
*                directory below directory where MAKEHTMQ is being ;
*                run.                                           ;
* 01-29-2004 - Mike Scott                                      ;
*                Commented out LENGTH HREF $ 250 statements, since ;
*                HREF was already declared.                    ;
* 02-11-2004 - Mike Scott                                      ;
*                Changed all lengths to 100 that were less than 100. ;
*=====================================================================;


/*** Added macro variables for previous periods (MAB 6-19-2002) ***/
%LET PERIOD1 = January, 2002 to December, 2002;   /*MJS 02/09/04*/
%LET PERIOD2 = April, 2002 to March, 2003;
%LET PERIOD3 = July, 2002 to June, 2003;


/*** Change name of macro variable from PERIOD (MAB 6-19-2002) ***/
%LET CURRENTPERIOD = October, 2002 to September, 2003;  /** Current Period of these reports **/
%LET QTRS=4;                                        /** Qtr of these reports    **/


OPTIONS NOXWAIT MPRINT;        /* 2000/11: added noxwait*/


%LET HTMLSP=%NRSTR( );     /**DANIELE CHANGED %STR(&NBSP;) TO %NRSTR(&NBSP)**/
%LET QUOTE=%STR("");
%LET OUTDIR=HTML;                    /** Directory to put HTML files **/  /*MJS 01/28/04 Set to
HTML*/
%LET IMGDIR=images;             /** Directory with images **/
%LET TARGET=target='_parent';   /** HTML code for frames targeting **/
%LET OUTXLS=1;                  /** 1=Make XLS file/0=Don't   Added 1-24 MAB **/
%LET fontface=%STR(Arial,Helvetica,Swiss,Geneva);
%LET hdcolr=%STR('white');
%LET BLUE=%STR('#663300');       /** This is really dark red **/
%LET GREEN=%STR('#009933');
%LET RED=%STR('#cc0000');
%LET GRAY=%STR('white');
```

```
%LET LOGO=%STR('images\tricare_side_35_new.gif');
%LET HELP_BUT=%STR('images\help75.gif');
%LET HOME_BUT=%STR('images\home75.gif');
%LET BACK_BUT=%STR('images\back75.gif');
%LET NUMBER_HTML_FILES=0;          /** Keep count of HTML files created **/


%LET SUB_HEAD=0;                   /** Macro variable for sub-benfit heading **/
                                   /** 1=headings, 0=no headings           **/

/*******************************************************/
/***** Macro for putting notes at bottom of table  *****/
/*******************************************************/
%MACRO BOTTOM_NOTES();
%if &seppage. ne 2 %then %do;
   %if &var3. =7 %then %do;   ***MJS 4/23/03 Changed 8 to 7;
      PUT "<tr>";
      PUT "     <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003.</font>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
      PUT "     <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
      PUT "     </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
      PUT "     <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

      PUT "</td></tr>";
   %end;

   %else %if &var3. =8 %then %do;   ***MJS 4/23/03 Changed 9 to 8;
      PUT "<tr>";
      PUT "     <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003.</font>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
      PUT "     <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
      PUT "     </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
      PUT "     <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

      PUT "</td></tr>";
   %end;

   %else %if &var3. =9 %then %do;   ***MJS 4/23/03 Changed 10 to 9;
      PUT "<tr>";
      PUT "     <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003.</font>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
      PUT "     <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
      PUT "     </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
      PUT "     <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

      PUT "</td></tr>";
   %end;

   %else %if &var3. =10 %then %do;   ***MJS 4/23/03 Changed 11 to 10;
      PUT "<tr>";
      PUT "     <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003.</font>";
      PUT "     <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
      PUT "     <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
```

```
     PUT "    </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
     PUT "    <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

     PUT "</td></tr>";
   %end;

   %else %do;
     PUT "<tr>";
     PUT "    <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
2003 Health Care Survey of DOD Beneficiaries</font>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
     PUT "    <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
     PUT "    </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
     PUT "    <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";
   %end;
%end;
%else %do;
      PUT "<tr>";
     PUT "    <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003.</font>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
     PUT "    <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
     PUT "    </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates suppressed due to
small sample size</font><br>";
     PUT "    <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

     PUT "</td></tr>";
%end;




%MEND BOTTOM_NOTES;



/*******************************************************/
/***** Macro for adding in link row to trends data  *****/
/*******************************************************/

/*** Macro variable with Javascript to go back ***/
%LET GOBACK=%STR(<script>document.write(&quote.<a href='javascript:history.go(-1)'
target='_parent'>&quote.);
document.write(&quote.<img src='images\\back75.gif' border='0' alt='Go to previous
page'>&quote.);document.write(&quote.</a>&quote.);</script>);


LIBNAME SRC1 V612 '.'  ACCESS=READONLY;



OPTIONS LS=132;

/**********************************************************************/
/****    Macro to create html pages                           ****/
/****           var1=major group                              ****/
```

```
/****            var2=region                                    ****/
/****            var3=benefit                                   ****/
/****            var4=trend
****/
/****      seppage=0/no separate pages for qtrly trends         ****/
/****              1/1st separate page                          ****/
/****              2/2nd separate page                          ****/
/*********************************************************************/
/** RSG 08/07/03 - added var4 to add extra dimension of page numbers for
    sub benefit trend pages**/

%MACRO MKHTML(var1,var2,var3,seppage,var4);


/*** Determine some macro variables ***/
%if &prefix=f %then %do;
  %let width1=640;
  %let width2=640;
  %let border=0;
%end;
%else %do;
  %let width1=90%;
  %let width2=85%;
  %let border=1;
%end;




%let number_html_files=%EVAL(1+&number_html_files.);


/** Load in data **/
DATA SUBSET;
  SET SRC1.TOTAL_Q;
  IF SCORE>100 then SCORE=100;                              ***MJS ADDED 2/14/2003 to
avoid scores > 100;
  IF (TIMEPD="Trend" and -.5<SCORE<0) THEN SCORE=ABS(SCORE);       ***DKB ADDED 8/13/2002 to
avoid negative zero values;
  IF TIMEPD="Trend" THEN TIMEPD="Est. Quarterly Rate of Change";   ***DKB ADDED 8/12/2002 to
rename Trend column;
RUN;    ***MJS 07/03/03 Changed BENTYPE to TIMEPD;


/** Load in data **/
DATA SUBSET;
  SET SUBSET;


  LENGTH FILEOUT1 $ 100;    /*MJS 02/11/04*/
  LENGTH FILEOUT2 $ 100;
  LENGTH FILEOUT3 $ 100;


  /*** VAR1 indicated major group ***/
  %if &var1.=0 %then %let major=%STR();
  %if &var1.=1 %then %let major=%STR(Prime Enrollees);
  %if &var1.=2 %then %let major=%STR(Enrollees with Military PCM);
  %if &var1.=3 %then %let major=%STR(Standard/Extra Users);   ***MJS 05/04/03 Removed Civilian
PCM;
  %if &var1.=4 %then %let major=%STR(Active Duty);           ***(var1.=3), and changed 4-8 to 3-
7;
  %if &var1.=5 %then %let major=%STR(Active Duty Dependents);
  %if &var1.=6 %then %let major=%STR(Retirees and Dependents);
  %if &var1.=7 %then %let major=%STR(All Users);


  %if &var1.=0 %then %do;
     /***IF REGION=REGCAT AND REGION NOT IN("CONUS MHS","Benchmark") ***/
     IF REGION=REGCAT AND REGION NOT IN("Benchmark");  /** Replaced 1-22 MAB **/

       %if &var2.^=99 %then %do; /*** Added 1-30 mab ***/
         IF REGION="CONUS MHS" THEN DELETE;
       %end;
```

```
      %let comma=%STR();
      %let grpmsg=%STR();
   %end;
   %else %do;
      IF MAJGRP="&major.";      /*** Subset data by major group ***/
      %let comma=%STR(,);
      %let grpmsg=%STR(Click below to view this table by other groups);
   %end;



   /*** Create macro variables to refer to Component or Trend pages ***/
   %if &seppage.=2 %then %do;
      %let q=q;
      %let unq=;
      %let click_alt=Click for Component data;
      %let click_image=component.gif;
   %end;
   %else %do;
      %let q=;
      %let unq=q;
      %let click_alt=Click for Trend data;
      %let click_image=trend.gif;
   %end;



   FILEOUT1=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.-&var4.&q..htm");     /** Main html **/
   FILEOUT2=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.-&var4.&q.a.htm");   /** Header html
**/
   FILEOUT3=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.-&var4.&q.b.htm");   /** Data html **/
    /*** Added &var4 to all file names for additional sub-benefit trend pages
         08-07-2003 RSG ***/
      /*MJS 01/28/04 Added &outdir.\ to above filenames*/

    /*** Added 07-12-2001 MAB  If creating Excel then don't create HTML ***/
    %if &outxls.=1 %then %do;
      %let fileout1= NUL;
      %let fileout2= NUL;
      %let fileout3= NUL;
    %end;
    %else %do;
      call symput('fileout1',FILEOUT1);
      call symput('fileout2',FILEOUT2);
      call symput('fileout3',FILEOUT3);
    %end;



  /*-------------------------*/
  /* 2000/11: begin xls code */
  /*-------------------------*/

  /*MJS 01/28/04 Added &outdir.\ to filename*/
  FILEOUTX=COMPRESS("&outdir.\p&var1.-&var2.-&var3.-&var4.&q..xls");          /* create run-
specific xls file */
  CALL SYMPUT('fileoutX',FILEOUTX);                                   /* via global macro vars
*/
  %if &seppage. ne 2 %then %do;
  TEMPLATE=COMPRESS(".\Templates\Template&var3..xls");
  %end;
  %else %do;
  TEMPLATE=COMPRESS(".\Templates\Template_trend.xls");
  %end;
  CALL SYMPUT('template',TEMPLATE);                                    /* identify which template
xls file */
  /*-------------------------*/
  /* 2000/11: end xls code   */
  /*-------------------------*/


  /*** VAR3 dictates type of benefit heading ***/
  %if &var3=0 %then %do;
    %let headvar=BENEFIT;
```

```
    %end;
    %else %do;              /*MJS 07/30/03 Added else do - was %else %let headvar=BENTYPE;*/
      %if &seppage.=2 or &var3=7 or &var3=8 or &var3=9 or &var3=10 %then %let headvar=TIMEPD;
/*MJS 08/01/03 Added &var3 code*/
      %else %let headvar=BENTYPE;
    %end;

    /*** clean up headvar variable ***/
    /***IF BENTYPE="Trend" THEN BENTYPE="Trend<BR>% change";***/

    /*** Link to XLS file ***/
    HREFXLS=COMPRESS("p&var1.-&var2.-&var3.-&var4.&q..xls");
    call symput('hrefxls',HREFXLS);
RUN;


/*** Subset data by region ***/
DATA SUBSET;
  SET SUBSET;

  %if &var2.=0 %then %do;     /** 0 = All regions **/
      IF REGION=REGCAT;        /** Just do All Region table **/
        %let sub_regs=%STR(All Regions);
  %end;
  %else %if &var2.=1 %then %do;
      IF REGION="Region 1" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 1);
  %end;
  %else %if &var2.=2 %then %do;
      IF REGION="Region 2" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 2);
  %end;
  %else %if &var2.=3 %then %do;
      IF REGION="Region 3" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 3);
  %end;
  %else %if &var2.=4 %then %do;
      IF REGION="Region 4" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 4);
  %end;
  %else %if &var2.=5 %then %do;
      IF REGION="Region 5" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 5);
  %end;
  %else %if &var2.=6 %then %do;
      IF REGION="Region 6" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 6);
  %end;
  %else %if &var2.=7 %then %do;
      IF REGION="Region 7/8" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 7/8);
  %end;
  %else %if &var2.=8 %then %do;
      IF REGION="Region 9" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 9);
  %end;
  %else %if &var2.=9 %then %do;
      IF REGION="Region 10" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 10);
  %end;
  %else %if &var2.=10 %then %do;
      IF REGION="Region 11" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 11);
  %end;
  %else %if &var2.=11 %then %do;
      IF REGION="Region 12" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Region 12);
  %end;
  %else %if &var2.=12 %then %do;
      IF REGION="Europe" OR REGION IN("CONUS MHS","Benchmark");
        %let sub_regs=%STR(Europe);
  %end;
  %else %if &var2.=13 %then %do;
      IF REGION="Asia" OR REGION IN("CONUS MHS","Benchmark");
```

```
      %let sub_regs=%STR(Asia);
   %end;
   %else %if &var2.=14 %then %do;
      IF REGION="Latin America" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Latin America);
   %end;
   %else %if &var2.=15 %then %do;
      IF REGION="Alaska" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Alaska);
   %end;
   %else %if &var2.=99 %then %do;
      IF REGION="CONUS MHS" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(CONUS MHS);
   %end;

RUN;


/*** Subset data by Benefit ***/
DATA SUBSET;
  SET SUBSET;

  %if &var3.=0 %then %do;   /** 0=All Benefits **/
      IF BENTYPE="Composite" and TIMEPD="&currentperiod.";   ***MJS 07/03/03 Changed from IF
BENTYPE="&currentperiod.";
   %end;
   %else %if &var3.=1 %then %do;   ***MJS 4/23/03 Changed 2 to 1;
      IF BENEFIT="Getting Needed Care";

      /*** # of columns for this benefit table ***/
      %let columns=%EVAL(5+&qtrs.);
   %end;
   %else %if &var3.=2 %then %do;   ***MJS 4/23/03 Changed 3 to 2;
      IF BENEFIT="Getting Care Quickly";
      %let columns=%EVAL(5+&qtrs.);
   %end;
   %else %if &var3.=3 %then %do;   ***MJS 4/23/03 Changed 4 to 3;
      IF BENEFIT="Courteous and Helpful Office Staff";
      %let columns=%EVAL(3+&qtrs.);
   %end;
   %else %if &var3.=4 %then %do;   ***MJS 4/23/03 Changed 5 to 4;
      IF BENEFIT="How Well Doctors Communicate";
      %let columns=%EVAL(5+&qtrs.);
   %end;
   %else %if &var3.=5 %then %do;   ***MJS 4/23/03 Changed 6 to 5;
      IF BENEFIT="Customer Service";
      %let columns=%EVAL(4+&qtrs.);
   %end;
   %else %if &var3.=6 %then %do;   ***MJS 4/23/03 Changed 7 to 6;
      IF BENEFIT="Claims Processing";
      %let columns=%EVAL(3+&qtrs.);
   %end;
   %else %if &var3.=7 %then %do;   ***MJS 4/23/03 Changed 8 to 7;
      IF BENEFIT="Health Plan";
      %let columns=%EVAL(2+&qtrs.);      ***DKB ADDED 2+ instead of 1+ for Trend 5/3/2002;
   %end;
   %else %if &var3.=8 %then %do;   ***MJS 4/23/03 Changed 9 to 8;
      IF BENEFIT="Health Care";
      %let columns=%EVAL(2+&qtrs.);      ***DKB ADDED 2+ instead of 1+ for Trend 5/3/2002;
   %end;
   %else %if &var3.=9 %then %do;   ***MJS 4/23/03 Changed 10 to 9;
      IF BENEFIT="Personal Doctor";      ***MJS 02/04/2003;
      %let columns=%EVAL(2+&qtrs.);      ***DKB ADDED 2+ instead of 1+ for Trend 5/3/2002;
   %end;
   %else %if &var3.=10 %then %do;   ***MJS 4/23/03 Changed 11 to 10;
      IF BENEFIT="Specialty Care";
      %let columns=%EVAL(2+&qtrs.);      ***DKB ADDED 2+ instead of 1+ for Trend 5/3/2002;
   %end;
   %else %if &var3.=11 %then %do;   ***MJS 4/23/03 Changed 12 to 11;
      IF BENEFIT="Preventive Care";   ***MJS 04/30/03 Changed from 5+ to 6+ because Cholesterol
Testing was added;
      %let columns=%EVAL(6+&qtrs.);   ***DKB CHANGED FROM 6+ to 5+ because removed flu shot
5/7/02;
   %end;
```

```
   /*** Set macro variable ***/
   %if &var3.=0 %then %do;
       %let sub_ben=%STR(&currentperiod. Composite Scores);
       %let columns=13;
   %end;
   %else %do;
     call symput('sub_ben',BENEFIT);
   %end;


   /*** Determine number of columns for sub-benefits  ***/
   /*** Equals cols - (x for qtrs  - 1 for stub column) ***/
   %let subcols=%EVAL(&columns.-&qtrs.-2);                 ***DKB CHANGED FROM -1 to -2 5/3/2002;

   /*** Determine number of columns less 1st (stub) column ***/
   %let columns_less1=%EVAL(&columns.-1);

RUN;



/*** Added 4-3-01 MAB ***/
DATA SUBSET;
  SET SUBSET;

  WIDTH_COL1=120; /** Set width of column 1 **/

  IF BENTYPE="Composite" THEN WIDTH3=90;  ***DKB ADDED TREND and changed width3 from 120 to 90
4/30/2002***;
  ELSE WIDTH3=90;                          ***MJS 07/03/03 Changed from BENTYPE IN any period and
Est. Quarterly Rate of Change;

  /** Deal with some special cases **/
  IF BENEFIT="Preventive Care" THEN DO;
      IF BENTYPE="Composite" THEN WIDTH3=.;    ***DKB ADDED TREND 4/30/2002***;
      ELSE WIDTH3=80;                          ***MJS 07/03/03 Changed from BENTYPE IN any period
and Est. Quarterly Rate of Change;
  END;
  IF BENEFIT="Courteous and Helpful Office Staff" AND
         BENTYPE="Composite" THEN WIDTH3=70;   ***DKB ADDED TREND 4/30/2002***;
                                               ***MJS 07/03/03 Changed from BENTYPE IN any
period and Est. Quarterly Rate of Change;

  %if &var3.=0 %then %do;
     WIDTH_COL1=.;
     WIDTH3=40;
  %end;


        /*** Added 5-7-2001 mab ***/
        %if &prefix.=p %then %do;
            WIDTH3=.;
        %end;

RUN;



OPTIONS LS=152;
PROC PRINT;
 VAR BENEFIT BENTYPE TIMEPD REGION REGCAT MAJGRP;   ***MJS 07/03/03 Added TIMEPD;
RUN CANCEL;



/**************************************************************/
/****  Put out Header rows of table                      ****/
/**************************************************************/
DATA HTML;
  SET SUBSET;
  LENGTH HREF $100;   /*MJS 02/11/04*/

  IF REGION IN("Benchmark") OR MAJGRP IN("Benchmark");
```

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```
   /** Determine where back button should link to **/
   %if &var1.=0 %then %do;
      HREFBACK=COMPRESS("&prefix.7-0-0-0.htm");    ***MJS 05/06/03 Changed 8-0-0 to 7-0-0;
   %end;
   %else %do;
      HREFBACK=COMPRESS("&prefix.&var1.-0-0-0.htm");
   %end;

   /*** Create macro variable date with today's date ***/
   DATETIME=DATETIME();
   CALL SYMPUT ('DATETIME',left(put(datetime,datetime20.)));
   DROP DATETIME;

RUN;

/*** ÛÛ FRAMES SECTION ÛÛ ***/
%if &prefix=f %then %do;

    /*** Make frameset page split frames smaller on all ratings pages ***/

   %if &var3.=0 %then %do;
        %let splitpixel=228;
   %end;
   %else %if &var3.=1 OR &var3.=2 %then %do;    ***MJS 4/23/03 Changed 2&3 to 1&2;
        %let splitpixel=211;
   %end;
   %else %if &var3.=3 OR &var3.=6 %then %do;    ***MJS 4/23/03 Changed 4&7 to 3&6;
        %let splitpixel=181;
   %end;
   %else %if &var3.=4 %then %do;    ***MJS 4/23/03 Changed 5 to 4;
        %let splitpixel=196;
   %end;
   %else %if &var3.=5 %then %do;    ***MJS 4/23/03 Changed 6 to 5;
        %let splitpixel=221;
   %end;
   %else %if &var3.=7 OR &var3.=8 OR &var3.=9 OR &var3.=10 %then %do;
        %let splitpixel=158;    ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
   %end;
   %else %if &var3.=11 %then %do;    ***MJS 4/23/03 Changed 12 to 11;
        %let splitpixel=192;
   %end;

   %if &SEPPAGE.=2 %then %do;
        %let splitpixel=157;
   %end;


   /*** Create frameset page HTML page ***/
   DATA _NULL_;
     FILE "&FILEOUT1.";
     PUT "<html>";
     PUT "<frameset rows='&splitpixel.,*'>";
      %if &seppage.=2 %then %do;
        PUT "   <frame src='f&var1.-&var2.-&var3.-&var4.qa.htm'  MARGINHEIGHT='0'
MARGINWIDTH='0'>";
        PUT "   <frame src='f&var1.-&var2.-&var3.-&var4.qb.htm'  MARGINHEIGHT='0'
MARGINWIDTH='0'>";
      %end;
      %else %do;
        PUT "   <frame src='f&var1.-&var2.-&var3.-&var4.a.htm'  MARGINHEIGHT='0'
MARGINWIDTH='0'>";
        PUT "   <frame src='f&var1.-&var2.-&var3.-&var4.b.htm'  MARGINHEIGHT='0'
MARGINWIDTH='0'>";
      %end;


     PUT "</frameset></html>";
   RUN;


   /*** Since done making frameset page then assign fileout1 = frame 1 ***/
   %let fileout1=&fileout2.;
   %if &seppage.=1 %then %do;
```

```
          %let fileout1=&fileout2.;
      %end;
      %else %if &seppage.=2 %then %do;
          %let fileout1=&fileout2.;
      %end;

   %end;


/*** Initialize HTML page ***/
DATA _NULL_;
  FILE "&FILEOUT1.";

  PUT "<! Created &datetime.>";
  PUT "<html><head><title>";
  PUT "&major. &comma. &sub_ben., &sub_regs.";
  PUT "</title></head>";
  PUT "<body bgcolor='#999999' text='#000099' link='#660066' alink='#660066' vlink='#996699'>";

  /*** link to printer friendly version moved, 10/25/2001 C.Rankin ***/


RUN;

/*------------------------*/
/* 2000/11: begin xls code */
/*------------------------*/
%if &outxls.=1 %then %do;
  X "COPY &template. &fileoutX.";                        /* copy template xls to run-
specific xls file */
  X "START &fileoutX.";                                  /* open run-specific xls file
*/
   FILENAME XLSTITLE DDE 'excel|Sheet1!R1C1:R2C20' NOTAB;        /* xls rows 1 & 2 (titles)
*/
   FILENAME XLSDATA DDE 'excel|Sheet1!R6C1:R100C20' NOTAB;       /* xls rows 6+ (body of table)
*/
%end;
/*------------------------*/
/* 2000/11: end xls code   */
/*------------------------*/



/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If ALL benefits (VAR3=0) then do special column headers ***/
%if &var3.=0 %then %do;
DATA _NULL_;
  SET HTML END=EOF;
  *LENGTH HREF $ 250;   /*MJS 01/29/04 Comented out statement*/

  IF _N_=1 THEN DO;

        FILE "&FILEOUT1." MOD;       /* 2000/11: moved file stmt inside if stmt */

        /*** put table title ***/
        /**PUT "<h2><center><font face='&fontface.'>&major., &sub_regs. <br> &sub_ben.
</font></center></h2>"**/

        /** MF Changes ROW 1 **/
        PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
colspan=13 width='&width1.'>";
        PUT "<tr bgcolor='white'>";
        PUT "    <td colspan='6' valign='top' bgcolor='#999999'><img border='0' height='25'
width='242' src=&logo.></td>";
        PUT "    <td colspan='7' align='right' valign='bottom' bgcolor='#999999'>";
        PUT "         <div align='right'>";
        PUT "           <a href='..\html\index.htm' &target.><img src=&home_but. border='0'
alt='Return to Main Page'></a>&htmlsp. &htmlsp.";

        /*** 4-17 MAB added JS code to go back ***/
        PUT "&goback.";
```

```
          PUT "              <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
          PUT "              &htmlsp. &htmlsp.";
          PUT "              <a href='..\html\help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
          PUT "     </td>";
          PUT "</tr>";

          /** MF Changes ROW 2 **/
          /** Modified 2-2 MAB to better align title **/
          PUT "<tr>";
          PUT "          <td valign='center' align='center' colspan='13' bgcolor='#D8D8D8'>";
          PUT "                 <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs.<br>";
          PUT "                  &sub_ben.</b></font>";
          PUT "          </td>";
          PUT "</tr>";


          /*** Print out 3rd row ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/



          %if &prefix=f %then %do;
              PUT "<tr bgcolor= &hdcolr.>";
              PUT "<td width=70>&htmlsp.</td>";
              PUT "<td width=40 colspan=1><IMG SRC='&imgdir.\total_score.gif' ALT='Total Score'
BORDER=0></td>";
              PUT "<td width=80 colspan=2><IMG SRC='&imgdir.\eoa.gif'ALT='Ease of Access'
BORDER=0></td>";
              PUT "<td width=185 colspan=4><IMG SRC='&imgdir.\com_cus_ser.gif' ALT='Communication
and Customer Service' BORDER=0></td>";
              PUT "<td width=160 colspan=4><IMG SRC='&imgdir.\ratings0.gif' ALT='Ratings'
BORDER=0></td>";
              PUT "<td width=50 colspan=1><IMG SRC='&imgdir.\prevention.gif' ALT='Prevention'
BORDER=0></td>";
              PUT "</tr>";
              PUT "<tr bgcolor= &hdcolr.>";
          %end;
          %else %do;
              PUT "<tr bgcolor= &hdcolr.>";
              PUT "<td>&htmlsp.</td>";
              PUT "<td align='center' valign='bottom' colspan=1><font face='&fontface.'
size='2'><b>Total Score</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=2><font face='&fontface.'
size='2'><b>Ease of Access</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=4><font face='&fontface.'
size='2'><b>Communication and Customer Service</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=4><font face='&fontface.'
size='2'><b>Ratings</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=1><font face='&fontface.'
size='2'><b>Prevention</b></font></td>";
              PUT "</tr>";
              PUT "<tr bgcolor= &hdcolr.>";
           %end;


          /*** Print out 1st column of 4th row ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
              PUT "<td width=55>&htmlsp.</td>";
          %end;
          %else %do;
              PUT "<td width='7%'><font face='&fontface.'>&htmlsp.</font></td>";
          %end;



          bennum=0;  /** index to all 11 benefits **/   ***MJS 05/14/03 Changed from 1 to 0;

          /*-------------------------*/
          /* 2000/11: begin xls code */
```

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```
        /*----------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSTITLE;
          PUT "&major. &comma. &sub_regs.";
          PUT "%cmpres('&sub_ben.')";
        %end;
        /*----------------------*/
        /* 2000/11: begin xls code */
        /*----------------------*/
  END;

  FILE "&FILEOUT1." MOD ;                /* 2000/11: refer back to htm file */

  /*** Put Benefits across columns (Continuation of 4th row) ***/
  HREF=COMPRESS("..\html\&prefix.&var1.-&var2.-"||bennum||"-&var4..htm");


  /** If TOTAL benefit then don't have HREF **/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/
  %if &prefix=f %then %do;        ***MJS 05/14/03 Changed BENNUM=1 to BENNUM=0;
    IMAGE=COMPRESS("&imgdir.\image0_"||bennum||".gif");
    IF BENNUM=0 THEN PUT "<td align='center' valign='bottom'><IMG SRC='&imgdir.\image0_0.gif'
alt='Total' BORDER=0></td>";
    ELSE PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='"
IMAGE "' alt='" BENEFIT "' BORDER=0></a></td>";
  %end;
  %else %do;                      ***MJS 05/14/03 Changed BENNUM=1 to BENNUM=0;
    IF BENNUM=0 THEN PUT "<td width='7%' align='center' valign='bottom'><font
face='&fontface.'size='1'>" &HEADVAR. "</font></td>";
    ELSE PUT "<td width='7%' align='center' valign='bottom'><font face='&fontface.'size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;


  bennum+1;


  IF EOF THEN DO;
    PUT "</tr>";
    /***  2-2 MAB removed scale row ***/
  END;

RUN;
%end;

/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If Sub-benefit (VAR3^=0) then do differently ***/
/*** If not separate page (SEPPAGE=0) for quarterly info then do as before ***/
%else %if &seppage.=0 OR &var3.=7 OR &var3.=8 OR &var3.=9 OR &var3.=10 %then %do;
                                ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;

DATA _NULL_;
  SET HTML END=EOF;
  *LENGTH HREF $ 250;   /*MJS 01/29/04 Comented out statement*/

  COLUMNS=&columns.;
  SPAN1=ROUND(COLUMNS/2,1);
  SPAN2=COLUMNS-SPAN1;


  IF _N_=1 THEN DO;

      FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */


      /** MF Changes ROW 1 **/
      PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
      PUT "<tr bgcolor='white'>";
      PUT "   <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
      PUT "   <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
      PUT "        <div align='right'>";
```

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```
        PUT "            <a href='..\html\index.htm' &target.><img src=&home_but. border='0'
alt='Return to Main Page'></a>&htmlsp. &htmlsp.";

        /*** 4-17 MAB added JS code to go back ***/
        PUT "&goback.";

        PUT "            <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
        PUT "            &htmlsp. &htmlsp.";
        PUT "            <a href='..\html\help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
        PUT "    </td>";
        PUT "</tr>";

        /** MF Changes ROW 2 **/
        /** Modified 2-2 MAB to better align title **/
        PUT "<tr>";
        PUT "        <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
        PUT "               <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";

        /*** If ratings then don't display reference period ***/
        %if &var3.=7 OR &var3.=8 OR &var3.=9 OR &var3.=10 %then %do;
                   ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
            PUT "            &sub_ben.</b></font>";
        %end;
        %else %do;
            PUT "            &sub_ben.<BR>&currentperiod.</b></font>";
        %end;


        PUT "        </td>";
        PUT "</tr>";


        /*** Sub_head macro variable added C.Rankin 10/25/2001  ***/

        %if &sub_head.=1 %then %do;
           /** 3rd Row ***/
           /** ÛÛ FRAMES SECTION ÛÛ ***/
           %if &prefix=f %then %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
                /*** If sub-benefits then output sub-benefit columns ***/
                %if &subcols.^=0 %then %do;
                   IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
                   PUT "<td align='center' valign='bottom' colspan=&subcols.><IMG SRC=" IMAGE "
alt='" BENEFIT "' BORDER=0></td>";
                   PUT "<td align='center' valign='bottom' colspan=&qtrs.><IMG
SRC='&imgdir.\composite.gif' ALT='Composite' BORDER=0></td></tr>";
                %end;
                %else %do;
                   PUT "<td align='center' valign='bottom' colspan=&qtrs.><IMG
SRC='&imgdir.\border_rating.gif' ALT='Ratings' BORDER=0></td></tr>";
                %end;
           %end;
           %else %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
                /*** If sub-benefits then output sub-benefit columns ***/
                %if &subcols.^=0 %then %do;
                   PUT "<td align='center' valign='bottom' colspan=&subcols.><font
face='&fontface.'><b>&sub_ben.<br>components</b></font></td>";
                   PUT "<td align='center' valign='bottom' colspan=&qtrs.><font
face='&fontface.'><b>Composite</b></font></td></tr>";
                %end;
                %else %do;
                   PUT "<td align='center' valign='bottom' colspan=&qtrs.><font
face='&fontface.'><b>Ratings</b></font></td></tr>";
                %end;
           %end;
        %end;


        /*** 4th Row start (column 1) ***/
```

```
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
          %end;
          %else %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td width='10%'>&htmlsp.</td>";
          %end;



          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSTITLE;
            PUT "&major. &comma. &sub_regs.";
            PUT "%cmpres('&sub_ben.')";
          %end;
          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
  END;

  FILE "&FILEOUT1." MOD ;                    /* 2000/11: refer back to htm file */
  /*** Print out column headings ***/

      HREF=COMPRESS("..\html\help.htm#q&var3.");
      HREF1=COMPRESS("..\html\help.htm#trend");   /*7-29-2002 DKB ADDED LINK FOR TREND SECTION OF
HELP FILE*/




  /*** 4th Row (columns 2+) ***/
  /*** If quarter column then HREF link is different ****/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/
  %if &prefix=f %then %do;
      IF _N_>&subcols. THEN IMAGE=COMPRESS("&imgdir.\col"||_N_-&subcols.||".gif");
*DKB CHANGED IMAGE NAME FROM QTR TO COL;
      ELSE IMAGE=COMPRESS("&imgdir.\image&var3._"||_N_||".gif");

      /*7-29-2002 DKB ADDED LINK TO TREND SECTION OF HELP FILE */   ***MJS 07/03/03 Changed
BENTYPE to TIMEPD;
      IF TIMEPD NE "Est. Quarterly Rate of Change" THEN PUT "<td align='center' valign='bottom'><a
href=""" HREF +(-1) """ &target.><IMG SRC='" IMAGE "' alt='" TIMEPD "' BORDER=0></a></td>";
      ELSE PUT "<td align='center' valign='bottom'><a href=""" HREF1 +(-1) """ &target.><IMG
SRC='" IMAGE "' alt='" TIMEPD "' BORDER=0></a></td>";
  %end;
  %else %do;
      /*7-29-2002 DKB ADDED LINK TO TREND SECTION OF HELP FILE */   ***MJS 07/03/03 Changed
BENTYPE to TIMEPD;
      IF TIMEPD NE "Est. Quarterly Rate of Change" THEN PUT "<td width='10%' align='center'
valign='bottom'><font face='&fontface.' size='1'><a href=""" HREF +(-1) """ &target.>" &HEADVAR.
"</a></font>
      ELSE PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF1 +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;


  IF EOF THEN DO;
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;

RUN;
%end;

/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** Added MAB 11-20-2000 ***/
/*** If Sub-benefit then do differently ***/
/*** If separate page (SEPPAGE=1) then create 1st of 2 HTML files ***/
```

```
/*** 1 for data without qtrly info and 1 for just qtrly info ***/
%else %if &seppage.=1 %then %do;

/*** 8-7-2003 Mark Brinkley ***/
DATA HTML;
  SET HTML;
  IF TIMEPD="&currentperiod.";
RUN;

/*** Remove qtrs from column counts ***/
%let columns=%EVAL(&columns.-&qtrs.);

/*** Do sub-benefit page without any qtrly info ***/
DATA _NULL_;
  SET HTML END=EOF;


  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE="Composite" THEN DELETE; ***DKB ADDED TREND 4/30/2002***;
                                      ***MJS 07/03/03 Changed from BENTYPE IN any period and Est.
Quarterly Rate of Change;

  FILE "&FILEOUT1." MOD ;

  COLUMNS=&columns.;
  SPAN2=ROUND(COLUMNS/2,1);
  SPAN1=COLUMNS-SPAN2;


  IF _N_=1 THEN DO;

        FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */


        /** MF Changes ROW 1 **/
        PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
        PUT "<tr bgcolor='white'>";
        PUT "    <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
        PUT "    <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
        PUT "          <div align='right'>";
        /** RSG - 09/02/03 Second set of trend pages need to refer to var4=0 pages **/
        PUT "          <a href='..\html\&prefix.&var1.-&var2.-&var3.-0&unq..htm' &target.><img
src='&imgdir.\&click_image.' alt='&click_alt.' border=0></a>&htmlsp.";
        PUT "          <a href='..\html\index.htm' &target.><img src=&home_but. border='0'
alt='Return to Main Page'></a>&htmlsp. ";

                /*** 4-17 MAB added JS code to go back ***/
        PUT "&goback.";
        PUT "          <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
        PUT "          &htmlsp. ";
        PUT "          <a href='..\html\help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
        PUT "    </td>";
        PUT "</tr>";

        /** MF Changes ROW 2 **/
        /** Modified 2-2 MAB to better align title **/
        PUT "<tr>";
        PUT "        <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
        PUT "              <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";


        PUT "                  &sub_ben.<BR>&currentperiod.</b></font>";



        PUT "        </td>";
```

```
         PUT "</tr>";

         /*** Sub_head macro variable added C.Rankin 10/25/2001  ***/

         %if &sub_head.=1 %then %do;
           /*** 3rd Row ***/
           /*** ÛÛ FRAMES SECTION ÛÛ ***/
           %if &prefix=f %then %do;
              PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
              IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
              PUT "<td align='center' valign='bottom' colspan=&subcols.><IMG SRC=" IMAGE "
alt='" BENEFIT "' BORDER=0></td>";
           %end;
           %else %do;
              PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
              PUT "<td align='center' valign='bottom' colspan=&subcols.><font
face='&fontface.'><b>&sub_ben.<br>components</b></font></td>";
           %end;
         %end;

         /*** 4th Row start (column 1) ***/
         /*** ÛÛ FRAMES SECTION ÛÛ ***/
         %if &prefix=f %then %do;
           PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
           PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
         %end;
         %else %do;
           PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
           PUT "<td width='10%'>&htmlsp.</td>";
         %end;


  qnum=1; /**RSG 08/07/03 Added as counter to use to for link to the trend pages**/

         /*------------------------*/
         /* 2000/11: begin xls code */
         /*------------------------*/
         %if &outxls.=1 %then %do;
           FILE XLSTITLE;
           PUT "&major. &comma. &sub_regs.";
           PUT "%cmpres('&sub_ben.')";
         %end;
         /*------------------------*/
         /* 2000/11: begin xls code */
         /*------------------------*/
  END;

  FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */
  /*** Print out column headings ***/

  /*HREF=COMPRESS("help.htm#q&var3.");   */

  HREF=COMPRESS("..\html\&prefix.&var1.-&var2.-&var3.-"||qnum||"&unq..htm");
    *** RSG 08/07/03 Use qnum counter to refer to subbenefit trend pages;

***************************************;
  /*** 4th Row (columns 2+) ***/
  /*** If quarter column then HREF link is different ****/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/
  %if &prefix=f %then %do;
    IMAGE=COMPRESS("&imgdir.\image&var3._"||_N_||".gif");
    PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='" IMAGE
"' alt='" BENTYPE "' BORDER=0></a></td>";
  %end;
  %else %do;
     PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;

  qnum+1; *** RSG 08/07/03 Added to increase the counter;

  IF EOF THEN DO;
```

```
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;


RUN;
%end;

/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If separate page (SEPPAGE=2) then create 2nd of 2 HTML files ***/
/*** 1 for data without qtrly info and 1 for just qtrly info ***/
%else %if &seppage.=2 %then %do;


/*** Keep only qtrs in column counts ***/
/**DKB CHANGED FROM +1 to +3 on 4/29/2002 ***/
%let columns=%EVAL(&qtrs.+2);  /** MAB changed to 2   6-19-2002 **/


/*** Then do sub-benefit page with just qtrly info ***/
DATA JUSTQTR;
  SET HTML;
  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/

  *  IF BENTYPE="Composite";   ***DKB ADDED TREND on 4/29/2002 to account for trend col;
  %if &var4. = 0 %then %do;  **RSG ADDED TREND FOR BENTYPES on 8/7/2003 - select
                                   records appropriate for bentype;
       IF BENTYPE="Composite";
  %end;
  %else %if &var4. ne 0 and BENTYPE ne "Composite" %then %do;
       %if &var4. = 1 %then %do;
              IF 1 <= _N_ <= 5;
       %end;
       %else %if &var4. = 2 %then %do;
              IF 6 <= _N_ <= 10;
       %end;
       %else %if &var4. = 3 %then %do;
              IF 11 <= _N_ <= 15;
       %end;
       %else %if &var4. = 4 %then %do;
              IF 16 <= _N_ <= 20;
       %end;
       %else %if &var4. = 5 %then %do;
              IF 21 <= _N_ <= 25;
       %end;
       call symput('sub2_ben',BENTYPE); **create macro var to use in sub-benefit
                                   trend pages (below) - RSG 08/07/03;
  %end;


RUN;                         ***MJS 07/03/03 Changed from BENTYPE IN any period and Est. Quarterly
Rate of Change;

DATA _NULL_;
  SET JUSTQTR END=EOF;
  *LENGTH HREF $ 250;   /*MJS 01/29/04 Comented out statement*/

  FILE "&FILEOUT1." MOD ;

  COLUMNS=&columns.;
  SPAN2=ROUND(COLUMNS/2,1);
  SPAN1=COLUMNS-SPAN2;

  IF _N_=1 THEN DO;

       FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */

       /** MF Changes ROW 1 **/
       PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
       PUT "<tr bgcolor='white'>";
       PUT "    <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
```

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```
        PUT "     <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
        PUT "            <div align='right'>";
        PUT "               <a href='..\html\&prefix.&var1.-&var2.-&var3.-0&unq..htm' &target.><img
src='&imgdir.\&click_image.' alt='&click_alt.' border=0></a>&htmlsp.";
        PUT "               <a href='..\html\index.htm' &target.><img src=&home_but. border='0'
alt='Return to Main Page'></a>&htmlsp. &htmlsp.";

        /*** 4-17 MAB added JS code to go back ***/
        PUT "&goback.";

        PUT "               <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
        PUT "               &htmlsp.";
        PUT "               <a href='..\html\help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
        PUT "     </td>";
        PUT "</tr>";

        /** MF Changes ROW 2 **/
        /** Modified 2-2 MAB to better align title **/
        PUT "<tr>";
        PUT "           <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
        PUT "               <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";

        /*** Since trend data don't display reference period ***/
        PUT "               &sub_ben.</b></font><br>";
        /*** For trend data for each benefit type, display benefit type - RSG 08/07/03***/
        %if &var4. ne 0 %then %do;
         PUT "               <font face='&fontface.' color='#3333cc' size='4'><b>";
         PUT "               &sub2_ben.</b></font>";
        %end;
         PUT "           </td>";
         PUT "</tr>";


        /*** 3rd Row ***/
        /*** ÛÛ FRAMES SECTION ÛÛ ***/
        /**PUT "<td></td>"**/



        /*** 4th Row start (column 1) ***/
        /*** ÛÛ FRAMES SECTION ÛÛ ***/
        %if &prefix=f %then %do;
          PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
          PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
        %end;
        %else %do;
          PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
          PUT "<td width='10%'>&htmlsp.</td>";
        %end;



        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSTITLE;
          PUT "&major. &comma. &sub_regs.";
         %if &var4. = 0 %then %do;
             PUT "%cmpres('&sub_ben.')";
         %end;
         %else %do;
             PUT "%CMPRES('&sub_ben. &comma. &sub2_ben.')";
         %end;
        %end;
        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
```

```
     END;

   FILE "&FILEOUT1." MOD ;                    /* 2000/11: refer back to htm file */
   /*** Print out column headings ***/


       LENGTH HREFf1 $250;
       LENGTH HREFf2 $250;
       LENGTH HREFf3 $250;
       LENGTH HREFf4 $250;

       LENGTH HREFp1 $250;
       LENGTH HREFp2 $250;
       LENGTH HREFp3 $250;
       LENGTH HREFp4 $250;


       LENGTH HREF5  $250;



       ****7-29-2002 DKB ADDED LINKS TO COMPONENT PAGES OF PREVIOUS QUARTERS FROM TREND PAGE****;
       ***********************THIS WILL NEED TO BE UPDATED EACH QUARTER*********************;
        ***FRAMES***;
        HREFf1=COMPRESS("..\Period1\f&var1.-&var2.-&var3.-0.htm");
        HREFf2=COMPRESS("..\Period2\f&var1.-&var2.-&var3.-0.htm");
        HREFf3=COMPRESS("..\Period3\f&var1.-&var2.-&var3.-0.htm");
        HREFf4=COMPRESS("f&var1.-&var2.-&var3.-0.htm");

        ***NO FRAMES***;
        HREFp1=COMPRESS("..\Period1\p&var1.-&var2.-&var3.-0.htm");
        HREFp2=COMPRESS("..\Period2\p&var1.-&var2.-&var3.-0.htm");
        HREFp3=COMPRESS("..\Period3\p&var1.-&var2.-&var3.-0.htm");
        HREFp4=COMPRESS("p&var1.-&var2.-&var3.-0.htm");

        ****HELP FILE FOR TREND COLUMN***;
        HREF5=COMPRESS("..\html\help.htm#trend");    /*7-29-2002 DKB ADDED LINK FOR TREND SECTION
OF HELP FILE*/

    ***************************************************;

  /*** 4th Row (columns 2+) ***/
  /*** If quarter column then HREF link is different ****/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/

       *LENGTH HREF $250;

  %if &prefix=f %then %do;
    IMAGE=COMPRESS("&imgdir.\col"||_N_||".gif");          *DKB CHANGED IMAGE NAME FROM QTR TO COL;

    IF _N_=1 THEN HREF=HREFf1;
    ELSE IF _N_=2 THEN HREF=HREFf2;
    ELSE IF _N_=3 THEN HREF=HREFf3;
    ELSE IF _N_=4 THEN HREF=HREFf4;
    ELSE IF _N_=5 THEN HREF=HREF5;
    PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='" IMAGE
"' alt='" TIMEPD "' BORDER=0></a></td>";
  %end;
  %else %do;
    IF _N_=1 THEN HREF=HREFp1;
    ELSE IF _N_=2 THEN HREF=HREFp2;
    ELSE IF _N_=3 THEN HREF=HREFp3;
    ELSE IF _N_=4 THEN HREF=HREFp4;
    ELSE IF _N_=5 THEN HREF=HREF5;

    /*7-29-2002 DKB ADDED LINK TO TREND SECTION OF HELP FILE */
    PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;


  IF EOF THEN DO;
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;
```

```
RUN;
%end;

/*** ÛÛ FRAMES SECTION ÛÛ ***/
%if &prefix=f %then %do;
  /*** Close out header HTML page ***/
  DATA _NULL_;
    FILE "&FILEOUT1." MOD;

    PUT "</center></table>";
    PUT "</body></html>";
  RUN;


  /*** Since done making frame 1 page then assign fileout1 = frame 2 ***/
  %let fileout1=&fileout3.;

  /*** Initialize out data HTML page ***/
  DATA _NULL_;
    FILE "&FILEOUT3.";

    PUT "<! Created &datetime.>";
    PUT "<html>";
    PUT "<body bgcolor='#999999' text='#000099' link='#660066' alink='#660066' vlink='#996699'>";
    PUT "<center><table border='1' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
cols=&columns. width=640>";
  RUN;




%end;




/************************************/
/****   Put out rest of table      ****/
/****   Colored scores and Stub    ****/
/************************************/
%if &seppage.=0 OR &var3.=7 OR &var3.=8 OR &var3.=9 OR &var3.=10 %then %do;
                              ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;

DATA HTML;
  SET SUBSET;
RUN;
%end;
%else %if &seppage.=1 %then %do;
DATA HTML;
  SET SUBSET;

  /*** 8-7-2003 Mark Brinkley ***/
  IF TIMEPD="&currentperiod.";

  /*** Since splitting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE="Composite" THEN DELETE;   ***DKB ADDED TREND 5/2/2002***;
RUN;                                    ***MJS 07/03/03 Changed from BENTYPE IN any period and
Est. Quarterly Rate of Change;
%end;
%else %if &seppage.=2 %then %do;
DATA HTML;
  SET SUBSET;
  /*** Since splitting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
*  IF BENTYPE="Composite";   ***DKB ADDED TREND 5/2/2002***;

  *** RSG ADDED VAR4 CONDITIONS FOR SUB-BENEFIT TREND PAGES 08/07/03;
  %if &var4. = 0 %then %do;
       IF BENTYPE="Composite";
  %end;
  %else %if &var4. ne 0 and BENTYPE ne "Composite" %then %do;
       %if &var3. = 1 %then %do;
               %if &var4. = 1 %then %do;
```

```
                            IF BENTYPE = "Problems Getting Personal Doctor/Nurse";
            %end;
            %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Problems Getting Referral to Specialist";
            %end;
            %else %if &var4. = 3 %then %do;
                    IF BENTYPE = "Problems Getting Necessary Care";
            %end;
            %else %if &var4. = 4 %then %do;
                    IF BENTYPE = "Delays in Care while Awaiting Approval";
            %end;
%end;
%else %if &var3. = 2 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Advice over Telephone";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Wait for Routine Visit";
        %end;
        %else %if &var4. = 3 %then %do;
                    IF BENTYPE = "Wait for Urgent Care";
        %end;
        %else %if &var4. = 4 %then %do;
                    IF BENTYPE = "Wait More than 15 Minutes Past Appointment";
        %end;
%end;
%else %if &var3. = 3 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Courteous and Respectful";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Helpful";
        %end;
%end;
%else %if &var3. = 4 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Listens Carefully";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Explains so You can Understand";
        %end;
        %else %if &var4. = 3 %then %do;
                    IF BENTYPE = "Shows Respect";
        %end;
        %else %if &var4. = 4 %then %do;
                    IF BENTYPE = "Spends Time with You";
        %end;
%end;
%else %if &var3. = 5 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Problem Finding/Understanding Written Material";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Problem Getting Help from Customer Service";
        %end;
        %else %if &var4. = 3 %then %do;
                    IF BENTYPE = "Problem with Paperwork";
        %end;
%end;
%else %if &var3. = 6 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Claims Handled in a Reasonable Time";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Claims Handled Correctly";
        %end;
%end;
%else %if &var3. = 11 %then %do;
        %if &var4. = 1 %then %do;
                    IF BENTYPE = "Mammography";
        %end;
        %else %if &var4. = 2 %then %do;
                    IF BENTYPE = "Pap Smear";
        %end;
```

```
                    %else %if &var4. = 3 %then %do;
                              IF BENTYPE = "Hypertension";
                    %end;
                    %else %if &var4. = 4 %then %do;
                              IF BENTYPE = "Prenatal Care";
                    %end;
                    %else %if &var4. = 5 %then %do;
                              IF BENTYPE = "Cholesterol Testing";
                    %end;
          %end;
     %end;

RUN;                          ***MJS 07/03/03 Changed from BENTYPE IN any period and Est. Quarterly
Rate of Change;
%end;


/*ÛÛÛÛ ALL MAJGRPS ÛÛÛÛ*/
%if &var1.=0 %then %do;

DATA HTML;
  SET HTML END=EOF;
  *LENGTH HREF $ 250;   /*MJS 01/29/04 Comented out statement*/


  IF MAJGRP="Prime Enrollees" THEN MAJNUM=1;
  IF MAJGRP="Enrollees with Military PCM"  THEN MAJNUM=2;
  IF MAJGRP="Standard/Extra Users" THEN MAJNUM=3;    ***MJS 05/04/03 Removed Civilian PCM;
  IF MAJGRP="Active Duty" THEN MAJNUM=4;             ***(MAJNUM=3), and changed 4-8 to 3-7;
  IF MAJGRP="Active Duty Dependents" THEN MAJNUM=5;
  IF MAJGRP="Retirees and Dependents" THEN MAJNUM=6;
  IF MAJGRP="All Users" THEN MAJNUM=7;


  /*** HREF link to another page ***/
  HREF=COMPRESS("..\html\&prefix."||MAJNUM||"-0-&var3.-&var4.&q..htm");  /** Link is diff for
CONUS MHS region **/
  /*** MAB 7-12-2001 updated to reference trend page if needed ***/


  %if &var2.^=99 %then %do;
     IF REGION="CONUS MHS" THEN DELETE;
  %end;


  LENGTH HREFQ LMAJGRP $ 100;   /*MJS 02/11/04*/
  RETAIN LMAJGRP;

  IF _N_=1 THEN DO;
     LMAJGRP=" ";
     ROW=0;


    /*** Add links to trend data 7.6.2001 MAB ***/
    %let columns_less1=%EVAL(&columns.-1);
    %if &seppage.=0 %then %do;
         FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
         PUT "<tr bgcolor= &gray.><td width='" WIDTH_COL1 "'><font face='&fontface.'
size='2'><b>Trends</b></font></td>";
         PUT "<td width='" WIDTH3 "'>&htmlsp.</td>";

         %do i=1 %to 11;    ***MJS 04/14/03 Changed i=2 to i=1 and 12 to 11;
             %if &i.^=7 AND &i.^=8 AND &i.^=9 AND &i.^=10 %then %do;    ***MJS 04/14/03 Changed
8,9,10,11 to 7,8,9,10;
                 HREFQ=COMPRESS("..\html\&prefix.&var1.-&var2.-&i.-0q.htm");  /*** href to 2nd
html file ***/
             %end;
             %else %do;
                 HREFQ=COMPRESS("..\html\&prefix.&var1.-&var2.-&i.-0.htm");  /*** href to 2nd
html file ***/
             %end;

             PUT "<td width='" WIDTH3 "'><a href='" HREFQ "' &target.><CENTER><img
src='&imgdir.\trend_row.gif' border=0></CENTER></a></td>";
         %end;
```

```
            PUT "</tr>";
      %end;

   END;



   IF LMAJGRP^=MAJGRP THEN DO;                /*** Start new row ***/
         FILE "&FILEOUT1." MOD ;    /* 2000/11: moved inside if stmt */
         ROW+1;
         IF LMAJGRP^=" " THEN PUT "</tr>";  /*** terminate previous row ***/


         /*** Column 1 / Row 1 ***/
         /*** ÛÛ FRAMES SECTION ÛÛ ***/
         %if &prefix=f %then %do;
             IF MAJGRP IN("Benchmark") THEN PUT "<tr><td width='" WIDTH_COL1 "'><b><font
face='&fontface.' size='2'>" MAJGRP "</font></b></td>";    /*** no HREF links ***/
         %end;
         %else %do;
             IF MAJGRP IN("Benchmark") THEN PUT "<tr><td><b><font face='&fontface.' size='2'>"
MAJGRP "</font></b></td>";                              /*** no HREF links ***/
         %end;
         * bmajgrp=majgrp; *DKB COMMENTED OUT ON 4/25/2002;

         *if majgrp='Standard/Extra Users' then majgrp='Standard-Extra Users';  *DKB COMMENTED OUT
TO TEST 4/25/2002;
         /*** Column 1 / Row 2+ ***/

         ELSE IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " MAJGRP " </a></font></td>";    /** Shade row **/
         ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """ &target.> "
MAJGRP " </a></font></td>";
         *majgrp=bmajgrp; *DKB COMMENTED OUT ON 4/25/2002;


         /*------------------------*/
         /* 2000/11: begin xls code */
         /*------------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSDATA;
            IF LMAJGRP^=" " THEN          PUT " ";
            IF REGION IN("Benchmark") THEN PUT REGION '09'x @@;   /* '09'x ensures text string is
put into one cell */
            ELSE IF MOD(ROW,2)=0 THEN      PUT MAJGRP '09'x @@;   /* rather than spanning across
cells           */
            ELSE                           PUT MAJGRP '09'x @@;
          %end;
         /*------------------------*/
         /* 2000/11: end xls code   */
         /*------------------------*/

         LMAJGRP=MAJGRP;
   END;


   /*** Column 2+ ***/
   /*******************************************/
   /**** Need to output different formats    ****/
   /*******************************************/
   FILE "&FILEOUT1." MOD ;                   /* 2000/11: refer back to htm file */


   IF MAJGRP IN("Benchmark") THEN DO;
         IF SCORE=. THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
         ELSE IF SCORE=.A THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
         ELSE PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
   END;
   ELSE DO;
     IF SCORE=. THEN DO;
```

```
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
    END;
    ELSE IF SCORE=.A THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
    END;
    ELSE DO;
        IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
        ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
    END;
  END;



  /*------------------------*/
  /* 2000/11: begin xls code */
  /*------------------------*/
  %if &outxls.=1 %then %do;
    FILE XLSDATA;
    IF MAJGRP IN("Benchmark") THEN DO;    /** Replaced 1-22 mab **/
        IF SCORE=. THEN        PUT "***" '09'x @@;
        ELSE IF SCORE=.A THEN  PUT "NA" '09'x @@;
        ELSE                   PUT SCORE '09'x @@;
    END;
    ELSE DO;
      IF SCORE=. THEN DO;
          PUT "***" '09'x @@;
      END;
      ELSE IF SCORE=.A THEN DO;
          PUT "NA" '09'x @@;
      END;
      ELSE DO;
          IF SIG=1 THEN        PUT SCORE '09'x @@;
          ELSE IF SIG=. THEN   PUT "***" '09'x @@;
          ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
          ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
          ELSE                 PUT SCORE '09'x @@;
      END;
    END;
  %end;
  /*------------------------*/
  /* 2000/11: end xls code  */
  /*------------------------*/

  IF EOF THEN DO;
    FILE "&FILEOUT1." MOD ;                              /* 2000/11: to refer back to htm file */
    PUT "</tr>";  /*** terminate last row ***/

    %BOTTOM_NOTES;  /** Macro with bottom notes **/


    /*------------------------*/
    /* 2000/11: begin xls code */
    /*------------------------*/
    %if &outxls.=1 %then %do;
        %if &var3.=0 %then %do;
          FILE XLSDATA;
          PUT; PUT;
          PUT "Source: 2003 Health Care Survey of DOD Beneficiaries ";
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates suppressed due to small sample size";
        %end;
```

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```
          %else %if &var3.ne 0 %then %do;
             FILE XLSDATA;
             PUT; PUT;
             PUT "Source: Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003";
             PUT "Indicates score significantly exceeds benchmark";
             PUT "Indicates score significantly falls short of benchmark";
             PUT "NA Indicates not applicable";
             PUT "*** Indicates suppressed due to small sample size";
          %end;
       %end;

    /*------------------------*/
    /* 2000/11: end xls code   */
    /*------------------------*/

   END;
RUN;
%end;




/*ÛÛÛÛ All Regions ÛÛÛÛ*/
%if &var2.=0 %then %do;
DATA HTML;
  SET HTML END=EOF;
  *LENGTH HREF $ 250;    /*MJS 01/29/04 Comented out statement*/

  LENGTH LREGION HREFQ $ 100;    /*MJS 02/11/04*/
  RETAIN LREGION;

  IF _N_=1 THEN DO;
     LREGION=" ";
     REGNUM=1;
     ROW=0;


    /*** Add links to trend data 7.6.2001 MAB ***/
    %let columns_less1=%EVAL(&columns.-1);
    %if &seppage.=0 %then %do;
         FILE "&FILEOUT1." MOD ;    /* 2000/11: moved inside if stmt */
         PUT "<tr bgcolor= &gray.><td width='" WIDTH_COL1 "'><font face='&fontface.'
size='2'><b>Trends</b></font></td>";
         PUT "<td width='" WIDTH3 "'>&htmlsp.</td>";

          %do i=1 %to 11;    ***MJS 04/14/03 Changed from i=2 to i=1 and 12 to 11;
             %if &i.^=7 AND &i.^=8 AND &i.^=9 AND &i.^=10 %then %do;    ***MJS 04/14/03 Changed
from 8,9,10,11 to 7,8,9,10;
                HREFQ=COMPRESS("..\html\&prefix.&var1.-&var2.-&i.-0q.htm");  /*** href to 2nd
html file ***/
             %end;

             %else %do;
                HREFQ=COMPRESS("..\html\&prefix.&var1.-&var2.-&i.-0.htm");  /*** href to 2nd
html file ***/
             %end;

             PUT "<td width='" WIDTH3 "'><a href='" HREFQ "' &target.><CENTER><img
src='&imgdir.\trend_row.gif' border=0></CENTER></a></td>";
          %end;
          PUT "</tr>";
    %end;


END;


  IF LREGION^=REGION THEN DO;                 /*** Start new row ***/
       FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
       ROW+1;
       IF LREGION^=" " THEN PUT "</tr>";  /*** terminate previous row ***/
```

```
          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSDATA;
            IF LREGION^=" " THEN PUT " ";              /*** terminate previous row ***/
            FILE "&FILEOUT1." MOD ;                    /* 2000/11: to refer back to htm file */
          %end;
          /*------------------------*/
          /* 2000/11: end xls code   */
          /*------------------------*/


          IF REGION IN("CONUS MHS") THEN DO;
               ORIGNUM=REGNUM;
               REGNUM=99;
          END;


          /*** Column 1 / Row 1 ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
             IF REGION IN("Benchmark") THEN PUT "<tr><td width='" WIDTH_COL1 "'><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";  /*** no HREF links ***/
          %end;
          %else %do;
             IF REGION IN("Benchmark") THEN PUT "<tr><td><b><font face='&fontface.' size='2'>"
REGCAT "</font></b></td>";  /*** no HREF links ***/
          %end;
          ELSE DO;   /*** HREF links for each region ***/


            HREF=COMPRESS("..\html\&prefix.0-"||REGNUM||"-&var3.-&var4.&q..htm");
             /*** MAB 7-12-2001 updated to reference trend page if needed ***/



            /*** Certain major groups are not large enough to show ***/
            /*** catchment level detail. so don't add HREF link here  ***/
            /*** Remove since qtrs not going down to catchment level ***/
            /**%if &var1.=3 or &var1.=5 or &var1.=6  %then %do;   ***MJS 05/04/03 Removed Civilian
PCM (&var1.=3), and changed 4,6,7 to 3,5,6;
                IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font  face='&fontface.' size='2'>
" REGCAT " </font></td>";     Shade row
                ELSE PUT "<tr><td><font  face='&fontface.' size='2'> " REGCAT " </font></td>";
                %end;
                %else %do;
                IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font  face='&fontface.'
size='2'><a href=""" HREF +(-1) """> " REGCAT " </a></font></td>";    Shade row
                ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """> "
REGCAT " </a></font></td>";
                %end;**/


          /*** Column 1 / Row 2+ ***/
          %if &prefix=f %then %do;
             IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " REGCAT " </a></font></td>"; /** Shade row **/
                ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """
&target.> " REGCAT " </a></font></td>";
          %end;
          %else %do;
             IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font  face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " REGCAT " </a></font></td>"; /** Shade row **/
                ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """
&target.> " REGCAT " </a></font></td>";
          %end;


          REGNUM+1;

          IF REGION IN("CONUS MHS") THEN DO;
             REGNUM=ORIGNUM;
          END;
```

```
       END;

       /*------------------------*/
       /* 2000/11: begin xls code */
       /*------------------------*/
       %if &outxls.=1 %then %do;
         FILE XLSDATA;
         IF REGION IN("Benchmark") THEN  PUT REGCAT '09'x @@;    /* no logic difference */
         ELSE DO;
           IF MOD(ROW,2)=0 THEN          PUT REGCAT '09'x @@;    /* just presentation difference
in htm */
           ELSE                          PUT REGCAT '09'x @@;    /* keeping as is to preserve htm
code structure */
         END;
       %end;
       /*------------------------*/
       /* 2000/11: end xls code   */
       /*------------------------*/

       LREGION=REGION;
   END;


   /*** Column 2+ ***/
   /*******************************************/
   /**** Need to output different formats     ****/
   /*******************************************/
   FILE "&FILEOUT1." MOD ;                /* 2000/11: refer back to htm file */
   IF REGION IN("Benchmark") THEN DO;     /*** no significance ***/
       IF SCORE=. THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SCORE=.A THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
   END;
   ELSE DO;
     IF SCORE=. THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE IF SCORE=.A THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE DO;
       IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
       ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
     END;
   END;


   /*------------------------*/
   /* 2000/11: begin xls code */
   /*------------------------*/
   %if &outxls.=1 %then %do;
     FILE XLSDATA;
     IF REGION IN("Benchmark") THEN DO;
       IF SCORE=. THEN        PUT "***" '09'x @@;
       ELSE IF SCORE=.A THEN PUT "NA"  '09'x @@;
       ELSE                  PUT SCORE '09'x @@;
     END;
     ELSE DO;
       IF SCORE=. THEN DO;
         PUT "***" '09'x @@;
```

```
       END;
       ELSE IF SCORE=.A THEN DO;
           PUT "NA" '09'x @@;
       END;
       ELSE DO;
            IF SIG=1 THEN         PUT SCORE '09'x @@;
            ELSE IF SIG=. THEN   PUT "***" '09'x @@;
            ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
            ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
            ELSE                 PUT SCORE '09'x @@;
       END;
     END;
   %end;
  /*------------------------*/
  /* 2000/11: end xls code   */
  /*------------------------*/


  IF EOF THEN DO;
     FILE "&FILEOUT1." MOD ;                      /* 2000/11: refer back to htm file */
     PUT "</tr>";  /*** terminate last row ***/


     %BOTTOM_NOTES;  /** Macro with bottom notes **/


     /*------------------------*/
     /* 2000/11: begin xls code */
     /*------------------------*/
     %if &outxls.=1 %then %do;
        %if &var3.=0 %then %do;
          FILE XLSDATA;
          PUT; PUT;
          PUT "Source: 2003 Health Care Survey of DOD Beneficiaries ";
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates suppressed due to small sample size";
        %end;

        %else %if &var3.ne 0 %then %do;
          FILE XLSDATA;
          PUT; PUT;
          PUT "Source: Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003";
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates suppressed due to small sample size";
        %end;
     %end;
     /*------------------------*/
     /* 2000/11: end xls code   */
     /*------------------------*/

   END;

RUN;

%end;




/*ÛÛÛÛ Single Regions ÛÛÛÛ*/
/* This code is not applicable for the 2000 report cards */
/*  since not enough data to display sub-region info. */
/*  Will leave in code in case this changes */
%if &var2.^=0 AND &var1.^=0 %then %do;
DATA HTML;
  SET HTML END=EOF;
```

```
      LENGTH LREGCAT $ 100 /*HREF $ 250*/;   /*MJS 01/29/04 Comented out HREF statement*/
      RETAIN LREGCAT;                          /*MJS 02/11/04*/

   IF _N_=1 THEN DO;
      LREGCAT=" ";
      ROW=0;
   END;


   IF LREGCAT^=REGCAT THEN DO;                /*** Start new row ***/
        FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
        ROW+1;
        IF LREGCAT^=" " THEN PUT "</tr>";  /*** terminate previous row ***/
        IF REGCAT IN("Benchmark") THEN PUT "<tr><td><b><font face='&fontface.' size='2'>" REGCAT
"</font></b></td>";
        ELSE IF REGCAT IN("CONUS MHS") THEN PUT "<tr bgcolor= &gray.><td><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";
        ELSE IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.' size='2'>"
REGCAT "</font></td>";    /** Shade row **/
        ELSE PUT "<tr><td><font face='&fontface.' size='2'>" REGCAT "</font></td>";


        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSDATA;
          IF LREGCAT^=" " THEN PUT " ";
          IF REGCAT IN("Benchmark") THEN      PUT REGCAT '09'x @@;          /* no logic difference
*/
          ELSE IF REGCAT IN("CONUS MHS") THEN PUT REGCAT '09'x @@;
          ELSE IF MOD(ROW,2)=0 THEN           PUT REGCAT '09'x @@;          /* just presentation
difference in htm */
          ELSE                                PUT REGCAT '09'x @@;          /* keeping as is to
preserve htm code structure */
        %end;
        /*------------------------*/
        /* 2000/11: end xls code   */
        /*------------------------*/


        LREGCAT=REGCAT;

   END;



   /*********************************************/
   /**** Need to output different formats    ****/
   /*********************************************/
   FILE "&FILEOUT1." MOD ;                  /* 2000/11: refer back to htm file */
   IF REGION IN("Benchmark") THEN DO;      /*** no significance ***/
        IF SCORE=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SCORE=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE PUT "<td align='center' valign='bottom'><b><font face='&fontface.' color=&blue.
size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
   END;
   ELSE DO;
     IF SCORE=. THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE IF SCORE=.A THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE DO;
        IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
```

```
          ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
          ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
    END;
  END;

  /*------------------------*/
  /* 2000/11: begin xls code */
  /*------------------------*/
  %if &outxls.=1 %then %do;
    FILE XLSDATA;
    IF REGION IN("Benchmark") THEN DO;
        IF SCORE=. THEN        PUT "***" '09'x @@;
        ELSE IF SCORE=.A THEN  PUT "NA"  '09'x @@;
        ELSE                   PUT SCORE '09'x @@;
    END;
    ELSE DO;
      IF SCORE=. THEN DO;
         PUT "***" '09'x @@;
      END;
      ELSE IF SCORE=.A THEN DO;
         PUT "NA" '09'x @@;
      END;
      ELSE DO;
        IF SIG=1 THEN        PUT SCORE '09'x @@;
        ELSE IF SIG=. THEN   PUT "***" '09'x @@;
        ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
        ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
        ELSE                 PUT SCORE '09'x @@;
      END;
    END;
  %end;
  /*------------------------*/
  /* 2000/11: end xls code   */
  /*------------------------*/


  IF EOF THEN DO;
    FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */
    PUT "</tr>";  /*** terminate last row ***/

    %BOTTOM_NOTES;  /** Macro with bottom notes **/


    /*------------------------*/
    /* 2000/11: begin xls code */
    /*------------------------*/
        %if &outxls.=1 %then %do;
        %if &var3.=0 %then %do;
          FILE XLSDATA;
          PUT; PUT;
          PUT "Source: 2003 Health Care Survey of DOD Beneficiaries ";
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates suppressed due to small sample size";
        %end;

        %else %if &var3.ne 0 %then %do;
          FILE XLSDATA;
          PUT; PUT;
          PUT "Source: Health Care Surveys of DoD Beneficiaries conducted in 2002 and 2003";
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates suppressed due to small sample size";
        %end;
    %end;
    /*------------------------*/
    /* 2000/11: end xls code   */
    /*------------------------*/

  END;
```

```
RUN;
%end;




/*************************************/
/**** Print out footer info    ****/
/*************************************/
DATA _NULL_;
    FILE "&FILEOUT1." MOD ;
    LENGTH HREF $250;


    /** Determine where back button should link to **/
    %if &var1.=0 %then %do;
       HREFBACK=COMPRESS("&prefix.8-0-0-0.htm");    ***MJS 05/14/03 Changed 8 to 7;
    %end;
    %else %do;
       HREFBACK=COMPRESS("&prefix.&var1.-0-0-0.htm");
    %end;


    /** MF Changes **/
    PUT "<tr>";
    PUT "    <td colspan='&columns.'>";
    PUT "       <center>";
    PUT "          <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return to Main
Page'></a>&htmlsp.&htmlsp.";
              /*** 7-17 MAB added JS code to go back ***/
    PUT "&goback.";
    PUT "          <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";

    PUT "          <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a><br>";
    PUT "          <font face='Arial,Helvetica,Swiss,Geneva' size='2'><b>&grpmsg.<br>";
    PUT "          </b></font>";




    majgrp1=COMPRESS("&prefix.1-&var2.-&var3.-&var4.&q..htm");
    majgrp2=COMPRESS("&prefix.2-&var2.-&var3.-&var4.&q..htm");
    majgrp3=COMPRESS("&prefix.3-&var2.-&var3.-&var4.&q..htm");   ***MJS 05/04/03 Removed Civilian
PCM;
    majgrp4=COMPRESS("&prefix.4-&var2.-&var3.-&var4.&q..htm");   ***(majgrp3), and changed 4-8 to
3-7;
    majgrp5=COMPRESS("&prefix.5-&var2.-&var3.-&var4.&q..htm");
    majgrp6=COMPRESS("&prefix.6-&var2.-&var3.-&var4.&q..htm");
    majgrp7=COMPRESS("&prefix.7-&var2.-&var3.-&var4.&q..htm");


     /*** Certain major groups are not large enough to show ***/
     /*** catchment level detail. So if we are in html file ***/
     /*** which has this detail then don't link to a html   ***/
     /*** file which doesn't exist                          ***/

    %if &var1.^=0 %then %do;
      %if &var1.^=3 and &var1.^=5 and &var1.^=6 and &var2.^=0 %then %do;   ***MJS 05/04/03
Removed Civilian PCM (&var1.^=3), changed 4,6,7 to 3,5,6,;
                                                ***and changed MAJGRP
5&8 below to 4&7;
          PUT "<a href=""" MAJGRP1 +(-1) """ &target.><font face='&fontface.' size='2'>Prime
Enrollees</font></a>&htmlsp.&htmlsp.";
          PUT "<a href=""" MAJGRP2 +(-1) """ &target.><font face='&fontface.' size='2'>Enrollees
with Military PCM</font></a>&htmlsp.&htmlsp.";
          PUT "<a href=""" MAJGRP4 +(-1) """ &target.><font face='&fontface.' size='2'>Active
Duty</font></a>&htmlsp.&htmlsp.";
          PUT "<a href=""" MAJGRP7 +(-1) """ &target.><font face='&fontface.' size='2'>All
Users</font></a>";

      %end;
      %else %do;
```

```
        PUT "<a href=""" MAJGRP1 +(-1) """ &target.><font face='&fontface.' size='2'>Prime
Enrollees</font></a>&htmlsp.&htmlsp.";
        PUT "<a href=""" MAJGRP2 +(-1) """ &target.><font face='&fontface.' size='2'>Enrollees
with Military PCM</font></a>&htmlsp.&htmlsp.";
        PUT "<a href=""" MAJGRP3 +(-1) """ &target.><font face='&fontface.'
size='2'>Standard/Extra Users</font></a>&htmlsp.&htmlsp.";    ***MJS 05/04/03 Removed Civilian
PCM;
        PUT "<a href=""" MAJGRP4 +(-1) """ &target.><font face='&fontface.' size='2'>Active
Duty</font></a>&htmlsp.&htmlsp.";             ***(MAJGRP5), and changed 4-8 to 3-7;
        PUT "<br>";
        PUT "<a href=""" MAJGRP5 +(-1) """ &target.><font face='&fontface.' size='2'>Active Duty
Dependents</font></a>&htmlsp.&htmlsp.";
        PUT "<a href=""" MAJGRP6 +(-1) """ &target.><font face='&fontface.' size='2'>Retirees and
Dependents</font></a>&htmlsp.&htmlsp.";
        PUT "<a href=""" MAJGRP7 +(-1) """ &target.><font face='&fontface.' size='2'>All
Users</font></a>";

      %end;
    %end;

   /*** link to printer friendly version moved C.Rankin 10/25/2001 ***/

   /*** 4-17 MAB added  ***/
   /*** If creating frames need link to printer friendly version of file ***/
   /***DANIELE ADDED BR STATEMENT ON 11/1/01 SO PRINTER ICON WOULD SHOW UP ON SEPARATE LINE ***/
   %if &prefix=f %then %do;
      HREFP=COMPRESS("p&var1.-&var2.-&var3.-&var4.&q..htm");
      PUT "    <BR><font face='Arial,Helvetica,Swiss,Geneva' size='1'><a href='" HREFP "'
&target.><img src='&imgdir.\printer.gif' alt='Printer Friendly Page' border=0>Printer Friendly
Page</a></font>
   %end;



RUN;


/*** Close HTML page ***/
DATA _NULL_;
  FILE "&FILEOUT1." MOD ;

  PUT "</center></td></tr></table>";
  PUT "</body></html>";

RUN;



/*-------------------------------*/
/* 2000/12: begin xls color code */
/*-------------------------------*/
%if &outxls.=1 %then %do;
  FILENAME CMDS DDE 'excel|system';

  /* Align 2 titles */
  DATA _NULL_;
     FILE CMDS;
     CELL=COMPRESS("[SELECT(""R1C1:R1C"||&columns.||""")]"); PUT CELL;
     PUT '[ALIGNMENT(3, False, 3,0, False,,,True)]';  /** Merges titles across columns **/
     CELL=COMPRESS("[SELECT(""R2C1:R2C"||&columns.||""")]"); PUT CELL;
     PUT '[ALIGNMENT(3, False, 3,0, False,,,True)]';  /** Merges titles across columns **/
  RUN;

  DATA _NULL_;
    FILE CMDS;
    SET HTML(DROP=ROW) END=EOF;

    RETAIN ROW COLUMN;


    /*** Need to initialize row and column pointers ***/
    IF _N_=1 THEN DO;
      ROW=6;
      COLUMN=1;
```

```
        END;

        /*** Increment Row and Column pointers ***/
/*      COLUMN=COLUMN+1;
        IF &var3.in (0,7,8,9,10) and COLUMN>&columns. THEN DO;    ***MJS 4/23/03 Changed 8/9/10/11 to
7/8/9/10;
            ROW=ROW+1;
            COLUMN=2;
        END;
        ELSE IF COLUMN>&columns.+1 THEN DO;
            ROW=ROW+1;
            COLUMN=2;
        END;
*** RSG/MAB - 10/13/03 - changes for new template format */

    COLUMN=COLUMN+1;
        IF COLUMN>&columns. THEN DO;
            ROW=ROW+1;
            COLUMN=2;
        END;


        CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
        PUT CELL;

        /** Before color cell center data **/
        PUT '[ALIGNMENT(3, False, 3,0, False)]';


        IF REGION IN("Benchmark") OR MAJGRP IN("Benchmark") THEN PUT
'[FORMAT.FONT("Arial",10,True,False,False,False,9)]';  /*** BOLD & DARK RED ***/
        ELSE IF SCORE NOT IN(.,.A) THEN DO;
            IF SIG=1 THEN PUT '[FORMAT.FONT("Arial",10,True,False,False,False,10)]';          /*** BOLD
& GREEN ***/
            ELSE IF SIG=-1 THEN PUT '[FORMAT.FONT("Arial",10,False,True,False,False,3)]';      /*** RED
***/
            ELSE PUT '[FORMAT.FONT("Arial",10,False,False,False,False,5)]';    /*** BLUE ***/
        END;


        /*** If last record then output footer ***/
        IF EOF THEN DO;
            ROW=ROW+3; COLUMN=1;
            CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
            PUT CELL;
            PUT '[FORMAT.FONT("Arial",10,True,False,False,False,10)]';           /*** BOLD & GREEN ***/
            ROW=ROW+1;
            CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
            PUT CELL;
            PUT '[FORMAT.FONT("Arial",10,False,True,False,False,3)]';      /*** RED ***/
        END;
    RUN;
  FILENAME CMDS DDE 'excel|system';
  DATA _NULL_;
    FILE CMDS;
    PUT '[SAVE()]';
    PUT '[CLOSE()]';
  RUN;
%end;
/*------------------------------*/
/* 2000/12: end xls color code  */
/*------------------------------*/




%MEND MKHTML;
/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/


/*
%LET PREFIX=p;
%LET OUTXLS=1;
```

```
%MKHTML (7,0,1,1,0);
*/


*********************************************;
**** Create macros to call MKHTML macro  ****;
*********************************************;

/*** Create 8 HTML pages (7 Majgrps / All Regions / All Benefits)***/
%MACRO DOALL1();
            %MKHTML(1,0,0,0,0);
            %MKHTML(2,0,0,0,0);
            %MKHTML(4,0,0,0,0);
            %MKHTML(7,0,0,0,0);
            %MKHTML(3,0,0,0,0);    ***MJS 05/04/03 Removed Civilian PCM (Majgrp 3), and changed 4-
8 to 3-7;
            %MKHTML(5,0,0,0,0);
            %MKHTML(6,0,0,0,0);
%MEND DOALL1;




/*** Create 88 HTML pages (8 Majgrps / All Regions / 11 Benefits)***/
/*** Create 56 More pages if have sep page for trends ***/
%MACRO DOALL2();
        %DO J=1 %TO 7;
                %DO K=1 %TO 11;       * 11 Sub-benefits ;    ***MJS 4/23/03 Changed 2 to 1 and 12 to
11;
*                   %MKHTML(3,0,&K.,0);    ***MJS 05/04/03 Removed Civilian PCM (Majgrp 3), and
changed 4-8 to 3-7;
                        %MKHTML(&J.,0,&K.,1,0);  ***RSG 08/07/03 Add var4 part of new page numbers;

                /*** Call macro for 2nd page (except for ratings benefits) ***/
                %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                        %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L= 0 %TO 4; ***RSG
08/07/03 There are different number of
                                                                          of sub-
benefits trend pages for each benefit so need a counter "L"
                                                                          to do
different number of pages for each benefit;
*                   %MKHTML(1,0,&K.,2);    ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
*                   %MKHTML(3,0,&K.,2);    ***MJS 05/07/03 Removed Civilian PCM (Majgrp 3), and
changed 4-8 to 3-7;
                                %MKHTML(&J.,0,&K.,2,&L.);
                                %END;
                        %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
*                   %MKHTML(1,0,&K.,2);    ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
*                   %MKHTML(3,0,&K.,2);    ***MJS 05/07/03 Removed Civilian PCM (Majgrp 3),
and changed 4-8 to 3-7;
                                %MKHTML(&J.,0,&K.,2,&L.);
                                %END;
                        %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
*                   %MKHTML(1,0,&K.,2);    ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
*                   %MKHTML(3,0,&K.,2);    ***MJS 05/07/03 Removed Civilian PCM (Majgrp 3),
and changed 4-8 to 3-7;
                                %MKHTML(&J.,0,&K.,2,&L.);
                                %END;
                        %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
*                   %MKHTML(1,0,&K.,2);    ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
*                   %MKHTML(3,0,&K.,2);    ***MJS 05/07/03 Removed Civilian PCM (Majgrp 3),
and changed 4-8 to 3-7;
                                %MKHTML(&J.,0,&K.,2,&L.);
                                %END;
                    %END;
                %END;
        %END;
%MEND DOALL2;




 /*** Create 15 HTML pages (All Majgrps / 15 Regions / All Benefits) ***/
%MACRO DOALL3();
        %DO J=1 %TO 15;               * 15 Regions ;
                %MKHTML(0,&J.,0,0,0);
        %END;
```

```
%MEND DOALL3;



 /*** Need to populate new table for all majgrps ***/
 /*** Create 165 HTML pages (All Majgrps / 15 Regions / 11 Benefits) ***/
 /*** Create 105 More pages if have sep page for trends ***/
%MACRO DOALL4();
      %DO J=1 %TO 15;
         %DO K=1 %TO 11;   ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;

            %MKHTML(0,&J.,&K.,1,0);
*            %MKHTML(0,&J.,&K.,2,0);                ***MJS 4/23/03 Changed 8/9/10/11 to 7/8/9/10;
            /*** Call macro for 2nd page (except for ratings benefits) ***/
            %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                    %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L = 0 %TO 4; ***RSG 08/07/03
Counter "L" for different number;
                            %MKHTML(0,&J.,&K.,2,&L.);
        *number of sub-benefit trend pages for each benefit;
                    %END;
                    %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
                            %MKHTML(0,&J.,&K.,2,&L.);
                    %END;
                    %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
                            %MKHTML(0,&J.,&K.,2,&L.);
                    %END;
                    %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
                            %MKHTML(0,&J.,&K.,2,&L.);
                    %END;
            %end;

         %END;
      %END;
%MEND DOALL4;



/*** Create 1 HTML pages (All Majgrps / 1 Region-ConusMHS / All Benefits) ***/
%MACRO DOALL5();
        %DO K=0 %TO 0;
            %MKHTML(0,99,&K.,0,0);
        %END;
%MEND DOALL5;


/*** Create 11 HTML pages (All Majgrps / 1 Region-ConusMHS / 11 Benefits) ***/
 /*** Create 7 More pages if have sep page for trends ***/
%MACRO DOALL6();
        %DO K=1 %TO 11;   ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;
             %MKHTML(0,99,&K.,1,0);
            /*** Call macro for 2nd page (except for ratings benefits) ***/
            %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                    %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L = 0 %TO 4; ***RSG 08/07/03
counter for sub-benefit trend pages;
                            %MKHTML(0,99,&K.,2,&L.);            ***MJS 4/23/03 Changed
8/9/10/11 to 7/8/9/10;
                    %END;
                    %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
                            %MKHTML(0,99,&K.,2,&L.);
                    %END;
                    %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
                            %MKHTML(0,99,&K.,2,&L.);
                    %END;
                    %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
                            %MKHTML(0,99,&K.,2,&L.);
                    %END;
            %end;

        %END;
%MEND DOALL6;



/*********************************************/
```

```
/**** Create macros to call MKHTML macro  ****/
/**** Need special macros for Excel files ****/
/*******************************************/

/*** Create 8 HTML pages (8 Majgrps / All Regions / All Benefits)***/
%MACRO EXCEL1();
              %MKHTML(1,0,0,0,0);
              %MKHTML(2,0,0,0,0);
              %MKHTML(4,0,0,0,0);
              %MKHTML(7,0,0,0,0);
              %MKHTML(3,0,0,0,0);    ***MJS 05/04/03 Removed Civilian PCM (Majgrp 3), and changed 4-
8 to 3-7;
              %MKHTML(5,0,0,0,0);    ***RSG 08/07/03 Added fourth dimension page number (var4);
              %MKHTML(6,0,0,0,0);
%MEND EXCEL1;

/*** Create 88 HTML pages (8 Majgrps / All Regions / 11 Benefits)***/
%MACRO EXCEL2();
    %DO J = 1 %TO 7;
         %DO K=1 %TO 11;       * 11 Sub-benefits ;    ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;
              %MKHTML(&J.,0,&K.,1,0);
                                             ***MJS 05/04/03 Removed Civilian PCM
(Majgrp 3), and changed 4-8 to 3-7;
                                             ***RSG 08/07/03 Added fourth dimension
page number (var4);
                   %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                              %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L= 0 %TO 4; ***RSG
08/07/03 There are different number of

                                        sub-benefits trend pages for each benefit so need a counter
"L"
                                                                                         to do
different number of pages for each benefit;
                              %MKHTML(&J.,0,&K.,2,&L.);
                                   %END;
                                   %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
                                       %MKHTML(&J.,0,&K.,2,&L.);
                                   %END;
                                   %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
                                       %MKHTML(&J.,0,&K.,2,&L.);
                                   %END;
                                   %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
                              %MKHTML(&J.,0,&K.,2,&L.);
                                   %END;
                   %END;
         %END;
    %END;
%MEND EXCEL2;

/*** Create 15 HTML pages (All Majgrps / 15 Regions / All Benefits) ***/
%MACRO EXCEL3();
      %DO J=1 %TO 15;              * 15 Regions ;
          %MKHTML(0,&J.,0,0,0);
      %END;
%MEND EXCEL3;

/*** Create 165 HTML pages (All Majgrps / 15 Regions / 11 Benefits) ***/
%MACRO EXCEL4();
        ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;
        ***RSG 8/7/03 Made changes to add 5th parameter to macro;
        %DO J=1 %TO 15;
          %DO K=1 %TO 11;    ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;
              %MKHTML(0,&J.,&K.,1,0);
              /*** Call macro for 2nd page (except for ratings benefits) ***/
              %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                      %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L = 0 %TO 4; ***RSG 08/07/03
Counter "L" for different number;
                               %MKHTML(0,&J.,&K.,2,&L.);
        *number of sub-benefit trend pages for each benefit;
                      %END;
                      %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
                               %MKHTML(0,&J.,&K.,2,&L.);
                      %END;
                      %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
```

```
                                %MKHTML(0,&J.,&K.,2,&L.);
                        %END;
                        %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
                                %MKHTML(0,&J.,&K.,2,&L.);
                        %END;
              %end;

          %END;
       %END;
%MEND EXCEL4;


/*** Create 1 HTML pages (All Majgrps / 1 Region-ConusMHS / All Benefits) ***/
%MACRO EXCEL5();
         %DO K=0 %TO 0;
             %MKHTML(0,99,&K.,0,0);
         %END;
%MEND EXCEL5;


/*** Create 11 HTML pages (All Majgrps / 1 Region-ConusMHS / 11 Benefits) ***/
%MACRO EXCEL6();
         ***MJS 4/23/03 Changed 2 to 1 and 12 to 11;
        ***RSG 8/7/03 Made changes to add 5th parameter in macro;

         %DO K=1 %TO 11;
               %MKHTML(0,99,&K.,1,0);
             /*** Call macro for 2nd page (except for ratings benefits) ***/
             %if &k.^=7 AND &k.^=8 AND &k.^=9 AND &k.^=10 %then %do;
                     %IF &K. = 1 OR &K. = 2 OR &K. = 4 %THEN %DO L = 0 %TO 4; ***RSG 08/07/03
counter for sub-benefit trend pages;
                              %MKHTML(0,99,&K.,2,&L.);                ***MJS 4/23/03 Changed
8/9/10/11 to 7/8/9/10;
                     %END;
                     %ELSE %IF &K. = 3 OR &K. = 6 %THEN %DO L = 0 %TO 2;
                             %MKHTML(0,99,&K.,2,&L.);
                     %END;
                     %ELSE %IF &K. = 5 %THEN %DO L = 0 %TO 3;
                             %MKHTML(0,99,&K.,2,&L.);
                     %END;
                     %ELSE %IF &K. = 11 %THEN %DO L = 0 %TO 5;
                             %MKHTML(0,99,&K.,2,&L.);
                     %END;
              %end;

       %END;
%MEND EXCEL6;

/*** Run macro to create Excel files ONLY ***/
%LET PREFIX=p;
%LET OUTXLS=1;
%EXCEL1;
%EXCEL2;
%EXCEL3;
%EXCEL4;
%EXCEL5;
%EXCEL6;

/*** Run macro to create Frame HTML files ***/
%LET PREFIX=f;
%LET OUTXLS=0;
%DOALL1;
%DOALL2;
%DOALL3;
%DOALL4;
%DOALL5;
%DOALL6;

/*** Run macro to create Printer Friendly HTML files (non-frames) ***/
%LET PREFIX=p;
%LET OUTXLS=0;
%DOALL1;
%DOALL2;
%DOALL3;
%DOALL4;
%DOALL5;
```

```
%DOALL6;


%PUT "&number_html_files. HTML files created.";



ENDSAS;
**********************************************************************;
**********************************************************************;
**********************************************************************;
**********************************************************************;
**********************************************************************;
**********************************************************************;
**********************************************************************;
```

9.   Q4_2003\PROGRAMS\LOADWEB\QC_ADULT.SAS - Quality Assurance for TRICARE Beneficiary Reports - Quarterly.

```
*====================================================================;
*                                                                    ;
*   Programmer:  Mark A. Brinkley                                    ;
*        Title:  QC_ADULT.SAS                                        ;
*       Client:  8860-410                                            ;
*         Date:  03-29-2000                                          ;
*                                                                    ;
*      Purpose:  This program is designed to read in ALL adult html  ;
*                files, extract the table data, and then compare     ;
*                this data to the input data which was used to       ;
*                create the html report cards.  If everything is OK, ;
*                then the comparison should yield no differences.    ;
*                                                                    ;
*  Input files: 1) All F*.HTM files                                  ;
*                2) TOTAL_Q.SD2                                      :
*                                                                    ;
*  Modifications:                                                    ;
*  1) 02/14/2001 - Keith Rathbun, Remove outputting of permanent     ;
*     SAS Dataset.  Deleted directory output file.  Removed white    ;
*     space from program.  Removed BY statement from proc compares.  ;
*     Added titles.  Setup to run in LOADWEB directory on Jdrive.    ;
*                                                                    ;
*  2) 04/18/2001 - Chris Rankin -- added Macro to process            ;
*                  frames and non-frames version separately          ;
*                                                                    ;
*  3) 04/10/2002 - Keith Rathbun -- updated Project/Task number.     ;
*                  No code changes required.                         ;
*                                                                    ;
*  4) 08/14/2002 - Mark Brinkley                                     ;
*                    - Added kludge to remove '>' from SCORE         ;
*                    - Added DROP=SCORE since don't need to pull     ;
*                       in SCORE from TESTFILE file. Was causing     ;
*                       a type mismatch error.                       ;
*  5) 08/14/2002 - Keith Rathbun                                     ;
*                    - Added kludge to reset SIG to 0 for trend      ;
*                      records that have no score.                   ;
*                                                                    ;
* Output files: Comparison summary listing                           ;
*                                                                    ;
*====================================================================;
LIBNAME IN  ".";
OPTIONS NOCENTER LS=132 PS=79 COMPRESS=NO;


********************************************************************;
*****    Run batch command to create dir of all F*.HTM files   *****;
********************************************************************;
OPTIONS NOXWAIT;

%MACRO COMPARE(INCOND=,TITLE=);

X "DIR Html\&INCOND..HTM /B > Html\QC_ADULT.DAT";
X "CD Html";

********************************************************************;
*****    Read in QC_ADULT which was just created           *****;
********************************************************************;

DATA QC_ADULT;
   INFILE "QC_ADULT.DAT" LRECL=15 PAD;
   INPUT HTMLFILE $ 1-15;
RUN;

********************************************************************;
*******        Read in all F*.HTM files                 *******;
********************************************************************;

DATA HTMLS;
   SET QC_ADULT;
   INFILE FILEREF FILEVAR=HTMLFILE  LRECL=175 PAD END=DONE;
```

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```
   DO UNTIL(DONE);
      INPUT TEMPVAR $ 1-175;
      OUTPUT;
   END;
RUN;

DATA TEMP;
   SET HTMLS;
   LENGTH ORDER 5;
   IF INDEX(TEMPVAR,"CODE")>0;
   PLACEI=INDEX(TEMPVAR,"CODE");
   ORDER=SUBSTR(TEMPVAR,PLACEI+5,5);
RUN;

DATA TESTFILE(DROP=PLACE PLACE2 PLACE3 SRCH PLACEI LNGTH TEMPVAR COLOR); *SCORE);
   SET TEMP;
   LENGTH COLOR $6;
   LENGTH SCORE_ 3;
   LENGTH SCORE $4;
   LENGTH SIG_ 3;
   IF INDEX(TEMPVAR,"color")>0 THEN DO;
      PLACE=INDEX(TEMPVAR,"color");
      COLOR=SUBSTR(TEMPVAR,PLACE+8,6);
      SRCH=SUBSTR(TEMPVAR,PLACE,30);
      IF INDEX(SRCH,">")>0 AND INDEX(SRCH,"<")>0 THEN DO;
         PLACE2=INDEX(SRCH,">");
         PLACE3=INDEX(SRCH,"<");
         LNGTH=PLACE3-PLACE2-1;
         SCORE=SUBSTR(SRCH,PLACE2+1,LNGTH);
      END;
   END;
   ELSE DO;
      PLACE=INDEX(TEMPVAR,"CODE");
      SCORE=SUBSTR(TEMPVAR,PLACE-5,3);
      IF SUBSTR(SCORE,1,1)=">" THEN SCORE=SUBSTR(SCORE,2,2);     /** MAB 8-14-2002 **/
      COLOR='.';
   END;
   IF COLOR='663300' THEN SIG_=.;
   ELSE IF COLOR='cc0000' THEN SIG_=-1;
   ELSE IF COLOR='009933' THEN SIG_=1;
   ELSE IF COLOR='.' THEN SIG_=0;
   IF SCORE='***' THEN SCORE_=.;
   ELSE IF SCORE='NA' THEN SCORE_=.A;
   ELSE SCORE_=SCORE;
RUN;

PROC SORT DATA=TESTFILE;
   BY ORDER;
RUN;

DATA TESTFILE;
   SET TESTFILE;
   BY ORDER;
   IF FIRST.ORDER;
RUN;

DATA MERGED(KEEP=ORDER SIG SIG_ SCORE SCORE_ SCORE1);
   MERGE TESTFILE(IN=IN1 DROP=SCORE)   /** MAB 8-14-2002 Added DROP=SCORE **/
         IN.TOTAL_Q;
   BY ORDER;
   IF IN1;
   LENGTH SCORE1 3;
   SCORE1=ROUND(SCORE);
   IF (SIG=. AND SIG_=0) THEN SIG_=.;
   ELSE IF (SIG=0 AND SIG_=.) THEN SIG_=0;
   IF (BENTYPE = 'Trend' AND SIG=-1 AND SCORE=.) THEN SIG=0; * KRR added 8/14/2002;
   IF (SCORE1=. AND SCORE_=.A) THEN SCORE_=.;
RUN;

TITLE1 "Validate Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: QC_ADULT.SAS By Mark Brinkley";
TITLE3 "Program Inputs: TOTAL_Q.SD2 - Scores Database in WEB Layout and report card HTML files";
TITLE4 &TITLE;
```

```
PROC COMPARE DATA=MERGED BRIEF;
   VAR SIG;
   WITH SIG_;
RUN;

/*
PROC PRINT DATA=MERGED;
VAR REGCAT BENTYPE SIG SIG_ SCORE SCORE_;
WHERE SIG NE SIG_;
RUN;
*/

PROC COMPARE DATA=MERGED BRIEF;
   VAR SCORE1;
   WITH SCORE_;
RUN;

X "DEL QC_ADULT.DAT";
X "CD ..";

%MEND COMPARE;

%COMPARE(INCOND=F*-*,TITLE="FRAMES VERSION");
%COMPARE(INCOND=P*-*,TITLE="NON-FRAMES VERSION");

ENDSAS;
```

10.A. ReportCards\CAHPS_Adult2003\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 H03007>=2) THEN GROUP1 = 1
*                   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN GROUP2 = 1
*                   IF (XENR_PCM = 3,7      AND H03007>=2) THEN GROUP3 = 1
*                   IF XINS_COV IN (3,4,5)                 THEN GROUP4 = 1
*                   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: 1) February 2001 By Keith Rathbun, Update for quarterly
*               adult report cards.  Removed permanent dataset ENTIRE.SD2.
*            2) August 2001 By Keith Rathbun, Updated DSN and LIBNAME
*               for 3rd quarter adult report cards.
*            3) OCTOBER 2001 BY DANIELE BEAHM, Because there was no post-
*               stratification done in Q3, changed all references of the
*               POSTSTR variable to ADJ_CELL
*            4) JANUARY 2002 BY DANIELE BEAHM, Modified group3 to include
*               XENR_PCM
*            5) April 2002 By Mike Scott, Updated variable names for 2002
*               survey.
*            6) July 2002 By Mike Scott: See Note #2.  Replaced variable
*               S02S01 with H03072 (new health status variable), deleted
*               code to recode S02S01 to H00077, and changed H00077/R00077
*               rename/recode to H03072/R03072 rename/recode.  The Hispanic/
*               Latino variable is not present.
*            7) January 2004 By Mike Scott, Updated for 2004 survey, variable
*               and data set names.
*            8) January 2004 By Keith Rathbun, Added STEP1Q.INC to recreate
*               CACSMPL for more detailed reporting purposes.  Use FIELDAGE
*               (instead of DAGEQY) to defined age groups.
*
*
*  INPUTS:   1) HCS03A_1.SD2 - 2003 DoD Combined Q1-q4 HCS Database   /* 2003 */
*
*  OUTPUTS:  1) GROUP1-8.SD2 - DoD Quarterly GROUP files as defined above
*
*  INCLUDES: 1) CONVERT.SAS - Convert item responses to proportional
*                             values for consistency w/ TOPS
*            2) STEP1Q.INC - Recreate CACSMPL for detailed reporting purposes
*
*  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 H03072,
*               and the Hispanic/Latino variable which was H02079 is now
*               H02077.
```

```
*
****************************************************************************;
OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMTERR NOOVP COMPRESS=YES;
LIBNAME OUT V612 "DATA";
LIBNAME IN1 V612 "..\..\..\DATA";

TITLE1    'Program Saved as: STEP1Q.SAS';

%INCLUDE "STEP1Q.INC"; *Create TEMP dataset containing the detailed CACSMPL;

PROC SORT DATA=IN1.HCS03A_1(DROP=CACSMPL) OUT=HCS03A_1; BY MPRID; RUN;

DATA HCS03A_1;
   MERGE TEMP HCS03A_1;
   BY MPRID;
RUN;

PROC CONTENTS DATA=HCS03A_1;   /* Annual Version */  /*MJS 01/14/04 Changed data set*/
RUN;

DATA ENTIRE;
   SET HCS03A_1(KEEP=   /* Annual Version */  /*MJS 01/14/04 Changed data set*/
                  MPRID
                  DAGEQY
                  FIELDAGE
                  XREGION
                  CACSMPL
                  CONUS
                  ENBGSMPL
                  SREDA
                  XSEXA
                  XBNFGRP
                  ADJ_CELL
                  XINS_COV
                  XENR_PCM
                  CWRWT
                  /* Getting Needed Care */
                  H03009
                  H03013
                  H03027
                  H03028
                  /* Getting Care Quickly */
                  H03018
                  H03020
                  H03023
                  H03029
                  /* How Well Doctors Communicate */
                  H03032
                  H03033
                  H03034
                  H03035
                  /* Courteous and Helpful Office Staff */
                  H03030
                  H03031
                  /* Customer Service */
                  H03044
                  H03046
                  H03051
                  /* Claims Processing */
                  H03040
                  H03041 /*****************************/
                  H03072 /* Health Status             */
                  H03036 /* Health Care Rating        */
                  H03052 /* Health Plan Rating        */
                  H03011 /* Personal Doctor Rating    */
                  H03015 /* Specialist Rating         */
                  H03007 /* How Long in Health Plan   */
                         /*****************************/
               );
   FORMAT _ALL_;
   IF XREGION = .    THEN DELETE;
   IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;
                  /* Note:  use tmp_cell in step2q.sas */
   LENGTH TMP_CELL 8;
```

```
        TMP_CELL = ADJ_CELL;
        WRWT=CWRWT;
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 '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;
      AGE1824=0;
      AGE2534=0;
      AGE3544=0;
      AGE4554=0;
      AGE5564=0;
      AGE6574=0;
      AGE75UP=0;
      IF      ( '018' <= FIELDAGE <= '024' ) THEN AGE1824=1;
      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;
```

```
* IF H03043=2 THEN H03044=1;
 *************************************************************************
 * 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 (XINS_COV IN (1,2,6)  AND H03007>=2) THEN GROUP1 = 1;
 IF (XENR_PCM IN (1,2,6)  AND H03007>=2) THEN GROUP2 = 1;
 IF (XENR_PCM IN (3,7)    AND H03007>=2) THEN GROUP3 = 1;
 IF XINS_COV IN (3,4,5)   THEN GROUP4 = 1;
 IF XBNFGRP = 1           THEN GROUP5 = 1;
 IF XBNFGRP = 2           THEN GROUP6 = 1;
 IF XBNFGRP IN (3,4)      THEN GROUP7 = 1;


 *************************************************************************
 * Reorder the codes for H03029.  H03029 is in reverse order.
 *************************************************************************;
 IF H03029 = 1      THEN R03029 = 4;
 ELSE IF H03029 = 2 THEN R03029 = 3;
 ELSE IF H03029 = 3 THEN R03029 = 2;
 ELSE IF H03029 = 4 THEN R03029 = 1;
 ELSE IF H03029 < 0 THEN R03029 = .;
    IF R03029 > 1   THEN R03029 = R03029 - 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 H03018 = 1      THEN R03018 = 1;
 ELSE IF H03018 = 2 THEN R03018 = 1;
 ELSE IF H03018 = 3 THEN R03018 = 2;
 ELSE IF H03018 = 4 THEN R03018 = 3;
 ELSE IF H03018 < 0 THEN R03018 = .;

 IF H03020 = 1      THEN R03020 = 1;
 ELSE IF H03020 = 2 THEN R03020 = 1;
 ELSE IF H03020 = 3 THEN R03020 = 2;
 ELSE IF H03020 = 4 THEN R03020 = 3;
 ELSE IF H03020 < 0 THEN R03020 = .;

 IF H03023 = 1      THEN R03023 = 1;
 ELSE IF H03023 = 2 THEN R03023 = 1;
 ELSE IF H03023 = 3 THEN R03023 = 2;
 ELSE IF H03023 = 4 THEN R03023 = 3;
 ELSE IF H03023 < 0 THEN R03023 = .;

 IF H03030 = 1      THEN R03030 = 1;
 ELSE IF H03030 = 2 THEN R03030 = 1;
 ELSE IF H03030 = 3 THEN R03030 = 2;
 ELSE IF H03030 = 4 THEN R03030 = 3;
 ELSE IF H03030 < 0 THEN R03030 = .;

 IF H03031 = 1      THEN R03031 = 1;
 ELSE IF H03031 = 2 THEN R03031 = 1;
 ELSE IF H03031 = 3 THEN R03031 = 2;
 ELSE IF H03031 = 4 THEN R03031 = 3;
```

```
       ELSE IF H03031 < 0 THEN R03031 = .;

       IF H03032 = 1       THEN R03032 = 1;
       ELSE IF H03032 = 2 THEN R03032 = 1;
       ELSE IF H03032 = 3 THEN R03032 = 2;
       ELSE IF H03032 = 4 THEN R03032 = 3;
       ELSE IF H03032 < 0 THEN R03032 = .;

       IF H03033 = 1       THEN R03033 = 1;
       ELSE IF H03033 = 2 THEN R03033 = 1;
       ELSE IF H03033 = 3 THEN R03033 = 2;
       ELSE IF H03033 = 4 THEN R03033 = 3;
       ELSE IF H03033 < 0 THEN R03033 = .;

       IF H03034 = 1       THEN R03034 = 1;
       ELSE IF H03034 = 2 THEN R03034 = 1;
       ELSE IF H03034 = 3 THEN R03034 = 2;
       ELSE IF H03034 = 4 THEN R03034 = 3;
       ELSE IF H03034 < 0 THEN R03034 = .;

       IF H03035 = 1       THEN R03035 = 1;
       ELSE IF H03035 = 2 THEN R03035 = 1;
       ELSE IF H03035 = 3 THEN R03035 = 2;
       ELSE IF H03035 = 4 THEN R03035 = 3;
       ELSE IF H03035 < 0 THEN R03035 = .;

       IF H03040 = 1       THEN R03040 = 1;
       ELSE IF H03040 = 2 THEN R03040 = 1;
       ELSE IF H03040 = 3 THEN R03040 = 2;
       ELSE IF H03040 = 4 THEN R03040 = 3;
       ELSE IF H03040 < 0 THEN R03040 = .;

       IF H03041 = 1       THEN R03041 = 1;
       ELSE IF H03041 = 2 THEN R03041 = 1;
       ELSE IF H03041 = 3 THEN R03041 = 2;
       ELSE IF H03041 = 4 THEN R03041 = 3;
       ELSE IF H03041 < 0 THEN R03041 = .;

       /*MJS 01/14/04 Deleted block of code for s02s01=1*/

       **************************************************************************
       * Recode variables to one missing condition ".".
       * This also renames all the "H0xxxx" to "R0xxxx".
       **************************************************************************;
       R03009 = H03009;  IF R03009 < 0 THEN R03009 = .;
       R03011 = H03011;  IF R03011 < 0 THEN R03011 = .;
       R03013 = H03013;  IF R03013 < 0 THEN R03013 = .;
       R03015 = H03015;  IF R03015 < 0 THEN R03015 = .;
       R03027 = H03027;  IF R03027 < 0 THEN R03027 = .;
       R03028 = H03028;  IF R03028 < 0 THEN R03028 = .;
       R03036 = H03036;  IF R03036 < 0 THEN R03036 = .;
       R03044 = H03044;  IF R03044 < 0 THEN R03044 = .;
       R03046 = H03046;  IF R03046 < 0 THEN R03046 = .;
       R03051 = H03051;  IF R03051 < 0 THEN R03051 = .;
       R03052 = H03052;  IF R03052 < 0 THEN R03052 = .;
       R03072 = H03072;  IF R03072 < 0 THEN R03072 = .;

       **************************************************************************
       * Create region dummies.
       **************************************************************************;
       IF XREGION NE . THEN DO;
          ARRAY REGDUMS (15) REG01 REG02 REG03 REG04 REG05 REG06 REG08
                             REG09 REG10 REG11 REG12 REG13 REG14 REG15 REG16;
          DO I = 1 TO 15;
             REGDUMS(I)=0;
          END;
          IF XREGION= 7  THEN XREGION = 8;  * Recode Region 7 into Region 8;
          IF        XREGION= 1  THEN REG01  =1;
          ELSE IF   XREGION= 2  THEN REG02  =1;
          ELSE IF   XREGION= 3  THEN REG03  =1;
          ELSE IF   XREGION= 4  THEN REG04  =1;
          ELSE IF   XREGION= 5  THEN REG05  =1;
          ELSE IF   XREGION= 6  THEN REG06  =1;
          ELSE IF   XREGION= 8  THEN REG08  =1;
```

```
       ELSE IF  XREGION= 9  THEN REG09  =1;
       ELSE IF  XREGION=10  THEN REG10  =1;
       ELSE IF  XREGION=11  THEN REG11  =1;
       ELSE IF  XREGION=12  THEN REG12  =1;
       ELSE IF  XREGION=13  THEN REG13  =1;
       ELSE IF  XREGION=14  THEN REG14  =1;
       ELSE IF  XREGION=15  THEN REG15  =1;
       ELSE IF  XREGION=16  THEN REG16  =1;
     END;
     *------------------------;
     * Create catchment dummies;
     *------------------------;
     %INCLUDE '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 "..\..\..\..\..\8687\PROGRAMS\REPORTCARDS\CONVERT.SAS";

%CONT1(DSN=ENTIRE, NUM=7,  Y=R03009 R03013 R03027 R03028
                              R03044 R03046 R03051);
%CONT2(DSN=ENTIRE, NUM=4,  Y=R03036 R03052 R03011 R03015);
%CONT3(DSN=ENTIRE, NUM=12, Y=R03018 R03020 R03023 R03029
                              R03032 R03033 R03034 R03035
                              R03030 R03031 R03040 R03041);

****************************************************************************
* 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
       DAGEQY
       FIELDAGE
       XREGION
       CONUS
       ENBGSMPL
       XSEXA
       ADJ_CELL
       XINS_COV
       XENR_PCM
       WRWT
       ;
RUN;

****************************************************************************
* Print some of the recoded records.
****************************************************************************;
PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of AGE and SEX dummies';
   VAR DAGEQY
       FIELDAGE
       AGE1824
       AGE2534
       AGE3544
```

```
             AGE4554
             AGE5564
             AGE6574
             AGE75UP

             XSEXA
             FEMALE

             ENBGSMPL
             XINS_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 H03009  R03009
            H03011  R03011
            H03013  R03013
            H03015  R03015
            H03018  R03018
            H03020  R03020
            H03023  R03023
            H03027  R03027
            H03028  R03028
            H03029  R03029
            H03030  R03030
            H03031  R03031
            H03032  R03032
            H03033  R03033
          ;
     RUN;


     PROC PRINT DATA=ENTIRE(OBS=60);
        TITLE2 'Print of recoded question variables';
        VAR H03034  R03034
            H03035  R03035
            H03036  R03036
            H03040  R03040
            H03041  R03041
            H03044  R03044
            H03046  R03046
            H03051  R03051
            H03052  R03052
            H03072  R03072
          ;
     RUN;

     PROC PRINT DATA=ENTIRE(OBS=60);
        TITLE2 'Print of recoded REGION variables';
        VAR XREGION
            REG01
            REG02
            REG03
            REG04
            REG05
            REG06
            REG08
            REG09
            REG10
            REG11
            REG12
            REG13
            REG14
            REG15
```

```
        ;
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
        H03009
        H03011
        H03013
        H03015
        H03018
        H03020
        H03023
        H03027
        H03028
        H03029
        H03030
        H03031
        H03032
        H03033
        H03034
        H03035
        H03036
        H03040
        H03041
        H03044
        H03046
        H03051
        H03052
        H03072
         ;
      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;
```

```
*****************************************************************************
*
* PROGRAM: STEP1Q.INC
* TASK:    DOD HEALTH CARE SURVEY ANALYSIS (8860-300)
* PURPOSE: CREATE DETAILED CACSMPL FOR ANNUAL REPORT CARDS
*
* WRITTEN: 01/20/2004 BY KEITH RATHBUN
*
* INPUT:   1) FRAMEA.SD2 - Quarterly Adult Frame files
*
* OUTPUTS: 1) Temporary SAS dataset to be used by STEP1Q.SAS
*          2) TABLE_C.SD2 - Catchment area table
*
* NOTES:   1) CACSMPL is de-collapsed here.  The same variable name is used
*             to minimize programming changes.
*
*****************************************************************************
* Define options and global parameters.
*****************************************************************************;
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER NOFMTERR;

%LET YEAR1 = 2003; * Year to process;
%LET YEAR2 = 03;   * Year to process;

%MACRO PROCESS;
    *****************************************************************************
    * Extract necessary CACSMPL-related information from the frame files.
    *****************************************************************************;
    %DO QTR = 1 %TO 4; * Do for each quarter;
        LIBNAME IN1T V612 "..\..\..\..\Q&QTR._&YEAR1\data\afinal";   * Location of frame file;
        LIBNAME IN2T V612 "..\..\..\..\Q&QTR._&YEAR1.t\data\afinal"; * Location HCSDB file;

        PROC SORT DATA=IN1T.FRAMEA(KEEP=MPRID D_PAR D_FAC D_HEALTH) OUT=FRAME&QTR; BY MPRID; RUN;
        PROC SORT DATA=IN1T.EXTRACT(KEEP=MPRID PCM ENRID DCATCH) OUT=EXTRACT&QTR; BY MPRID; RUN;

        %IF &QTR = 4 %THEN %DO;
            PROC SORT DATA=IN1T.HCS&YEAR2.&QTR._1(KEEP=MPRID XREGION) OUT=HCSDB&QTR; BY MPRID; RUN;
        %END;
        %ELSE %DO;
            PROC SORT DATA=IN2T.HCS&YEAR2.&QTR._1(KEEP=MPRID XREGION) OUT=HCSDB&QTR; BY MPRID; RUN;
        %END;
        DATA HCSDB&QTR;
            MERGE FRAME&QTR(IN=IN1)  EXTRACT&QTR(IN=IN2) HCSDB&QTR(IN=IN3);
            BY MPRID;
            IF IN3;  *Keep only respondents;
        RUN;
    %END;
%MEND;

%PROCESS;

DATA TEMP(KEEP=MPRID CACSMPL enrid);
    SET HCSDB1 HCSDB2 HCSDB3 HCSDB4;
    BY MPRID;
    LENGTH CACSMPL 8;
    if pcm = 'MTF' then do;
        if ('1976' <= enrid <= '1980') or ('6301' <= enrid <= '6323') or
           ('6991' <= enrid <= '6994') or ('6501' <= enrid <= '6512') or
           ('7166' <= enrid <= '7195')
           then CACSMPL=dcatch; *Administrative assignment--1976-1980 added q4 2002*;
        else if ('3031' <= enrid <= '3057')
           then CACSMPL = dcatch; ***On the Ship***;
        else if enrid in ('0002', '5208', '0250', '0449', '0622') /* '0626' added q2 2003*/
           then CACSMPL = dcatch; ***Inactive***;
        ****************************************************************;
        else if ('0190' <= enrid <='0199') then CACSMPL = dcatch;**BYDON;
        ****************************************************************;
        else CACSMPL = enrid;
    end;
    else CACSMPL=dcatch;
    if pcm = 'MTF' then do;
```

```
      if NOT (('1976' <= enrid <= '1980') or ('6301' <= enrid <= '6323') or
          ('6991' <= enrid <= '6994')  or ('6501' <= enrid <= '6512') or
          ('7166' <= enrid <= '7195')  or ('3031' <= enrid <= '3057') or
          enrid in ('0002', '5208', '0250', '0449', '0626')) then;
          CACSMPL = d_par;
      end;

   LENGTH TMPHVAR 8;
   TMPHVAR = D_HEALTH;
   if d_fac = 'NONCAT' then CACSMPL = 9900 + TMPHVAR; *Assign out of catchment;

   *** If the facility is unknown then set com_geo indicates unknown facility ***;
   *** '0999' added 03/15 to account for id 6992;
   if CACSMPL in (9900, 999, 998, .) then CACSMPL = 9999;
RUN;

PROC SUMMARY NWAY;
   CLASS CACSMPL ENRID;
   OUTPUT OUT=OUT.TABLE_C;
RUN;
```

```
/****************************************************************************
/*  Project:  DoD - 1999 Adult Report Cards
/*  Program:  STEP2.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: 1) December 2001 By Mike Scott: Updated parameters for 2000 survey,
/*               added V612 to support SUDAAN with Version 8 SAS, changed STRATUM to
/*               TMP_CELL, and changed INTERCEP to INTERCEPT to support Version 8 SAS.
/*            2) January 2003 By Keith Rathbun: Added output files for SKELCAT and
/*               SKELREG (No longer permanent datasets... only needed by this program).
/*            3) January 2004 By Mike Scott: Updated for 2003 survey.
/*
/* SUBGROUPS
/* _____
/*    Seven subgroups           Definitions                  Reg or Catch  Macro
/* _____
/* 1. Prime enrollees           XINS_COV IN(1,2,6) AND H03007>=4  Catchment     SCORE1
/* 2. Enrollees w/mil PCM        XENR_PCM IN(1,2,6) AND H03007>=4  Catchment     SCORE1
/* 3. Enrollees w/civ PCM        XENR_PCM = 3      AND H03007>=4  Region        SCORE2
/* 4. Nonenrollees               XINS_COV IN(3,4,5)              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 COMPRESS=YES;
OPTIONS NOCENTER NOFMTERR LS=132 PS=78 SOURCE STIMER; *NOOVP MPRINT MLOGIC SYMBOLGEN;
LIBNAME   IN1  V612     "DATA";
LIBNAME   IN2  V612     "..\..\..\DATA";
LIBNAME   OUT  V612     "DATA";
LIBNAME   OUT2 V612     "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 =  23;


* 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     = WRWT;
%LET IND_VAR1 = R03072;
%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 = R03009;
%LET DEPVAR2 = R03013;
%LET DEPVAR3 = R03027;
%LET DEPVAR4 = R03028;


****************************************************************************
* GETTING NEEDED CARE QUICKLY.
****************************************************************************;
%LET DEPVAR5 = R03018;
%LET DEPVAR6 = R03020;
%LET DEPVAR7 = R03023;
%LET DEPVAR8 = R03029;


****************************************************************************
* HOW WELL DOCTORS COMMUNICATE.
****************************************************************************;
%LET DEPVAR9  = R03032;
%LET DEPVAR10 = R03033;
%LET DEPVAR11 = R03034;
%LET DEPVAR12 = R03035;


****************************************************************************
* COURTEOUS AND HELPFUL OFFICE STAFF.
****************************************************************************;
%LET DEPVAR13 = R03030;
%LET DEPVAR14 = R03031;


****************************************************************************
* CUSTOMER SERVICE.
****************************************************************************;
%LET DEPVAR15 = R03044;
%LET DEPVAR16 = R03046;
%LET DEPVAR17 = R03051;


****************************************************************************
* CLAIMS PROCESSING.
****************************************************************************;
%LET DEPVAR18 = R03040;
%LET DEPVAR19 = R03041;


****************************************************************************
* RATING ALL HEALTH CARE: 0 - 10.
****************************************************************************;
%LET DEPVAR20 = R03036;


****************************************************************************
* RATING OF HEALTH PLAN: 0 - 10.
****************************************************************************;
%LET DEPVAR21 = R03052;


****************************************************************************
* RATING OF PERSONAL DR: 0 - 10.
****************************************************************************;
%LET DEPVAR22 = R03011;


****************************************************************************
* SPECIALITY CARE: 0 - 10.
****************************************************************************;
%LET DEPVAR23 = R03015;
```

```
proc freq data=in1.group8;     /*MJS 01/23/04 Changed data set*/
   tables cacsmpl /missing list out=skelcat(keep=cacsmpl);
run;
data skelcat;
   set skelcat;
   if cacsmpl = " " then delete;
run;

proc freq data=in2.hcs03a_1;   /*MJS 01/23/04 Changed data set*/
   tables xregion /missing list out=skelreg(keep=xregion);
run;

data skelreg;
   set skelreg;
   if xregion = . then delete;
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 RMRGFILE = OUT.R_&&DEPVAR&IVAR;
%IF "&IGRP" = "1" %THEN %LET RMRGFILE = SKELREG;
%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 'REGRSCAT.INC';
     OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
                     PRED&IGRP RESID&IGRP CACSMPL XREGION &&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 XREGION 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);
%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 'RISKARRY.INC';
     %INCLUDE '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 '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    XREGION ;  * 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 XREGION 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;


 * Calculate region level adjusted scores from the;
 * catchment level adjusted scores;
 * this proc calculates the regional avg of the;
 * weighted catchment adjusted scores;
 PROC MEANS DATA=COEFFCAC NWAY NOPRINT;
    WEIGHT CATWGT;
    CLASS  XREGION;
    VAR    NEWADJST;
    OUTPUT OUT=REGFILE1 (DROP = _TYPE_ _FREQ_) MEAN=ADJ&IGRP;
 RUN;


* create a region level weight;
PROC MEANS DATA=GROUP&IGRP NWAY NOPRINT ;
  CLASS XREGION;
  VAR   &WGT;
  OUTPUT OUT=REG_WGTS (DROP = _TYPE_ _FREQ_) N=REGCNT&IGRP SUM=REGWGT&IGRP;
RUN;


%IF &DEBUGFLG > 0  %THEN %DO;
     PROC PRINT DATA=REGFILE1(OBS=70);
          TITLE2 'REGFILE1: Region level Sum of WGTS from Catchment sums';
          TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
     RUN;

     PROC PRINT DATA = REG_WGTS(OBS=70);
          TITLE2 'REG_WGTS: Region level Sum of WGTS from Group&igrp sums';
          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 XREGION)
           REGFILE1(KEEP = ADJ&IGRP XREGION);
     BY XREGION;
     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;

PROC PRINT DATA=OUT.R_&&DEPVAR&IVAR;
     TITLE2 "Print of variables in R_&&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 *************************************;


* 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 'REGRSREG.INC';
     OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
                     PRED&IGRP RESID&IGRP CACSMPL XREGION &&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 XREGION 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);
%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;
    IF _N_ = 1 THEN SET BETAS(DROP = _TYPE_);
    %INCLUDE 'RISKARRY.INC';
    %INCLUDE '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=XREGION NEWADJST);
    SET ADJUST;
    %INCLUDE 'REGARRAY.INC';
    LENGTH NAME $8;
    DO I=1 TO DIM(REGRHS);
        CALL VNAME(REGRHS(I),NAME);
        XREGION=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 XREGION;
  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=XREGION REGCNT REGWGT);
      BY XREGION;
      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  XREGION;
  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;
DATA OUT.R_&&DEPVAR&IVAR;
    MERGE OUT.R_&&DEPVAR&IVAR(IN=INS)
          R&IGRP&&DEPVAR&IVAR     /*KRR - removed perm dataset ref to OUT2 */
          coeffreg(rename=(newadjst=adj&igrp));
    BY XREGION;
    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;


%IF &IGRP = 6 OR &IGRP = 7 %THEN %DO;
   * For active duty dependents(6) and retirees and dependents (7) calculate;
   * catchment level residuals from the enhanced HCSDB file;
   * here we sum the weights to the catchment level as well;
    PROC MEANS DATA = OUT2.H&IGRP&&DEPVAR&IVAR NOPRINT NWAY;
         ID XREGION;
         CLASS CACSMPL;
         weight &wgt;
         VAR RESID&IGRP;
         OUTPUT OUT=MEANRES MEAN= n=catcnt sumwgt=sumwgt;

    RUN;

    %IF &DEBUGFLG > 0  %THEN %DO;
         PROC PRINT DATA=MEANRES;
```

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```
                  TITLE2 "Print of MEANRES";
                  TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
            RUN;
       %END;

       PROC SORT DATA=MEANRES;
            BY XREGION;
       RUN;


  * Merge the regional adjusted scores with the catchment;
  * level residual means.  Calculate the catchment level;
  * adjusted scores by adding the catchment mean residual;
  * to the region level adjusted score. Set the catchment;
  * level weight to 0.0 if the catchment adjusted score is;
  * missing;
       DATA MERGE&IGRP(KEEP=CACSMPL ADJ&IGRP CATCNT&IGRP CATWGT&IGRP);
            MERGE COEFFREG
                  MEANRES(RENAME=(CATCNT=CATCNT&IGRP SUMWGT=CATWGT&IGRP));
             BY XREGION;
             ADJ&IGRP = RESID&IGRP+NEWADJST;
             IF ADJ&IGRP=. THEN CATWGT&IGRP=.;
       RUN;

       PROC SORT DATA=MERGE&IGRP;
            BY CACSMPL;
       RUN;


* merge the previous groups catchment results (if any);
* with the catchment level std and the current catchment;
* level results calculated above;
       DATA OUT.C_&&DEPVAR&IVAR;
             MERGE OUT.C_&&DEPVAR&IVAR(IN=INS)
                   C&IGRP&&DEPVAR&IVAR
                   MERGE&IGRP;
             BY CACSMPL;
             DEPENDNT = "&&DEPVAR&IVAR";
             IF INS;
       RUN;


       PROC PRINT DATA=OUT.C_&&DEPVAR&IVAR;
            TITLE2 "Print of variables in C_&&DEPVAR&IVAR";
            TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
       RUN;

  %END;

  %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(16)   8 REGCNT01 - REGCNT16;
          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 XREGION >= 1 AND XREGION <=16  THEN DO;
             REGCNT(XREGION) = REGCNT(XREGION) + 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 16;
      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 '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 cacsmpl 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 '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;
DO I = 1 TO 16;   * 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 '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 'RISKARRY.INC';
PUT @10  "ARRAY COEFFS(*) $8";
DO I = 1 TO CNT2;
   PUT @12 AGENAMX(I);
END;
```

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```
        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 '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 '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 '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 'REGARRAY.INC';
        PUT @10  "ARRAY REGRHS(*) $8";
        DO I = 1 TO 16;
            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 'RISKVARS.INC';
      %INCLUDE 'MEANFILE.INC';
```

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```
     RUN;

DATA GROUP&IGRP;
     SET GROUP&IGRP;
     IF _N_ = 1 THEN SET MEANFILE;
     %INCLUDE 'RISKARRY.INC';
     %INCLUDE 'RISKMEAN.INC';
     DO I = 1 TO DIM(COEFFS);
        IF COEFFS(I) = . THEN DO;
           COEFFS(I) = MEANS(I);
        END;
     END;
RUN;
/* PROC MEANS DATA=in1.group8;
*    where &&depvar&ivar ne .;
     WEIGHT &WGT;
   %INCLUDE 'RISKVARS.INC';
    %INCLUDE '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;




 %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 XREGION > 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 XREGION;
   SUBGROUP XREGION;
```

```
        LEVELS 16;
        OUTPUT  SEMEAN
              / TABLECELL=DEFAULT
                FILENAME=RS&DEP;
        RUN;

        DATA R&IGRP&&DEPVAR&IVAR;
             SET RS&DEP;
             KEEP XREGION 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
           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
                 %SCORE1;
              %ELSE
                 %SCORE2;
           %END;
        %END;

%MEND;

%MAINLOOP(&MIN_VAR,&MAX_VAR,&MIN_GRP,&MAX_GRP);
```

```
*****************************************************************************
* 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) 02/27/2001 By Keith Rathbun, Small changes to input DSNs to
*              accommodate the move of ALLSCORE.SAS functionality into the
*              STEP2Q.SAS program.
*           2) 01/08/2002 By Daniele Beahm, Changed versions in libname statements
*              so program can be run with SAS v8 and still produce SAS v612 datasets.
*           3) 04/10/2002 By Mike Scott, Updated variable names for 2002
*              survey.
*           4) 02/04/2004 By Mike Scott, Updated for the 2003 Annual Report.
*****************************************************************************;
OPTIONS NOCENTER NOFMTERR LS=132 PS=78 SOURCE SOURCE2 MLOGIC MPRINT NOOVP COMPRESS=YES;
libname in  v612  "data";
libname in2 v612 "data\adulthatfiles";
libname out v612 "data";

 %MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,QCOUNT=);

  DATA _NULL_;
   %IF "&TYPE" = "R" %THEN %DO;
       CALL SYMPUT ('BYVAR','XREGION');
   %END; %ELSE
   %IF "&TYPE" = "C" %THEN %DO;
       CALL SYMPUT ('BYVAR','CACSMPL');
   %END;

 ****************************************;
 *    Create a Composite Score         ;
 ****************************************;
 DATA _NULL_;
     FILE '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 'FILES.INC';
     DEPENDNT = "&TYPE.COMPOS&COMPOS";
 RUN;

 PROC SORT DATA=COMPOS&COMPOS;
     BY &BYVAR;
 RUN;

 PROC PRINT DATA=COMPOS&COMPOS(OBS=60);
     TITLE "Print of COMPOS&COMPOS after sort";
 RUN;

 DATA COMPOS&COMPOS;
     SET COMPOS&COMPOS;
     BY &BYVAR;
   %IF "&TYPE" = "R" %THEN %DO;
       ARRAY N(*) REGCNT1 - REGCNT8;
       ARRAY W(*) REGWGT1 - REGWGT8;
       ARRAY TN(*) TOTCNT1 - TOTCNT8;
       ARRAY TW(*) TOTWGT1 - TOTWGT8;
   %END; %ELSE
   %IF "&TYPE" = "C" %THEN %DO;
       ARRAY N(*) CATCNT1 - CATCNT8;
       ARRAY W(*) CATWGT1 - CATWGT8;
```

```
       ARRAY TN(*) TOTCNT1 - TOTCNT8;
       ARRAY TW(*) TOTWGT1 - TOTWGT8;
    %END;
       ARRAY ADJ(*)    ADJ1 - ADJ8;
       ARRAY TOTADJ(*) TOTADJ1 - TOTADJ8;
       ARRAY AVGADJ(*) AVJADJ1 - AVJADJ8;
       RETAIN TOTADJ TN TW;
       RETAIN AVGADJ;

       IF FIRST.&BYVAR THEN DO;
          DO I = 1 TO DIM(TOTADJ);
             TOTADJ(I) = 0; TN(I)=0; TW(I)=0;
          END;
       END; DROP I;

       PUT ' ';
       PUT ' --- STARTING LOOP1: ' &BYVAR=;
       DO I = 1 TO DIM(TOTADJ);
          PUT I= ADJ(I)=;
          IF ADJ(I) NE . THEN DO;
             TOTADJ(I) = TOTADJ(I) + ADJ(I);
             TN(I)=TN(I)+N(I);
             TW(I)=TW(I)+W(I);
          END;
          PUT I= ADJ(I)= TOTADJ(I)=;
       END;


       PUT ' ';
       PUT ' --- STARTING LOOP2: ' &BYVAR=;
       IF LAST.&BYVAR THEN DO;
          DO I = 1 TO DIM(TOTADJ);
             PUT I= ADJ(I)= TOTADJ(I)= AVGADJ(I)=;
             AVGADJ(I) = TOTADJ(I)/&QCOUNT;
             adj(i)=avgadj(i);
             N(I)=TN(I)/&QCOUNT;
             W(I)=TW(I)/&QCOUNT;
          END;
          OUTPUT;
       END;
    END;

 RUN;

%do i=1 %to 8;
/* Collect Standard Errors and residuals from variables in composite */
%if &type=R|(&i=1|&i=2|&i>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;
%if &i~=8 %then %do;
set in2.h&i.&var1(rename=(resid&i=r_&var1));
%end;
%else %do;
set in2.h5&var1(rename=(resid5=r_&var1)) in2.h6&var1(rename=(resid6=r_&var1))
in2.h7&var1(rename=(resid7=r_&var1));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var2(rename=(resid&i=r_&var2));
%end;
%else %do;
```

```
set in2.h5&var2(rename=(resid5=r_&var2)) in2.h6&var2(rename=(resid6=r_&var2))
in2.h7&var2(rename=(resid7=r_&var2));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var3(rename=(resid&i=r_&var3));
%end;
%else %do;
set in2.h5&var3(rename=(resid5=r_&var3)) in2.h6&var3(rename=(resid6=r_&var3))
in2.h7&var3(rename=(resid7=r_&var3));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var4(rename=(resid&i=r_&var4));
%end;
%else %do;
set in2.h5&var4(rename=(resid5=r_&var4)) in2.h6&var4(rename=(resid6=r_&var4))
in2.h7&var4(rename=(resid7=r_&var4));
%end;

%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;
proc corr  outp=outf noprint;
by &byvar;
var &n;
weight wrwt;
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 _name_="R_&&var&j" then
sde=sum(sde,r_val(i)*s_&&var&j*s_val(i));
%end;
end;
data sefin&compos._&i;
set final; by &byvar;
if first.&byvar then tv=0;
 tv+sde;
if last.&byvar then do;
sde&i=(tv**.5)/&qcount;
output;
end;
%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=R03009,var2=R03013,var3=R03027,var4=R03028,qcount=4);
%COMPOSIT (type=R,compos=2,var1=R03018,var2=R03020,var3=R03023,var4=R03029,qcount=4);
%COMPOSIT (type=R,compos=3,var1=R03032,var2=R03033,var3=R03034,var4=R03035,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R03030,var2=R03031,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R03044,var2=R03046,var3=R03051,qcount=3);
%COMPOSIT (type=R,compos=6,var1=R03040,var2=R03041,qcount=2);

%COMPOSIT (type=C,compos=1,var1=R03009,var2=R03013,var3=R03027,var4=R03028,qcount=4);
%COMPOSIT (type=C,compos=2,var1=R03018,var2=R03020,var3=R03023,var4=R03029,qcount=4);
%COMPOSIT (type=C,compos=3,var1=R03032,var2=R03033,var3=R03034,var4=R03035,qcount=4);
%COMPOSIT (type=C,compos=4,var1=R03030,var2=R03031,qcount=2);
%COMPOSIT (type=C,compos=5,var1=R03044,var2=R03046,var3=R03051,qcount=3);
%COMPOSIT (type=C,compos=6,var1=R03040,var2=R03041,qcount=2);
```

11.A. LOADWEB\LOADCAHP.SAS - Convert CAHPS Scores into WEB layout - Annual.

```
*****************************************************************************
*
* PROGRAM:  LOADCAHP.SAS
* TASK:     2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:  Convert the CAHPS Scores Database into the WEB layout
*
* WRITTEN:  06/01/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 01/28/2002 BY KEITH RATHBUN, Updated to support the 2000 survey.
*           2) 01/07/2003 BY KEITH RATHBUN, Updated to support the 2002 survey.
*           3) 02/06/2004 BY MIKE SCOTT, Updated for the 2003 Annual Report.
*
* INPUTS:   1) CAHPS Individual and Composite data sets with adjusted scores
*
* OUTPUT:   1) LOADCAHP.SD2 - Combined CAHPS Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*              and composite data sets
*           2) CATREP.INC - Catchment definitions for WEB
*
* 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.SD2) will be run through the
*    MAKEHTML.SAS program to generate the WEB pages.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN  V612 "..\REPORTCARDS\CAHPS_ADULT2003\DATA";   /*MJS 02/06/04*/
LIBNAME OUT V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER NOFMTERR;

*****************************************************************************
* Load Format definitions for CAHPS Individual and composite data sets.
*****************************************************************************;
%INCLUDE "LOADCAHQ.INC";
%INCLUDE "CATREP.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 = "2003";   /*MJS 02/04/04*/

*****************************************************************************
* 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 H99004=4
* 2. Enrollees w/mil PCM       XENR_PCM IN (1,2,6) AND H99004=4
* 3. Enrollees w/civ PCM       XENR_PCM = 3   AND H99004=4
* 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         All beneficiaries
*
****************************************************************************;
DATA &QUESTION;
   SET IN.&QUESTION;

   LENGTH MAJGRP  $30;
   LENGTH REGION  $15;
   LENGTH REGCAT  $26;
   LENGTH BENTYPE $50;
   LENGTH BENEFIT $34;

   ********************************************************************
   * Assign Region
   *******************************************************************;
   REGION  = PUT(XREGION,REGIONF.);
   ********************************************************************
   * Assign benefit and benefit type
   *******************************************************************;
   IF "&TYPE" = "INDIVIDUAL" THEN DO;
      IF DEPENDNT IN("R03036","R03052","R03011","R03015") THEN   /*MJS 02/04/04*/
         BENTYPE = PUT(&YEAR,$BENTYPF.);
      ELSE
         BENTYPE = PUT(DEPENDNT,$BENTYPF.);
      BENEFIT = PUT(DEPENDNT,$BENEF.);
   END;
   ELSE IF "&TYPE" = "COMPOSITE" THEN DO;
      BENTYPE = PUT(&YEAR,$BENTYPF.);
      BENEFIT = PUT(DEPENDNT,$BENEF.);
   END;
   ELSE PUT "ERROR: Invalid TYPE = &TYPE";

   ********************************************************************
   * For now, Initialize Significance test to zero.
   *******************************************************************;
   SIG = 0;
   ********************************************************************
   * Assign Region/Catchment Area
   *******************************************************************;
   IF "&REGCAT" = "Region" THEN
      REGCAT = PUT(XREGION,REGIONF.);
   ELSE IF "&REGCAT" = "Catchment" THEN
      REGCAT = PUT(CACSMPL,CATREP.);
   ELSE PUT "ERROR: Invalid REGCAT = &REGCAT";

   ********************************************************************
   * 1 = Prime Enrollees
   *******************************************************************;
   MAJGRP = PUT(1,MAJGRPF.);
   SCORE = ADJ1;
```

```
      SEMEAN = SEMEAN1;
      N_OBS = &PREFIX.CNT1;
      N_WGT = &PREFIX.WGT1;
      OUTPUT;


      ***********************************************************************
      * 2 = Enrollees with military PCM
      **********************************************************************;
      MAJGRP = PUT(2,MAJGRPF.);
      SCORE = ADJ2;
      SEMEAN = SEMEAN2;
      N_OBS = &PREFIX.CNT2;
      N_WGT = &PREFIX.WGT2;
      OUTPUT;


      ***********************************************************************
      * 3 = Enrollees with civilian PCM
      **********************************************************************;
      IF "&REGCAT" = "Region" THEN DO;
         MAJGRP = PUT(3,MAJGRPF.);
         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,MAJGRPF.);
         SCORE = ADJ4;
         SEMEAN = SEMEAN4;
         N_OBS = &PREFIX.CNT4;
         N_WGT = &PREFIX.WGT4;
         OUTPUT;
      END;


      ***********************************************************************
      * 5 = Active duty
      **********************************************************************;
      MAJGRP = PUT(5,MAJGRPF.);
      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,MAJGRPF.);
         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
     SCORE
     SEMEAN
     N_OBS
     N_WGT
     SIG
   ;
RUN;

%MEND;
                                               /*MJS 02/04/04*/
***************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
***************************************************************************;
%PROCESS(QUESTION=RCOMPOS1,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R03009,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03013,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03027,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03028,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS1,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03009,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03013,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03027,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03028,TYPE=INDIVIDUAL,REGCAT=Catchment);


***************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
***************************************************************************;
%PROCESS(QUESTION=RCOMPOS2,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R03018,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03020,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03023,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03029,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS2,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03018,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03020,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03023,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03029,TYPE=INDIVIDUAL,REGCAT=Catchment);


***************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
***************************************************************************;
%PROCESS(QUESTION=RCOMPOS3,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R03032,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03033,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03034,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03035,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS3,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03032,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03033,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03034,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03035,TYPE=INDIVIDUAL,REGCAT=Catchment);


***************************************************************************
* COMPOSITE # 4.
```

```
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS4,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R03030,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03031,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS4,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03030,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03031,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS5,TYPE=COMPOSITE, REGCAT=Region );
%PROCESS(QUESTION=R_R03044,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03046,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03051,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS5,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03044,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03046,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03051,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS6,TYPE=COMPOSITE, REGCAT=Region);
%PROCESS(QUESTION=R_R03040,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=R_R03041,TYPE=INDIVIDUAL,REGCAT=Region);

%PROCESS(QUESTION=CCOMPOS6,TYPE=COMPOSITE, REGCAT=Catchment);
%PROCESS(QUESTION=C_R03040,TYPE=INDIVIDUAL,REGCAT=Catchment);
%PROCESS(QUESTION=C_R03041,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03036,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R03036,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03052,TYPE=INDIVIDUAL,REGCAT=Region)
%PROCESS(QUESTION=C_R03052,TYPE=INDIVIDUAL,REGCAT=Catchment)


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03011,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R03011,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03015,TYPE=INDIVIDUAL,REGCAT=Region);
%PROCESS(QUESTION=C_R03015,TYPE=INDIVIDUAL,REGCAT=Catchment);


*****************************************************************************
*****************************************************************************
* STACK up all of the files into one final output dataset.
*****************************************************************************
*****************************************************************************;
DATA OUT.LOADCAHP;
    SET R_R03009 C_R03009
        R_R03013 C_R03013
        R_R03027 C_R03027
        R_R03028 C_R03028
```

```
        R_R03018 C_R03018
        R_R03020 C_R03020
        R_R03023 C_R03023
        R_R03029 C_R03029
        R_R03032 C_R03032
        R_R03033 C_R03033
        R_R03034 C_R03034
        R_R03035 C_R03035
        R_R03030 C_R03030
        R_R03031 C_R03031
        R_R03044 C_R03044
        R_R03046 C_R03046
        R_R03051 C_R03051
        R_R03040 C_R03040
        R_R03041 C_R03041
        R_R03036 C_R03036
        R_R03052 C_R03052
        R_R03011 C_R03011
        R_R03015 C_R03015
        RCOMPOS1 CCOMPOS1
        RCOMPOS2 CCOMPOS2
        RCOMPOS3 CCOMPOS3
        RCOMPOS4 CCOMPOS4
        RCOMPOS5 CCOMPOS5
        RCOMPOS6 CCOMPOS6
      ;
      IF SCORE = . THEN DELETE;
RUN;

TITLE1 "2002 DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: LOADCAHP.SAS By Keith Rathbun";
TITLE3 "Program Inputs: CAHPS Individual and Composite data sets with adjusted scores";
TITLE4 "Program Outputs: LOADCAHP.SD2 - Combined CAHPS Scores Database in WEB layout";

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

11.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 (8860-410)
* 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 BENTYPF = 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.
*
* 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/Unknown"
   ;
   VALUE REGIONF
      0 = "CONUS MHS "
      1 = "Region 1  "
      2 = "Region 2  "
      3 = "Region 3  "
      4 = "Region 4  "
      5 = "Region 5  "
      6 = "Region 6  "
      8 = "Region 7/8"
      9 = "Region 9  "
     10 = "Region 10 "
     11 = "Region 11 "
     12 = "Region 12 "
     13 = "Europe    "
     14 = "Asia      "
     15 = "Latin America "
     16 = "Alaska    "
   ;
   VALUE $BENTYPF
```

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```
     "1998    " = "1998                                       "
     "1999    " = "1999                                       "
     "2000    " = "2000                                       "
     "2001    " = "2001                                       "
     "2002    " = "2002                                       "
     "2003    " = "2003                                       "
     "2000 Q1 " = "January, 2000 to December, 2000            "
     "2000 Q2 " = "April, 2000 to March, 2001                 "
     "2000 Q3 " = "July, 2000 to June, 2001                   "
     "2000 Q4 " = "October, 2000 to September, 2001           "
     "2002 Q1 " = "January, 2001 to December, 2001            "
     "2002 Q2 " = "April, 2001 to March, 2002                 "
     "2002 Q3 " = "July, 2001 to June, 2002                   "
     "2002 Q4 " = "October, 2001 to September, 2002           "
     "2003 Q1 " = "January, 2002 to December, 2002            "
     "2003 Q2 " = "April, 2002 to March, 2003                 "
     "2003 Q3 " = "July, 2002 to June, 2003                   "
     "2003 Q4 " = "October, 2002 to September, 2003           "
     /*****************************/
     /* Admin. Year Defn.         */
     /* 2001       2002       2003 */
     /*****************************/
     "R00007  ", "R02009  ", "R03009  " = "Problems Getting Personal Doctor/Nurse     "
     "R00014  ", "R02016  ", "R03013  " = "Problems Getting Referral to Specialist    "
     "R00028  ", "R02030  ", "R03027  " = "Problems Getting Necessary Care            "
     "R00029  ", "R02031  ", "R03028  " = "Delays in Care while Awaiting Approval      "
     "R00019  ", "R02021  ", "R03018  " = "Advice over Telephone                      "
     "R00021  ", "R02023  ", "R03020  " = "Wait for Routine Visit                     "
     "R00024  ", "R02026  ", "R03023  " = "Wait for Urgent Care                       "
     "R00030  ", "R02032  ", "R03029  " = "Wait More than 15 Minutes Past Appointment "
     "R00033  ", "R02035  ", "R03032  " = "Listens Carefully                          "
     "R00034  ", "R02036  ", "R03033  " = "Explains so You can Understand             "
     "R00035  ", "R02037  ", "R03034  " = "Shows Respect                              "
     "R00036  ", "R02038  ", "R03035  " = "Spends Time with You                       "
     "R00031  ", "R02033  ", "R03030  " = "Courteous and Respectful                   "
     "R00032  ", "R02034  ", "R03031  " = "Helpful                                    "
     "R00048  ", "R02048  ", "R03044  " = "Problem Finding/Understanding Written Material"
     "R00050  ", "R02050  ", "R03046  " = "Problem Getting Help from Customer Service  "
     "R00055  ", "R02055  ", "R03051  " = "Problem with Paperwork                     "
     "R00044  ", "R02044  ", "R03040  " = "Claims Handled in a Reasonable Time        "
     "R00045  ", "R02045  ", "R03041  " = "Claims Handled Correctly                   "
     "R00037  ", "R02039  ", "R03036  " = "Health Care                                "
     "R00056  ", "R02056  ", "R03052  " = "Health Plan                                "
     "R00009  ", "R02011  ", "R03011  " = "Primary Care Manager                       "
     "R00016  ", "R02018  ", "R03015  " = "Specialty Care                             "
                            "PHYSIC  " = "Physical                                   "
                            "MENTAL  " = "Mental                                     "
   ;
  VALUE $BENEF
   "RCOMPOS1","CCOMPOS1","R00007","R00014","R00028","R00029",
                        "R02009","R02016","R02030","R02031",
                        "R03009","R03013","R03027","R03028"
    = "Getting Needed Care  "

   "RCOMPOS2","CCOMPOS2","R00019","R00021","R00024","R00030",
                        "R02021","R02023","R02026","R02032",
                        "R03018","R03020","R03023","R03029"
    = "Getting Care Quickly "

   "RCOMPOS3","CCOMPOS3","R00033","R00034","R00035","R00036",
                        "R02035","R02036","R02037","R02038",
                        "R03032","R03033","R03034","R03035"
    = "How Well Doctors Communicate "

   "RCOMPOS4","CCOMPOS4","R00031","R00032",
                        "R02033","R02034",
                        "R03030","R03031"
    = "Courteous and Helpful Office Staff "

   "RCOMPOS5","CCOMPOS5","R00048","R00050","R00055",
                        "R02048","R02050","R02055",
                        "R03044","R03046","R03051"
    = "Customer Service          "
```

```
        "RCOMPOS6","CCOMPOS6","R00044","R00045",
                          "R02044","R02045",
                          "R03040","R03041"
      = "Claims Processing              "
      "RCOMPOS11","COMPOS11","MENTAL","PHYS"
      = "Health Status                  "
      /*********************/
      /* Admin. Year Defn. */
      /* 2001       2002   */
      /*********************/
      "R00037", "R02039", "R03036" = "Health Care                          "
      "R00056", "R02056", "R03052" = "Health Plan                          "
      "R00009", "R02011", "R03011" = "Primary Care Manager                 "
      "R00016", "R02018", "R03015" = "Specialty Care                       "
    ;
VALUE BEN
  0 = 'Total'    /*** 12-13 MAB ***/
  1 = 'Getting Needed Care'
  2 = 'Getting Care Quickly'
  3 = 'Courteous and Helpful Office Staff'
  4 = 'How Well Doctors Communicate'
  5 = 'Customer Service'
  6 = 'Claims Processing'
  7 = 'Health Plan'
  8 = 'Health Care'
  9 = 'Primary Care Manager'
 10 = 'Specialty Care'
 11 = 'Preventive Care';

  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 = "Problems Getting Personal Doctor/Nurse"
  2 = "Problems Getting Referral to Specialist"
  3 = "Problems Getting Necessary Care"
  4 = "Delays in Care while Awaiting Approval"
  5 = "Composite";

  VALUE GETCAREQ
  1 = "Advice over Telephone"
  2 = "Wait for Routine Visit"
  3 = "Wait for Urgent Care"
  4 = "Wait More than 15 Minutes Past Appointment"
  5 = "Composite";

  VALUE CRTSHELP
  1 = "Courteous and Respectful"
  2 = "Helpful"
  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 = "Problem Finding/Understanding Written Material"
  2 = "Problem Getting Help from Customer Service"
  3 = "Problem with Paperwork"
  4 = "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 = "Cholesterol Testing"
   6 = "Composite";
RUN;
```

12.A. Benchmark\BENCHA03.SAS - Calculate CAHPS Benchmark data for HCSDB - Annual.

```
*****************************************************************************
*
* PROGRAM:   BENCHA03.SAS
* TASK:      2003 DOD HEALTH CARE SURVEY ANALYSIS (8687-430)
* PURPOSE:   Adjust 2000 Adult CAHPS Benchmarks
*
* WRITTEN:   June 2000 BY ERIC SCHONE
*
* INPUTS:    1) BENCHA02.SD2 - 2000 Adult CAHPS Questions Renamed to be
*               consistent with the 2000 MPR DOD Survey.
*            2) GROUP8.SD2 - CAHPS Group8 (all beneficiaries) Dataset
*
* OUTPUTS:   1) Benchmark Composite Scores Data Sets
*
* MODIFIED: 1) Nov 2000 BY ERIC SCHONE - Output permanent datasets with
*              scores and standard errors and process the rest of the
*              composites and ratings.
*           2) Dec 2000 BY KEITH RATHBUN - Update variable names for
*              Q1 2000 Survey.
*           3) Jan 2002 BY KEITH RATHBUN - Updated to run under SAS
*              version 8 (changed INTERCEP to INTERCEPT).
*           4) Apr 2002 BY MIKE SCOTT - Updated variable names for Q1
*              2002 Survey.
*           5) Jul 2002 BY MIKE SCOTT - Changed R00077 to R03072, since
*              H02077 (health status) is back and was renamed to R03072
*              in HSC022_1.sd2.
*           6) Feb 2004 BY MIKE SCOTT - Updated for the 2003 Annual Report.
*
* 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
*****************************************************************************;
libname in  V612 '..\..\..\Q1_2003\programs\benchmark\data';   /*MJS 02/06/04*/
libname in2 V612 '..\reportcards\cahps_adult2003\data';        /*MJS 02/04/04*/
libname out V612 'data';

%let wgt=cwrwt;

OPTIONS MLOGIC MPRINT NOCENTER 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;
 merge temp 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;

 ADJUST = ADJUST + intercept;
 &q._&l=adjust;

run;

%mend comb;

%macro adjust(x,y);



proc summary data=setup;
where &x>.;
 class product;

 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 product);
 if _n_=1 then set count2;
 set count;
 pweight=denom/_freq_;
run;

data temp;
 merge count  setup; by product;

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;

proc sort data=r_&x; by product;
run;

PROC DESCRIPT DATA=r_&x DESIGN=STRWR NOPRINT;
 WEIGHT pweight;
 SETENV DECWIDTH=4;
 NEST product / 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);
```

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```sas
    %do i=1 %to 8;
     %let p&i=%str(&&p&i &d._&i);
     %end;

     %let m=%str(&m s_&d);
   %end;

data infile;
 merge &n;
 by mpid;
run;

proc corr outp=outf noprint;
 var &n;
 weight pweight;
run;

data final;
 if _n_=1 then do;
  %if &a~= %then %do;
   set s_&a;
  %end;
  %if &b~= %then %do;
   set s_&b;
  %end;
  %if &c~= %then %do;
   set s_&c;
  %end;
  %if &d~= %then %do;
   set s_&d;
  %end;
 end;
 set  outf;
 call symput('s'||compress(_n_),substr(_name_,3));
 where _type_='CORR';
run;

data final;
 set final;
 array r_val &n;
 array s_val &m;
 sde=0;
 do i=1 to dim(s_val);
  %do i=1 %to &grpnum;
   if _name_="r_&&s&i" then
    sde=sde+r_val(i)*s_&&s&i*s_val(i);
  %end;
 end;
run;

data sefin&compno;
 set final end=last;
 tv+sde;
 if last then do;
 sde=(tv**.5)/&grpnum;
 output;
end;

%do i=1 %to 8;
 data temp(keep=&&p&i);
  merge &&p&i;
 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;
 merge output temp;
run;

data out.comp&compno._&i;
   merge out&compno._&i
        sefin&compno;
run;

%end;

%mend comp;

/* create composites */
proc sort data=in.bencha02 out=setup;
 by product;
run;
data setup;
set setup;
if ^(model in (2,4));
if disp='M10' & ac03_02=1;   /*MJS 02/06/04*/
data setup;
 set setup; by product;
 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;
run;
%INCLUDE "..\..\..\..\8687\PROGRAMS\REPORTCARDS\CONVERT.SAS";

%CONT1(DSN=SETUP, NUM=7,  Y=R03009 R03013 R03027 R03028   /*MJS 02/04/04*/
                          R03044 R03046 R03051);
%CONT2(DSN=SETUP, NUM=4,  Y=R03036 R03052 R03011 R03015);
%CONT3(DSN=SETUP, NUM=12, Y=R03018 R03020 R03023 R03029
                          R03032 R03033 R03034 R03035
                          R03030 R03031 R03040 R03041);
/* GETTING NEEDED CARE */
%adjust(r03009,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03013,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03027,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03028,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(1,r03009,r03013,r03027,r03028);

/* GETTING NEEDED CARE QUICKLY */
%adjust(r03018,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03020,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03023,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03029,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(2,r03018,r03020,r03023,r03029);

/* HOW WELL DOCTORS COMMUNICATE */
%adjust(r03032,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03033,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03034,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03035,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(3,r03032,r03033,r03034,r03035);

/* COURTEOUS AND HELPFUL OFFICE STAFF */
%adjust(r03030,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03031,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(4,r03030,r03031);

/* CUSTOMER SERVICE */
%adjust(r03044,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03046,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
```

```
%adjust(r03051,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(5,r03044,r03046,r03051);

/* CLAIMS PROCESSING */
%adjust(r03040,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%adjust(r03041,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(6,r03040,r03041);

/* RATING ALL HEALTH CARE: 0 - 10 */
%adjust(r03036,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(7,r03036);

/* RATING OF HEALTH PLAN: 0 - 10 */
%adjust(r03052,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(8,r03052);

/* RATING OF PERSONAL DR: 0 - 10 */
%adjust(r03011,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(9,r03011);

/* SPECIALTY CARE */
%adjust(r03015,age1824 age2534 age3544 age4554 age5564 age6574 r03072);
%comp(10,r03015);
```

12.B. Benchmark\BENCHA04.SAS - Convert the Benchmark Scores Database into the WEB layout - Annual.

```
*****************************************************************************
*
* PROGRAM:   BENCHA04.SAS
* TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8687-430)
* 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:  1) Dec 2000 bY Keith Rathbun: Updated variable names for
*               Q1 2000 Survey.  For the quarterly survey group 8 (all benes)
*               is being used as the benchmark for all groups (1-8).  Thus,
*               this group is copied and output to each of the other 7 groups.
*            2) 01/23/2002 by Mike Scott: Updated variable names to be consistent
*               with 2000 survey.
*            4) 04/15/2002 by Mike Scott - Updated variable names for
*               Q1 2002 Survey.
*            5) 02/06/2004 by Mike Scott - Updated for the 2003 Annual Report.
*
* 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.SD2) will be run through the
*    MAKEHTML.SAS program to generate the WEB pages.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN  V612 "DATA";
LIBNAME OUT V612 "DATA";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************
* Load Format definitions for CAHPS Individual and composite data sets.
*****************************************************************************;
%INCLUDE "..\LOADWEB\LOADCAHQ.INC";   /*MJS 02/06/04*/

*****************************************************************************
*****************************************************************************
*
* 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 H98043_R>=7
* 2. Enrollees w/mil PCM        XENR_PCM IN (1,2,6) AND H98043_R>=7
* 3. Enrollees w/civ PCM        XENR_PCM = 3        AND H98043_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)
```

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```
* 8. All Beneficiaries
*
*******************************************************************************;
%MACRO PROCESS(CNUM=, GNUM=, NVAR=, VARS=, SE=);
*******************************************************************************
* Assign value for BENTYPE composite year
*******************************************************************************;
%LET YEAR = "2003";   /*MJS 02/06/04*/


*******************************************************************************
* Convert benchmark scores datasets into WEB layout.
*******************************************************************************;

   DATA COMP&CNUM._&Gnum;
      SET IN.COMP&CNUM._&GNUM;

      LENGTH MAJGRP  $30;
      LENGTH REGION  $15;
      LENGTH REGCAT  $26;
      LENGTH BENTYPE $50;
      LENGTH BENEFIT $34;

      *********************************************************************
      * 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 = "Courteous and Helpful Office Staff";
      ELSE IF &CNUM = 5  THEN BENEFIT = "Customer Service";
      ELSE IF &CNUM = 6  THEN BENEFIT = "Claims Processing";
      ELSE IF &CNUM = 7  THEN BENEFIT = "Health Care";
      ELSE IF &CNUM = 8  THEN BENEFIT = "Health Plan";
      ELSE IF &CNUM = 9  THEN BENEFIT = "Primary Care Manager";
      ELSE IF &CNUM = 10 THEN BENEFIT = "Specialty Care";

      BENTYPE = PUT(&YEAR,$BENTYPF.);

      *********************************************************************
      * Assign composite score and SEMEAN
      *********************************************************************;
      SCORE = TOTADJ;
      SEMEAN = SDE;

      *********************************************************************
      * Output composite score record for each REGION
      *********************************************************************;
      OUTPUT;

      *********************************************************************
      * Now, output the individual score records
      *********************************************************************;
      IF &NVAR GT 1 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 = SE(I);
                BENTYPE = PUT(NAME,$BENTYPF.);
                OUTPUT;
            END;
        END;

    KEEP MAJGRP
         REGION
         REGCAT
         BENTYPE
         BENEFIT
         SEMEAN
         SCORE
         SIG
         ;
    RUN;


%MEND;
                                                       /*MJS 02/04/04*/
*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=8, NVAR=4, VARS=r03009_8 R03013_8 R03027_8 R03028_8,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=8, NVAR=4, VARS=R03018_8 R03020_8 R03023_8 R03029_8,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=8, NVAR=4, VARS=R03032_8 R03033_8 R03034_8 R03035_8,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=8, NVAR=2, VARS=R03030_8 R03031_8, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=8, NVAR=3, VARS=R03044_8 R03046_8 R03051_8,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=8, NVAR=2, VARS=R03040_8 R03041_8, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=8, NVAR=1, VARS=R03036_8, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=8, NVAR=1, VARS=R03052_8, SE=S_R03052);


*****************************************************************************
```

```
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=8, NVAR=1, VARS=R03011_8, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=8, NVAR=1, VARS=R03015_8, SE=S_R03015);


*****************************************************************************
*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=3, NVAR=4, VARS=r03009_3 R03013_3 R03027_3 R03028_3,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=3, NVAR=4, VARS=R03018_3 R03020_3 R03023_3 R03029_3,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=3, NVAR=4, VARS=R03032_3 R03033_3 R03034_3 R03035_3,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=3, NVAR=2, VARS=R03030_3 R03031_3, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=3, NVAR=3, VARS=R03044_3 R03046_3 R03051_3,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=3, NVAR=2, VARS=R03040_3 R03041_3, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=3, NVAR=1, VARS=R03036_3, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=3, NVAR=1, VARS=R03052_3, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=3, NVAR=1, VARS=R03011_3, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=3, NVAR=1, VARS=R03015_3, SE=S_R03015);
```

```
*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
****************************************************************************;
%PROCESS(CNUM=1, GNUM=4, NVAR=4, VARS=r03009_4 R03013_4 R03027_4 R03028_4,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
****************************************************************************;
%PROCESS(CNUM=2, GNUM=4, NVAR=4, VARS=R03018_4 R03020_4 R03023_4 R03029_4,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
****************************************************************************;
%PROCESS(CNUM=3, GNUM=4, NVAR=4, VARS=R03032_4 R03033_4 R03034_4 R03035_4,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
****************************************************************************;
%PROCESS(CNUM=4, GNUM=4, NVAR=2, VARS=R03030_4 R03031_4, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
****************************************************************************;
%PROCESS(CNUM=5, GNUM=4, NVAR=3, VARS=R03044_4 R03046_4 R03051_4,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
****************************************************************************;
%PROCESS(CNUM=6, GNUM=4, NVAR=2, VARS=R03040_4 R03041_4, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=7, GNUM=4, NVAR=1, VARS=R03036_4, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=8, GNUM=4, NVAR=1, VARS=R03052_4, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=9, GNUM=4, NVAR=1, VARS=R03011_4, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
****************************************************************************;
%PROCESS(CNUM=10, GNUM=4, NVAR=1, VARS=R03015_4, SE=S_R03015);


*****************************************************************************
*****************************************************************************;
*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
****************************************************************************;
%PROCESS(CNUM=1, GNUM=5, NVAR=4, VARS=r03009_5 R03013_5 R03027_5 R03028_5,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
```

```
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=5, NVAR=4, VARS=R03018_5 R03020_5 R03023_5 R03029_5,
          SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
*
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=5, NVAR=4, VARS=R03032_5 R03033_5 R03034_5 R03035_5,
          SE=S_R03032 S_R03033 S_R03034 S_R03035);

*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=5, NVAR=2, VARS=R03030_5 R03031_5, SE=S_R03030 S_R03031);

*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=5, NVAR=3, VARS=R03044_5 R03046_5 R03051_5,
          SE=S_R03044 S_R03046 S_R03051);

*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=5, NVAR=2, VARS=R03040_5 R03041_5, SE=S_R03040 S_R03041);

*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=5, NVAR=1, VARS=R03036_5, SE=S_R03036);

*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=5, NVAR=1, VARS=R03052_5, SE=S_R03052);

*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=5, NVAR=1, VARS=R03011_5, SE=S_R03011);

*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=5, NVAR=1, VARS=R03015_5, SE=S_R03015);

*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=6, NVAR=4, VARS=r03009_6 R03013_6 R03027_6 R03028_6,
          SE=s_r03009 S_R03013 S_R03027 S_R03028);

*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=6, NVAR=4, VARS=R03018_6 R03020_6 R03023_6 R03029_6,
          SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=6, NVAR=4, VARS=R03032_6 R03033_6 R03034_6 R03035_6,
```

```
           SE=S_R03032 S_R03033 S_R03034 S_R03035);

******************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
******************************************************************************;
%PROCESS(CNUM=4, GNUM=6, NVAR=2, VARS=R03030_6 R03031_6, SE=S_R03030 S_R03031);

******************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
******************************************************************************;
%PROCESS(CNUM=5, GNUM=6, NVAR=3, VARS=R03044_6 R03046_6 R03051_6,
         SE=S_R03044 S_R03046 S_R03051);

******************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
******************************************************************************;
%PROCESS(CNUM=6, GNUM=6, NVAR=2, VARS=R03040_6 R03041_6, SE=S_R03040 S_R03041);

******************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=7, GNUM=6, NVAR=1, VARS=R03036_6, SE=S_R03036);

******************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=8, GNUM=6, NVAR=1, VARS=R03052_6, SE=S_R03052);

******************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=9, GNUM=6, NVAR=1, VARS=R03011_6, SE=S_R03011);

******************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
******************************************************************************;
%PROCESS(CNUM=10, GNUM=6, NVAR=1, VARS=R03015_6, SE=S_R03015);

******************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
******************************************************************************;
%PROCESS(CNUM=1, GNUM=7, NVAR=4, VARS=r03009_7 R03013_7 R03027_7 R03028_7,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);

******************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
******************************************************************************;
%PROCESS(CNUM=2, GNUM=7, NVAR=4, VARS=R03018_7 R03020_7 R03023_7 R03029_7,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
******************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
******************************************************************************;
%PROCESS(CNUM=3, GNUM=7, NVAR=4, VARS=R03032_7 R03033_7 R03034_7 R03035_7,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);

******************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
******************************************************************************;
%PROCESS(CNUM=4, GNUM=7, NVAR=2, VARS=R03030_7 R03031_7, SE=S_R03030 S_R03031);

******************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
```

```
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=7, NVAR=3, VARS=R03044_7 R03046_7 R03051_7,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=7, NVAR=2, VARS=R03040_7 R03041_7, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=7, NVAR=1, VARS=R03036_7, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=7, NVAR=1, VARS=R03052_7, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=7, NVAR=1, VARS=R03011_7, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=7, NVAR=1, VARS=R03015_7, SE=S_R03015);


*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=2, NVAR=4, VARS=r03009_2 R03013_2 R03027_2 R03028_2,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=2, NVAR=4, VARS=R03018_2 R03020_2 R03023_2 R03029_2,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=2, NVAR=4, VARS=R03032_2 R03033_2 R03034_2 R03035_2,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=2, NVAR=2, VARS=R03030_2 R03031_2, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=2, NVAR=3, VARS=R03044_2 R03046_2 R03051_2,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=2, NVAR=2, VARS=R03040_2 R03041_2, SE=S_R03040 S_R03041);


*****************************************************************************
```

```
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=2, NVAR=1, VARS=R03036_2, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=2, NVAR=1, VARS=R03052_2, SE=S_R03052);


*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=2, NVAR=1, VARS=R03011_2, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=2, NVAR=1, VARS=R03015_2, SE=S_R03015);


**************************************************************************************************
*********************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=1, GNUM=1, NVAR=4, VARS=r03009_1 R03013_1 R03027_1 R03028_1,
         SE=s_r03009 S_R03013 S_R03027 S_R03028);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(CNUM=2, GNUM=1, NVAR=4, VARS=R03018_1 R03020_1 R03023_1 R03029_1,
         SE=S_R03018 S_R03020 S_R03023 S_R03029);
*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(CNUM=3, GNUM=1, NVAR=4, VARS=R03032_1 R03033_1 R03034_1 R03035_1,
         SE=S_R03032 S_R03033 S_R03034 S_R03035);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(CNUM=4, GNUM=1, NVAR=2, VARS=R03030_1 R03031_1, SE=S_R03030 S_R03031);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(CNUM=5, GNUM=1, NVAR=3, VARS=R03044_1 R03046_1 R03051_1,
         SE=S_R03044 S_R03046 S_R03051);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(CNUM=6, GNUM=1, NVAR=2, VARS=R03040_1 R03041_1, SE=S_R03040 S_R03041);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=7, GNUM=1, NVAR=1, VARS=R03036_1, SE=S_R03036);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=8, GNUM=1, NVAR=1, VARS=R03052_1, SE=S_R03052);
```

```
*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=9, GNUM=1, NVAR=1, VARS=R03011_1, SE=S_R03011);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(CNUM=10, GNUM=1, NVAR=1, VARS=R03015_1, SE=S_R03015);


*****************************************************************************
*****************************************************************************
* 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
        COMP10_1 COMP10_2 COMP10_3 COMP10_4 COMP10_5 COMP10_6 COMP10_7 COMP10_8
    ;
    IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: BENCHA04.SAS By Keith Rathbun";
TITLE3 "Program Inputs: Benchmark Individual and Composite data sets with adjusted scores";
TITLE4 "Program Outputs: BENCHA04.SD2 - Combined Benchmark Scores Database in WEB layout";

PROC CONTENTS; RUN;

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
     /MISSING LIST;
RUN;
```

13.A. ReportCards\MPR_Adult2003\PRVCOMP.SAS - Calculate Preventive Care Composite Scores - Annual.

```
*******************************************************************
*  Project:    DoD Reporting and Analysis 8860-400
*  Program:    PRVCOMP.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:   10/25/01 By Daniele Beahm: Because no poststratification
*              was done for q3 2000, changed POSTSTR back to ADJ_CELL
*              04/09/02 modified macros the first three macros to create
*              temporary datasets (instead of writing permanent datasets)
*              01/29/03 By Chris Rankin: Added &YR to output variable names
*              for the Trend program
*              02/04/04 By Eric Schone: Updated for 2003 Annual Report. Changed
*              HP_FLU to HP_CHOL. Added NORMDATA data step and IN2000 libname.
*              02/05/04 By Chris Rankin: CACSMPL taken from Group8 dataset
*  Purpose:    Calculate MPR Preventive Care Composites
*  Input:      \\DOD\2002\DATA\AFINAL\HCS02A_1.SD2
*  Output:     RFINAL.SD2
*              CFINAL.SD2
*              MFINAL.SD2
*  Include
*   Files:     LOADCAHPQ.INC
*              CATREP.INC
*    Note:     Next program is Loadmprq.sas
*******************************************************************;

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 MLOGIC MPRINT
        NOFMTERR COMPRESS=YES;

LIBNAME IN        V612  "..\..\..\DATA";
LIBNAME IN2000    V612  "..\..\..\..\2000\DATA";   /*ES 02/04/04*/
LINAME CACLIB     V612  "..\CAHPS_Adult2003\Data"; /*CDR 02/05/04 */
LIBNAME OUT       V612  ".";
LIBNAME LIBRARY   V612  "..\..\..\DATA\FMTLIB";

%LET WGT=CWRWT;
%LET DEBUG=Y;        /** Set to Y for Debug print of datasets **/
%LET INDATA=HCS03A_1;   /*ES 02/04/04*/
%LET YRDATA=HCS03A;     /*ES 02/04/04*/
%LET YR=03;

/***** The following parameters are used in the Variance ****/
/***** calcuation macro for region and catchment area    ****/

%LET GRPNUM=8;       /** number of groups            **/
%LET COMPNUM=8;      /** number of variables         **/
%LET REGNUM=16;      /** number of regions           **/
%LET CATCHNUM=9999; /** number of catchment areas **/

%LET CMPNUM1=5;    /** number of variables in first composite  **/   /*ES 02/04/04*/
%LET CMPNUM2=3;    /** number of variables in second composite **/   /*ES 02/04/04*/

%LET COMPCNT=2;    /** number of composites                    **/

**** set up benchmarks for prentive services ;
**** note -- these are the hp 2000 goals     ;

%LET GOALVAR1= .90;   /** HP Goal for Prenatal Care        **/
%LET GOALVAR2= .70;   /** HP Goal for Mammography          **/
%LET GOALVAR3= .90;   /** HP Goal for Papsmear             **/
%LET GOALVAR4= .95;   /** HP Goal for Blood Pressure Check **/
%LET GOALVAR5= .90;   /** HP Goal for Cholesterol Screening **/
%LET GOALVAR6= .90;   /** access goal                      **/
%LET GOALVAR7= .90;   /** access goal                      **/
%LET GOALVAR8= .98;   /** access goal                      **/

%INCLUDE "..\..\LOADWEB\LOADCAHQ.INC";
%INCLUDE "..\..\LOADWEB\CATREP.INC";
```

```
****************************************************************;
* Beneficiary group note
*    Eight groups            Definitions
* _____;
* 1. Prime enrollees          XINS_COV IN (1,2,6) AND H03007>=2
* 2. Enrollees w/mil PCM       XENR_PCM IN (1,2,6) AND H03007>=2
* 3. Enrollees w/civ PCM       XENR_PCM IN (3,7)   AND H03007>=2
* 4. Nonenrollees             XINS_COV IN (3,4,5)
* 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);
   BY MPRID;
RUN;

PROC SORT DATA=IN.&INDATA(KEEP=MPRID XINS_COV HP_CHOL  HP_BP   HP_MAMOG
                             HP_PAP HP_PRNTL   /*ES 02/04/04*/
                             XREGION  XENR_PCM XBNFGRP ENBGSMPL &WGT
                             ADJ_CELL H03020   H03023   H03029
                   H03007)
   OUT= &YRDATA; BY MPRID;
RUN;


/**** note -- output all data to a single dataset for macro */
/**** call                                                 */
/**** MACROS are no longer called for catchment areas      */

DATA NORMDATA(KEEP=XREGION  cwrWT                       /*ES 02/04/04*/
                   PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
                   DENV1-DENV&COMPNUM IN_GROUP8);

  set IN2000.hcs00a_1(KEEP=MPRID XINS_COV HP_CHOL  HP_BP
                             HP_MAMOG HP_PAP HP_PRNTL   /*ES 02/04/04*/
                             XREGION  XENR_PCM XBNFGRP ENBGSMPL cwrWT
                             ADJ_CELL H00021 H00024 H00030); /*CDR 02/05/2004 */
/*  IF IN_1;
  IF IN_2=1 THEN IN_GROUP8=1;
  ELSE IN_GROUP8=0;
*/
  /*IF IN_1 & NOT IN_2 THEN PUT
  "NORM DATA: NO CATCHMENT AREA FOR MPRID=" MPRID;*/

*****************************************************************************
* 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 XREGION=7 THEN XREGION=8;
  IF XREGION IN (.,0)    THEN DELETE;
*  IF CACSMPL IN (.,9999) THEN DELETE;
  IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;

  PRVVAR1=HP_PRNTL;        /** prenatal care  **/
  PRVVAR2=HP_MAMOG;        /** mammography    **/
  PRVVAR3=HP_PAP;          /** papsmear       **/
  PRVVAR4=HP_BP;           /** blood pressure **/
  PRVVAR5=HP_CHOL;         /** cholesterol    **/   /*ES 02/04/04*/
  PRVVAR6=H00021;          /** access var 1   **/   /*ES 02/04/04*/
  PRVVAR7=H00024;          /** access var 2   **/   /*ES 02/04/04*/
  PRVVAR8=H00030;          /** access var 3   **/   /*ES 02/04/04*/

/**** 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;

run;
/*
PROC FREQ DATA=NORMDATA;
   TABLES IN_GROUP8/MISSING LIST;
    TITLE "OVERLAP BETWEEN &INDATA AND GROUP8 DATA";
RUN;
*/
DATA &YRDATA(KEEP=BGROUP MHS CONUS XREGION CACSMPL &WGT TMP_CELL
                   PRVVAR1-PRVVAR&COMPNUM. NUM&YR.V1-NUM&YR.V&COMPNUM.
                   DEN&YR.V1-DEN&YR.V&COMPNUM IN_GROUP8);

   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;

   /*IF IN_1 & NOT IN_2 THEN PUT
   "&YRDATA: No Catchment Area for MPRID=" MPRID; */

****************************************************************************
* 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
***************************************************************************;

   CELLP=1;
   LENGTH TMP_CELL 8;
   TMP_CELL=ADJ_CELL;   /* make ADJ_CELL a numeric variable */

   IF XREGION=7 THEN XREGION=8;
   IF XREGION IN (.,0)    THEN DELETE;
   IF CACSMPL IN (.,9999) THEN DELETE;
   IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;

   PRVVAR1=HP_PRNTL;         /** prenatal care  **/
   PRVVAR2=HP_MAMOG;         /** mammography    **/
   PRVVAR3=HP_PAP;           /** papsmear       **/
   PRVVAR4=HP_BP;            /** blood pressure **/
   PRVVAR5=HP_CHOL;          /** cholesterol    **/   /*ES 02/04/04*/
   PRVVAR6=H03020;           /** access var 1   **/   /*ES 02/04/04*/
   PRVVAR7=H03023;           /** access var 2   **/   /*ES 02/04/04*/
   PRVVAR8=H03029;           /** access var 3   **/   /*ES 02/04/04*/

/**** 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 */

******************************************************************************
* Assign indicator of CONUS based on XREGION.  CONUS stands for
* Contential 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 CONUS=1;
   ELSE IF XREGION IN (13,14,15)                        THEN CONUS=0;
   ELSE IF XREGION = .                                  THEN CONUS=.;

* Prime enrollees      *;

   IF (XINS_COV IN (1,2,6) AND H03007>=2) THEN DO;   /*ES 02/04/04*/
      BGROUP=1;
      OUTPUT;
   END;

* Enrollees with military PCMs *;

   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN DO;   /*ES 02/04/04*/
      BGROUP=2;
      OUTPUT;
   END;

* Enrollees with civilian PCMs *;

   IF (XENR_PCM IN (3,7) AND H03007>=2) THEN DO;   /*ES 02/04/04*/
      BGROUP=3;
      OUTPUT;
   END;

* Nonenrollees *;

   IF XINS_COV IN (3,4,5) THEN DO;
      BGROUP=4;
      OUTPUT;
   END;

* Active duty       *;

   IF XBNFGRP = 1 THEN DO;
      BGROUP=5;
      OUTPUT;
   END;

* Active duty dependents  *;

   IF XBNFGRP = 2 THEN DO;
      BGROUP=6;
      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 NOPRINT DATA=&YRDATA;
    TABLE BGROUP*MHS*CONUS*XREGION*CACSMPL/MISSING LIST
    OUT=OBSCNT(DROP=PERCENT);
RUN;

PROC SORT DATA=&YRDATA; BY BGROUP MHS CONUS XREGION CACSMPL;
RUN;

DATA HCSDB /*FAILED*/;
   MERGE &YRDATA(IN=IN_ALL) OBSCNT(IN=IN_OBS);
   BY BGROUP MHS CONUS XREGION CACSMPL;
   IF COUNT < 2 THEN DO;
       PUT "Failed obs # criterion: XREGION=" XREGION "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      *****
***** (REGION, CACSMPL, MHS)                        *****
***** Note:  7/10/2000 use CONUS for MHS            *****
***** Note:  there are 8 variables and 8 groups     *****
*******************************************************;

%MACRO A_SUDAAN(TABLEVAR);

*** set the number of levels in the proc descript ***;
*** for region or catchment                        ***;

 %IF %UPCASE(&TABLEVAR)=XREGION %THEN %DO;
     %LET ENDNUM=&REGNUM;
     %LET PREF=R;          /** dataset prefix for region data    **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CACSMPL %THEN %DO;
     %LET ENDNUM=&CATCHNUM;
     %LET PREF=C;          /** dataset prefix for catchement area data **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %LET PREF=M;

 %DO I=1 %TO &GRPNUM;      /** 8 groups    **/

     %DO J=1 %TO &COMPNUM;  /** 8 variables **/
```

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```
          DATA INDATA&I.&J(KEEP=&WGT MHS CONUS XREGION CACSMPL
                            NUM&YR.V&J DEN&YR.V&J TMP_CELL);
            SET HCSDB;
            WHERE XREGION > 0 AND BGROUP=&I AND DEN&YR.V&J > 0;
            %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                IF CONUS NE 1 THEN DELETE;  /* don't include all MHS */
            %END;
          RUN;

*** Calculate values for regions, catchment areas ****;

          %IF %UPCASE(&TABLEVAR) NE CONUS %THEN %DO;

            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
                FILENAME=&PREF.GRP&I.V&J;
            RUN;

          %END;
          %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;

**** No tables, levels, or subgroups needed ****;

            PROC DESCRIPT DATA=INDATA&I.&J DESIGN=STRWR NOPRINT;
                WEIGHT &WGT;
                SETENV DECWIDTH=4;
                NEST TMP_CELL / MISSUNIT;
                VAR NUM&YR.V&J;
                OUTPUT SEMEAN/ TABLECELL=DEFAULT
                FILENAME=&PREF.GRP&I.V&J;
            RUN;

          %END;

***** 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;
            %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                CONUS=1;
            %END;
          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               *****;
```

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```
      %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 (CONUS);
%A_SUDAAN (XREGION);
%A_SUDAAN (CACSMPL);

**********************************************************
*** Next, calculate correlation coefficients       ***
*** and create a file for each analytical unit      ***
**********************************************************;

%MACRO GETCORR(BYVAR);

 %IF %UPCASE(&BYVAR)=XREGION %THEN %LET PREF=R;
 %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF %UPCASE(&BYVAR)=CONUS %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)=CONUS %THEN %DO;
            WHERE BGROUP=&I AND CONUS = 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;
```

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```
    %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(CONUS);
%GETCORR(XREGION);
%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)=XREGION %THEN %LET PREF=R;
   %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
   %ELSE %IF %UPCASE(&BYVAR)=CONUS %THEN %LET PREF=M;


  PROC MEANS NWAY NOPRINT DATA=HCSDB;
     CLASS BGROUP &BYVAR;
     VAR NUM&YR.V1-NUM&YR.V&COMPNUM
         DEN&YR.V1-DEN&YR.V&COMPNUM;
     WEIGHT &WGT;
     OUTPUT OUT= &PREF.CMPSUM(DROP = _TYPE_)
     SUM =  ;
  RUN;
PROC MEANS NWAY NOPRINT DATA=normdata;
  *   CLASS &BYVAR;
     VAR
         DENV1-DENV&COMPNUM;
     WEIGHT cwrwt;
     OUTPUT OUT= &PREF.norms(DROP = _TYPE_)
     SUM =  nrmv1-nrmv&compnum;
  RUN;
  PROC MEANS NWAY NOPRINT DATA=HCSDB;
     CLASS BGROUP &BYVAR;
     VAR DEN&YR.V1-DEN&YR.V&COMPNUM;
     OUTPUT OUT=&PREF.DGFR(DROP=_TYPE_ _FREQ_)
     SUM= NOBS&YR.V1-NOBS&YR.V&COMPNUM;
  RUN;
data &pref.cmpsum;

if _n_=1 then set &pref.norms;
set &pref.cmpsum;
proc sort data=&pref.cmpsum; by bgroup &byvar;
 DATA &PREF.CMPSUM;
    MERGE &PREF.CMPSUM(RENAME=(_FREQ_=N_OBS&YR.))
          &PREF.DGFR;
    BY BGROUP &BYVAR;

    %IF &PREF=M %THEN %DO;  /** added 7/10/2000 **/
       WHERE CONUS=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 **/
/*
    %DO Q=1 %TO &COMPCNT;
       %IF &Q=1 %THEN %DO;
          CP&YR.NUM&Q.=SUM(OF NUM&YR.V1-NUM&YR.V&CMPNUM1);
          CP&YR.DEN&Q.=SUM(OF DEN&YR.V1-DEN&YR.V&CMPNUM1);
          CP&YR.OBS&Q.=SUM(OF NOBS&YR.V1-NOBS&YR.V&CMPNUM1);
       %END;
       %ELSE %DO;
          CP&YR.NUM&Q.=SUM(OF NUM&YR.V&START-NUM&YR.V&COMPNUM);
          CP&YR.DEN&Q.=SUM(OF DEN&YR.V&START-DEN&YR.V&COMPNUM);
          CP&YR.OBS&Q.=SUM(OF NOBS&YR.V&START-NOBS&YR.V&COMPNUM);
       %END;
       COMP&YR.&Q.=CP&YR.NUM&Q./CP&YR.DEN&Q.;
    %END;
*/
** 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;
   GOALVAR7=&GOALVAR7;
   GOALVAR8=&GOALVAR8;

** 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&cmpnum1);
cpden2=sum(of nrmv&start-nrmv&compnum);
   DO K = 1 TO &COMPNUM;
       IF K < &START THEN SVCWGT(K)= norm(K)/cpden1;
       ELSE SVCWGT(K) = norm(K)/cpden2;
       WGTBMARK(K) = SVCWGT(K)*BMARK(K);
        comp(k)=svcwgt(k)*proport(k);
 END;
   DROP K;
   CP&YR.BMK1=SUM(OF WTD&YR.V1-WTD&YR.V&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(CONUS);   /** changed to CONUS 7/10/2000  **/
%GETPROP(XREGION);
%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;


**** simple macro added to get adjusted composite scores ****;
**** for region and catchment to be displayed in report  ****;
**** cards                                                ****;


%MACRO ADJUST(FILE,LEVEL);
```

```
   DATA &FILE;
       IF _N_=1 THEN SET  ADJUST;
                    SET  &FILE;
     %DO Z=1 %TO &COMPCNT;
/*        %IF &LEVEL=CONUS %THEN %DO;
          ADJ&YR.CP&Z.=1;
          C&YR.SCOR&Z=COMP&YR.&Z.*ADJ&YR.CP&Z.*100;
       %END;
       %ELSE %DO; */
          ADJ&YR.CP&Z.=MHS&YR.BM&Z./CP&YR.BMK&Z.;
          C&YR.SCOR&Z=COMP&YR.&Z.*ADJ&YR.CP&Z.*100;
    /*     %END;     */
     %END;
    RUN;

%MEND ADJUST;

*%ADJUST(MCMPSUM,CONUS)
*%ADJUST(RCMPSUM,REG);
*%ADJUST(CCMPSUM,CAT);


*********************************************************;
***  Macro to merge 3 datasets for each        *******;
***  called by analytical unit                 *******;
***  output final dataset for                  *******;
***  Region, Catchment, MHS                    *******;
*********************************************************;


%MACRO GETSIG(BYVAR);

 %LET START = %EVAL(&CMPNUM1+1);
 %LET NEXT  = %EVAL(&CMPNUM1+2);

 %IF &BYVAR=XREGION %THEN %LET PREF=R;
 %ELSE %IF &BYVAR=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF &BYVAR=CONUS %THEN %LET PREF=M;

 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
                 C&YR.SCOR1-C&YR.SCOR&COMPCNT 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 $15. REGCAT $42.;

   %IF &PREF=C %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=C %THEN %DO;
   REGCAT=PUT(CACSMPL, CATREP.);
   REGION=PUT(XREGION, REGIONF.);
%END;
%ELSE %IF &PREF=R %THEN %DO;
   REGION=PUT(XREGION, REGIONF.);
   REGCAT=PUT(XREGION, REGIONF.);
%END;
%ELSE %DO;
   REGION="CONUS MHS";
   REGCAT="CONUS MHS";
%END;

/**** setup t statistics, degreees of freedom    **/

ARRAY    TSTAT{&COMPNUM} T_&YR.V1-T_&YR.V&COMPNUM;
ARRAY    BMARK{&COMPNUM} GOALVAR1-GOALVAR&COMPNUM;
ARRAY   STNDERR{&COMPNUM} SERR&YR.V1-SERR&YR.V&COMPNUM;
ARRAY   SERRSQR{&COMPNUM} SESQ&YR.V1-SESQ&YR.V&COMPNUM;
ARRAY      DEGF{&COMPNUM} DF&YR.SCR1-DF&YR.SCR&COMPNUM;
ARRAY     DENOM{&COMPNUM} DEN&YR.V1-DEN&YR.V&COMPNUM;
ARRAY   PROPORT{&COMPNUM} PROP&YR.V1-PROP&YR.V&COMPNUM;
ARRAY     SCORE{&COMPNUM} SCOR&YR.V1-SCOR&YR.V&COMPNUM;
ARRAY    PVALUE{&COMPNUM} PVAL&YR.V1-PVAL&YR.V&COMPNUM;
ARRAY       SIG{&COMPNUM} SIG&YR.V1-SIG&YR.V&COMPNUM;
ARRAY     N_OBS{&COMPNUM} NOBS&YR.V1-NOBS&YR.V&COMPNUM;
array      norm{&compnum} nrmv1-nrmv&compnum;
/** get the item variance, t-statistics, df, p-values **/
/** and whether significant                          **/

DO I=1 TO &COMPNUM;
   SERRSQR{I}=STNDERR{I}**2;  /* Item variance */
   SCORE{I}=PROPORT{I}*100;   /* Score (prop. * 100) */
   IF STNDERR{I} > 0 THEN TSTAT{I}=(PROPORT{I}-BMARK{I})/STNDERR{I};
   ELSE TSTAT{I}=.;
   DEGF{I}=N_OBS{I}-1;
   PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
   IF PVALUE{I} GE .05 THEN SIG{I}=0;
   ELSE IF PVALUE{I} < .05 THEN DO;
      IF PROPORT{I} > BMARK{I} THEN SIG{I}=1;
      IF PROPORT{I} < BMARK{I} THEN SIG{I}=-1;
   END;
END;
DROP I;

/** 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;
```

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```
    /** multiply each item pair std. errors and correlation coefficients **/
    /** access to care composite                                         **/

   ARRAY SERRC2{&CMPNUM2} SERR&YR.V&START-SERR&YR.V&COMPNUM;

   %DO L = &START %TO &COMPNUM;
      ARRAY  SMEAN&L{&CMPNUM2} SEM&YR.V&L.&START-SEM&YR.V&L.&COMPNUM;
      ARRAY CORVAR&L{&CMPNUM2} COR&YR.V&L.&START-COR&YR.V&L.&COMPNUM;
      DO M=1 TO &CMPNUM2;
          SMEAN&L{M}=SERR&YR.V&L*SERRC2{M}*CORVAR&L{M};
      END;
      SEM&YR.V&L.&L=0;  /** don't coun't in final standard error calculation **/
    %END;
    DROP M;
  /** calculate composite t-statistic, pvalue, and whether significant **/
  /** for composites                                                   **/

    %DO P=1 %TO &COMPCNT;
       %IF &P=1 %THEN %DO;

          /** composite standard error comprised of two parts **/
          CP&YR.&P.SE1=SUM(OF SEw&YR.V1-SEw&YR.V&CMPNUM1);
          CP&YR.&P.SE2=SUM(OF SEM&YR.V11-SEM&YR.V&CMPNUM1.&CMPNUM1.);
    cp&yr.obs&p=sum(of nobs&yr.v1-nobs&yr.v&cmpnum1);
    cp&yr.den&p=sum(of den&yr.v1-den&yr.v&cmpnum1);
   %END;
       %ELSE %DO;
          CP&YR.&P.SE1=SUM(OF SESQ&YR.V&START-SESQ&YR.V&COMPNUM);
          CP&YR.&P.SE2=SUM(OF SEM&YR.V&START.&START.-SEM&YR.V&COMPNUM.&COMPNUM.);

       %END;

    /** add the two parts of the composite standard error  **/
    /** calculate the composite t statistics and p-values  **/
    /** determine whether differences are sigificant       **/

       CP&YR.&P.SE=SQRT(CP&YR.&P.SE2+CP&YR.&P.SE1)/cpden&P;
       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;

%MEND GETSIG;

%GETSIG(CONUS);     /** changed to CONUS 7/10/2000 **/
%GETSIG(XREGION);
%GETSIG(CACSMPL);

ENDSAS;
```

13.B. ReportCards\MPR_Adult2003\LOADMPR.SAS - Convert the MPR Scores Database into the WEB layout - Annual.

```
****************************************************************;
*  Project:   DoD Reporting and Analysis 8687-100
*  Program:   LOADMPR.SAS
*  Author:    Chris Rankin
*  Date:      4/07/2000
*  Modified: 1) 5/08/2001 -- standard errors retained in output data set.
*            2) 1/8/2003 by Keith Rathbun: Updated to accomodate the
*               2002 survey.
*            3) 1/30/2003 by Chris Rankin:  Updated to for trends from
*               2000, 2002 Annual.
*            4) 02/05/2004 by Mike Scott: Updated for 2003 Annual Report.
*               Uncommented Flu Shot and changed to Cholesterol.
*  Purpose:   Calculate MPR Preventive Care Composites
*
*   Input:    RFINAL.SD2
*             CFINAL.SD2
*             MFINAL.SD2
*   Output:  loadmpr.sd2
****************************************************************;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2;

LIBNAME   INLIB   V612 ".";
LIBNAME   OUT     V612 ".";
LIBNAME   LIBRARY V612 "..\..\..\data\fmtlib";   /*MJS 02/05/04*/


%LET COMPNUM=8; /*** number of questions in both composites ***/
%LET CMPNUM1=5; /*** number of questions in first composite ***/   /*MJS 02/05/04*/

%LET YR=03;       /*MJS 02/05/04*/
%LET YEAR=2003;

%INCLUDE "..\..\LOADWEB\LOADCAHQ.INC";   /*MJS 02/05/04*/


****************************************************************;
*** Note -- take out access to care questions and composite ***;
****************************************************************;
/*
data mfinal(keep=cp03bmk1);
  set inlib.mfinal(keep=majgrp cp03bmk1);
  where majgrp="All Beneficiaries";
run;

data mfinal;
  if _n_=1 then set mfinal;
  set inlib.mfinal(drop=cp03bmk1);
run;
*/
DATA BENCHMKS(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SIG);
  FORMAT MAJGRP $30.  REGION $15. REGCAT $26.
         BENEFIT $34. BENTYPE $50.;

  SET inlib.MFINAL;

  /***** Benchmarks       *****/

  ARRAY BENCHMK{*} GOALVAR1-GOALVAR&CMPNUM1 CP&yr.BMK1;
  DO I = 1 TO 6;   /*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";   /*MJS 02/05/04*/
```

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```
      ELSE IF I = 6 THEN BENTYPE = "&YEAR";
      OUTPUT;
   END;
   DROP I;
RUN;


DATA BENCHMKS;
   SET BENCHMKS;
   OUTPUT;
   IF MAJGRP = "All Beneficiaries" THEN DO;
      DO REG = 0 TO 16; DROP REG;
         IF REG NE 7 THEN DO;
            MAJGRP = "Benchmark";
            REGION = PUT(REG,REGIONF.);
            REGCAT = PUT(REG,REGIONF.);
            OUTPUT;
         END;
      END;
   END;
RUN;


PROC FREQ DATA=BENCHMKS;
   TABLES MAJGRP/MISSING LIST;
RUN;


************************;
*****  Scores        **;
************************;

DATA CFINAL;
   SET INLIB.CFINAL;
   WHERE UPCASE(TRIM(MAJGRP)) IN ("PRIME ENROLLEES", "ENROLLEES WITH MILITARY PCM",
                                  "ACTIVE DUTY", "ALL BENEFICIARIES");
RUN;


DATA SCORES(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN SIG N_OBS N_WGT);
   FORMAT MAJGRP $30.  REGION $15. REGCAT $26.
          BENEFIT $34. BENTYPE $50.;
   SET INLIB.MFINAL
       INLIB.RFINAL
       CFINAL;

   ARRAY SEMEANS{*} SERR03V1-SERR03V&CMPNUM1. CP031SE ;
   ARRAY  SCORES{*} SCOR03V1-SCOR03V&CMPNUM1. Comp031;
   ARRAY  SIGNIF{*} SIG03V1-SIG03V&CMPNUM1.   CP03SIG1;
   ARRAY    NOBS {*} NOBS03V1-NOBS03V&CMPNUM1. CP03OBS1;
   ARRAY    NWGT {*} DEN03V1-DEN03V&CMPNUM1    CP03DEN1;
  cp03den1=0;
   DO I = 1 TO 6;   /*MJS 02/05/04*/
      SCORE  = SCORES{I};
      SEMEAN = SEMEANS{I};
      SIG    = SIGNIF{I};
      N_OBS  = NOBS{I};
      N_WGT  = NWGT{I};
      if i<6 then cp03den1+nwgt[i];
      BENEFIT = "Preventive Care";
      IF     I = 1 THEN BENTYPE = "Prenatal Care";
      ELSE IF I = 2 THEN BENTYPE = "Mammography";
      ELSE IF I = 3 THEN BENTYPE = "Pap Smear";
      ELSE IF I = 4 THEN BENTYPE = "Hypertension";
      ELSE IF I = 5 THEN BENTYPE = "Cholesterol";   /*MJS 02/05/04*/
      ELSE IF I = 6 THEN do; BENTYPE = "&YEAR"; score=score*100; end;
      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 CTREND;
   SET INLIB.CTREND; 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=cp03bmk1; adj2=cp01bmk1; 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 SCORE SIG N_OBS N_WGT);
    FORMAT MAJGRP $30.  REGION $15. REGCAT $26.
           BENEFIT $34. BENTYPE $50.;

    SET inlib.MTREND
        CTREND
        INLIB.RTREND;by majgrp;
/*
    if _n_=1 then do;
       adj1=tadj1;
       adj2=tadj2;
    end;
    retain adj1 adj2;
    score=100*((comp031*adj1/cp03bmk1)-(comp011*adj2/cp01bmk1));*/
    score=cmptrnd1;
    SIG= SIGCPTR1;
    N_OBS=DF_COMP1;
    N_WGT=NWGTC1;
    SEMEAN=.;
    BENTYPE="Trend";
    BENEFIT="Preventive Care";
    OUTPUT;
RUN;

DATA TREND2(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SIG);
  FORMAT MAJGRP $30.  REGION $15. REGCAT $26.
         BENEFIT $34. BENTYPE $50.;

  SET INLIB.MTREND;
  SCORE= TRNDBMK1;
  SIG=.;
  SEMEAN=.;
  REGION="Benchmark";
  REGCAT="Benchmark";
  BENTYPE="Trend";
  BENEFIT="Preventive Care";
  OUTPUT;
RUN;

DATA OUT.LOADMPR(KEEP=MAJGRP REGION REGCAT BENEFIT semean BENTYPE SCORE SIG
                     N_OBS N_WGT);
  SET BENCHMKS TREND1 TREND2 SCORES;
RUN;


PROC FREQ DATA=OUT.LOADMPR;
   WHERE BENTYPE="Trend";
   TABLES BENTYPE*REGION/MISSING LIST;
RUN;
```

14. ReportCards\MPR_Adult2003\TRENDMPR.SAS - Calculate Trend and Perform Significance tests on MPR Scores - Annual.

```
*****************************************************************
*  Project:   DoD Reporting and Analysis 8687-100
*  Program:   TRENDMPR.SAS
*  Author:    Chris Rankin
*  Date:      6/19/2000
*
*  Modified:  1) 02/21/2001
*                trend calculation changed
*             2) 01/29/2003 By Keith Rathbun, Chris Rankin: Updated to
*                  calculate trends based on 2000 to 2002.
*             3) 02/10/2004 By Mike Scott: Updated for 2003 Annual Report.
*
*  Purpose:   Calculate trends from 2000 to 2002
*  Output:    RTREND.SD2
*             MTREND.SD2
*             CTREND.SD2
*  Input:     RFINAL.SD2
*             CFINAL.SD2
*             MFINAL.SD2
*    Note:    Next program is loadmpr.sas
*****************************************************************;

OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 MLOGIC MPRINT;

LIBNAME   IN03   V612  ".";                                    /*MJS 02/05/04*/
LIBNAME   IN01   V612  "..\..\2001\ReportCards\MPR_Adult2001";  /*MJS 02/10/04*/
LIBNAME   OUT    V612  ".";
LIBNAME   LIBRARY  "..\..\..\data\fmtlib";


%LET COMPNUM=8;    /** number of variables      **/

**** 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 H99004=4
* 2. Enrollees w/mil PCM        XENR_PCM IN (2,6)  AND H99004=4
* 3. Enrollees w/civ PCM        XENR_PCM=3         AND H99004=4
* 4. Nonenrollees               XINSCOV IN (3,4,5)
* 5. Active duty                BFGROUPP=1
* 6. Active duty dependents     BFGROUPP=2
* 7. Retirees                   BFGROUPP IN (3,4)
* 8. All beneficiaries          ALL
*****************************************************************;

/*** macro to merge final datasets together and calculate trends ***/

%MACRO TRENDS(INDATA, OUTDATA);

  PROC SORT DATA=IN01.&INDATA;   /*MJS 02/05/04*/
    BY MAJGRP REGION REGCAT;
  RUN;

  PROC SORT DATA=IN03.&INDATA;   /*MJS 02/05/04*/
    BY MAJGRP REGION REGCAT;
  RUN;

  DATA OUT.&OUTDATA;
    MERGE IN03.&INDATA(IN=IN_03) IN01.&INDATA(IN=IN_01);   /*MJS 02/05/04*/
    BY MAJGRP REGION REGCAT;
    IF IN_03 & IN_01;
 /*** calculate trends in the composite benchmarks ***/

    ARRAY  BMK03{*} CP03BMK1 CP03BMK2;   /*MJS 02/10/04*/
    ARRAY  BMK01{*} CP01BMK1 CP01BMK2;
    ARRAY BMKTRND{*} TRNDBMK1 TRNDBMK2;
```

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```
      DO J=1 TO 2;
          IF BMK01{J} > 0 THEN BMKTRND{J}=100*(BMK03{J}-BMK01{J});   /*MJS 02/10/04*/
          ELSE BMKTRND{J}=.;
      END;
      DROP J;
  /*** note-- don't use adjusted scores ***/

      ARRAY SCORE03{*} PROP03V1-PROP03V&COMPNUM COMP031 COMP032;   /*MJS 02/10/04*/
      ARRAY SCORE01{*} PROP01V1-PROP01V&COMPNUM COMP011 COMP012;
      ARRAY  SERR03{*} SERR03V1-SERR03V&COMPNUM CP031SE  CP032SE;
      ARRAY  SERR01{*} SERR01V1-SERR01V&COMPNUM CP011SE  CP012SE;
      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 DEGFR03{*} DF03SCR1-DF03SCR&COMPNUM DF03_CP1 DF03_CP2;   /*MJS 02/10/04*/
      ARRAY DEGFR01{*} DF01SCR1-DF01SCR&COMPNUM DF01_CP1 DF01_CP2;
      ARRAY    DEGF{*} DFSCOR1-DFSCOR&COMPNUM DF_COMP1 DF_COMP2;
      ARRAY   DENOM{*} DENOMT1-DENOMT&COMPNUM DENOMTC1 DENOMTC2;
      ARRAY   DEN01{*} DEN01V1-DEN01V&COMPNUM CP01DEN1 CP01DEN2;   /*MJS 02/10/04*/
      ARRAY   DEN03{*} DEN03V1-DEN03V&COMPNUM CP03DEN1 CP03DEN2;
      ARRAY    NWGT{*} NWGT1-NWGT&COMPNUM NWGTC1 NWGTC2;

  /*** setup t statistics, degreees of freedom    ***/

      DO I=1 TO 10;
          IF SCORE01{I} GE 0 AND SCORE03{I} GE 0 THEN DO;   /*MJS 02/10/04*/
             IF SCORE01{I} > 0 THEN TREND{I}=100*(SCORE03{I}-SCORE01{I}); /*changed 2/21/2001*/
             ELSE TREND{I}=.;
             DENOM{I}= SERR01{I}**2+SERR03{I}**2;
           IF DENOM{I} > 0 THEN
               TSTAT{I}=(SCORE03{I}-SCORE01{I})/SQRT(DENOM{I});

             ELSE TSTAT{I}=.;
             DEGF{I}=MIN(DEGFR03{I},DEGFR01{I});   /*MJS 02/10/04*/
             NWGT{I}=MIN(DEN03{I},DEN01{I});
             IF DEGF{I}=0 THEN DEGF{I}=1;
             IF DEGF{I}IN (0, .) THEN
             PUT "MAJGRP=" MAJGRP "REGCAT=" REGCAT "REGION=" REGION
             "DEGFR01=" DEGFR01{I} "DEGFR03=" DEGFR03{I};   /*MJS 02/10/04*/
             PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
             IF TREND{I}=. THEN SIG{I}=.;
             ELSE IF TREND{I} NE . THEN DO;
                IF PVALUE{I} GE .05 THEN SIG{I}=0;
                IF PVALUE{I} < .05  THEN DO;
                    IF TSTAT{I} > 0 THEN SIG{I}=1;
                    IF TSTAT{I} < 0 & TSTAT{I} ne . THEN SIG{I}=-1;
                END;
             END;
          END;
      END;
      DROP I;


  RUN;

%MEND TRENDS;

%TRENDS(MFINAL, MTREND);
%TRENDS(RFINAL, RTREND);
%TRENDS(CFINAL, CTREND);
```

15.A. LOADWEB\FAKE.SAS - Generate the WEB layout/template file - Annual.

```
/**********************************************************************/
/* PROJECT:   8860 - 2002 Annual Survey                            */
/* PROGRAM:   FAKE.SAS                                             */
/* PURPOSE:   Generate Fake Data for Report Cards                 */
/* AUTHOR:    Mark A. Brinkley                                    */
/*                                                               */
/* MODIFIED: 1) July 2000 By Eric Schone to utilize CACRPT and CATREP */
/*              include files.                                    */
/*           2) January 2002 By Keith Rathbun: Updated to support the */
/*              2000 Annual HCSDB format.                         */
/*           3) January 2003 By Keith Rathbun: Updated to support the */
/*              2002 Annual HCSDB format.  Delete flu shot, increment */
/*              previous years by 1, added 2002.                 */
/*           4) February 2004 By Mike Scott: Updated for 2003 Annual */
/*              Report. Uncommented Flu Shot and changed it to   */
/*              Cholesterol.                                     */
/*                                                               */
/* INCLUDES: 1) CATREP.INC - Report Card Catchment Format Defns  */
/*                                                               */
/**********************************************************************/

LIBNAME OUT V612 '.';
LIBNAME IN  V612 '..\ReportCards\CAHPS_Adult2003\Data';  /*** Changed to group8 location for
revised cacsmpl KRR 02-05-2004 ***/
LIBNAME LIBRARY V612 '..\..\DATA\FMTLIB';
OPTIONS COMPRESS=YES NOFMTERR;

DATA TEMP;
   SET IN.GROUP8(KEEP=XREGION CACSMPL);   /*KRR 02/05/04*/
RUN;

****************************************************************************
* CACSMPL FORMAT DEFINITIONS FOR REPORT CARD USE FACILITY NAME.
****************************************************************************;
PROC FORMAT;
%INCLUDE "CATREP.INC";

PROC FORMAT;
   VALUE REG
      1  = 'Region 1'
      2  = 'Region 2'
      3  = 'Region 3'
      4  = 'Region 4'
      5  = 'Region 5'
      6  = 'Region 6'
      8  = 'Region 7/8'
      9  = 'Region 9'
      10 = 'Region 10'
      11 = 'Region 11'
      12 = 'Region 12'
      13 = 'Europe'
      14 = 'Asia'
      15 = 'Latin America'
      16 = 'Alaska';
RUN;

proc freq;
   table xregion*cacsmpl/ noprint out=temp;
run;

data temp;
   length cafmt $26;
   set temp end=last; by xregion;
   caf=0;
   where cacsmpl ne 9999;
   if first.xregion & xregion ne 7 then do;
      cafmt=put(xregion,reg.);
      output;
   end;
   cafmt=put(cacsmpl,catrep.);
   caf=1;
```

```
   if count>1 & cafmt ne 'INV' then output;
   if last then do;
      xregion=0;
      caf=0;
      cafmt='Benchmark';
      output;
      caf=1;
      cafmt='CONUS MHS';
      output;
   end;
run;

proc sort; by xregion caf cafmt; run;

data temp;
   set temp end=last;
   start=_n_; label=cafmt; type='N'; fmtname='ROWMAT';
   if last then call symput('x',_n_);
run;

proc format cntlin=temp;
proc print data=temp;

PROC FORMAT;
  VALUE BEN
  0 = 'Total' /*** Added 01-09-2002 by KRR ***/
  1 = 'Getting Needed Care'
  2 = 'Getting Care Quickly'
  3 = 'Courteous and Helpful Office Staff'
  4 = 'How Well Doctors Communicate'
  5 = 'Customer Service'
  6 = 'Claims Processing'
  7 = 'Health Plan'
  8 = 'Health Care'
  9 = 'Primary Care Manager'
 10 = 'Specialty Care'
 11 = 'Preventive Care';

  VALUE MAJOR
  1 = "Prime Enrollees            "
  2 = "Enrollees with Military PCM"
  3 = "Enrollees with Civilian PCM"
  /**4 = "Non-enrolled Beneficiaries " CHANGED MAB 1-25-2002**/
  4 = "Standard/Extra Users       "
  5 = "Active Duty                "
  6 = "Active Duty Dependents     "
  7 = "Retirees and Dependents    "
  /**8 = "All Beneficiaries          "  CHANGED MAB 1-25-2002**/
  8 = "All Users                  "  ;

RUN;

DATA FAKE;

  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE I K;

  LENGTH MAJGRP $  30
         REGION $  15
         REGCAT $  26
         BENTYPE $ 50;

  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;

        IF REGCAT="Benchmark" THEN REGION="Benchmark";
        ELSE IF REGCAT="CONUS MHS" THEN REGION="CONUS MHS";
        ELSE IF UPCASE(SUBSTR(REGCAT,1,6))="REGION" OR
                REGCAT="Alaska" OR
```

```
          REGCAT="Europe" OR
          REGCAT="Asia" OR
          REGCAT="Latin America" THEN REGION=REGCAT;

DO K = 0 TO 11; *Start with 0 (total) 11 Composites 01-09-2002 - KRR;

    BENEFIT=PUT(K,BEN.);


    /*** Changed 01-07-2003 KRR  - Order years as 1999/2000/2001/2002 ***/

    IF K=0 THEN DO;          /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=1 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Problems Getting Personal Doctor/Nurse"; OUTPUT;
       BENTYPE="Problems Getting Referral to Specialist"; OUTPUT;
       BENTYPE="Problems Getting Necessary Care"; OUTPUT;
       BENTYPE="Delays in Care while Awaiting Approval"; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=2 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Advice over Telephone"; OUTPUT;
       BENTYPE="Wait for Routine Visit"; OUTPUT;
       BENTYPE="Wait for Urgent Care"; OUTPUT;
       BENTYPE="Wait More than 15 Minutes Past Appointment"; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=3 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Courteous and Respectful"; OUTPUT;
       BENTYPE="Helpful"; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=4 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Listens Carefully            "; OUTPUT;
       BENTYPE="Explains so You can Understand"; OUTPUT;
       BENTYPE="Shows Respect                 "; OUTPUT;
       BENTYPE="Spends Time with You          "; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=5 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Problem Finding/Understanding Written Material"; OUTPUT;
       BENTYPE="Problem Getting Help from Customer Service"; OUTPUT;
       BENTYPE="Problem with Paperwork"; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=6 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="Claims Handled in a Reasonable Time"; OUTPUT;
       BENTYPE="Claims Handled Correctly"; OUTPUT;
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
       BENTYPE="2002"; OUTPUT;
       BENTYPE="2003"; OUTPUT;
       BENTYPE="Trend"; OUTPUT;
    END;
    ELSE IF K=7 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
       BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
```

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```
                    BENTYPE="2002"; OUTPUT;
                    BENTYPE="2003"; OUTPUT;
                    BENTYPE="Trend"; OUTPUT;
                END;
                ELSE IF K=8 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
                    BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
                    BENTYPE="2002"; OUTPUT;
                    BENTYPE="2003"; OUTPUT;
                    BENTYPE="Trend"; OUTPUT;
                END;
                ELSE IF K=9 THEN DO;   /*** Updated 01-07-2003 by KRR ***/
                    BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
                    BENTYPE="2002"; OUTPUT;
                    BENTYPE="2003"; OUTPUT;
                    BENTYPE="Trend"; OUTPUT;
                END;
                ELSE IF K=10 THEN DO;  /*** Updated 01-07-2003 by KRR ***/
                    BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
                    BENTYPE="2002"; OUTPUT;
                    BENTYPE="2003"; OUTPUT;
                    BENTYPE="Trend"; OUTPUT;
                END;
                ELSE IF K=11 THEN DO;  /*** Updated 01-07-2003 by KRR ***/
                    BENTYPE="Mammography  "; OUTPUT;
                    BENTYPE="Pap Smear    "; OUTPUT;
                    BENTYPE="Hypertension "; OUTPUT;
                    BENTYPE="Cholesterol  "; OUTPUT;   /*MJS 02/05/04*/
                    BENTYPE="Prenatal Care"; OUTPUT;
                    BENTYPE="2001"; OUTPUT;   /*MJS 02/05/04*/
                    BENTYPE="2002"; OUTPUT;
                    BENTYPE="2003"; OUTPUT;
                    BENTYPE="Trend"; OUTPUT;
                END;
            END;      **  EndDo for total and 11 composites  **;
        END;          **  EndDo for Region/catchment          **;
    END;              **  EndDo for 8 Major groups            **;
RUN;

/*** Need to clean up data ***/
DATA OUT.FAKE;
  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;

PROC FREQ;
  TABLES MAJGRP REGION REGCAT BENTYPE BENEFIT;
RUN;
```

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15.B. LOADWEB\MERGFINL.SAS - Merge the final CAHPS and MPR Scores Databases into the WEB layout - Annual.

```
*****************************************************************************
*
* PROGRAM:  MERGFINL.SAS
* TASK:     2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* 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) 01/09/2002 BY KEITH RATHBUN: Updated to support the 2000
*              annual HCSDB.
*           2) 01/07/2002 BY KEITH RATHBUN: Updated to support the 2002
*              annual HCSDB.
*           3) 02/08/2004 BY CHRIS RANKIN:  Updated to support the 2003
*              annual HCSDB.
*
* INPUTS:   1) MPR and CAHPS Individual and Composite data sets with adjusted
*              scores, and benchmark data for 1999-2002 DoD HCS.
*              - LOADMPR.SD2  - 1999-2003 MPR Scores Databases
*              - LOADCAHP.SD2 - 1999-2003 CAHPS Scores Databases
*              - BENCHA04.SD2 - 1999-2003 CAHPS Benchmark Databases
*              - FAKE.SD2     - WEB Layout in Column order
*
* OUTPUT:   1) MERGFINL.SD2 - Combined Scores Database in WEB layout
*
* NOTES:
*
* 1) The following steps need to be run prior to this
*    program (2001,2002,2003):
*  - 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
*  - BENCHA01-04.SAS - Convert Benchmark Scores into WEB layout
*  - LOADCAHP.SAS     - Convert CAHPS Scores Database into WEB layout
*
* 2) The output file (MERGFINL.SD2) will be run through the
*    MAKEHTML.SAS program to generate the WEB pages.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN01  V612 ".";
LIBNAME IN02  V612 ".";
LIBNAME IN03  V612 "..\2002\LOADWEB";
LIBNAME IN04  V612 "..\2001\LOADWEB";
LIBNAME IN05  V612 "..\REPORTCARDS\MPR_ADULT2003";
LIBNAME IN06  V612 "..\2002\REPORTCARDS\MPR_ADULT2002";
LIBNAME IN07  V612 "..\2001\REPORTCARDS\MPR_ADULT2001";
LIBNAME IN08  V612 "..\BENCHMARK\DATA";
LIBNAME IN09  V612 "..\2002\BENCHMARK\DATA";
LIBNAME IN10  V612 "..\2001\BENCHMARK\DATA";
LIBNAME OUT   V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************
* 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));
   KEEP KEY ORDER;
RUN;

PROC SORT DATA=ORDER; BY KEY; RUN;
```

```
    ****************************************************************************
    * Merge the Scores Databases
    ****************************************************************************;
    DATA MERGFINL;
        SET IN02.LOADCAHP (IN=INCAHP03)
            IN03.LOADCAHP (IN=INCAHP02)
            IN04.LOADCAHP (IN=INCAHP01)
            IN05.LOADMPR  (IN=INMPR03)
            IN06.LOADMPR  (IN=INMPR02)
            IN07.LOADMPR  (IN=INMPR01)
            IN08.BENCHA04 (IN=INBEN03)
            IN09.BENCHA04 (IN=INBEN02)
            IN10.BENCHA04 (IN=INBEN01);
        SVCAHP03 = INCAHP03;
        SVCAHP02 = INCAHP02;
        SVCAHP01 = INCAHP01;
        SVMPR03  = INMPR03 ;
        SVMPR02  = INMPR02 ;
        SVMPR01  = INMPR01 ;
        SVBEN03  = INBEN03 ;
        SVBEN02  = INBEN02 ;
        SVBEN01  = INBEN01 ;
        LENGTH KEY $200;
        IF MAJGRP = "All Beneficiaries" THEN MAJGRP = "All Users";
        IF MAJGRP = "Non-enrolled Beneficiaries" THEN MAJGRP = "Standard/Extra Users";
        KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
              UPCASE(TRIM(MAJGRP))  ||
              UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
        IF SCORE = . THEN DELETE;
        IF TRIM(REGCAT) = "INV" THEN DELETE;
        ****************************************************************************
        * Keep only the composites from 2001 and 2002.
        ****************************************************************************;
        IF ( INBEN02 OR  INBEN01 OR
             INCAHP02 OR INCAHP01 OR
              INMPR02 OR  INMPR01) THEN DO;
           IF BENTYPE IN ("2001","2002") THEN OUTPUT; /* CDR 2/08/2004 */
        END;
        ELSE OUTPUT;

    RUN;


    PROC SORT DATA=MERGFINL; BY KEY; RUN;

    ****************************************************************************
    * Append ORDERing variable to the merged Scores database file
    ****************************************************************************;
    DATA MERGFINL 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 SVCAHP03 = 1 THEN SOURCE = "CAHPS 2003     ";
        IF SVCAHP02 = 1 THEN SOURCE = "CAHPS 2002     ";
        IF SVCAHP01 = 1 THEN SOURCE = "CAHPS 2001     ";
        IF SVMPR03  = 1 THEN SOURCE = "MPR 2003       ";
        IF SVMPR02  = 1 THEN SOURCE = "MPR 2002       ";
        IF SVMPR01  = 1 THEN SOURCE = "MPR 2001       ";
        IF SVBEN03  = 1 THEN SOURCE = "BENCHMARK 2003";
        IF SVBEN02  = 1 THEN SOURCE = "BENCHMARK 2002";
        IF SVBEN01  = 1 THEN SOURCE = "BENCHMARK 2001";

        IF IN1 AND NOT IN2 THEN OUTPUT out.MISSING; *Missing from layout;
        IF IN1 AND ORDER NE . THEN OUTPUT MERGFINL;
    RUN;

    ****************************************************************************
    * Reorder file according to WEB layout
    ****************************************************************************;
```

```
PROC SORT DATA=MERGFINL 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 "2003 DOD Health Survey Scores/Report Cards (8860-410)";
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.SD2 - Merged Final Scores Database for input to MAKEHTML.SAS";

TITLE5 "MERGFINL.SD2 Data source counts";
PROC FREQ DATA=OUT.MERGFINL;
TABLES SOURCE FLAG

  SVCAHP03 SVCAHP02 SVCAHP01
  SVMPR03  SVMPR02  SVMPR01
  SVBEN03  SVBEN02  SVBEN01


  SVCAHP03 * SVCAHP02 * SVCAHP01 *
  SVMPR03  * SVMPR02  * SVMPR01  *
  SVBEN03  * SVBEN02  * SVBEN01

 /MISSING LIST;
RUN;

TITLE5 "MERGFINL.SD2 Data attribute counts";
PROC FREQ DATA=OUT.MERGFINL;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;

TITLE5 "LAYONLY.SD2 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.SD2)";
PROC PRINT DATA=out.MISSING;
VAR MAJGRP REGION REGCAT BENTYPE BENEFIT;
RUN;
```

16.   LOADWEB\CONUS_Q.SAS - Generate CAHPS CONUS scores and perform significance tests - Annual.

```
*****************************************************************************
*
*  PROGRAM:   CONUS_Q.SAS
*  TASK:      ANNUAL DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
*  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 funtionality.
*
*  MODIFIED:  1) 01/07/2002 BY KEITH RATHBUN, Updated for 2000 annual consumer
*                reports.
*             2) 01/27/2003 BY KEITH RATHBUN, Updated for 2002 annual consumer
*                reports.
*             3) 02/08/2004 BY CHRIS RANKIN, Updated for 2003 annual consumer
*                reports.
*
*   INPUTS:   1) MERGFINL.SD2 - Scores Database in WEB Layout
*             2) FAKE.SD2 - Scores Database WEB Layout
*             3) CONUS_A.SD2 - Previous years Combined CAHPS/MPR Scores Database in WEB layout
*
*   OUTPUT:   1) CONUS_Q.SD2 - Combined CAHPS/MPR Scores Database in WEB layout
*             2) LT30Q.SD2 - Records with <= 30 observations
*
*    NOTES:
*
* 1) The following steps need to be run prior to this program:
*    - STEP1Q.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
*    - MERGFINL.SAS - Merge the final CAHPS and MPR Scores Databases
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN1 V612 ".";
LIBNAME OUT V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;


*****************************************************************************
*****************************************************************************
*
* Process Macro Input Parameters:
*
* 1) BENTYPE = Benefit Type
* 2) MAJGRP = Major Group
* 3) TYPE = INDIVIDUAL or COMPOSITE
* 4) BENEFIT = COMPOSITE Benefit Type
*
*****************************************************************************
*****************************************************************************;
* Set up empty template file for data merge purposes and set first time flag
*****************************************************************************;
%LET DSN = MERGFINL;

DATA INIT;
   SET IN1.&DSN;
   DELETE;
RUN;
%LET FLAG = 0;

%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
             REGION NOT IN("Benchmark","CONUS MHS") AND
             REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %IF "&TYPE" = "COMPOSITE" %THEN %DO;
       WHERE BENTYPE = &BENTYPE AND "&MAJGRP" = MAJGRP AND REGION = REGCAT AND
             BENEFIT = "&BENEFIT" AND
```

```
                  REGION NOT IN("Benchmark","CONUS MHS") AND
                  REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %DO;
       PUT "ERROR: Invalid Type = &TYPE";
   %END;
RUN;

DATA TEMP;
   SET TEMP END=FINISHED;
   IF _N_ = 1 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;
   *************************************************************************
   * Skip over the Non-CONUS
   *************************************************************************;
   IF REGION NOT IN("Asia","Europe","Latin America") THEN DO;
      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;
   END;
   IF FINISHED THEN GOTO FINISHED;
   RETURN;

KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT SIG SCORE SEMEAN N_OBS N_WGT
     FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;

FINISHED:
   SCORE   = SUMSCOR1/SUMWGT1;
   SEMEAN  = SQRT(SUMSE2)/SUMWGT1;
   N_OBS   = N_OBS1;
   N_WGT   = SUMWGT1;
   SOURCE  = "CONUS";
   FLAG    = "CONUS";
   REGION  = "CONUS MHS";
   REGCAT  = "CONUS MHS";
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
   OUTPUT;
RUN;

%IF &FLAG = 0 %THEN %DO;
   DATA FINAL;
      SET INIT TEMP;
   RUN;
%END;
%ELSE %DO;
   DATA FINAL;
      SET FINAL TEMP;
   RUN;
%END;
%LET FLAG = 1;

%MEND;

*****************************************************************************
* Create CONUS for Active Duty - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Active Duty,
TYPE=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 and Respectful                   ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment  ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Active Duty Dependents - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Active Duty Dependents,
TYPE=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 and Respectful                   ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment  ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Enrollees with Civilian PCM - Individual
*****************************************************************************;
```

```
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Enrollees with Civilian
PCM, TYPE=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 and Respectful                   ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Enrollees with Military PCM - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Enrollees with Military
PCM, TYPE=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 and Respectful                   ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval     ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                         ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);


******************************************************************************
* Create CONUS for Standard/Extra Users - Individual
******************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled Correctly                     ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time          ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous and Respectful                     ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval       ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service   ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                                ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You                         ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care                         ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Standard/Extra Users,
TYPE=INDIVIDUAL);


******************************************************************************
* Create CONUS for Prime Enrollees - Individual
******************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Prime Enrollees,
TYPE=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 and Respectful                     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service   ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for Retirees and Dependents - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Retirees and Dependents,
TYPE=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 and Respectful                   ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);

*****************************************************************************
* Create CONUS for All Users - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled Correctly                   ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled in a Reasonable Time        ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous and Respectful                   ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Shows Respect                              ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Spends Time with You                       ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Urgent Care                       ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment  ,MAJGRP=All Users,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=All Users,
TYPE=INDIVIDUAL);


*****************************************************************************
* Process Annual (2001,2002,2003) CONUS Composites
*****************************************************************************;
%MACRO ANNUAL;
%DO PERIOD = 2001 %TO 2003;           /* CDR 2/08/2004 */
*****************************************************************************
* Create CONUS for Claims Processing - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                   , TYPE=COMPOSITE,BENEFIT=Claims
Processing);


*****************************************************************************
* Create CONUS for Courteous and Helpful Office Staff - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                   , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);


*****************************************************************************
* Create CONUS for Customer Service - Annual
```

```
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                   , TYPE=COMPOSITE,BENEFIT=Customer
Service);

******************************************************************************
* Create CONUS for Getting Care Quickly - Annual
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                   , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);

******************************************************************************
* Create CONUS for Getting Needed Care - Annual
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                   , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);

******************************************************************************
* Create CONUS for Health Care - Annual
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users        , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Health
Care);
```

```
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                  , TYPE=COMPOSITE,BENEFIT=Health
Care);


*****************************************************************************
* Create CONUS for Health Plan - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users       , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                  , TYPE=COMPOSITE,BENEFIT=Health
Plan);


*****************************************************************************
* Create CONUS for How Well Doctors Communicate - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users       , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                  , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);


*****************************************************************************
* Create CONUS for Primary Care Manager - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users       , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                  , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);


*****************************************************************************
* Create CONUS for Specialty Care - Annual
*****************************************************************************;
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Specialty
Care);
```

```
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Standard/Extra Users      , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Prime Enrollees           , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD", MAJGRP=All Users                 , TYPE=COMPOSITE,BENEFIT=Specialty
Care);

%END; * END DO FOR 2001 TO 2003;
%MEND ANNUAL;
%ANNUAL;

*****************************************************************************
* 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_;
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));

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);
   SET IN1.&DSN;
   WHERE REGION = "Benchmark" AND SVMPR01=0 AND SVMPR02=0 AND SVMPR03=0; /*CDR 2/08/2004*/
RUN;
Data abnchmrk(keep=benefit bentype ascore);
set benchmrk;
where upcase(majgrp)='ALL USERS';
rename score=ascore;
proc sort; by benefit bentype;
proc sort data=benchmrk; by benefit bentype;
data benchmrk;
merge benchmrk abnchmrk; by benefit bentype;

PROC SORT DATA=BENCHMRK; BY MAJGRP BENEFIT BENTYPE; RUN;

PROC SORT DATA=FINAL; BY KEY; RUN;

DATA CONUS_Q;
   MERGE FINAL(IN=IN1) FAKE(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;

   TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;
   REGION = "CONUS MHS";
   REGCAT = "CONUS MHS";
```

```
      KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
            UPCASE(TRIM(MAJGRP))  ||
            UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
      SOURCE = "CONUS_Q";
      FLAG   = "CONUS_Q";
      score=score+ascore-bscore;
      IF SIN;
   RUN;
   PROC SORT DATA=SIGTEST1; BY KEY; RUN;


   ******************************************************************************
   * Extract CAHPS scores to perform significance tests
   *****************************************************************************;
   DATA CAHPS MPR;
      SET IN1.&DSN;
      ******************************************************************************
      * Significance tests have already been performed for MPR scores,
      * so remove from file.
      *****************************************************************************;
      /* CDR 2/08/2004 */

      IF SVMPR01 = 1|svmpr02=1|svmpr03=1 THEN OUTPUT MPR;
      IF SVMPR01 = 0 & svmpr02 = 0 & svmpr03 = 0 THEN OUTPUT CAHPS;
   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);
      TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
      SIG = 0;
      IF N_OBS >= 30 AND TEST < 0.05 THEN SIG = 1;
      IF SCORE < BSCORE THEN SIG = -SIG;
      IF SIN;
      score=score+ascore-bscore;
   RUN;
   PROC SORT DATA=SIGTEST2; BY KEY; RUN;

   PROC SORT DATA=MPR; BY KEY; RUN;


   ******************************************************************************
   * Combine previously created records with the new file
   *****************************************************************************;
   DATA COMBINE OUT.LT30Q;
      SET SIGTEST1 SIGTEST2 MPR;
      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.LT30Q;
      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;
   SET FAKEONLY COMBINE;
   BY KEY;
   ***************************************************************************
   * Convert CAHPS Composites and Individual to 1-100 scale.  Note that
   * preventive care, and scores from previous quarters have already been
   * converted to 1-100 scale.  The below if condition will need to have the
   * following condition added for Q4:
   * AND BENTYPE NE "July, 2000 to June, 2001".
   ***************************************************************************;
   IF BENEFIT NE "Preventive Care" /*AND
      BENTYPE NOT IN ("1998","1999","2000")*/
   THEN SCORE = SCORE*100;
RUN;

PROC SORT DATA=CONUS_Q OUT=OUT.CONUS_Q; BY ORDER; RUN;

TITLE1 "Annual 2003 DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: CONUS_Q.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MERGFINL.SD2 - Scores Database in WEB Layout";
TITLE4 "Program Outputs: CONUS_Q.SD2 - CONUS Scores Database in WEB layout";

PROC FREQ;
TABLES SIG FLAG SOURCE BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

17. LOADWEB\TOTAL_A.SAS - Calculate CAHPS total scores and perform significance tests - Annual.

```
*****************************************************************************
*
*  PROGRAM:  TOTAL_A.SAS
*  TASK:     Annual DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
*  PURPOSE:  Generate TOTAL scores and perform significance tests.
*
*  WRITTEN:  12/15/2000 BY KEITH RATHBUN
*
*  MODIFIED: 1) May 2001 BY ERIC SCHONE, Modified calculations for
*               Total Score.
*            2) February 2003 BY MIKE SCOTT, Added code to change "Primary Care
*               Manager" in BENEFIT to "Personal Doctor".
*            3) February 2004 BY CHRIS RANKIN, Updated for 2003 annual consumer
*               reports.
*
*   INPUTS:  1) CONUS_Q.SD2 - Scores Database in WEB Layout
*            2) FAKEQ.SD2 - Scores Database WEB Layout
*            3) FACTCOMP.SD2 - Total Scores (Part 1)
*
*   OUTPUT:  1) TOTAL_A.SD2 - Combined CAHPS/MPR/TOTAL 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 1-8
*    - COMPOSIT.SAS - Calculate composite adjusted scores for group 1-8
*    - MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases
*    - CONUS_Q.SAS  - Generate CAHPS CONUS scores and perform significance tests.
*    - FACTCOMP.SAS - Calculate total scores (Part 1)
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN1  V612 ".";
LIBNAME OUT  V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*****************************************************************************
*****************************************************************************
*
* Process Macro Input Parameters:
*
* 1) MAJGRP = Major Group
* 2) REGION = Region
*
*****************************************************************************
*****************************************************************************;
* Set up empty template file for data merge purposes and set first time flag
*****************************************************************************;
%LET PERIOD = 2003;  /* CDR 2/08/2004 */
%LET DSN = CONUS_Q;

DATA INIT;
   SET IN1.&DSN;
   DELETE;
RUN;

PROC SORT DATA=IN1.FACTCOMP OUT=FACTCOMP; BY LAB; RUN;

PROC CONTENTS DATA=INIT;
TITLE 'CONUS_Q';
RUN;

PROC CONTENTS DATA=FACTCOMP;
TITLE 'FACTCOMP';
RUN;

%LET FLAG = 0;

%MACRO PROCESS(MAJGRP=, REGION=);
```

```
DATA TEMP(DROP=SUMSCOR1 SUMWGT1 SUMSE2);
   SET IN1.&DSN;
   WHERE ("&MAJGRP" = MAJGRP  AND
          ("&REGION" = REGION or region = "CONUS MHS") AND
          "&PERIOD" = BENTYPE AND
           BENEFIT NE 'Total');
RUN;

PROC SORT; BY BENEFIT REGION; RUN;

DATA TEMP;
   SET TEMP; BY BENEFIT REGION;
   RETAIN CSORE SWGT 0;
   IF FIRST.BENEFIT & REGION='CONUS MHS' THEN DO;
      CSORE = SCORE;
      SWGT = N_WGT;
   END;
RUN;

PROC SORT; BY BENEFIT DESCENDING REGION; RUN:

DATA TEMP(DROP=TSORE);
   SET TEMP; BY BENEFIT;
   RETAIN TSORE TWGT 0;
   IF FIRST.BENEFIT & REGION='CONUS MHS' THEN DO;
      TSORE = SCORE ;
      TWGT = N_WGT;
   END;
   IF REGION = "&REGION" THEN DO;
      if csore = 0 & swgt = 0 then do;
         CSORE = TSORE;
         SWGT = TWGT;
       end;
      SIGMA = SQRT(CSORE*(100-CSORE));
      OUTPUT;
   END;
RUN;

PROC SORT; BY BENEFIT; RUN;

DATA TEMP;
   MERGE TEMP FACTCOMP(RENAME=(LAB=BENEFIT)); BY BENEFIT;
   IF BENEFIT = 'Preventive Care' THEN VAR = 1/11;
RUN;
proc sort; by regcat;
DATA TEMP;
   SET TEMP; by regcat;
   IF first.regcat THEN DO;
      SUMSCOR1 = 0;    RETAIN SUMSCOR1;
      SUMWGT1 = 0;     RETAIN SUMWGT1;
      SUMSE2 = 0;      RETAIN SUMSE2;
      SUMWGT2 = 0;     RETAIN SUMWGT2;
      N_OBS1 = 0;      RETAIN N_OBS1;
      TSIG = 0; RETAIN TSIG;
   END;
   IF SCORE  NE . AND N_WGT NE . AND N_OBS > 29 THEN
      SUMSCOR1 = SUMSCOR1 + (VAR/SIGMA)*(SCORE);
   ELSE SUMSCOR1 = SUMSCOR1+(VAR/SIGMA)*(CSORE);
   SUMWGT1 = SUMWGT1  + VAR*SWGT;
   TSIG = TSIG+SIGMA;
   IF SEMEAN NE . AND N_WGT NE . & N_OBS > 29 THEN SUMSE2 = SUMSE2 + (VAR*SEMEAN*SWGT)**2;
   IF N_OBS  NE . THEN N_OBS1 + N_OBS;
   IF last.regcat THEN GOTO FINISHED;
   RETURN;

KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT SIG SCORE SEMEAN N_OBS N_WGT
     FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;

FINISHED:
   SCORE   = TSIG*SUMSCOR1/(11);
   SEMEAN  = SQRT(SUMSE2)/SUMWGT1;
   N_OBS   = N_OBS1;
   N_WGT   = SUMWGT1;
   SOURCE  = "TOTAL";
```

```
      FLAG    = "TOTAL";
      BENEFIT = "Total";
      KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
            UPCASE(TRIM(MAJGRP)) ||
            UPCASE(TRIM(REGCAT)) || UPCASE(TRIM(REGION));
      OUTPUT;
   RUN;

   %IF &FLAG = 0 %THEN %DO;
      DATA FINAL;
         SET INIT TEMP;
      RUN;
   %END;
   %ELSE %DO;
      DATA FINAL;
         SET FINAL TEMP;
      RUN;
   %END;

   %LET FLAG = 1;

%MEND PROCESS;

*****************************************************************************
* Create TOTAL for Active Duty
*****************************************************************************;
%PROCESS(MAJGRP=Active Duty, REGION=Region 1       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 2       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 3       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 4       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 5       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 6       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 7/8     );
%PROCESS(MAJGRP=Active Duty, REGION=Region 9       );
%PROCESS(MAJGRP=Active Duty, REGION=Region 10      );
%PROCESS(MAJGRP=Active Duty, REGION=Region 11      );
%PROCESS(MAJGRP=Active Duty, REGION=Region 12      );
%PROCESS(MAJGRP=Active Duty, REGION=Europe         );
%PROCESS(MAJGRP=Active Duty, REGION=Asia           );
%PROCESS(MAJGRP=Active Duty, REGION=Latin America  );
%PROCESS(MAJGRP=Active Duty, REGION=Alaska         );
%PROCESS(MAJGRP=Active Duty, REGION=CONUS MHS      );

*****************************************************************************
* Create TOTAL for Active Duty Dependents
*****************************************************************************;
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 1        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 2        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 3        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 4        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 5        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 6        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 7/8      );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 9        );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 10       );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 11       );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Region 12       );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Europe          );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Asia            );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Latin America   );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=Alaska          );
%PROCESS(MAJGRP=Active Duty Dependents, REGION=CONUS MHS       );

*****************************************************************************
* Create TOTAL for Enrollees with Civilian PCM
*****************************************************************************;
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 1       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 2       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 3       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 4       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 5       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 6       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 7/8     );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 9       );
```

```
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 10       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 11       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Region 12       );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Europe          );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Asia            );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Latin America   );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=Alaska          );
%PROCESS(MAJGRP=Enrollees with Civilian PCM, REGION=CONUS MHS        );


*******************************************************************************
* Create TOTAL for Enrollees with Military PCM - Individual
*******************************************************************************;
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 1        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 2        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 3        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 4        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 5        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 6        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 7/8      );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 9        );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 10       );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 11       );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Region 12       );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Europe          );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Asia            );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Latin America   );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=Alaska          );
%PROCESS(MAJGRP=Enrollees with Military PCM, REGION=CONUS MHS        );


*******************************************************************************
* Create TOTAL for Standard/Extra Users
*******************************************************************************;
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 1        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 2        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 3        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 4        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 5        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 6        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 7/8      );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 9        );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 10       );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 11       );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Region 12       );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Europe          );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Asia            );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Latin America   );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=Alaska          );
%PROCESS(MAJGRP=Standard/Extra Users, REGION=CONUS MHS        );


*******************************************************************************
* Create TOTAL for Prime Enrollees
*******************************************************************************;
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 1                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 2                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 3                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 4                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 5                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 6                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 7/8               );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 9                 );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 10                );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 11                );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Region 12                );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Europe                   );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Asia                     );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Latin America            );
%PROCESS(MAJGRP=Prime Enrollees, REGION=Alaska                   );
%PROCESS(MAJGRP=Prime Enrollees, REGION=CONUS MHS                 );


*******************************************************************************
* Create TOTAL for Retirees and Dependents
*******************************************************************************;
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 1         );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 2         );
```

```
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 3            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 4            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 5            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 6            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 7/8          );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 9            );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 10           );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 11           );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Region 12           );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Europe              );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Asia                );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Latin America       );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=Alaska              );
%PROCESS(MAJGRP=Retirees and Dependents, REGION=CONUS MHS           );


****************************************************************************
* Create TOTAL for All Users
****************************************************************************;
%PROCESS(MAJGRP=All Users, REGION=Region 1                  );
%PROCESS(MAJGRP=All Users, REGION=Region 2                  );
%PROCESS(MAJGRP=All Users, REGION=Region 3                  );
%PROCESS(MAJGRP=All Users, REGION=Region 4                  );
%PROCESS(MAJGRP=All Users, REGION=Region 5                  );
%PROCESS(MAJGRP=All Users, REGION=Region 6                  );
%PROCESS(MAJGRP=All Users, REGION=Region 7/8                );
%PROCESS(MAJGRP=All Users, REGION=Region 9                  );
%PROCESS(MAJGRP=All Users, REGION=Region 10                 );
%PROCESS(MAJGRP=All Users, REGION=Region 11                 );
%PROCESS(MAJGRP=All Users, REGION=Region 12                 );
%PROCESS(MAJGRP=All Users, REGION=Europe                    );
%PROCESS(MAJGRP=All Users, REGION=Asia                      );
%PROCESS(MAJGRP=All Users, REGION=Latin America             );
%PROCESS(MAJGRP=All Users, REGION=Alaska                    );
%PROCESS(MAJGRP=All Users, REGION=CONUS MHS                 );


****************************************************************************
* 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.FAKE;
   SIG = .;
   SCORE = .;
   ORDER = _N_;
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));

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 REGION = "Benchmark" AND SVMPR01 = 0 & svmpr02 = 0 & svmpr03 = 0; /* CDR 2/08/2003 */
RUN;
PROC SORT DATA=BENCHMRK; BY MAJGRP BENEFIT BENTYPE; RUN;

PROC SORT DATA=FINAL; BY KEY; RUN;

DATA TOTAL_A;
   MERGE FINAL(IN=IN1) FAKEQ(IN=IN2);
   BY KEY;
   IF IN1;
RUN;
PROC SORT DATA=TOTAL_A; BY MAJGRP BENEFIT BENTYPE; RUN;

****************************************************************************
* Perform significance tests for TOTAL scores
****************************************************************************;
```

```
DATA SIGTESTS;
   MERGE TOTAL_A(IN=SIN) BENCHMRK(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
   BY MAJGRP BENEFIT BENTYPE;

   TEMP = (SCORE-BSCORE)/SQRT(BSEMEAN**2+SEMEAN**2);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;

   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
   SOURCE = "TOTAL_A";
   FLAG   = "TOTAL_A";
   IF SIN;
RUN;
PROC SORT DATA=SIGTESTS; BY KEY; RUN;

PROC SORT DATA=IN1.&DSN OUT=PREVIOUS; BY KEY; RUN;

******************************************************************************
* Combine previously created records with the new file
******************************************************************************;
DATA COMBINE OUT.LT30Q;
   SET PREVIOUS SIGTESTS;
   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.LT30Q;
   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 TOTAL_A;
   SET FAKEONLY COMBINE;
   BY KEY;
   IF BENEFIT = "Total" THEN DO;
      SIG = 0;
      IF REGION = "Benchmark" OR MAJGRP = "Benchmark" THEN SCORE = .A;
   END;
RUN;

PROC SORT DATA=TOTAL_A OUT=OUT.TOTAL_A; BY ORDER; RUN;

TITLE1 "Annual 2003 DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: TOTAL_A.SAS By Keith Rathbun";
TITLE3 "Program Inputs: FAKEQ.SD2, FACTCOMP.SD2, CONUS_Q.SD2 - CONUS Scores Database in WEB
Layout";
TITLE4 "Program Outputs: TOTAL_A.SD2 - TOTAL Scores Database in WEB layout";

PROC FREQ;
TABLES SIG FLAG SOURCE BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

18. LOADWEB\TREND_A.SAS - Calculate Trends for CAHPS scores - Annual.

```
********************************************************************************
*
* PROGRAM:  TREND_A.SAS
* TASK:     2003 DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:  Add TREND records to Scores database.
*
* WRITTEN:  06/28/2000 BY KEITH RATHBUN
*
* MODIFIED: 1) 02/21/2001 BY KEITH RATHBUN -- updated calculation for
*              trend score (DSCORE).
*           2) 01/07/2002 BY KEITH RATHBUN -- updated for 2000 survey.
*              Use 1998/2000 pairs to caclulate trends.
*           3) 01/27/2003 BY KEITH RATHBUN -- updated for 2002 survey.
*              Use 2000/2002 pairs to caclulate trends.
*           4) 02/08/2004 BY CHRIS RANKIN -- updated for 2003 survey.
*              Use 2001/2003 pairs to caclulate trends.
*
* INPUTS:   1) TOTAL_A.SD2 - MPR and CAHPS Scores Database in WEB layout
*           2) FAKE.SD2 - Scores Database WEB Layout
*
* OUTPUT:   1) TREND_A.SD2 - 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.SD2) 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;


********************************************************************************
* 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.TOTAL_A;
   WHERE BENTYPE IN ('2001','2003'); /*CDR 2/08/2004 */
   ********************************************************************************
   * Trends already calculated for MPR scores, so remove from file
   ********************************************************************************;
   IF SVMPR01 = 1 THEN DELETE;
   IF SVMPR02 = 1 THEN DELETE;
   IF SVMPR03 = 1 THEN DELETE;

RUN;


/* CDR 2/08/2004  Changed from 2000,2002 to 2001,2003*/

DATA TEMP01;
   SET TRENDS;
   KEEP MAJGRP REGION REGCAT BENEFIT;
   IF BENTYPE = "2001";
RUN;
PROC SORT DATA=TEMP01; BY MAJGRP REGION REGCAT BENEFIT; RUN;

DATA TEMP03;
   SET TRENDS;
   KEEP MAJGRP REGION REGCAT BENEFIT;
   IF BENTYPE = "2003";
RUN;
PROC SORT DATA=TEMP03; BY MAJGRP REGION REGCAT BENEFIT; RUN;

DATA PAIR0103(keep=majgrp region regcat benefit);
```

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```
      MERGE TEMP01(IN=IN01) TEMP03(IN=IN03);
      BY MAJGRP REGION REGCAT BENEFIT;
      IF IN01 AND IN03;
   RUN;

   PROC SORT DATA=TRENDS;
      BY MAJGRP REGION REGCAT BENEFIT;
   RUN;

   DATA TRENDS;
      MERGE TRENDS(IN=INTREND) PAIR0103(IN=INPAIR);
      BY MAJGRP REGION REGCAT BENEFIT;
      IF INTREND AND INPAIR;
   RUN;

   PROC SORT DATA=TRENDS;
      BY MAJGRP REGION REGCAT BENEFIT BENTYPE;
   RUN;
     proc print data=trends(obs=100);
   *****************************************************************************
   * Calculate TRENDs keeping only the TREND records
   *****************************************************************************;

   /* CDR 2/08/2004 - Changed from 2000,2002 to 2001,2003 */

   DATA TRENDS bench;
      SET TRENDS(drop=bscore bsemean);
      BY MAJGRP REGION REGCAT BENEFIT BENTYPE;
      IF BENTYPE = '2001' THEN DO;
         SCORE01 = SCORE/100;
         SE01    = SEMEAN;
         N01     = N_OBS;
         W01     = N_WGT;
      END;
      RETAIN SCORE01 SE01 N01 W01;
      IF BENTYPE = '2003' THEN DO;
         SCORE03 = SCORE/100;
         SE03    = SEMEAN;
         N03     = N_OBS;
         W03     = N_WGT;
      END;
      RETAIN SCORE03 SE03 N03 W03;
      IF BENTYPE = '2003' THEN DO;
         BENTYPE = "Trend";
         KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
               UPCASE(TRIM(MAJGRP))  ||
               UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
         SOURCE = "TREND";
         SEMEAN = SQRT(SE01**2+SE03**2);
         N_OBS  = MIN(N01,N03);
         N_WGT  = MIN(W01,W03);
         SCORE  = SCORE03-SCORE01;
         DSCORE = 100*(SCORE03-SCORE01);
         if region='Benchmark' then OUTPUT bench;
         else output trends;
      END;
      DROP ORDER SCORE01 SCORE03 SE01 SE03 N01 N03;
   RUN;
   PROC SORT DATA=trends;
      BY MAJGRP BENEFIT BENTYPE;
   RUN;
   proc sort data=bench out=benchs(keep=majgrp benefit bentype score semean);
   by majgrp benefit bentype;
   run;

   *****************************************************************************
   * Perform significance tests for CAHPS scores
   *****************************************************************************;
   DATA trends;
      MERGE trends(IN=SIN) BENCHS(RENAME=(SCORE=BSCORE SEMEAN=BSEMEAN));
      BY MAJGRP BENEFIT BENTYPE;
      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 benefit='Getting Care Quickly' then do;
   score=.A; dscore=.A; sig=.A; end; */      /* CDR 2/09/2004 */
      IF SIN;
RUN;
proc print data=trends(obs=100);

data trends;
set trends bench;
score=dscore;
PROC SORT DATA=TRENDS; BY KEY; RUN;

*****************************************************************************
* Construct ORDERing variable from WEB layout
*****************************************************************************;
DATA ORDER;
   SET IN.FAKE;
   ORDER = _N_;
   LENGTH KEY $200;
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))   ||
         UPCASE(TRIM(REGCAT))   || UPCASE(TRIM(REGION));
   KEEP KEY ORDER;
RUN;
PROC SORT DATA=ORDER; BY KEY; RUN;

DATA MERGTRND;
   MERGE TRENDS(IN=IN1) ORDER(IN=IN2);
   BY KEY;
   IF IN1;
RUN;

PROC SORT DATA=IN.TOTAL_A OUT=TOTAL_A; BY ORDER; RUN;
PROC SORT DATA=MERGTRND; BY ORDER; RUN;

DATA OUT.TREND_A;
   MERGE TOTAL_A MERGTRND;
   BY ORDER;
  /* IF BENEFIT = "Getting Care Quickly" THEN DO;
      IF BENTYPE IN ("2001") THEN DO;
         SIG = 0;
         IF REGCAT = "Benchmark" THEN SCORE = .A;
      END;
      IF BENTYPE = "Trend" THEN SCORE = .A;
   END;
   IF BENEFIT = "Preventive Care" AND BENTYPE = "Trend" THEN SCORE = .A; *KRR Added 2/3/2002;
   if regcat='Reynolds ACH/ALtus AFB' then regcat='Reynolds ACH/Altus AFB';
if regcat='Wuerzburg Meddac' then regcat='Wuerzburg MEDDAC';
if regcat='Heidelberg Meddac' then regcat='Heidelberg MEDDAC';
if regcat='Landstuhl Regional Medcen' then regcat='Landstuhl Regional MedCen'; */ /* CDR
2/08/2004 */

   IF BENEFIT = "Primary Care Manager" THEN BENEFIT = "Personal Doctor";   /*MJS 02/13/2003*/
RUN;

TITLE1 "2003 DOD Health Survey Scores/Report Cards (8860-410)";
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.SD2 - Merged Final Scores Database with TRENDs for input to
SIGNIF_A.SAS";

TITLE5 "FREQs of TREND_A.SD2";
PROC FREQ;
   TABLES SOURCE FLAG MAJGRP REGION BENEFIT BENTYPE
  /MISSING LIST;
RUN;

TITLE5 "FREQs of FAKE.SD2";
PROC FREQ DATA=IN.FAKE;
   TABLES MAJGRP REGION BENEFIT BENTYPE
  /MISSING LIST;
RUN;
```

19. LOADWEB\MAKEHTML.SAS - Generate HTML and XLS files for TRICARE Beneficiary Reports - Annual.

```
*=====================================================================;
*   Programmer:  Mark A. Brinkley                                     ;
*        Title:  MAKEHTMA.SAS                                         ;
*       Client:  8687-210                                            ;
*         Date:  01-10-2002                                          ;
*                                                                    ;
*      Purpose:  This program is designed to create                  ;
*                 Annual report cards for the 2002 DOD project        ;
*                                                                    ;
*  Input files:  TREND_A.SD2                                         ;
* Output files:  HTML\                                               ;
*                1292*3 F*.HTM Files (Frame version)                 ;
*                1292   P*.HTM Files (Printer friendly - no frames)  ;
*                 816   P*.XLS Files (Excel files)                   ;
*                -------------------                                 ;
*                5984                                                ;
*                                                                    ;
*                                                                    ;
*   ÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!  ;
*                                                                    ;
*     IF YOU MODIFY THIS PROGRAM THEN PLEASE INITIAL AND DOCUMENT    ;
*     YOUR CHANGES.  THOSE FAILING TO DO THIS WILL BE SEVERELY       ;
*     BEATEN.                                                        ;
*                                                                    ;
*   ÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!ÛÛÛ!  ;
*                                                                    ;
*                                                                    ;
*                                                                    ;
* Modifications:                                                     ;
* 11-01-2000 - JSykes added pieces to create Excel Spreadsheets      ;
* 07-01-2001 - MAB modified for qtr 2                                ;
* 10-25-2001 - C.Rankin moved link to printer friendly version       ;
*              from frame, created macro variable to include         ;
*              third row of subbenefit heading                       ;
* 11-01-2001 - D.Beahm changed splitpercent to splitpixel and adjusted;
*              the pixel size of the top frame to prevent scrolling  ;
*              she also added a <BR> before the printer icon to make ;
*              sure it appears on it's own line                      ;
*              sure it appears on it's own line                      ;
* 01-10-2002 - MAB Modified Q3 MAKEHTMQ.SAS to create MAKEHTMA.SAS   ;
*               for 2000 annual program                              ;
* 01-18-2002 - MAB Changed comments of 'qtrly' to 'trend'            ;
* 01-30-2002 - MAB Changed 'qtr' to 'period' for images              ;
* 01-30-2003 - MJS Changed 1998, 1999, 2000 strings to 2000, 2001,   ;
*              and 2002                                              ;
* 02-12-2003 - MJS Added code to link catchment level back to the    ;
*              help file                                            ;
* 02-13-2003 - MJS Changed "Primary Care Manager" to "Personal Doctor";
* 02-18-2003 - MJS Added code to link catchment level back to the    ;
*              help file (needed code in another place).  Limited link;
*              creation to catchment areas other that "Region #" ones ;
* 02-19-2003 - MJS Added code to create links back to 2000 and 2001   ;
*              html                                                 ;
* 02-20-2003 - MJS Substituted code similar to Q4 2002 to create image;
* 02-13-2004 - MJS Updated for 2003 Annual Report (changed 2000/2001/ ;
*              2002 to 2001/2002/2003).  Changed 6 to 7 in Preventive ;
*              Care columns calculation to add Cholesterol.  Deleted  ;
*              catchment area statements.  Changed LENGTH to 100 if   ;
*              < 100.  02-14-2004 also.                              ;
* 02-16-2004 - MJS Added .&q to FILEOUTX and HREFXLS, added if-then-  ;
*              else with Template_trend line, and added macro calls   ;
*              to the Excel macros to create separate Trend pages     ;
*              from the Component pages.  Changed 7 back to 6.        ;
* 02-16-2004 - EMS Moved initial data read-in outside macro loop to   ;
*              speed up program.                                     ;
*=====================================================================;



/*** Changed  MAB 1-18-2002 ***/
```

```
%LET PERIOD=2003;              /** Period of these reports **/   /*MJS 02/13/04*/
%LET TRENDCOLUMNS=4;           /** Number of columns for trends **/


OPTIONS NOXWAIT;        /* 2000/11: added noxwait*/


/***OPTIONS MPRINT;  Removed MAB 1-23-2002 ***/


%LET HTMLSP=%NRSTR( );     /**DANIELE CHANGED %STR(&NBSP;) TO %NRSTR(&NBSP)**/
%LET QUOTE=%STR("");
%LET OUTDIR=HTML;                /** Directory to put HTML files **/
%LET IMGDIR=images;              /** Directory with images **/
%LET TARGET=target='_parent';    /** HTML code for frames targeting **/
%LET OUTXLS=0;                   /** 1=Make XLS file/0=Don't   Added 1-24 MAB **/
%LET fontface=%STR(Arial,Helvetica,Swiss,Geneva);
%LET hdcolr=%STR('white');
%LET BLUE=%STR('#663300');       /** This is really dark red **/
%LET GREEN=%STR('#009933');
%LET RED=%STR('#cc0000');
%LET GRAY=%STR('white');
%LET LOGO=%STR('images\tricare_side_35_new.gif');
%LET HELP_BUT=%STR('images\help75.gif');
%LET HOME_BUT=%STR('images\home75.gif');
%LET BACK_BUT=%STR('images\back75.gif');
%LET NUMBER_HTML_FILES=0;        /** Keep count of HTML files created **/

%LET SUB_HEAD=0;                 /** Macro variable for sub-benfit heading **/


                                 /** 1=headings, 0=no headings          **/
/*******************************************************/
/***** Macro for putting notes at bottom of table   *****/
/*******************************************************/
%MACRO BOTTOM_NOTES();

%IF &var1=8 and &var3=3 %THEN %DO;

     PUT "<tr>";
     PUT "    <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
2003 Health Care Survey of DOD Beneficiaries</font>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
/*MJS 02/13/04*/
     PUT "    <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
     PUT "    </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates significance not
available</font><br>";
     PUT "    <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";

%END;

%ELSE %DO;

     PUT "<tr>";
     PUT "    <td colspan='&columns.'><font face='Arial,Helvetica,Swiss,Geneva' size='2'>Source:
2003 Health Care Survey of DOD Beneficiaries</font>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#009933'><br>";
/*MJS 02/13/04*/
     PUT "    <b>Indicates score significantly exceeds benchmark</b></font><b>&htmlsp.<br>";
     PUT "    </b><font face='Arial,Helvetica,Swiss,Geneva' size='2' color='#cc0000'><i>Indicates
score significantly falls short of benchmark</i></font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>NA Indicates not
applicable</font><br>";
     PUT "    <font face='Arial,Helvetica,Swiss,Geneva' size='2'>*** Indicates significance not
available</font><br>";
     PUT "    <center><a href='&hrefxls.'><img src='&imgdir.\excel.gif' border=0>Download
Page</a></center>";
%END;
```

```
       PUT "</td></tr>";
%MEND BOTTOM_NOTES;




/*******************************************************/
/***** Macro for adding in link row to trends data  *****/
/*******************************************************/

/*** Macro variable with Javascript to go back ***/
%LET GOBACK=%STR(<script>document.write(&quote.<a href='javascript:history.go(-1)'
target='_parent'>&quote.);
document.write(&quote.<img src='images\\back75.gif' border='0' alt='Go to previous
page'>&quote.);document.write(&quote.</a>&quote.);</script>);

LIBNAME SRC1 V612 '.'  ACCESS=READONLY;

OPTIONS LS=132;

/** Load in data **/   /*EMS 02/16/04*/
DATA SETUP;
  SET SRC1.TREND_A (KEEP=MAJGRP--SCORE);

  if regcat  = "355th Med Grp-Davis Montha" then regcat= "355th Med Gr-Davis Monthan";
  if regcat  = "366th Med Grp-Mountain Hom" then regcat= "366th Med Gr-Mountain Home";
  if regcat  = "Kimbrough Amb Car Cen-Ft M" then regcat= "Kimbrough ACC-Ft Meade";
  if regcat  = "99th Med Grp-O'Callaghan H" then regcat= "99th Med Grp-O'Callaghan";
  if regcat  = "4th Med Grp-Seymour Johnso" then regcat= "4th Med Gr-Seymour Johnson";
  if regcat  = "74th Med Grp-Wright-Patter" then regcat= "74th Med Grp-Wright-Patt";
  if regcat= "16th Med Grp-Hurlburt Fiel" then regcat="16th Med Gr-Hurlburt Field";
RUN;



/**********************************************************************/
/****    Macro to create html pages                           ****/
/****          var1=major group                               ****/
/****          var2=region                                    ****/
/****          var3=benefit                                    ****/
/****        seppage=0/no separate pages for trends            ****/
/****             1/1st separate page                          ****/
/****             2/2nd separate page                          ****/
/**********************************************************************/
%MACRO MKHTML(var1,var2,var3,seppage);


/*** Determine some macro variables ***/
%if &prefix=f %then %do;
  %let width1=640;
  %let width2=640;
  %let border=0;
%end;
%else %do;
  %let width1=90%;
  %let width2=85%;
  %let border=1;
%end;




%let number_html_files=%EVAL(1+&number_html_files.);




/** Load in data **/
DATA SUBSET;
  SET SETUP;   /*EMS 02/16/04*/


  LENGTH FILEOUT1 $ 100;   /*MJS 02/13/04*/
  LENGTH FILEOUT2 $ 100;
  LENGTH FILEOUT3 $ 100;
```

```
   /*** VAR1 indicated major group ***/
   %if &var1.=0 %then %let major=%STR();
   %if &var1.=1 %then %let major=%STR(Prime Enrollees);
   %if &var1.=2 %then %let major=%STR(Enrollees with Military PCM);
   %if &var1.=3 %then %let major=%STR(Enrollees with Civilian PCM);
   %if &var1.=4 %then %let major=%STR(Standard/Extra Users);   /*** Changed from 'Non-enrolled
Beneficiaries' 1-25-2002 MAB ***/
   %if &var1.=5 %then %let major=%STR(Active Duty);
   %if &var1.=6 %then %let major=%STR(Active Duty Dependents);
   %if &var1.=7 %then %let major=%STR(Retirees and Dependents);
   %if &var1.=8 %then %let major=%STR(All Users);  /*** Changed from 'All Beneficiares' 1-24-2002
MAB ***/


   %if &var1.=0 %then %do;
      /***IF REGION=REGCAT AND REGION NOT IN("CONUS MHS","Benchmark") ***/
      IF REGION=REGCAT AND REGION NOT IN("Benchmark");  /** Replaced 1-22 MAB **/

       %if &var2.^=99 %then %do; /*** Added 1-30 mab ***/
         IF REGION="CONUS MHS" THEN DELETE;
       %end;

      %let comma=%STR();
      %let grpmsg=%STR();
   %end;
   %else %do;
      IF MAJGRP="&major.";    /*** Subset data by major group ***/
      %let comma=%STR(,);
      %let grpmsg=%STR(Click below to view this table by other groups);
   %end;



    /*** Create macro variables to refer to Component or Trend pages ***/
    %if &seppage.=2 %then %do;
       %let q=q;
       %let unq=;
       %let click_alt=Click for Component data;
       %let click_image=component.gif;
    %end;
    %else %do;
       %let q=;
       %let unq=q;
       %let click_alt=Click for Trend data;
       %let click_image=trend.gif;
    %end;



   FILEOUT1=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.&q..htm");    /** Main html **/
   FILEOUT2=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.&q.a.htm");   /** Header html **/
   FILEOUT3=COMPRESS("&outdir.\&prefix.&var1.-&var2.-&var3.&q.b.htm");   /** Data html **/


    /*** Added 07-12-2001 MAB  If creating Excel then don't create HTML ***/
    %if &outxls.=1 %then %do;
      %let fileout1= NUL;
      %let fileout2= NUL;
      %let fileout3= NUL;
    %end;
    %else %do;
      call symput('fileout1',FILEOUT1);
      call symput('fileout2',FILEOUT2);
      call symput('fileout3',FILEOUT3);
    %end;



   /*------------------------*/
   /* 2000/11: begin xls code */
   /*------------------------*/
```

```
   FILEOUTX=COMPRESS("&outdir.\p&var1.-&var2.-&var3.&q..xls");          /* create run-specific xls
file */   /*MJS 02/16/04*/
   CALL SYMPUT('fileoutX',FILEOUTX);                                    /* via global macro vars
*/

   %if &seppage. ne 2 %then %do;   /*MJS 02/16/04*/
     TEMPLATE=COMPRESS("Templates\Template&var3..xls");
   %end;
   %else %do;
     TEMPLATE=COMPRESS("Templates\Template_trend.xls");
   %end;

   CALL SYMPUT('template',TEMPLATE);                                    /* identify which template
xls file */
   /*-----------------------*/
   /* 2000/11: end xls code   */
   /*-----------------------*/


   /*** VAR3 dictates type of benefit heading ***/
   %if &var3=0 %then %do;
      %let headvar=BENEFIT;
   %end;
   %else %let headvar=BENTYPE;

   /*** clean up headvar variable ***/
   /***IF BENTYPE="Trend" THEN BENTYPE="Trend<BR>% change";***/

   /*** Link to XLS file ***/
   HREFXLS=COMPRESS("p&var1.-&var2.-&var3.&q..xls");   /*MJS 02/16/04*/
   call symput('hrefxls',HREFXLS);
RUN;



/*** Subset data by region ***/
DATA SUBSET;
   SET SUBSET;

   %if &var2.=0 %then %do;     /** 0 = All regions **/
      IF REGION=REGCAT;        /** Just do All Region table **/
       %let sub_regs=%STR(All Regions);
   %end;
   %else %if &var2.=1 %then %do;
      IF REGION="Region 1" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 1);
   %end;
   %else %if &var2.=2 %then %do;
      IF REGION="Region 2" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 2);
   %end;
   %else %if &var2.=3 %then %do;
      IF REGION="Region 3" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 3);
   %end;
   %else %if &var2.=4 %then %do;
      IF REGION="Region 4" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 4);
   %end;
   %else %if &var2.=5 %then %do;
      IF REGION="Region 5" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 5);
   %end;
   %else %if &var2.=6 %then %do;
      IF REGION="Region 6" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 6);
   %end;
   %else %if &var2.=7 %then %do;
      IF REGION="Region 7/8" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 7/8);
   %end;
   %else %if &var2.=8 %then %do;
      IF REGION="Region 9" OR REGION IN("CONUS MHS","Benchmark");
       %let sub_regs=%STR(Region 9);
```

```
      %end;
      %else %if &var2.=9 %then %do;
         IF REGION="Region 10" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Region 10);
      %end;
      %else %if &var2.=10 %then %do;
         IF REGION="Region 11" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Region 11);
      %end;
      %else %if &var2.=11 %then %do;
         IF REGION="Region 12" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Region 12);
      %end;
      %else %if &var2.=12 %then %do;
         IF REGION="Europe" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Europe);
      %end;
      %else %if &var2.=13 %then %do;
         IF REGION="Asia" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Asia);
      %end;
      %else %if &var2.=14 %then %do;
         IF REGION="Latin America" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Latin America);
      %end;
      %else %if &var2.=15 %then %do;
         IF REGION="Alaska" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(Alaska);
      %end;
      %else %if &var2.=99 %then %do;
         IF REGION="CONUS MHS" OR REGION IN("CONUS MHS","Benchmark");
          %let sub_regs=%STR(CONUS MHS);
      %end;

   RUN;



   /*** Subset data by Benefit ***/
   DATA SUBSET;
     SET SUBSET;

     %if &var3.=0 %then %do;    /** 0=All Benefits **/
        IF BENTYPE="&period.";
     %end;
     %else %if &var3.=2 %then %do;
        IF BENEFIT="Getting Needed Care";

        /*** # of columns for this benefit table ***/
        %let columns=%EVAL(5+&trendcolumns.);
     %end;
     %else %if &var3.=3 %then %do;
        IF BENEFIT="Getting Care Quickly";
        %let columns=%EVAL(5+&trendcolumns.);
     %end;
     %else %if &var3.=4 %then %do;
        IF BENEFIT="Courteous and Helpful Office Staff";
        %let columns=%EVAL(3+&trendcolumns.);
     %end;
     %else %if &var3.=5 %then %do;
        IF BENEFIT="How Well Doctors Communicate";
        %let columns=%EVAL(5+&trendcolumns.);
     %end;
     %else %if &var3.=6 %then %do;
        IF BENEFIT="Customer Service";
        %let columns=%EVAL(4+&trendcolumns.);
     %end;
     %else %if &var3.=7 %then %do;
        IF BENEFIT="Claims Processing";
        %let columns=%EVAL(3+&trendcolumns.);
     %end;
     %else %if &var3.=8 %then %do;
        IF BENEFIT="Health Plan";
        %let columns=%EVAL(1+&trendcolumns.);
```

```
    %end;
    %else %if &var3.=9 %then %do;
       IF BENEFIT="Health Care";
       %let columns=%EVAL(1+&trendcolumns.);
    %end;
    %else %if &var3.=10 %then %do;
       IF BENEFIT="Personal Doctor";   /*MJS 02/13/2003*/
       %let columns=%EVAL(1+&trendcolumns.);
    %end;
    %else %if &var3.=11 %then %do;
       IF BENEFIT="Specialty Care";
       %let columns=%EVAL(1+&trendcolumns.);
    %end;
    %else %if &var3.=12 %then %do;
       IF BENEFIT="Preventive Care";
       %let columns=%EVAL(6+&trendcolumns.);   /*MJS 02/16/04 Changed 7 back to 6*/
    %end;

    /*** Set macro variable ***/
    %if &var3.=0 %then %do;
        %let sub_ben=%STR(&period. Composite Scores);
        %let columns=13;
    %end;
    %else %do;
      call symput('sub_ben',BENEFIT);
    %end;


    /*** Determine number of columns for sub-benefits  ***/
    /*** Equals cols - (x for qtrs  - 1 for stub column) ***/
    %let subcols=%EVAL(&columns.-&trendcolumns.-1);

    /*** Determine number of columns less 1st (stub) column ***/
    %let columns_less1=%EVAL(&columns.-1);

RUN;




/*** Added 4-3-01 MAB ***/
DATA SUBSET;
  SET SUBSET;

  WIDTH_COL1=120; /** Set width of column 1 **/

  /*** Changed 1-18-2002 MAB ***/
  IF BENTYPE IN ("2001","2002","2003","Trend") THEN WIDTH3=120;   /*MJS 02/13/04*/
  ELSE WIDTH3=90;

  /** Deal with some special cases **/
  IF BENEFIT="Preventive Care" THEN DO;
      /*** Changed 1-18-2002 MAB ***/
      IF BENTYPE IN ("2001","2002","2003","Trend") THEN WIDTH3=.;   /*MJS 02/13/04*/
       ELSE WIDTH3=80;
  END;
  IF BENEFIT="Courteous and Helpful Office Staff" AND
         BENTYPE IN ("2001","2002","2003","Trend") THEN WIDTH3=70;   /*MJS 02/13/04*/
         /*** Changed 1-18-2002 MAB ***/


  %if &var3.=0 %then %do;
     WIDTH_COL1=.;
     WIDTH3=40;
  %end;


        /*** Added 5-7-2001 mab ***/
        %if &prefix.=p %then %do;
            WIDTH3=.;
        %end;

RUN;
```

```
OPTIONS LS=152;
PROC PRINT;
 VAR BENEFIT BENTYPE REGION REGCAT MAJGRP;
RUN CANCEL;



/*****************************************************************/
/****  Put out Header rows of table                         ****/
/*****************************************************************/
DATA HTML;
  SET SUBSET;


  IF REGION IN("Benchmark") OR MAJGRP IN("Benchmark");

  /** Determine where back button should link to **/
  %if &var1.=0 %then %do;
     HREFBACK=COMPRESS("&prefix.8-0-0.htm");
  %end;
  %else %do;
     HREFBACK=COMPRESS("&prefix.&var1.-0-0.htm");
  %end;

  /*** Create macro variable date with today's date ***/
  DATETIME=DATETIME();
  CALL SYMPUT ('DATETIME',left(put(datetime,datetime20.)));
  DROP DATETIME;

RUN;



/*** ÛÛ FRAMES SECTION ÛÛ ***/
%if &prefix=f %then %do;

    /*** Make frameset page split frames smaller on all ratings pages ***/

   %if &var3.=0 %then %do;
        %let splitpixel=228;
     %end;
     %else %if &var3.=2 OR &var3.=3 %then %do;
        %let splitpixel=211;
     %end;
     %else %if &var3.=4 OR &var3.=7 %then %do;
        %let splitpixel=181;
     %end;
     %else %if &var3.=5 %then %do;
        %let splitpixel=196;
     %end;
     %else %if &var3.=6 %then %do;
        %let splitpixel=221;
     %end;
     %else %if &var3.=8 OR &var3.=9 OR &var3.=10 OR &var3.=11 %then %do;
        %let splitpixel=158;
     %end;
     %else %if &var3.=12 %then %do;
        %let splitpixel=192;
     %end;

     %if &SEPPAGE.=2 %then %do;
        %let splitpixel=157;
     %end;


    /*** Create frameset page HTML page ***/
    DATA _NULL_;
      FILE "&FILEOUT1.";
      PUT "<html>";
      PUT "<frameset rows='&splitpixel.,*'>";
       %if &seppage.=2 %then %do;
         PUT "   <frame src='f&var1.-&var2.-&var3.qa.htm'  MARGINHEIGHT='0' MARGINWIDTH='0'>";
```

```
         PUT "     <frame src='f&var1.-&var2.-&var3.qb.htm'  MARGINHEIGHT='0' MARGINWIDTH='0'>";
      %end;
      %else %do;
         PUT "     <frame src='f&var1.-&var2.-&var3.a.htm'  MARGINHEIGHT='0' MARGINWIDTH='0'>";
         PUT "     <frame src='f&var1.-&var2.-&var3.b.htm'  MARGINHEIGHT='0' MARGINWIDTH='0'>";
      %end;


    PUT "</frameset></html>";
   RUN;

   /*** Since done making frameset page then assign fileout1 = frame 1 ***/
   %let fileout1=&fileout2.;
   %if &seppage.=1 %then %do;
       %let fileout1=&fileout2.;
    %end;
    %else %if &seppage.=2 %then %do;
       %let fileout1=&fileout2.;
    %end;

%end;




/*** Initialize HTML page ***/
DATA _NULL_;
  FILE "&FILEOUT1.";

  PUT "<! Created &datetime.>";
  PUT "<html><head><title>";
  PUT "&major. &comma. &sub_ben., &sub_regs.";
  PUT "</title></head>";
  PUT "<body bgcolor='#999999' text='#000099' link='#660066' alink='#660066' vlink='#996699'>";

  /*** link to printer friendly version moved, 10/25/2001 C.Rankin ***/



RUN;




/*------------------------*/
/* 2000/11: begin xls code */
/*------------------------*/
%if &outxls.=1 %then %do;
  X "COPY &template. &fileoutX.";                        /* copy template xls to run-
specific xls file */
  X "START &fileoutX.";                                  /* open run-specific xls file
*/
  FILENAME XLSTITLE DDE 'excel|Sheet1!R1C1:R2C20' NOTAB;      /* xls rows 1 & 2 (titles)
*/
  FILENAME XLSDATA DDE 'excel|Sheet1!R6C1:R100C20' NOTAB;     /* xls rows 6+ (body of table)
*/
%end;
/*------------------------*/
/* 2000/11: end xls code   */
/*------------------------*/




/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If ALL benefits (VAR3=0) then do special column headers ***/
%if &var3.=0 %then %do;
DATA _NULL_;
  SET HTML END=EOF;

  IF _N_=1 THEN DO;

        FILE "&FILEOUT1." MOD;      /* 2000/11: moved file stmt inside if stmt */

         /*** put table title ***/
         /**PUT "<h2><center><font face='&fontface.'>&major., &sub_regs. <br> &sub_ben.
</font></center></h2>"**/
```
H-253

```
          /** MF Changes ROW 1 **/
          PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
colspan=13 width='&width1.'>";
          PUT "<tr bgcolor='white'>";
          PUT "    <td colspan='6' valign='top' bgcolor='#999999'><img border='0' height='25'
width='242' src=&logo.></td>";
          PUT "    <td colspan='7' align='right' valign='bottom' bgcolor='#999999'>";
          PUT "          <div align='right'>";
          PUT "          <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return
to Main Page'></a>&htmlsp. &htmlsp.";  /*MJS 02/19/2003*/

          /*** 4-17 MAB added JS code to go back ***/
          PUT "&goback.";

          PUT "          <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
          PUT "          &htmlsp. &htmlsp.";
          PUT "          <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
          PUT "    </td>";
          PUT "</tr>";

          /** MF Changes ROW 2 **/
          /** Modified 2-2 MAB to better align title **/
          PUT "<tr>";
          PUT "        <td valign='center' align='center' colspan='13' bgcolor='#D8D8D8'>";
          PUT "              <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs.<br>";
          PUT "                  &sub_ben.</b></font>";
          PUT "        </td>";
          PUT "</tr>";


          /*** Print out 3rd row ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/

          %if &prefix=f %then %do;
              PUT "<tr bgcolor= &hdcolr.>";
              PUT "<td width=70>&htmlsp.</td>";
              PUT "<td width=40 colspan=1><IMG SRC='&imgdir.\total_score.gif' ALT='Total Score'
BORDER=0></td>";
              PUT "<td width=80 colspan=2><IMG SRC='&imgdir.\eoa.gif'ALT='Ease of Access'
BORDER=0></td>";
              PUT "<td width=185 colspan=4><IMG SRC='&imgdir.\com&cus_ser.gif' ALT='Communication
and Customer Service' BORDER=0></td>";
              PUT "<td width=160 colspan=4><IMG SRC='&imgdir.\ratings0.gif' ALT='Ratings'
BORDER=0></td>";
              PUT "<td width=50 colspan=1><IMG SRC='&imgdir.\prevention.gif' ALT='Prevention'
BORDER=0></td>";
              PUT "</tr>";
              PUT "<tr bgcolor= &hdcolr.>";
           %end;
           %else %do;
              PUT "<tr bgcolor= &hdcolr.>";
              PUT "<td>&htmlsp.</td>";
              PUT "<td align='center' valign='bottom' colspan=1><font face='&fontface.'
size='2'><b>Total Score</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=2><font face='&fontface.'
size='2'><b>Ease of Access</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=4><font face='&fontface.'
size='2'><b>Communication and Customer Service</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=4><font face='&fontface.'
size='2'><b>Ratings</b></font></td>";
              PUT "<td align='center' valign='bottom' colspan=1><font face='&fontface.'
size='2'><b>Prevention</b></font></td>";
              PUT "</tr>";
              PUT "<tr bgcolor= &hdcolr.>";
           %end;


          /*** Print out 1st column of 4th row ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
```

```
              PUT "<td width=55>&htmlsp.</td>";
          %end;
          %else %do;
              PUT "<td width='7%'><font face='&fontface.'>&htmlsp.</font></td>";
          %end;




          bennum=1;  /** index to all 11 benefits **/

          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSTITLE;
            PUT "&major. &comma. &sub_regs.";
            PUT "%cmpres('&sub_ben.')";
          %end;
          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
   END;

   FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */

   /*** Put Benefits across columns (Continuation of 4th row) ***/
   LENGTH HREF $ 100;   /*MJS 02/13/04*/
   HREF=COMPRESS("&prefix.&var1.-&var2.-"||bennum||".htm");



   /** If TOTAL benefit then don't have HREF **/
   /*** ÛÛ FRAMES SECTION ÛÛ ***/
   %if &prefix=f %then %do;
     IMAGE=COMPRESS("&imgdir.\image0_"||bennum||".gif");
     IF BENNUM=1 THEN PUT "<td align='center' valign='bottom'><IMG SRC='&imgdir.\image0_0.gif'
alt='Total' BORDER=0></td>";
     ELSE PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='"
IMAGE "' alt='" BENEFIT "' BORDER=0></a></td>";
   %end;
   %else %do;
     IF BENNUM=1 THEN PUT "<td width='7%' align='center' valign='bottom'><font
face='&fontface.'size='1'>" &HEADVAR. "</font></td>";
     ELSE PUT "<td width='7%' align='center' valign='bottom'><font face='&fontface.'size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
   %end;


  bennum+1;


  IF EOF THEN DO;
    PUT "</tr>";
    /***  2-2 MAB removed scale row ***/
  END;

RUN;
%end;




/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If Sub-benefit (VAR3^=0) then do differently ***/
/*** If not separate page (SEPPAGE=0) for quarterly info then do as before ***/
%else %if &seppage.=0 OR &var3.=8 OR &var3.=9 OR &var3.=10 OR &var3.=11 %then %do;


DATA _NULL_;
  SET HTML END=EOF;

  COLUMNS=&columns.;
  SPAN1=ROUND(COLUMNS/2,1);
```

```
   SPAN2=COLUMNS-SPAN1;


   IF _N_=1 THEN DO;

         FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */


         /** MF Changes ROW 1 **/
         PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
         PUT "<tr bgcolor='white'>";
         PUT "    <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
         PUT "    <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
         PUT "           <div align='right'>";
         PUT "             <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return
to Main Page'></a>&htmlsp. &htmlsp.";   /*MJS 02/19/2003*/

         /*** 4-17 MAB added JS code to go back ***/
         PUT "&goback.";

         PUT "             <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
         PUT "             &htmlsp. &htmlsp.";
         PUT "             <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
         PUT "    </td>";
         PUT "</tr>";

         /** MF Changes ROW 2 **/
         /** Modified 2-2 MAB to better align title **/
         PUT "<tr>";
         PUT "        <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
         PUT "                 <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";

         /*** If ratings then don't display reference period ***/
         %if &var3.=8 OR &var3.=9 OR &var3.=10 OR &var3.=11 %then %do;
             PUT "                 &sub_ben.</b></font>";
         %end;
         %else %do;
             PUT "                 &sub_ben.<BR>&period.</b></font>";
         %end;


         PUT "        </td>";
         PUT "</tr>";


         /*** Sub_head macro variable added C.Rankin 10/25/2001  ***/

         %if &sub_head.=1 %then %do;
            /** 3rd Row ***/
            /** ÛÛ FRAMES SECTION ÛÛ ***/
            %if &prefix=f %then %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
                /*** If sub-benefits then output sub-benefit columns ***/
                %if &subcols.^=0 %then %do;
                  IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
                  PUT "<td align='center' valign='bottom' colspan=&subcols.><IMG SRC=" IMAGE "
alt='" BENEFIT "' BORDER=0></td>";
                  PUT "<td align='center' valign='bottom' colspan=&trendcolumns.><IMG
SRC='&imgdir.\composite.gif' ALT='Composite' BORDER=0></td></tr>";
                %end;
                %else %do;
                  PUT "<td align='center' valign='bottom' colspan=&trendcolumns.><IMG
SRC='&imgdir.\border_rating.gif' ALT='Ratings' BORDER=0></td></tr>";
                %end;
            %end;
            %else %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";   /** Column 1 **/
```

```
                /*** If sub-benefits then output sub-benefit columns ***/
                %if &subcols.^=0 %then %do;
                  PUT "<td align='center' valign='bottom' colspan=&subcols.><font
face='&fontface.'><b>&sub_ben.<br>components</b></font></td>";
                  PUT "<td align='center' valign='bottom' colspan=&trendcolumns.><font
face='&fontface.'><b>Composite</b></font></td></tr>";
                %end;
                %else %do;
                  PUT "<td align='center' valign='bottom' colspan=&trendcolumns.><font
face='&fontface.'><b>Ratings</b></font></td></tr>";
                %end;
            %end;
        %end;


        /*** 4th Row start (column 1) ***/
        /*** ÛÛ FRAMES SECTION ÛÛ ***/
        %if &prefix=f %then %do;
          PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
          PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
        %end;
        %else %do;
          PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
          PUT "<td width='10%'>&htmlsp.</td>";
        %end;



        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSTITLE;
          PUT "&major. &comma. &sub_regs.";
          PUT "%cmpres('&sub_ben.')";
        %end;
        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
  END;

  FILE "&FILEOUT1." MOD ;               /* 2000/11: refer back to htm file */
  /*** Print out column headings ***/
  HREF=COMPRESS("help.htm#q&var3.");
  HREF1=COMPRESS("help.htm#trend");   /*2-20-2003 MJS ADDED LINK FOR TREND SECTION OF HELP FILE*/



  /*** 4th Row (columns 2+) ***/
  /*** If quarter column then HREF link is different ****/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/
  %if &prefix=f %then %do;
     IF _N_>&subcols. THEN IMAGE=COMPRESS("&imgdir.\period"||_N_-&subcols.||".gif");
     ELSE IMAGE=COMPRESS("&imgdir.\image&var3._"||_N_||".gif");
     PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='"
IMAGE "' alt='" BENTYPE "' BORDER=0></a></td>";
  %end;
  %else %do;
     PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;


  IF EOF THEN DO;
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;

RUN;
%end;
```

```
/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** Added MAB 11-20-2000 ***/
/*** If Sub-benefit then do differently ***/
/*** If separate page (SEPPAGE=1) then create 1st of 2 HTML files ***/
/*** 1 for data without trend info and 1 for just trend info ***/
%else %if &seppage.=1 %then %do;


/*** Remove trendcolumns from column counts ***/
%let columns=%EVAL(&columns.-&trendcolumns.);


/*** Do sub-benefit page without any trend info ***/
DATA _NULL_;
  SET HTML END=EOF;


  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE IN ("2001","2002","2003","Trend") THEN DELETE; /*** Changed 1-18-2002 MAB ***/
/*MJS 02/13/04*/


  FILE "&FILEOUT1." MOD ;

  COLUMNS=&columns.;
  SPAN2=ROUND(COLUMNS/2,1);
  SPAN1=COLUMNS-SPAN2;


  IF _N_=1 THEN DO;

        FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */


        /** MF Changes ROW 1 **/
        PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
        PUT "<tr bgcolor='white'>";
        PUT "    <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
        PUT "    <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
        PUT "            <div align='right'>";
        PUT "            <a href='&prefix.&var1.-&var2.-&var3.&unq..htm' &target.><img
src='&imgdir.\&click_image.' alt='&click_alt.' border=0></a>&htmlsp.";  /*MJS 02/19/2003*/
        PUT "            <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return
to Main Page'></a>&htmlsp. ";  /*MJS 02/19/2003*/

        /*** 4-17 MAB added JS code to go back ***/
        PUT "&goback.";
        PUT "            <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
        PUT "            &htmlsp. ";
        PUT "            <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
        PUT "    </td>";
        PUT "</tr>";

        /** MF Changes ROW 2 **/
        /** Modified 2-2 MAB to better align title **/
        PUT "<tr>";
        PUT "        <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
        PUT "              <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";


        PUT "              &sub_ben.<BR>&period.</b></font>";


        PUT "        </td>";
```

```
          PUT "</tr>";

          /*** Sub_head macro variable added C.Rankin 10/25/2001  ***/

          %if &sub_head.=1 %then %do;
             /*** 3rd Row ***/
             /*** ÛÛ FRAMES SECTION ÛÛ ***/
             %if &prefix=f %then %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";    /** Column 1 **/
                IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
IMAGE=COMPRESS("&imgdir.\span_image&var3..gif");
                PUT "<td align='center' valign='bottom' colspan=&subcols.><IMG SRC=" IMAGE "
alt='" BENEFIT "' BORDER=0></td>";
             %end;
             %else %do;
                PUT "<tr bgcolor= &hdcolr.><td>&htmlsp.</td>";    /** Column 1 **/
                PUT "<td align='center' valign='bottom' colspan=&subcols.><font
face='&fontface.'><b>&sub_ben.<br>components</b></font></td>";
             %end;
          %end;

          /*** 4th Row start (column 1) ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
          %end;
          %else %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td width='10%'>&htmlsp.</td>";
          %end;



          /*-----------------------*/
          /* 2000/11: begin xls code */
          /*-----------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSTITLE;
            PUT "&major. &comma. &sub_regs.";
            PUT "%cmpres('&sub_ben.')";
          %end;
          /*-----------------------*/
          /* 2000/11: begin xls code */
          /*-----------------------*/
  END;

  FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */
  /*** Print out column headings ***/
  HREF=COMPRESS("help.htm#q&var3.");


  /*** 4th Row (columns 2+) ***/
  /*** If quarter column then HREF link is different ****/
  /*** ÛÛ FRAMES SECTION ÛÛ ***/
  %if &prefix=f %then %do;
     IMAGE=COMPRESS("&imgdir.\image&var3._"||_N_||".gif");
     PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='"
IMAGE "' alt='" BENTYPE "' BORDER=0></a></td>";
  %end;
  %else %do;
     PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;


  IF EOF THEN DO;
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;


RUN;
```

```
%end;



/*ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ*/
/*** If separate page (SEPPAGE=2) then create 2nd of 2 HTML files ***/
/*** 1 for data without trend info and 1 for just trend info ***/
%else %if &seppage.=2 %then %do;


/*** Keep only trendcolumns in column counts ***/
%let columns=%EVAL(&trendcolumns.+1);


/*** Then do sub-benefit page with just trend info ***/
DATA JUSTTRENDS;
  SET HTML;
  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE IN ("2001","2002","2003","Trend");   /*** Changed 1-18-2002 MAB ***/   /*MJS
02/13/04*/
RUN;


DATA _NULL_;
  SET JUSTTRENDS END=EOF;

  FILE "&FILEOUT1." MOD ;

  COLUMNS=&columns.;
  SPAN2=ROUND(COLUMNS/2,1);
  SPAN1=COLUMNS-SPAN2;



  IF _N_=1 THEN DO;

       FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */

       /** MF Changes ROW 1 **/
       PUT "<center><table border='&border.' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
width='&width2.'>";
       PUT "<tr bgcolor='white'>";
       PUT "    <td colspan=""" SPAN1 +(-1) """ valign='top' bgcolor='#999999'><img border='0'
height='25' width='242' src=&logo.></td>";
       PUT "    <td colspan=""" SPAN2 +(-1) """ align='right' valign='bottom'
bgcolor='#999999'>";
       PUT "          <div align='right'>";
       PUT "          <a href='&prefix.&var1.-&var2.-&var3.&unq..htm' &target.><img
src='&imgdir.\&click_image.' alt='&click_alt.' border=0></a>&htmlsp.";  /*MJS 02/19/2003*/
       PUT "          <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return
to Main Page'></a>&htmlsp. &htmlsp.";  /*MJS 02/19/2003*/

       /*** 4-17 MAB added JS code to go back ***/
       PUT "&goback.";

       PUT "          <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";
       PUT "          &htmlsp.";
       PUT "          <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a></div>";
       PUT "     </td>";
       PUT "</tr>";

       /** MF Changes ROW 2 **/
       /** Modified 2-2 MAB to better align title **/
       PUT "<tr>";
       PUT "      <td valign='center' align='center' colspan=""" COLUMNS +(-1) """
bgcolor='#D8D8D8'>";
       PUT "          <font face='&fontface.' color='#3333cc' size='5'><b>&major. &comma.
&sub_regs. <br>";
```

```
          /*** Since trend data don't display reference period ***/
          PUT "                    &sub_ben.</b></font>";


          PUT "          </td>";
          PUT "</tr>";


          /*** 3rd Row ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          /**PUT "<td></td>"**/


          /*** 4th Row start (column 1) ***/
          /*** ÛÛ FRAMES SECTION ÛÛ ***/
          %if &prefix=f %then %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td align='center' valign='bottom'><img src='&imgdir.\blank_120_50.gif'
border=0></td>";
          %end;
          %else %do;
            PUT "<tr bgcolor= &hdcolr.><font face='&fontface.'>";
            PUT "<td width='10%'>&htmlsp.</td>";
          %end;



          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
          %if &outxls.=1 %then %do;
            FILE XLSTITLE;
            PUT "&major. &comma. &sub_regs.";
            PUT "%cmpres('&sub_ben.')";
          %end;
          /*------------------------*/
          /* 2000/11: begin xls code */
          /*------------------------*/
    END;

    FILE "&FILEOUT1." MOD ;                    /* 2000/11: refer back to htm file */
    /*** Print out column headings ***/

    LENGTH HREFf1 $250;   /*MJS 02/19/2003*/
    LENGTH HREFf2 $250;
    LENGTH HREFf3 $250;

    LENGTH HREFp1 $250;
    LENGTH HREFp2 $250;
    LENGTH HREFp3 $250;

    LENGTH HREF4  $250;

    ****7-29-2002 DKB ADDED LINKS TO COMPONENT PAGES OF PREVIOUS QUARTERS FROM TREND PAGE****;
    ********************THIS WILL NEED TO BE UPDATED EACH QUARTER********************;
    ***FRAMES***;
    HREFf1=COMPRESS("2001\f&var1.-&var2.-&var3..htm");   /*MJS 02/13/04*/
    HREFf2=COMPRESS("2002\f&var1.-&var2.-&var3..htm");   /*MJS 02/13/04*/
    HREFf3=COMPRESS("f&var1.-&var2.-&var3..htm");

    ***NO FRAMES***;
    HREFp1=COMPRESS("2001\p&var1.-&var2.-&var3..htm");   /*MJS 02/13/04*/
    HREFp2=COMPRESS("2002\p&var1.-&var2.-&var3..htm");   /*MJS 02/13/04*/
    HREFp3=COMPRESS("p&var1.-&var2.-&var3..htm");

    ****HELP FILE FOR TREND COLUMN***;
    HREF4=COMPRESS("help.htm#trend");    /*7-29-2002 DKB ADDED LINK FOR TREND SECTION OF HELP
FILE*/

    **************************************************;

    /*** 4th Row (columns 2+) ***/
    /*** If quarter column then HREF link is different ****/
    /*** ÛÛ FRAMES SECTION ÛÛ ***/
```

```
  %if &prefix=f %then %do;
    *IF _N_>&subcols. THEN IMAGE=COMPRESS("&imgdir.\period"||_N_-&subcols.||".gif");
    *ELSE IMAGE=COMPRESS("&imgdir.\image&var3._"||_N_||".gif");
    IMAGE=COMPRESS("&imgdir.\period"||_N_||".gif");   /*MJS 02/20/2003*/

    IF _N_=1 THEN HREF=HREFf1;         /*MJS 02/19/2003*/
    ELSE IF _N_=2 THEN HREF=HREFf2;
    ELSE IF _N_=3 THEN HREF=HREFf3;
    ELSE IF _N_=4 THEN HREF=HREF4;

    PUT "<td align='center' valign='bottom'><a href=""" HREF +(-1) """ &target.><IMG SRC='" IMAGE
"' alt='" BENTYPE "' BORDER=0></a></td>";
  %end;
  %else %do;
    IF _N_=1 THEN HREF=HREFp1;         /*MJS 02/19/2003*/
    ELSE IF _N_=2 THEN HREF=HREFp2;
    ELSE IF _N_=3 THEN HREF=HREFp3;
    ELSE IF _N_=4 THEN HREF=HREF4;

    PUT "<td width='10%' align='center' valign='bottom'><font face='&fontface.' size='1'><a
href=""" HREF +(-1) """ &target.>" &HEADVAR. "</a></font></td>";
  %end;

  IF EOF THEN DO;
    PUT "</font></tr>";
    /***  2-2 MAB removed scale row ***/
  END;


RUN;
%end;




/*** ÛÛ FRAMES SECTION ÛÛ ***/
%if &prefix=f %then %do;
  /*** Close out header HTML page ***/
  DATA _NULL_;
    FILE "&FILEOUT1." MOD;

    PUT "</center></table>";
    PUT "</body></html>";
  RUN;


  /*** Since done making frame 1 page then assign fileout1 = frame 2 ***/
  %let fileout1=&fileout3.;

  /*** Initialize out data HTML page ***/
  DATA _NULL_;
    FILE "&FILEOUT3.";

    PUT "<! Created &datetime.>";
    PUT "<html>";
    PUT "<body bgcolor='#999999' text='#000099' link='#660066' alink='#660066' vlink='#996699'>";
    PUT "<center><table border='1' cellpadding='2' cellspacing='0' bgcolor='#D8D8D8'
cols=&columns. width=640>";
  RUN;

%end;




/************************************/
/****  Put out rest of table     ****/
/****  Colored scores and Stub   ****/
/************************************/
%if &seppage.=0 OR &var3.=8 OR &var3.=9 OR &var3.=10 OR &var3.=11 %then %do;
DATA HTML;
```

```
  SET SUBSET;
RUN;
%end;
%else %if &seppage.=1 %then %do;
DATA HTML;
  SET SUBSET;
  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE IN ("2001","2002","2003","Trend") THEN DELETE; /*** Changed 1-18-2002 MAB ***/
/*MJS 02/13/04*/
RUN;
%end;
%else %if &seppage.=2 %then %do;
DATA HTML;
  SET SUBSET;
  /*** Since spliting up table need to delete some records ***/
  /*** Modified 2-2 MAB to deal with new period values **/
  IF BENTYPE IN ("2001","2002","2003","Trend");  /*** Changed 1-18-2002 MAB ***/   /*MJS
02/13/04*/
RUN;
%end;




/*** MAB 1-10-2002  -  This code should never be run since never create ***/
/*** all MAJGRP page for Annual report cards ***/
/*ÛÛÛÛ ALL MAJGRPS ÛÛÛÛ*/
%if &var1.=0 %then %do;

DATA HTML;
  SET HTML END=EOF;


  IF MAJGRP="Prime Enrollees" THEN MAJNUM=1;
  IF MAJGRP="Enrollees with Military PCM"  THEN MAJNUM=2;
  IF MAJGRP="Enrollees with Civilian PCM" THEN MAJNUM=3;
  IF MAJGRP="Standard/Extra Users" THEN MAJNUM=4;  /*** Changed from 'Non-enrolled Beneficiaries'
1-25-2002 MAB ***/
  IF MAJGRP="Active Duty" THEN MAJNUM=5;
  IF MAJGRP="Active Duty Dependents" THEN MAJNUM=6;
  IF MAJGRP="Retirees and Dependents" THEN MAJNUM=7;
  IF MAJGRP="All Users" THEN MAJNUM=8;   /*** Changed from 'All Beneficiares' 1-24-2002 MAB ***/


  /*** HREF link to another page ***/
  HREF=COMPRESS("&prefix."||MAJNUM||"-0-&var3.&q..htm");  /** Link is diff for CONUS MHS region
**/
  /*** MAB 7-12-2001 updated to reference trend page if needed ***/


  %if &var2.^=99 %then %do;
     IF REGION="CONUS MHS" THEN DELETE;
  %end;


  LENGTH HREFQ LMAJGRP $ 100;   /*MJS 02/13/04*/
  RETAIN LMAJGRP;

  IF _N_=1 THEN DO;
     LMAJGRP=" ";
     ROW=0;


    /*** Add links to trend data 7.6.2001 MAB ***/
    %let columns_less1=%EVAL(&columns.-1);
    %if &seppage.=0 %then %do;
         FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
```

```
          PUT "<tr bgcolor= &gray.><td width='" WIDTH_COL1 "'><font face='&fontface.'
size='2'><b>Trends</b></font></td>";
          PUT "<td width='" WIDTH3 "'>&htmlsp.</td>";

          %do i=2 %to 12;
              %if &i.^=8 AND &i.^=9 AND &i.^=10 AND &i.^=11 %then %do;
                  HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i.q.htm");  /*** href to 2nd html file
***/
              %end;
              %else %do;
                  HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i..htm");  /*** href to 2nd html file
***/
              %end;

              PUT "<td width='" WIDTH3 "'><a href='" HREFQ "' &target.><CENTER><img
src='&imgdir.\trend_row.gif' border=0></CENTER></a></td>";
          %end;
          PUT "</tr>";
    %end;

  END;



  IF LMAJGRP^=MAJGRP THEN DO;                 /*** Start new row ***/
        FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
        ROW+1;
        IF LMAJGRP^=" " THEN PUT "</tr>";  /*** terminate previous row ***/


        /*** Column 1 / Row 1 ***/
        /*** ÛÛ FRAMES SECTION ÛÛ ***/
        %if &prefix=f %then %do;
            IF MAJGRP IN("Benchmark") THEN PUT "<tr><td width='" WIDTH_COL1 "'><b><font
face='&fontface.' size='2'>" MAJGRP "</font></b></td>";    /*** no HREF links ***/
        %end;
        %else %do;
            IF MAJGRP IN("Benchmark") THEN PUT "<tr><td><b><font face='&fontface.' size='2'>"
MAJGRP "</font></b></td>";                              /*** no HREF links ***/
        %end;

        /*** Column 1 / Row 2+ ***/
        ELSE IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " MAJGRP " </a></font></td>";   /** Shade row **/
        ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """ &target.> "
MAJGRP " </a></font></td>";



        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
         %if &outxls.=1 %then %do;
           FILE XLSDATA;
           IF LMAJGRP^=" " THEN          PUT " ";
           IF REGION IN("Benchmark") THEN PUT REGION '09'x @@;   /* '09'x ensures text string is
put into one cell */
           ELSE IF MOD(ROW,2)=0 THEN      PUT MAJGRP '09'x @@;   /* rather than spanning across
cells          */
           ELSE                          PUT MAJGRP '09'x @@;
         %end;
        /*------------------------*/
        /* 2000/11: end xls code   */
        /*------------------------*/

        LMAJGRP=MAJGRP;
  END;


  /*** Column 2+ ***/
  /*******************************************/
  /**** Need to output different formats    ****/
  /*******************************************/
  FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */
```

```
   IF MAJGRP IN("Benchmark") THEN DO;
        IF SCORE=. THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SCORE=.A THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SCORE=.B THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
   END;
   ELSE DO;
     IF SCORE=. THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE IF SCORE=.A THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
    ELSE IF SCORE=.B THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NB<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE DO;
        IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.B THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
        ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
     END;
   END;


   /*--------------------------*/
   /* 2000/11: begin xls code */
   /*--------------------------*/
   %if &outxls.=1 %then %do;
     FILE XLSDATA;
     IF MAJGRP IN("Benchmark") THEN DO;   /** Replaced 1-22 mab **/
          IF SCORE=. THEN       PUT "***" '09'x @@;
          ELSE IF SCORE=.A THEN  PUT "NA"  '09'x @@;
          ELSE IF SCORE=.B THEN  PUT "NB"  '09'x @@;
          ELSE                   PUT SCORE '09'x @@;
     END;
     ELSE DO;
       IF SCORE=. THEN DO;
          PUT "***" '09'x @@;
       END;
       ELSE IF SCORE=.A THEN DO;
          PUT "NA" '09'x @@;
       END;
       ELSE IF SCORE=.B THEN DO;
          PUT "NB" '09'x @@;
       END;
       ELSE DO;
          IF SIG=1 THEN        PUT SCORE '09'x @@;
          ELSE IF SIG=. THEN   PUT "***" '09'x @@;
          ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
          ELSE IF SIG=.B THEN PUT "NB"  '09'x @@;
          ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
          ELSE                 PUT SCORE '09'x @@;
       END;
     END;
   %end;
```

```
   /*------------------------*/
   /* 2000/11: end xls code   */
   /*------------------------*/

   IF EOF THEN DO;
      FILE "&FILEOUT1." MOD ;                          /* 2000/11: to refer back to htm file */
      PUT "</tr>";  /*** terminate last row ***/

      %BOTTOM_NOTES;  /** Macro with bottom notes **/


    /*------------------------*/
    /* 2000/11: begin xls code */
    /*------------------------*/
    %if &outxls.=1 %then %do;
     FILE XLSDATA;
     PUT; PUT;
         %if &var1=8 and &var3=3 %then %do;
           PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/13/04*/
           PUT "Indicates score significantly exceeds benchmark";
           PUT "Indicates score significantly falls short of benchmark";
           PUT "NA Indicates not applicable";
           PUT "*** Indicates significance not available";
         %end;
         %else %do;
           PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/13/04*/
           PUT "Indicates score significantly exceeds benchmark";
           PUT "Indicates score significantly falls short of benchmark";
           PUT "NA Indicates benchmark not available";
           PUT "*** Indicates significance not available";
         %end;
    %end;
    /*------------------------*/
    /* 2000/11: end xls code   */
    /*------------------------*/

   END;
RUN;
%end;




/*ÛÛÛÛ All Regions ÛÛÛÛ*/
%if &var2.=0 %then %do;
DATA HTML;
  SET HTML END=EOF;


  LENGTH HREFQ LREGION $ 100;   /*MJS 02/13/04*/
  RETAIN LREGION;

  IF _N_=1 THEN DO;
     LREGION=" ";
     REGNUM=1;
     ROW=0;


    /*** Add links to trend data 7.6.2001 MAB ***/
    %let columns_less1=%EVAL(&columns.-1);
    %if &seppage.=0 %then %do;
         FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
         PUT "<tr bgcolor= &gray.><td width='" WIDTH_COL1 "'><font face='&fontface.'
size='2'><b>Trends</b></font></td>";
         PUT "<td width='" WIDTH3 "'>&htmlsp.</td>";

         %do i=2 %to 12;
             %if &i.^=8 AND &i.^=9 AND &i.^=10 AND &i.^=11 %then %do;
                 HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i.q.htm");  /*** href to 2nd html file
***/
             %end;
             %else %do;
```

```
                    HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i..htm");  /*** href to 2nd html file
***/
              %end;

              PUT "<td width='" WIDTH3 "'><a href='" HREFQ "' &target.><CENTER><img
src='&imgdir.\trend_row.gif' border=0></CENTER></a></td>";
          %end;
          PUT "</tr>";
    %end;


  END;


  IF LREGION^=REGION THEN DO;              /*** Start new row ***/
        FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
        ROW+1;
        IF LREGION^=" " THEN PUT "</tr>";  /*** terminate previous row ***/


        /*------------------------*/
        /* 2000/11: begin xls code */
        /*------------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSDATA;
          IF LREGION^=" " THEN PUT " ";            /*** terminate previous row ***/
          FILE "&FILEOUT1." MOD ;                  /* 2000/11: to refer back to htm file */
        %end;
        /*------------------------*/
        /* 2000/11: end xls code   */
        /*------------------------*/


        /***REMOVED MAB 1-18-2002***/
        /***IF REGION IN("CONUS MHS") THEN DO;
            ORIGNUM=REGNUM;
            REGNUM=99;
        END;***/


        /*** Column 1 / Row 1 ***/
        /*** ÛÛ FRAMES SECTION ÛÛ ***/
        %if &prefix=f %then %do;
          IF REGION IN("Benchmark") THEN PUT "<tr><td width='" WIDTH_COL1 "'><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";  /*** no HREF links ***/
            ELSE IF REGION IN("CONUS MHS") THEN PUT "<tr bgcolor= &gray.><td><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";  /*** no HREF links ***/
        %end;
        %else %do;
          IF REGION IN("Benchmark") THEN PUT "<tr><td><b><font face='&fontface.' size='2'>"
REGCAT "</font></b></td>";  /*** no HREF links ***/
            ELSE IF REGION IN("CONUS MHS") THEN PUT "<tr bgcolor= &gray.><td><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";  /*** no HREF links ***/
        %end;
        ELSE DO;   /*** HREF links for each region ***/


          /***REMOVED MAB 1-10-2002  HREF=COMPRESS("&prefix.0-"||REGNUM||"-&var3.&q..htm");***/
          /*** Added MAB 1-10-2002 ***/
          HREF=COMPRESS("&prefix.&var1.-"||REGNUM||"-&var3.&q..htm");

          /*** Added MAB 1-10-2002 ***/
          /*** Certain major groups are not large enough to show ***/
          /*** catchment level detail. so don't add HREF link here  ***/
          %if &var1.=3 or &var1.=4 or &var1.=6 or &var1.=7  %then %do;
            IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font  face='&fontface.' size='2'>
" REGCAT " </font></td>";     /**Shade row **/
              ELSE PUT "<tr><td><font  face='&fontface.' size='2'> " REGCAT " </font></td>";
          %end;
          %else %do;
            IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.' size='2'><a
href=""" HREF +(-1) """ &target.> " REGCAT " </a></font></td>";  /** Shade row **/
              ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """
&target.> " REGCAT " </a></font></td>";
```

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```
          %end;



          /*** Column 1 / Row 2+ ***/
          /*** REMOVED MAB 1-10-2002 ***/
          /***%if &prefix=f %then %do;
             IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " REGCAT " </a></font></td>";  Shade row
             ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """
&target.> " REGCAT " </a></font></td>";
          %end;
          %else %do;
             IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""" HREF +(-1) """ &target.> " REGCAT " </a></font></td>";  Shade row
             ELSE PUT "<tr><td><font face='&fontface.' size='2'><a href=""" HREF +(-1) """
&target.> " REGCAT " </a></font></td>";
          %end;***/


          REGNUM+1;

          /***REMOVED MAB 1-18-2002***/
          /***IF REGION IN("CONUS MHS") THEN DO;
             REGNUM=ORIGNUM;
          END;***/

       END;

       /*------------------------*/
       /* 2000/11: begin xls code */
       /*------------------------*/
       %if &outxls.=1 %then %do;
         FILE XLSDATA;
         IF REGION IN("Benchmark") THEN  PUT REGCAT '09'x @@;   /* no logic difference */
         ELSE DO;
            IF MOD(ROW,2)=0 THEN           PUT REGCAT '09'x @@;   /* just presentation difference
in htm */
            ELSE                           PUT REGCAT '09'x @@;   /* keeping as is to preserve htm
code structure */
         END;
       %end;
       /*------------------------*/
       /* 2000/11: end xls code   */
       /*------------------------*/

       LREGION=REGION;
  END;


  /*** Column 2+ ***/
  /*****************************************/
  /**** Need to output different formats    ****/
  /*****************************************/
  FILE "&FILEOUT1." MOD ;                /* 2000/11: refer back to htm file */
  IF REGION IN("Benchmark") THEN DO;    /*** no significance ***/
       IF SCORE=. THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SCORE=.A THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SCORE=.B THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
  END;
  ELSE DO;
    IF SCORE=. THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
    END;
    ELSE IF SCORE=.A THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
    END;
```

```
    ELSE IF SCORE=.B THEN DO;
        PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NB<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
    END;
    ELSE DO;
        IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.B THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
        ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
    END;
  END;


  /*------------------------*/
  /* 2000/11: begin xls code */
  /*------------------------*/
  %if &outxls.=1 %then %do;
    FILE XLSDATA;
    IF REGION IN("Benchmark") THEN DO;
        IF SCORE=. THEN      PUT "***" '09'x @@;
        ELSE IF SCORE=.A THEN PUT "NA"  '09'x @@;
        ELSE IF SCORE=.B THEN PUT "NB"  '09'x @@;
        ELSE                  PUT SCORE '09'x @@;
    END;
    ELSE DO;
      IF SCORE=. THEN DO;
         PUT "***" '09'x @@;
      END;
      ELSE IF SCORE=.A THEN DO;
         PUT "NA" '09'x @@;
      END;
      ELSE IF SCORE=.B THEN DO;
         PUT "NB" '09'x @@;
      END;
      ELSE DO;
         IF SIG=1 THEN       PUT SCORE '09'x @@;
         ELSE IF SIG=. THEN  PUT "***" '09'x @@;
         ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
         ELSE IF SIG=.B THEN PUT "NB"  '09'x @@;
         ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
         ELSE                PUT SCORE '09'x @@;
      END;
    END;
  %end;
  /*------------------------*/
  /* 2000/11: end xls code   */
  /*------------------------*/


  IF EOF THEN DO;
    FILE "&FILEOUT1." MOD ;                 /* 2000/11: refer back to htm file */
    PUT "</tr>";  /*** terminate last row ***/


    %BOTTOM_NOTES;  /** Macro with bottom notes **/


    /*------------------------*/
    /* 2000/11: begin xls code */
    /*------------------------*/
    %if &outxls.=1 %then %do;
      FILE XLSDATA;
      PUT; PUT;
      %if &var1=8 and &var3=3 %then %do;
         PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/13/04*/
```

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```
                  PUT "Indicates score significantly exceeds benchmark";
                  PUT "Indicates score significantly falls short of benchmark";
                  PUT "NA Indicates not applicable";
                  PUT "*** Indicates significance not available";
               %end;
               %else %do;
                  PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/14/04*/
                  PUT "Indicates score significantly exceeds benchmark";
                  PUT "Indicates score significantly falls short of benchmark";
                  PUT "NA Indicates benchmark not available";
                  PUT "*** Indicates significance not available";
               %end;
         %end;
         /*-----------------------*/
         /* 2000/11: end xls code  */
         /*-----------------------*/

   END;

RUN;

%end;




/*ÛÛÛÛ Single Regions ÛÛÛÛ*/
/* This code is not applicable for the 2000 report cards */
/*  since not enough data to display sub-region info. */
/*  Will leave in code in case this changes */
%if &var2.^=0 AND &var1.^=0 %then %do;
DATA HTML;
  SET HTML END=EOF;

   /*** Added HREFQ 1-18-2002 MAB ***/
   /*** DKB CHANGED LENGTH FROM 26 to 42 B/C E.Schone CHANGED LENGTH OF REGCAT VAR 2-25-2002 ***/
  LENGTH HREFQ LREGCAT $ 100;   /*MJS 02/13/04*/
  RETAIN LREGCAT;

  IF _N_=1 THEN DO;
     LREGCAT=" ";
     ROW=0;

     /*** Add links to trend data 1.23.2002 MAB ***/
     %let columns_less1=%EVAL(&columns.-1);
     %if &seppage.=0 %then %do;
          FILE "&FILEOUT1." MOD ;
          PUT "<tr bgcolor= &gray.><td width='" WIDTH_COL1 "'><font face='&fontface.'
size='2'><b>Trends</b></font></td>";
          PUT "<td width='" WIDTH3 "'>&htmlsp.</td>";

          %do i=2 %to 12;
              %if &i.^=8 AND &i.^=9 AND &i.^=10 AND &i.^=11 %then %do;
                  HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i.q.htm");  /*** href to 2nd html file
***/
              %end;
              %else %do;
                  HREFQ=COMPRESS("&prefix.&var1.-&var2.-&i..htm");  /*** href to 2nd html file
***/
              %end;

              PUT "<td width='" WIDTH3 "'><a href='" HREFQ "' &target.><CENTER><img
src='&imgdir.\trend_row.gif' border=0></CENTER></a></td>";
          %end;
          PUT "</tr>";
     %end;

  END;


  IF LREGCAT^=REGCAT THEN DO;                    /*** Start new row ***/
       FILE "&FILEOUT1." MOD ;   /* 2000/11: moved inside if stmt */
       ROW+1;
```

```
        IF LREGCAT^=" " THEN PUT "</tr>";  /*** terminate previous row ***/
        IF REGCAT IN("Benchmark") THEN PUT "<tr><td width='" WIDTH_COL1 "'><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";
        ELSE IF REGCAT IN("CONUS MHS") THEN PUT "<tr bgcolor= &gray.><td><b><font
face='&fontface.' size='2'>" REGCAT "</font></b></td>";
        ELSE IF MOD(ROW,2)=0 THEN PUT "<tr bgcolor= &gray.><td><font face='&fontface.'
size='2'><a href=""help.htm#" regcat +(-1)""">" REGCAT "</a></font></td>";   /** Shade row **/
/*MJS 02/18/2003*/
        ELSE DO;   /*MJS 02/18/2003*/
          IF SUBSTR(REGCAT,1,6)="Region" THEN
            PUT "<tr><td><font face='&fontface.' size='2'>" REGCAT "</font></td>";  /*MJS
02/12/2003*/
          ELSE
            PUT "<tr><td><font face='&fontface.' size='2'><a href=""help.htm#" regcat +(-1)""">"
REGCAT "</a></font></td>";  /*MJS 02/18/2003*/
        END;

        /*------------------------*/
        /* 2000/11: begin xls code */
        /*-----------------------*/
        %if &outxls.=1 %then %do;
          FILE XLSDATA;
          IF LREGCAT^=" " THEN PUT " ";
          IF REGCAT IN("Benchmark") THEN      PUT REGCAT '09'x @@;          /* no logic difference
*/
          ELSE IF REGCAT IN("CONUS MHS") THEN PUT REGCAT '09'x @@;
          ELSE IF MOD(ROW,2)=0 THEN           PUT REGCAT '09'x @@;          /* just presentation
difference in htm */
          ELSE                                PUT REGCAT '09'x @@;          /* keeping as is to
preserve htm code structure */
        %end;
        /*------------------------*/
        /* 2000/11: end xls code   */
        /*------------------------*/


        LREGCAT=REGCAT;

   END;



   /********************************************/
   /**** Need to output different formats    ****/
   /********************************************/
   FILE "&FILEOUT1." MOD ;               /* 2000/11: refer back to htm file */
   IF REGION IN("Benchmark") THEN DO;       /*** no significance ***/
       /*** Add WIDTH info 1.23.2002 MAB ***/
       IF SCORE=. THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SCORE=.A THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE IF SCORE=.B THEN PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font
face='&fontface.' color=&blue. size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
       ELSE PUT "<td width='" WIDTH3 "' align='center' valign='bottom'><b><font face='&fontface.'
color=&blue. size='2'>" SCORE 3.0 "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
   END;
   ELSE DO;
     IF SCORE=. THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>***<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE IF SCORE=.A THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NA<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE IF SCORE=.B THEN DO;
       PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'>NB<!CODE= "
+(-1) ORDER Z5.  "></font></b></td>";
     END;
     ELSE DO;
       IF SIG=1 THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.' size='2'
color=&green.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
```

```
        ELSE IF SIG=. THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>***<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.A THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NA<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=.B THEN PUT "<td align='center' valign='bottom'><b><font face='&fontface.'
size='2'>NB<!CODE= " +(-1) ORDER Z5.  "></font></b></td>";
        ELSE IF SIG=-1 THEN PUT "<td align='center' valign='bottom'><i><font face='&fontface.'
size='2' color=&red.>" SCORE 3.0  "<!CODE= " +(-1) ORDER Z5.  "></font></i></td>";
        ELSE PUT "<td align='center' valign='bottom'><font face='&fontface.' size='2'>" SCORE 3.0
"<!CODE= " +(-1) ORDER Z5.  "></font></td>";
    END;
  END;

  /*------------------------*/
  /* 2000/11: begin xls code */
  /*------------------------*/
  %if &outxls.=1 %then %do;
    FILE XLSDATA;
    IF REGION IN("Benchmark") THEN DO;
        IF SCORE=. THEN        PUT "***" '09'x @@;
        ELSE IF SCORE=.A THEN  PUT "NA"  '09'x @@;
        ELSE IF SCORE=.B THEN  PUT "NB"  '09'x @@;
        ELSE                   PUT SCORE '09'x @@;
    END;
    ELSE DO;
      IF SCORE=. THEN DO;
         PUT "***" '09'x @@;
      END;
      ELSE IF SCORE=.A THEN DO;
         PUT "NA" '09'x @@;
      END;
      ELSE IF SCORE=.B THEN DO;
         PUT "NB" '09'x @@;
      END;
      ELSE DO;
         IF SIG=1 THEN        PUT SCORE '09'x @@;
         ELSE IF SIG=. THEN   PUT "***" '09'x @@;
         ELSE IF SIG=.A THEN PUT "NA"  '09'x @@;
         ELSE IF SIG=.B THEN PUT "NB"  '09'x @@;
         ELSE IF SIG=-1 THEN PUT SCORE '09'x @@;
         ELSE                PUT SCORE '09'x @@;
      END;
    END;
  %end;
  /*------------------------*/
  /* 2000/11: end xls code   */
  /*------------------------*/


  IF EOF THEN DO;
     FILE "&FILEOUT1." MOD ;              /* 2000/11: refer back to htm file */
     PUT "</tr>";  /*** terminate last row ***/

     %BOTTOM_NOTES;  /** Macro with bottom notes **/


     /*------------------------*/
     /* 2000/11: begin xls code */
     /*------------------------*/
     %if &outxls.=1 %then %do;
       FILE XLSDATA;
       PUT; PUT;
  %if &var1=8 and &var3=3 %then %do;
          PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/13/04*/
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates not applicable";
          PUT "*** Indicates significance not available";
       %end;
       %else %do;
          PUT "Source: 2003 Health Care Survey of DOD Beneficiaries";   /*MJS 02/13/04*/
          PUT "Indicates score significantly exceeds benchmark";
          PUT "Indicates score significantly falls short of benchmark";
          PUT "NA Indicates benchmark not available";
```

```
              PUT "*** Indicates significance not available";
           %end;
      %end;
      /*------------------------*/
      /* 2000/11: end xls code   */
      /*------------------------*/


   END;

RUN;
%end;




/************************************/
/****  Print out footer info      ****/
/************************************/
DATA _NULL_;
     FILE "&FILEOUT1." MOD ;


     /** Determine where back button should link to **/
     %if &var1.=0 %then %do;
        HREFBACK=COMPRESS("&prefix.8-0-0.htm");
     %end;
     %else %do;
        HREFBACK=COMPRESS("&prefix.&var1.-0-0.htm");
     %end;


     /** MF Changes **/
     PUT "<tr>";
     PUT "    <td colspan='&columns.'>";
     PUT "       <center>";
     PUT "           <a href='index.htm' &target.><img src=&home_but. border='0' alt='Return to Main
Page'></a>&htmlsp.&htmlsp.";   /*MJS 02/19/2003*/
             /*** 7-17 MAB added JS code to go back ***/
     PUT "&goback.";
     PUT "           <noscript><a href=""" HREFBACK  +(-1) """ &target.><img src=&back_but.
border='0' alt='Return to Top Level'></a></noscript>";

     PUT "           <a href='help.htm' &target.><img src=&help_but. border='0'
alt='Help'></a><br>";
     PUT "           <font face='Arial,Helvetica,Swiss,Geneva' size='2'><b>&grpmsg.<br>";
     PUT "           </b></font>";



     majgrp1=COMPRESS("&prefix.1-&var2.-&var3.&q..htm");
     majgrp2=COMPRESS("&prefix.2-&var2.-&var3.&q..htm");
     majgrp3=COMPRESS("&prefix.3-&var2.-&var3.&q..htm");
     majgrp4=COMPRESS("&prefix.4-&var2.-&var3.&q..htm");
     majgrp5=COMPRESS("&prefix.5-&var2.-&var3.&q..htm");
     majgrp6=COMPRESS("&prefix.6-&var2.-&var3.&q..htm");
     majgrp7=COMPRESS("&prefix.7-&var2.-&var3.&q..htm");
     majgrp8=COMPRESS("&prefix.8-&var2.-&var3.&q..htm");


      /*** Certain major groups are not large enough to show ***/
      /*** catchment level detail. So if we are in html file ***/
      /*** which has this detail then don't link to a html   ***/
      /*** file which doesn't exist                          ***/

     %if &var1.^=0 %then %do;
       %if &var1.^=3 and &var1.^=4 and &var1.^=6 and &var1.^=7 and &var2.^=0 %then %do;

         PUT "<a href=""" MAJGRP1 +(-1) """ &target.><font face='&fontface.' size='2'>Prime
Enrollees</font></a>&htmlsp.&htmlsp.";
         PUT "<a href=""" MAJGRP2 +(-1) """ &target.><font face='&fontface.' size='2'>Enrollees
with Military PCM</font></a>&htmlsp.&htmlsp.";
         PUT "<a href=""" MAJGRP5 +(-1) """ &target.><font face='&fontface.' size='2'>Active
Duty</font></a>&htmlsp.&htmlsp.";
         PUT "<a href=""" MAJGRP8 +(-1) """ &target.><font face='&fontface.' size='2'>All
Users</font></a>";  /*** Changed from 'All Beneficiares' 1-24-2002 MAB ***/
```

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```
        %end;
        %else %do;

            PUT "<a href=""" MAJGRP1 +(-1) """ &target.><font face='&fontface.' size='2'>Prime
Enrollees</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP2 +(-1) """ &target.><font face='&fontface.' size='2'>Enrollees
with Military PCM</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP3 +(-1) """ &target.><font face='&fontface.' size='2'>Enrollees
with Civilian PCM</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP4 +(-1) """ &target.><font face='&fontface.'
size='2'>Standard/Extra Users</font></a>&htmlsp.&htmlsp.";  /*** Changed from 'Non-enrolled
Beneficiaries' 1-25-2002 MAB ***
            PUT "<br>";
            PUT "<a href=""" MAJGRP5 +(-1) """ &target.><font face='&fontface.' size='2'>Active
Duty</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP6 +(-1) """ &target.><font face='&fontface.' size='2'>Active Duty
Dependents</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP7 +(-1) """ &target.><font face='&fontface.' size='2'>Retirees and
Dependents</font></a>&htmlsp.&htmlsp.";
            PUT "<a href=""" MAJGRP8 +(-1) """ &target.><font face='&fontface.' size='2'>All
Users</font></a>";    /*** Changed from 'All Beneficiares' 1-24-2002 MAB ***/

        %end;
     %end;

    /*** link to printer friendly version moved C.Rankin 10/25/2001 ***/

    /*** 4-17 MAB added  ***/
    /*** If creating frames need link to printer friendly version of file ***/
    /***DANIELE ADDED BR STATEMENT ON 11/1/01 SO PRINTER ICON WOULD SHOW UP ON SEPARATE LINE ***/
    %if &prefix=f %then %do;
        HREFP=COMPRESS("p&var1.-&var2.-&var3.&q..htm");
        PUT "   <BR><font face='Arial,Helvetica,Swiss,Geneva' size='1'><a href='" HREFP "'
&target.><img src='&imgdir.\printer.gif' alt='Printer Friendly Page' border=0>Printer Friendly
Page</a></font>
    %end;


RUN;


/*** Close HTML page ***/
DATA _NULL_;
  FILE "&FILEOUT1." MOD ;

  PUT "</center></td></tr></table>";
  PUT "</body></html>";

RUN;


/*------------------------------*/
/* 2000/12: begin xls color code */
/*------------------------------*/
%if &outxls.=1 %then %do;
  FILENAME CMDS DDE 'excel|system';

  /* Align 2 titles */
  DATA _NULL_;
     FILE CMDS;
     CELL=COMPRESS("[SELECT(""R1C1:R1C"||&columns.||""")]"); PUT CELL;
     PUT '[ALIGNMENT(3, False, 3,0, False,,,True)]';  /** Merges titles across columns **/
     CELL=COMPRESS("[SELECT(""R2C1:R2C"||&columns.||""")]"); PUT CELL;
     PUT '[ALIGNMENT(3, False, 3,0, False,,,True)]';  /** Merges titles across columns **/
  RUN;

  DATA _NULL_;
    FILE CMDS;
    SET HTML(DROP=ROW) END=EOF;

    RETAIN ROW COLUMN;
```

```
    /*** Need to initialize row and column pointers ***/
    IF _N_=1 THEN DO;
      ROW=6;
      COLUMN=1;
    END;

    /*** Increment Row and Column pointers ***/
    COLUMN=COLUMN+1;
    IF COLUMN>&columns. THEN DO;
       ROW=ROW+1;
       COLUMN=2;
    END;


    CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
    PUT CELL;

    /** Before color cell center data **/
    PUT '[ALIGNMENT(3, False, 3,0, False)]';


    IF REGION IN("Benchmark") THEN PUT '[FORMAT.FONT("Arial",10,True,False,False,False,9)]';
/*** BOLD & DARK RED ***/
    ELSE IF SCORE NOT IN(.,.A) THEN DO;
      IF SIG=1 THEN PUT '[FORMAT.FONT("Arial",10,True,False,False,False,10)]';          /*** BOLD
& GREEN ***/
      ELSE IF SIG=-1 THEN PUT '[FORMAT.FONT("Arial",10,False,True,False,False,3)]';     /*** RED
***/
      ELSE PUT '[FORMAT.FONT("Arial",10,False,False,False,False,5)]';    /*** BLUE ***/
    END;


    /*** If last record then output footer ***/
    IF EOF THEN DO;
       ROW=ROW+3; COLUMN=1;
       CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
       PUT CELL;
       PUT '[FORMAT.FONT("Arial",10,True,False,False,False,10)]';           /*** BOLD & GREEN ***/
       ROW=ROW+1;
       CELL=COMPRESS("[SELECT(""R"||ROW||"C"||COLUMN||":R"||ROW||"C"||COLUMN||""")]");
       PUT CELL;
       PUT '[FORMAT.FONT("Arial",10,False,True,False,False,3)]';      /*** RED ***/
    END;
  RUN;
  FILENAME CMDS DDE 'excel|system';
  DATA _NULL_;
    FILE CMDS;
    PUT '[SAVE()]';
    PUT '[CLOSE()]';
  RUN;
%end;
/*------------------------------*/
/* 2000/12: end xls color code   */
/*------------------------------*/


%MEND MKHTML;
/*ÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔ*/
/*ÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔÛÔ*/




*********************************************;
**** Create macros to call MKHTML macro  ****;
*********************************************;
/*** Create 68 HTML files ***/
%MACRO DOALL1();
     %DO J=0 %TO 15;
            %MKHTML(1,&j.,0,0);
            %MKHTML(2,&j.,0,0);
            %MKHTML(5,&j.,0,0);
```

```
                %MKHTML(8,&j.,0,0);
        %END;

        %MKHTML(3,0,0,0);
        %MKHTML(4,0,0,0);
        %MKHTML(6,0,0,0);
        %MKHTML(7,0,0,0);

%MEND DOALL1;




/*** Create 704 HTML pages (4 Majgrps / 16 Regions / 11 Benefits)***/
/*** Create 448 More pages if have sep page for trends ***/
%MACRO DOALL2();
        %DO J=0 %TO 15;
           %DO K=2 %TO 12;        * 11 Sub-benefits ;

                %MKHTML(1,&j.,&K.,1);
                %MKHTML(2,&j.,&K.,1);
                %MKHTML(5,&j.,&K.,1);
                %MKHTML(8,&j.,&K.,1);

                    /*** Call macro for 2nd page (except for ratings benefits) ***/
                    %if &k.^=8 AND &k.^=9 AND &k.^=10 AND &k.^=11 %then %do;
                      %MKHTML(1,&j.,&K.,2);
                      %MKHTML(2,&j.,&K.,2);
                      %MKHTML(5,&j.,&K.,2);
                      %MKHTML(8,&j.,&K.,2);
                    %end;
           %END;

        %END;
%MEND DOALL2;


/*** Create 72 HTML pages ***/
%MACRO DOALL3();
        %DO J=0 %TO 0;
           %DO K=2 %TO 12;        * 11 Sub-benefits ;

                %MKHTML(3,&j.,&K.,1);
                %MKHTML(4,&j.,&K.,1);
                %MKHTML(6,&j.,&K.,1);
                %MKHTML(7,&j.,&K.,1);


                    /*** Call macro for 2nd page (except for ratings benefits) ***/
                    %if &k.^=8 AND &k.^=9 AND &k.^=10 AND &k.^=11 %then %do;
                      %MKHTML(3,&j.,&K.,2);
                      %MKHTML(4,&j.,&K.,2);
                      %MKHTML(6,&j.,&K.,2);
                      %MKHTML(7,&j.,&K.,2);
                    %end;
           %END;

        %END;
%MEND DOALL3;




/*********************************************/
/**** Create macros to call MKHTML macro   ****/
/**** Need special macros for Excel files ****/
/*********************************************/
/*** Create 68 HTML files ***/
%MACRO EXCEL1();
        %DO J=0 %TO 15;
                %MKHTML(1,&j.,0,0);
                %MKHTML(2,&j.,0,0);
                %MKHTML(5,&j.,0,0);
                %MKHTML(8,&j.,0,0);
        %END;
```

```
      %MKHTML(3,0,0,0);
      %MKHTML(4,0,0,0);
      %MKHTML(6,0,0,0);
      %MKHTML(7,0,0,0);

%MEND EXCEL1;




/*** Create 704 HTML pages (4 Majgrps / 16 Regions / 11 Benefits)***/
%MACRO EXCEL2();
      %DO J=0 %TO 15;
          %DO K=2 %TO 12;      * 11 Sub-benefits ;

               %MKHTML(1,&j.,&K.,1);   /*MJS 02/16/04*/
               %MKHTML(2,&j.,&K.,1);
               %MKHTML(5,&j.,&K.,1);
               %MKHTML(8,&j.,&K.,1);

                   /*** Call macro for 2nd page (except for ratings benefits) ***/   /*MJS
02/16/04*/
                   %if &k.^=8 AND &k.^=9 AND &k.^=10 AND &k.^=11 %then %do;
                     %MKHTML(1,&j.,&K.,2);
                     %MKHTML(2,&j.,&K.,2);
                     %MKHTML(5,&j.,&K.,2);
                     %MKHTML(8,&j.,&K.,2);
                   %end;
          %END;

      %END;
%MEND EXCEL2;




/*** Create 44 HTML pages ***/
%MACRO EXCEL3();
      %DO J=0 %TO 0;
          %DO K=2 %TO 12;      * 11 Sub-benefits ;

               %MKHTML(3,&j.,&K.,1);   /*MJS 02/16/04*/
               %MKHTML(4,&j.,&K.,1);
               %MKHTML(6,&j.,&K.,1);
               %MKHTML(7,&j.,&K.,1);

                   /*** Call macro for 2nd page (except for ratings benefits) ***/   /*MJS
02/16/04*/
                   %if &k.^=8 AND &k.^=9 AND &k.^=10 AND &k.^=11 %then %do;
                     %MKHTML(3,&j.,&K.,2);
                     %MKHTML(4,&j.,&K.,2);
                     %MKHTML(6,&j.,&K.,2);
                     %MKHTML(7,&j.,&K.,2);
                   %end;
          %END;

      %END;
%MEND EXCEL3;


/*** Run macro to create Frame HTML files ***/
%LET PREFIX=f;
%LET OUTXLS=0;
%DOALL1;
%DOALL2;
%DOALL3;

/*** Run macro to create Printer Friendly HTML files (non-frames) ***/
%LET PREFIX=p;
%LET OUTXLS=0;
%DOALL1;
%DOALL2;
%DOALL3;

/*** Run macro to create Excel files ONLY ***/
%LET PREFIX=p;
```

```
%LET OUTXLS=1;
%EXCEL1;
%EXCEL2;
%EXCEL3;



%PUT "&number_html_files. HTML files created.";



ENDSAS;
***********************************************************************;
***********************************************************************;
***********************************************************************;
```

APPENDIX I

SAS CODE FOR TRICARE CONSUMER WATCH

**1.   Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\STEP1Q.SAS - Construct Variables for service
       affiliation Consumer Watch.**


```
*****************************************************************************
*
*   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 H03007>=2) THEN GROUP1 = 1
*                   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN GROUP2 = 1
*                   IF (XENR_PCM = 3,7     AND H03007>=2) THEN GROUP3 = 1
*                   IF XINS_COV IN (3,4,5)               THEN GROUP4 = 1
*                   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: 1) February 2001 By Keith Rathbun, Update for quarterly
*                adult report cards.  Removed permanent dataset ENTIRE.SD2.
*             2) August 2001 By Keith Rathbun, Updated DSN and LIBNAME
*                for 3rd quarter adult report cards.
*             3) OCTOBER 2001 BY DANIELE BEAHM, Because there was no post-
*                stratification done in Q3, changed all references of the
*                POSTSTR variable to ADJ_CELL
*             4) JANUARY 2002 BY DANIELE BEAHM, Modified group3 to include
*                XENR_PCM
*             5) April 2002 By Mike Scott, Updated variable names for 2002
*                survey.
*             6) July 2002 By Mike Scott: See Note #2.  Replaced variable
*                S02S01 with H03072 (new health status variable), deleted
*                code to recode S02S01 to H00077, and changed H00077/R00077
*                rename/recode to H03072/R03072 rename/recode.  The Hispanic/
*                Latino variable is not present.
*             7) January 2003 By Mike Scott, Changed ADJ_CELL to COM_SAMP.
*             8) March 2003 By Mike Scott, Updated variable names for 2003
*                survey.
*
*
*   INPUTS:   1) HCS034_1 - DoD Quarterly HCS Database   /*MJS 03/21/03*/
*
*   OUTPUTS:  1) GROUP1-8.SD2 - 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 H03072,
*                and the Hispanic/Latino variable which was H02079 is now
*                H02077.
*
*****************************************************************************;
```

```
OPTIONS NOCENTER LS=124 PS=74 SOURCE SOURCE2 NOFMTERR NOOVP COMPRESS=YES;
LIBNAME OUT V612 "DATA";
LIBNAME IN1 V612 "..\..\..\DATA\AFINAL";

TITLE1    'Program Saved as: STEP1Q.SAS';

PROC CONTENTS DATA=IN1.HCS034_1;   /*MJS 03/21/03*/
RUN;

DATA ENTIRE;
   SET IN1.HCS034_1(KEEP=   /*MJS 03/21/03*/
                MPRID
                FIELDAGE
                XREGION
                SERVAFF
                CONUS
                ENBGSMPL
                SREDA
                XSEXA
                XBNFGRP
                adj_cell
                XINS_COV
                XENR_PCM
                WRWT
                /* Getting Needed Care */
                H03009
                H03013
                H03027
                H03028
                /* Getting Care Quickly */
                H03018
                H03020
                H03023
                H03029
                /* How Well Doctors Communicate */
                H03032
                H03033
                H03034
                H03035
                /* Courteous and Helpful Office Staff */
                H03030
                H03031
                /* Customer Service */
                H03044
                H03046
                H03051
                /* Claims Processing */
                H03040
                H03041 /***************************/
                H03072 /* Health Status            */
                H03036 /* Health Care Rating       */
                H03052 /* Health Plan Rating       */
                H03011 /* Personal Doctor Rating   */
                H03015 /* Specialist Rating        */
                H03007 /* 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/unknown;
   IF XREGION = .    THEN DELETE;
   IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;
                     /* Note:  use tmp_cell in step2q.sas */
   LENGTH TMP_CELL 8;
   TMP_CELL = adj_cell;
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;
      AGE1824=0;
      AGE2534=0;
      AGE3544=0;
      AGE4554=0;
      AGE5564=0;
      AGE6574=0;
      AGE75UP=0;
      IF     ( '018' <= FIELDAGE <= '024' ) THEN AGE1824=1;
      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;

 * IF H02047=2 THEN H02048=1;
   **************************************************************************
   * 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 (XINS_COV IN (1,2,6)  AND H03007>=2) THEN GROUP1 = 1;
   IF (XENR_PCM IN (1,2,6)  AND H03007>=2) THEN GROUP2 = 1;
   IF (XENR_PCM IN (3,7)    AND H03007>=2) THEN GROUP3 = 1;
   IF XINS_COV IN (3,4,5)   THEN GROUP4 = 1;
   IF XBNFGRP = 1           THEN GROUP5 = 1;
   IF XBNFGRP = 2           THEN GROUP6 = 1;
   IF XBNFGRP IN (3,4)      THEN GROUP7 = 1;

   **************************************************************************
   * Reorder the codes for H03029.  H03029 is in reverse order.
   **************************************************************************;
   IF H03029 = 1     THEN R03029 = 4;
   ELSE IF H03029 = 2 THEN R03029 = 3;
   ELSE IF H03029 = 3 THEN R03029 = 2;
   ELSE IF H03029 = 4 THEN R03029 = 1;
   ELSE IF H03029 < 0 THEN R03029 = .;
      IF R03029 > 1  THEN R03029 = R03029 - 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 H03018 = 1     THEN R03018 = 1;
   ELSE IF H03018 = 2 THEN R03018 = 1;
   ELSE IF H03018 = 3 THEN R03018 = 2;
   ELSE IF H03018 = 4 THEN R03018 = 3;
   ELSE IF H03018 < 0 THEN R03018 = .;

   IF H03020 = 1     THEN R03020 = 1;
   ELSE IF H03020 = 2 THEN R03020 = 1;
```

```
ELSE IF H03020 = 3 THEN R03020 = 2;
ELSE IF H03020 = 4 THEN R03020 = 3;
ELSE IF H03020 < 0 THEN R03020 = .;

IF H03023 = 1      THEN R03023 = 1;
ELSE IF H03023 = 2 THEN R03023 = 1;
ELSE IF H03023 = 3 THEN R03023 = 2;
ELSE IF H03023 = 4 THEN R03023 = 3;
ELSE IF H03023 < 0 THEN R03023 = .;

IF H03030 = 1      THEN R03030 = 1;
ELSE IF H03030 = 2 THEN R03030 = 1;
ELSE IF H03030 = 3 THEN R03030 = 2;
ELSE IF H03030 = 4 THEN R03030 = 3;
ELSE IF H03030 < 0 THEN R03030 = .;

IF H03031 = 1      THEN R03031 = 1;
ELSE IF H03031 = 2 THEN R03031 = 1;
ELSE IF H03031 = 3 THEN R03031 = 2;
ELSE IF H03031 = 4 THEN R03031 = 3;
ELSE IF H03031 < 0 THEN R03031 = .;

IF H03032 = 1      THEN R03032 = 1;
ELSE IF H03032 = 2 THEN R03032 = 1;
ELSE IF H03032 = 3 THEN R03032 = 2;
ELSE IF H03032 = 4 THEN R03032 = 3;
ELSE IF H03032 < 0 THEN R03032 = .;

IF H03033 = 1      THEN R03033 = 1;
ELSE IF H03033 = 2 THEN R03033 = 1;
ELSE IF H03033 = 3 THEN R03033 = 2;
ELSE IF H03033 = 4 THEN R03033 = 3;
ELSE IF H03033 < 0 THEN R03033 = .;

IF H03034 = 1      THEN R03034 = 1;
ELSE IF H03034 = 2 THEN R03034 = 1;
ELSE IF H03034 = 3 THEN R03034 = 2;
ELSE IF H03034 = 4 THEN R03034 = 3;
ELSE IF H03034 < 0 THEN R03034 = .;

IF H03035 = 1      THEN R03035 = 1;
ELSE IF H03035 = 2 THEN R03035 = 1;
ELSE IF H03035 = 3 THEN R03035 = 2;
ELSE IF H03035 = 4 THEN R03035 = 3;
ELSE IF H03035 < 0 THEN R03035 = .;

IF H03040 = 1      THEN R03040 = 1;
ELSE IF H03040 = 2 THEN R03040 = 1;
ELSE IF H03040 = 3 THEN R03040 = 2;
ELSE IF H03040 = 4 THEN R03040 = 3;
ELSE IF H03040 < 0 THEN R03040 = .;

IF H03041 = 1      THEN R03041 = 1;
ELSE IF H03041 = 2 THEN R03041 = 1;
ELSE IF H03041 = 3 THEN R03041 = 2;
ELSE IF H03041 = 4 THEN R03041 = 3;
ELSE IF H03041 < 0 THEN R03041 = .;

*************************************************************************
* Recode variables to one missing condition ".".
* This also renames all the "H0xxxx" to "R0xxxx".
*************************************************************************;
R03009 = H03009;  IF R03009 < 0 THEN R03009 = .;
R03011 = H03011;  IF R03011 < 0 THEN R03011 = .;
R03013 = H03013;  IF R03013 < 0 THEN R03013 = .;
R03015 = H03015;  IF R03015 < 0 THEN R03015 = .;
R03027 = H03027;  IF R03027 < 0 THEN R03027 = .;
R03028 = H03028;  IF R03028 < 0 THEN R03028 = .;
R03036 = H03036;  IF R03036 < 0 THEN R03036 = .;
R03044 = H03044;  IF R03044 < 0 THEN R03044 = .;
R03046 = H03046;  IF R03046 < 0 THEN R03046 = .;
R03051 = H03051;  IF R03051 < 0 THEN R03051 = .;
R03052 = H03052;  IF R03052 < 0 THEN R03052 = .;
```

```
   R03072 = H03072;  IF R03072 < 0 THEN R03072 = .;

   **************************************************************************
   * Create service affiliation dummies.
   **************************************************************************;
   IF XREGION NE . THEN DO;
      ARRAY SRVDUMS (4) SRV01 SRV02 SRV03 SRV04;
      DO I = 1 TO 4;
         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;
   END;

RUN;


*****************************************************************************
* Recode item responses to proportional values using CONVERT.SAS.
*****************************************************************************;
%INCLUDE "..\..\..\..\..\8687\PROGRAMS\REPORTCARDS\CONVERT.SAS";

%CONT1(DSN=ENTIRE, NUM=7,  Y=R03009 R03013 R03027 R03028
                            R03044 R03046 R03051);
%CONT2(DSN=ENTIRE, NUM=4,  Y=R03036 R03052 R03011 R03015);
%CONT3(DSN=ENTIRE, NUM=12, Y=R03018 R03020 R03023 R03029
                            R03032 R03033 R03034 R03035
                            R03030 R03031 R03040 R03041);

*****************************************************************************
* 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
       XREGION
       XSERVAFF
       CONUS
       ENBGSMPL
       XSEXA
       ADJ_CELL
       XINS_COV
       XENR_PCM
       WRWT
       ;
RUN;

*****************************************************************************
* Print some of the recoded records.
*****************************************************************************;
PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of AGE and SEX dummies';
   VAR FIELDAGE
       AGE1824
       AGE2534
       AGE3544
       AGE4554
       AGE5564
```

```
           AGE6574
           AGE75UP

           XSEXA
           FEMALE

           ENBGSMPL
           XINS_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 H03009  R03009
       H03011  R03011
       H03013  R03013
       H03015  R03015
       H03018  R03018
       H03020  R03020
       H03023  R03023
       H03027  R03027
       H03028  R03028
       H03029  R03029
       H03030  R03030
       H03031  R03031
       H03032  R03032
       H03033  R03033
       ;
RUN;


PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of recoded question variables';
   VAR H03034  R03034
       H03035  R03035
       H03036  R03036
       H03040  R03040
       H03041  R03041
       H03044  R03044
       H03046  R03046
       H03051  R03051
       H03052  R03052
       H03072  R03072
       ;
RUN;

PROC PRINT DATA=ENTIRE(OBS=60);
   TITLE2 'Print of recoded REGION variables';
   VAR XREGION
       XSERVAFF
       SRV01
       SRV02
       SRV03
       SRV04
       ;
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
             H03009
             H03011
             H03013
             H03015
             H03018
             H03020
             H03023
             H03027
             H03028
             H03029
             H03030
             H03031
             H03032
             H03033
             H03034
             H03035
             H03036
             H03040
             H03041
             H03044
             H03046
             H03051
             H03052
             H03072
             ;
        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;
```

2.   Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\STEP2Q.SAS - Calculate CAHPS Adjusted Scores for service affiliation.

```
*****************************************************************************
*
*  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.
*
*  Modified: 1) May 2001 By Natalie Justh and Keith Rathbun to accomodate
*               the short reports: use service affiliation (XSERVAFF)
*               instead of XREGION.
*            2) May 2003 By Keith Rathbun: Updated global parameters to
*               reflect the 2003 variable names.
*
*  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
*
*  Subgroup Definitions:
* _____
*     Seven Subgroups          Definitions
* _____
* 1. Prime enrollees           XINS_COV IN (1,2,6) AND H00002>=2
* 2. Enrollees w/mil PCM        XENR_PCM IN (1,2,6) AND H00002>=2
* 3. Enrollees w/civ PCM        XENR_PCM = 3        AND H00002>=2
* 4. Nonenrollees               XINS_COV IN (3,4,5)
* 5. Active duty                XBNFGRP = 1
* 6. Active duty dependents     XBNFGRP = 2
* 7. Retirees and dependents    XBNFGRP IN (3,4)
*
*  Previous Program:  STEP1Q.SAS
*
*****************************************************************************;
OPTIONS NOCENTER LS=132 PS=79 SOURCE NOOVP COMPRESS=YES;
LIBNAME   IN1  v612 "DATA";
LIBNAME   IN2  v612 "..\..\..\DATA\AFINAL";
LIBNAME   IN3  v612 "DATA";
LIBNAME   OUT  v612 "DATA";
LIBNAME   OUT2 v612 "DATA\ADULTHATFILES";


*****************************************************************************
*****************************************************************************
* 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 = 23;


*****************************************************************************
* 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      = WRWT;
%LET IND_VAR1 = R03072;
%LET IND_VAR2 =  ;  * FEMALE;
%LET IND_VAR3 =  ;  * SREDHIGH;
%LET DEBUGFLG = 1;  * 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 = R03009;
%LET DEPVAR2 = R03013;
%LET DEPVAR3 = R03027;
%LET DEPVAR4 = R03028;


*****************************************************************************
* GETTING NEEDED CARE QUICKLY.
*****************************************************************************;
%LET DEPVAR5 = R03018;
%LET DEPVAR6 = R03020;
%LET DEPVAR7 = R03023;
%LET DEPVAR8 = R03029;


*****************************************************************************
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%LET DEPVAR9  = R03032;
%LET DEPVAR10 = R03033;
%LET DEPVAR11 = R03034;
%LET DEPVAR12 = R03035;


*****************************************************************************
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%LET DEPVAR13 = R03030;
%LET DEPVAR14 = R03031;


*****************************************************************************
* CUSTOMER SERVICE.
*****************************************************************************;
%LET DEPVAR15 = R03044;
%LET DEPVAR16 = R03046;
%LET DEPVAR17 = R03051;


*****************************************************************************
* CLAIMS PROCESSING.
*****************************************************************************;
%LET DEPVAR18 = R03040;
%LET DEPVAR19 = R03041;


*****************************************************************************
* RATING ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%LET DEPVAR20 = R03036;


*****************************************************************************
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%LET DEPVAR21 = R03052;
```

```
******************************************************************************
* RATING OF PERSONAL DR: 0 - 10.
******************************************************************************;
%LET DEPVAR22 = R03011;


******************************************************************************
* SPECIALITY CARE: 0 - 10.
******************************************************************************;
%LET DEPVAR23 = R03015;

%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 = IN2.SKELSRV;


* 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 'REGRSREG.INC';
     OUTPUT OUT = OUT2.H&IGRP&&DEPVAR&IVAR(KEEP=MPRID &WGT TMP_CELL
                     PRED&IGRP RESID&IGRP XREGION XSERVAFF &&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 XREGION XSERVAFF &&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 'RISKARRY.INC';
    %INCLUDE '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 service affiliation coefficients to the adjusted value from above;
* output one record per region with the service affiliation;
* level adjusted scores;
 DATA COEFFREG(KEEP=XSERVAFF NEWADJST);
    SET ADJUST;
    %INCLUDE 'REGARRAY.INC';
    LENGTH NAME $8;
    DO I=1 TO DIM(REGRHS);
        CALL VNAME(REGRHS(I),NAME);
        XSERVAFF=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 service affiliation;
PROC MEANS DATA=GROUP&IGRP NWAY NOPRINT ;
  CLASS XSERVAFF;
  VAR   &WGT;
  OUTPUT OUT=REG_WGTS (DROP = _TYPE_ _FREQ_) N=REGCNT&IGRP SUM=REGWGT&IGRP;
RUN;



* merge the COEFFREG file with the service affiliation;
* adjusted scores to the service affiliation level total weight;
* merge by the service affiliation.  Creates a service affiliation level;
* file with the total sample weight of the service affiliation;
DATA COEFFREG;
      MERGE COEFFREG(IN=IN1)
            REG_WGTS(IN=IN2   KEEP=XSERVAFF REGCNT&IGRP REGWGT&IGRP);
      BY XSERVAFF;
      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: Service Affiliation Adjusted Scores';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
    RUN;

    PROC PRINT DATA=REG_WGTS;
        TITLE2 'Print of REG_WGTS: Service Affiliation Area Sum of WGTS';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
```

```
     RUN;

     PROC PRINT DATA=COEFFREG;
           TITLE2 'Print of COEFFREG: Service Affiliation Adjusted Scores - with sum of wgts and
region';
           TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
     RUN;
%END;


* Calculate service affiliation level adjusted scores from the;
* service affiliation level adjusted scores in COEFFREG;
PROC MEANS DATA=COEFFREG NWAY NOPRINT;
  WEIGHT REGWGT&IGRP;
  CLASS  XSERVAFF;
  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: Service Affiliation Scores';
         TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
   RUN;
%END;

* merge the previous groups service affiliation results (if any);
* with the service affiliation level std errs and the service affiliation;
* level results from catchment results collapsed to service affiliation;
DATA OUT.R_&&DEPVAR&IVAR;
     MERGE &RMRGFILE(IN=INS)
           R&IGRP&&DEPVAR&IVAR
           REG_WGTS(KEEP = REGCNT&IGRP REGWGT&IGRP XSERVAFF)
           REGFILE1(KEEP = ADJ&IGRP XSERVAFF);
     BY XSERVAFF;
     DEPENDNT = "&&DEPVAR&IVAR";
     IF INS;
RUN;

* merge the previous groups service affiliation results (if any);
* with the service affiliation level std err and the service affiliation;
* 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 XSERVAFF;
   DEPENDNT = "&&DEPVAR&IVAR";
   IF INS;
RUN;

PROC PRINT DATA=OUT.R_&&DEPVAR&IVAR;
     TITLE2 "Print of XSERVAFF 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(4)  8 REGCNT01 - REGCNT04;
        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 XSERVAFF group;
        * we will only use XSERVAFFs with more than than 2 obs;
        * I am using the service affiliation value as the subscript;
        * to make the code simpler and more readable;
        IF XSERVAFF >= 1 AND XSERVAFF <= 4  THEN DO;
           REGCNT(XSERVAFF) = REGCNT(XSERVAFF) + 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 " ";
```

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```
      DO I = 1 TO 4;
         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 XREGION;
    FILE '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;
    DO I = 1 TO 4;    * skip the 1st service affiliation with 1+ obs;
       IF REGCNT(I) > 0 THEN DO;
          IF FIRST = 1 THEN PUT @12 'SRV' 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 '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 '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 '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 '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 service affiliation area array;
        * with at least ONE obs;
        FILE 'REGARRAY.INC';
        PUT @10   "ARRAY REGRHS(*) $8";
        DO I = 1 TO 4;
            IF REGCNT(I) > 0 THEN DO; *** ems 7/12/00 changed "> 1" to "> 0";
                PUT  @16 'SRV' 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;
```

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```
 PROC MEANS DATA=GROUP&IGRP;
    WEIGHT &WGT;
    %INCLUDE 'RISKVARS.INC';
    %INCLUDE '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 'RISKARRY.INC';
     %INCLUDE 'RISKMEAN.INC';
     DO I = 1 TO DIM(COEFFS);
        IF COEFFS(I) = . THEN DO;
           COEFFS(I) = MEANS(I);
        END;
     END;
RUN;
/* PROC MEANS DATA=IN3.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 XSERVAFFs.
***************************************************;
%PUT ***************************************;
%PUT STARTING MACRO R_SUDAAN (XSERVAFF);
%PUT ***************************************;

DATA &INFILE;
   SET &INFILE;
   IF XSERVAFF > 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 (XSERVAFF)';
        TITLE3 "Beneficiary group&igrp:  &&TITL&IGRP";
   RUN;
%END;


* Calculate values for service affiliation;
PROC DESCRIPT DATA=&INFILE DESIGN=STRWR NOPRINT;
   WEIGHT &WGT;
   SETENV DECWIDTH=4;
   NEST TMP_CELL / missunit;
   VAR RESID&IGRP;
   TABLES XSERVAFF;
   SUBGROUP XSERVAFF;
   LEVELS 4;
   OUTPUT  SEMEAN
         / TABLECELL=DEFAULT
           FILENAME=RS&DEP;
```

```
      RUN;

      DATA R&IGRP&&DEPVAR&IVAR;
           SET RS&DEP;
           KEEP XSERVAFF SEMEAN;
           IF SEMEAN NE .;
           RENAME SEMEAN = SEMEAN&IGRP;
      RUN;


      PROC PRINT DATA=R&IGRP&&DEPVAR&IVAR;
         TITLE2 "Print XSERVAFF 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);
```

3. **Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\COMPOSIT.SAS - Calculate CAHPS Composite Scores for service affiliation.**

```
*****************************************************************************
* 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) 02/27/2001 By Keith Rathbun, Small changes to input DSNs to
*              accommodate the move of ALLSCORE.SAS functionality into the
*              STEP2Q.SAS program.
*           2) 01/08/2002 By Daniele Beahm, Changed versions in libname statements
*              so program can be run with SAS v8 and still produce SAS v612 datasets.
*           3) 04/10/2002 By Mike Scott, Updated variable names for 2002
*              survey.
*           4) 03/21/2003 By Mike Scott, Updated variable names for 2003
*              survey.
*****************************************************************************;
OPTIONS NOCENTER LS=132 PS=78 SOURCE SOURCE2 MLOGIC MPRINT NOOVP COMPRESS=YES;
libname in  v612 "data";
libname in2 v612 "data\adulthatfiles";
libname out v612 "data";

 %MACRO COMPOSIT (TYPE=,COMPOS=,VAR1=,VAR2=,VAR3=,VAR4=,QCOUNT=);

  DATA _NULL_;
   %IF "&TYPE" = "R" %THEN %DO;
      CALL SYMPUT ('BYVAR','XSERVAFF');
   %END; %ELSE
   %IF "&TYPE" = "C" %THEN %DO;
      CALL SYMPUT ('BYVAR','CACSMPL');
   %END;

 *****************************************;
 *   Create a Composite Score          ;
 *****************************************;
 DATA _NULL_;
     FILE '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 '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
```

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```
     %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;
%if &i~=8 %then %do;
set in2.h&i.&var1(rename=(resid&i=r_&var1));
%end;
%else %do;
set in2.h5&var1(rename=(resid5=r_&var1)) in2.h6&var1(rename=(resid6=r_&var1))
in2.h7&var1(rename=(resid7=r_&var1));
%end;
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;
```

```
%if &i~=8 %then %do;
set in2.h&i.&var2(rename=(resid&i=r_&var2));
%end;
%else %do;
set in2.h5&var2(rename=(resid5=r_&var2)) in2.h6&var2(rename=(resid6=r_&var2))
in2.h7&var2(rename=(resid7=r_&var2));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var3(rename=(resid&i=r_&var3));
%end;
%else %do;
set in2.h5&var3(rename=(resid5=r_&var3)) in2.h6&var3(rename=(resid6=r_&var3))
in2.h7&var3(rename=(resid7=r_&var3));
%end;
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;
%if &i~=8 %then %do;
set in2.h&i.&var4(rename=(resid&i=r_&var4));
%end;
%else %do;
set in2.h5&var4(rename=(resid5=r_&var4)) in2.h6&var4(rename=(resid6=r_&var4))
in2.h7&var4(rename=(resid7=r_&var4));
%end;

%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;
proc corr  outp=outf noprint;
by &byvar;
var &n;
weight wrwt;
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 _name_="R_&&var&j" then
sde=sum(sde,r_val(i)*s_&&var&j*s_val(i));
%end;
end;
data sefin&compos._&i;
set final; by &byvar;
if first.&byvar then tv=0;
 tv+sde;
if last.&byvar then do;
```

```
sde&i=(tv**.5)/&qcount;
output;
end;
%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=R03009,var2=R03013,var3=R03027,var4=R03028,qcount=4);
%COMPOSIT (type=R,compos=2,var1=R03018,var2=R03020,var3=R03023,var4=R03029,qcount=4);
%COMPOSIT (type=R,compos=3,var1=R03032,var2=R03033,var3=R03034,var4=R03035,qcount=4);
%COMPOSIT (type=R,compos=4,var1=R03030,var2=R03031,qcount=2);
%COMPOSIT (type=R,compos=5,var1=R03044,var2=R03046,var3=R03051,qcount=3);
%COMPOSIT (type=R,compos=6,var1=R03040,var2=R03041,qcount=2);
```

4.   Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\LOADCAHQ.SAS - Convert the CAHPS Scores Database into the WEB layout.

```
*******************************************************************************
*
* PROGRAM:  LOADCAHQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* 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.SD2 - 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.SD2) will be run through the
*    MAKEHTMQ.SAS program to generate the WEB pages.
*
* MODIFIED:
*
* 1) 04/10/2002 BY MIKE SCOTT, Updated variable names for 2002 survey.
* 2) 03/21/2003 BY MIKE SCOTT, Updated variable names for 2003 survey.
*******************************************************************************
* Assign data libraries and options
*******************************************************************************;
LIBNAME IN  v612  "DATA";   /*MJS 03/21/03*/
LIBNAME OUT v612  ".";
LIBNAME LIBRARY   "..\..\..\DATA\AFINAL\FMTLIB";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

*******************************************************************************
* Load Format definitions for CAHPS Individual and composite data sets.
*******************************************************************************;
%INCLUDE "..\..\..\PROGRAMS\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 = "2003 Q4";   /*MJS 03/21/03*/

*******************************************************************************
* 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:
*
* _____
*    Adjusted Score            Definitions
*    Group Number
* _____
* 1. Prime enrollees           XINS_COV IN (1,2,6) AND H03007>=2
* 2. Enrollees w/mil PCM       XENR_PCM IN (1,2,6) AND H03007>=2
* 3. Enrollees w/civ PCM       XENR_PCM = 3        AND H03007>=2
* 4. Nonenrollees              XINS_COV IN (3,4,5)
* 5. Active duty               XBNFGRP = 1
* 6. Active duty dependents    XBNFGRP = 2
* 7. Retirees and dependents   XBNFGRP IN (3,4)
*
****************************************************************************;
DATA &QUESTION;
   SET IN.&QUESTION;

   LENGTH MAJGRP  $30;
   LENGTH REGION  $15;
   LENGTH REGCAT  $26;
   LENGTH BENTYPE $50;
   LENGTH BENEFIT $34;

   ***********************************************************************
   * Kludge: Assign Service Affiliation to Region
   ***********************************************************************;
   REGION  = PUT(XSERVAFF,XSERVAFF.);
   ***********************************************************************
   * Assign benefit and benefit type
   ***********************************************************************;
   IF "&TYPE" = "INDIVIDUAL" THEN DO;
      IF DEPENDNT IN("R03036","R03052","R03011","R03015") THEN
         BENTYPE = PUT(&YEAR,$BENTYPF.);
      ELSE
         BENTYPE = PUT(DEPENDNT,$BENTYPF.);
      BENEFIT = PUT(DEPENDNT,$BENEF.);
   END;
   ELSE IF "&TYPE" = "COMPOSITE" THEN DO;
      BENTYPE = PUT(&YEAR,$BENTYPF.);
      BENEFIT = PUT(DEPENDNT,$BENEF.);
   END;
   ELSE PUT "ERROR: Invalid TYPE = &TYPE";

   ***********************************************************************
   * For now, Initialize Significance test to zero.
   ***********************************************************************;
   SIG = 0;
   ***********************************************************************
   * Assign Service Affiliation
   ***********************************************************************;
   REGCAT = PUT(XSERVAFF,XSERVAFF.);

   ***********************************************************************
   * 1 = Prime Enrollees
   ***********************************************************************;
   MAJGRP = PUT(1,MAJGRPF.);
   SCORE = ADJ1;
   SEMEAN = SEMEAN1;
   N_OBS = &PREFIX.CNT1;
   N_WGT = &PREFIX.WGT1;
   OUTPUT;

   ***********************************************************************
   * 2 = Enrollees with Military PCM
   ***********************************************************************;
   MAJGRP = PUT(2,MAJGRPF.);
   SCORE = ADJ2;
   SEMEAN = SEMEAN2;
```

```
     N_OBS = &PREFIX.CNT2;
     N_WGT = &PREFIX.WGT2;
     OUTPUT;

     **********************************************************************
     * 3 = Enrollees with Civilian PCM
     *********************************************************************;
     MAJGRP = PUT(3,MAJGRPF.);
     SCORE = ADJ3;
     SEMEAN = SEMEAN3;
     N_OBS = &PREFIX.CNT3;
     N_WGT = &PREFIX.WGT3;
     OUTPUT;

     **********************************************************************
     * 4 = Non-enrolled Beneficiaries
     *********************************************************************;
     MAJGRP = PUT(4,MAJGRPF.);
     SCORE = ADJ4;
     SEMEAN = SEMEAN4;
     N_OBS = &PREFIX.CNT4;
     N_WGT = &PREFIX.WGT4;
     OUTPUT;

     **********************************************************************
     * 5 = Active Duty
     *********************************************************************;
     MAJGRP = PUT(5,MAJGRPF.);
     SCORE = ADJ5;
     SEMEAN = SEMEAN5;
     N_OBS = &PREFIX.CNT5;
     N_WGT = &PREFIX.WGT5;
     OUTPUT;

     **********************************************************************
     * 6 = Active Duty Dependents
     *********************************************************************;
     MAJGRP = PUT(6,MAJGRPF.);
     SCORE = ADJ6;
     SEMEAN = SEMEAN6;
     N_OBS = &PREFIX.CNT6;
     N_WGT = &PREFIX.WGT6;
     OUTPUT;

     **********************************************************************
     * 7 = Retirees and Dependents
     *********************************************************************;
     MAJGRP = PUT(7,MAJGRPF.);
     SCORE = ADJ7;
     SEMEAN = SEMEAN7;
     N_OBS = &PREFIX.CNT7;
     N_WGT = &PREFIX.WGT7;
     OUTPUT;

     **********************************************************************
     * 8 = All Beneficiaries              ALL Beneficiaries
     *********************************************************************;
     MAJGRP = PUT(8,MAJGRPF.);
     SCORE  = ADJ8;
     SEMEAN = SEMEAN8;
     N_OBS = &PREFIX.CNT8;
     N_WGT = &PREFIX.WGT8;
     OUTPUT;

KEEP MAJGRP
     REGION
     REGCAT
     BENTYPE
     BENEFIT
     SCORE
     SEMEAN
     N_OBS
     N_WGT
```

```
    SIG
  ;
RUN;

%MEND;


*****************************************************************************
* COMPOSITE # 1.
* GETTING NEEDED CARE VARIABLES.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS1,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03009,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03013,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03027,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03028,TYPE=INDIVIDUAL);


*****************************************************************************
* COMPOSITE # 2.
* GETTING CARE QUICKLY VARIABLES.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS2,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03018,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03020,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03023,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03029,TYPE=INDIVIDUAL);


*****************************************************************************
* COMPOSITE # 3.
* HOW WELL DOCTORS COMMUNICATE.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS3,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03032,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03033,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03034,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03035,TYPE=INDIVIDUAL);


*****************************************************************************
* COMPOSITE # 4.
* COURTEOUS AND HELPFUL OFFICE STAFF.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS4,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03030,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03031,TYPE=INDIVIDUAL);


*****************************************************************************
* COMPOSITE # 5.
* CUSTOMER SERVICE.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS5,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03044,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03046,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03051,TYPE=INDIVIDUAL);


*****************************************************************************
* COMPOSITE # 6.
* CLAIMS PROCESSING.
*****************************************************************************;
%PROCESS(QUESTION=RCOMPOS6,TYPE=COMPOSITE );
%PROCESS(QUESTION=R_R03040,TYPE=INDIVIDUAL);
%PROCESS(QUESTION=R_R03041,TYPE=INDIVIDUAL);


*****************************************************************************
* INDIVIDUAL # 1.
* RATING OF ALL HEALTH CARE: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03036,TYPE=INDIVIDUAL);


*****************************************************************************
* INDIVIDUAL # 2.
* RATING OF HEALTH PLAN: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03052,TYPE=INDIVIDUAL)
```

```
*****************************************************************************
* INDIVIDUAL # 3.
* RATING OF PERSONAL DOCTOR: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03011,TYPE=INDIVIDUAL);


*****************************************************************************
* INDIVIDUAL # 4.
* SPECIALTY CARE: 0 - 10.
*****************************************************************************;
%PROCESS(QUESTION=R_R03015,TYPE=INDIVIDUAL);


*****************************************************************************
*****************************************************************************
* STACK up all of the files into one final output dataset.
*****************************************************************************
*****************************************************************************;
DATA OUT.LOADCAHQ;
   SET R_R03009
       R_R03013
       R_R03027
       R_R03028
       R_R03018
       R_R03020
       R_R03023
       R_R03029
       R_R03032
       R_R03033
       R_R03034
       R_R03035
       R_R03030
       R_R03031
       R_R03044
       R_R03046
       R_R03051
       R_R03040
       R_R03041
       R_R03036
       R_R03052
       R_R03011
       R_R03015
       RCOMPOS1
       RCOMPOS2
       RCOMPOS3
       RCOMPOS4
       RCOMPOS5
       RCOMPOS6
   ;
   IF SCORE = . THEN DELETE;
RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: LOADCAHQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: CAHPS Individual and Composite data sets with adjusted scores";
TITLE4 "Program Outputs: LOADCAHQ.SD2 - Combined CAHPS Scores Database in WEB layout";

PROC FREQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

**5.   Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\PRVCOMPQ.SAS - Calculate MPR Preventive Care
       Composite Scores for service affiliation.**

```
******************************************************************
*  Project:   DoD Reporting and Analysis 8860-410
*  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:  10/25/01 By Daniele Beahm: Because no poststratification
*             was done for q3 2000, changed POSTSTR back to ADJ_CELL
*             04/09/02 modified macros the first three macros to create
*             temporary datasets (instead of writing permanent datasets)
*             07/15/02 By Mike Scott: Changed HCS021 to HCS022 for Q2 2002.
*             01/12/03 By Mike Scott: Changed ADJ_CELL to COM_SAMP.
*             03/21/03 By Mike Scott: Changed HCS024 to HCS031 for Q2 2002.
*             04/01/03 By Mike Scott: Replaced HP_FLU with HP_CHOL.
*             04/30/03 By Mike Scott: Changed COM_SAMP to ADJ_CELL.  Changed
*             CMPNUM1 from 4 to 5 and CMPNUM2 from 4 to 3.
*  Purpose:   Calculate MPR Preventive Care Composites
*  Input:     \\DOD\FILES\DOD\Q4_2000\DATA\AFINAL\HCS031_1.SD2
*  Output:    RFINAL.SD2
*             CFINAL.SD2
*             MFINAL.SD2
*  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;

LIBNAME IN  v612 "..\..\..\DATA\AFINAL";
LIBNAME OUT v612 ".";
LIBNAME LIBRARY  "..\..\..\DATA\AFINAL\FMTLIB";

%LET WGT=WRWT;
%LET DEBUG=Y;        /** Set to Y for Debug print of datasets **/
%LET INDATA=HCS034_1;   /*MJS 03/21/03*/
%LET YRDATA=HCS034;     /*MJS 03/21/03*/


/***** The following parameters are used in the Variance ****/
/***** calcuation macro for region and catchment area    ****/

%LET GRPNUM=8;       /** number of groups          **/
%LET COMPNUM=8;      /** number of variables       **/
%LET REGNUM=16;      /** number of regions         **/
%LET CATCHNUM=9999; /** number of catchment areas **/

%LET CMPNUM1=5;    /** number of variables in first composite  **/   /*MJS 04/30/03 Changed
CMPNUM1 from 4 to 5*/
%LET CMPNUM2=3;    /** 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 ;
**** note -- these are the hp 2000 goals       ;

%LET GOALVAR1= .90;   /** HP Goal for prenatal care         **/
%LET GOALVAR2= .70;   /** HP Goal for Mammography           **/
%LET GOALVAR3= .90;   /** HP Goal for Papsmear              **/
%LET GOALVAR4= .95;   /** HP Goal for Blood Pressure check **/
%LET GOALVAR5= .90;   /** HP Goal for Cholesterol check    **/   /*MJS 04/01/03*/
%LET GOALVAR6= .90;   /** access goals                     **/
%LET GOALVAR7= .90;
%LET GOALVAR8= .98;
```

```
%INCLUDE "..\..\..\PROGRAMS\LOADWEB\LOADCAHQ.INC";

***************************************************************;
* Beneficiary group note
*    Eight groups              Definitions
* _____;
* 1. Prime enrollees           XINS_COV IN (1,2,6) AND H03007>=2
* 2. Enrollees w/mil PCM        XENR_PCM IN (1,2,6) AND H03007>=2
* 3. Enrollees w/civ PCM        XENR_PCM IN (3,7)   AND H03007>=2
* 4. Nonenrollees              XINS_COV IN (3,4,5)
* 5. Active duty               XBNFGRP = 1
* 6. Active duty dependents     XBNFGRP = 2
* 7. Retirees                  XBNFGRP IN (3,4)
* 8. All beneficiaries         ALL
***************************************************************;


/**** note -- output all data to a single dataset for macro */
/**** call                                                  */
/**** MACROS are no longer called for catchment areas       */


DATA &YRDATA(KEEP=BGROUP MHS CONUS XREGION XSERVAFF CACSMPL &WGT TMP_CELL
                 PRVVAR1-PRVVAR&COMPNUM. NUMV1-NUMV&COMPNUM.
                 DENV1-DENV&COMPNUM);

  SET IN.&INDATA(KEEP=XINS_COV HP_CHOL  HP_BP   HP_MAMOG HP_PAP HP_PRNTL   /*MJS 04/01/03*/
                     XREGION  XENR_PCM XBNFGRP ENBGSMPL &WGT   CACSMPL
                     ADJ_CELL H03020   H03023  H03029   H03007 SERVAFF);   /*MJS 03/21/03*/
*  IF _N_ LE 100;                                                          /*MJS 04/30/03*/


****************************************************************************
* 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
****************************************************************************;

  CELLP=1;
  LENGTH TMP_CELL 8;
  TMP_CELL=ADJ_CELL;   /* make COM_SAMP a numeric variable */ /*MJS 04/30/03*/

  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 XREGION=7 THEN XREGION=8;
  IF XREGION IN (.,0)    THEN DELETE;
  IF CACSMPL IN (.,9999) THEN DELETE;
  IF XINS_COV NOT IN(1,2,3,6) THEN DELETE;

  PRVVAR1=HP_PRNTL;         /** prenatal care  **/
  PRVVAR2=HP_MAMOG;         /** mammography    **/
  PRVVAR3=HP_PAP;           /** papsmear       **/
  PRVVAR4=HP_BP;            /** blood pressure **/
  PRVVAR5=HP_CHOL;          /** cholesterol    **/   /*MJS 04/01/03*/
  PRVVAR6=H03020;           /** access var 1   **/
  PRVVAR7=H03023;           /** access var 2   **/
  PRVVAR8=H03029;           /** access var 3   **/

/**** 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 */

****************************************************************************
* Assign indicator of CONUS based on XREGION.  CONUS stands for
* Contential 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 CONUS=1;
   ELSE IF XREGION IN (13,14,15)                      THEN CONUS=0;
   ELSE IF XREGION = .                                THEN CONUS=.;

* Prime enrollees      *;

   IF (XINS_COV IN (1,2,6) AND H03007>=2) THEN DO;
      BGROUP=1;
      OUTPUT;
   END;

* Enrollees with military PCMs *;

   IF (XENR_PCM IN (1,2,6) AND H03007>=2) THEN DO;
      BGROUP=2;
      OUTPUT;
   END;

* Enrollees with civilian PCMs *;

   IF (XENR_PCM IN (3,7) AND H03007>=2) THEN DO;
      BGROUP=3;
      OUTPUT;
   END;

* Nonenrollees *;

   IF XINS_COV IN (3,4,5) THEN DO;
      BGROUP=4;
      OUTPUT;
   END;

* Active duty       *;

   IF XBNFGRP = 1 THEN DO;
      BGROUP=5;
      OUTPUT;
   END;

* Active duty dependents  *;

   IF XBNFGRP = 2 THEN DO;
      BGROUP=6;
      OUTPUT;
   END;

* Retirees  *;

   IF XBNFGRP IN (3,4) THEN DO;
      BGROUP=7;
      OUTPUT;
   END;

* All beneficiaries *;

   BGROUP=8;
```

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```
    OUTPUT;

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 NOPRINT DATA=&YRDATA;
    TABLE BGROUP*MHS*CONUS*XREGION*CACSMPL/MISSING LIST
    OUT=OBSCNT(DROP=PERCENT);
RUN;

PROC SORT DATA=&YRDATA; BY BGROUP MHS CONUS XREGION CACSMPL;
RUN;

DATA HCSDB FAILED;
   MERGE &YRDATA(IN=IN_ALL) OBSCNT(IN=IN_OBS);
   BY BGROUP MHS CONUS XREGION CACSMPL;
   IF COUNT < 2 THEN DO;
       PUT "Failed obs # criterion: XREGION=" XREGION "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     *****
***** (REGION, CACSMPL, MHS)                      *****
***** Note:  7/10/2000 use CONUS for MHS          *****
***** Note:  there are 8 variables and 8 groups   *****
*******************************************************;

%MACRO A_SUDAAN(TABLEVAR);

*** set the number of levels in the proc descript ***;
*** for region or catchment                       ***;

 %IF %UPCASE(&TABLEVAR)=XSERVAFF %THEN %DO;
     %LET ENDNUM=&REGNUM;
     %LET PREF=S;        /** dataset prefix for service affiliation data    **/
 %END;
 %IF %UPCASE(&TABLEVAR)=XREGION %THEN %DO;
     %LET ENDNUM=&REGNUM;
     %LET PREF=R;        /** dataset prefix for region data    **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CACSMPL %THEN %DO;
     %LET ENDNUM=&CATCHNUM;
     %LET PREF=C;        /** dataset prefix for catchement area data **/
 %END;
 %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %LET PREF=M;

 %DO I=1 %TO &GRPNUM;     /** 8 groups     **/

     %DO J=1 %TO &COMPNUM;   /** 8 variables **/
```

```
          DATA INDATA&I.&J(KEEP=&WGT MHS CONUS XREGION CACSMPL
                              XSERVAFF NUMV&J DENV&J TMP_CELL);
            SET HCSDB;
            WHERE XREGION > 0 AND BGROUP=&I AND DENV&J > 0;
            %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                IF CONUS NE 1 THEN DELETE;  /* don't include all MHS */
            %END;
          RUN;

*** Calculate values for regions, catchment areas ****;

          %IF %UPCASE(&TABLEVAR) NE CONUS %THEN %DO;

             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;

          %END;
          %ELSE %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;

**** No tables, levels, or subgroups needed ****;

             PROC DESCRIPT DATA=INDATA&I.&J DESIGN=STRWR NOPRINT;
                 WEIGHT &WGT;
                 SETENV DECWIDTH=4;
                 NEST TMP_CELL / MISSUNIT;
                 VAR NUMV&J;
                 OUTPUT SEMEAN/ TABLECELL=DEFAULT
                 FILENAME=&PREF.GRP&I.V&J;
             RUN;

          %END;

***** 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;
             %IF %UPCASE(&TABLEVAR)=CONUS %THEN %DO;
                 CONUS=1;
             %END;
          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 (CONUS);
      %A_SUDAAN (XSERVAFF);
      **%A_SUDAAN (XREGION);
      **%A_SUDAAN (CACSMPL);

      *********************************************************
      *** Next, calculate correlation coefficients      ***
      *** and create a file for each analytical unit      ***
      *********************************************************;

      %MACRO GETCORR(BYVAR);

       %IF %UPCASE(&BYVAR)=XSERVAFF %THEN %LET PREF=S;
       %ELSE %IF %UPCASE(&BYVAR)=XREGION %THEN %LET PREF=R;
       %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
       %ELSE %IF %UPCASE(&BYVAR)=CONUS %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)=CONUS %THEN %DO;
                  WHERE BGROUP=&I AND CONUS = 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;
 %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(CONUS);
%GETCORR(XSERVAFF);
**%GETCORR(XREGION);
**%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)=XSERVAFF %THEN %LET PREF=S;
 %ELSE %IF %UPCASE(&BYVAR)=XREGION %THEN %LET PREF=R;
 %ELSE %IF %UPCASE(&BYVAR)=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF %UPCASE(&BYVAR)=CONUS %THEN %LET PREF=M;


 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=HCSDB;
    CLASS BGROUP &BYVAR;
    VAR DENV1-DENV&COMPNUM;
    OUTPUT OUT=&PREF.DGFR(DROP=_TYPE_ _FREQ_)
    SUM= NOBSV1-NOBSV&COMPNUM;
 RUN;

 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 CONUS=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;

    DO J=1 TO DIM(PROPORT);
       PROPORT(J) = NUMER(J)/DENOM(J);
    END;
    DROP J;

  **** composites **;

    %DO Q=1 %TO &COMPCNT;
        %IF &Q=1 %THEN %DO;
            CPNUM&Q.=SUM(OF NUMV1-NUMV&CMPNUM1);
            CPDEN&Q.=SUM(OF DENV1-DENV&CMPNUM1);
            CPOBS&Q.=SUM(OF NOBSV1-NOBSV&CMPNUM1);
        %END;
        %ELSE %DO;
            CPNUM&Q.=SUM(OF NUMV&START-NUMV&COMPNUM);
            CPDEN&Q.=SUM(OF DENV&START-DENV&COMPNUM);
            CPOBS&Q.=SUM(OF NOBSV&START-NOBSV&COMPNUM);
        %END;
        COMP&Q.=CPNUM&Q./CPDEN&Q.;
    %END;

** 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;
   GOALVAR7=&GOALVAR7;
   GOALVAR8=&GOALVAR8;

** 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;

  DO K = 1 TO &COMPNUM;
       IF K < &START THEN SVCWGT(K)= DENOM(K)/CPDEN1;
       ELSE SVCWGT(K) = DENOM(K)/CPDEN2;
       WGTBMARK(K) = SVCWGT(K)*BMARK(K);
  END;
  DROP K;
  CPBMK1=SUM(OF WTDV1-WTDV&CMPNUM1);
  CPBMK2=SUM(OF WTDV&START-WTDV&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(CONUS);
%GETPROP(XSERVAFF);
**%GETPROP(XREGION);
**%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 CPBMK1 CPBMK2);
   WHERE GROUP=8;             /** use all beneficiaries **/
   RENAME CPBMK1=MHSBM1;
   RENAME CPBMK2=MHSBM2;
   DROP GROUP;
RUN;

**** simple macro added to get adjusted composite scores ****
**** for region and catchment to be displayed in report  ****
**** cards                                                ****;

%MACRO ADJUST(FILE,LEVEL);

  DATA &FILE;
    IF _N_=1 THEN SET  ADJUST;
               SET  &FILE;
    %DO Z=1 %TO &COMPCNT;
        /*%IF &LEVEL=CONUS %THEN %DO;
            ADJCP&Z.=1;
            CSCOR&Z=COMP&Z.*ADJCP&Z.*100;
        %END;
        %ELSE %DO;*/
            ADJCP&Z.= MHSBM&Z./CPBMK&Z.;
            CSCOR&Z=COMP&Z.*ADJCP&Z.*100;
```

```
            /*%END;*/
      %END;
    RUN;

%MEND ADJUST;

%ADJUST(MCMPSUM,CONUS)
%ADJUST(SCMPSUM,XSERVAFF);
**%ADJUST(RCMPSUM,REG);
**%ADJUST(CCMPSUM,CAT);

**********************************************************
***  Macro to merge 3 datasets for each         *******
***  called by analytical unit                  *******
***  output final dataset for                   *******
***  Region, Catchment, MHS                      *******
**********************************************************;

%MACRO GETSIG(BYVAR);

 %LET START = %EVAL(&CMPNUM1+1);
 %LET NEXT  = %EVAL(&CMPNUM1+2);

 %IF &BYVAR=XSERVAFF %THEN %LET PREF=S;
 %ELSE %IF &BYVAR=XREGION %THEN %LET PREF=R;
 %ELSE %IF &BYVAR=CACSMPL %THEN %LET PREF=C;
 %ELSE %IF &BYVAR=CONUS %THEN %LET PREF=M;

 DATA OUT.&PREF.FINAL(KEEP= MAJGRP REGION REGCAT GOALVAR1-GOALVAR&COMPNUM
                SIGV1-SIGV&COMPNUM SCORV1-SCORV&COMPNUM
                CPSIG1-CPSIG&COMPCNT CP1SE CP2SE
                CSCOR1-CSCOR&COMPCNT CPBMK1-CPBMK&COMPCNT
                SERRV1-SERRV&COMPNUM CP1SE CP2SE
                COMP1 COMP2 PROPV1-PROPV&COMPNUM
                DFSCR1-DFSCR&COMPNUM DF_CP1 DF_CP2
                NOBSV1-NOBSV&COMPNUM CPOBS1-CPOBS&COMPCNT
                DENV1-DENV&COMPNUM CPDEN1-CPDEN&COMPCNT);

    FORMAT MAJGRP $30. REGION $15. REGCAT $26.;
    %IF &PREF=C %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=S %THEN %DO;
        REGCAT=PUT(XSERVAFF,XSERVAFF.);
        REGION=PUT(XSERVAFF,XSERVAFF.);
    %END;
    %else %IF &PREF=C %THEN %DO;
        REGCAT=PUT(CACSMPL, CATREP.);
        REGION=PUT(XREGION, REGIONF.);
    %END;
    %ELSE %IF &PREF=R %THEN %DO;
        REGION=PUT(XREGION, REGIONF.);
```

```
          REGCAT=PUT(XREGION, REGIONF.);
     %END;
     %ELSE %DO;
          REGION="CONUS MHS";
          REGCAT="CONUS MHS";
     %END;

 **** setup t statistics, degreees of freedom    **;
  ARRAY    TSTAT{&COMPNUM} T_V1-T_V&COMPNUM;
  ARRAY     BMARK{&COMPNUM} GOALVAR1-GOALVAR&COMPNUM;
  ARRAY   STNDERR{&COMPNUM} SERRV1-SERRV&COMPNUM;
  ARRAY   SERRSQR{&COMPNUM} SESQV1-SESQV&COMPNUM;
  ARRAY      DEGF{&COMPNUM} DFSCR1-DFSCR&COMPNUM;
  ARRAY     DENOM{&COMPNUM} DENV1-DENV&COMPNUM;
  ARRAY   PROPORT{&COMPNUM} PROPV1-PROPV&COMPNUM;
  ARRAY     SCORE{&COMPNUM} SCORV1-SCORV&COMPNUM;
  ARRAY    PVALUE{&COMPNUM} PVALV1-PVALV&COMPNUM;
  ARRAY       SIG{&COMPNUM} SIGV1-SIGV&COMPNUM;
  ARRAY      NOBS{&COMPNUM} NOBSV1-NOBSV&COMPNUM;

  ** get the item variance, t-statistics, df, p-values **;
  ** and whether significant                         **;
   DO I=1 TO &COMPNUM;
       SERRSQR{I}=STNDERR{I}**2;  /* Item variance */
       SCORE{I}=PROPORT{I}*100;   /* Score (prop. * 100) */
       IF STNDERR{I} > 0 THEN TSTAT{I}=(PROPORT{I}-BMARK{I})/STNDERR{I};
       ELSE TSTAT{I}=.;
       DEGF{I}=NOBS{I}-1;
       PVALUE{I}=(1-PROBT(ABS(TSTAT{I}),DEGF{I}))*2;
       IF PVALUE{I} GE .05 THEN SIG{I}=0;
       ELSE IF PVALUE{I} < .05 THEN DO;
            IF PROPORT{I} > BMARK{I} THEN SIG{I}=1;
            IF PROPORT{I} < BMARK{I} THEN SIG{I}=-1;
       END;
   END;
   DROP I;

  ** 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}*DENOM{K}*DENV&J;
       END;
       SEMV&J.&J=0;
        sewv&j= (DENV&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.);
```

```
        %END;
        %ELSE %DO;
             CP&P.SE1=SUM(OF SESQV&START-SESQV&COMPNUM);
             CP&P.SE2=SUM(OF SEMV&START.&START.-SEMV&COMPNUM.&COMPNUM.);
        %END;

   ** add the two parts of the composite standard error  **;
   ** calculate the composite t statistics and p-values  **;
   ** determine whether differences are sigificant       **;

        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(CONUS);
%GETSIG(XSERVAFF);
**%GETSIG(XREGION);
**%GETSIG(CACSMPL);

ENDSAS;
```

6. Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\LOADMPRQ.SAS - Convert the MPR Scores Database into the WEB layout.

```
*****************************************************************************
*
*  Project:   DoD Reporting and Analysis 8860-410
*  Program:   LOADMPRQ.SAS
*  Purpose:   Calculate MPR Preventive Care Composites
*  Date:      4/07/2000
*  Author:    Chris Rankin
*
*  Modified:  1) 05-08-2001 By Keith Rathbun, Added SEMEAN to LOADMPRQ.SD2
*                to accommodate the Short Reports.  Condensed some code.
*             2) 07-15-2002 By Mike Scott, Changed PERIOD to = "April, 2001
*                to March, 2002".
*             3) 03-21-2003 By Mike Scott, Changed PERIOD to = "January, 2001
*                to December, 2002".
*             4) 04-30-2003 By Mike Scott, Changed CMPNUM1 from 4 to 5, and
*                changed the upper limits of both DO loops from 5 to 6 because
*                of the addition of Cholesterol Testing.
*
*   Input:    RFINAL.SD2
*             CFINAL.SD2
*             MFINAL.SD2
*
*   Output:   loadmprq.sd2
*
*   Note:     ***CHECK COMPNUM AND CMPNUM1 ASSIGNMENTS AND UPPER LIMIT OF DO LOOPS***
*
*****************************************************************************;

OPTIONS COMPRESS=YES NOCENTER LS=124 PS=74 SOURCE SOURCE2;

LIBNAME   INLIB V612 ".";
LIBNAME   OUT   V612 ".";
LIBNAME   LIBRARY    "..\..\..\DATA\AFINAL\FMTLIB";

%LET COMPNUM=8; /*** number of questions in both composites ***/
%LET CMPNUM1=5; /*** number of questions in first composite ***/ /*MJS 04/30/03 Changed 4 to 5*/

%LET PERIOD=October, 2002 to September, 2003;   /*MJS 03/21/03*/
%INCLUDE "..\..\..\PROGRAMS\LOADWEB\LOADCAHQ.INC";

***************************************************************;
*** Note -- take out access to care questions and composite ***;
***************************************************************;

data mfinal(keep=cpbmk1);
  set inlib.mfinal(keep=majgrp cpbmk1);
  where majgrp="All Beneficiaries";
run;

data mfinal;
  if _n_=1 then set mfinal;
  set inlib.mfinal(drop=cpbmk1) ;
run;

***********************;
***** Benchmarks     **;
***********************;

DATA BENCHMKS(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SIG);
    FORMAT   MAJGRP  $30. REGION  $15. REGCAT $26.
             BENEFIT $34. BENTYPE $50.;
  SET MFINAL;

  ARRAY BENCHMK{*} GOALVAR1-GOALVAR&CMPNUM1 CPBMK1;
  DO I = 1 TO 6;    ***MJS 04/30/03 Changed 5 to 6;
     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";   ***MJS 04/30/03 Added Cholesterol;
      ELSE IF I = 6 THEN BENTYPE = "&PERIOD";
      OUTPUT;
   END;
   DROP I;
RUN;


DATA BENCHMKS;
   SET BENCHMKS;
   OUTPUT;
   IF MAJGRP = "All Beneficiaries" THEN DO;
      DO SERVF = 1 TO 4; DROP SERVF;
            MAJGRP = "Benchmark";
            REGION = PUT(SERVF,XSERVAFF.);
            REGCAT = PUT(SERVF,XSERVAFF.);
            OUTPUT;
      END;
   END;
RUN;


PROC FREQ DATA=BENCHMKS;
   TABLES MAJGRP/MISSING LIST;
RUN;


************************;
*****  Scores        **;
************************;

DATA SCORES(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN SIG N_OBS N_WGT);
      FORMAT MAJGRP $30.  REGION $15. REGCAT $26.
            BENEFIT $34. BENTYPE $50.;
   SET INLIB.MFINAL
       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 6;   ***MJS 04/30/03 Changed 5 to 6;
      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";
      ELSE IF I = 5 THEN BENTYPE = "Cholesterol Testing";   ***MJS 04/30/03 Added Cholesterol;
      ELSE IF I = 6 THEN BENTYPE = "&PERIOD";
      OUTPUT;
   END;
RUN;



DATA OUT.LOADMPRQ(KEEP=MAJGRP REGION REGCAT BENEFIT BENTYPE SCORE SEMEAN SIG
                    N_OBS N_WGT);
   SET BENCHMKS SCORES;
RUN;
```

7. Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\FAKEQ.SAS - Generate the WEB layout/template file.

```
******************************************************************************
* PROJECT:  DOD Quarterly Survey, Consumer Reports (8860-410)
* PROGRAM:  FAKEQ.SAS
* PURPOSE:  Generate Fake Data for Report Cards
* AUTHOR:   Mark A. Brinkley
*
* MODIFIED: 1) July 2000 By Eric Schone to utilize CACRPT and CATREP
*              include files.
*           2) February 2001 By Keith Rathbun - More updates for
*              Quarterly report card format.  Made FAKE datastep into
*              a macro to handle multiple quarters.  Added QTR and
*              PERIOD parameters.
*           3) July 2001 By Mark Brinkley - Updated for
*              Quarterly 2 reports
*           4) April 2002 By Keith Rathbun - Updated DSN and %LET
*              statements for 2002 reports and added TREND records.
*              Removed Flu Shot.
*           5) July 2002 By Mike Scott - Updated DSN and %LET statements
*              for Q2 2002 reports.
*           6) March 2003 By Mike Scott - Updated for 2003 survey.
*
* INCLUDES: 1) CACRPT.INC - Report Card Catchment Definitions
*           2) CATREP.INC - Report Card Catchment Format Defns
*
******************************************************************************;
%LET NUMQTR = 4;
%LET PERIOD1 = January, 2002 to December, 2002;    /*MJS 03/21/03*/
%LET PERIOD2 = April, 2002 to March, 2003;         /*MJS 03/21/03*/
%LET PERIOD3 = July, 2002 to June, 2003;
%LET PERIOD4 = October, 2002 to September, 2003;

LIBNAME OUT V612 ".";
LIBNAME IN  V612 "..\..\..\data\afinal";
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.HCS034_1(KEEP=SERVAFF);   /*MJS 03/21/03*/
   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;
   CELLP=1;
   DROP SERVAFF;
   ******************************************************************************
   * CALCULATE CACSMPL FOR REPORT CARD BASED ON CELLP
   ******************************************************************************;
   %INCLUDE "..\..\..\PROGRAMS\LOADWEB\CACRPT.INC";
RUN;

******************************************************************************
* CACSMPL FORMAT DEFINITIONS FOR REPORT CARD
******************************************************************************;
PROC FORMAT;
%INCLUDE "..\..\..\PROGRAMS\LOADWEB\CATREP.INC";
%INCLUDE "..\..\..\PROGRAMS\LOADWEB\LOADCAHQ.INC";

PROC FORMAT;
   VALUE REG
       1  = 'Region 1'
       2  = 'Region 2'
       3  = 'Region 3'
```

```
          4  = 'Region 4'
          5  = 'Region 5'
          6  = 'Region 6'
          7  = 'Region 7/8'
          9  = 'Region 9'
         10 = 'Region 10'
         11 = 'Region 11'
         12 = 'Region 12'
         13 = 'Europe'
         14 = 'Asia'
         15 = 'Latin America'
         16 = 'Alaska';
RUN;

proc freq;
table xservaff*cacsmpl/ noprint out=temp;
data temp;
length cafmt $26;
set temp end=last; by xservaff;
caf=0;
where cacsmpl ne 9999;
if first.xservaff & xservaff ne 8 then do; cafmt=put(xservaff,xservaff.); output; end;
cafmt=put(cacsmpl,catrep.); caf=1; if count>60 & cafmt ne 'INV' then output;
if last then do;
xregion=0; caf=0; cafmt='Benchmark'; output; caf=1; cafmt='CONUS MHS'; output;
end;
proc sort; by xservaff caf cafmt;
data temp;
set temp end=last;

start=_n_; label=cafmt; type='N'; fmtname='ROWMAT';
if last then call symput('x',_n_);
proc format cntlin=temp;
proc print data=temp;

PROC FORMAT;


  VALUE BEN
  0 = 'Total'     /*** 12-13 MAB ***/
  1 = 'Getting Needed Care'
  2 = 'Getting Care Quickly'
  3 = 'Courteous and Helpful Office Staff'
  4 = 'How Well Doctors Communicate'
  5 = 'Customer Service'
  6 = 'Claims Processing'
  7 = 'Health Plan'
  8 = 'Health Care'
  9 = 'Primary Care Manager'
 10 = 'Specialty Care'
 11 = 'Preventive Care';

  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         " ;

RUN;



%MACRO FAKE;
DATA FAKE;

  KEEP MAJGRP REGION REGCAT BENEFIT BENTYPE I K;

  LENGTH MAJGRP $  30
```

```
            REGION $  15
            REGCAT $  26
            BENTYPE $ 50;



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;

    IF REGCAT="Benchmark" THEN REGION="Benchmark";
    ELSE IF REGCAT="CONUS MHS" THEN REGION="CONUS MHS";
    ELSE IF REGCAT = "Army"OR
            REGCAT = "Air Force" OR
            REGCAT = "Navy" OR
            REGCAT = "Other/Unknown" THEN REGION=REGCAT;


      DO K=0 TO 11;      ** 12 Benefits **;  /*** 12-13 MAB ***/

        BENEFIT=PUT(K,BEN.);

        IF K=0 THEN DO;                /*** 12-13 MAB ***/
            %DO Q = &NUMQTR %TO &NUMQTR;
                BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
            %END;
        END;
        ELSE IF K=1 THEN DO;
            BENTYPE="Problems Getting Personal Doctor/Nurse"; OUTPUT;
            BENTYPE="Problems Getting Referral to Specialist"; OUTPUT;
            BENTYPE="Problems Getting Necessary Care"; OUTPUT;
            BENTYPE="Delays in Care while Awaiting Approval"; OUTPUT;
            %DO Q = 1 %TO &NUMQTR;
                BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
            %END;
            BENTYPE="Trend"; OUTPUT;
        END;
        ELSE IF K=2 THEN DO;
            BENTYPE="Advice over Telephone"; OUTPUT;
            BENTYPE="Wait for Routine Visit"; OUTPUT;
            BENTYPE="Wait for Urgent Care"; OUTPUT;
            BENTYPE="Wait More than 15 Minutes Past Appointment"; OUTPUT;
            %DO Q = 1 %TO &NUMQTR;
                BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
            %END;
            BENTYPE="Trend"; OUTPUT;
        END;
        ELSE IF K=3 THEN DO;
            BENTYPE="Courteous and Respectful"; OUTPUT;
            BENTYPE="Helpful"; OUTPUT;
            %DO Q = 1 %TO &NUMQTR;
                BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
            %END;
            BENTYPE="Trend"; OUTPUT;
        END;
        ELSE IF K=4 THEN DO;
            BENTYPE="Listens Carefully            "; OUTPUT;
            BENTYPE="Explains so You can Understand"; OUTPUT;
            BENTYPE="Shows Respect                "; OUTPUT;
            BENTYPE="Spends Time with You         "; OUTPUT;
            %DO Q = 1 %TO &NUMQTR;
                BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
            %END;
            BENTYPE="Trend"; OUTPUT;
         END;
         ELSE IF K=5 THEN DO;
            BENTYPE="Problem Finding/Understanding Written Material"; OUTPUT;
            BENTYPE="Problem Getting Help from Customer Service"; OUTPUT;
```

```
                BENTYPE="Problem with Paperwork"; OUTPUT;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=6 THEN DO;
                BENTYPE="Claims Handled in a Reasonable Time"; OUTPUT;
                BENTYPE="Claims Handled Correctly"; OUTPUT;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=7 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=8 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=9 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=10 THEN DO;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
            ELSE IF K=11 THEN DO;
                BENTYPE="Mammography         "; OUTPUT;
                BENTYPE="Pap Smear           "; OUTPUT;
                BENTYPE="Hypertension        "; OUTPUT;
                BENTYPE="Prenatal Care       "; OUTPUT;
                BENTYPE="Cholesterol Testing"; OUTPUT;
                %DO Q = 1 %TO &NUMQTR;
                        BENTYPE = "&&PERIOD&Q"; OUTPUT; /*** 02-01-2001 KRR ***/
                %END;
                BENTYPE="Trend"; OUTPUT;
            END;
          END;
        END;
      END;
   END;
RUN;
%MEND FAKE;
%FAKE;


/*** 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;



/*** Assign score and sig values ***/
DATA FAKE;
   SET FAKE;

   /*** significance is either -1, 0, or 1 ***/
   SIG = INT(RANUNI(1)*3)-1;



   /*** These BENEFITs have range 1.00-3.00 ***/
   IF BENEFIT='Getting Needed Care' THEN SCORE = (RANUNI(1)*2)+1;
   IF BENEFIT='Getting Care Quickly' THEN SCORE = (RANUNI(1)*2)+1;
   IF BENEFIT='Courteous and Helpful Office Staff' THEN SCORE = (RANUNI(1)*2)+1;
   IF BENEFIT='How Well Doctors Communicate'  THEN SCORE = (RANUNI(1)*2)+1;
   IF BENEFIT='Customer Service' THEN SCORE = (RANUNI(1)*2)+1;
   IF BENEFIT='Claims Processing' THEN SCORE = (RANUNI(1)*2)+1;

   /*** These BENEFITs have range 0-100 ***/
   IF BENEFIT='Health Plan' THEN SCORE = INT(RANUNI(1)*100);
   IF BENEFIT='Health Care' THEN SCORE = INT(RANUNI(1)*100);
   IF BENEFIT='Primary Care Manager' THEN SCORE = INT(RANUNI(1)*100);
   IF BENEFIT='Specialty Care' THEN SCORE = INT(RANUNI(1)*100);
   IF BENEFIT='Preventive Care'  THEN SCORE = INT(RANUNI(1)*100);

   /*** Trend is always range 0-100 ***/
   IF BENTYPE="Trend" THEN SCORE = INT(RANUNI(1)*100);



   /*** Even though fake data, need to have benchmarks near high end of range ***/
   IF REGCAT="Benchmark" THEN DO;
       /*** These BENEFITs have range 1.00-3.00 ***/
       IF BENEFIT='Getting Needed Care' THEN SCORE = (RANUNI(1)*1)+2;
       IF BENEFIT='Getting Care Quickly' THEN SCORE = (RANUNI(1)*1)+2;
       IF BENEFIT='Courteous and Helpful Office Staff' THEN SCORE = (RANUNI(1)*1)+2;
       IF BENEFIT='How Well Doctors Communicate'  THEN SCORE = (RANUNI(1)*1)+2;
       IF BENEFIT='Customer Service' THEN SCORE = (RANUNI(1)*1)+2;
       IF BENEFIT='Claims Processing' THEN SCORE = (RANUNI(1)*1)+2;

       /*** These BENEFITs have range 0-100 ***/
       IF BENEFIT='Health Plan' THEN SCORE = INT(RANUNI(1)*10)+90;
       IF BENEFIT='Health Care' THEN SCORE = INT(RANUNI(1)*10)+90;
       IF BENEFIT='Primary Care Manager' THEN SCORE = INT(RANUNI(1)*10)+90;
       IF BENEFIT='Specialty Care' THEN SCORE = INT(RANUNI(1)*10)+90;
       IF BENEFIT='Preventive Care'  THEN SCORE = INT(RANUNI(1)*10)+90;

       /*** Trend is always range 0-100 ***/
       IF BENTYPE="Trend" THEN SCORE = INT(RANUNI(1)*10)+90;
   END;
   ELSE SCORE=85;   /*** 12-13 MAB ***/

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 SIG;
RUN;

PROC MEANS N MIN MAX MEAN;
  VAR SCORE;
RUN;


ENDSAS;
```

8.   Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\MERGFINQ.SAS - Merge the final CAHPS and MPR Scores
     Databases into the WEB layout.


```
*****************************************************************************
*
* PROGRAM:  MERGFINQ.SAS
* TASK:     Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
* PURPOSE:  Merge the final CAHPS and MPR Scores Databases
*           into the WEB layout preserving the order of the FAKEQ.SD2.
*
* WRITTEN:  11/09/2000 BY KEITH RATHBUN, Adapted from MERGFINL.SAS.
*
* INPUTS:   1) MPR and CAHPS Individual and Composite data sets with adjusted
*              scores, and benchmark data for quarterly DoD HCS.
*              - LOADMPRQ.SD2 - MPR Scores Database
*              - LOADCAHQ.SD2 - CAHPS Scores Database
*              - BENCHA04.SD2 - 2001 CAHPS Benchmark Database
*              - FAKEQ.SD2    - WEB Layout in Column order
*
* OUTPUT:   1) MERGFINQ.SD2 - Combined Scores Database in WEB layout
*
* INCLUDES: 1) LOADCAHQ.INC - Format definitions for CAHPS Individual
*              and composite data sets
*
* MODIFIED: 1) 07/15/2002 by Mike Scott: Updated libnames for Q2 2002.
*           2) 03/21/2003 by Mike Scott: Updated for 2003 survey.
*
* 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
*  - BENCHA01-04.SAS - Convert 2000 Benchmark Scores into WEB layout
*  - LOADCAHQ.SAS    - Convert Quarterly CAHPS Scores Database into WEB layout
*  - LOADMPRQ.SAS    - Convert Quarterly MPR Scores Database into WEB layout
*
* 2) The output file (MERGFINQ.SD2) will be run through the
*    MAKEHTMQ.SAS program to generate the WEB pages.
*
*****************************************************************************
* Assign data libraries and options
*****************************************************************************;
LIBNAME IN1 v612 ".";
LIBNAME IN2 v612 ".";
LIBNAME IN3 v612 ".";
LIBNAME IN4 v612 "..\..\..\PROGRAMS\BENCHMARK\DATA";
LIBNAME OUT v612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

%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));
   KEEP KEY ORDER;
RUN;

proc print data=order;
run;

PROC SORT DATA=ORDER; BY KEY; RUN;

*****************************************************************************
```

```
* Merge the Scores Databases
****************************************************************************;
DATA MERGFINQ;
    SET IN2.LOADCAHQ(IN=INCAHPQ)
        IN3.LOADMPRQ(IN=INMPRQ )
        IN1.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));
    OUTPUT;
    IF INBENQ THEN DO;
        IF MAJGRP = "All Beneficiaries" THEN DO;
            DO SERVF = 1 TO 4; DROP SERVF;
                MAJGRP = "Benchmark";
                REGION = PUT(SERVF,XSERVAFF.);
                REGCAT = PUT(SERVF,XSERVAFF.);
                KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
                      UPCASE(TRIM(MAJGRP))  ||
                      UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
                OUTPUT;
            END;
        END;
    END;
    IF SCORE = . THEN DELETE;

RUN;

PROC SORT DATA=MERGFINQ; BY KEY; RUN;

proc print data=mergfinq;
run;

****************************************************************************
* Append ORDERing variable to the merged Scores database file
****************************************************************************;
DATA MERGFINQ MISSING;
    MERGE MERGFINQ(IN=IN1) ORDER(IN=IN2);
    BY KEY;

    LENGTH FLAG $30;
    IF IN1 AND IN2 THEN FLAG = "IN SCORES DB AND LAYOUT";
    ELSE IF    IN1 THEN FLAG = "IN SCORES DB ONLY";
    ELSE IF    IN2 THEN FLAG = "IN LAYOUT ONLY";

    LENGTH SOURCE $30;
    IF SVCAHPQ = 1 THEN SOURCE = "CAHPS     ";
    IF SVMPRQ  = 1 THEN SOURCE = "MPR       ";
    IF SVBENQ  = 1 THEN SOURCE = "BENCHMARK ";

    IF IN1 AND NOT IN2 THEN OUTPUT MISSING; *Missing from layout;
    IF IN1 THEN OUTPUT MERGFINQ;
RUN;

****************************************************************************
* Reorder file according to WEB layout
****************************************************************************;
PROC SORT DATA=MERGFINQ OUT=OUT.MERGFINQ; BY ORDER; RUN;

DATA FAKEQ;
    SET IN1.FAKEQ;
    ORDER = _N_;
RUN;

DATA LAYONLY;
    MERGE FAKEQ(IN=IN1) OUT.MERGFINQ(IN=IN2 KEEP=ORDER);
    BY ORDER;
    IF IN1 AND NOT IN2;
RUN;
```

```
TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: MERGFINQ.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MPR and CAHPS Combined Scores data sets and WEB Layout";
TITLE4 "Program Outputs: MERGFINQ.SD2 - Merged Final Scores Database for input to MAKEHTML.SAS";

TITLE5 "MERGFINQ.SD2 Data source counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES SOURCE FLAG SVCAHPQ SVMPRQ SVBENQ
                    SVCAHPQ*SVMPRQ*SVBENQ
      /MISSING LIST;
RUN;

TITLE5 "MERGFINQ.SD2 Data attribute counts";
PROC FREQ DATA=OUT.MERGFINQ;
TABLES BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;

TITLE5 "LAYONLY.SD2 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 (FAKEQ.SD2)";
PROC PRINT DATA=MISSING;
VAR MAJGRP REGION REGCAT BENTYPE BENEFIT;
RUN;
```

```
9.    Q4_2003\PROGRAMS\ConsumerWatch\q4_2003\CONUS_Q.SAS - Generate CAHPS CONUS scores and
      perform significance tests for service affiliation.


******************************************************************************
*
*  PROGRAM:   CONUS_Q.SAS
*  TASK:      Quarterly DOD HEALTH CARE SURVEY ANALYSIS (8860-410)
*  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 funtionality.
*
*  MODIFIED:  1) 04/10/2002 BY KEITH RATHBUN, Update for 2002 survey:
*                changed code to process 4 rolling quarters.
*             2) 04/30/2002 By Eric Schone, to calculate & test trend.
*             3) 07/17/2002 BY MIKE SCOTT, Updated %LET statements for
*                Q2 2002.
*             4) 03/21/2003 BY MIKE SCOTT, Updated for 2003 survey.
*
*    INPUTS:  1) MERGFINQ.SD2 - Scores Database in WEB Layout
*             2) FAKEQ.SD2 - Scores Database WEB Layout
*             3) CONUS_Q.SD2 - Previous Quarters' Combined CAHPS/MPR Scores Database in WEB layout
*
*    OUTPUT:  1) CONUS_Q.SD2 - Combined CAHPS/MPR Scores Database in WEB layout
*             2) LT30Q.SD2 - Records with <= 30 observations
*
*     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
*    - MERGFINQ.SAS - Merge the final CAHPS and MPR Scores Databases
*
******************************************************************************
* Assign data libraries and options
******************************************************************************;
LIBNAME IN1 V612 ".";
LIBNAME OUT V612 ".";
OPTIONS PS=79 LS=132 COMPRESS=YES NOCENTER;

******************************************************************************;
* Define GLOBAL parameters for last CONUSQ.SD2, rolling quarters, and
* input dataset name.
*
* IMPORTANT: Update these GLOBALS each quarter prior to rerunning program.
******************************************************************************;
%LET LSTCONUS = ..\..\..\..\Q3_2003\PROGRAMS\CONSUMERWATCH\Q3_2003;
%LET PERIOD1  = January, 2002 to December, 2002;   /*MJS 03/21/03*/
%LET PERIOD2  = April, 2002 to March, 2003;        /*MJS 03/21/03*/
%LET PERIOD3  = July, 2002 to June, 2003;
%LET PERIOD4  = October, 2002 to September, 2003;
%LET DSN      = MERGFINQ;


******************************************************************************;
* 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
            REGION NOT IN("Benchmark","CONUS MHS") AND
            REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %IF "&TYPE" = "COMPOSITE" %THEN %DO;
      WHERE BENTYPE = &BENTYPE AND "&MAJGRP" = MAJGRP AND REGION = REGCAT AND
            BENEFIT = "&BENEFIT" AND
            REGION NOT IN("Benchmark","CONUS MHS") AND
            REGCAT NOT IN("Benchmark","CONUS MHS");
   %END;
   %ELSE %DO;
       PUT "ERROR: Invalid Type = &TYPE";
   %END;
RUN;

DATA TEMP;
   SET TEMP END=FINISHED;
      length key $200;
   IF _N_ = 1 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;
   **************************************************************************
   * Skip over the Non-CONUS
   *************************************************************************;
   IF REGION NOT IN("Asia","Europe","Latin America") THEN DO;
      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;
   END;
   IF FINISHED THEN GOTO FINISHED;
   RETURN;

KEEP MAJGRP REGION REGCAT BENTYPE BENEFIT SIG SCORE SEMEAN N_OBS N_WGT
     FLAG SOURCE SUMSCOR1 SUMWGT1 SUMSE2 KEY;

FINISHED:
   SCORE   = SUMSCOR1/SUMWGT1;
   SEMEAN  = SQRT(SUMSE2)/SUMWGT1;
   N_OBS   = N_OBS1;
   N_WGT   = SUMWGT1;
   SOURCE  = "CONUS";
   FLAG    = "CONUS";
   REGION  = "CONUS MHS";
   REGCAT  = "CONUS MHS";
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
   OUTPUT;
RUN;

%IF &FLAG = 0 %THEN %DO;
   DATA FINAL;
      SET INIT TEMP;
   RUN;
%END;
%ELSE %DO;
   DATA FINAL;
      SET FINAL TEMP;
   RUN;
%END;
%LET FLAG = 1;

%MEND;
```

```
******************************************************************************
* Create CONUS for Active Duty - Individual
******************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                       ,MAJGRP=Active Duty,
TYPE=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 and Respectful                    ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval       ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand              ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                     ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                           ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care             ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist     ,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 Urgent Care                        ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                      ,MAJGRP=Active Duty,
TYPE=INDIVIDUAL);


******************************************************************************
* Create CONUS for Active Duty Dependents - Individual
******************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                       ,MAJGRP=Active Duty Dependents,
TYPE=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 and Respectful                    ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval       ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand              ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                           ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                      ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care             ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse      ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist     ,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 Urgent Care                       ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Active Duty Dependents,
TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Enrollees with Civilian PCM - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Enrollees with Civilian
PCM, TYPE=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 and Respectful                   ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service  ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care            ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist    ,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 Urgent Care                       ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                     ,MAJGRP=Enrollees with Civilian
PCM, TYPE=INDIVIDUAL);


*****************************************************************************
* Create CONUS for Enrollees with Military PCM - Individual
*****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                      ,MAJGRP=Enrollees with Military
PCM, TYPE=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 and Respectful                   ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval      ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand             ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                    ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                          ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
```

```
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Enrollees with Military
PCM, TYPE=INDIVIDUAL);


****************************************************************************
* Create CONUS for Non-enrolled Beneficiaries - Individual
****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=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 and Respectful                     ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval       ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Non-enrolled
Beneficiaries, TYPE=INDIVIDUAL);


****************************************************************************
* Create CONUS for Prime Enrollees - Individual
****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Claims Handled Correctly                     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
```

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%PROCESS(BENTYPE=Claims Handled in a Reasonable Time          ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Courteous and Respectful                     ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment   ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                       ,MAJGRP=Prime Enrollees,
TYPE=INDIVIDUAL);


****************************************************************************
* Create CONUS for Retirees and Dependents - Individual
****************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                        ,MAJGRP=Retirees and Dependents,
TYPE=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 and Respectful                     ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand               ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                      ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                            ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care              ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse       ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist      ,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 Urgent Care                         ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
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%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=Retirees and Dependents,
TYPE=INDIVIDUAL);


******************************************************************************
* Create CONUS for All Beneficiaries - Individual
******************************************************************************;
%PROCESS(BENTYPE=Advice over Telephone                         ,MAJGRP=All Beneficiaries,
TYPE=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 and Respectful                      ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Delays in Care while Awaiting Approval        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Explains so You can Understand                ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Helpful                                       ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Listens Carefully                             ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Finding/Understanding Written Material,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem Getting Help from Customer Service    ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problem with Paperwork                        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Necessary Care               ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Personal Doctor/Nurse        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Problems Getting Referral to Specialist       ,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 Urgent Care                          ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait More than 15 Minutes Past Appointment    ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);
%PROCESS(BENTYPE=Wait for Routine Visit                        ,MAJGRP=All Beneficiaries,
TYPE=INDIVIDUAL);


******************************************************************************
* Process Quarterly CONUS Composites
******************************************************************************
******************************************************************************
* Create CONUS for Claims Processing - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Claims
Processing);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=Claims
Processing);


******************************************************************************
* Create CONUS for Courteous and Helpful Office Staff - Quarterly
******************************************************************************;
```

```
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries           , TYPE=COMPOSITE,BENEFIT=Courteous
and Helpful Office Staff);

****************************************************************************
* Create CONUS for Customer Service - Quarterly
****************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Customer
Service);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries           , TYPE=COMPOSITE,BENEFIT=Customer
Service);

****************************************************************************
* Create CONUS for Getting Care Quickly - Quarterly
****************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents     , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries           , TYPE=COMPOSITE,BENEFIT=Getting
Care Quickly);

****************************************************************************
* Create CONUS for Getting Needed Care - Quarterly
****************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                 , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents      , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees             , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
```

```
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=Getting
Needed Care);

******************************************************************************
* Create CONUS for Health Care - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Health
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=Health
Care);

******************************************************************************
* Create CONUS for Health Plan - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Health
Plan);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=Health
Plan);

******************************************************************************
* Create CONUS for How Well Doctors Communicate - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=How Well
Doctors Communicate);

******************************************************************************
* Create CONUS for Primary Care Manager - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
```

```
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=All Beneficiaries          , TYPE=COMPOSITE,BENEFIT=Primary
Care Manager);


******************************************************************************
* Create CONUS for Specialty Care - Quarterly
******************************************************************************;
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty                , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Active Duty Dependents     , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Civilian PCM, TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Enrollees with Military PCM, TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Non-enrolled Beneficiaries , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Prime Enrollees            , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", MAJGRP=Retirees and Dependents    , TYPE=COMPOSITE,BENEFIT=Specialty
Care);
%PROCESS(BENTYPE="&PERIOD4", 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));

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 REGION = "Benchmark" AND SVMPRQ = 0;
RUN;
Data abnchmrk(keep=benefit bentype ascore);
set benchmrk;
where upcase(majgrp)='ALL BENEFICIARIES';
rename score=ascore;
proc sort; by benefit bentype;
proc sort data=benchmrk; by benefit bentype;
data benchmrk;
merge benchmrk abnchmrk; by benefit bentype;
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);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;
   REGION = "CONUS MHS";
   REGCAT = "CONUS MHS";

   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
   SOURCE = "CONUS_Q";
   FLAG   = "CONUS_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);
   TEST = 2*(1-PROBT(ABS(TEMP),N_OBS-1));
   SIG = 0;
   IF N_OBS >= 30 AND TEST < 0.05 THEN SIG = 1;
   IF SCORE < BSCORE THEN SIG = -SIG;
   IF SIN;
   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;
            SET IN2.CONUS_Q;
            IF BENTYPE IN ("&PERIOD1","&PERIOD2","&PERIOD3") AND
              (REGION = REGCAT) AND
               BENEFIT IN ("Getting Needed Care",
                           "Getting Care Quickly",
                           "How Well Doctors Communicate",
                           "Courteous and Helpful Office Staff",
                           "Customer Service",
                           "Claims Processing",
                           "Health Care",
                           "Health Plan",
                           "Primary Care Manager",
                           "Specialty Care",
                           "Preventive Care") & bentype not in ("Trend","Flu Shot");

        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 bentype="&period1" then period=1;
                        if bentype="&period2" then period=2;
                        if bentype="&period3" then period=3;
                        if bentype="&period4" then period=4;
    ************************************************************************
    * 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 ne .;
if period<4|benefit="Preventive Care" then score=score/100;

proc sort data=trend;
by majgrp region regcat benefit period;

data avg(keep=majgrp region regcat benefit t_obs a_period a_score twgt) ;
set trend;   by majgrp region regcat benefit period;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit 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 then do;
```

```
a_score=t_score/twgt;

a_period=t_period/twgt;
output;
end;

data trend(drop=score) btrend(keep=majgrp benefit trend serr);
merge trend avg;  by majgrp region regcat benefit;
if majgrp="Benchmark"|region="Benchmark" then n_wgt=1;
if first.majgrp|first.region|first.regcat|first.benefit 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 then do;
trend=t_score/t_period;
serr=sqrt(t_se/(t_period*twgt));


if region="Benchmark"|majgrp="Benchmark" then output btrend;
output trend;
end;
proc sort data=trend; by majgrp benefit;
proc sort data=btrend; by majgrp benefit;
data trend(rename=(trend=score));
merge trend btrend(rename=(trend=btrend serr=bserr));
by majgrp benefit;
   length key $200;
if ^(region="Benchmark"|majgrp="Benchmark") then do;
ttrend=trend-btrend;
serr=sqrt((serr**2)+(bserr**2));
sig=0;
test= 2*(1-probt(abs(ttrend/serr),t_obs));
if test<.05 then sig=1;
if sig=1 & ttrend<0 then sig=-1;
end;
bentype="Trend";
   KEY = UPCASE(TRIM(BENEFIT)) || UPCASE(TRIM(BENTYPE)) ||
         UPCASE(TRIM(MAJGRP))  ||
         UPCASE(TRIM(REGCAT))  || UPCASE(TRIM(REGION));
         if benefit="Preventive Care" then do;
         sig=0;
         trend=.A;
 end;
proc sort data=trend(drop=t_obs twgt a_score a_period t_score t_se t_period serr
 bserr btrend ttrend order); by key;
 data trend ;
 merge trend(in=din) fakeq(in=cin); by key;
 if din;

data combine;
set combine trend;
proc sort; by key;
data combine dupe;
set combine; by key;
if ^(first.key & last.key) then output dupe;
output combine;
proc print data=dupe;




****************************************************************************
* 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;
   SET FAKEONLY COMBINE;
   BY KEY;
   *************************************************************************
   * Convert CAHPS Composites and Individual to 1-100 scale
   *************************************************************************;
   IF BENEFIT NE "Preventive Care" AND
      BENTYPE NE "&PERIOD1" AND
      BENTYPE NE "&PERIOD2" AND
      BENTYPE NE "&PERIOD3"
      THEN SCORE = SCORE*100;
RUN;

PROC SORT DATA=CONUS_Q OUT=OUT.CONUS_Q; BY ORDER; RUN;

TITLE1 "Quarterly DOD Health Survey Scores/Report Cards (8860-410)";
TITLE2 "Program Name: CONUS_Q.SAS By Keith Rathbun";
TITLE3 "Program Inputs: MERGFINQ.SD2 - Scores Database in WEB Layout";
TITLE4 "Program Outputs: CONUS_Q.SD2 - CONUS Scores Database in WEB layout";

PROC FREQ;
TABLES SIG FLAG SOURCE BENEFIT BENTYPE MAJGRP REGION REGCAT
       REGION*REGCAT
      /MISSING LIST;
RUN;
```

10. **Q4_2003\PROGRAMS\ConsumerWatch\DISENRL.SAS** - Calculate disenrollment scores for quarterly TRICARE Consumer Watch.

```
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMTERR;
********************************************************************************
********************************************************************************
* PROJECT: 8860-420
* PROGRAM: DISENRL.SAS
* PURPOSE: To produce numbers that go into INTENT TO DISENROLL chart in
*          TRICARE consumer watch
* AUTHOR : MIKI SATAKE and NATALIE JUSTH
* DATE   : 5/08/01
* UPDATED: 7/16/01 FOR QUARTER 2
* UPDATED: 10/01/01 FOR QUARTER 3
* UPDATED: 1/15/01 FOR QUARTER 4
* UPDATED: 4/11/02 FOR QUARTER 1 2002
* UPDATED: 7/2/02 FOR QUARTER 2 2002
* UPDATED: 10/11/02 FOR QUARTER 3 2002
* UPDATED: 11/12/02 FOR QUARTER 4 2002
* UPDATED: 4/3/03 FOR QUARTER 1 2003
* UPDATED: 5/19/03 FOR QUARTER 2 2003
* UPDATED: 8/28/03 FOR QUARTER 3 2003
* UPDATED: 11/14/03 FOR QUARTER 4 2003
* INPUT  : (2003-Q4) ..\..\DATA\AFINAL\HCS034_1.SD2
*          (2003-Q3) ..\..\..\Q3_2003t\DATA\AFINAL\HCS033_1.SD2
*          (2003-Q2) ..\..\..\Q2_2003t\DATA\AFINAL\HCS032_1.SD2
*          (2003-Q1) ..\..\..\Q1_2003t\DATA\AFINAL\HCS031_1.SD2
* OUTPUT : DISENRL.SD2
********************************************************************************
********************************************************************************;
LIBNAME CURRNT  V612 '..\..\DATA\AFINAL';
LIBNAME PRIOR1  V612 '..\..\..\Q3_2003t\DATA\AFINAL';
LIBNAME PRIOR2  V612 '..\..\..\Q2_2003t\DATA\AFINAL';
LIBNAME PRIOR3  V612 '..\..\..\Q1_2003t\DATA\AFINAL';
LIBNAME OUT V612 '.';

TITLE '8860-420 DOD CONSUMER WATCH Q4 2003';

PROC FORMAT;
   VALUE XSRVAFF
      1 = "Army"
      2 = "Air Force"
      3 = "Navy";
RUN;

LIBNAME LIBRARY '..\..\DATA\AFINAL\FMTLIB';
DATA HCS034_1(KEEP=TOTAL CONUS H03053 XBNFGRP XENRLLMT WRWT XREGION XSRVAFF XINS_COV STRATUMN
             DEPVARD DENOMD);
   SET CURRNT.HCS034_1;
   TOTAL = 1;
   IF XREGION > 7 THEN XREGION = XREGION - 1;
   IF SERVAFF = 'A' THEN XSRVAFF = 1;
      ELSE IF SERVAFF = 'F' THEN XSRVAFF = 2;
      ELSE IF SERVAFF = 'N' THEN XSRVAFF = 3;
   FORMAT XSRVAFF XSRVAFF.;
   STRATUMN = STRATUM + 0;
   IF (H03053 IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVARD = 1;
      ELSE DEPVARD = 0;
   IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOMD = 1;
      ELSE DENOMD = 0;
RUN;

LIBNAME LIBRARY '..\..\..\Q3_2003t\DATA\AFINAL\FMTLIB';
DATA HCS033_1(KEEP=TOTAL CONUS H03053 XBNFGRP XENRLLMT WRWT XREGION XSRVAFF XINS_COV STRATUMN
             DEPVARD DENOMD);
   SET PRIOR1.HCS033_1;
   TOTAL = 1;
   IF XREGION > 7 THEN XREGION = XREGION - 1;
   IF SERVAFF = 'A' THEN XSRVAFF = 1;
      ELSE IF SERVAFF = 'F' THEN XSRVAFF = 2;
      ELSE IF SERVAFF = 'N' THEN XSRVAFF = 3;
   FORMAT XSRVAFF XSRVAFF.;
```

```
      STRATUMN = STRATUM + 0;
      IF (H03053 IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVARD = 1;
         ELSE DEPVARD = 0;
      IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOMD = 1;
         ELSE DENOMD = 0;
   RUN;

   LIBNAME LIBRARY '..\..\..\Q2_2003t\DATA\AFINAL\FMTLIB';
   DATA HCS032_1(KEEP=TOTAL CONUS H03053 XBNFGRP XENRLLMT WRWT XREGION XSRVAFF XINS_COV STRATUMN
                 DEPVARD DENOMD);
      SET PRIOR2.HCS032_1;
      TOTAL = 1;
      IF XREGION > 7 THEN XREGION = XREGION - 1;
      IF SERVAFF = 'A' THEN XSRVAFF = 1;
         ELSE IF SERVAFF = 'F' THEN XSRVAFF = 2;
         ELSE IF SERVAFF = 'N' THEN XSRVAFF = 3;
      FORMAT XSRVAFF XSRVAFF.;
      STRATUMN = STRATUM + 0;
      IF (H03053 IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVARD = 1;
         ELSE DEPVARD = 0;
      IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOMD = 1;
         ELSE DENOMD = 0;
   RUN;

   LIBNAME LIBRARY '..\..\..\Q1_2003t\DATA\AFINAL\FMTLIB';
   DATA HCS031_1(KEEP=TOTAL CONUS H03053 XBNFGRP XENRLLMT WRWT XREGION XSRVAFF XINS_COV STRATUMN
                 DEPVARD DENOMD);
      SET PRIOR3.HCS031_1;
      TOTAL = 1;
      IF XREGION > 7 THEN XREGION = XREGION - 1;
      IF SERVAFF = 'A' THEN XSRVAFF = 1;
         ELSE IF SERVAFF = 'F' THEN XSRVAFF = 2;
         ELSE IF SERVAFF = 'N' THEN XSRVAFF = 3;
      FORMAT XSRVAFF XSRVAFF.;
      STRATUMN = STRATUM + 0;
      IF (H03053 IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVARD = 1;
         ELSE DEPVARD = 0;
      IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOMD = 1;
         ELSE DENOMD = 0;
   RUN;

   ********************************************************************************
   ********************************************************************************
   * Intent to Disenroll
   ********************************************************************************
   ********************************************************************************;

   TITLE2 'Intent to Disenroll';

   %MACRO DISENRL (DATASET,QUARTER,BENTYPE,ROW,VAR);

   /************************************/
   /* RUN SIGNIFICANCE TESTS          */
   /************************************/

   %MACRO RUNSE (DS,DEPVAR,INDEPVAR,NUMCOL,SUBPOP,QTR,BYVAR);
   ***CALCULATE VALUES FOR EACH COLUMN FOR ENTIRE POPULATION****;
   PROC SORT DATA=&DS;
      BY STRATUMN;
   RUN;

   PROC DESCRIPT DATA=&DS DESIGN=STRWR /*NOPRINT*/;
      WEIGHT WRWT;                  ******  FINAL SURVEY WEIGHT  ********;
      NEST STRATUMN / MISSUNIT;
      VAR &DEPVAR;                  ******  VARIABLES TO BE ESTIMATED**;
      SUBPOPN &SUBPOP;
      TABLES &INDEPVAR;
      SUBGROUP &INDEPVAR;
      LEVELS &NUMCOL;
      setenv/decwidth=6;
      PRINT /STYLE=NCHS;
      OUTPUT / TABLECELL=DEFAULT FILENAME=&QTR&BYVAR;
   RUN;
```

```
PROC PRINT DATA=&QTR&BYVAR;
RUN;
%MEND RUNSE;


%RUNSE (HCS034_1,DEPVARD,XREGION,15,(DENOMD=1),Q4,REG);
%RUNSE (HCS034_1,DEPVARD,XSRVAFF,3,(DENOMD=1),Q4,SRV);
%RUNSE (HCS033_1,DEPVARD,XREGION,15,(DENOMD=1),Q3,REG);
%RUNSE (HCS033_1,DEPVARD,XSRVAFF,3,(DENOMD=1),Q3,SRV);
%RUNSE (HCS032_1,DEPVARD,XREGION,15,(DENOMD=1),Q2,REG);
%RUNSE (HCS032_1,DEPVARD,XSRVAFF,3,(DENOMD=1),Q2,SRV);
%RUNSE (HCS031_1,DEPVARD,XREGION,15,(DENOMD=1),Q1,REG);
%RUNSE (HCS031_1,DEPVARD,XSRVAFF,3,(DENOMD=1),Q1,SRV);


%MACRO RUNSEC (DS,DEPVAR,SUBPOP,QTR);
***CALCULATE VALUES FOR EACH COLUMN FOR ENTIRE POPULATION****;
PROC SORT DATA=&DS;
   BY STRATUMN;
RUN;

PROC DESCRIPT DATA=&DS DESIGN=STRWR /*NOPRINT*/;
   WEIGHT WRWT;                    ******  FINAL SURVEY WEIGHT   ********;
   NEST STRATUMN / MISSUNIT;
   VAR &DEPVAR;                    ******  VARIABLES TO BE ESTIMATED**;
   SUBPOPN &SUBPOP;
   setenv/decwidth=6;
   PRINT /STYLE=NCHS;
   OUTPUT / TABLECELL=DEFAULT FILENAME=&QTR;
RUN;

PROC PRINT DATA=&QTR;
RUN;
%MEND RUNSEC;


%RUNSEC (HCS034_1,DEPVARD,(DENOMD=1 AND CONUS=1),Q4);
%RUNSEC (HCS033_1,DEPVARD,(DENOMD=1 AND CONUS=1),Q3);
%RUNSEC (HCS032_1,DEPVARD,(DENOMD=1 AND CONUS=1),Q2);
%RUNSEC (HCS031_1,DEPVARD,(DENOMD=1 AND CONUS=1),Q1);


%MACRO SIGFLAG(NUMCOL,QTR,BYVAR,INDEPVAR);
DATA N&QTR&BYVAR (KEEP=COL4 &INDEPVAR);
   MERGE &QTR(RENAME=(MEAN=DOM_MEAN SEMEAN=DOM_SE wsum=dom_w NSUM=DOM_N))
         &QTR&BYVAR;
   BY TABLENO;
   RETAIN NCOL 0;
   ARRAY COLUMNS COL1-COL&NUMCOL;
   IF &INDEPVAR > 0;
   NCOL+1;
   IF &INDEPVAR IN (1,2,3,4,5,6,7,8,9,10,11,15) THEN
      VARDIF = ((1 - 2*wSUM/DOM_w)*DOM_SE**2 + SEMEAN**2);
   IF &INDEPVAR IN (12,13,14) THEN VARDIF = DOM_SE**2 + SEMEAN**2;
   SEDIF = SQRT(VARDIF);
   N=MIN(NSUM,DOM_N);
   ***SIGNIFICANCE TEST****;
   TESTVAL = 2*(1-PROBT(ABS(MEAN - DOM_MEAN) / SEDIF,N));
   PUT VARDIF= SEDIF= TESTVAL=;
   IF TESTVAL<.05 & MEAN>DOM_MEAN THEN COLUMNS(NCOL) = 1;
   ELSE IF TESTVAL <.05 & MEAN<DOM_MEAN THEN COLUMNS(NCOL) = -1;
   ELSE COLUMNS(NCOL) = 0;
   DO I=1 TO &NUMCOL;
      IF COLUMNS(I) NE . THEN COL4=COLUMNS(I);
   END;
RUN;

PROC PRINT DATA=N&QTR&BYVAR;
RUN;
%MEND SIGFLAG;

%SIGFLAG(15,Q4,REG,XREGION);
%SIGFLAG(15,Q3,REG,XREGION);
%SIGFLAG(15,Q2,REG,XREGION);
%SIGFLAG(15,Q1,REG,XREGION);
%SIGFLAG(3,Q4,SRV,XSRVAFF);
```

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```
%SIGFLAG(3,Q3,SRV,XSRVAFF);
%SIGFLAG(3,Q2,SRV,XSRVAFF);
%SIGFLAG(3,Q1,SRV,XSRVAFF);


/*****/
/*MHS*/
/*****/

PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND &VAR IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSNUM&QUARTER(RENAME=(COUNT=MHSNUM));
    WEIGHT WRWT;
RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSDEN&QUARTER(RENAME=(COUNT=MHSDEN));
    WEIGHT WRWT;
RUN;
/************/
/*UNWEIGHTED*/
/************/
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSDEU&QUARTER(RENAME=(COUNT=MHSDENU));
RUN;


/********/
/*Region*/
/********/

PROC SORT DATA=&DATASET;BY XREGION;RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (&VAR IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=FIGDN&QUARTER(RENAME=(COUNT=FIGDNUM));
    WEIGHT WRWT;
    BY XREGION;
RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=FIGDD&QUARTER(RENAME=(COUNT=FIGDDEN));
    WEIGHT WRWT;
    BY XREGION;
RUN;
/************/
/*UNWEIGHTED*/
/************/
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=FIGDDU&QUARTER(RENAME=(COUNT=FIGDDENU));
    BY XREGION;
RUN;


/*********************/
/*Service Affiliation*/
/*********************/

PROC SORT DATA=&DATASET;BY XSRVAFF;RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (&VAR IN (4,5) AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=FIGDSN&QUARTER(RENAME=(COUNT=FIGDNUMS));
    WEIGHT WRWT;
    BY XSRVAFF;
RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=FIGDSD&QUARTER(RENAME=(COUNT=FIGDDENS));
    WEIGHT WRWT;
    BY XSRVAFF;
RUN;
/************/
/*UNWEIGHTED*/
/************/
PROC FREQ DATA=&DATASET NOPRINT;
```

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```
      WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
      TABLES TOTAL / OUT=FGDSDU&QUARTER(RENAME=(COUNT=FGDDENSU));
      BY XSRVAFF;
   RUN;

   DATA MHSD&QUARTER;
      MERGE MHSNUM&QUARTER MHSDEN&QUARTER MHSDEU&QUARTER;
      BY TOTAL;
      LENGTH BENTYPE $35;
      BENTYPE = &BENTYPE;
      ROW=&ROW;
      IF (MHSDEN<200 OR MHSDENU<30) THEN COL2=.;
         ELSE COL2 = (MHSNUM / MHSDEN)*100;
   RUN;
   DATA REGD&QUARTER;
      MERGE FIGDN&QUARTER FIGDD&QUARTER FIGDDU&QUARTER N&QUARTER.REG;
      BY XREGION;
      LENGTH BENTYPE $35;
      BENTYPE = &BENTYPE;
      ROW=&ROW;
      IF (FIGDDEN<200 OR FIGDDENU<30) THEN COL3=.;
         ELSE COL3 = (FIGDNUM / FIGDDEN)*100;
   RUN;
   DATA SRVD&QUARTER;
      MERGE FIGDSN&QUARTER FIGDSD&QUARTER FGDSDU&QUARTER N&QUARTER.SRV;
      BY XSRVAFF;
      LENGTH BENTYPE $35;
      BENTYPE = &BENTYPE;
      ROW=&ROW;
      IF (FIGDDENS<200 OR FGDDENSU<30) THEN COL3=.;
         ELSE COL3 = (FIGDNUMS / FIGDDENS)*100;
   RUN;
   DATA FIGD&QUARTER(DROP=TOTAL PERCENT MHSNUM MHSDEN MHSDENU FIGDNUM FIGDDEN FIGDDENU FIGDNUMS
   FIGDDENS FGDDENSU);
      SET MHSD&QUARTER REGD&QUARTER SRVD&QUARTER;
      LENGTH FIGURE $19;
      FIGURE = 'INTENT TO DISENROLL';
   RUN;
   PROC PRINT;RUN;
   %MEND DISENRL;

   %DISENRL (HCS034_1,Q4,'October, 2002 to September, 2003',34,H03053);
   %DISENRL (HCS033_1,Q3,'July, 2002 to June, 2003',33,H03053);
   %DISENRL (HCS032_1,Q2,'April, 2002 to March, 2003',32,H03053);
   %DISENRL (HCS031_1,Q1,'January, 2002 to December, 2002',31,H03053);

   ****************************************************************************************************
   ****************************************************************************************************
   * Combine all temporary datasets into one dataset for inclusion in consumer watch
   ****************************************************************************************************
   ***************************************************************************************************;

   DATA OUT.DISENRL;
      SET FIGDQ1 FIGDQ2 FIGDQ3 FIGDQ4;
      LENGTH REGION $20;
      IF XREGION=0 THEN REGION='CONUS';
         ELSE IF XREGION=1 THEN REGION='Region 1';
         ELSE IF XREGION=2 THEN REGION='Region 2';
         ELSE IF XREGION=3 THEN REGION='Region 3';
         ELSE IF XREGION=4 THEN REGION='Region 4';
         ELSE IF XREGION=5 THEN REGION='Region 5';
         ELSE IF XREGION=6 THEN REGION='Region 6';
         ELSE IF XREGION=7 THEN REGION='Region 7/8';
         ELSE IF XREGION=8 THEN REGION='Region 9';
         ELSE IF XREGION=9 THEN REGION='Region 10';
         ELSE IF XREGION=10 THEN REGION='Region 11';
         ELSE IF XREGION=11 THEN REGION='Region 12';
         ELSE IF XREGION=12 THEN REGION='Europe';
         ELSE IF XREGION=13 THEN REGION='Asia';
         ELSE IF XREGION=14 THEN REGION='Latin America';
         ELSE IF XREGION=15 THEN REGION='Alaska';
         ELSE IF XSRVAFF=1 THEN REGION='Army';
         ELSE IF XSRVAFF=3 THEN REGION='Navy';
```

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```
        ELSE IF XSRVAFF=2 THEN REGION='Air Force';
    PROC SORT;
    BY ROW;
RUN;
PROC PRINT;
RUN;
```

11. Q4_2003\PROGRAMS\ConsumerWatch\CONSUMERWATCH-R.SAS - Run regional TRICARE Consumer Watch reports.

```
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMTERR;
*********************************************************************************
* PROJECT: 8860-420
* PROGRAM: CONSUMERWATCH-R.SAS
* 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
* INPUT  : DATA FROM CONSUMER REPORTS: ..\..\PROGRAMS\LOADWEB\CONUS_Q.SD2
*          INTENT TO DISENROLL: DISENRL.SD2
* OUTPUT : INTO EXCEL SPREADSHEET
*********************************************************************************;


OPTIONS NOXWAIT MPRINT;

/***************************/
/* UPDATE REGIONAL LIBNAMES */
/***************************/

/* LIBNAMES for Regional Consumer Watch */
LIBNAME CURNTR '..\..\PROGRAMS\LOADWEB';

LIBNAME IN    '.';

/******************************************/
/* TIME PERIOD MACROS: UPDATE EACH QUARTER */
/******************************************/

%LET CURRNT  = 'October, 2002 to September, 2003';
%LET CURRNTQ = Q4;
%LET PREV1   = 'July, 2002 to June, 2003';
%LET PREV1Q  = Q3;
%LET PREV2   = 'April, 2002 to March, 2003';
%LET PREV2Q  = Q2;
%LET PREV3   = 'January, 2002 to December, 2002';
%LET PREV3Q  = Q1;

%MACRO RUNCW (AREA=,        /* Region
*/
              FOLDER=,      /* Folder containing excel template
*/
              NAME=,        /* Name of Excel file for each region
*/
              CURRENT=,     /* Libname and dataset for the current quarter
*/
              );

/* Change parameter for each region */
%LET VAL = &AREA.;

X "START &FOLDER.&NAME.";

DATA _NULL_;
   X=SLEEP(8);
RUN;

TITLE "8860-420 DOD CONSUMER WATCH &CURRNTQ CY 2003";
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
*/
                 QUARTER=     /* Data is processed for current quarter and each of 3 previous
quarters */
                 );
DATA FIG&FIGURE&QUARTER FIGB&QUARTER(KEEP=SCORE);
   SET FIG&FIGURE&QUARTER;
   IF REGION='Benchmark' THEN OUTPUT FIGB&QUARTER;
      ELSE OUTPUT FIG&FIGURE&QUARTER;
RUN;
DATA FIG&FIGURE&QUARTER(DROP=RSCORE);
   MERGE FIGB&QUARTER(RENAME=(SCORE=RSCORE))
         FIG&FIGURE&QUARTER;
   SCORE=SCORE-RSCORE;
RUN;
%MEND NEWSCORE;


%MACRO COMBDATA (FIGURE=    /* Figure number in consumer watch reports */
                 );
DATA FIG&FIGURE(DROP=BSCORE);
   SET BENCH FIG&FIGURE.Q1 FIG&FIGURE.Q4 FIG&FIGURE.Q3 FIG&FIGURE.Q2;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
      ROW = 3;
      BSCORE=SCORE;
   END;
   ELSE IF TIMEPD = &PREV3 THEN DO;
      ROW = 4;
      SCORE=SCORE+BSCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
   END;
   ELSE IF TIMEPD = &PREV2 THEN DO;
      ROW = 5;
      SCORE=SCORE+BSCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
   END;
   ELSE IF TIMEPD = &PREV1 THEN DO;
      ROW = 6;
      SCORE=SCORE+BSCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
   END;
   ELSE IF TIMEPD = &CURRNT THEN DO;
      ROW=7;
      SCORE=SCORE+BSCORE;
   END;
   COL2 = SCORE / 100;
   COL3 = SIG;
RUN;
PROC SORT;
```

```
   BY ROW;
RUN;
%MEND COMBDATA;

********************************************************************************
* 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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=FIG1&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV1,
          OUTDATA=FIG1&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV2,
          OUTDATA=FIG1&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV3,
          OUTDATA=FIG1&PREV3Q);

%NEWSCORE (FIGURE=1,
           QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV3Q);

%COMBDATA (FIGURE=1);

PROC PRINT;
RUN;

********************************************************************************
* DDE LINK
*******************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C2:R22C3";

DATA _NULL_;
   SET FIG1;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
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=&CURRNT,
           OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
           MAJGRP='Prime Enrollees',
           REGION=("&VAL",'Benchmark'),
           REGCAT=("&VAL",'Benchmark'),
           BENEFIT=('Health Plan'),
           BENTYPE=('Composite'),
           TIMEPD=&CURRNT,
           OUTDATA=FIG2&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
           MAJGRP='Prime Enrollees',
           REGION=("&VAL",'Benchmark'),
           REGCAT=("&VAL",'Benchmark'),
           BENEFIT=('Health Plan'),
           BENTYPE=('Composite'),
           TIMEPD=&PREV1,
           OUTDATA=FIG2&PREV1Q);
%GETDATA (DATASET=&CURRENT,
           MAJGRP='Prime Enrollees',
           REGION=("&VAL",'Benchmark'),
           REGCAT=("&VAL",'Benchmark'),
           BENEFIT=('Health Plan'),
           BENTYPE=('Composite'),
           TIMEPD=&PREV2,
           OUTDATA=FIG2&PREV2Q);
%GETDATA (DATASET=&CURRENT,
           MAJGRP='Prime Enrollees',
           REGION=("&VAL",'Benchmark'),
           REGCAT=("&VAL",'Benchmark'),
           BENEFIT=('Health Plan'),
           BENTYPE=('Composite'),
           TIMEPD=&PREV3,
           OUTDATA=FIG2&PREV3Q);

%NEWSCORE (FIGURE=2,
            QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=2,
            QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=2,
            QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=2,
            QUARTER=&PREV3Q);

%COMBDATA (FIGURE=2);

PROC PRINT;
RUN;

*******************************************************************************
* DDE LINK (EXCEL file has to be open )
*******************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C6:R22C7";

DATA _NULL_;
   SET FIG2;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
RUN;

*******************************************************************************
* FIGURE 3: Personal Provider Rating
```

```
*****************************************************************************;
TITLE2 'Figure 3: Personal Provider Rating';
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=('Benchmark'),
          REGCAT=('Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=FIG3&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV1,
          OUTDATA=FIG3&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV2,
          OUTDATA=FIG3&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV3,
          OUTDATA=FIG3&PREV3Q);

%NEWSCORE (FIGURE=3,
           QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV3Q);

%COMBDATA (FIGURE=3);

PROC PRINT;
RUN;

*****************************************************************************
* DDE LINK (EXCEL file has to be open )
*****************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C10:R22C11";

DATA _NULL_;
   SET FIG3;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
RUN;

*****************************************************************************
* FIGURE 4: Intent to Disenroll
*****************************************************************************;
TITLE2 'Figure 4: Intent to Disenroll';
PROC FREQ NOPRINT DATA=IN.DISENRL;
```

```
    WHERE BENTYPE = &CURRNT
      AND FIGURE='INTENT TO DISENROLL'
      AND REGION = "&VAL";
    TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&CURRNTQ(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &CURRNT
      AND FIGURE='INTENT TO DISENROLL'
      AND COL2 NE .;
    TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&CURRNTQ.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV1
      AND FIGURE='INTENT TO DISENROLL'
      AND REGION = "&VAL";
    TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV1Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV1
      AND FIGURE='INTENT TO DISENROLL'
      AND COL2 NE .;
    TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV1Q.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV2
      AND FIGURE='INTENT TO DISENROLL'
      AND REGION = "&VAL";
    TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV2Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV2
      AND FIGURE='INTENT TO DISENROLL'
      AND COL2 NE .;
    TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV2Q.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV3
      AND FIGURE='INTENT TO DISENROLL'
      AND REGION = "&VAL";
    TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV3Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
    WHERE BENTYPE = &PREV3
      AND FIGURE='INTENT TO DISENROLL'
      AND COL2 NE .;
    TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV3Q.C(DROP=COUNT PERCENT);
RUN;

DATA COL2(DROP=COL3 COL4)
     COL3(DROP=COL2 COL4)
     COL4(DROP=COL2 COL3);
    SET FIG4Q1 FIG4Q1C FIG4Q4 FIG4Q4C FIG4Q3 FIG4Q3C FIG4Q2 FIG4Q2C;

    IF COL2>=0 THEN OUTPUT COL2;
    IF COL3>=0 THEN OUTPUT COL3;
    IF COL4>=-1 THEN OUTPUT COL4;
RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;

DATA FIG4;
    MERGE COL2 COL3 COL4;
    BY ROW;
RUN;

TITLE2 'FIGURE 4';
PROC PRINT;
RUN;

***************************************************************************
* DDE LINK (EXCEL file has to be open )
```

```
*****************************************************************************;
FILENAME TBL DDE "EXCEL|DISENROLL!R19C2:R22C4";

DATA _NULL_;
   SET FIG4;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3 '09'X COL4;
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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=FIG5&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV1,
          OUTDATA=FIG5&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV2,
          OUTDATA=FIG5&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV3,
          OUTDATA=FIG5&PREV3Q);

%MACRO COMPSCORE (QUARTER=,    /*Data is processed for current quarter and each of 3 previous
quarters*/
                  FIGNUM=     /*Use macro for figures 5, 6, and 7
*/
                  );
DATA FIG&FIGNUM.Q&QUARTER FIGB&QUARTER(KEEP=SCORE BENEFIT SIG);
   SET FIG&FIGNUM.Q&QUARTER;
   IF REGION = 'Benchmark' THEN OUTPUT FIGB&QUARTER;
      ELSE OUTPUT FIG&FIGNUM.Q&QUARTER;
RUN;
PROC SORT DATA=FIG&FIGNUM.Q&QUARTER;
   BY BENEFIT;
RUN;
PROC SORT DATA=FIGB&QUARTER;
   BY BENEFIT;
RUN;
DATA FIG&FIGNUM.Q&QUARTER(DROP=RSCORE);
   MERGE FIGB&QUARTER(RENAME=(SCORE=RSCORE))
         FIG&FIGNUM.Q&QUARTER;
```

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```
      BY BENEFIT;
      SCORE=SCORE-RSCORE;
RUN;
%MEND COMPSCORE;


%COMPSCORE (QUARTER=1,
            FIGNUM=5);
%COMPSCORE (QUARTER=2,
            FIGNUM=5);
%COMPSCORE (QUARTER=3,
            FIGNUM=5);
%COMPSCORE (QUARTER=4,
            FIGNUM=5);

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
     COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
     COL4(KEEP=ROW SCORE1 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 FIG5Q4 FIG5Q3 FIG5Q2 FIG5Q1;
   BY BENEFIT;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
      BSCORE=SCORE;
      ROW = 18;
      SCORE1 = SCORE;
   END;
   ELSE IF TIMEPD = &PREV3 THEN DO;
      ROW = 18;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &PREV2 THEN DO;
      ROW = 19;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &PREV1 THEN DO;
      ROW = 20;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &CURRNT 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;

DATA FIG5;
   MERGE COL2 COL3 COL4 COL5 COL6 COL7;
   BY ROW;
RUN;

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!R23C2:R26C4";

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';
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=('Benchmark'),
          REGCAT=('Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=('Composite'),
          TIMEPD=&CURRNT,
          OUTDATA=FIG6&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=('Composite'),
          TIMEPD=&PREV1,
          OUTDATA=FIG6&PREV1Q);
%GETDATA (DATASET=&CURRENT,
```

```
              MAJGRP='Prime Enrollees',
              REGION=("&VAL",'Benchmark'),
              REGCAT=("&VAL",'Benchmark'),
              BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
              BENTYPE=('Composite'),
              TIMEPD=&PREV2,
              OUTDATA=FIG6&PREV2Q);
%GETDATA (DATASET=&CURRENT,
              MAJGRP='Prime Enrollees',
              REGION=("&VAL",'Benchmark'),
              REGCAT=("&VAL",'Benchmark'),
              BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
              BENTYPE=('Composite'),
              TIMEPD=&PREV3,
              OUTDATA=FIG6&PREV3Q);


%COMPSCORE (QUARTER=1,
              FIGNUM=6);
%COMPSCORE (QUARTER=2,
              FIGNUM=6);
%COMPSCORE (QUARTER=3,
              FIGNUM=6);
%COMPSCORE (QUARTER=4,
              FIGNUM=6);


DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
        COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
        COL4(KEEP=ROW SCORE1 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 FIG6Q4 FIG6Q3 FIG6Q2 FIG6Q1;
    BY BENEFIT;
    RETAIN BSCORE;
    IF REGION = 'Benchmark' THEN DO;
        BSCORE=SCORE;
        ROW = 18;
        SCORE1 = SCORE;
    END;
    ELSE IF TIMEPD = &PREV3 THEN DO;
        ROW = 18;
        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
            ELSE SCORE1=SCORE;
    END;
    ELSE IF TIMEPD = &PREV2 THEN DO;
        ROW = 19;
        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
            ELSE SCORE1=SCORE;
    END;
    ELSE IF TIMEPD = &PREV1 THEN DO;
        ROW = 20;
        SCORE=BSCORE+SCORE;
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
            ELSE SCORE1=SCORE;
    END;
    ELSE IF TIMEPD = &CURRNT THEN DO;
        ROW = 21;
        SCORE=BSCORE+SCORE;
        SCORE1 = SCORE;
    END;

    IF (BENEFIT = 'Courteous and Helpful Office Staff' AND REGION NE 'Benchmark') THEN OUTPUT COL2
COL6;
    IF (BENEFIT = 'Courteous and Helpful Office Staff' AND REGION = 'Benchmark') THEN OUTPUT COL3;
    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=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;

DATA FIG6;
   MERGE COL2 COL3 COL4 COL5 COL6 COL7;
   BY ROW;
RUN;

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 COL2;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C9:R18C9";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL3;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C10:R21C10";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL4;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C11:R18C11";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL5;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R23C8:R26C10";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL6 '09'X '09'X 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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Customer Service','Claims Processing'),
```

```
                   BENTYPE=('Composite'),
                   TIMEPD=&CURRNT,
                   OUTDATA=FIG7&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
               MAJGRP='Prime Enrollees',
               REGION=("&VAL",'Benchmark'),
               REGCAT=("&VAL",'Benchmark'),
               BENEFIT=('Customer Service','Claims Processing'),
               BENTYPE=('Composite'),
               TIMEPD=&PREV1,
               OUTDATA=FIG7&PREV1Q);
%GETDATA (DATASET=&CURRENT,
               MAJGRP='Prime Enrollees',
               REGION=("&VAL",'Benchmark'),
               REGCAT=("&VAL",'Benchmark'),
               BENEFIT=('Customer Service','Claims Processing'),
               BENTYPE=('Composite'),
               TIMEPD=&PREV2,
               OUTDATA=FIG7&PREV2Q);
%GETDATA (DATASET=&CURRENT,
               MAJGRP='Prime Enrollees',
               REGION=("&VAL",'Benchmark'),
               REGCAT=("&VAL",'Benchmark'),
               BENEFIT=('Customer Service','Claims Processing'),
               BENTYPE=('Composite'),
               TIMEPD=&PREV3,
               OUTDATA=FIG7&PREV3Q);


%COMPSCORE (QUARTER=1,
                 FIGNUM=7);
%COMPSCORE (QUARTER=2,
                 FIGNUM=7);
%COMPSCORE (QUARTER=3,
                 FIGNUM=7);
%COMPSCORE (QUARTER=4,
                 FIGNUM=7);

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
     COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
     COL4(KEEP=ROW SCORE1 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 FIG7Q4 FIG7Q3 FIG7Q2 FIG7Q1;
   BY BENEFIT;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
      BSCORE=SCORE;
      ROW = 18;
      SCORE1 = SCORE;
   END;
   ELSE IF TIMEPD = &PREV3 THEN DO;
      ROW = 18;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &PREV2 THEN DO;
      ROW = 19;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &PREV1 THEN DO;
      ROW = 20;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF TIMEPD = &CURRNT 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;

   DATA FIG7;
      MERGE COL2 COL3 COL4 COL5 COL6 COL7;
      BY ROW;
   RUN;

   PROC PRINT;
   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;
      PUT COL2;
   RUN;

   FILENAME TBL DDE "EXCEL|COMPOSITES!R18C15:R18C15";

   DATA _NULL_;
      SET FIG7;
      FILE TBL NOTAB LRECL=200;
      PUT COL3;
   RUN;

   FILENAME TBL DDE "EXCEL|COMPOSITES!R18C16:R21C16";

   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;
      PUT COL5;
   RUN;

   FILENAME TBL DDE "EXCEL|COMPOSITES!R23C14:R26C16";

   DATA _NULL_;
      SET FIG7;
      FILE TBL NOTAB LRECL=200;
      PUT COL6 '09'X '09'X COL7;
   RUN;

   ********************************************************************************
   * TABLE 1: Preventive Care
   * CHANGED MAJGRP TO 'Prime Enrollees' (from 'All Users') in Q2_2002
   *******************************************************************************;
   PROC FREQ NOPRINT DATA=&CURRENT;
      WHERE MAJGRP IN ('Prime Enrollees','Benchmark')
```

```
       AND REGION = "&VAL"
       AND REGCAT = "&VAL"
       AND BENEFIT = 'Preventive Care'
       AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing')
       AND TIMEPD = &CURRNT;
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/ OUT=TAB1_&CURRNTQ(DROP=COUNT
PERCENT);
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*N_OBS/ OUT=TAB2_&CURRNTQ(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
    WHERE MAJGRP = 'Prime Enrollees'
       AND REGION = "&VAL"
       AND REGCAT = "&VAL"
       AND BENEFIT = 'Preventive Care'
       AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing')
       AND TIMEPD = &PREV1;
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV1Q(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
    WHERE MAJGRP = 'Prime Enrollees'
       AND REGION = "&VAL"
       AND REGCAT = "&VAL"
       AND BENEFIT = 'Preventive Care'
       AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing')
       AND TIMEPD = &PREV2;
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV2Q(DROP=COUNT
PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&CURRENT;
    WHERE MAJGRP = 'Prime Enrollees'
       AND REGION = "&VAL"
       AND REGCAT = "&VAL"
       AND BENEFIT = 'Preventive Care'
       AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing')
       AND TIMEPD = &PREV3;
    TABLES MAJGRP*REGION*BENEFIT*BENTYPE*TIMEPD*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV3Q(DROP=COUNT
PERCENT);
RUN;
DATA TAB1&CURRNTQ;
    SET TAB1_&CURRNTQ;
    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='Cholesterol Testing' THEN COL6=SCORE;
    END;
       ELSE DO;
       ROW = 40;
       IF BENTYPE='Mammography' THEN DO;
          COL2=SCORE;
          COL7=SIG;
       END;
       ELSE IF BENTYPE='Pap Smear' THEN DO;
          COL3=SCORE;
          COL8=SIG;
       END;
       ELSE IF BENTYPE='Hypertension' THEN DO;
          COL4=SCORE;
          COL9=SIG;
       END;
       ELSE IF BENTYPE='Prenatal Care' THEN DO;
          COL5=SCORE;
          COL10=SIG;
       END;
       ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
```

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```
                COL6=SCORE;
                COL11=SIG;
            END;
            END;
        PROC SORT;
        BY ROW;
    RUN;
    DATA TAB2&CURRNTQ;
        SET TAB2_&CURRNTQ;
        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='Cholesterol Testing' THEN COL6=N_OBS;
        PROC SORT;
        BY ROW;
    RUN;
    DATA TAB1&PREV1Q;
        SET TAB1_&PREV1Q;
        ROW=39;
            IF BENTYPE='Mammography' THEN DO;
                COL2=SCORE;
                COL7=SIG;
            END;
            ELSE IF BENTYPE='Pap Smear' THEN DO;
                COL3=SCORE;
                COL8=SIG;
            END;
            ELSE IF BENTYPE='Hypertension' THEN DO;
                COL4=SCORE;
                COL9=SIG;
            END;
            ELSE IF BENTYPE='Prenatal Care' THEN DO;
                COL5=SCORE;
                COL10=SIG;
            END;
            ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
                COL6=SCORE;
                COL11=SIG;
            END;
        PROC SORT;
        BY ROW;
    RUN;
    DATA TAB1&PREV2Q;
        SET TAB1_&PREV2Q;
        ROW=38;
            IF BENTYPE='Mammography' THEN DO;
                COL2=SCORE;
                COL7=SIG;
            END;
            ELSE IF BENTYPE='Pap Smear' THEN DO;
                COL3=SCORE;
                COL8=SIG;
            END;
            ELSE IF BENTYPE='Hypertension' THEN DO;
                COL4=SCORE;
                COL9=SIG;
            END;
            ELSE IF BENTYPE='Prenatal Care' THEN DO;
                COL5=SCORE;
                COL10=SIG;
            END;
            ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
                COL6=SCORE;
                COL11=SIG;
            END;
        PROC SORT;
        BY ROW;
    RUN;
    DATA TAB1&PREV3Q;
        SET TAB1_&PREV3Q;
```

```
    ROW=37;
        IF BENTYPE='Mammography' THEN DO;
            COL2=SCORE;
            COL7=SIG;
        END;
        ELSE IF BENTYPE='Pap Smear' THEN DO;
            COL3=SCORE;
            COL8=SIG;
        END;
        ELSE IF BENTYPE='Hypertension' THEN DO;
            COL4=SCORE;
            COL9=SIG;
        END;
        ELSE IF BENTYPE='Prenatal Care' THEN DO;
            COL5=SCORE;
            COL10=SIG;
        END;
        ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
            COL6=SCORE;
            COL11=SIG;
        END;
    PROC SORT;
    BY ROW;
RUN;

DATA TAB1;
    MERGE TAB1&PREV3Q TAB1&PREV2Q TAB1&PREV1Q TAB1&CURRNTQ TAB2&CURRNTQ;
    BY ROW;
RUN;
DATA COL2(DROP=COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL3(DROP=COL2 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL4(DROP=COL2 COL3 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL5(DROP=COL2 COL3 COL4 COL6 COL7 COL8 COL9 COL10 COL11)
     COL6(DROP=COL2 COL3 COL4 COL5 COL7 COL8 COL9 COL10 COL11)
     COL7(DROP=COL2 COL3 COL4 COL5 COL6 COL8 COL9 COL10 COL11)
     COL8(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL9 COL10 COL11)
     COL9(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL10 COL11)
     COL10(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL11)
     COL11(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10);
    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;
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;
DATA TABLE1;
    MERGE COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11;
    BY ROW;
RUN;
TITLE2 'TABLE 1';
PROC PRINT;
RUN;

*****************************************************************************
* DDE LINK (EXCEL file has to be open )
```

```
   ****************************************************************************;
   FILENAME TBL DDE "EXCEL|TABLES!R3C10:R8C19";

   DATA _NULL_;
      SET TABLE1;
      FILE TBL NOTAB LRECL=200;
      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;
   RUN;

   FILENAME CMDS DDE "EXCEL|SYSTEM";
   DATA _NULL_;
      FILE CMDS;
      PUT '[SAVE]';
      PUT '[CLOSE]';
   RUN;

   %MEND RUNCW;

   %RUNCW(AREA=Region 1,
         FOLDER=Region1/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 2,
         FOLDER=Region2/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 3,
         FOLDER=Region3/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 4,
         FOLDER=Region4/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 5,
         FOLDER=Region5/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 6,
         FOLDER=Region6/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 7/8,
         FOLDER=Region78/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 9,
         FOLDER=Region9/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 10,
         FOLDER=Region10/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 11,
         FOLDER=Region11/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Region 12,
         FOLDER=Region12/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Europe,
         FOLDER=Europe/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Asia,
         FOLDER=Asia/,
         NAME=template.xls,
         CURRENT=CURNTR.CONUS_Q);
   %RUNCW(AREA=Latin America,
```

```
        FOLDER=LatinAmerica/,
        NAME=template.xls,
        CURRENT=CURNTR.CONUS_Q);
%RUNCW(AREA=Alaska,
        FOLDER=Alaska/,
        NAME=template.xls,
        CURRENT=CURNTR.CONUS_Q);
```

12. Q4_2003\PROGRAMS\ConsumerWatch\CONSUMERWATCH-S.SAS - Run service affiliation TRICARE Consumer Watch reports.

```
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMTERR;
*******************************************************************************
* PROJECT: 8860-420
* PROGRAM: CONSUMERWATCH-S.SAS
* PURPOSE: To produce numbers that go into data sheet in Excel to produce graphs
*          for service affiliation 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: 11/14/03 FOR QUARTER 4 2003 BY NATALIE JUSTH
* INPUT  : DATA FROM CONSUMER REPORTS
*          (2003-Q4) Q4_2003\CONUS_Q.SD2
*          (2003-Q3) Q3_2003\CONUS_Q.SD2
*          (2003-Q2) Q2_2003\CONUS_Q.SD2
*          (2003-Q1) Q1_2003\CONUS_Q.SD2
*          INTENT TO DISENROLL
*          (ALL) DISENRL.SD2
* OUTPUT : INTO EXCEL SPREADSHEET
*******************************************************************************;

OPTIONS NOXWAIT MPRINT;

/***************************/
/* UPDATE SERVICE LIBNAMES  */
/***************************/

/* LIBNAMES for Service Affiliation Consumer Watch */
LIBNAME CURNTS 'Q4_2003';
LIBNAME PRV1S  'Q3_2003';
LIBNAME PRV2S  'Q2_2003';
LIBNAME PRV3S  'Q1_2003';

LIBNAME IN     '.';

/*********************************************/
/* TIME PERIOD MACROS: UPDATE EACH QUARTER */
/*********************************************/

%LET CURRNT  = 'October, 2002 to September, 2003';
%LET CURRNTQ = Q4;
%LET PREV1   = 'July, 2002 to June, 2003';
%LET PREV1Q  = Q3;
%LET PREV2   = 'April, 2002 to March, 2003';
%LET PREV2Q  = Q2;
%LET PREV3   = 'January, 2002 to December, 2002';
%LET PREV3Q  = Q1;

%MACRO RUNCW (AREA=,          /* Service affiliation
*/
              FOLDER=,        /* Folder containing excel template
*/
              NAME=,          /* Name of Excel file for each service
*/
              CURRENT=,       /* Libname and dataset for the current quarter
*/
              PREVIOUS1=,     /* Libname and dataset for the previous quarter
*/
              PREVIOUS2=,     /* Libname and dataset for the 2nd quarter prior to current quarter
*/
              PREVIOUS3=      /* Libname and dataset for the 3rd quarter prior to current quarter
*/
```

```
                );

/* Change parameter for each service */
%LET VAL = &AREA.;

X "START &FOLDER.&NAME.";

DATA _NULL_;
   X=SLEEP(8);
RUN;

TITLE "8860-420 DOD CONSUMER WATCH &CURRNTQ CY 2003";
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 */
                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;
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*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
*/
                 QUARTER=     /* Data is processed for current quarter and each of 3 previous
quarters */
                 );
DATA FIG&FIGURE&QUARTER FIGB&QUARTER(KEEP=SCORE);
   SET FIG&FIGURE&QUARTER;
   IF REGION='Benchmark' THEN OUTPUT FIGB&QUARTER;
      ELSE OUTPUT FIG&FIGURE&QUARTER;
RUN;
DATA FIG&FIGURE&QUARTER(DROP=RSCORE);
   MERGE FIGB&QUARTER(RENAME=(SCORE=RSCORE))
         FIG&FIGURE&QUARTER;
   SCORE=SCORE-RSCORE;
RUN;
%MEND NEWSCORE;

%MACRO COMBDATA (FIGURE=   /* Figure number in consumer watch reports */
                 );
DATA FIG&FIGURE(DROP=BSCORE);
   SET BENCH FIG&FIGURE.Q1 FIG&FIGURE.Q4 FIG&FIGURE.Q3 FIG&FIGURE.Q2;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
      ROW = 3;
      BSCORE=SCORE;
   END;
   ELSE IF BENTYPE = &PREV3 THEN DO;
      ROW = 4;
      SCORE=SCORE+BSCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
   END;
   ELSE IF BENTYPE = &PREV2 THEN DO;
      ROW = 5;
      SCORE=SCORE+BSCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
   END;
   ELSE IF BENTYPE = &PREV1 THEN DO;
      ROW = 6;
      SCORE=SCORE+BSCORE;
```

```
        IF (N_OBS<30 OR N_WGT<200) THEN SCORE=.;
    END;
    ELSE IF BENTYPE = &CURRNT THEN DO;
        ROW=7;
        SCORE=SCORE+BSCORE;
    END;
    COL2 = SCORE / 100;
    COL3 = SIG;
RUN;
PROC SORT;
    BY ROW;
RUN;
%MEND COMBDATA;

*********************************************************************************
* 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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG1&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=&PREV1,
          OUTDATA=FIG1&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=&PREV2,
          OUTDATA=FIG1&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Care'),
          BENTYPE=&PREV3,
          OUTDATA=FIG1&PREV3Q);

%NEWSCORE (FIGURE=1,
           QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=1,
           QUARTER=&PREV3Q);

%COMBDATA (FIGURE=1);

PROC PRINT;
RUN;

*********************************************************************************
* DDE LINK
*********************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C2:R22C3";
```

```
DATA _NULL_;
   SET FIG1;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Plan'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG2&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Plan'),
          BENTYPE=&PREV1,
          OUTDATA=FIG2&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Plan'),
          BENTYPE=&PREV2,
          OUTDATA=FIG2&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Health Plan'),
          BENTYPE=&PREV3,
          OUTDATA=FIG2&PREV3Q);

%NEWSCORE (FIGURE=2,
           QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=2,
           QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=2,
           QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=2,
           QUARTER=&PREV3Q);

%COMBDATA (FIGURE=2);

PROC PRINT;
RUN;

********************************************************************************
* DDE LINK (EXCEL file has to be open )
********************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C6:R22C7";

DATA _NULL_;
   SET FIG2;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
RUN;

********************************************************************************
* FIGURE 3: Personal Provider Rating
```

```
******************************************************************************;
TITLE2 'Figure 3: Personal Provider Rating';
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=('Benchmark'),
          REGCAT=('Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG3&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=&PREV1,
          OUTDATA=FIG3&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=&PREV2,
          OUTDATA=FIG3&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Primary Care Manager'),
          BENTYPE=&PREV3,
          OUTDATA=FIG3&PREV3Q);

%NEWSCORE (FIGURE=3,
           QUARTER=&CURRNTQ);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV1Q);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV2Q);
%NEWSCORE (FIGURE=3,
           QUARTER=&PREV3Q);

%COMBDATA (FIGURE=3);

PROC PRINT;
RUN;


******************************************************************************
* DDE LINK (EXCEL file has to be open )
******************************************************************************;
FILENAME TBL DDE "EXCEL|RATINGS!R18C10:R22C11";

DATA _NULL_;
   SET FIG3;
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3;
RUN;

******************************************************************************
* FIGURE 4: Intent to Disenroll
******************************************************************************;
TITLE2 'Figure 4: Intent to Disenroll';
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &CURRNT
     AND FIGURE='INTENT TO DISENROLL'
     AND REGION = "&VAL";
   TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&CURRNTQ(DROP=COUNT PERCENT);
RUN;
```

```
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &CURRNT
     AND FIGURE='INTENT TO DISENROLL'
     AND COL2 NE .;
   TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&CURRNTQ.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV1
     AND FIGURE='INTENT TO DISENROLL'
     AND REGION = "&VAL";
   TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV1Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV1
     AND FIGURE='INTENT TO DISENROLL'
     AND COL2 NE .;
   TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV1Q.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV2
     AND FIGURE='INTENT TO DISENROLL'
     AND REGION = "&VAL";
   TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV2Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV2
     AND FIGURE='INTENT TO DISENROLL'
     AND COL2 NE .;
   TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV2Q.C(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV3
     AND FIGURE='INTENT TO DISENROLL'
     AND REGION = "&VAL";
   TABLES BENTYPE*REGION*FIGURE*COL3*COL4*ROW/ OUT=FIG4&PREV3Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=IN.DISENRL;
   WHERE BENTYPE = &PREV3
     AND FIGURE='INTENT TO DISENROLL'
     AND COL2 NE .;
   TABLES BENTYPE*REGION*FIGURE*COL2*ROW/ OUT=FIG4&PREV3Q.C(DROP=COUNT PERCENT);
RUN;


DATA COL2(DROP=COL3 COL4)
     COL3(DROP=COL2 COL4)
     COL4(DROP=COL2 COL3);
   SET FIG4Q1 FIG4Q1C FIG4Q4 FIG4Q4C FIG4Q3 FIG4Q3C FIG4Q2 FIG4Q2C;

   IF COL2>=0 THEN OUTPUT COL2;
   IF COL3>=0 THEN OUTPUT COL3;
   IF COL4>=-1 THEN OUTPUT COL4;
RUN;

PROC SORT DATA=COL2; BY ROW; RUN;
PROC SORT DATA=COL3; BY ROW; RUN;
PROC SORT DATA=COL4; BY ROW; RUN;

DATA FIG4;
   MERGE COL2 COL3 COL4;
   BY ROW;
RUN;

TITLE2 'FIGURE 4';
PROC PRINT;
RUN;

*****************************************************************************
* DDE LINK (EXCEL file has to be open )
*****************************************************************************;
FILENAME TBL DDE "EXCEL|DISENROLL!R19C2:R22C4";

DATA _NULL_;
   SET FIG4;
```

```
   FILE TBL NOTAB LRECL=200;
   PUT COL2 '09'X COL3 '09'X COL4;
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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG5&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=&PREV1,
          OUTDATA=FIG5&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=&PREV2,
          OUTDATA=FIG5&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Getting Needed Care','Getting Care Quickly'),
          BENTYPE=&PREV3,
          OUTDATA=FIG5&PREV3Q);

%MACRO COMPSCORE (QUARTER=,    /*Data is processed for current quarter and each of 3 previous
quarters*/
                  FIGNUM=      /*Use macro for figures 5, 6, and 7
*/
                  );
DATA FIG&FIGNUM.Q&QUARTER FIGB&QUARTER(KEEP=SCORE BENEFIT SIG);
   SET FIG&FIGNUM.Q&QUARTER;
   IF REGION = 'Benchmark' THEN OUTPUT FIGB&QUARTER;
      ELSE OUTPUT FIG&FIGNUM.Q&QUARTER;
RUN;
PROC SORT DATA=FIG&FIGNUM.Q&QUARTER;
   BY BENEFIT;
RUN;
PROC SORT DATA=FIGB&QUARTER;
   BY BENEFIT;
RUN;
DATA FIG&FIGNUM.Q&QUARTER(DROP=RSCORE);
   MERGE FIGB&QUARTER(RENAME=(SCORE=RSCORE))
         FIG&FIGNUM.Q&QUARTER;
   BY BENEFIT;
   SCORE=SCORE-RSCORE;
RUN;
%MEND COMPSCORE;

%COMPSCORE (QUARTER=1,
            FIGNUM=5);
%COMPSCORE (QUARTER=2,
            FIGNUM=5);
%COMPSCORE (QUARTER=3,
```

```
            FIGNUM=5);
%COMPSCORE (QUARTER=4,
            FIGNUM=5);


DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
     COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
     COL4(KEEP=ROW SCORE1 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 FIG5Q4 FIG5Q3 FIG5Q2 FIG5Q1;
   BY BENEFIT;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
     BSCORE=SCORE;
     ROW = 18;
     SCORE1 = SCORE;
   END;
   ELSE IF BENTYPE = &PREV3 THEN DO;
     ROW = 18;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV2 THEN DO;
     ROW = 19;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV1 THEN DO;
     ROW = 20;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &CURRNT 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;

DATA FIG5;
   MERGE COL2 COL3 COL4 COL5 COL6 COL7;
   BY ROW;
RUN;

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!R23C2:R26C4";

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';
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=('Benchmark'),
          REGCAT=('Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG6&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=&PREV1,
          OUTDATA=FIG6&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=&PREV2,
          OUTDATA=FIG6&PREV2Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Courteous and Helpful Office Staff','How Well Doctors Communicate'),
          BENTYPE=&PREV3,
          OUTDATA=FIG6&PREV3Q);
```

```
%COMPSCORE (QUARTER=1,
            FIGNUM=6);
%COMPSCORE (QUARTER=2,
            FIGNUM=6);
%COMPSCORE (QUARTER=3,
            FIGNUM=6);
%COMPSCORE (QUARTER=4,
            FIGNUM=6);


DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
     COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
     COL4(KEEP=ROW SCORE1 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 FIG6Q4 FIG6Q3 FIG6Q2 FIG6Q1;
   BY BENEFIT;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
     BSCORE=SCORE;
     ROW = 18;
     SCORE1 = SCORE;
   END;
   ELSE IF BENTYPE = &PREV3 THEN DO;
      ROW = 18;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV2 THEN DO;
      ROW = 19;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV1 THEN DO;
      ROW = 20;
      SCORE=BSCORE+SCORE;
      IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
         ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &CURRNT THEN DO;
      ROW = 21;
      SCORE=BSCORE+SCORE;
      SCORE1 = SCORE;
   END;

   IF (BENEFIT = 'Courteous and Helpful Office Staff' AND REGION NE 'Benchmark') THEN OUTPUT COL2
COL6;
   IF (BENEFIT = 'Courteous and Helpful Office Staff' AND REGION = 'Benchmark') THEN OUTPUT COL3;
   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=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;

DATA FIG6;
   MERGE COL2 COL3 COL4 COL5 COL6 COL7;
   BY ROW;
RUN;

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 COL2;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C9:R18C9";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL3;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C10:R21C10";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL4;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C11:R18C11";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL5;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R23C8:R26C10";

DATA _NULL_;
   SET FIG6;
   FILE TBL NOTAB LRECL=200;
   PUT COL6 '09'X '09'X 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=&CURRNT,
          OUTDATA=BENCH);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Customer Service','Claims Processing'),
          BENTYPE=&CURRNT,
          OUTDATA=FIG7&CURRNTQ);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Customer Service','Claims Processing'),
          BENTYPE=&PREV1,
          OUTDATA=FIG7&PREV1Q);
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Customer Service','Claims Processing'),
          BENTYPE=&PREV2,
          OUTDATA=FIG7&PREV2Q);
```

```
%GETDATA (DATASET=&CURRENT,
          MAJGRP='Prime Enrollees',
          REGION=("&VAL",'Benchmark'),
          REGCAT=("&VAL",'Benchmark'),
          BENEFIT=('Customer Service','Claims Processing'),
          BENTYPE=&PREV3,
          OUTDATA=FIG7&PREV3Q);


%COMPSCORE (QUARTER=1,
            FIGNUM=7);
%COMPSCORE (QUARTER=2,
            FIGNUM=7);
%COMPSCORE (QUARTER=3,
            FIGNUM=7);
%COMPSCORE (QUARTER=4,
            FIGNUM=7);

DATA COL2(DROP=SCORE RENAME=(SCORE1=COL2))
     COL3(KEEP=ROW SCORE1 RENAME=(SCORE1=COL3))
     COL4(KEEP=ROW SCORE1 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 FIG7Q4 FIG7Q3 FIG7Q2 FIG7Q1;
   BY BENEFIT;
   RETAIN BSCORE;
   IF REGION = 'Benchmark' THEN DO;
     BSCORE=SCORE;
     ROW = 18;
     SCORE1 = SCORE;
   END;
   ELSE IF BENTYPE = &PREV3 THEN DO;
     ROW = 18;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV2 THEN DO;
     ROW = 19;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &PREV1 THEN DO;
     ROW = 20;
     SCORE=BSCORE+SCORE;
     IF (N_OBS<30 OR N_WGT<200) THEN SCORE1=.;
        ELSE SCORE1=SCORE;
   END;
   ELSE IF BENTYPE = &CURRNT 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;

DATA FIG7;
   MERGE COL2 COL3 COL4 COL5 COL6 COL7;
   BY ROW;
RUN;
```

```
PROC PRINT;
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;
   PUT COL2;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C15:R18C15";

DATA _NULL_;
   SET FIG7;
   FILE TBL NOTAB LRECL=200;
   PUT COL3;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R18C16:R21C16";

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;
   PUT COL5;
RUN;

FILENAME TBL DDE "EXCEL|COMPOSITES!R23C14:R26C16";

DATA _NULL_;
   SET FIG7;
   FILE TBL NOTAB LRECL=200;
   PUT COL6 '09'X '09'X COL7;
RUN;

*****************************************************************************
* TABLE 1: Preventive Care
* CHANGED MAJGRP TO 'Prime Enrollees' (from 'All Users') in Q2_2002
*****************************************************************************;
PROC FREQ NOPRINT DATA=&CURRENT;
   WHERE MAJGRP IN ('Prime Enrollees','Benchmark')
     AND REGION = "&VAL"
     AND REGCAT = "&VAL"
     AND BENEFIT = 'Preventive Care'
     AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing');
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB1_&CURRNTQ(DROP=COUNT PERCENT);
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*SEMEAN*N_OBS/ OUT=TAB2_&CURRNTQ(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&PREVIOUS1;
   WHERE MAJGRP = 'Prime Enrollees'
     AND REGION = "&VAL"
     AND REGCAT = "&VAL"
     AND BENEFIT = 'Preventive Care'
     AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing');
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV1Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&PREVIOUS2;
   WHERE MAJGRP = 'Prime Enrollees'
     AND REGION = "&VAL"
```

```
     AND REGCAT = "&VAL"
     AND BENEFIT = 'Preventive Care'
     AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing');
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV2Q(DROP=COUNT PERCENT);
RUN;
PROC FREQ NOPRINT DATA=&PREVIOUS3;
   WHERE MAJGRP = 'Prime Enrollees'
     AND REGION = "&VAL"
     AND REGCAT = "&VAL"
     AND BENEFIT = 'Preventive Care'
     AND BENTYPE IN ('Mammography', 'Pap Smear', 'Hypertension', 'Prenatal Care', 'Cholesterol
Testing');
   TABLES MAJGRP*REGION*BENEFIT*BENTYPE*SEMEAN*SCORE*SIG/ OUT=TAB1_&PREV3Q(DROP=COUNT PERCENT);
RUN;
DATA TAB1&CURRNTQ;
   SET TAB1_&CURRNTQ;
   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='Cholesterol Testing' THEN COL6=SCORE;
   END;
      ELSE DO;
      ROW = 40;
      IF BENTYPE='Mammography' THEN DO;
         COL2=SCORE;
         COL7=SIG;
      END;
      ELSE IF BENTYPE='Pap Smear' THEN DO;
         COL3=SCORE;
         COL8=SIG;
      END;
      ELSE IF BENTYPE='Hypertension' THEN DO;
         COL4=SCORE;
         COL9=SIG;
      END;
      ELSE IF BENTYPE='Prenatal Care' THEN DO;
         COL5=SCORE;
         COL10=SIG;
      END;
      ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
         COL6=SCORE;
         COL11=SIG;
      END;
      END;
   PROC SORT;
   BY ROW;
RUN;
DATA TAB2&CURRNTQ;
   SET TAB2_&CURRNTQ;
   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='Cholesterol Testing' THEN COL6=N_OBS;
   PROC SORT;
   BY ROW;
RUN;
DATA TAB1&PREV1Q;
   SET TAB1_&PREV1Q;
   ROW=39;
      IF BENTYPE='Mammography' THEN DO;
         COL2=SCORE;
         COL7=SIG;
      END;
      ELSE IF BENTYPE='Pap Smear' THEN DO;
         COL3=SCORE;
         COL8=SIG;
```

```
        END;
        ELSE IF BENTYPE='Hypertension' THEN DO;
            COL4=SCORE;
            COL9=SIG;
        END;
        ELSE IF BENTYPE='Prenatal Care' THEN DO;
            COL5=SCORE;
            COL10=SIG;
        END;
        ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
            COL6=SCORE;
            COL11=SIG;
        END;
    PROC SORT;
    BY ROW;
RUN;
DATA TAB1&PREV2Q;
    SET TAB1_&PREV2Q;
    ROW=38;
        IF BENTYPE='Mammography' THEN DO;
            COL2=SCORE;
            COL7=SIG;
        END;
        ELSE IF BENTYPE='Pap Smear' THEN DO;
            COL3=SCORE;
            COL8=SIG;
        END;
        ELSE IF BENTYPE='Hypertension' THEN DO;
            COL4=SCORE;
            COL9=SIG;
        END;
        ELSE IF BENTYPE='Prenatal Care' THEN DO;
            COL5=SCORE;
            COL10=SIG;
        END;
        ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
            COL6=SCORE;
            COL11=SIG;
        END;
    PROC SORT;
    BY ROW;
RUN;
DATA TAB1&PREV3Q;
    SET TAB1_&PREV3Q;
    ROW=37;
        IF BENTYPE='Mammography' THEN DO;
            COL2=SCORE;
            COL7=SIG;
        END;
        ELSE IF BENTYPE='Pap Smear' THEN DO;
            COL3=SCORE;
            COL8=SIG;
        END;
        ELSE IF BENTYPE='Hypertension' THEN DO;
            COL4=SCORE;
            COL9=SIG;
        END;
        ELSE IF BENTYPE='Prenatal Care' THEN DO;
            COL5=SCORE;
            COL10=SIG;
        END;
        ELSE IF BENTYPE='Cholesterol Testing' THEN DO;
            COL6=SCORE;
            COL11=SIG;
        END;
    PROC SORT;
    BY ROW;
RUN;

DATA TAB1;
    MERGE TAB1&PREV3Q TAB1&PREV2Q TAB1&PREV1Q TAB1&CURRNTQ TAB2&CURRNTQ;
    BY ROW;
RUN;
```

```
DATA COL2(DROP=COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL3(DROP=COL2 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL4(DROP=COL2 COL3 COL5 COL6 COL7 COL8 COL9 COL10 COL11)
     COL5(DROP=COL2 COL3 COL4 COL6 COL7 COL8 COL9 COL10 COL11)
     COL6(DROP=COL2 COL3 COL4 COL5 COL7 COL8 COL9 COL10 COL11)
     COL7(DROP=COL2 COL3 COL4 COL5 COL6 COL8 COL9 COL10 COL11)
     COL8(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL9 COL10 COL11)
     COL9(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL10 COL11)
     COL10(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL11)
     COL11(DROP=COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10);
  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;
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;
DATA TABLE1;
  MERGE COL2 COL3 COL4 COL5 COL6 COL7 COL8 COL9 COL10 COL11;
  BY ROW;
RUN;
TITLE2 'TABLE 1';
PROC PRINT;
RUN;

*******************************************************************************
* DDE LINK (EXCEL file has to be open )
*******************************************************************************;
FILENAME TBL DDE "EXCEL|TABLES!R3C10:R8C19";

DATA _NULL_;
  SET TABLE1;
  FILE TBL NOTAB LRECL=200;
  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;
RUN;

FILENAME CMDS DDE "EXCEL|SYSTEM";
DATA _NULL_;
  FILE CMDS;
  PUT '[SAVE]';
  PUT '[CLOSE]';
RUN;

%MEND RUNCW;

%RUNCW(AREA=Navy,
       FOLDER=Navy/,
       NAME=template.xls,
       CURRENT=CURNTS.CONUS_Q,
       PREVIOUS1=PRV1S.CONUS_Q,
       PREVIOUS2=PRV2S.CONUS_Q,
       PREVIOUS3=PRV3S.CONUS_Q);
%RUNCW(AREA=Air Force,
       FOLDER=AirForce/,
```

```
                NAME=template.xls,
                CURRENT=CURNTS.CONUS_Q,
                PREVIOUS1=PRV1S.CONUS_Q,
                PREVIOUS2=PRV2S.CONUS_Q,
                PREVIOUS3=PRV3S.CONUS_Q);
     %RUNCW(AREA=Army,
                FOLDER=Army/,
                NAME=template.xls,
                CURRENT=CURNTS.CONUS_Q,
                PREVIOUS1=PRV1S.CONUS_Q,
                PREVIOUS2=PRV2S.CONUS_Q,
                PREVIOUS3=PRV3S.CONUS_Q);
```

13. Q4_2003\PROGRAMS\ConsumerWatch\DISENRL-C.SAS - Calculate disenrollment scores for annual TRICARE Consumer Watch.

```
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMTERR;
********************************************************************************
* PROJECT: 8860-420
* PROGRAM: DISENRL-C.SAS
* PURPOSE: To produce numbers that go into 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
* OUTPUT : DISENRLC.SD2
********************************************************************************;

OPTIONS NOXWAIT;

LIBNAME YR03 V612 '..\..\..\2003\DATA';
LIBNAME YR02 V612 '..\..\..\2002\DATA';
LIBNAME YR01 V612 '..\..\..\2000\DATA';
LIBNAME YR03X      '..\..\..\2003\DATA';
LIBNAME IN         '.';
LIBNAME OUT V612  '.';

TITLE 'Consumer Watch 2003 - Catchment';

%INCLUDE "..\..\..\2003\PROGRAMS\LOADWEB\CATREP.INC";

TITLE2 'Plans to Disenroll';

LIBNAME LIBRARY '..\..\..\2003\DATA\FMTLIB';
DATA HCS03A_1(KEEP=CONUS KDISENRL XBNFGRP XENRLLMT CWRWT MPRID ADJ_CELL XREGION);
   SET YR03.HCS03A_1;
RUN;

PROC SORT DATA=HCS03A_1; BY MPRID; RUN;

DATA STEP1Q(KEEP=MPRID CACSMPL);
   SET YR03X.STEP1Q;
RUN;

PROC SORT DATA=STEP1Q; BY MPRID; RUN;

LIBNAME LIBRARY '..\..\..\2003\DATA\FMTLIB';
DATA MERGED03;
   MERGE HCS03A_1(IN=IN1)
         STEP1Q;
   BY MPRID;
   IF IN1;
   TOTAL=1;
   IF XREGION=7 THEN XREGION=8;
   IF (KDISENRL=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVAR = 1;
      ELSE DEPVAR = 0;
   IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOM = 1;
      ELSE DENOM = 0;
*    STRATUMN = STRATUM + 0;
RUN;

LIBNAME LIBRARY '..\..\..\2002\DATA\FMTLIB';
DATA HCS02A_1(KEEP=CONUS KDISENRL XBNFGRP XENRLLMT CWRWT MPRID ADJ_CELL XREGION);
   SET YR02.HCS02A_1;
RUN;

PROC SORT DATA=HCS02A_1; BY MPRID; RUN;

DATA STEP1Q02(KEEP=MPRID CACSMPL);
   SET IN.STEP1Q02;
RUN;

PROC SORT DATA=STEP1Q02; BY MPRID; RUN;
```

```
LIBNAME LIBRARY '..\..\..\2002\DATA\FMTLIB';
DATA MERGED02;
   MERGE HCS02A_1(IN=IN1)
         STEP1Q02;
   BY MPRID;
   IF IN1;
   TOTAL=1;
   IF XREGION=7 THEN XREGION=8;
   FORMAT CACSMPL CATREP.;

   IF (KDISENRL=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVAR = 1;
      ELSE DEPVAR = 0;
   IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOM = 1;
      ELSE DENOM = 0;
*   STRATUMN = STRATUM + 0;
RUN;

LIBNAME LIBRARY '..\..\..\2000\DATA\FMTLIB';
DATA HCS00A_1(KEEP=CONUS KDISENRL XBNFGRP XENRLLMT CWRWT MPRID ADJ_CELL XREGION);
   SET YR01.HCS00A_1;
RUN;

PROC SORT DATA=HCS00A_1; BY MPRID; RUN;

DATA STEP1Q01(KEEP=MPRID CACSMPL);
   SET IN.STEP1Q01;
RUN;

PROC SORT DATA=STEP1Q01; BY MPRID; RUN;

LIBNAME LIBRARY '..\..\..\2000\DATA\FMTLIB';
DATA MERGED01;
   MERGE HCS00A_1(IN=IN1)
         STEP1Q01;
   BY MPRID;
   IF IN1;
   TOTAL=1;
   IF XREGION=7 THEN XREGION=8;
   FORMAT CACSMPL CATREP.;
   IF (KDISENRL=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DEPVAR = 1;
      ELSE DEPVAR = 0;
   IF (XBNFGRP IN (2,3,4) AND XENRLLMT = 2) THEN DENOM = 1;
      ELSE DENOM = 0;
*   STRATUMN = STRATUM + 0;
RUN;

**********************************************************************************
* Intent to Disenroll
**********************************************************************************;

%MACRO DISENRL (DATASET,YEAR,BENTYPE,ROW,WT);

/**********************************/
/* RUN SIGNIFICANCE TESTS         */
/**********************************/

%MACRO RUNSE (DS,DEPVAR,INDEPVAR,NUMCOL,SUBPOP,YR,WGT);
***CALCULATE VALUES FOR EACH COLUMN FOR ENTIRE POPULATION****;
PROC SORT DATA=&DS;
   BY ADJ_CELL;
RUN;

PROC DESCRIPT DATA=&DS DESIGN=STRWR NOPRINT;
   WEIGHT &WGT;                    ******  FINAL SURVEY WEIGHT   ********;
   NEST ADJ_CELL / MISSUNIT;
   VAR &DEPVAR;                    ******  VARIABLES TO BE ESTIMATED**;
   SUBPOPN &SUBPOP;
   TABLES &INDEPVAR;
   SUBGROUP &INDEPVAR;
   LEVELS &NUMCOL;
   setenv/decwidth=6;
*   PRINT /STYLE=NCHS;
   OUTPUT / TABLECELL=DEFAULT FILENAME=&YR;
```

```
RUN;

/*PROC PRINT DATA=&YR;
RUN; */
%MEND RUNSE;

%RUNSE (MERGED03,DEPVAR,CACSMPL,9999,(DENOM=1),Z03,CWRWT);
%RUNSE (MERGED02,DEPVAR,CACSMPL,9999,(DENOM=1),Z02,CWRWT);
%RUNSE (MERGED01,DEPVAR,CACSMPL,9999,(DENOM=1),Z01,CWRWT);

%MACRO RUNSEC (DS,DEPVAR,SUBPOP,YR,WGT);
***CALCULATE VALUES FOR EACH COLUMN FOR ENTIRE POPULATION****;
PROC SORT DATA=&DS;
   BY ADJ_CELL;
RUN;

PROC DESCRIPT DATA=&DS DESIGN=STRWR NOPRINT;
   WEIGHT &WGT;                      ******  FINAL SURVEY WEIGHT   ********;
   NEST ADJ_CELL / MISSUNIT;
   VAR &DEPVAR;                      ******  VARIABLES TO BE ESTIMATED**;
   SUBPOPN &SUBPOP;
   setenv/decwidth=6;
*   PRINT /STYLE=NCHS;
   OUTPUT / TABLECELL=DEFAULT FILENAME=&YR;
RUN;

/*PROC PRINT DATA=&YR;
RUN; */
%MEND RUNSEC;

%RUNSEC (MERGED03,DEPVAR,(DENOM=1 AND CONUS=1),C03,CWRWT);
%RUNSEC (MERGED02,DEPVAR,(DENOM=1 AND CONUS=1),C02,CWRWT);
%RUNSEC (MERGED01,DEPVAR,(DENOM=1 AND CONUS=1),C01,CWRWT);

%MACRO SIGFLAG(NUMCOL,ZYR,CYR,INDEPVAR,ROW);
DATA N&ZYR (KEEP=COL4 &INDEPVAR ROW);
   MERGE &CYR(RENAME=(MEAN=DOM_MEAN SEMEAN=DOM_SE NSUM=DOM_N))
         &ZYR;
   BY TABLENO;
   RETAIN NCOL 0;
   ARRAY COLUMNS COL1-COL&NUMCOL;
   IF &INDEPVAR > 0;
   NCOL+1;
   /* CONUS MTFS */
   IF &INDEPVAR IN
(34,35,36,37,66,67,68,69,81,86,100,123,306,310,321,326,330,385,413,420,425,426,428,9901,
                   89,90,91,92,120,121,122,124,335,430,432,433,9902,
                   39,45,46,47,48,49,50,51,101,103,104,105,356,421,9903,
                   1,3,4,38,42,43,73,74,416,422,7139,9904,
                   55,56,60,61,95,9905,
                   13,62,64,93,94,96,97,98,109,110,112,113,114,117,118,363,364,366,423,9906,
8,9,10,79,83,84,85,108,9907,32,33,53,57,58,59,75,76,77,78,106,119,129,338,7200,9908,
                   18,19,24,29,30,131,248,9909,
                   14,15,28,418,419,9910,
                   125,126,127,128,395,434,435,7045,9911,
                   52,280,287,7043,9912,
                   5,6,130,203,417,7044,7047) THEN
     VARDIF = ((1 - 2*NSUM/DOM_N)*DOM_SE**2 + SEMEAN**2);
   /* OCONUS MTFS */
   IF &INDEPVAR IN (606,607,609,617,618,623,624,629,633,635,805,806,808,825,8931,8982,9913,
                   610,612,620,621,622,637,638,639,640,802,804,9914,
                   615,616,5197,7042,9915) THEN VARDIF = DOM_SE**2 + SEMEAN**2;
   SEDIF = SQRT(VARDIF);
   N=MIN(NSUM,DOM_N);
   ***SIGNIFICANCE TEST****;
   TESTVAL = 2*(1-PROBT(ABS(MEAN - DOM_MEAN) / SEDIF,N));
   PUT VARDIF= SEDIF= TESTVAL=;
   IF TESTVAL<.05 & MEAN>DOM_MEAN THEN COLUMNS(NCOL) = 1;
   ELSE IF TESTVAL <.05 & MEAN<DOM_MEAN THEN COLUMNS(NCOL) = -1;
   ELSE COLUMNS(NCOL) = 0;
   DO I=1 TO &NUMCOL;
      IF COLUMNS(I) NE . THEN COL4=COLUMNS(I);
```

```
        END;
        ROW=&ROW;
RUN;

/*PROC PRINT DATA=N&ZYR;
RUN;*/
%MEND SIGFLAG;

%SIGFLAG(9999,Z03,C03,CACSMPL,3);
%SIGFLAG(9999,Z02,C02,CACSMPL,2);
%SIGFLAG(9999,Z01,C01,CACSMPL,1);

/*****/
/*MHS*/
/*****/

PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND KDISENRL=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSNUM&YEAR(RENAME=(COUNT=MHSNUM));
    WEIGHT &WT;
RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSDEN&YEAR(RENAME=(COUNT=MHSDEN));
    WEIGHT &WT;
RUN;
/************/
/*UNWEIGHTED*/
/************/
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (CONUS=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=MHSDEU&YEAR(RENAME=(COUNT=MHSDENU));
RUN;


/********/
/*MTF   */
/********/

PROC SORT DATA=&DATASET;BY CACSMPL;RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (KDISENRL=1 AND XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=CACN&YEAR(RENAME=(COUNT=CACNUM));
    WEIGHT &WT;
    BY CACSMPL;
RUN;
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=CACD&YEAR(RENAME=(COUNT=CACDEN));
    WEIGHT &WT;
    BY CACSMPL;
RUN;
/************/
/*UNWEIGHTED*/
/************/
PROC FREQ DATA=&DATASET NOPRINT;
    WHERE (XBNFGRP IN (2,3,4) AND XENRLLMT=2);
    TABLES TOTAL / OUT=CACDU&YEAR(RENAME=(COUNT=CACDENU));
    BY CACSMPL;
RUN;

DATA MHS&YEAR;
    MERGE MHSNUM&YEAR MHSDEN&YEAR MHSDEU&YEAR;
    BY TOTAL;
    LENGTH BENTYPE $35;
    BENTYPE = &BENTYPE;
    ROW=&ROW;
    IF (MHSDEN<200 OR MHSDENU<30) THEN COL2=.;
        ELSE COL2 = (MHSNUM / MHSDEN)*100;
RUN;
DATA CAC&YEAR;
    MERGE CACN&YEAR CACD&YEAR CACDU&YEAR NZ&YEAR;
    BY CACSMPL;
```

```
        LENGTH BENTYPE $35;
        BENTYPE = &BENTYPE;
        ROW=&ROW;
        IF (CACDEN<200 OR CACDENU<30) THEN COL3=.;
            ELSE COL3 = (CACNUM / CACDEN)*100;
RUN;
DATA DIS&YEAR(DROP=TOTAL PERCENT MHSNUM MHSDEN MHSDENU CACNUM CACDEN CACDENU);
        SET MHS&YEAR CAC&YEAR;
        LENGTH FIGURE $19;
        FIGURE = 'INTENT TO DISENROLL';
RUN;
/*PROC PRINT;RUN;*/
%MEND DISENRL;

%DISENRL (MERGED03,03,'2003',3,CWRWT);
%DISENRL (MERGED02,02,'2002',2,CWRWT);
%DISENRL (MERGED01,01,'2001',1,CWRWT);

********************************************************************************************
********************************************************************************************
* Combine all temporary datasets into one dataset for inclusion in consumer watch
********************************************************************************************
*******************************************************************************************;

DATA OUT.DISENRLC;
        SET DIS03 DIS02 DIS01;

        /* UPDATED BASED ON 2003 MTFS */
        IF CACSMPL NOT IN
(.,34,35,36,37,66,67,68,69,81,86,100,123,306,310,321,326,330,385,413,420,425,426,428,9901,
                    89,90,91,92,120,121,122,124,335,430,432,433,9902,
                    39,45,46,47,48,49,50,51,101,103,104,105,356,421,9903,
                    1,3,4,38,42,43,73,74,416,422,7139,9904,
                    55,56,60,61,95,9905,
                    13,62,64,93,94,96,97,98,109,110,112,113,114,117,118,363,364,366,423,9906,
8,9,10,79,83,84,85,108,9907,32,33,53,57,58,59,75,76,77,78,106,119,129,338,7200,9908,
                    18,19,24,29,30,131,248,9909,
                    14,15,28,418,419,9910,
                    125,126,127,128,395,434,435,7045,9911,
                    52,280,287,7043,9912,
                    5,6,130,203,417,7044,7047,
                    606,607,609,617,618,623,624,629,633,635,805,806,808,825,8931,8982,9913,
                    610,612,620,621,622,637,638,639,640,802,804,9914,
                    615,616,5197,7042,9915) THEN DELETE;

        PROC SORT;
        BY ROW;
RUN;
PROC PRINT;
RUN;
```

14. Q4_2003\PROGRAMS\ConsumerWatch\CONSUMERWATCH-C.SAS - Run annual MTF TRICARE Consumer Watch reports.

```
OPTIONS PS=63 LS=200 COMPRESS=NO ERRORS=2 NOCENTER SOURCE2 NOFMTERR SPOOL;
**************************************************************************
* 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
**************************************************************************;
LIBNAME INT V612 '..\..\..\2003\PROGRAMS\LOADWEB';

%INCLUDE "..\..\..\2003\PROGRAMS\LOADWEB\CATREP.INC";

%INCLUDE "CONSUMERWATCH-C.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=INT.TREND_A;
      TABLES REGION*REGCAT / LIST MISSING OUT=TEMP;
      WHERE (REGION=&REG AND REGCAT NE &REG);
   RUN;

   DATA TEMP;
      SET TEMP;

      /* DO NOT PRODUCE CONSUMER WATCH REPORTS FOR OUT OF CATCHMENT AREAS */
      REGCATSUB=SUBSTR(REGCAT,1,16);
      IF REGCATSUB="Out of Catchment" THEN DELETE;

      /* REMOVE O'CALLAGHAN AND RUN SEPARATELY */
      REGCATSUB2=SUBSTR(REGCAT,1,14);
      IF REGCATSUB2="99th Med Grp-O" THEN DELETE;
   RUN;

   DATA _NULL_;
      SET TEMP END=FINISHED;

      LENGTH CMPRS $39;
      LENGTH NUM $4;

      CMPRS=COMPRESS(REGCAT)||".xls";
      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="Region 1",FOLDER=Region1);
*%RUNBYREG(REG="Region 2",FOLDER=Region2);
*%RUNBYREG(REG="Region 3",FOLDER=Region3);
```

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```
*%RUNBYREG(REG="Region 4",FOLDER=Region4);
*%RUNBYREG(REG="Region 5",FOLDER=Region5);
*%RUNBYREG(REG="Region 6",FOLDER=Region6);
*%RUNBYREG(REG="Region 7/8",FOLDER=Region78);
*%RUNBYREG(REG="Region 9",FOLDER=Region9);
*%RUNBYREG(REG="Region 10",FOLDER=Region10);
*%RUNBYREG(REG="Region 11",FOLDER=Region11);
*%RUNBYREG(REG="Region 12",FOLDER=Region12);
*%RUNBYREG(REG="Europe",FOLDER=Europe);
*%RUNBYREG(REG="Asia",FOLDER=Asianew);
*%RUNBYREG(REG="Latin America",FOLDER=LatinAmerica);
*%RUNBYREG(REG="Alaska",FOLDER=Alaska);
```

APPENDIX J

SUDAAN CODE FOR VARIANCE ESTIMATION

```
****************************************************************
*  program:    SUDTEST.SAS
*  purpose:    to demonstrate SAS callable SUDAAN procedures to get
*                 SEs for survey estimates
*  input: j:\dod\2003\data\Afinal\hcs03A_1.sd2
****************************************************************
*;
options ps=79 ls=132;
libname in 'j:\dod\2003\data\Afinal\hcs03A_1.sd2';
libname library  'j:\dod\2003\data\Afinal\fmtlib';


***SORT FILE BY STRATUM****;
data hcs2003;
set in.hcs03A_1;
***make xregion = 7 to xregion = 8 for tables  ***;
if xregion = 7 then xregion = 8;
run;

PROC SORT DATA=HCS2003(keep=xregion h03014  h03015  h030 xenrllmt
                            wrwt poststr);
BY poststr;
RUN;


****************************************************************
if you want to estimate means
****************************************************************;
title 'Output file from SUDAAN for estimating means';
title2 'Overall ratings among all beneficiaries in the past 12 months';
title3 'who saw a specilist (H00014=1) for each region (XREGION)';

PROC DESCRIPT DATA=HCS2003 DESIGN=STRWR NOPRINT;
 WEIGHT   CWRWT;       ******  sampling/FINAL SURVEY WEIGHT    ********;
 NEST POSTSTR / missunit;
 VAR  H03015;               ******  VARIABLES TO BE ESTIMATED**;
 SUBPOPN H03014=1;            ******specify domains to be reported;
 TABLES XREGION;
 SUBGROUP XREGION;
 LEVELS 16;
 OUTPUT MEAN SEMEAN deffmean/ TABLECELL=DEFAULT FILENAME=mnsDAT;
 ***SEMEAN=standard error and deffmean=design effect**;
RUN;

proc print data=mnsdat;
run;

****************************************************************
if you want to estimate percentage
****************************************************************;
title 'Output file from SUDAAN for estimating percentages';
title2 'Those who last had a blood pressure reading less than 12 months;
title3 'ago, 1 to 2 years ago, and more than 2years ago (h03055)';
title4 'by TRICARE enrollment (XENRLLMT) in region 3';
TITLE5 'PROC CROSSTAB';
PROC CROSSTAB DATA=HCS2003 DESIGN=STRWR NOPRINT;
 WEIGHT   CWRWT;
 NEST POSTSTR / missunit;
 SUBPOPN XREGION=3;
```

```
 SUBGROUP H03055 XENRLLMT;
 LEVELS 3 5;
 TABLES H03055*XENRLLMT;                    /*  DEP * INDEP */
 OUTPUT NSUM WSUM SEWGT COLPER SECOL
    / TABLECELL=DEFAULT FILENAME=OUTDAT;
RUN;

proc print data=outdat;
run;
```

APPENDIX K

RECODING OF PRENATAL CARE VARIABLES

The questionnaire fielded in the first wave of Quarter 1, 2003 omitted a response for question H03069: "Have you been pregnant in the last 12 months or are you pregnant now?" Question H03069 is combined with H03070, "In what trimester is your pregnancy" and H03071, " In which trimester did you first receive prenatal care" to identify women who are currently in the second or third trimester of their pregnancy, or who have been pregnant in the past 12 months, and determine which proportion received prenatal care in the first trimester. The response to H03069, "No, I am not currently pregnant, but have been in the past 12 months" was omitted. The omitted response was restored in the second wave, but the majority of responses, approximately 80 percent, used the first wave questionnaire.

Effect on responses

Table K.1 shows the weighted number of respondents to the key question in each of the three categories in the four quarters of 2002 and the first quarter of 2003.

Table K.1

Response	Q1, 2002	Q2, 2002	Q3, 2002	Q4, 2002	Q1, 2003
Pregnant Now	81,112	64,931	78,255	78,002	167,271
Pregnant w/in 12 months	151,250	143,495	169,717	168,449	38,442
Not pregnant	2,810,501	2,902,572	2,963,050	2,927,326	3,022,466

How responses were edited

Based on this response pattern, it appears that many who would otherwise have used the second response option, instead chose the first option. It is also possible that some instead used the third option. To test these assumptions we examined follow-up questions. We found that the majority in Quarter 1, 2003 who responded that they were currently pregnant did not respond to H03070, which asks about their current pregnancy, but did respond to H03071, which asks about their prenatal care. We took this as sufficient evidence that they were not currently pregnant, but had chosen to respond they were as the best available response. We therefore reassigned their responses to H03069 to the second category, pregnant in the past 12 months.

We were not able to correct the responses of those who responded to H03069 that they were not pregnant. Though some in this group reported the trimester in which they received prenatal care, the number who responded that they did not receive prenatal care led us to believe that several in that category had not received care because they had not been pregnant. Because we could not determine who these women were, we were forced to ignore all of the responses of women who chose the third response to H03069.

As a result of the reassignment, weighted frequencies for H03069 are:

TABLE K.2

Response	Frequency
Pregnant	87,476
Pregnant within 12 months	18,237
Not pregnant	3,022,466

The total number of women who are pregnant appears to be overstated somewhat and the number who were pregnant in the past 12 months is too low, but the numbers are a substantial improvement.

Impact on prenatal care sample size

Compared with past quarters, the sample size for estimating prenatal care rates has been reduced, though the drop-off is not catastrophic. System-wide estimates are still available with adequate precision, and many regional estimates will be suppressed, as has been the case in past quarters.

Table K.3. Sample Sizes for Prenatal Care Estimates

Beneficiary category	Q1, 2002	Q2, 2002	Q3, 2002	Q4, 2002	Q1, 2003
Total	726	640	681	590	552
Active Duty	108	100	114	130	86

Impact on prenatal care rates

The numbers are used to calculate prenatal care rates as described above. We can assess the bias remaining in the calculation after reassigning these responses by dividing prenatal care rates into two groups, rates for women in their second or third trimester and rates for those who were pregnant in the past 12 months.

Table K.4.

	2001	2002	Quarter 1, 2003
Pregnant	90.9 (N=54,747)	91.6 (N=59,206)	92.4 (N=53,689)
Pregnant w/in 12 mos.	85.9 (N=141,172)	81.0 (N=140,456)	87.5 (N=117,801)

From these numbers, it appears that the number of pregnancies in the calculation is about 15 percent less than usual, and that most of the missing pregnancies were in the formerly pregnant category. Women in that category reported somewhat lower prenatal care rates than did currently pregnant women. That result suggests that prenatal care rates for Quarter 1 are slightly biased upward. Rates may be biased if the women whose responses were not included because of the question defect are less likely to have received prenatal care than those who were able to understand how their responses might yet be included. Further research would be needed to determine whether this is likely to be the case. The magnitude of the additional bias is probably too small to justify the additional cost of the investigation.