# MEPS HC-201
# 2017 Full Year
# Consolidated Data File

## August 2019

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The MEPS instrument design changed beginning in Spring of 2018, affecting Panel 23 Round 1, Panel 22 Round 3, and Panel 21 Round 5. For the Full-Year 2017 PUFs, the Panel 22 Round 3 and Panel 21 Round 5 data were transformed to the degree possible to conform to the previous design. **Data users should be aware of possible impacts on the data and especially trend analysis for these data years due to the design transition.**

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**Table of Contents**

A. DATA USE AGREEMENT ..... A-1

B. BACKGROUND ..... B-1

1.0 Household Component ..... B-1
2.0 Medical Provider Component ..... B-1
3.0 Survey Management and Data Collection ..... B-2

C. TECHNICAL AND PROGRAMMING INFORMATION ..... C-1

1.0 General Information ..... C-1
2.0 Data File Information ..... C-1

2.1 Codebook Structure ..... C-2
2.2 Reserved Codes ..... C-2
2.3 Codebook Format ..... C-3
2.4 Variable Naming ..... C-3
2.5 File Contents ..... C-3

2.5.1 Survey Administration Variables (DUID- PSTATS53) C-4
2.5.2 Navigating the MEPS Data with Information on Person Disposition Status ..... C-13
2.5.3 Demographic Variables (AGE31X-DAPID53X)..... C-19
2.5.4 Income and Tax Filing Variables (FILEDR17-HIEUIDX) C-29
2.5.4.1 Income Top-Coding ..... C-32
2.5.4.2 Poverty Status ..... C-33
2.5.5 Person-Level Condition Variables (RTHLTH31-ADHDAGED) ..... C-34

2.5.5.1 Perceived Health Status ..... C-34
2.5.5.2 Priority Condition Variables (HIBPDX-ADHDAGED) ..... C-34
Recoding of Cancer Variables..... C-37

2.5.6 Health Status Variables (IADLHP31-CEFMPR31).... C-39

2.5.6.1 IADL and ADL Limitations ..... C-40
2.5.6.2 Functional and Activity Limitations ..... C-41
2.5.6.3 Hearing, Vision Problems ..... C-43
2.5.6.4 Disability Status..... C-44
2.5.6.5 Hearing Aids, Eyeglasses ..... C-45
2.5.6.6 Any Limitation Rounds 3 and 4 (Panel 21) / Rounds 1 and 2 (Panel 22)..... C-45
2.5.6.7 Child Health and Preventive Care ..... C-46
2.5.6.8 Preventive Care Variables..... C-53
2.5.6.9 2017 Self-Administered Questionnaire (SAQ) C-54
2.5.6.10 Diabetes Care Survey (DCS)..... C-61

**Table of Contents (continued)**


2.5.6.11 Cancer Self-Administered Questionnaire (CSAQ) ..... C-63

2.5.7 Disability Days Indicator Variables (DDNWRK17-OTHNDD17) ..... C-69

2.5.8 Access to Care Variables (ACCELI42-PMDLRS42)70

2.5.8.1 Family Members' Usual Source of Health Care C-71
2.5.8.2 Characteristics of Usual Source of Health Care Providers ..... C-72
2.5.8.3 Access to and Satisfaction with the Provider C-74
2.5.8.4 Access to Medical Treatment, Dental Treatment, and Prescription Medicines..... C-75
2.5.8.5 Editing the Access to Care Variables ..... C-75
2.5.8.6 Recoding of Additional Other Specify Text Items ..... C-76

2.5.9 Employment Variables (EMPST31-RTPLN53H)..... C-77
2.5.10 Health Insurance Variables (TRIJA17X-PMEDPY53) C-95

2.5.10.1 Monthly Health Insurance Indicators (TRIJA17X-INSDE17X)..... C-95
2.5.10.2 Summary Insurance Coverage Indicators (PRVEV17-INSURC17)..... C-99
2.5.10.3 FY 2017 PUF Managed Care Variables (TRIST31X-PRVHMO17)..... C-101
2.5.10.4 Flexible Spending Accounts (FSAGT31-FSAAMT31) ..... C-106
2.5.10.5 Unedited Health Insurance Variables (PREVCOVR-INSENDYY) ..... C-106
2.5.10.6 Health Insurance Coverage Variables – At Any Time/At Interview Date/At 12-31 Variables (TRICR31X-INSAT17X)..... C-107
2.5.10.7 Dental and Prescription Drug Private Insurance Variables (DENTIN31-PMDINS17)..... C-109
2.5.10.8 Medical Debt Variables (PROBPY42 – PYUNBL42) ..... C-110
2.5.10.9 Prescription Drug Usual Third Party Payer Variables (PMEDUP31-PMEDPY53) ..... C-110

2.5.11 Utilization, Expenditures, and Sources of Payment Variables (TOTTCH17-RXOSR17) ..... C-111

2.5.11.1 Expenditures Definition..... C-111
2.5.11.2 Utilization and Expenditure Variables by Type of Medical Service ..... C-115

2.5.12 Changes in Variable List..... C-120

**Table of Contents (continued)**


2.6 Linking to Other Files ..... C-121

2.6.1 Event and Condition Files ..... C-121
2.6.2 National Health Interview Survey ..... C-122
2.6.3 Longitudinal Analysis ..... C-122

3.0 SURVEY SAMPLE INFORMATION ..... C-122
3.1 Background on Sample Design and Response Rates ..... C-122

3.1.1 References ..... C-123
3.1.2 MEPS-Linked to the National Health Interview Survey (NHIS) ..... C-123
3.1.3 Sample Weights and Variance Estimation ..... C-125

3.2 The MEPS Sampling Process and Response Rates: An Overview C-125

3.2.1 Response Rates ..... C-127
3.2.2 Panel 22 Response Rates ..... C-128
3.2.3 Panel 21 Response Rates ..... C-128
3.2.4 Annual (Combined Panel) Response Rate ..... C-128
3.2.5 Oversampling ..... C-129

3.3 Person-Level Weight (PERWT17F) ..... C-130

3.3.1 Overview ..... C-130
3.3.2 Details on Person-Level Weights Construction ..... C-130
3.3.3 MEPS Panel 21 Weight Development Process ..... C-131
3.3.4 MEPS Panel 22 Weight Development Process ..... C-131
3.3.5 The Final Person-Level Weight for 2017 ..... C-132
3.3.6 A Note on MEPS Population Estimates ..... C-133

3.4 Coverage ..... C-133

3.5 Background on Family-Level Estimation Using This MEPS Public Use File ..... C-133

3.5.1 Overview ..... C-133
3.5.2 Definition of "Family" for Estimation Purposes ..... C-134
3.5.3 Instructions to Create Family Estimates ..... C-135
3.5.4 Details on Family Weight Construction and Estimated Number of Families ..... C-135

3.6 Analysis Using Health Insurance Eligibility Units ..... C-136
3.7 Weights and Response Rates for the Self-Administered Questionnaire ..... C-137
3.8 Weights and Response Rates for the Diabetes Care Survey ..... C-138
3.9 Weights and Response Rates for the Cancer Self-Administered Questionnaire ..... C-139
3.10 Variance Estimation ..... C-139
3.10.1 Taylor-series Linearization Method ..... C-139

**Table of Contents (continued)**

3.10.2 Balanced Repeated Replication (BRR) Method..... C-141
3.11 Guidelines for Determining which Weight to Use for Analyses Involving Data/Variables from Multiple Sources and Supplements: MEPS 2017 Full-Year Use File ..... C-141
3.12 Using MEPS Data for Trend Analysis ..... C-142

D. VARIABLE-SOURCE CROSSWALK..... D-144

APPENDIX 1:..... A-1

## A. Data Use Agreement

Individual identifiers have been removed from the micro-data contained in these files. Nevertheless, under sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-1), data collected by the Agency for Healthcare Research and Quality (AHRQ) and/or the National Center for Health Statistics (NCHS) may not be used for any purpose other than for the purpose for which they were supplied; any effort to determine the identity of any reported cases is prohibited by law.

Therefore in accordance with the above referenced Federal Statute, it is understood that:

1. No one is to use the data in this data set in any way except for statistical reporting and analysis; and

2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity; and

3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey. Furthermore, linkage of the Medical Expenditure Panel Survey and the National Health Interview Survey may not occur outside the AHRQ Data Center, NCHS Research Data Center (RDC) or the U.S. Census RDC network.

By using these data you signify your agreement to comply with the above stated statutorily based requirements with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates Title 18 part 1 Chapter 47 Section 1001 and is punishable by a fine of up to $10,000 or up to 5 years in prison.

The Agency for Healthcare Research and Quality requests that users cite AHRQ and the Medical Expenditure Panel Survey as the data source in any publications or research based upon these data.

## B. Background

### 1.0 Household Component

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS Household Component (HC) also provides estimates of respondents' health status, demographic and socio-economic characteristics, employment, access to care, and satisfaction with health care. Estimates can be produced for individuals, families, and selected population subgroups. The panel design of the survey, which includes 5 Rounds of interviews covering 2 full calendar years, provides data for examining person level changes in selected variables such as expenditures, health insurance coverage, and health status. Using computer assisted personal interviewing (CAPI) technology, information about each household member is collected, and the survey builds on this information from interview to interview. All data for a sampled household are reported by a single household respondent.

The MEPS-HC was initiated in 1996. Each year a new panel of sample households is selected. Because the data collected are comparable to those from earlier medical expenditure surveys conducted in 1977 and 1987, it is possible to analyze long-term trends. Each annual MEPS-HC sample size is about 15,000 households. Data can be analyzed at either the person or event level. Data must be weighted to produce national estimates.

The set of households selected for each panel of the MEPS HC is a subsample of households participating in the previous year's National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics. The NHIS sampling frame provides a nationally representative sample of the U.S. civilian noninstitutionalized population and reflects an oversample of Blacks and Hispanics. In 2006, the NHIS implemented a new sample design, which included Asian persons in addition to households with Black and Hispanic persons in the oversampling of minority populations. NHIS introduced a new sample design in 2016 that discontinued oversampling of these minority groups. The linkage of the MEPS to the previous year's NHIS provides additional data for longitudinal analytic purposes.

### 2.0 Medical Provider Component

Upon completion of the household CAPI interview and obtaining permission from the household survey respondents, a sample of medical providers are contacted by telephone to obtain information that household respondents can not accurately provide. This part of the MEPS is called the Medical Provider Component (MPC) and information is collected on dates of visits, diagnosis and procedure codes, charges and payments. The Pharmacy Component (PC), a subcomponent of the MPC, does not collect charges or diagnosis and procedure codes but does collect drug detail information, including National Drug Code (NDC) and medicine name, as well as date filled and sources and amounts of payment. The MPC is not designed to yield national estimates. It is primarily used as an imputation source to supplement/replace household reported expenditure information.

## 3.0 Survey Management and Data Collection

MEPS HC and MPC data are collected under the authority of the Public Health Service Act. Data are collected under contract with Westat, Inc. (MEPS HC) and Research Triangle Institute (MEPS MPC). Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of the Public Health Service Act and the Privacy Act. The National Center for Health Statistics (NCHS) provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, micro data files, and tables via the MEPS website. Selected data can be analyzed through MEPSnet, an on-line interactive tool designed to give data users the capability to statistically analyze MEPS data in a menu-driven environment.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, 5600 Fishers Lane, Rockville, MD 20857 (301-427-1406).

## C. Technical and Programming Information

### 1.0 General Information

This documentation describes the 2017 full-year consolidated data file from the Medical Expenditure Panel Survey Household Component (MEPS HC). Released as an ASCII file (with related SAS, Stata, and SPSS programming statements and data user information) and a SAS transport dataset, this public use file provides information collected on a nationally representative sample of the civilian noninstitutionalized population of the United States for calendar year 2017. The file contains 1,564 variables and has a logical record length of 4,228 with an additional 2-byte carriage return/line feed at the end of each record.

This file consists of MEPS survey data obtained in Rounds 3, 4, and 5 of Panel 21 and Rounds 1, 2, and 3 of Panel 22, the rounds for the MEPS panels covering calendar year 2017, and contains variables pertaining to survey administration, demographics, income, person-level conditions, health status, disability days, quality of care, employment, health insurance, and person-level medical care use and expenditures.

The following documentation offers a brief overview of the types and levels of data provided, content and structure of the files, and programming information. It contains the following sections:

- Data File Information
- Survey Sample Information
- Variable-Source Crosswalk

Both weighted and unweighted frequencies of most variables included in the 2017 full-year consolidated data file are provided in the accompanying codebook file. The exceptions to this are weight variables, variance estimation variables, and variables that have a separate weight (SAQ, DCS, CSAQ). Only unweighted frequencies of these variables are included in the accompanying codebook file. See the Weights Variables list in Section D, Variable-Source Crosswalk.

A database of all MEPS products released to date and a variable locator indicating the major MEPS data items on public use files that have been released to date can be found on the MEPS website.

### 2.0 Data File Information

This public use dataset contains variables and frequency distributions associated with 31,880 persons who participated in the MEPS Household Component of the Medical Expenditure Panel Survey in 2017. These persons received a positive person-level weight, a family-level weight, or both (some participating persons belonged to families characterized as family-level nonrespondents while some members of participating families were not eligible for a person-level weight).

These 31,880 persons were part of one of the two MEPS panels for whom data were collected in 2017: Rounds 3, 4, and 5 of Panel 21 or Rounds 1, 2, and 3 of Panel 22. Of these persons, 30,716 were assigned a positive person-level weight. There were 12,756 families receiving a positive

family-level weight. The codebook provides both weighted and unweighted frequencies for most variables on the dataset. In conjunction with the person-level weight variable (PERWT17F) provided on this file, data for persons with a positive person-level weight can be used to make estimates for the civilian noninstitutionalized U.S. population for 2017.

The MEPS CAPI design has changed significantly beginning with the specifications for Panel 21 Round 5/Panel 22 Round 3/Panel 23 Round 1.

For the 2017 data year, data collected in Panel 21 Round 5 and Panel 22 Round 3 have been collected with the new CAPI design and, for consistency, have been presented in the format used for the four rounds collected with the previous CAPI design. Details can be found within the document.

## 2.1 Codebook Structure

The codebook and data file sequence lists variables in the following order:

- Unique person identifiers and survey administration variables
- Geographic variables
- Demographic variables
- Income and tax filing variables
- Person-level priority condition variables
- Health status variables
- Disability days variables
- Access to care variables
- Employment variables
- Health insurance variables
- Utilization, expenditure, and source of payment variables
- Weight and variance estimation variables

## 2.2 Reserved Codes

The following reserved code values are used:

| Value | | Definition |
|---|---|---|
| -1 | INAPPLICABLE | Question was not asked due to skip pattern |
| -2 | DETERMINED IN PREVIOUS ROUND | Question was not asked in round because there was no change in current main job since previous round |
| -7 | REFUSED | Question was asked and respondent refused to answer question |
| -8 | DK | Question was asked and respondent did not know answer |
| -9 | NOT ASCERTAINED | Interviewer did not record the data |
| -10 | HOURLY WAGE >= $96.15 | Hourly wage was top-coded for confidentiality |
| -13 | INITIAL WAGE IMPUTED | Hourly wage was previously imputed so an updated wage is not included in this file |

## 2.3 Codebook Format

This codebook describes an ASCII data set and provides the following programming identifiers for each variable:

| Identifier | Description |
|---|---|
| Name | Variable name (maximum of 8 characters) |
| Description | Variable descriptor (maximum of 40 characters) |
| Format | Number of bytes |
| Type | Type of data: numeric (indicated by NUM) or character (indicated by CHAR) |
| Start | Beginning column position of variable in record |
| End | Ending column position of variable in record |

## 2.4 Variable Naming

In general, variable names reflect the content of the variable, with an eight-character limitation. Edited variables end in an X and are so noted in the variable label. The last two characters in round-specific variables denote the rounds of data collection, Round 3, 4, or 5 of Panel 21 and Round 1, 2, or 3 of Panel 22. Unless otherwise noted, variables that end in "17" represent status as of December 31, 2017.

Variables contained in this delivery were derived either from the questionnaire itself or from the CAPI. The source of each variable is identified in the section of the documentation entitled "Section D. Variable-Source Crosswalk." Sources for each variable are indicated in one of four ways: (1) variables derived from CAPI or assigned in sampling are so indicated; (2) variables derived from complex algorithms associated with reenumeration are labeled "RE Section"; (3) variables that are collected by one or more specific questions in the instrument have those question numbers listed in the Source column; and (4) variables constructed from multiple questions using complex algorithms are labeled "Constructed."

## 2.5 File Contents

Users of MEPS data should be aware that the survey collects data for all sample persons who were in the survey target population at any time during the survey period. In other words, a small proportion of individuals in MEPS analytic files are not members of the survey target population (i.e., civilian noninstitutionalized) for the entire survey period. These persons include those who had periods during which they lived in an institution (e.g., nursing home or prison), were in the military, or lived out of the country, as well as those who were born (or adopted) into MEPS sample households or died during the year. They are considered sample persons for the survey and are included in MEPS data files with positive person weights, but no data were collected for the periods they were not inscope and their annual data for variables like health care utilization, expenditures, and insurance coverage reflect only the part of the year they were inscope for the survey. Persons who are inscope for only part of the year should not be confused with non-respondents. Sample persons who are classified as non-respondents to one or more rounds of data collection (i.e., initial non-respondents and drop-outs over time) are not included in MEPS annual files, and survey weights for full-year respondents are inflated through statistical

adjustment procedures to compensate for both full and part-year nonresponse (see Section 3.0 "Survey Sample Information" for more information). The AHRQ website provides more details about the identification and analytic considerations regarding sample persons who are inscope only part of the year.

### 2.5.1 Survey Administration Variables (DUID- PSTATS53)

The survey administration variables contain information related to conducting the interview, household and family composition, and person-level and RU-level status codes. Data for the survey administration variables were derived from the sampling process, the CAPI programs, or were computed based on information provided by the respondent in the reenumeration section of the questionnaire. Most survey administration variables on this file are asked during every round of the MEPS interview. They describe data for Rounds 3/1, 4/2, 5/3 status and status as of December 31, 2017. Variable names ending in "xy" represent variables relevant to Round "x" of Panel 21 or Round "y" of Panel 22. For example, RULETR53 is a variable relevant to Round 5 of Panel 21 or Round 3 of Panel 22, depending on the panel in which the person was included. The variable PANEL indicates the panel in which the person participated.

The December 31, 2017 variables were developed in two ways. Those used in the construction of eligibility, inscope, and the end reference date were based on an exact date. The remaining variables were constructed using data from specific rounds, if available. If data were missing from the target round but were available in another round, data from that other round were used in the variable construction. If no valid data were available during any round of data collection, an appropriate reserved code was assigned.

**Dwelling Units, Reporting Units, and Families**

The definitions of Dwelling Units (DUs) in the MEPS Household Survey are generally consistent with the definitions employed for the National Health Interview Survey (NHIS). The Dwelling Unit ID (DUID) is a five-digit random ID number assigned after the case was sampled for MEPS. A person number (PID) uniquely identifies each person within the DU. The variable DUPERSID is the combination of the variables DUID and PID.

PANEL is a constructed variable used to specify the panel number for the person. PANEL will indicate either Panel 21 or Panel 22 for each person on the file. Panel 21 is the panel that started in 2016, and Panel 22 is the panel that started in 2017.

A Reporting Unit (RU) is a person or group of persons in the sampled DU who are related by blood, marriage, adoption, or other family association. Each RU was interviewed as a single entity for MEPS. Thus, the RU serves chiefly as a family-based "survey" operations unit rather than an analytic unit. Members of each RU within the DU are identified in the pertinent three rounds by the round-specific variables RULETR31, RULETR42, and RULETR53. End-of-year status (as of December 31, 2017 or the last round they were in the survey) is indicated by the RULETR17 variable. Regardless of the legal status of their association, two persons living together as a "family" unit were treated as a single RU if they chose to be so identified.

Examples of different types of RUs are:

1. A married daughter and her husband living with her parents in the same DU constitute a single RU;

2. A husband and wife and their unmarried daughter, age 18, who is living away from home while at college constitute two RUs; and

3. Three unrelated persons living in the same DU would each constitute a distinct RU (a total of three RUs).

Unmarried college students (less than 24 years of age) who usually live in the sampled household but were living away from home and going to school at the time of the Round 3/1 MEPS interview were treated as an RU separate from that of their parents for the purpose of data collection.

The round-specific variables RUSIZE31, RUSIZE42, RUSIZE53, and the end-of-year status variable RUSIZE17 indicate the number of persons in each RU, treating students as single RUs separate from their parents. Thus, students are not included in the RUSIZE count of their parents' RU. However, for many analytic objectives, the student RUs would be combined with their parents' RU, treating the combined entity as a single family. Family identifier and size variables are described below and include students with their parents' RU.

The round-specific variables FAMID31, FAMID42, FAMID53, and the end-of-year status variable FAMID17 identify a family (i.e., persons related to one another by blood, marriage, adoption, or self-identified as a single unit) for each round and as of December 31, 2017. The FAMID variables differ from the RULETR variables only in that student RUs are combined with their parents' RU.

Two other family identifiers, FAMIDYR and CPSFAMID, are provided on this file. The annualized family ID letter, FAMIDYR, identifies eligible members of the eligible annualized families within a DU. The CPSFAMID represents a redefinition of MEPS families into families defined by the Current Population Survey (CPS). Some of the distinctions between CPS-and MEPS-defined families are that MEPS families include and CPS families do not include: non-married partners, and in-laws. These persons are considered as members of separate families for CPS-like families. CPS-like families are defined so a poverty status classification variable consistent with established definitions of poverty can be assigned to the CPS-like families and used for weight poststratification purposes. In order to identify a person's family affiliation, users must create a unique set of FAMID variables by concatenating the DU identifier and the FAMID variable. Instructions for creating family estimates are described in Section 3.5.

Beginning with the 2017 Consolidated Public Use File, foster care relationships and fostered members of households are not included in MEPS data.

The round-specific variables FAMSZE31, FAMSZE42, FAMSZE53, and the end-of-year status variable FAMSZE17 indicate the number of persons associated with a single family unit after students are linked to their associated parent RUs for analytical purposes. Family-level analyses should use the FAMSZE variables.

Note that the variables RUSIZE31, RUSIZE42, RUSIZE53, RUSIZE17, FAMSZE31, FAMSZE42, FAMSZE53, and FAMSZE17 exclude persons who are ineligible for data collection (i.e., those where ELGRND31 NE 1, ELGRND42 NE 1, ELGRND53 NE 1 or ELGRND17 NE 1); analysts should exclude ineligible persons in a given round from all family-level analyses for that round.

The round-specific variables RURSLT31, RURSLT42, and RURSLT53 indicate the RU response status for each round. Users should note that the values for RURSLT31 differ from those for RURSLT42 and RURSLT53. The values for RURSLT31 include the following:

| **Value** | **Definition** |
|---|---|
| -1 | Inapplicable |
| 60 | Complete with RU member |
| 61 | Complete with proxy-all RU members deceased |
| 62 | Complete with proxy-all RU members institutionalized or deceased |
| 63 | Complete with proxy-other |
| 72 | RU institutionalized in prior round; Still institutionalized-R3 only |
| 80 | Entire RU merged with other RU |
| 81 | Entire RU deceased before 1/1/17 |
| 82 | Entire RU is military before 1/1/17 |
| 83 | Entire RU institutionalized before 1/1/17 |
| 84 | Entire RU left U.S. before 1/1/17 |
| 85 | Entire RU is ineligible before 1/1/17; Multi-reason |
| 86 | Entire RU is ineligible; Non-Key NHIS study |
| 87 | Reenumeration complete; No eligible RU member; Ineligible RU |
| 88 | Unavailable during field period |
| 89 | Too ill; No proxy |
| 90 | Physically/Mentally incompetent; No proxy |
| 91 | Final Refusal |
| 92 | Final Breakoff |
| 93 | Unable to locate |
| 94 | Entire RU is military or left U.S. after 1/1/17 |
| 95 | Entire RU institutionalized after 1/1/17; No proxy |
| 96 | Entire RU deceased after 1/1/17; No proxy |
| 97 | Reenumeration complete; No RU member; Non-Response |
| 98 | RU moved too far to interview |

| Value | Definition |
|---|---|
| 99 | Final other Non-Response |

The values for RURSLT42 and RURSLT53 include the following:

| Value | Definition |
|---|---|
| -1 | Inapplicable |
| 60 | Complete with RU member |
| 61 | Complete with proxy-all RU members deceased |
| 62 | Complete with proxy-all RU members institutionalized or deceased |
| 63 | Complete with proxy-other |
| 70 | Entire RU merged with other RU |
| 71 | Reenumeration complete; No eligible RU member; Ineligible RU |
| 72 | RU institutionalized in prior round; Still institutionalized |
| 88 | Unavailable during field period |
| 89 | Too ill; No proxy |
| 90 | Physically/Mentally incompetent; No proxy |
| 91 | Final Refusal |
| 92 | Final Breakoff |
| 93 | Unable to locate |
| 94 | Entire RU is military or left U.S. after 1/1/17 |
| 95 | Entire RU institutionalized after 1/1/17; No proxy |
| 96 | Entire RU deceased after 1/1/17; No proxy |
| 97 | Reenumeration complete; No RU member; Non-Response |
| 98 | RU moved too far to interview |
| 99 | Final other Non-Response |

Standard or primary RUs are the original RUs from NHIS. A new RU is one created when members of the household leave the primary RU and are followed according to the rules of the survey. A student RU is an unmarried college student (under 24 years of age) who is considered a usual member of the household, but was living away from home while going to school, and was treated as a Reporting Unit (RU) separate from his or her parents' RU for the purpose of data collection. RUCLAS17 was set based on the RUCLAS values from Rounds 3/1, 4/2, and 5/3. If the person was present in the responding RU in Round 5/3, then RUCLAS17 was set to RUCLAS53. If the person was not present in a responding RU in Round 5/3 but was present in Round 4/2, then RUCLAS17 was set to RUCLAS42. If the person was not present in either

Rounds 4/2 or 5/3 but was present in Round 3/1, then RUCLAS17 was set to RUCLAS31. If the person was not linked to a responding RU during any round, then RUCLAS17 was set to -9.

**Geographic Variables**

The round-specific variables REGION31, REGION42, REGION53, and the end-of-year status variable REGION17 indicate the Census region for the RU. REGION17 indicates the region for the 2017 portion of Round 5/3. For most analyses, REGION17 should be used.

The values and states for each region include the following:

| Value | Label | States |
|---|---|---|
| 1 | Northeast | Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont |
| 2 | Midwest | Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin |
| 3 | South | Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia |
| 4 | West | Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming |

**Reference Period Dates**

The reference period is the period of time for which data were collected in each round for each person. The reference period dates were determined during the interview for each person by the CAPI program. The round-specific beginning reference period dates are included for each person. These variables include BEGRFM31, BEGRFY31, BEGRFM42, BEGRFY42, BEGRFM53, and BEGRFY53. The reference period for Round 1 for most persons began on January 1, 2017 and ended on the date of the Round 1 interview. For RU members who joined later in Round 1, the beginning Round 1 reference date was the date the person entered the RU. For all subsequent rounds, the reference period for most persons began on the date of the previous round's interview and ended on the date of the current round's interview. Persons who joined after the previous round's interview had their beginning reference date for the round set to the day they joined the RU.

The round-specific ending reference period dates for Rounds 3/1, 4/2, and 5/3 as well as the end-of-year reference period end date variables are also included for each person. These variables include ENDRFM31, ENDRFY31, ENDRFM42, ENDRFY42, ENDRFM53, ENDRFY53, ENDRFM17, and ENDRFY17. For most persons in the sample, the date of the round's interview is the reference period end date. Note that the end date of the reference period for a person is prior to the date of the interview if the person was deceased during the round, left the RU, was institutionalized prior to that round's interview, or left the RU to join the military.

**Reference Person Identifiers**

The round-specific variables REFPRS31, REFPRS42, and REFPRS53 and the end-of-year status variable REFPRS17 identify the reference person for Rounds 3/1, 4/2 and 5/3, and as of December 31, 2017 (or the last round they were in the survey). In general, the reference person is defined as the household member 16 years of age or older who owns or rents the home. If more than one person meets this description, the household respondent identifies one from among them. If the respondent is unable to identify a person fitting this definition, the questionnaire asks for the head of household and this person is then considered the reference person for that RU. This information is collected in the Reenumeration section of the CAPI questionnaire.

**Respondent Identifiers**

The respondent is the person who answered the interview questions for the Reporting Unit (RU). The round-specific variables RESP31, RESP42, and RESP53 and the end-of-year status variable RESP17 identify the respondent for Rounds 3/1, 4/2, and 5/3 and as of December 31, 2017 (or the last round they were in the survey). Only one respondent is identified for each RU. In instances where the interview was completed in more than one session, only the first respondent is indicated.

There are two types of respondents. The respondent can be either an RU member or a non-RU member proxy. The round-specific variables PROXY31, PROXY42, and PROXY53 and the end-of-year status variable PROXY17 identify the type of respondent for Rounds 3/1, 4/2, 5/3 and as of December 31, 2017 (or the last round they were in the survey).

**Language of Interview**

The language of interview variable (INTVLANG) is a summary value of the round-specific RU-level information section question, (RS02), which asks the interviewer to record the language in which the interview was completed: English, Spanish, Both English and Spanish, Other Language. Given the first round that the person was part of the study and the person's associated RU for that round, INTVLANG is assigned the interview language value reported for the person's RU for the round.

**Person Status**

A number of variables describe the various components reflecting each person's status for each round of data collection. These variables provide information about a person's in-scope status, Keyness status, eligibility status, and disposition status. These variables include: KEYNESS, INSCOP31, INSCOP42, INSCOP53, INSCOP17, INSC1231, INSCOPE, ELGRND31, ELGRND42, ELGRND53, ELGRND17, PSTATS31, PSTATS42, and PSTATS53. These variables are set based on sampling information and responses provided in the reenumeration section of the CAPI questionnaire.

Through the reenumeration section of the CAPI questionnaire, each member of an RU was classified as "Key" or "Non-Key", "in-scope" or "out-of-scope", and "eligible" or "ineligible" for MEPS data collection. To be included in the set of persons used in the derivation of MEPS person-level estimates, a person had to be a member of the civilian noninstitutionalized

population for at least one day during 2017. Because a person's eligibility for the survey might have changed since the NHIS interview, a sampling reenumeration of household membership was conducted at the start of each round's interview. Only persons who were "inscope" sometime during the year, were "Key", and responded for the full period in which they were inscope were assigned positive person-level weights and thus are to be used in the derivation of person-level national estimates from the MEPS.

Note: If analysts want to subset to infants born during 2017, then newborns should be identified using AGE17X = 0 rather than PSTATSxy = 51.

**Inscope**

The round-specific variables INSCOP31, INSCOP42, and INSCOP53 indicate a person's in-scope status for Rounds 3/1, 4/2, and 5/3. INSCOP17, INSC1231, and INSCOPE indicate a person's in-scope status for the portion of Round 5/3 that covers 2017, the person's in-scope status as of 12/31/17, and whether a person was ever in-scope during the calendar year 2017. A person was considered as in-scope during a round or a referenced time period if he or she was a member of the U.S. civilian, noninstitutionalized population at some time during that round or that time period. The values of these variables taken in conjunction allow one to determine in-scope status over time (for example, becoming inscope in the middle of a round, as would be the case for newborns). These variables may contain the following values and corresponding labels:

| Value | Definition |
|---|---|
| 0 | Incorrectly listed, or on NHIS roster but out-of-scope prior to January 1, 2017 |
| 1 | Person is inscope for the whole reference period |
| 2 | Person is inscope at the start of the RU reference period, but not at the end of the RU reference period |
| 3 | Person is not inscope at the start of RU reference period, but is inscope at the end of the RU reference period. (For example, the person is inscope from the date the person joined the RU or the person was in the military in the previous round, but is no longer in the military in the current round) |
| 4 | Person is inscope during the reference period, but neither at the reference start date nor on the reference end date. (For example, person leaves an institution, goes into community, and then dies) |
| 5 | Person is out-of-scope for all of the reference period during which he or she is an RU member. (For example, the person is in the military) |
| 6 | Person is out-of-scope for the entire reference period and is not a member of the RU during this time period and was inscope and an RU member in an earlier round |
| 7 | Person is not in an RU, joined in a later round (or joined the RU after December 31, 2017 for INSCOP17) |
| 8 | RU Non-response and Key persons who left an RU with no tracing info and so a new RU was not formed |

| Value | Definition |
|---|---|
| 9 | Person is not a member of an RU during this time period, and was an RU member in an earlier round |

**Keyness**

The term "Keyness" is related to an individual's chance of being included in MEPS. A person is Key if that person is linked for sampling purposes to the set of NHIS sampled households designated for inclusion in MEPS. Specifically, a Key person was either a member of a responding NHIS household at the time of interview, or joined a family associated with such a household after being out-of-scope at the time of the NHIS (examples of the latter situation include newborns and those returning from military service, an institution, or residence in a foreign country).

A non-Key person is one whose chance of selection for the NHIS (and MEPS) was associated with a household eligible but not sampled for the NHIS and who later became a member of a MEPS Reporting Unit. MEPS data (e.g., utilization and expenditures) were collected for the period of time a non-Key person was part of the sampled unit to provide information for family-level analyses. However, non-Key persons who leave a sample household unaccompanied by a Key, in-scope member were not followed for subsequent interviews. Non-Key individuals do not receive sample person-level weights and thus do not contribute to person-level national estimates.

The variable KEYNESS indicates a person's Keyness status. This variable is not round-specific. Instead, it is set at the time the person enters MEPS, and the person's Keyness status never changes. Once a person is determined to be Key, that person will always be Key.

It should be pointed out that a person might be Key even though not part of the civilian, noninstitutionalized portion of the U.S. population. For example, a person in the military may have been living with his or her civilian spouse and children in a household sampled for NHIS. The person in the military would be considered a Key person for MEPS; however, such a person would not be eligible to receive a person-level sample weight if he or she was never inscope during 2017.

**Eligibility**

The eligibility of a person for MEPS pertains to whether or not data were to be collected for that person. All of the Key in-scope persons of a sampled RU were eligible for data collection. The only non-Key persons eligible for data collection were those who happened to be living in an RU with at least one Key, in-scope person. Their eligibility continued only for the time that they were living with at least one such person. The only out-of-scope persons eligible for data collection were those who were living with Key in-scope persons, again only for the time they were living with such a person. Only military persons can meet this description (for example, a person on full-time active duty military, living with a spouse who is Key).

A person may be classified as eligible for an entire round or for some part of a round. For persons who are eligible for only part of a round (for example, persons may have been

institutionalized during a round), data were collected for the period of time for which that person was classified as eligible. The round-specific variables ELGRND31, ELGRND42, ELGRND53 and the end-of-year status variable ELGRND17 indicate a person's eligibility status for Rounds 3/1, 4/2, and 5/3 and as of December 31, 2017.

**Person Disposition Status**

The round-specific variables PSTATS31, PSTATS42, and PSTATS53 indicate a person's response and eligibility status for each round of interviewing. The PSTATSxy variables indicate the reasons for either continuing or terminating data collection for each person in the MEPS. Using this variable, one could identify persons who moved during the reference period, died, were born, institutionalized, or who were in the military. Analysts should note that PSTATS53 provides a summary for all of Round 5/3, including transitions that occurred after 2017. Note that some categories may be collapsed for confidentiality purposes.

The following codes specify the value labels for the PSTATSxy variables.

| Value | Definition |
|---|---|
| -1 | The person was not fielded during the round or the RU was non-response |
| 0 | Incorrectly listed in RU at NHIS - applies to MEPS Round 1 only |
| 11 | Person in original RU, not full-time active military duty |
| 12 | Person in original RU, full-time active military duty, out-of-scope for whole reference period |
| 13 | Full-time student living away from home, but associated with sampled RU |
| 14 | The person is full-time active military duty during round, is inscope for part of the reference period and is in the RU at the end of the reference period |
| 21 | The person remains in a health care institution for the whole round - Rounds 4/2 and 5/3 only |
| 22 | The person leaves an institution (health care or non-health care) and rejoins the community - Rounds 4/2 and 5/3 only |
| 23 | The person leaves an institution and dies – Rounds 4/2 and 5/3 only |
| 24 | The person dies in a health care institution during the round (former RU member) - Rounds 4/2 and 5/3 only |
| 31 | Person from original RU, dies during reference period |
| 32 | Went to health care institution during reference period |
| 33 | Went to non-healthcare institution during reference period |
| 34 | Moved from original RU, outside U.S. (not as student) |
| 35 | Moved from original RU, to a military facility while on full-time active military duty |
| 36 | Went to institution (type unknown) during reference period |

| Value | Definition |
|---|---|
| 41 | Moved from the original RU, to new RU within U.S. (new RUs include RUs originally classified as "Student RU" but which converted to "New RU") |
| 42 | The person joins RU and is not full-time military during round |
| 43 | The person's disposition as to why the person is not in the RU is unknown or the person moves and it is unknown whether the person moved inside or outside the U.S. |
| 44 | The person leaves an RU and joins an existing RU and is not both in the military and coded as inscope during the round |
| 51 | Newborn in reference period |
| 61 | Died prior to reference period (not eligible)-Round 3/1 only |
| 62 | Institutionalized prior to reference period (not eligible)-Round 3/1 only |
| 63 | Moved outside U.S., prior to reference period (not eligible)-Round 3/1 only |
| 64 | Full-time military, living on a military facility, moved prior to reference period (not eligible)-Round 3/1 only |
| 71 | Student under 24 living away at school in grades 1-12 (Non-Key) |
| 72 | Person is dropped from the RU roster as ineligible: the person is a non-Key student living away or the person is not related to reference person or the RU is the person's residence only during the school year |
| 73 | Not Key and not full-time military, moved without someone Key and in-scope (not eligible) |
| 74 | Moved as full-time military but not to a military facility and without someone Key and in-scope (not eligible this round) |
| 81 | Person moved from original RU, full-time student living away from home, did not respond |

### 2.5.2 Navigating the MEPS Data with Information on Person Disposition Status

Since the variables PSTATS31, PSTATS42, and PSTATS53 indicate the reasons for either continuing or terminating data collection for each person in MEPS, these variables can be used to explain the beginning and ending dates for each individual's reference period of data collection, as well as which sections in the instrument each individual did not receive. By using the information included in the following table, analysts will be able to determine for each individual which sections of the MEPS questionnaire collected data elements for that person.

Some individuals have a reference period that spans an entire round, while other individuals may have data collected only for a portion of the round. When an individual's reference period does not coincide with the RU reference period, the individual's start date may be a later date, or the end date may be an earlier date, or both. In addition, some individuals have reference period information coded as "Inapplicable" (e.g., for individuals who were not actually in the household). The information in this table indicates the beginning and ending dates of reference periods for persons with various values of PSTATS31, PSTATS42, and PSTATS53. The actual

dates for each individual can be found in the following variables included on this file: BEGRFM31, BEGRFM42, BEGRFM53, BEGRFY31, BEGRFY42, BEGRFY53, ENDRFM31, ENDRFM42, ENDRFM53, ENDRFY31, ENDRFY42, ENDRFY53, ENDRFM17, and ENDRFY17.

The table below also describes the section or sections of the questionnaire that were **NOT** asked for each value of PSTATS31, PSTATS42, and PSTATS53. For example, the Condition Enumeration (CE) and Preventive Care (AP) sections have questions that are not asked for deceased persons. The Closing (CL) section also contains some questions or question rosters that exclude certain persons depending on whether the person died, became institutionalized, or otherwise left the RU; however, no one is considered to have skipped the entire section. Some questions or sections (e.g., Health Status (HE), Employment (RJ, EM, EW)) are skipped if individuals are not within a certain age range. Since the PSTATS variables do not address skip patterns based on age, analysts will need to use the appropriate age variables.

The paper-and-pencil Self-Administered Questionnaire (SAQ) was designed to collect information during Panel 22 Round 2 and Panel 21 Round 4. A person was considered eligible to receive an SAQ if that person did not have a status of deceased or institutionalized, did not move out of the U.S. or to a military facility, was not a non-response at the time of the Round 2 or Round 4 interview date, and was 18 years of age or older. No RU members added in Round 3 or Round 5 were asked to complete an SAQ questionnaire. Because PSTATS variables do not address skip patterns based on age, this questionnaire was not included in the table below. Once again, analysts will need to use the appropriate age variable which in this case would be AGE42X. The documentation for this questionnaire appears in the SAQ section of this document under "Health Status Variables."

Please note that the end reference date shown below for PSTATS53 reflects the Round 5/3 reference period rather than the portion of Round 5/3 that occurred during 2017.

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| -1 | The person was not fielded during the round or the RU was non-response | ALL sections | Inapplicable | Inapplicable |
| 0 | Incorrectly listed in RU at NHIS - Round 1 only | ALL sections after RE | Inapplicable | Inapplicable |
| 11 | Person in original household, not FT active military duty (Person is in the same RU as the previous round) | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | Interview date |

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| 12 | Person in original household, FT active military duty, out-of-scope for whole reference period. | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | Interview date |
| 13 | FT student living away from home, but associated with sampled household | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | Interview date |
| 14 | The person is FT active military duty during round and is in-scope for part of the reference period and is in the RU at the end of the reference period | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | PSTATS31: Interview date PSTATS42 and PSTATS53: If the person is living w/ someone Key and in-scope, then the interview date. If not living w/ someone who is Key and inscope, then the date the person joined the military |
| 21 | The person remains in a health care institution for the whole round - Rounds 4/2 and 5/3 only | All sections after RE | Inapplicable | Inapplicable |
| 22 | The person leaves a health care institution and rejoins the community - Rounds 4/2 and 5/3 only | -- | Date rejoined the community | Interview date |
| 23 | The person leaves a health care institution, goes into community and then dies - Rounds 4/2 and 5/3 only | PE - Priority Conditions Enumeration<br>Part of CE - Condition Enumeration: Skip CE1 to CE5<br>HE - Health Status<br>AC - Access to Care<br>Part of AP - Preventive Care: Skip AP12 to AP22 | Date rejoined the community | Date of Death |

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| 24 | The person dies in a health care institution during the round (former household member) - Rounds 4/2 and 5/3 only | All sections after RE | Inapplicable | Inapplicable |
| 31 | Person from original household, dies during reference period | PE - Priority Conditions Enumeration<br>Part of CE - Condition Enumeration: Skip CE1 to CE5<br>HE - Health Status<br>AC - Access to Care<br>Part of AP - Preventive Care: Skip AP12 to AP22 | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Date of Death |
| 32 | Went to healthcare institution during reference period | Access to Care (AC) | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Date institutionalized |
| 33 | Went to non-healthcare institution during reference period | Access to Care (AC) | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Date institutionalized |
| 34 | Moved from original household, outside US | -- | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Date left the RU |
| 35 | Moved from original household, to a military facility while on FT active military duty | -- | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Date left the RU |

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| 36 | Went to institution (type unknown) during reference period | Access to Care (AC) | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | Date institutionalized |
| 41 | Moved from the original household, to new household within US (new households include RUs originally classified as a student RU but which converted to a new RU; these are individuals in an RU that has split from an RU since the previous round) | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date | Interview date |
| 42 | The person joins household and is not full-time military during round | -- | The later date of January 1, 2017 and the date the person joined the RU | Interview date |
| 43 | The person's disposition as to why the person is not in the RU is unknown or the person moves and it is unknown whether the person moved inside or outside the U.S. | All sections after RE | Inapplicable | Inapplicable |
| 44 | The person leaves an RU and joins an existing RU and is not both in the military and coded as inscope during the round | -- | PSTATS31: January 1, 2017 PSTATS42 and PSTATS53: Prior round interview date of the RU the person has joined. This may not be the interview date of the RU that the person came from | Interview date |

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| 51 | Newborn in reference period | Questions where age must be > 1<br>Health Status (HE)<br>Disability Days (DD)<br>Employment (RJ/EM/EW) | PSTATS31: January 1, 2017 if born prior to 2017. The date of birth if born in 2017.<br>PSTATS42 and PSTATS53: The later of the prior round interview date and date of birth | Interview date |
| 61 | Died prior to reference period (not eligible)--Round 3/1 only | All sections after RE | Inapplicable | Inapplicable |
| 62 | Institutionalized prior to reference period (not eligible)--Round 3/1 only | All sections after RE | Inapplicable | Inapplicable |
| 63 | Moved outside U.S., prior to reference period (not eligible)--Round 3/1 only | All sections after RE | Inapplicable | Inapplicable |
| 64 | FT military, moved prior to reference period (not eligible)--Round 3/1 only | All sections after RE | Inapplicable | Inapplicable |
| 71 | Student under 24 living away at school in grades 1 through 12 (Non-Key) | -- | PSTATS31: January 1, 2017<br>PSTATS42 and PSTATS53: Prior round interview date | Interview date |
| 72 | Person is dropped from the RU roster as ineligible:<br>the person is a Non-Key student living away<br>or the person is not related to reference person<br>or the RU is the person's residence only during the school year | All sections after RE | Inapplicable | Inapplicable |
| 73 | Not Key and not full-time military, moved w/o someone Key and inscope (not eligible) | All sections after RE | Inapplicable | Inapplicable |

| PSTATS Value | PSTATS Description | Sections in the instrument which persons with this PSTATS value do NOT receive | Begin Reference Date | End Reference Date |
|---|---|---|---|---|
| 74 | Moved as full-time military but not to a military facility and w/o someone Key and in-scope (not eligible) | All sections after RE | Inapplicable | Inapplicable |
| 81 | Person moved from original household, FT student living away from home, did not respond | No data were collected | Inapplicable | Inapplicable |

### 2.5.3 Demographic Variables (AGE31X-DAPID53X)

**General Information**

Demographic variables provide information about the demographic characteristics of each person from the MEPS-HC. The characteristics include age, sex, race, ethnicity, marital status, educational attainment, and military service. As noted below, some variables have edited and imputed values. Most demographic variables on this file were asked during every round of the MEPS interview. These variables describe data for Rounds 3, 4, and 5 of Panel 21 (the panel that started in 2016); Rounds 1, 2 and 3 of Panel 22 (the panel that started in 2017); and status as of December 31, 2017. Demographic variables that are round-specific are identified by names including numbers "xy", where x and y refer to round numbers of Panel 21 and Panel 22 respectively. For example, AGE31X represents the age data relevant to Round 3 of Panel 21 or Round 1 of Panel 22. As mentioned in Section 2.5.1 "Survey Administration Variables", the variable PANEL indicates the panel from which the data were derived. A value of 21 indicates Panel 21 data and a value of 22 indicates Panel 22 data. The remaining demographic variables on this file are not round-specific.

The variables describing demographic status of the person as of December 31, 2017 were developed in two ways. First, the age variable (AGE17X) represents the exact age, calculated from date of birth and indicates age status as of 12/31/17. For the remaining December 31st variables [i.e., related to marital status (MARRY17X, SPOUID17, SPOUIN17), student status (FTSTU17X), and the relationship to reference persons (REFRL17X)], the following algorithm was used: data were taken from the Round 5/3 counterpart if non-missing; else, if missing, data were taken from the Round 4/2 counterpart; else from the Round 3/1 counterpart. If no valid data were available during any of these rounds of data collection, the algorithm assigned the missing value (other than -1 "Inapplicable") from the first round that the person was part of the study. When all three rounds were set to -1, a value of -9 "Not Ascertained" was assigned.

**Age**

Date of birth and age for each RU member were asked or verified during each MEPS interview (DOBMM, DOBYY, AGE31X, AGE42X, AGE53X). If date of birth was available, age was calculated based on the difference between date of birth and date of interview. Inconsistencies

between the calculated age and the age reported during the CAPI interview were reviewed and resolved. For purposes of confidentiality, the variables AGE31X, AGE42X, AGE53X, AGE17X, and AGELAST were top-coded at 85 years.

When date of birth was not provided but age was provided (either from the MEPS interviews or the 2015-2016 NHIS data), the month and year of birth were assigned randomly from among the possible valid options. For any cases still not accounted for, age was imputed using:

(1) the mean age difference between MEPS participants with certain family relationships (where available) or
(2) the mean age value for MEPS participants.

For example, a mother's age is imputed as her child's age plus 26, where 26 is the mean age difference between MEPS mothers and their children. A wife's age is imputed as the husband's age minus 3, where 3 is the mean age difference between MEPS wives and husbands.

Age was imputed in this way for 18 persons on this file. Age was determined for 4 additional persons from data in a later round.

AGELAST indicates a person's age from the last time the person was eligible for data collection during a specific calendar year. The age range for this variable is between 0 and 85.

**Sex**

Data on the gender of each RU member (SEX) were initially determined from the 2015 NHIS for Panel 21 and from the 2016 NHIS for Panel 22. The SEX variable was verified and, if necessary, corrected during each MEPS interview. The data for new RU members (persons who were not members of the RU at the time of the NHIS interviews) were also obtained during each MEPS round. When gender of the RU member was not available from the NHIS interviews and was not ascertained during one of the subsequent MEPS interviews, it was assigned in the following way. The person's first name was used to assign gender if obvious (no cases were resolved in this way). If the person's first name provided no indication of gender, then family relationships were reviewed (no cases were resolved this way). If neither of these approaches made it possible to determine the individual's gender, gender was randomly assigned (3 cases were resolved this way).

**Race and Ethnicity Group**

The race and the ethnic background questions were asked for each RU member during the MEPS interview. If the information was not obtained in Round 1, the questions were asked in subsequent rounds. It should be noted that race/ethnicity questions in the MEPS were revised starting with data collection in 2013 for Panel 16 Round 5, Panel 17 Round 3, and Panel 18 Round 1; this affected data starting with the FY 2012 file. Previously, there were two race questions, but starting with data collection in 2013, there is only one race question. All Asian categories listed in the second question were moved to the new single question. In addition, the new race question had additional detail for the Native Hawaiian and Other Pacific Islander categories. The main change for ethnicity is that the new questions allowed respondents to report more than one Hispanic ethnicity. Race/ethnicity data from earlier years may not be directly

comparable. The following table shows the variables used for FY 2002-2011 and FY 2012-2017, with these exceptions: 1) in FY 2012, RACEV1X categories 4 and 5 were not combined but are combined starting with 2013, and 2) RACEV2X and HISPNCAT were first introduced in 2013.

MEPS Race and Ethnicity Variables, by Years, 2002 to Present

| **FY PUFS 2002-2011** | **FY PUFS 2012-2017** |
|---|---|
| **RACE** | **RACE** |
| — | RACEVER<br>Used only in FY12-FY13.<br>1 Old Race Questions<br>2 New Race Questions |
| RACEX | RACEV1X |
| 1 White – No other race reported | 1 White – No other race reported |
| 2 Black – No other race reported | 2 Black – No other race reported |
| 3 American Indian/Alaska Native – No other race reported | 3 American Indian/Alaska Native – No other race reported |
| 4 Asian – No other race reported | 4 Asian – No other race reported (Used only in FY12. Starting in 2013, category 5 collapses into category 4.) |
| 5 Native Hawaiian/Pacific Islander – No other race reported | 5 Native Hawaiian/Pacific Islander – No other race reported (Used only in FY12. Starting in 2013, category 5 collapses into category 4.) |
| 6 Multiple races reported | 6 Multiple races reported |
| — | RACEV2X (Starting in 2013)<br>Treatment of categories 10 and 12 differed between 2013-2015 and 2016-2017 |
| | 1 White – No other race reported |
| | 2 Black – No other race reported |
| | 3 American Indian/Alaska Native – No other race reported |
| | 4 Asian Indian – No other race reported |
| | 5 Chinese – No other race reported |
| | 6 Filipino – No other race reported |
| | 10 Oth Asian/Natv Hawaiian/Pacfc Isl-No Oth |
| | 12 Multiple races reported |
| | -1 Inapplicable (Used only in FY13) |

| FY PUFS 2002-2011 | FY PUFS 2012-2017 |
|---|---|
| RACETHNX | RACETHX |
| 1 Person is Hispanic | 1 Hispanic |
| 2 Person is Black – No other race reported/Not Hispanic | 2 Non-Hispanic White only |
| 3 Person is Asian – No other race reported/Not Hispanic | 3 Non-Hispanic Black only |
| 4 Other race/Not Hispanic | 4 Non-Hispanic Asian only |
| — | 5 Non-Hispanic Other race or multi-race |
| RACEAX | RACEAX |
| 1 Asian – No other race reported | 1 Asian – No other race reported |
| 2 Asian – Other race(s) reported | 2 Asian – Other race(s) reported |
| 3 All other race assignments | 3 All other race assignments |
| RACEBX | RACEBX |
| 1 Black – No other race reported | 1 Black – No other race reported |
| 2 Black – Other race(s) reported | 2 Black – Other race(s) reported |
| 3 All other race assignments | 3 All other race assignments |
| RACEWX | RACEWX |
| 1 White – No other race reported | 1 White – No other race reported |
| 2 White – Other race(s) reported | 2 White – Other race(s) reported |
| 3 All other race assignments | 3 All other race assignments |
| **ETHNICITY** | **ETHNICITY** |
| HISPANX | HISPANX |
| 1 Hispanic | 1 Hispanic |
| 2 Not Hispanic | 2 Not Hispanic |
| HISPCAT | HISPCAT (Used only in FY12-FY13) |
| 1 Puerto Rican | 1 Puerto Rican |
| 2 Cuban/Cuban American | 2 Cuban/Cuban American |
| 3 Dominican | 3 Dominican |
| 4 Mexican/Mexican American | 4 Mexican/Mexican American |
| 5 Central or South American | 5 Central or South American |
| 6 Non-Hispanic | 6 Non-Hispanic |
| 91 Other Latin American | 91 Other Latin American |
| 92 Other Hispanic/ Latino | 92 Other Hispanic/ Latino |
| — | -1 Inapplicable |

| FY PUFS 2002-2011 | FY PUFS 2012-2017 |
|---|---|
| | HISPNCAT (starting in 2013) |
| | 1 Mexican/Mexican American/Chicano – No other Hispanic reported |
| | 2 Puerto Rican – No other Hispanic reported |
| | 3 Cuban/Cuban American – No other Hispanic reported |
| | 4 Dominican – No other Hispanic reported |
| | 5 Central or South American – No other Hispanic reported |
| | 6 Oth Lat Am/Hisp/Latino/Spnsh orgn – No other Hispanic reported |
| | 8 Multiple Hispanic groups reported |
| | 9 Non-Hispanic |
| | -1 Inapplicable (Used only in FY13) |

Race and ethnicity variables and their response categories for years prior to 2002 are available in the documentation for the FY Consolidated PUF for each data year.

Values for these variables were obtained based on the following priority order. If available, data collected were used to determine race and ethnicity. If race and/or ethnicity were not reported in the interview, then data obtained from the originally collected NHIS data were used. If still not ascertained, the race, and/or ethnicity were assigned based on relationship to other members of the DU using a priority ordering that gave precedence to blood relatives in the immediate family (this approach was used on 10 persons to set race and 5 persons to set ethnicity).

For the FY12 and FY13 PUFs, three new race variables were constructed for both the old and the new questions: RACEVER, RACEV1X, and RACETHX. The variable RACEVER was constructed to indicate which version of the race question(s) was asked and was included in only the 2012 and 2013 FY PUFs. RACEVER has been dropped starting with the 2014 PUF. The variables RACEV1X and RACETHX replace the variables RACEX and RACETHNX from 2002-2011. A new race variable, RACEV2X, was constructed only for the new race question and was added for the first time to the 2013 files. RACEV2X was set to -1 “Inapplicable” for persons that were not asked the new race question in FY13 only. This variable includes the expanded detail Asian categories and continues to be constructed for all PUFs.

The “multiple races reported” categories for RACEV1X and RACEV2X differ in the 2013-2015 PUFs but are the same starting with the 2016 PUF. In the 2013-2015 PUFs, persons with multiple Asian races or multiple Hawaiian/Pacific Islander races were considered multiple races for RACEV2X and were not considered multiple races for RACEV1X. Starting with the 2016

PUFs, persons with multiple Asian races or multiple Hawaiian/Pacific Islander races were no longer considered multiple races in RACEV2X.

For the FY12 and FY13 PUFs, the two Hispanic ethnicity variables from previous years were included: HISPANX and HISPCAT. The HISPANX variable continues to be constructed. The HISPCAT variable was constructed for specific Hispanic categories based only on the old question in FY12 and FY13 and HISPCAT has been dropped starting with the 2014 PUF. A new ethnicity variable, HISPNCAT, based on the new question, was introduced starting with 2013. HISPNCAT includes similar categories as HISPCAT but in a different order, and contains an additional category, 8 "Multiple Hispanic Groups Reported", to represent any multiple responses reported. HISPNCAT was set to -1 "Inapplicable" for persons that were not asked the new ethnicity question in FY13. This variable continues to be constructed for all PUFs.

Categories have been collapsed in the variables RACEV1X, RACEV2X and HISPNCAT. For RACEV1X, new with the 2012 PUF, categories 4 and 5 were collapsed in category 4 as "ASIAN/NATV HAWAIIAN/PACFC ISL-NO OTH" starting with the 2013 PUF. For RACEV2X, new with and starting with the 2013 PUF, categories 7, 8, 9, 10, and 11 were collapsed in category 10 as "OTH ASIAN/NATV HAWAIIAN/PACFC ISL-NO OTH," and for HISPNCAT, new with and starting with the 2013 PUF, categories 6 and 7 were collapsed in category 6 as "OTH LAT AM/HISP/LATINO/SPNSH ORGN-NO OTH".

**Language and English Proficiency**

Beginning in 2013, three questions were asked in the Demographic section to ascertain whether a foreign language was spoken in the household and, if so, how well each person could speak English. The language questions were asked the first time a household is interviewed (Round 1) and were only asked in later rounds (Rounds 2-5) if a new person joined the family. These questions replaced the preferred language questions that had been asked in the Access to Care section in Rounds 2 and 4 from 2002 to 2012.

In Round 1, all households were asked a family-level question to determine whether anyone age 5 or older in their family speaks a language other than English at home (RE102, OTHLANG). If the response to OTHLANG was 'Yes', then two other questions were asked: LANGSPK (RE102A) is a family-level question that asks whether the non-English language spoken in the household is Spanish or some other language. HWELLSPE (RE102B) is a person-level question that asks how well each person in the family can speak English. As a result, OTHLANG and LANGSPK are coded at the family level and HWELLSPE is coded at the person level. If the response to OTHLANG was 'No' then LANGSPK and HWELLSPE were set to '-1' (Inapplicable). Family members who are deceased or institutionalized in Round 1 are coded with a value of '-1' (Inapplicable). Minors under age 5 in households where OTHLANG = 1 are coded as having HWELLSPE = "5" (Under 5 years old – Inapplicable).

In Rounds 2 to 5, language questions are asked only if a new person >=5 has joined the family in that round. Any new information for language variables collected in a later round is applied only to the newly entered family member(s). As a result, even though OTHLANG and LANGSPK are asked as family-level concepts, their values on the PUF could differ between original family members (present at Round 1) and new family members (joining in Rounds 2-5). For example, if

original family members did not speak a foreign language, but a new person (>= age 5) joined the family in Round 3 and spoke Spanish, the original family members would have values OTHLANG = 2 and LANGSPK = -1, but the new family member would have values OTHLANG = 1 and LANGSPK = 1.

If the new member is a minor less than 5 years old and joined the family by himself/herself, that is, with no other person age 5 or older after Round 1, the language questions are not asked and OTHLANG, LANGSPK, HWELLSPE for such minors are coded with '-1' (Inapplicable).

Prior to the 2015 Consolidated file, the family-level variables OTHLANG and LANGSPK were set to '-1' (Inapplicable) for any new persons joining the family in Rounds 2 to 5, but the person-level value for HWELLSPE was collected and recorded on the file. Starting with the 2015 Consolidated file, OTHLANG and LANGSPK were set for all new persons in Rounds 2 to 5 with the family-level value collected in the round they entered MEPS. Minors who entered the family with a non-minor family member in Rounds 2-5 also receive the family-level values for OTHLANG and LANGSPK, but HWELLSPE was coded to a value of '5' for minors less than 5 years old when OTHLANG had a reported value of '1' (Yes). If the minor less than 5 years old joined the family by themselves after Round 1, they were assigned the values from the reference person from the round the minor joined for OTHLANG and LANGSPK, and HWELLSPE was coded to a value of '5' when the reference person's OTHLANG had a value of '1' (Yes).

Beginning with the 2017 PUF, for Round 3 of Panel 22 and Round 5 of Panel 21, the three language variables (OTHLANG, LANGSPK, and HWELLSPE) were constructed based on data collected at the person level for new household members, rather than at the RU level as in previous rounds. Data for these three variables, in these two rounds of data collection, are then brought up to the RU level to match data collected in previous rounds. The variables are brought up in the following order:

**OTHLANG**

If only persons < 5 years old joined the RU, then OTHLANG = -1.
If only one person >= 5 years old joined the RU with or without persons < 5 years old, then OTHLANG is set to the person level response from the person >= 5 years old.
If more than one person >= 5 years old joined the RU and at least one of them has the person level variable = 1, then OTHLANG = 1.
If more than one person >= 5 years old joined the RU and at least one of them has the person level variable = 2 (others may have RF or DK), then OTHLANG = 2.
If more than one person >= 5 years old joined the RU and all have the person level variable = RF, then OTHLANG = -7.
If more than one person >= 5 years old joined the RU and all have the person level variable = RF or DK, then OTHLANG = -8.

**LANGSPK**

If only persons < 5 years old joined the RU, then LANGSPK = -1.
If only one person >= 5 years old joined the RU with or without persons < 5 years old, then LANGSPK is set to the value of the person-level variable from the person >= 5 years old.
If more than one person >= 5 years old joined the RU and all of the persons have the person-level variable = 1, then LANGSPK = 1.

If more than one person >= 5 years old joined the RU and all of the persons have the person-level variable = 2, then LANGSPK = 2.
If more than one person >= 5 years old joined the RU and all have the person-level variable = RF, then LANGSPK = -7.
If more than one person >= 5 years old joined the RU and all have different values for the person-level variable (1, 2, RF, DK) then LANGSPK = -8.

**HWELLSPE** is set to the person level collected variable for any new members when the constructed variable OTHLANG = 1, including new persons under age 5 who are then assigned a value of 5 "Under 5 and OTHLANG = 1, Inapplicable." If OTHLANG ^= 1, then HWELLSPE is set to 'Inapplicable' (-1).

**Foreign Born Status**

Three foreign born questions were asked in the Demographic section to ascertain whether a person was born in the U.S. (RE102C), what year they came to the U.S. (RE102D) if not born in the U.S., and years lived in the U.S. (RE102E) if the response to RE102D was 'Don't Know'. They replaced similar questions that had been asked in the Access to Care section prior to 2013.

The three foreign born questions were only asked once for each eligible person, that is, the first round the person was interviewed. These new questions were asked of everyone, except deceased and institutionalized persons. The data from RE102C are reported as the constructed variable BORNUSA. The data from RE102D (YRCAMEUS) and RE102E (YRSINUSA) were used to calculate the number of years a person has lived in the U.S. for the constructed variable YRSINUS. Please note that YRSINUS is a discrete variable and has collapsed categories: 1 "less than 1 year"; 2 "1 yr., less than 5 years"; 3 "5 yrs., less than 10 years"; 4 "10 yrs., less than 15 years"; 5 "15 years or more".

**Marital Status and Spouse ID**

Current marital status was collected and/or updated during every round of the MEPS interview. This information was obtained in RE13 and RE97 and is reported as MARRY31X, MARRY42X, MARRY53X, and MARRY17X. Persons under the age of 16 were coded as 6 "Under 16 – Inapplicable". If marital status of a specified round differed from that of the previous round, then the marital status of the specified round was edited to reflect a change during the round (e.g., married in round, divorced in round, separated in round, or widowed in round).

In instances where there were discrepancies between the marital statuses of two individuals within a family, other person-level variables were reviewed to determine the edited marital status for each individual. Thus, when one spouse was reported as married and the other spouse reported as widowed, the data were reviewed to determine if one partner should be coded as 8 "Widowed in Round".

Edits were performed to ensure some consistency across rounds. First, a person could not be coded as "Never Married" after previously being coded as any other marital status (e.g., "Widowed"). Second, a person could not be coded as "Under 16 – Inapplicable" after being

previously coded as any other marital status. Third, a person could not be coded as "Married in Round" after being coded as "Married" in the round immediately preceding. Fourth, a person could not be coded as an "in Round" code (e.g., "Widowed in Round") in two subsequent rounds. Since marital status can change across rounds and it was not feasible to edit every combination of values across rounds, unlikely sequences for marital status across the round-specific variables do exist.

The person identifier for each individual's spouse is reported in SPOUID31, SPOUID42, SPOUID53, and SPOUID17. These are the PIDs (within each family) of the person identified as the spouse during Round 3/1, Round 4/2, and Round 5/3 and as of December 31, 2017, respectively. If no spouse was identified in the household, the variable was coded as 995 "No Spouse in House". Those with unknown marital status are coded as 996 "Marital Status Unknown". Persons under the age of 16 are coded as 997 "Less than 16 Years Old".

The SPOUIN31, SPOUIN42, SPOUIN53, and SPOUIN17 variables indicate whether a person's spouse was present in the RU during Round 3/1, Round 4/2, Round 5/3 and as of December 31, 2017 respectively. If the person had no spouse in the household, the value was coded as 2 "Not Married/No Spouse". For persons under the age of 16 the value was coded as 3 "Under 16 – Inapplicable".

The SPOUID and SPOUIN variables were obtained from RE76A, where the respondent was asked to identify how each pair of persons in the household was related. Analysts should note that this information was collected in a set of questions separate from the questions that asked about marital status. While editing was performed to ensure that SPOUID and SPOUIN are consistent within each round, there was no consistency check between these variables and marital status in a given round. Apparent discrepancies between marital status and spouse information may be due to any of the following causes:

1. Ambiguity as to when during a round a change in marital status occurred. This is a result of relationship information being asked for all persons living in the household at any time during the round, while marital status is asked as of the interview date (e.g., If one spouse died during the reference period, the surviving spouse's marital status would be "Widowed in Round", but SPOUIN and SPOUID for the same round would indicate that a spouse was present).

2. Valid discrepancies in the case of persons who are married but not living with their spouse, or separating but still living together.

3. Discrepancies that cannot be explained for either of the previous reasons.

**Student Status and Educational Attainment**

The variables FTSTU31X, FTSTU42X, FTSTU53X, and FTSTU17X indicate whether the person was a full-time student at the interview date (or 12/31/17 for FTSTU17X). These variables have valid values for all persons between the ages of 17 - 23 inclusive. When this question was asked during Round 1 of Panel 22, it was based on age as of the 2016 NHIS interview date.

Education questions were only asked when persons first entered MEPS, typically Round 1 for most people. It should be noted that education questions were changed with data collection in 2012 and then changed back to the original questions with data collection in 2015. The variables associated with the original education questions (data collection in 2011 and prior years and 2015 and subsequent years) are EDUCYR and HIDEG. The variable associated with the interim education question (data collection in 2012-2014) is EDUYRDEG (or EDUYRDG with collapsed categories). The variable EDRECODE relates variables for the original and interim education questions. As a result, different education variables are in the 2011-2015 PUFs based on the panel and round when a person first entered MEPS. The PUF documentation for each of the 2011-2015 years contains details about which education variables are in the respective files. Starting with the 2016 PUFs, EDUCYR and HIDEG are the only education variables on the PUFs. EDUCYR contains the number of years of education completed when entering MEPS for individuals 5 years or older. Children under the age of 5 years were coded as -1 "Inapplicable" regardless of whether they attended school. Individuals who were 5 years of age or older and had never attended school were coded as 0. The user should note that EDUCYR is an unedited variable and minimal data cleaning was performed on this variable.

HIDEG contains information on the highest degree of education attained at the time the individual entered MEPS. Information was obtained from three questions: highest grade completed, high school diploma, and highest degree. Persons under 16 years of age when they first entered MEPS were coded as 8 "Under 16 – Inapplicable". In cases where the response to the highest degree question was "No Degree" and the response to the highest grade question was 13 through 17, the variable HIDEG was coded as 3 "High School Diploma". If the response to the highest grade completed was "Refused" or "Don't Know" and the response to the highest degree question was "No Degree", the variable HIDEG was coded as 1 "No Degree". The user should note that HIDEG is an unedited variable and minimal data cleaning was performed on this variable.

**Military Service and Honorable Discharge**

Information on active duty military status was collected during each round of the MEPS interview. Persons currently on full-time active duty status are identified in the variables ACTDTY31, ACTDTY42, and ACTDTY53. Those under 16 years of age were coded as 3 "Under 16 – Inapplicable", and those over the age of 59 were coded as 4 "Over 59 – Inapplicable".

Persons who have been honorably discharged from active duty in the Armed Forces are identified by HONRDC31, HONRDC42, and HONRDC53. Those 16 years of age and under are coded as 3 "16 or Younger – Inapplicable", and those over 16 and currently serving on full-time active duty in the military are coded as 4 "Now Active Duty".

**Relationship to the Reference Person within Reporting Units**

For each Reporting Unit (RU), the person who owns or rents the DU is usually defined as the reference person. For student RUs, the student is defined as the reference person. (For additional information on reference persons, see the documentation on survey administration variables.) The relationship variables indicate the relationship of each individual to the reference person of

the Reporting Unit (RU) in a given round. For confidentiality, detailed relationships were combined into more general categories in the variables REFRL31X, REFRL42X, REFRL53X, and REFRL17X. For the reference person, these variables have the value "Household reference person"; for all other persons in the RU, relationship to the reference person is indicated by codes representing "Spouse", "Unmarried Partner", "Child", etc. A code of 91, meaning "Other Related, Specify", was used to indicate rarely observed relationship descriptions such as "Mother of Partner", "Partner of Sister", etc. If the relationship of an individual to the reference person was not ascertained during the round-specific interview, relationships between other RU members were used, where possible, to assign a relationship to the reference person. If MEPS data from calendar year 2017 were not sufficient to identify the relationship of an individual to the reference person, relationship variables from the 2016 MEPS or NHIS data were used to assign a relationship. In the event that a meaningful value could not be determined or data were missing, the relationship variable was assigned a missing value code.

If the relationship of two individuals indicated they were spouses, but both had marital status indicating they were not married, their relationship was changed to non-marital partners. In addition, the relationship variables were edited to insure that they did not change across rounds for RUs in which the reference person did not change, with the exception of relationships identified as partner or spouse relationships.

**Parent Identifiers**

The variables MOPID31X, MOPID42X, MOPID53X and DAPID31X, DAPID42X, DAPID53X are round-specific and are used to identify the parents (biological, adopted, or step) of the person represented on that record. MOPID##X contains the person identifier (PID) for each individual's mother if she lived in the RU in that panel/round of the survey, or a value of –1 "Inapplicable" if she did not. Similarly, DAPID##X contains the person identifier (PID) for each individual's father if he lived in the RU in that panel/round of the survey, or a value of –1 "Inapplicable" if he did not. MOPID##X and DAPID##X were constructed based on information collected in the relationship grid of the instrument each round at question RE76A, and include biological, adopted, and stepparents. Foster parents were not included. For persons who were not present in the household during a round, MOPID##X and DAPID##X have values of –1 "Inapplicable".

Edits were performed to ensure that MOPID##X and DAPID##X were consistent with each individual's age, sex, and other relationships within the family. For instance, the gender of the parent must be consistent with the indicated relationship; mothers are at least 12 years older than the person and no more than 55 years older than the person; fathers are at least 12 years older than the person; each person has no more than one mother and no more than one father; and the PID for the person's mother and father are valid PIDs for that person's RU for the 2017 Full Year File.

### 2.5.4 Income and Tax Filing Variables (FILEDR17-HIEUIDX)

The file provides income and tax-related variables that were constructed primarily from data collected in the Panel 21 Round 5 and Panel 22 Round 3 Income Sections. Person-level income amounts have been edited and imputed for every record on the full-year file, with detailed

imputation flags provided as a guide to the method of editing. The tax-filing variables and some program participation variables are unedited, as discussed below.

During imputation, logical editing and weighted, sequential hot-decks were used to estimate income amounts for missing values (both for item nonresponse and for persons in the full-year file who were not in the income rounds). Reported income components were generally left unedited (with the few exceptions noted below). Thus, analysts using these data may wish to apply additional checks for outlier values that would appear to stem from misreporting.

The editing process began with wage and salary income, WAGEP17X. Complete responses were left unedited, and this group of people was assigned WAGIMP17=1, where WAGIMP17 is the imputation flag for wage and salary data. The only exception was for a small number of persons who reported zero wage and salary income despite having been employed for pay during the year according to round-level data (see below). Since data on tax filing and on taxable income sources were collected using an approach that encouraged respondents to provide information from their federal tax returns, logical edits were used to assign separate income amounts to married persons whose responses were based on combined income amounts on their joint tax returns.

Persons assigned WAGIMP17=2 were those providing broad income ranges (brackets) rather than giving specific dollar amounts. Weighted sequential hot-decking was used to provide these individuals with specific dollar amounts. For this imputation, donors were persons who reported specific dollar amounts within the corresponding broad income ranges. In 2017 (as in all previous years) there were a small number of cases where WAGEP17X=0 and WAGIMP17=2. These are cases where a married couple filing jointly reported wages with a bracket, and reported that one spouse earned $0 of that bracketed amount. All WAGEP17X hot-deck imputations used cells defined on the basis of a conventional list of person-level characteristics including age, education, employment status, race, sex, and region.

Persons assigned WAGIMP17=3 were those who did not report wage and salary income and who were assigned WAGEP17X=0 based on not having been employed during the year.

Persons assigned WAGIMP17=4 were those who did not provide valid dollar amounts or dollar ranges, but for whom we had related information from the employment sections of the survey. In most cases this information included wages, hours, and weeks worked; for some persons, only hours and weeks worked data were reported in the employment section. The available employment section data were used to construct annualized wage amounts to be used in place of missing income section annual wage and salary data. Comparisons of reported and constructed wages and salaries using persons who provided both sorts of information yielded a high degree of confidence that employment data could be reliably used to derive values to serve in place of missing wage and salary information. To implement this approach, part-year responders were assumed to be fully employed during the remainder of the year if they were employed during the period in which they provided data. An exception was made for those who either died or were institutionalized. These persons were assigned zero wages and salaries for the time they were not in MEPS.

Hot-deck imputation was used for the remaining persons with missing WAGEP17X. Donor pools included persons whose WAGEP17X amounts were edited in the steps described above.

Whenever possible, the hot-deck imputations used data on whether or not the person had been employed at any point during the year (and, if available, the number of weeks worked). Imputations for persons deemed to have been employed were conditional in nature, using only donors with positive WAGEP17X amounts (WAGIMP17=5). Imputations for WAGEP17X for the remaining persons were unconditional, using both workers and non-workers as donors (WAGIMP17=6).

After editing WAGEP17X for all persons in the full-year file, the remaining income sources were edited in the following sequence: INTRP17X, BUSNP17X, DIVDP17X, ALIMP17X, SALEP17X, TRSTP17X, PENSP17X, IRASP17X, SSECP17X, UNEMP17X, WCMPP17X, VETSP17X, CASHP17X, OTHRP17X, CHLDP17X, SSIP17X, and PUBP17X. Income components were edited sequentially, in each case using information regarding income amounts that had already been edited (so as to maintain patterns of correlation across income sources whenever possible). In all cases, bracketed responses were edited first (using hot-deck imputations from donors in corresponding brackets who gave specific dollar amounts), followed by imputations for remaining missing values. The hot-deck imputations used cells defined on the basis of income amounts already edited and a conventional list of person-level characteristics such as age, education, employment status, race, sex, and region. In addition, hot-deck imputations for CHLDP17X used family-level information concerning marital status and the number of children. Hot-deck imputations for SSIP17X and PUBP17X were also assigned using, in part, simulated program eligibility indicators that integrated state-level program eligibility criteria with data on family composition and income.

In the hot-decks for some income types, information from the National Health Interview Survey (NHIS) was used. The NHIS sample is the frame for the new sample selected for MEPS collection each year, with a year's time lag. Data from the 2015 NHIS correspond to MEPS Panel 21, while those from the 2016 NHIS correspond to MEPS Panel 22. Because MEPS units come from the NHIS, it is possible to match individual MEPS responding units to an NHIS unit.

Taking advantage of this matching ability, income recipiency indicators collected by NHIS were used in imputing for missing data in certain MEPS income components − interest, dividends, business income, pensions, and Social Security. (Not all MEPS income categories have an equivalent in NHIS. Also, wage data were available from NHIS, but were not used in the MEPS imputation process.)

In cases where data on a particular income category were missing for a person in MEPS, the indicator in that income category on the NHIS file was employed, if a valid response was supplied. Indicators were examined for the entire tax-filing unit (two people in the case of married couples filing jointly; one person in all other cases).

Reported income amounts of less than one dollar were treated as missing amounts (to be hot-decked from donors with positive amounts of the corresponding income source). Also, very few cases of outlier responses were edited (primarily public sources of income that exceeded possible amounts). Otherwise, reported amounts were left unchanged.

For each income component, the corresponding xxxIMP17 variable contains an indicator concerning the method for editing/imputation. All the flag variables have the following formatted values:

1 = Original response used;
2 = Bracket converted;
3 = Missing value set to 0;
4 = Weeks worked/earnings used (WAGIMP17 only);
5 = Conditional hot-deck;
6 = Unconditional hot-deck;

Missing values were set to zero when there were too few recipients to warrant hot-deck imputations of positive values (as in the case of ALIMP17X received by males). "Conditional hot-decks" indicate instances where the respondent indicated receipt but not a specific dollar amount. In these cases, the donor pool was restricted to persons with nonzero amounts of the income source in question. "Unconditional hot-decks" indicate instances where the donor pool included persons receiving both zero and nonzero amounts (implemented in cases where there was little or no information about a person's income source).

Total person-level income (TTLP17X) is the sum of all income components with the exception of SALEP17X (to match as closely as possible the CPS definition of income; see Section 2.5.4.2). Some researchers may wish to define their own income measure by adding in one or both of these excluded components.

The tax variables and food stamp variables are all completely unedited. Unedited tax variables are provided to assist researchers building tax simulation programs. No efforts have been made to eliminate inconsistencies among these program participation and tax variables and other MEPS data. All of these unedited variables should be used with great care.

Starting in Panel 21 Round 5 and Panel 22 Round 3, the question for "Did Person's check include AFDC or ADC" was not asked due to design changes; the variable AFDC17, which reflects participation in Temporary Assistance for Needy Families (TANF), is not available starting in Full Year 2017.

#### 2.5.4.1 Income Top-Coding

All person-level income amounts on the file, including both total income and the separate sources of income, were top-coded to preserve confidentiality. For each income source, top codes were applied to the top percentile of all cases (including negative amounts that exceeded income thresholds in absolute value). In cases where less than one percent of all persons received a particular income source, all recipients were top-coded.

Top-coded income amounts were masked using a regression-based approach. The regressions relied on many of the same variables used in the hot-deck imputations, with the dependent variable in each case being the natural logarithm of the amount that the income component was in excess of its top-code threshold. Predicted values from this regression were reconverted from logarithms to levels using a smearing correction, and these predicted amounts were then added back to the top-code thresholds. This approach preserves the component-by-component weighted

means (both overall and among top-coded cases), while also preserving much of the income distribution conditional on the variables contained in the regressions. At the same time, this approach ensures that every reported amount in excess of its respective threshold is altered on the public use file. The process of top-coding income amounts in this way inevitably introduces measurement error in cases where income amounts were reported correctly by respondents. Note, however, that top-coding can also help to reduce the impact of outliers that occur due to reporting errors.

Total person-level income is constructed as the sum of the adjusted person-level income components. Having constructed total income in this manner, this total was then top-coded using the same regression-based procedure described above (again masking the top percentile of cases). Finally, the components of income were scaled up or down in order to make the sources of income consistent with the newly-adjusted totals.

#### 2.5.4.2 Poverty Status

The definitions of income, family, and poverty categories used to construct the related variables in this file were taken from the 2017 poverty statistics developed by the Current Population Survey (CPS). The categorical variable for 2017 family income as a percentage of poverty (POVCAT17) was constructed using the same method as in earlier years' files.

FAMINC17 contains total family income for each person's CPS family. Family income was derived by constructing person-level total income comprising annual earnings from wages, salaries, bonuses, tips, commissions; business and farm gains and losses; unemployment and workers' compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, IRA withdrawals, social security, and veterans payments; supplemental security income and cash welfare payments from public assistance, and related programs; gains or losses from estates, trusts, partnerships, S corporations, rent, and royalties; and a small amount of "other" income. Person-level income excluded tax refunds and capital gains. Person-level income totals were then summed over family members, as defined by CPSFAMID, to yield CPS family-level total income (FAMINC17).

POVLEV17 is the continuous version of the POVCAT17 variable. The POVLEV17 percentage was computed by dividing CPS family income by the applicable poverty line (based on family size and composition). POVCAT17 takes the POVLEV17 percentage for each person and classifies it into one of five poverty categories: negative or poor (less than 100%), near poor (100% to less than 125%), low income (125% to less than 200%), middle income (200% to less than 400%), and high income (greater than or equal to 400%). Persons missing CPSFAMID were treated as one-person families in constructing their poverty percentage and category.

Family income, as well as the components of person-level income, has been subjected to internal editing patterns and derivation methods that are in accordance to specific definitions, and are not being released at this time. Researchers working with a family definition other than CPSFAMID may wish to create their own versions of total family income.

Health Insurance Eligibility Units (HIEUs) are sub-family relationship units constructed to include adults plus those family members who would typically be eligible for coverage under the

adults' private health insurance family plans. To construct the HIEUIDX variable, which links persons into a common HIEU, we begin with the family identification variable CPSFAMID. Working with this family ID, we define HIEUIDX using family relationships as of the end of 2017. Persons missing end-of-year relationship information are assigned to an HIEUIDX using relationship information from the last round in which they provided such information. HIEUs comprise adults, their spouses, and their unmarried natural/adoptive children age 18 and under. We also include children under age 24 who are full-time students (living at home or away from home). Other children who do not live with their natural/adoptive adult parents are placed in an HIEUIDX as follows:

- Other unmarried children are placed in stepparent HIEUIDX, grandparent HIEUIDX, great-grandparent HIEUIDX, or aunt/uncle HIEUIDX.
- Children of unmarried minors are placed (along with their minor parents) in the HIEUIDX of their adult grandparents (if possible). Married minors are placed into separate HIEUs along with any spouses and children they might have.
- Some HIEUs are headed by unmarried minors, when there is no adult family member present in the CPSFAMID.

HIEUs do not, in general, comprise adult (nonmarital) partnerships, because unmarried adult partners are rarely eligible for dependent coverage under each other's insurance. The exception to this rule is that we include adult partners in the same HIEU if there is at least one (out-of-wedlock) child in the family that links to both adult partners. In cases of missing or contradictory relationship codes, HIEUs are edited by hand, with the presumption being that the adults and children form a nuclear family.

### 2.5.5 Person-Level Condition Variables (RTHLTH31-ADHDAGED)

#### 2.5.5.1 Perceived Health Status

Perceived health status (RTHLTH31, RTHLTH42, and RTHLTH53) and perceived mental health status (MNHLTH31, MNHLTH42, and MNHLTH53) were collected in the Priority Conditions Enumeration (PE) section. The target persons of the questions are all current or institutionalized persons regardless of age. These questions (PE00A and PE00B) asked the respondent to rate each person in the family according to the following categories: excellent, very good, good, fair, and poor.

In 2017, the question that asked if anyone had been pregnant during the round ("Since (start date) has anyone in the family been pregnant at any time?") was dropped, and the variables PREGNT31, PREGNT42, and PREGNT53 are dropped from the file.

#### 2.5.5.2 Priority Condition Variables (HIBPDX-ADHDAGED)

The PE section was asked in its entirety in Round 1 for all current or institutionalized persons, and in Rounds 2 and 4 for only new RU members. In Round 3, the specific condition questions (except joint pain and chronic bronchitis) were asked only if the person had not reported the condition in a previous round; the joint pain and chronic bronchitis questions were asked in Round 3 for all current or institutionalized persons aged 18 or older, regardless of Round 1 and

Round 2 responses. Beginning in 2017, the PE section is no longer asked in Round 5 and no Round 5/3 variables are included in this file.

Priority condition variables whose names end in "DX" indicate whether the person was ever diagnosed with the condition. For chronic bronchitis, joint pain, and asthma follow-up questions (ASSTIL##, ASATAK##, and ASTHEP## described below), variables ending in "31" reflect data obtained in Round 3 of Panel 21 and Round 1 of Panel 22. Diagnoses data (except attention deficit hyperactivity disorder/attention deficit disorder and asthma) were collected for persons over 17 years of age. If edited age is within range for the variable to be set, but the source data are missing because person's age in CAPI is not within range, the constructed variable is set to "Not Ascertained" (-9). Additionally, if the person was 17 in Round 1, turned 18 in Round 2, and was not a current or institutionalized RU member in Round 3, the source data are missing per design. However, the DX variables are set to "Not Ascertained" (-9) as the person was old enough to be asked the PE questions within the data year. Following the same pattern, attention deficit hyperactivity disorder/attention deficit disorder is asked of persons age 5 to 17 and asthma is asked of persons of all ages. Exceptions to this pattern are the variables JTPAIN31 and CHBRON31, which are described in greater detail below.

Questions were asked regarding the following conditions:

- High blood pressure, including multiple diagnoses
- Heart disease (including coronary heart disease, angina, myocardial infarction, and other unspecified heart disease)
- Stroke
- Emphysema
- Chronic bronchitis
- High cholesterol
- Cancer
- Diabetes
- Joint pain
- Arthritis
- Asthma
- Attention Deficit Hyperactivity Disorder/Attention Deficit Disorder (ADHD/ADD)

These conditions were selected because of their relatively high prevalence, and because generally accepted standards for appropriate clinical care have been developed. This information thus supplements other information on medical conditions that is gathered in other parts of the interview.

Condition data were collected at the person-by-round level (indicating if the person was ever diagnosed with the condition) and at the condition level. If the person reported having been diagnosed with a condition, the person-by-round variable was set to '1' (Yes) and a condition record for that medical condition was created.

Editing of these variables focused on checking that skip patterns were consistent.

**High Blood Pressure**

Questions about high blood pressure (hypertension) were asked only of persons aged 18 or older. Consequently, persons aged 17 or younger were coded as "Inapplicable" (-1) on these variables. HIBPDX ascertained whether the person had ever been diagnosed as having high blood pressure (other than during pregnancy). Those who had received this diagnosis were also asked if they had been told on two or more different visits that they had high blood pressure (BPMLDX). The age of diagnosis for high blood pressure (HIBPAGED) is included in this file. This variable is top-coded to 85 years of age.

**Heart Disease**

Heart disease questions were asked only of persons aged 18 or older. Consequently, persons aged 17 or younger were coded as "Inapplicable" (-1) on all the variables in this set.

CHDDX – asked if the person had ever been diagnosed as having coronary heart disease

ANGIDX – asked if the person had ever been diagnosed as having angina, or angina pectoris

MIDX – asked if the person had ever been diagnosed as having a heart attack, or myocardial infarction

OHRTDX – asked if the person had ever been diagnosed with any other kind of heart disease or condition

The age of diagnosis for coronary heart disease (CHDAGED), angina (ANGIAGED), heart attack or myocardial infarction (MIAGED), and other kind of heart disease (OHRTAGED) are included in this file. These variables are top-coded to 85 years of age.

**Stroke**

STRKDX asked if the person (aged 18 or older) had ever been diagnosed as having had a stroke or transient ischemic attack (TIA or ministroke). Persons aged 17 or younger were coded as "Inapplicable" (-1). The age of diagnosis for stroke or TIA (STRKAGED) is included in this file. This variable is top-coded to 85 years of age.

**Emphysema**

EMPHDX asked if the person (aged 18 or older) had ever been diagnosed with emphysema. Persons aged 17 or younger were coded as "Inapplicable" (-1). The age of diagnosis for emphysema (EMPHAGED) is included in this file. This variable is top-coded to 85 years of age.

**Chronic Bronchitis**

CHBRON31 asked if the person (aged 18 or older) has had chronic bronchitis in the last 12 months. Persons aged 17 or younger were coded as "Inapplicable" (-1).

**High Cholesterol**

Questions about high cholesterol were asked of persons aged 18 or older. Consequently, persons aged 17 or younger were coded as "Inapplicable" (-1) on these variables. CHOLDX ascertained whether the person had ever been diagnosed as having high cholesterol. The age of diagnosis for high cholesterol (CHOLAGED) is included in this file. This variable is top-coded to 85 years of age.

**Cancer**

Questions about cancer were asked only of persons aged 18 or older. Consequently, persons aged 17 or younger were coded as "Inapplicable" (-1) on these variables. CANCERDX ascertained whether the person had ever been diagnosed as having cancer or a malignancy of any kind. If the respondent answered "Yes" they were asked at PE22 what type of cancer was diagnosed. CABLADDR, CABLOOD, CABREAST, CACERVIX, CACOLON, CALUNG, CALYMPH, CAMELANO, CAMUSCLE, CAOTHER, CAPROSTA, CASKINNM, CASKINDK, and CAUTERUS indicate selection of cancer of the bladder, blood, breast, cervix, colon, or lung; lymphoma or melanoma; cancer of the soft tissue, muscle, or fat; other type of cancer, cancer of the prostate, skin, or uterus. Cancer of the cervix or uterus could not be reported for males, and cancer of the prostate could not be reported for females.

**Recoding of Cancer Variables**

Specific cancer diagnosis variables with a frequency count fewer than 20 and those considered clinically rare (i.e., appear on the National Institutes of Health's list of rare diseases), were removed from the file for confidentiality reasons, and the corresponding variable CAOTHER, indicating diagnosis of a cancer that is not counted individually, was recoded to Yes (1) as necessary.

In data year 2017, the clinically rare cancers are:

- bone
- brain
- esophagus
- gallbladder
- kidney
- larynx
- leukemia
- liver
- mouth
- ovary
- pancreas
- rectum
- stomach
- testis
- throat
- thyroid

The variable CABREAST, which indicates diagnosis of breast cancer, was recoded to "Inapplicable" (-1) for males for confidentiality reasons. The corresponding value of the general cancer diagnosis variable, CANCERDX, was recoded to "Not Ascertained" (-9), and the corresponding values of remaining specific cancer variables were recoded to "Inapplicable" (-1).

**Diabetes**

DIABDX indicates whether each person (aged 18 or older) had ever been diagnosed with diabetes (excluding gestational diabetes). Persons aged 17 or younger were coded as "Inapplicable" (-1). The age of diagnosis for diabetes (DIABAGED) is included in this file. This variable is top-coded to 85 years of age.

In 2017, REFDIAB (denial by the respondent of a diabetes diagnosis) was dropped from CAPI. Each person said to have received a diagnosis of diabetes was asked to complete a special self-administered questionnaire. The documentation for this questionnaire appears in the Diabetes Care Survey (DCS) section of the documentation.

**Joint Pain**

JTPAIN31 asked if the person (aged 18 or older) had experienced pain, swelling, or stiffness around a joint in the last 12 months. This question is not intended to be used as an indicator of a diagnosis of arthritis. Persons aged 17 or younger were coded as "Inapplicable" (-1).

**Arthritis**

ARTHDX asked if the person (aged 18 or older) had ever been diagnosed with arthritis. Persons aged 17 or younger were coded as "Inapplicable" (-1). Respondents who answered "Yes" were asked a follow up question to determine the type of arthritis. ARTHTYPE indicates if the diagnosis was for Rheumatoid Arthritis (1), Osteoarthritis (2), or non-specific arthritis (3). The age of diagnosis for arthritis (ARTHAGED) is included in this file and may be recoded in some cases to "Not Ascertained" (-9) for confidentiality reasons. This variable is top-coded to 85 years of age.

**Asthma**

ASTHDX indicates whether a person had ever been diagnosed with asthma. The age of diagnosis for asthma (ASTHAGED) is included in this file. This variable is top-coded to 85 years of age.

Prior to 2017, the asthma questions were asked in Rounds 3 and 5. Beginning in 2017, the asthma questions were asked in Rounds 1 and 3, so no Round 5/3 asthma variables are included in this file.

Respondents who answered "Yes" to asthma diagnosis were asked additional questions. ASSTIL31 asked if the person still had asthma. ASATAK31 asked whether the person had experienced an episode of asthma or an asthma attack in the past 12 months. If the person did not experience an asthma attack in the past 12 months, a follow-up question (ASTHEP31) asked when the last asthma episode or asthma attack occurred.

Prior to 2017, questions regarding asthma medication used for quick relief, preventive medicine, and peak flow meters were asked in Rounds 3 and 5. Starting with Panel 21 Round 5/Panel 22 Round 3/Panel 23 Round 1, these questions were asked in Rounds 1 and 3. Since these 2017 data were not collected in Panel 22 Round 1, the asthma medication variables are not included in this file.

The asthma variables not included in this file are:

ASSTIL53 (Does Person Still Have Asthma - RD 5/3)
ASATAK53 (Asthma Attack Last 12 Mos - RD 5/3)
ASTHEP53 (When Was Last Episode of Asthma - RD 5/3)
ASACUT53 (Used Acute Pres Inhaler Last 3 Mos - RD5/3)

ASPREV53 (Ever Used Prev Daily Asthma Meds - RD5/3)
ASPKFL53 (Have Peak Flow Meter at Home - RD 5/3)
ASMRCN53 (Used >3Acute Cn Pres Inh Last 3 Mos - RD5/3)
ASDALY53 (Now Take Prev Daily Asthma Meds - RD 5/3)
ASEVFL53 (Ever Used Peak Flow Meter - RD 5/3)
ASWNFL53 (When Last Used Peak Flow Meter - RD 5/3)

It may appear that there are discrepancies between the diagnosis variable and the follow-up variables. If a person reported asthma in the PE section in Panel 22 Round 3, ASATAK31 and ASSTIL31 will be set to "Inapplicable" (-1) as the person had not reported asthma in Round 1.

**Attention Deficit Hyperactivity Disorder/Attention Deficit Disorder**

ADHDADDX asked if persons aged 5 through 17 had ever been diagnosed as having Attention Deficit Hyperactivity Disorder or Attention Deficit Disorder. Persons younger than 5 or older than 17 were coded as "Inapplicable" (-1). The age of diagnosis for attention deficit hyperactivity disorder/attention deficit disorder (ADHDAGED) is included in this file.

### 2.5.6 Health Status Variables (IADLHP31-CEFMPR31)

Due to the overlapping panel design of the MEPS (Round 3 for Panel 21 overlapped with Round 1 for Panel 22, Round 4 for Panel 21 coincided with Round 2 for Panel 22, and Round 5 for Panel 21 occurred at the same time as Round 3 for Panel 22), data from overlapping rounds have been combined across panels. Thus, any variable ending in "31" reflects data obtained in Round 3 of Panel 21 and Round 1 of Panel 22. Analogous comments apply to variables ending in "42". Health Status variables whose names end in "17" indicate a full-year measurement. Beginning in 2017, the Health Status (HE) section is no longer asked in Round 5 and no Round 5/3 variables are included in this file.

For persons in Panel 21, Round 3 extended from 2016 into 2017. Therefore, for these people, some information from late 2016 is included for variables that have names ending in "31".

Health Status variables in this data release can be classified into several conceptually distinct sets:

- IADL (Instrumental Activities of Daily Living) and ADL (Activities of Daily Living) limitations
- Functional and activity limitations
- Hearing, vision problems
- Disability status
- Hearing aids, eyeglasses
- Any limitations
- Child health and preventive care
- Preventive care
- Self-administered questionnaire
- Diabetes care survey
- Cancer self-administered questionnaire

In general, Health Status variables involved the construction of person-level variables based on information collected in the Health Status section of the questionnaire. Many Health Status questions were initially asked at the family level to ascertain if anyone in the household had a particular problem or limitation. These were followed up with questions to determine which household member had each problem or limitation. All information ascertained at the family level has been brought to the person level for this file. Logical edits were performed in constructing the person-level variables to assure that family-level and person-level values were consistent. Particular attention was given to cases where missing values were reported at the family level to ensure that appropriate information was carried to the person level.

Inapplicable cases occurred when a question was never asked because of a skip pattern in the survey (e.g., some follow-up verification questions were not asked about individuals who were 13 years of age or older; questions pertaining to children's health status were not asked about individuals older than 17). Inapplicable cases are coded as -1. In addition, deceased persons were coded as "Inapplicable" (-1).

Each of the sets of variables listed above will be described in turn.

#### 2.5.6.1 IADL and ADL Limitations

**IADL Help**

The Instrumental Activities of Daily Living (IADL) Help or Supervision variable (IADLHP31) was constructed from a series of three questions administered in the Health Status section of the interview in Panel 21 Round 3 and Panel 22 Round 1. The initial question (HE01) determined if anyone in the family received help or supervision with IADLs such as using the telephone, paying bills, taking medications, preparing light meals, doing laundry, or going shopping. If the response was "Yes", a follow-up question (HE02) was asked to determine which household member(s) received this help or supervision. For persons under age 13, a final verification question (HE03) was asked to confirm that the IADL help or supervision was the result of an impairment or physical or mental health problem. If the response to the final verification question was "No", IADLHP31 was coded "No" for persons under the age of 13.

If no one in the family was identified as receiving help or supervision with IADLs, all members of the family were coded as receiving no IADL help or supervision. In cases where the response to the family-level question was "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), all persons were coded according to the family-level response. In cases where the response to the family-level question (HE01) was "Yes" but no specific individuals were identified in the follow-up question as having IADL difficulties, all persons were coded as "Don't Know" (-8).

**ADL Help**

The Activities of Daily Living (ADL) Help or Supervision variable (ADLHLP31) was constructed in the same manner, and for the same persons, as the IADL help variables, but using questions HE04-HE06 in Panel 21 Round 3 and Panel 22 Round 1. Coding conventions for missing data were the same as for the IADL variables.

### 2.5.6.2 Functional and Activity Limitations

**Functional Limitations**

A series of questions asked in Panel 21 Round 3 and Panel 22 Round 1 pertained to functional limitations, which are defined as difficulty in performing certain specific physical actions. WLKLIM31 was the filter question. These variables were derived from a question (HE09) that was asked at the family level: "Does anyone in the family have difficulties walking, climbing stairs, grasping objects, reaching overhead, lifting, bending or stooping, or standing for long periods of time?" If the answer was "No", then all family members were coded as "No" (2) on WLKLIM31. If the answer was "Yes", then the specific persons who had any of these difficulties were identified and coded as "Yes" (1), and remaining family members were coded as "No" (2). If the response to the family-level question was "Don't Know" (-8), "Refused" (-7), "Not Ascertained" (-9), or "Inapplicable" (-1), then the corresponding missing value code was applied to each family member's value for WLKLIM31. If the answer to HE09 was "Yes" (1) but no specific individual was named as experiencing such difficulties, then each family member was assigned "Don't Know" (-8). Deceased persons were assigned a code of "Inapplicable" (-1) for WLKLIM31.

For Rounds 3 (Panel 21) and 1 (Panel 22), if WLKLIM31 was coded "Yes" (1) for any family member, a subsequent series of questions was administered. The series of questions for which WLKLIM31 served as a filter is as follows:

LFTDIF31 – difficulty lifting 10 pounds
STPDIF31 – difficulty walking up 10 steps
WLKDIF31 – difficulty walking 3 blocks
MILDIF31 – difficulty walking a mile
STNDIF31 – difficulty standing 20 minutes
BENDIF31 – difficulty bending or stooping
RCHDIF31 – difficulty reaching over head
FNGRDF31 – difficulty using fingers to grasp

This series of questions was asked separately for each person whose response to WLKLIM31 was coded "Yes" (1). The series of questions was not asked for other individual family members whose response to WLKLIM31 was "No" (2). In addition, this series was not asked about family members who were less than 13 years of age, regardless of their status on WLKLIM31. These questions were not asked about deceased family members. In such cases (i.e., WLKLIM31 = 2, or age < 13, or PSTATS31 = 23, 24, or 31), each question in the series was coded as "Inapplicable" (-1). Finally, if responses to WLKLIM31 were "Refused" (-7), "Don't Know" (-8), "Not Ascertained" (-9), or otherwise "Inapplicable" (-1), then each question in this series was coded as "Inapplicable" (-1).

Analysts should note that WLKLIM31 was asked of all household members, regardless of age. For the subsequent series of questions, however, persons less than 13 years old were skipped and coded as "Inapplicable" (-1). Therefore, it is possible for someone age 12 or younger to have a code of "Yes" (1) on WLKLIM31, and also to have codes of "Inapplicable" on the subsequent series of questions.

**Use of Assistive Technology and Social/Recreational Limitations**

The variables indicating use of assistive technology (AIDHLP31 from question HE07) and social/recreational limitations (SOCLIM31, from question HE22) were collected initially at the family level. If there was a "Yes" (1) response to the family-level question, a second question identified the specific individual(s) to whom the "Yes" response pertained. Each individual identified as having the difficulty was coded "Yes" (1) for the appropriate variable; all remaining family members were coded "No" (2). If the family-level response was "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" but no specific individual was identified as having difficulty, all family members were coded as "Don't Know" (-8).

**Work, Housework, and School Limitations**

The variable indicating any limitation in work, housework, or school (ACTLIM31) was constructed using questions HE19-HE20. Specifically, information was collected initially at the family level. If there was a "Yes" (1) response to the family-level question (HE19), a second question (HE20) identified the specific individual(s) to whom the "Yes" (1) response pertained. Each individual identified as having a limitation was coded "Yes" (1) for the appropriate variable; all remaining family members were coded "No" (2). If the family-level response was "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" (1) but no specific individual was identified as having limitation, all family members were coded as "Don't Know" (-8). Persons less than five years old were coded as "Inapplicable" (-1) on ACTLIM31.

For Round 3 (Panel 21) or Round 1 (Panel 22), if ACTLIM31 was "Yes" (1) and the person was 5 years of age or older, a follow-up question (HE20A) was asked to identify the specific limitation or limitations for each person. These included working at a job (WRKLIM31), doing housework (HSELIM31), or going to school (SCHLIM31). Respondents could answer "Yes" (1) or "No" (2) to each activity; thus a person could report limitations in multiple activities. WRKLIM31, HSELIM31, and SCHLIM31 have values of "Yes" (1) or "No" (2) only if ACTLIM31 was "Yes" (1); each variable was coded as "Inapplicable" (-1) if ACTLIM31 was "No" (2). When ACTLIM31 was "Refused" (-7), these variables were all coded as "Refused" (-7); when ACTLIM31 was "Don't Know" (-8), these variables were all coded as "Don't Know" (-8); and when ACTLIM31 was "Not Ascertained" (-9), these variables were all coded as "Not Ascertained" (-9). If a person was under 5 years old or was deceased, WRKLIM31, HSELIM31, and SCHLIM31 were each coded as "Inapplicable" (-1).

An additional question (UNABLE31) asked if the person was completely unable to work at a job, do housework, or go to school. Those persons who were coded "No" (2), "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9) on ACTLIM31, were under 5 years of age, or were deceased were coded as "Inapplicable" (-1) on UNABLE31. UNABLE31 was asked once for whichever set of WRKLIM31, HSELIM31, and SCHLIM31 the person had limitations; if a person was limited in more than one of these three activities, UNABLE31 did **not** specify if the person was completely unable to perform all of them, or only some of them.

**Cognitive Limitations**

The variable indicating any cognitive limitation (COGLIM31) was collected at the family level as a three-part question (HE24-01 to HE24-03), asking if any of the adults in the family (1) experience confusion or memory loss, (2) have problems making decisions, or (3) require supervision for their own safety. If a "Yes" response was obtained to any item, the persons affected were identified in HE25, and COGLIM31 was coded as "Yes" (1). Remaining family members not identified were coded as "No" (2) for COGLIM31.

If responses to HE24-01 through HE24-03 were all "No", or if two of three were "No" (2) and the remaining was "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), all family members were coded as "No" (2). If responses to the three questions were combinations of "Don't Know" (-8), "Refused" (-7), and missing, all persons were coded as "Don't Know" (-8). If the response to any of the three questions was "Yes" (1) but no individual was identified in HE25, all persons were coded as "Don't Know" (-8).

COGLIM31 reflects whether **any** of the three component questions is "Yes" (1). Family members with one, two, or three specific cognitive limitations cannot be distinguished. In addition, because the question asked specifically about adult family members, all persons less than 18 years of age are coded as "Inapplicable" (-1) on this question.

### 2.5.6.3 Hearing, Vision Problems

A series of questions (HE26 to HE32), asked in Panel 21 Round 4 and Panel 22 Round 2, provides information on hearing and visual impairment. Household members less than one year old and deceased RU members were coded as "Inapplicable" (-1).

The hearing impairment variable, DFHEAR42, indicates whether a person has serious difficulty hearing. This variable was based on two questions, HE26 and HE27. The initial question (HE26) determined if anyone in the family had difficulty hearing. If the response was "Yes" (1), a follow-up question (HE27) was asked to determine which household member(s) had a hearing impairment. If the family-level response was "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" (1) but no specific individual was identified as having serious difficulty hearing, all family members were coded as "Don't Know" (-8).

One subsequent question was asked only about individuals who had difficulty hearing (i.e., DFHEAR42 was "Yes" (1)). DEAF42 indicates whether the family member with hearing impairment is deaf. Persons with no hearing impairment were coded as "Inapplicable" (-1) for this question, as were persons with "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9) responses to DFHEAR42.

The visual impairment variable, DFSEE42, indicates whether a person has serious difficulty seeing. This variable was based on two questions, HE29 and HE30. The initial question (HE29) determined if anyone in the family had difficulty seeing. If the response was "Yes" (1), a follow-up question (HE30) was asked to determine which household member(s) had a seeing impairment. If the family-level response was "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the

family-level response was “Yes” (1) but no specific individual was identified as having serious difficulty seeing, all family members were coded as “Don’t Know” (-8).

One subsequent question was asked only about individuals who had difficulty seeing (i.e., DFSEE42 was “Yes” (1)). BLIND42 indicates whether the family member with seeing impairment is blind. Persons with no seeing impairment were coded as “Inapplicable” (-1) for this question, as were persons with “Don’t Know” (-8), “Refused” (-7), or “Not Ascertained” (-9) responses to DFSEE42.

#### 2.5.6.4 Disability Status

A series of questions (HE32 to HE39) in Panel 21 Round 4 and Panel 22 Round 2 provides information on cognitive difficulty, difficulty walking or climbing stairs, difficulty dressing or bathing, and difficulty doing errands. Questions regarding cognitive difficulty, difficulty walking or climbing stairs, and difficulty dressing or bathing were asked of household members 5 years of age and older. The question regarding difficulty doing errands was asked of household members 15 years of age and older. Deceased RU members were coded “Inapplicable” (-1).

DFCOG42 indicates whether a person had serious cognitive difficulty. This variable was based on two questions, HE32 and HE33. The initial question (HE32) determined if anyone in the family had difficulty concentrating, remembering or making decisions. If the response was “Yes” (1), a follow-up question (HE33) was asked to determine which household member(s) had difficulty concentrating, remembering or making decisions. If the family-level response was “Don’t Know” (-8), “Refused” (-7), or “Not Ascertained” (-9), all persons were coded with the family-level response. In cases where the family-level response was “Yes” (1) but no specific individual was identified as having serious cognitive difficulty, all family members were coded as “Don’t Know” (-8).

DFWLKC42 indicates whether a person has serious difficulty walking or climbing stairs. This variable was based on two questions, HE34 and HE35. The initial question (HE34) determined if anyone in the family had serious difficulty walking or climbing stairs. If the response was “Yes” (1), a follow-up question (HE35) was asked to determine which household member(s) had difficulty walking or climbing stairs. If the family-level response was “Don’t Know” (-8), “Refused” (-7), or “Not Ascertained” (-9), all persons were coded with the family-level response. In cases where the family-level response was “Yes” (1) but no specific individual was identified as having serious difficulty walking or climbing stairs, all family members were coded as “Don’t Know” (-8).

DFDRSB42 indicates whether a person has difficulty dressing or bathing. This variable was based on two questions, HE36 and HE37. The initial question (HE36) determined if anyone in the family had difficulty dressing or bathing. If the response was “Yes” (1), a follow-up question (HE37) was asked to determine which household member(s) had difficulty dressing or bathing. If the family-level response was “Don’t Know” (-8), “Refused” (-7), or “Not Ascertained” (-9), all persons were coded with the family-level response. In cases where the family-level response was “Yes” (1) but no specific individual was identified as having difficulty dressing or bathing, all family members were coded as “Don’t Know” (-8).

DFERND42 indicates whether a person has difficulty doing errands alone. This variable was based on two questions, HE38 and HE39. The initial question (HE38) determined if anyone in the family had difficulty doing errands alone. If the response was "Yes" (1), a follow-up question (HE39) was asked to determine which household member(s) had difficulty doing errands alone. If the family-level response was "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" (1) but no specific individual was identified as having difficulty doing errands alone, all family members were coded as "Don't Know" (-8).

#### 2.5.6.5 Hearing Aids, Eyeglasses

A series of questions (HE40 to HE43) provides information on hearing aids and eyeglasses. These questions were asked of all household members, regardless of age. Deceased RU members were coded "Inapplicable" (-1).

HEARAD42 indicates whether a person wears a hearing aid. This variable was based on two questions, HE40 and HE41. The initial question (HE40) determined if anyone in the family wore a hearing aid. If the response was "Yes", a follow-up question (HE41) was asked to determine which household member(s) wore a hearing aid. If the family-level response was "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" but no specific individual was identified as wearing a hearing aid, all family members were coded as "Don't Know" (-8).

WRGLAS42 indicates whether a person wears eyeglasses or contact lenses. This variable was based on two questions, HE42 and HE43. The initial question (HE42) determined if anyone in the family wore eyeglasses or contact lenses. If the response was "Yes" (1), a follow-up question (HE43) was asked to determine which household member(s) wore eyeglasses or contact lenses. If the family-level response was "Don't Know" (-8), "Refused" (-7), or "Not Ascertained" (-9), all persons were coded with the family-level response. In cases where the family-level response was "Yes" (1) but no specific individual was identified as wearing eyeglasses or contact lenses, all family members were coded as "Don't Know" (-8).

#### 2.5.6.6 Any Limitation Rounds 3 and 4 (Panel 21) / Rounds 1 and 2 (Panel 22)

ANYLMI17 summarizes whether a person had any IADL, ADL, functional, or activity limitations in any of the pertinent rounds. Beginning in Panel 21 Round 5 and Panel 22 Round 3, the HE section is no longer asked in Round 5, so Round 5 variables were dropped from construction, and the variable was renamed from ANYLMTyy. ANYLMI17 was built using the component variables IADLHP31, ADLHLP31, WLKLIM31, ACTLIM31, DFSEE42, and DFHEAR42. If any of these components was coded "Yes", then ANYLMI17 was coded "Yes" (1). If all components were coded "No", then ANYLMI17 was coded "No" (2). If all the components were "Inapplicable" (-1), then ANYLMI17 was coded as "Inapplicable" (-1). If all the components had missing value codes (i.e., -7, -8, -9, or -1), ANYLMI17 was coded as "Not Ascertained" (-9). If some components were "No" and others had missing value codes, ANYLMI17 was coded as "Not Ascertained" (-9). The exception to this latter rule was for children younger than five years old, who were not asked questions that are the basis for ACTLIM31; for these RU members, if all other components were "No", then ANYLMI17 was

coded as “No” (2). The variable label for ANYLMI17 departs slightly from conventions. Typically, variables that end in “17” refer only to 2017. However, some of the variables used to construct ANYLMI17 were assessed in 2018, so some information from early 2018 is incorporated into this variable.

#### 2.5.6.7 Child Health and Preventive Care

Questions were asked about each child (under the age of 18 excluding deceased children) in the applicable age subgroups to which they pertained. For the Child Supplement variables, a code of “Inapplicable” (-1) was assigned if a person was deceased, was not in the appropriate Round 2 or 4, or was not in the applicable age subgroup as of the interview date. This public use dataset contains variables and frequency distributions from the Child Health and Preventive Care Section associated with 8,790 children who were eligible for the Child Health and Preventive Care Section. Children were eligible for this section when PSTATS42 was not equal to 23, 24, 31 (Deceased) and 0 <= AGE42X <= 17. Of these children, 7,890 were assigned a positive person-level weight for 2017 (PERWT17F > 0). Cases not eligible for the Child Health and Preventive Care Section should be excluded from estimates made with the Child Health and Preventive Care Section.

**Children with Special Health Care Needs Screener (ages 0 - 17)**

The Children with Special Health Care Needs (CSHCN) Screener instrument was developed through a national collaborative process as part of the Child and Adolescent Health Measurement Initiative (CAHMI) coordinated by the Foundation for Accountability. A key reference for this screener instrument is:

> Bethel CD, Read D, Stein REK, Blumberg SJ, Wells N, Newacheck PW. Identifying Children with Special Health Care Needs: Development and Evaluation of a Short Screening Instrument. *Ambulatory Pediatrics* Volume 2, No. 1, January-February 2002, pp 38-48.

These questions are asked about children ages 0 –17. In general, the CSHCN screener identifies children with activity limitation or need or use of more health care or other services than is usual for most children of the same age. When a response to a gate question was set to “No” (2), “Refused” (-7), “Don’t Know” (-8), or “Not Ascertained” (-9), follow-up variables based on the gate question were coded as “Inapplicable” (-1).

The variable CSHCN42 identifies children with special health care needs, and was created using the CSHCN screener questions according to the specifications in the reference above. The CSHCN screener questions consist of a series of question-sequences about the following five health consequences: the need or use of medicines prescribed by a doctor; the need or use of more medical care, mental health, or education services than is usual for most children; being limited or prevented in doing things most children can do; the need or use of special therapy such as physical, occupational, or speech therapy; and the need or use of treatment or counseling for emotional, developmental, or behavioral problems. Parents who responded “yes” to any of the “initial” questions in the five-question sequences were then asked to respond to up to two follow-up questions about whether the health consequence was attributable to a medical, behavioral, or

other health condition lasting or expected to last at least 12 months. Children with positive responses to at least one of the five health consequences along with all of the follow-up questions were identified as having a Special Health Care Need. Children with a "no" response for all five-question sequences were considered NOT to have a Special Health Care Need. Those children whose "special health care need" status could not be determined (due to missing data for any of the questions) were coded as "Unknown" for CSHCN42. More information about the CSHCN screener questions can be obtained from the website for the Child and Adolescent Health Measurement Initiative.

The CSHCN screener questions were:

CHPMED42 – child needs or uses prescribed medicines

CHPMHB42 – prescribed medicines were because of a medical, behavioral, or other health condition

CHPMCN42 – health condition that causes a person to need prescribed medicines has lasted or is expected to last for at least 12 months

CHSERV42 – child needs or uses more medical care, mental health, or education services than is usual for most children of the same age

CHSRHB42 – child needs or uses more medical and other service because of a medical, behavioral, or other health condition

CHSRCN42 – health condition that causes a person to need or use more medical and other services has lasted or is expected to last for at least 12 months

CHLIMI42 – child is limited or prevented in any way in ability to do the things most children of the same age can do

CHLIHB42 – child is limited in the ability to do the things most children can do because of a medical, behavioral, or other health condition

CHLICO42 – health condition that causes a person to be limited in the ability to do the things most children can do has lasted or is expected to last for at least 12 months

CHTHER42 – child needs or gets special therapy such as physical, occupational, or speech therapy

CHTHHB42 – child needs or gets special therapy because of a medical, behavioral, or other health condition

CHTHCO42 – health condition that causes a person to need or get special therapy has lasted or is expected to last for at least 12 months

CHCOUN42 – child has an emotional, developmental, or behavioral problem for which he or she needs or gets treatment or counseling

CHEMPB42 – problem for which a person needs or gets treatment or counseling is a condition that has lasted or is expected to last for at least 12 months

CSHCN42 – identifies children with special health care needs

**Columbia Impairment Scale (ages 5 - 17)**

These questions inquired about possible child behavioral problems and were asked in previous years. Respondents were asked to rate on a scale from 0 to 4, where "0" indicates "No Problem" and "4" indicates "A Very Big Problem", how much of a problem the child has with thirteen specified activities. A key reference for the Columbia Impairment Scale is:

> Bird HR, Andrews H, et. al. "Global Measures of Impairment for Epidemiologic and Clinical Use with Children and Adolescents." *International Journal of Methods in Psychiatric Research,* vol. 6, 1996, pp. 295-307.

Certain questions in this series were coded to "Asked, but Inapplicable" (99) when the question was not applicable for a specific child. For example, if a child's mother was deceased, a question about how much of a problem a child has getting along with his/her mother would be set to "Asked, but Inapplicable" (99). Similarly, the question about problems getting along with siblings would be set to "Asked, but Inapplicable" (99) for children with no siblings. Variables in this set include:

MOMPRO42 – getting along with mother
DADPRO42 – getting along with father
UNHAP42 – feeling unhappy or sad
SCHLBH42 – (his/her) behavior at school
HAVFUN42 – having fun
ADUPRO42 – getting along with adults
NERVAF42 – feeling nervous or afraid
SIBPRO42 – getting along with brothers and sisters
KIDPRO42 – getting along with other kids
SPRPRO42 – getting involved in activities like sports or hobbies
SCHPRO42 – (his/her) schoolwork
HOMEBH42 – (his/her) behavior at home
TRBLE42 – staying out of trouble

**CAHPS® (Consumer Assessment of Healthcare Providers and Systems) ages 0 - 17**

The health care quality measures were taken from the health plan version of CAHPS®, an AHRQ sponsored family of survey instruments designed to measure quality of care from the consumer's perspective. All of the CAHPS® variables refer to events experienced in the last 12 months. The variables included from the CAHPS® are:

CHILCR42 – whether a person had an illness, injury, or condition that needed care right away from a clinic, emergency room, or doctor's office

CHILWW42 – how often a person got care as soon as was needed (coded as "-1 Inapplicable" when CHILCR42 = 2, -7, -8, or -9)

CHRTCR42 – whether any appointments were made

CHRTWW42 – how often a person got an appointment for health care as soon as was needed (coded as "-1 Inapplicable" when CHRTCR42 = 2, -7, -8, or -9)

CHAPPT42 – how many times a person went to a doctor's office or clinic for health care

CHNDCR42 – whether the parent or a doctor believed the person needed any care, tests or treatment (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHENEC42 – how often it was easy to get a person the care, tests, or treatment that the parent or a doctor believed necessary (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9 or when CHNDCR42 = 2, -7, -8, or -9).

CHLIST42 – how often a person's doctors or other health providers listened carefully to the parent (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHEXPL42 – how often a person's doctors or other health providers explained things in a way the parent could understand (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHRESP42 – how often a person's doctors or other health providers showed respect for what the parent had to say (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHPRTM42 – how often doctors or other health providers spent enough time with a person (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHHECR42 – rating of health care from 0 to 10 where 0 = Worst health care possible and 10 = Best health care possible (coded as "-1 Inapplicable" when CHAPPT42 = 0, -7, -8, or -9)

CHSPEC42 – whether a person needed to see a specialist

CHEYRE42 – how often it was easy to see a specialist (coded as "-1 Inapplicable" when CHSPEC42 = 2, -7, -8, or -9).

**Child Preventive Care (age range depends on question)**

A series of questions was asked about amounts and types of preventive care a child may receive when going to see a doctor or other health provider. Questions are asked of children of different

age groups depending on the nature of the questions. When a response to a gate question was set to "No" (2), "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), follow-up variables based on the gate question were coded as "Inapplicable" (-1). Variables in this set include:

MESHGT42 – doctor or other health provider ever measured child's height (0 – 17)

WHNHGT42 – when doctor or other health provider measured child's height (0 – 17)

MESWGT42 – doctor or other health provider ever measured child's weight (0 – 17)

WHNWGT42 – when doctor or other health provider measured child's weight (0 – 17)

CHBMIX42 – child's Body Mass Index (BMI) as based on child's reported height and weight (6 – 17)

MESVIS42 – doctor or other health provider ever checked child's vision (3 – 6)

MESBPR42 – Doctor or other health provider ever checked child's blood pressure (2 – 17)

WHNBPR42 – when doctor or other health provider checked child's blood pressure (2 – 17)

DENTAL42 – doctor or other health provider ever advised a dental checkup (2 – 17)

WHNDEN42 – when doctor or other health provider advised a dental checkup (2 – 17)

EATHLT42 – doctor or other health provider ever given advice about child's eating healthy (2 – 17)

WHNEAT42 – when doctor or other health provider gave advice about eating healthy (2 – 17)

PHYSCL42 – doctor or other health provider ever given advice about the amount and kind of exercise, sports or physically active hobbies the child should have (2 – 17)

WHNPHY42 – when doctor or other health provider gave advice about exercise (2 – 17)

SAFEST42 – doctor or other health provider ever given advice about using a safety seat when child rides in the car (weight <= 40 pounds or age 0 - 4 if weight is missing)

WHNSAF42 – when doctor or other health provider gave advice about using a safety seat (weight <= 40 pounds or age 0 - 4 if weight is missing)

BOOST42 – doctor or other health provider ever given advice about using a booster seat when child rides in the car (weight between 41 and 80 pounds or age > 4 and age <= 9 if weight is missing)

WHNBST42 – when doctor or other health provider gave advice about using a booster seat (weight between 41 and 80 pounds or age > 4 and age <= 9 if weight is missing)

LAPBLT42 – doctor or other health provider ever given advice about using lap and shoulder belts when child rides in the car (weight > 80 pounds or age > 9 if weight is missing)

WHNLAP42 – when doctor or other health provider gave advice about using lap and shoulder belts (weight > 80 pounds or age > 9 if weight is missing)

HELMET42 – doctor or other health provider ever given advice about the child's using a helmet when riding a bicycle or motorcycle (2 – 17)

WHNHEL42 – when doctor or other health provider gave advice about the child's using a helmet when riding a bicycle or motorcycle (2 – 17)

NOSMOK42 – doctor or other health provider ever given advice about how smoking in the house can be bad for child's health (0 – 17)

WHNSMK42 – when doctor or other health provider gave advice about how smoking in the house can be bad for the child's health (0 – 17)

TIMALN42 – during last health care visit, doctor or other health provider spent any time alone with the child (12 – 17)

Due to confidentiality concerns and restrictions, child height and weight variables are not included on the Full-Year file. Instead, a Body Mass Index (BMI) variable, CHBMIX42 is used. For the 2001 and 2002 PUFs, CHBMIX42 was included for children ages 3-17; all children age 2 and under were given a -1 "Inapplicable" code. Starting with the 2003 PUF, CHBMIX42 is included for all children ages 6-17; all children age 5 and under are given a -1 "Inapplicable" code. Please note: analysts can have access to the height and weight variables and/or can construct a BMI variable of their own through the AHRQ Data Center.

The steps used to calculate the BMI for children 6-17 are as follows:

1. Construct child height and weight variables HGTFT42, HGTIN42, WGTLB42, and WGTOZ42 based on collected data

2. Create a preliminary data set containing height, weight, sex, and age data

3. Generate a preliminary child BMI using the preliminary data set and the procedure for calculating the BMI for children as described on the Centers for Disease Control and Prevention website.

4. Create the child BMI variable CHBMIX42 using the preliminary child BMI, setting all deceased persons, all persons over 17 years old, and all persons 5 years old or younger to Inapplicable (-1)

Child height and weight were not top-coded prior to the construction of the preliminary data set. Where height in feet was > 0 and height in inches was missing, the mid-point value for height in inches (6 inches) was assigned to HGTIN42 for use in the calculation of the child BMI. Where height in feet was 0 and height in inches was missing, the preliminary child BMI was set to "Not Ascertained" (-9).

For cases where weight in pounds was between 1 and 20 and weight in ounces was missing (WGTOZ42 in (-7, -8, -9)), the mid-point value for weight in ounces (8 ounces) was assigned to WGTOZ42 for use in the calculation of the child BMI. Where weight in pounds was 0 and weight in ounces was missing, the preliminary child BMI was set to "Not Ascertained" (-9).

This use of the mid-points for inches and ounces ensures that children who have feet but not inches in height and/or pounds but not ounces in weight are included in the BMI calculation.

As indicated in step 2 above, a preliminary SAS data set containing height, weight, sex, and age data for children 6-17 years old in FY 2017 was created. One SAS program and one SAS dataset were downloaded from the Centers for Disease Control and Prevention website for the purpose of calculating the BMI for children (step 3). The program used the preliminary data set of children to generate a preliminary child BMI based on the 2000 CDC growth charts. The program used the following formula to calculate the preliminary BMI for children:

$$\text{Weight in Kilograms} / [(\text{Height in Centimeters}/100)]^2$$

Note that weight in pounds and ounces was converted to weight in kilograms in the preliminary data set. Similarly, height in feet and inches was converted to height in centimeters in the preliminary data set.

As indicated in step 4 above, the child BMI variable CHBMIX42 was calculated using this preliminary BMI from step 3. Deceased persons, persons > 17 years old, and children younger than 6 years old were set to "Inapplicable" (-1) for CHBMIX42. Children 6-17 years old with a missing value for height in feet (HGTFT42 is "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9)) and/or weight in pounds (WGTLB42 is "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9)) were set to "Not Ascertained" (-9) for CHBMIX42. Children whose height in feet was 0 and height in inches was missing (HGTIN42 is "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9)) were set to "Not Ascertained" (-9) for CHBMIX42. Children whose weight in pounds was 0 and weight in ounces was missing (WGTOZ42 is "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9)) were set to "Not Ascertained" (-9) for CHBMIX42. All other children 6-17 years old have a calculated BMI for FY 2017.

CHBMIX42 is not top- or bottom-coded or edited.

### 2.5.6.8 Preventive Care Variables

Prior to Panel 21 Round 5/Panel 22 Round 3, a series of questions was asked for each person about the receipt of preventive care or screening examinations. In Panel 21 Round 5/Panel 22 Round 3, this section was dropped from CAPI and the following variables were removed from this file:

DENTCK53 – on average, frequency of dental check-up
Age > 1; both genders

BPCHEK53 – how long since last blood pressure check
Age > 17; both genders

CHOLCK53 – about how long since last blood cholesterol check by doctor or health professional
Age >17; both genders

CHECK53 – how long since last routine check-up by doctor or other health professional for assessing overall health
Age >17; both genders

NOFAT53 – has a doctor or other health professional ever advised the person to eat fewer high fat or high cholesterol foods
Age > 17; both genders

EXRCIS53 – has a doctor advised the person to exercise more
Age > 17; both genders

FLUSHT53 – how long since last flu vaccination
Age >17; both genders

ASPRIN53 – does the person take aspirin frequently
Age > 17; both genders

NOASPR53 – is taking aspirin unsafe due to a medical condition
Age > 17; both genders; ASPRIN53 is "No" (2), "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9)

STOMCH53 – is taking aspirin unsafe due to a stomach-related reason or something else
Age > 17; both genders; NOASPR53=1 (taking aspirin is not safe)

PSA53 – how long since last prostate specific antigen (PSA) test
Age >39; males only

HYSTER53 – had a hysterectomy
Age >17; females only

PAPSMR53 – how long since last pap smear test
Age >17; females only

BRSTEX53 – how long since last breast exam
Age >17; females only

MAMOGR53 – how long since last mammogram
Age >29; females only

BSTST53 – when last blood stool test using the home kit
Age >39; both genders

BSTSRE53 – reason for blood stool test
Age >39; BSTST53 indicates person had a blood stool test

CLNTST53 – when last colonoscopy
Age >39; both genders

CLNTRE53 – reason for colonoscopy
Age >39; CLNTST53 indicates person had a colonoscopy

SGMTST53 – when last sigmoidoscopy
Age >39; both genders

SGMTRE53 – reason for sigmoidoscopy
Age >39; SGMTST53 indicates person had a sigmoidoscopy

BMINDX53 – Adult Body Mass Index (BMI) as based on reported height and weight
Age > 17; both genders

SEATBE53 – wears seat belt when drives or rides in a car
Age >15; both genders

In addition, the height and weight variables used to construct the adult Body Mass Index variable (BMINDX53) were collected in the Preventive Care section, so BMINDX53 is dropped from this file.

Two questions from the Preventive Care section, LSTETH53 (has person lost all natural (permanent) teeth) and PHYEXE53 (currently spends half hour or more in moderate to vigorous physical activity at least five times a week), were retained and moved to a new section (Additional Healthcare Questions (AH)) and a new question, OFTSMK53 (how often smoke cigarettes), was added. These questions were asked of each person 18 years or older. A code of "Inapplicable" (-1) was assigned if the person was deceased or less than 18 years old.

#### 2.5.6.9 2017 Self-Administered Questionnaire (SAQ)

The 2017 Self-Administered Questionnaire (SAQ), a paper-and-pencil questionnaire, was fielded during Panel 21 Round 4 and Panel 22 Round 2 of the 2017 Medical Expenditure Panel Survey

(MEPS). The survey was designed to collect a variety of health status and health care quality measures of adults. All adults age 18 and older as of the Round 2 or 4 interview date (AGE42X >= 18) in MEPS households were asked to complete a SAQ. The questionnaires were administered in late 2017 and early 2018.

The variable SAQELIG indicates the person's eligibility status for the SAQ. SAQELIG was used to construct the variables based on the SAQ data. SAQELIG was coded "0" (Not Eligible For SAQ) if there was no record for the person in the round, if the person was deceased or institutionalized, moved out of the U.S., moved to a military facility, if the person's disposition status was inapplicable, or if the person was less than 18 years old. SAQELIG was coded "1" (Eligible For SAQ and Has SAQ Data) if an SAQ record existed for the person in Round 2 (for Panel 22) or Round 4 (for Panel 21). SAQELIG was coded "2" (Eligible For SAQ, But No SAQ Data) if no SAQ record existed for the person in the round.

If a person was unable to respond to the SAQ, the questionnaire was completed by a proxy, indicated by the variable ADPROX42 (ADPROX42 > 1). Prior to 2015, the variable ADPRX42 indicated the relationship of the proxy to the adult. In 2015 and 2016, the response categories for proxy relationship were collapsed in the variable ADPRXY42, and ADPRX42 was dropped from the file. In 2017, additional collapsing of categories occurred in the variable ADPROX42 and ADPRXY42 was dropped from the file. For the SAQ variables, a code of "Inapplicable" (-1) was assigned if a person was not eligible or was eligible but no data existed based on SAQELIG (SAQELIG was coded "0" or "2"). If a person was not assigned a positive SAQ weight, all SAQ variables, with the exception of SAQELIG, were coded "Inapplicable" (-1). When a gate question answer was set to "No" (2), follow-up variables based on the gate question were coded as "Inapplicable" (-1). When a gate question answer was set to "Refused" (-7), "Don't Know" (-8), or "Not Ascertained" (-9), follow-up variable answers were left as reported. A special weight variable (SAQWT17F) has been designed to be used with the SAQ for persons who were age 18 and older at the interview date. This weight adjusts for SAQ non-response and weights to the U.S. civilian noninstitutionalized population (see Section 3.0 "Survey Sample Information" for details). The variables created from the SAQ begin with "AD".

The language in which the SAQ was completed is indicated by the variable ADLANG42. If the English version of the SAQ was completed, ADLANG42 was coded "1" (English Version SAQ Was Administered). If the Spanish version of the SAQ was completed, or if the English version was translated into Spanish, ADLANG42 was coded "2" (Spanish Version SAQ Was Administered). If the language in which the SAQ was administered was not ascertained, ADLANG42 was coded "-9" (Not Ascertained).

The month and year the SAQ was completed are indicated by the variables ADCMPM42 and ADCMPY42, respectively.

**Health Care Quality**

**CAHPS® (Consumer Assessment of Healthcare Providers and Systems)**

The health care quality measures in the SAQ were taken from the health plan version of CAHPS®, an AHRQ-sponsored family of survey instruments designed to measure quality of

care from the consumer's perspective. All of the variables refer to events experienced in the last 12 months and were asked of adults age 18 and older. The variables included from the CAHPS® are:

ADILCR42 – Had an illness, injury or condition needing care right away from a clinic, emergency room or doctor's office

ADILWW42 – If ADILCR42 = 1, how often got care right away

ADRTCR42 – Any appointment was made with a doctor or clinic for health care

ADRTWW42 – If ADRTCR42 = 1, how often got an appointment for health care as soon as he or she thought it was needed

ADAPPT42 – Number of times went to doctor's office or clinic to get care

ADLIST42 – If ADAPPT42 > 0, how often health providers listened carefully to you

ADEXPL42 – If ADAPPT42 > 0, how often health providers explained things in a way that was easy to understand

ADRESP42 – If ADAPPT42 > 0, how often providers showed respect for what you had to say

ADPRTM42 – If ADAPPT42 > 0, how often health providers spent enough time with you

ADINST42 – If ADAPPT42 > 0, whether doctors or other health providers gave instructions about what to do about a specific illness or health condition

ADEZUN42 – If ADINST42 = 1, how often the advice given by doctors or other health providers was easy to understand

ADTLHW42 – If ADINST42 = 1, how often doctors or other health providers asked you to describe how you are going to follow their instructions

ADFFRM42 – If ADAPPT42 > 0, whether had to fill out or sign any forms at the doctor's office or other health provider's office

ADFHLP42 – If ADFFRM42 = 1, how often you were offered help with filling out forms at the office

ADHECR42 – If ADAPPT42 > 0, rating of healthcare from all doctors and other health providers, from 0 (worst health care possible) to 10 (best health care possible)

In 2017, ADNDCR42 (whether you or a doctor believed you needed any care, tests, or treatment) and ADEGMC42 (how often it was easy to get care, tests, or treatment you or a doctor believed necessary) were dropped from the file.

**General Health**

ADSMOK42 – Currently smoke

ADNSMK42 – If ADSMOK42 = 1, doctor advised you to quit smoking

ADSPCL42 – Needed to see a specialist

ADSNSP42 – If ADSPCL42 = 1, how easy to see a specialist

In 2017, the questions related to seeing a specialist were revised. Prior to 2017, the SAQ asked: in the last 12 months, did you or a doctor think you needed to see a specialist (ADSPEC42) and, if yes, asked how often was it easy to see a specialist you needed to see (ADESSP42). In 2017, the SAQ asked: in the last 12 months, did you make any appointments to see a specialist (ADSPCL42) and, if yes, asked how often did you get an appointment to see a specialist as soon as you needed (ADSNSP42). Consequently, the variables ADSPEC42 and ADESSP42 were dropped from the file in 2017, and the variables ADSPCL42 and ADSNSP42 were added. In addition, the variable ADDRBP42 (blood pressure has been checked by a doctor, nurse, or other health professional) was also dropped from the file.

**Health Status**

The SAQ contained three measures of health status: the Veteran's RAND 12-item (VR-12) (in 2017 this replaces the Short-Form 12 Version 2 (SF-12v2 (r), a registered trademark)), the Kessler Index (K6) of non-specific psychological distress, and the Patient Health Questionnaire (PHQ-2). More information about the VR-12 is available through the Boston University School of Public Health website. Key references for these three measures are:


1. Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.L., Walters, E.E., and Zaslavsky, A.M. (2002). Short screening scales to monitor population prevalence and trends in non-specific psychological distress. *Psychological Medicine* 32: 959-976.

2. Kroenke, K., Spitzer, R.L., and Williams, J.B. (2003). The Patient Health Questionnaire-2: Validity of a two-item depressive screener. *Medical Care* 41: 1284-1292.

3. Selim A, Rogers W, Qian S, Rothendler JA, Kent EE, Kazis LE. A new algorithm to build bridges between two patient-reported health outcome instruments: the MOS SF-36® and the VR-12 Health Survey. *Qual Life Res*. 2018 Aug; 27(8):2195-2206. View Related Profiles. DOI: 10.1007/s11136-018-1850-3.

4. Selim AJ, Rogers W, Fleishman JA, Qian SX, Fincke BG, Rothendler JA, Kazis LE. Updated U.S. population standard for the Veterans RAND 12-item Health Survey (VR-12). *Qual Life Res*. 2009 Feb; 18(1):43-52.View Related Profiles. PMID: 19051059; DOI: 10.1007/s11136-008-9418-2.

**Veterans RAND 12 Version (VR-12)**

The Veterans RAND 12 Item Health Survey (VR-12©) is a self-administered health survey comprising 12 items used to measure health related quality of life, to estimate disease burden and to evaluate disease-specific impact on general and selected populations.

In analyzing data from the VR-12, the standard approach is to form two summary scores based on responses to the 12 questions. The scoring algorithms for both the Physical Component Summary (PCS) and the Mental Component Summary (MCS) incorporate information from all 12 questions. However, the PCS weights more heavily responses to the following questions: ADGENH42, ADDAYA42, ADCLIM42, ADACLS42, ADWKLM42, and ADPAIN42. The MCS weights more heavily responses to the following questions: ADPRST42, ADPCFL42, ADEMLS42, ADMWDF42, and ADSOCA42. The computer programs to create VR scales and PCS/MCS summaries are copyrighted (all rights reserved) by the Trustees of Boston University to ensure the integrity of the assessments.

The PCS and MCS cannot be computed directly if a person has missing data for any of the twelve items. A proprietary method was used for imputing the PCS and MCS scores if some data are missing. PCS and MCS scores calculated according to the standard algorithm and incorporating imputations for some cases with missing data are available for analysts in this file. The PCS-12 score is VPCS42, and the MCS-12 score is VMCS42. Beginning in 2017, there will no longer be negative values due to top- and bottom-coding. Persons who were not eligible for the SAQ, or who were eligible but for whom no data existed based on SAQELIG, or who did not have a positive SAQ weight, were set to “Inapplicable” (-1) for VPCS42 and VMCS42.

The variables VPCS42 and VMCS42 include cases in which the scores were imputed. VRFLAG42 indicates whether the physical component summary, VPCS42, or the mental component, VMCS42, was imputed for a respondent. In some cases the software could not impute a score due to the amount of missing data; these cases have VRFLAG42 = 0 (No). Persons who were not eligible for the SAQ, or who were eligible but for whom no data existed based on SAQELIG, or who did not have a positive SAQ weight, were set to “Inapplicable” (-1) for VRFLAG42.

More information on the VR-12 can be found on the Boston University website VR-12 page.

The VR-12 questions are as follows:

ADGENH42 – General health today

ADDAYA42 – During a typical day, limitations in moderate activities

ADCLIM42 – During a typical day, limitations in climbing several flights of stairs

ADACLS42 – During past 4 weeks, as result of physical health, accomplished less than would like

ADWKLM42 – During past 4 weeks, as result of physical health, limited in kind of work or other activities

ADEMLS42 – During past 4 weeks, as result of mental problems, accomplished less than you would like

ADMWCF42 – During past 4 weeks, as result of mental problems, did work or other activities less carefully than usual

ADPAIN42 – During past 4 weeks, pain interfered with normal work outside the home and housework

ADPCFL42 – During the past 4 weeks, felt calm and peaceful

ADENGY42 – During the past 4 weeks, had a lot of energy

ADPRST42 – During the past 4 weeks, felt downhearted and depressed

ADSOCA42 – During the past 4 weeks, physical health or emotional problems interfered with social activities

In 2017, seven of the health status questions changed and the corresponding variables were renamed. The scales were reversed as indicated for the following four variables:

ADPALS42 (renamed ADACLS42)
ADPWLM42 (renamed ADWKLM42)
ADMALS42 (renamed ADEMLS42)
ADMWLM42 (renamed ADMWCF42)

| Scale prior to 2017: | Scale beginning in 2017: |
|---|---|
| 1 All of the time | 1 None of the time |
| 2 Most of the time | 2 Little of the time |
| 3 Some of the time | 3 Some of the time |
| 4 Little of the time | 4 Most of the time |
| 5 None of the time | 5 All of the time |

For the three variables below, the category "A good bit of the time" was added in 2017:

ADCAPE42 (renamed ADPCFL42)
ADNRGY42 (renamed ADENGY42)
ADDOWN42 (renamed ADPRST42)

| Prior to 2017: | Beginning in 2017 |
|---|---|
| 1 All of the time | 1 All of the time |
| 2 Most of the time | 2 Most of the time |
| 3 Some of the time | 3 A good bit of the time |
| 4 Little of the time | 4 Some of the time |
| 5 None of the time | 5 Little of the time |
| | 6 None of the time |

The scoring algorithms for the variables VPCS42 (veteran's physical component summary) and VMCS42 (veteran's mental component summary) use these variables with category changes.

**Non-Specific Psychological Distress**

The 2017 SAQ includes six mental health-related questions, using the "K-6" scale developed by R.C. Kessler and colleagues. These questions assess the person's non-specific psychological distress during the past 30 days.

The non-specific psychological distress variables are as follows:

ADNERV42 – During the past 30 days, felt nervous

ADHOPE42 – During the past 30 days, felt hopeless

ADREST42 – During the past 30 days, felt restless or fidgety

ADSAD42 – During the past 30 days, felt so sad that nothing could cheer the person up

ADEFRT42 – During the past 30 days, felt that everything was an effort

ADWRTH42 – During the past 30 days, felt worthless

**Kessler Index (K6)**

A summary of the six variables above provides an index to measure non-specific, rather than disorder-specific, psychological distress, using the following values:

0 None of the Time
1 A Little of the Time
2 Some of the Time
3 Most of the Time
4 All of the Time

The index, called K6SUM42, is a summation of the values of the six variables above. The higher the value of K6SUM42, the greater the person's tendency towards mental disability.

**Patient Health Questionnaire (PHQ-2)**

The 2017 SAQ includes two additional mental health questions. These questions assess the frequency of the person's depressed mood and decreased interest in usual activities.

ADINTR42 – During the past two weeks, bothered by having little interest or pleasure in doing things

ADDPRS42 – During the past two weeks, bothered by feeling down, depressed, or hopeless

PHQ242 is a summation of the values of the two variables above, with scores ranging from 0 through 6. The higher the value of PHQ242, the greater the person's tendency towards depression. Kroenke et al. (2004) suggest a score of 3 as the optimal cut point for screening purposes. Note that these items are intended as a screening measure for depression and are not equivalent to a DSM-V diagnosis of depression.

**Attitudes about Health**

The SAQ included four questions that ascertain certain health-related attitudes. Two items (ADINSA42 and ADINSB42) deal with attitudes toward health insurance. The other two questions (ADRISK42 and ADOVER42) deal with attitudes that might influence decisions to purchase health insurance or to use health services. No editing has been performed for these items.

ADINSA42 – Do not need health insurance

ADINSB42 – Health insurance is not worth the money it costs

ADRISK42 – More likely to take risks than the average person

ADOVER42 – Can overcome illness without help from a medically trained person

When using the SAQ and DCS variables in analysis, weights specific to each of these sets of questions should be used (SAQWT17F, DIABW17F). For persons who are not assigned a positive SAQ weight, the SAQ variables are recoded to "Inapplicable" (-1). Please see Section 3.0 "Survey Sample Information" for details.

### 2.5.6.10 Diabetes Care Survey (DCS)

The Diabetes Care Survey (DCS), a self-administered paper-and-pencil questionnaire, was fielded during Panel 21, Round 5 and Panel 22, Round 3. Households received a DCS based on their response to DIABDX in the Priority Conditions Enumeration (PE) section of the CAPI instrument, which asks whether the person was ever told by a doctor or health professional that he/she had diabetes. Prior to 2017, the variable REFDIAB, collected at PC02A, allowed the respondent to indicate that diabetes was reported in the PE section in error (REFDIAB = 2). In 2017, REFDIAB (denial by the respondent of a diabetes diagnosis) was dropped from CAPI.

The DCS asks the same question as DIABDX with responses summarized in the variable DSDIA53. DSDIA53 confirms that the person has ever been told by a health professional that he/she had diabetes or sugar diabetes. Every year, a small number (fewer than 10) of people answer no to the diabetes diagnosis question (DCS.DIABDIAG) on the DCS. These people have DSDIA53 initially set to "2" (No). DCS.DIABDIAG is used in the development of the diabetes weight (DIABWyyF); if the person has DCS.DIABDIAG = "2" (No) they do not receive a diabetes weight (DIABWyyF = 0). In the final stage of DCS variable construction, DCS constructed variables, excluding the eligibility variable (DCSELIG) were recoded to "-1" where DIABWyyF = 0. For these cases, DIABDX =YES (1) but DSDIA53 = NO (2). The DCS data are unedited, and, therefore, these and other data inconsistencies remain in the data. For all persons

17 years of age or younger, all the DCS variables are set to "-1" (Inapplicable) because there is not an appropriate weight included on the file to make national estimates for this population.

DSA1C53 indicates the number of times the respondent reported having a hemoglobin A1c blood test in 2017. Note that, prior to 2005, DSA1C53 did not reflect whether the person had a hemoglobin A1c blood test, only whether the person had a hemoglobin A1c test. DSFT1853, DSFT1753, DSFT1653, DSFB1653, and DSFTNV53 indicate whether the respondent reported having his or her feet checked for sores or irritations: in 2018, in 2017, in 2016, before 2016, or never, respectively. DSEY1853, DSEY1753, DSEY1653, DSEB1653 and DSEYNV53 indicate whether the respondent reported having an eye exam in which the pupils were dilated: in 2018, in 2017, in 2016, before 2016, or never, respectively. DSCH1853, DSCH1753, DSCH1653, DSCB1653, and DSCHNV53 indicate the last time the respondent reported having his or her blood cholesterol checked: in 2018, in 2017, in 2016, before 2016, or never, respectively. DSFL1853, DSFL1753, DSFL1653, DSVB1653, and DSFLNV53 indicate when the person got a flu vaccination including the flu vaccine nasal spray: in 2018, in 2017, in 2016, before 2016, or never, respectively. DSKIDN53 and DSEYPR53 ascertain whether the diabetes has caused kidney or eye problems, respectively. DSDIET53, DSMED53, and DSINSU53 indicate if the respondent reported being treated for his/her diabetes by the following methods: diet, oral medications, or insulin, respectively.

The five variables that assess different ways the person with diabetes can learn about diabetes care are: DSCPCP53 (learned care from a primary care provider), DSCNPC53 (learned care from a provider not in the person's primary care practice), DSCPHN53 (learned care from a phone call with a provider), DSCINT53 (learned care from reading about it on the internet), and DSCGRP53 (learned care by taking a group class). Creation of these variables is based on the answer to a gate question, which asks, "During the last 12 months, have you learned how to take care of your diabetes?" Please note that there is no variable listed in the codebook to indicate the answer to that question, since it is only used for creation of the follow-up variables DSCPCP53, DSCNPC53, DSCPHN53, DSCINT53, and DSCGRP53. These follow-up variables are set to Inapplicable (-1) for persons who report *not* having learned how to take care of their diabetes during the last 12 months. The variable DSCONF53 indicates how confident the person is in treating his or her diabetes. Those variables that indicate a range of care outside the data year may represent persons with additional information included on the 2016 or the 2018 Full Year Consolidated PUF. Additional data for the second-year panel may be available on the 2016 PUF.

If a person was unable to respond to the DCS, the questionnaire was completed by a proxy (DSPRX53 = 1). A special weight variable (DIABW17F) has been designed to be used with DCS data. This weight adjusts for DCS nonresponse and weights to the number of diabetics in the U.S. civilian noninstitutionalized population in 2017 (see Section 3.0 "Survey Sample Information" for details). When using these variables in analysis, weights specific to each of these sets of questions should be used (SAQWT17F, DIABW17F). For persons who are not assigned a positive DCS weight, the DCS variables are recoded to "Inapplicable" (-1). Please see Section 3.0 "Survey Sample Information" for details.

### 2.5.6.11 Cancer Self-Administered Questionnaire (CSAQ)

The Cancer Self-Administered Questionnaire (CSAQ), a paper-and-pencil questionnaire, was fielded during Panel 21 Round 3 and Panel 22 Round 1 based on the response for the person to PE21 ((Have/Has) (PERSON) ever been told by a doctor or other health professional that (PERSON) had cancer or a malignancy of any kind?) in the Priority Conditions Enumeration (PE) section of the CAPI instrument. The CSAQ was administered in Panel 21 Round 3 to persons who answered "no" to ever having cancer in Round 1, but "yes" in Round 2 or 3. The CSAQ asks the same question as PE21 with responses summarized in the variable CCNRDI31, which confirms if the person has ever been told by a health professional that they had cancer.

The variable CELIGI31 indicates the person's eligibility status for the CSAQ. CELIGI31 was coded "0" (Not Eligible For CSAQ) if 1) the person was out-of-scope in Round 1 (for Panel 22) or Round 3 (for Panel 21) or deceased or institutionalized within the round, 2) the respondent did not report cancer for the person in the PE section, 3) the respondent indicated the person's cancer was reported in error, or 4) the person was less than 18 years old. CELIGI31 was coded "1" (Eligible For CSAQ and Has CSAQ Data) if the person responded to the CSAQ in Round 1 (for Panel 22) or Round 3 (for Panel 21). CELIGI31 was coded "2" (Eligible For CSAQ, But No CSAQ Data) if the person did not respond to the CSAQ in the round.

For all the CSAQ variables, a code of "-1" (Inapplicable) was assigned if a person was not eligible or if the person was eligible but no data existed (CELIGI31 = 0 or 2). If a person was not assigned a positive CSAQ weight, all CSAQ variables, with the exception of CELIGI31, were coded "-1" (Inapplicable). A special weight variable (CSAQW17F) is to be utilized for the CSAQ for persons age 18 and older at the interview date. This weight adjusts for CSAQ non-response and is an estimate of the adult population self-reporting as having been diagnosed with or treated for cancer as an adult (see Section 3.0 "Survey Sample Information" for details). For FY 2017, a CSAQ weight was assigned to Panel 22 only. Analysts should note that the CSAQ data collected from Panel 21 Round 3 were omitted due to possible overrepresentation of recently diagnosed individuals.

**Cancer History**

The CSAQ includes questions to ascertain the person's cancer diagnosis and treatment history. Two items (CCNRDI31 and CDIAG31) confirm that the person was diagnosed or treated for cancer at age 18 or older. The other five items are given below.

CTRTMT31 – Currently being treated for cancer

CLSTRT31 – How long ago received last cancer treatment

CBCK31 – Doctor or health professional ever told you cancer had come back

CBCKYR31 – Most recent year doctor or health professional told you cancer had come back

CFTRT31 – First time being treated for cancer

**Changes to Work Schedule**

The CSAQ includes questions to determine whether cancer or its treatment caused the person to take extended paid time off from work, change to working part-time, change to a flexible work schedule, change to a less demanding job, not pursue promotion, or retire early.

CWRKP31 – Working for pay at any time since first diagnosed with cancer

CTMOFF31 – Took time off from work since first cancer diagnosis

CWYCNG31 – Made work changes because of cancer or some other reason

CEXTM31 – Took extended paid time off from work

CEXTDI31 – Took extended paid time off at time of diagnosis

CEXTRT31 – Took extended paid time off during treatment

CEXTLT31 – Took extended paid time off less than one year after treatment was finished

CEXTMT31 – Took extended paid time off one year or more after treatment was finished

CNPTLD31 – Had to change from working full-time to working part-time or to less demanding job

CNGFLX31 – Changed to flexible work schedule

CPROM31 – Decided not to pursue promotion because of cancer

CERET31 – Retired earlier than planned because of cancer

**Other Aspects of Work**

The CSAQ contains questions to ascertain a person's experiences at work from the time they were first diagnosed with cancer to now.

CPTASK31 – Ever felt that cancer interfered with your ability to perform physical tasks required by a job

CMTASK31 – Ever felt that cancer interfered with your ability to perform mental tasks required by a job

CLPROD31 – Ever felt that you were less productive at work because of cancer

CFRET31 – Ever worried that because of cancer you might be forced to retire

CLHINS31 – Ever stayed at a job because of concerns about losing health insurance

CCLHIN31 – Concerned about losing health insurance because of cancer

CSLHIN31 – Spouse or significant other ever stayed at a job because they were concerned about losing health insurance

**Caregivers**

The CSAQ contains questions to ascertain if caregivers provided help with getting the person to the doctor, going to appointments, making decisions about treatment, or provided other types of care and support during or after cancer treatment.

CFMEM31 – Friend or family member provided care during or after cancer treatment

CFMSPS31 – Caregiver is your spouse or partner

CFMCHD31 – Caregiver is your child

CFMSIB31 – Caregiver is your sibling

CFMPAR31 – Caregiver is your parent

CFMREL31 – Caregiver is your other relative

CFMFND31 – Caregiver is your friend

CFMOTR31 – Caregiver is other

CFMTOF31 – Caregivers took extended paid or unpaid time off from work or made changes in their hours, duties, or employment status

CFM2MT31 – Caregivers took extended paid or unpaid time off from work or made changes in their hours, duties, or employment status for at least 2 months

**Experiences with Health Insurance**

The CSAQ contains questions that ask about health insurance coverage from the time the respondent was first diagnosed with cancer to now. These questions ascertain if the person had health insurance coverage that paid for all or only part of the medical care, tests, cancer treatment, doctor visits or second opinions, or if they were ever denied coverage.

CINCOV31 – Covered by health insurance that paid for all or part of medical care, tests, or cancer treatment

CINPRV31 – The type of health insurance is private

CINMDC31 – The type of health insurance is Medicare

CINMDG31 – The type of health insurance is Medi-gap

CINMDA31 – The type of health insurance is Medicaid

CINMLT31 – The type of health insurance is Military

CINIHS31 – The type of health insurance is Indian Health Service

CINSHP31 – The type of health insurance is State-sponsored health plan

CINOGP31 – The type of health insurance is other government program

CINSSP31 – The type of health insurance is single service plan

CINNCV31 – The type of health insurance is no coverage of any type

CINNOC31 – Health insurance ever refused to cover a visit, treatment or procedure

CINADQ31 – Health insurance did not provide adequate coverage

CINCMP31 – Current health insurance compared to a year ago

CINDIF31 – Difficulty finding a plan with the type of coverage needed for your cancer

CINAFD31 – Difficulty finding a plan you can afford for your cancer

**The Effects of Cancer and Its Treatment on Finances**

The CSAQ includes questions to assess the person's financial burden that they may have experienced as a result of their cancer, its treatment, or the lasting effects of that treatment.

CNCMED31 – Medical expenses paid out of pocket

CNCTRP31 – Transportation expenses paid out of pocket

CNCLOD31 – Lodging expenses paid out of pocket

CNCCHD31 – Child care expenses paid out of pocket

CNCHME31 – Home or respite care expenses paid out of pocket

CNCNON31 – Had no expenses paid out of pocket

CNCNTS31 – Don't know or not sure about expenses paid out of pocket

CFNDBT31 – You or anyone in family had to borrow money or go into debt

CFNAMT31 – How much money was borrowed or how much debt was incurred

CFNVAC31 – You or anyone in family had to make financial sacrifices on vacation or leisure activities

CFNPUR31 – You or anyone in family had to make financial sacrifices on delaying large purchases

CFNSPD31 – You or anyone in family had to make financial sacrifices on basic spending

CFNSAV31 – You or anyone in family had to make financial sacrifices on savings set aside for other purposes

CFNLIV31 – You or anyone in family had to make financial sacrifices on living situation

CFNOTH31– You or anyone in family had to make financial sacrifices on other categories

CFNUNB31 – Unable to cover cost of medical care visits

CFNBNK31 – You or family member ever filed for bankruptcy

CFNPMT31 – Ever worried about paying large medical bills

CFNSTB31 – Ever worried about financial stability

CFNINC31 – Ever concerned about keeping your job and income or that earnings will be limited

**Medical Care for Cancer**

The CSAQ asks questions about experiences the person had with medical care, including subjects discussed with doctors or healthcare providers, whether the person received all necessary care, and reasons for not receiving necessary care.

CMCFUP31 – Doctor ever discussed need for regular follow-up care and monitoring after completing treatment

CMCEFF31 – Doctor ever discussed long-term side effects of cancer treatment

CMCPSY31 – Doctor ever discussed emotional or social needs related to cancer

CMCSTY31 – Doctor ever discussed lifestyle or health recommendations

CMCOST31 – Doctor ever discussed cost for cancer paid out of your own pocket

CMCTRT31 – Doctor ever discussed summary of all the cancer treatments you received

CDLPRS31 – Ever delay, forego or make changes to prescription medicine because of cost

CDLVST31 – Ever delay, forego or make changes to visit to specialist because of cost

CDLTRT31 – Ever delay, forego or make changes to treatment because of cost

CDLFUP31 – Ever delay, forego or make changes to follow up care because of cost

CDLMNT31 – Ever delay, forego or make changes to mental health services because of cost

CDLOTH31 – Ever delay, forego or make changes to other categories because of cost

CMCNEC31 – Received all medical care, tests, or treatments that you or doctor believed were necessary.

CMNAFF31 – Did not get all necessary medical care, tests, or treatments because couldn't afford care

CMNINS31 – Did not get all necessary medical care, tests, or treatments because insurance company wouldn't approve or pay

CMNACC31 – Did not get all necessary medical care, tests, or treatments because doctor did not accept insurance

CMNOFF31 – Did not get all necessary medical care, tests, or treatments because had problems getting to doctor's office

CMNTIM31 – Did not get all necessary medical care, tests, or treatments because couldn't get time off from work

CMNPLC31 – Did not get all necessary medical care, tests, or treatments because didn't know where to go to get care

CMNCRE31 – Did not get all necessary medical care, tests, or treatments because couldn't get child care/adult care

CMNLNG31 – Did not get all necessary medical care, tests, or treatments because didn't have time or care/test/treatment took too long

**The Effects of Cancer and Its Treatment on Life in General**

The CSAQ asks questions about how cancer, its treatment, and the lasting effects of that treatment have affected the person's life. This includes limitations on activities and tasks, whether the person asked for and received help getting to doctors or understanding medical bills, concerns about cancer coming back or getting worse, and positive experiences due to cancer.

CEFACT31 – Cancer ever limited the kind or amount of activities outside of work

CEFLCT31 – How long you were limited in the kind or amount of usual daily activities

CEFOG31 – Limitation is ongoing

CEFMTL31 – Cancer ever interfered with ability to perform mental tasks

CEFUND31 – Ever have a problem understanding health insurance or bills

CEFBCK31 – Worried that cancer may come back or get worse

CEFSTG31 – Cancer has made you a stronger person

CEFCOP31 – Cancer has made you cope better with life's challenges

CEFPOS31 – Cancer became a reason to make positive changes in life

CEFHLT31 – Cancer has made you have healthier habits

CEFPHL31 – Rate your physical health

CEFPAC31 – How well you are able to carry out everyday physical activities

CEFPIN31 – Rate your pain in the past 7 days

CEFFTG31 – Rate your fatigue in the past 7 days

CEFQLF31 – Rate your quality of life

CEFMHL31 – Rate your mental health and mood

CEFRLT31 – Rate your satisfaction with social activities and relationships

CEFMPR31 – Rate your emotional problems in the past 7 days

### 2.5.7 Disability Days Indicator Variables (DDNWRK17-OTHNDD17)

The Disability Days (DD) section of the core interview contains questions about time lost from work because of a physical illness or injury, or a mental or emotional problem. Data were collected on each individual in the household. These questions were repeated in each round of interviews; this file contains data from Rounds 3, 4, and 5 of the MEPS Panel 21, initiated in 2016, and Rounds 1, 2, and 3 of the MEPS Panel 22, initiated in 2017.

Beginning in 2015, annualized versions of these variables are constructed for release rather than the previously released versions, which were round and panel specific. The number at the end of the variable name (17) identifies the variable as representing data from 2017. Due to confidentiality concerns, the annual Disability Days variables which represent the number of days a person missed work (DDNWRK17, and OTHNDD17) are top-coded to mask values that exceed the top one-half of one percent of the population.

These annual variables use building block variables for construction which represent an individual panel within the data year. The reference period for the Disability Days questions is the time period between the beginning of the panel or the previous interview date and the current interview date. Analysts should be aware that Round 3 is conducted across years. The Disability

Days variables reflect only the data pertinent to the calendar year (i.e., the current delivery year of 2017). Analysts who are interested in examining Disability Days data across years can link to other person-level PUFs using the DUPERSID.

The flow of the Disability Days section relies on the person's age as of the interview date. Therefore, the round-specific constructed age variables (AGE31X, AGE42X, and AGE53X) are used to construct the comparable round-specific Disability Days building block variables. Due to the age-specific nature of the Disability Days section, age data from other rounds are not used should the person's age for the round be missing.

The variable DDNWRK17 represents the number of times the person lost a half-day or more from work because of illness, injury, or mental or emotional problems during the calendar year. A response of "no work days lost" was coded zero; if the person did not work, this variable was coded -1 (Inapplicable). The analyst should note that there are cases where EMPST## = 1 or 2 (has current job or job to return to) where DDNWRK17 indicates work around the house only. This is because the responses to the Disability Days questions are independent of the responses to the employment questions. Persons who were less than 16 years old or whose age is missing (AGE##X is set to -1) were not asked about work days lost, thus this variable is coded -1 (Inapplicable) for these persons.

Beginning with Panel 21 Round 5, Panel 22 Round 3, the CAPI questions about time lost from school are no longer asked and the related variable DDNSCLyy is no longer delivered.

A final set of variables indicates if an individual took a half-day or more off from work to care for the health problems of another individual in the family and the number of days missed. OTHDYS17 indicates if a person missed work because of someone else's illness, injury, or health care needs, for example to take care of a sick child or relative. This variable has three possible answers: yes - missed work to care for another (coded 1); no – did not miss work to care for another (coded 2); or the person does not work (coded -1), based on the setting of DDNWRK17. Persons younger than 16 and persons whose age is missing were not asked this question and are also coded as -1 (in a small number of cases this was not done for the 1996 data, the analyst will need to make this edit when doing longitudinal analyses).

OTHNDD17 indicates the number of days in which work was lost because of another's health problem. Persons younger than 16, those whose age is missing, those who do not work, and those who answer "no" to OTHDYS17 are skipped out of OTHNDD17 and receive a code of -1.

Note that, because Disability Days variables use only those Round 3 data pertinent to the data year, it is possible to have a person report missing work to care for the health problems of another individual (OTHDYS17 = 1) but report no days missed (OTHNDD17 = 0). This combination indicates that the person did not miss those work days during the data year. Editing was done on these variables to preserve the skip patterns. No imputation was done for those with missing data.

### 2.5.8 Access to Care Variables (ACCELI42-PMDLRS42)

The variables ACCELI42 through PMDLRS42 describe data from the Access to Care (AC) section of the MEPS HC questionnaire, which was administered in Panel 21 Round 4 and Panel

22 Round 2. This supplement gathers information on family members' usual source of health care; characteristics of usual source of health care providers; access to and satisfaction with the usual source of health care provider; and access to medical treatment, dental treatment, and prescription medicines. The variable ACCELI42 indicates whether persons were eligible to receive the Access to Care questions. Persons with ACCELI42 set to '-1' (Inapplicable) should be excluded from estimates made with the Access to Care data.

#### 2.5.8.1 Family Members' Usual Source of Health Care

For each individual family member, the AC section ascertains whether there is a particular doctor's office, clinic, health center, or other place that the individual usually goes to if he/she is sick or needs advice about his/her health (HAVEUS42).

YNOUSC42 indicates the main reason why a person does not have a usual source of care (USC) provider. For those family members who do not have a USC provider, question AC07 ascertains the main reason why.

1 Seldom or Never Sick
2 Recently Moved to Area
3 Don't Know Where to Go
4 USC in Area Not Available
5 Can't Find Provider Who Speaks Language
6 Goes Different Places for Diff Needs
7 Just Changed Insurance Plans
8 Don't Use Docs/Treat Self
9 Cost of Medical Care
10 No Health Insurance
91 Other Reason

If respondents choose '91' (Other Reason) at AC07, they are asked at AC07OV to provide a verbal explanation of what the main reason is that they do not have a USC provider. These "text strings" can be recoded to one of the existing categorical values listed above or, if the frequency of the response warrants it, additional categorical values. Recoding is described in greater detail below.

Family members without a USC provider are then asked AC08, which ascertains whether there are any additional reasons why. The person may choose one or more reasons. A variable is constructed for each reason why:

NOREAS42 No Other Reason
SELDSI42 Seldom or Never Sick
NEWARE42 Recently Moved to Area
DKWHRU42 Don't Know Where to Go
USCNOT42 USC in Area Not Available
PERSLA42 Can't Find Provider Who Speaks Language
DIFFPL42 Goes Different Places For Diff Needs
INSRPL42 Just Changed Insurance Plans

| | |
|---|---|
| MYSELF42 | Don't Use Docs/Treat Self |
| CARECO42 | Cost of Medical Care |
| NOHINS42 | No Health Insurance |
| OTHREA42 | Other Reason |

These variables reflect the answer categories given at AC08. If respondents choose '91' (Other Reason) at AC08, they are asked at AC08OV to provide a verbal explanation of what the additional reason is that they do not have a USC provider. These "text strings" can be recoded to one of the existing yes/no variables listed above or, if the frequency of response warrants it, an additional yes/no variable. Recoding is described in greater detail below.

#### 2.5.8.2 Characteristics of Usual Source of Health Care Providers

The AC section collects information about the different characteristics of each unique USC provider for a given family. If a person does not have a USC provider (HAVEUS42 is set to '2' (No), '-7' (Refused), '-8' (Don't Know) or '-9' (Not Ascertained)), then these variables are set to '-1' (Inapplicable).

The basis for the AC provider questions is PROVTY42. This variable indicates whether the person's provider is a facility ('1'), a person ('2'), or a person-in-facility ('3'). PROVTY42 is a copy of PROVTYPE (Provider Type) for persons who have a USC provider.

Depending on how PROVTYPE is set, persons are asked about the provider's location, the provider's personal characteristics (e.g., race), the provider's accessibility, and the person's satisfaction with the provider.

**Provider Location**

Two variables indicate the location of the provider. For facility or person-in-facility type providers, PLCTYP42 indicates whether the person's facility is a Hospital Clinic or Outpatient Department ('1'), Hospital Emergency Room ('2'), or Other Kind of Place ('3'). According to CAPI flow, persons do not report the type of facility for person-type providers; therefore, if PROVTY42 is set to '2' (Person), PLCTYP42 is set to '-1' (Inapplicable). For all provider types, including person-type, LOCATN42 indicates whether the person's provider is located in an Office ('1'), a Hospital but Not the Emergency Room ('2'), or a Hospital Emergency Room ('3').

**Personal Characteristics of Providers**

For person and person-in-facility type providers, TYPEPE42 indicates what type of doctor or other medical provider the person's provider is. The possible values include:

| | |
|---|---|
| 1 | MD – General/Family Practice |
| 2 | MD – Internal Medicine |
| 3 | MD – Pediatrics |
| 4 | MD – OB/Gyn |
| 5 | MD – Surgery |
| 6 | MD – Other |

7 Chiropractor
8 Nurse
9 Nurse Practitioner
10 Physician's Assistant
11 Other Non-MD Provider
12 Unknown
13 MD - Cardiologist
14 Doctor of Osteopathy
15 MD – Endocrinologist
16 MD – Gastroenterologist
17 MD – Geriatrician
18 MD – Nephrologist
19 MD – Oncologist
20 MD – Pulmonologist
21 MD – Rheumatologist
22 Psychiatrist / Psychologist
23 MD – Neurologist
24 Alternative Care Provider

TYPEPE42 is constructed using variables collected at several questions: AC15 "Is provider a medical doctor?" (PROV.MEDTYPE); AC16 "Is provider a nurse, nurse practitioner, physician's assistant, midwife, or some other kind of person?" (PROV.OTHTYPE); and AC17 "What is provider's specialty?" (PROV.MDSPECLT). If respondents choose '91' (Other) at AC16 or AC17, they are asked at AC16OV or AC17OV, respectively, to provide a verbal explanation of the type of provider or medical doctor. These "text strings" can be recoded to one of the existing categorical values listed above or, if the frequency of the response warrants it, additional categorical values. Recoding is described in greater detail below.

The AC section also collects demographic information about person and person-in-facility type providers (PROVTY42 = 2 or 3). Six variables indicate the provider's race: WHITPR42 (White), BLCKPR42 (Black/African American), ASIANP42 (Asian), NATAMP42 (Indian/Native American/Alaska Native), PACISP42 (Other Pacific Islander) and OTHRCP42 (Other Race). The respondent may choose more than one race for a single provider. These variables reflect the answer categories given at AC19. Prior to 2014, if respondents chose '91' (Some Other Race) at AC19, they were asked at AC19OV to provide a verbal explanation of the provider's race. These text strings could have been recoded to one of the existing yes/no variables listed above or an additional yes/no variable. Starting in 2014, AC19OV was removed from the MEPS and its "other specify" text string, PRVRACOS, is no longer collected.

In addition to the race variables, two other demographic variables are created: HSPLAP42 indicates whether the provider is Hispanic or Latino, and GENDRP42 indicates whether the provider is Male ('1') or Female ('2').

**Using Constructed Variables to Describe the Usual Source of Care Provider**

These variables describing a person's USC provider can be used in combination to present a broader picture of the provider. For example, a person-in-facility provider with a particular

person named who is a white, Hispanic, female pediatrician, with no other race specified, and whose location is in an office in a hospital is coded as:

PROVTY42 = 3
PLCTYP42 = 1
TYPEPE42 = 3
HSPLAP42 = 1
WHITPR42 = 1
BLCKPR42 = 2
ASIANP42 = 2
NATAMP42 = 2
PACISP42 = 2
OTHRCP42 = 2
GENDRP42 = 2
LOCATN42 = 2

#### 2.5.8.3 Access to and Satisfaction with the Provider

The AC section collects information regarding the person's ability to access the USC provider as well as the person's satisfaction with the USC provider.

**Access to the Provider**

TMTKUS42 indicates how long it takes the person to travel to the USC provider: Less Than 15 Minutes ('1'), 15 to 30 Minutes ('2'), 31 to 60 Minutes ('3'), 61 to 90 Minutes ('4'), 91 Minutes to 120 Minutes ('5'), or More than 120 Minutes ('6').

OFFHOU42, PHNREG42, and AFTHOU42 assess aspects of the provider that may make it difficult for the person to get in contact with the USC provider. OFFHOU42 indicates whether the provider has office hours at night or on the weekend. The remaining two variables reflect the person's rating of the difficulty of accessing the USC provider by phone (PHNREG42), and after hours (AFTHOU42). The person has the following choices: Very Difficult ('1'), Somewhat Difficult ('2'), Not Too Difficult ('3'), or Not at All Difficult ('4').

**Satisfaction with the Provider**

These variables reflect the person's confidence in, and satisfaction with, the USC provider. Four different facets of the person's level of confidence in the USC provider are examined: Is the provider the person or place family members would go to for routine or minor health problems (MINORP42), preventive health care (PREVEN42), referrals to other health professionals (REFFRL42), or ongoing health problems (ONGONG42). The person's level of satisfaction with the USC provider is examined in five ways: Does the USC provider: usually ask about prescription medications and treatments other doctors may give them (TREATM42), ask about and show respect for medical, traditional, and alternative treatments that the person is happy with (RESPCT42), ask the person to help make decisions between a choice of treatments (DECIDE42), present and explain all options to the person (EXPLOP42), and speak the person's language or provide translator services (PRVSPK42).

PRVSPK42 is set to a value other than '-1' (Inapplicable) for persons eligible for the Access to Care supplement, who had a usual source of care, and were identified as speaking a language other than English at home (OTHLANG = '1') and speaking English either "Not Well" or "Not at All" (HWELLSPE = '3' or '4'). PRVSPK42 is set to '-1' (Inapplicable) for all persons not meeting these criteria or who were deceased, institutionalized, or younger than 5 years of age.

If the person was under 5 years old in Round 1 and age 5 in Round 2 of the first year panel or Round 4 of the second year panel, and the source data are missing, PRVSPK42 was set to '-1' (Inapplicable); if the source data are available, PRVSPK42 was set per specifications.

#### 2.5.8.4 Access to Medical Treatment, Dental Treatment, and Prescription Medicines

The Access to Care supplement gathers information on family members' abilities to receive treatment and receive it without delay. These questions are split into three sections inquiring about medical, dental, and prescription medicine treatments. Each section inquires whether the person was unable to receive treatment (MDUNAB42, DNUNAB42, PMUNAB42) or was delayed in receiving treatment (MDDLAY42, DNDLAY42, PMDLAY42). A value of '1' (Yes) for these two sets of variables indicates that the person needed treatment but was unable to receive it or was delayed in receiving it. A value of '2' (No) for these two sets of variables indicates that either the person did not need treatment or the person needed treatment and was able to receive it without delay. If the person was unable to receive treatment, the respondent was asked why (MDUNRS42, DNUNRS42, PMUNRS42). Respondents were also asked why there was delay in receiving treatment (MDDLRS42, DNDLRS42, PMDLRS42). Possible reasons include:

1 Could Not Afford Care
2 Ins Co Would Not Approve/Cover/Pay
3 Doctor Refused Family Ins Plan
4 Problems Getting To Doctor's Office
5 Different Language
6 Could Not Get Time Off Work
7 Don't Know Where To Go To Get Care
8 Was Refused Services
9 Could Not Get Child Care
10 Did Not Have Time or Took Too Long
91 Other

#### 2.5.8.5 Editing the Access to Care Variables

Editing consisted primarily of logical editing for consistency with skip patterns. Other editing included the construction of new response values and new variables describing the recoding of several "other specify" text items into existing or new categorical values, which are described below.

Not all variables or categories that appear in the Access to Care section of the HC questionnaire are included on the file, as some small cell sizes have been suppressed to maintain confidentiality.

### 2.5.8.6 Recoding of Additional Other Specify Text Items

For Access to Care items AC07, AC08, AC16, and AC17, the "other specify" text responses were reviewed and coded as an existing or new value for the related categorical variable (for AC07, AC16, and AC17), or coded as an existing or new "yes/no" variable (for item AC08). Note that, starting in 2005, additional categories and variables are retained for low frequency responses to allow for pooling data.

In 2009, "No Health Insurance" was added as category '10' at AC07 and AC08 for the main reason and for another reason why a person does not have a usual source of care. In order to distinguish between category '10' selected within CAPI (No Health Insurance) and category '10' in recoding (Other Insurance Related Reason), the recoding category for Other Insurance Related Reason was updated to category '24'. In order to compare data from 2009 or later with data previous to 2009, users can compare a combination of the CAPI category '10' and recoding category '24' for 2009 or later with the previous recoding category '10' alone.

The following are the additional codes or variables which were created from these "other specify" text responses.

For item AC07 ("What is the main reason person does not have a usual source of health care"), the following additional values were available for the variable YNOUSC42:

11 Job-Related Reasons
12 Looking for a New Doctor
13 Doctor is Located Elsewhere
14 Don't Like/Don't Trust Doctors
15 Health-Related Reasons
16 Newborn-No Doctor Yet
17 Self, Relative, or Friend is a Doctor
19 Care Available on Job
20 Will Not Go to the Doctor
21 Problems with Time and Transportation
22 Person Goes to a Hospital, Clinic, or Emergency Room
23 Uses Alternative Care
24 Other Insurance Related Reason

For item AC08 ("What are the other reasons person does not have a usual source of health care"), the following additional variables were constructed:

OTHINS42 For Other Insurance Reasons;
JOBRSN42 For Job-Related Reasons;
NEWDOC42 Is Looking for a Doctor;
DOCELS42 Doctor is Located Elsewhere;
NOLIKE42 Does Not Like Doctor;
HEALTH42 Health-Related Reasons;
KNOWDR42 The Person Knows or is a Doctor;
ONJOB42 Works with Medical Personnel;

| | |
|---|---|
| NOGODR42 | Person Will Not Go to the Doctor; |
| TRANS42 | The Person Had Problems Finding Transportation or Time; |
| CLINIC42 | The Person Goes to a Hospital, Clinic, or Emergency Room; |
| NOHINS42 | No Health Insurance. |

OTHTYPE and MDSPECLT are used to construct the variable TYPEPE42. Unlike the other recoded variables, these variables' text strings can be recoded to each other's categories. For example, for persons who indicate that their USC provider is not a medical doctor (PROV.MEDTYPE = 2), the other type of USC provider is other (PROV.OTHTYPE = 91), and the text string collected is "GYNECOLOGIST", TYPEPE42 would be set to "4" (MD – OB/GYN) instead of "11" (OTHER NON-MD PROVIDER.)

### 2.5.9 Employment Variables (EMPST31-RTPLN53H)

Employment questions were asked of all persons 16 years and older at the time of the interview. Employment variables consist of person-level indicators such as employment status and job-related variables such as hourly wage. All job-specific variables refer to a person's current main job. The current main job, defined by the respondent, indicates the main source of employment.

Most employment variables pertain to the round interview date. The round dates are indicated by two numbers following the variable name; the first number representing the round for Panel 21 persons, the second number representing the round for Panel 22 persons. For example, EMPST31 refers to employment status on the Round 3 interview date for Panel 21 persons and employment status on the Round 1 interview date for Panel 22 persons.

With the exception of some health insurance and wage variables, no attempt has been made to logically edit any employment variables. When missing, values were imputed for certain persons' hourly wages. Due to confidentiality concerns, hourly wages greater than or equal to $96.15 were top-coded to -10 and the number of employees variable was top-coded at 500. With the exception of a variable indicating whether the employer has more than one location (MORE31, MORE42, MORE53), all employer-specific variables refer to the establishment that is the location of a person's current main job.

The MEPS employment section used dependent interviewing in Rounds 2 through 5. If employment status and certain job characteristics did not change from the previous round, as identified in the Review of Employment (RJ) section, the respondent was skipped through the main employment section. A code of "–2" is used to indicate that the information in question was obtained in a previous round. For example, if the HRWG42X (Round 4 interview date hourly wage for Panel 21 persons or Round 2 interview date hourly wage for Panel 22 persons) is coded as "-2", refer to HRWG31X (Round 3 interview date hourly wage for Panel 21 persons or Round 1 interview date hourly wage for Panel 22 persons) for the value for HRWG42X. Note that there may be a value for the Round 3/1 hourly wage or there may be an "Inapplicable" code (-1). The "-2" value for HRWG42X indicates that the person was skipped past the question at the time of the subsequent interview. To determine who should be skipped through various employment questions, certain information, such as employment status, had to be asked in every round and, thus, "-2" codes do not apply to employment status. Additionally, information on whether the person currently works at more than one job (MORJOB) or whether the person holds

health insurance from a current main employer (HELD) was asked in every round, and, therefore, those variables also have no "-2" codes.

For Panel 21 persons who have a current main job in Round 3 that continues from Round 1 or 2, the "-2" code is not sufficient for those variables that the person was skipped past at the time of the interview. This is because the Panel 21 Round 1 and 2 data are not included on this release and therefore there are no data to refer to. For such persons, the values for the variables for these skipped questions are copied from the Round 1 or 2 constructed variable on the 2016 Full Year Public Use File, depending on the round in which the job first became the current main job. The accompanying variable RNDFLG31 indicates the round in which these data were collected. For example, if the person has a Round 3 current main job that continues from Round 2 and was first reported as the current main job in Round 2, HRWG31X will be a copy of the HRWG42X variable from the 2016 Full Year Public Use File and RNDFLG31 will be "2", indicating the round in which the job was first reported as the current main job.

**Employment Status (EMPST31, EMPST42, and EMPST53)**

Employment status was asked for all persons age 16 or older. Allowable responses to the employment status questions were as follows:

- "currently employed" if the person had a job at the interview date;
- "has a job to return to" if the person did not work during the reference period but had a job to return to as of the interview date;
- "employed during the reference period" if the person had no job at the interview date but did work during the round;
- "not employed with no job to return to" if the person did not have a job at the interview date, did not work during the reference period, and did not have a job to which he or she could return.

These responses were mutually exclusive. A current main job was defined for persons who either reported that they were currently employed and identified a current main job or who reported and identified a job to return to. Therefore, job-specific information such as hourly wage exists for persons not presently working at the interview date but who have a job to return to as of the interview date.

The analyst should note that there are cases where EMPST## = 1 or 2 (has current job or job to return to) where DDNWRK17 indicates work around the house only. This is because the responses to the Disability Days questions are independent of the responses to the employment questions.

**Data Collection Round for Round 3/1 CMJ (RNDFLG31)**

As mentioned above, for Panel 21, if a person's Round 3 current main job (CMJ) is a continuation CMJ from Round 2 or Round 1, the value of most "31" variables will be copied forward from the variable representing the round in which the job was first reported as the CMJ. For persons in Panel 21, RNDFLG31 indicates the round in which the Round 3 CMJ was first reported as the CMJ and provides a timeframe for the reported wage information and other job

details. RNDFLG31 is used with many "31" variables to indicate the round on which the reported information is based.

RNDFLG31 is set to "Inapplicable" (-1) for persons in either panel who are under age 16 or who do not have a CMJ in Panel 21 Round 3 or Panel 22 Round 1. For persons who are part of Panel 21, RNDFLG31 is also set to "Inapplicable" (-1) if the person is out-of-scope in the 2017 portion of Round 3. For persons who are part of Panel 22, RNDFLG31 is also set to "Inapplicable" (-1) if the person is out-of-scope in Round 1. For persons who are part of Panel 21, other values for RNDFLG31 are set as follows:

1 continuing Round 3 CMJs reported first in Round 1;
2 continuing Round 3 CMJs reported first in Round 2;
3 jobs newly reported as current main in Round 3;
-9 Round 3 CMJ is a continuation CMJ (wage information and other details were not collected in Round 3) but the Round 2 CMJ record either does not exist or is not the same job. This setting applies even in cases where there is a corresponding Round 1 CMJ. This can occur in rare instances because corrections made to a person's record in a current file cannot be made to that record in an earlier file due to database processing constraints. Corrections are made based on respondent comments in subsequent rounds that affect employment information previously reported. Users may refer to the Full Year 2016 Jobs File to review the Round 1 through Round 3 rosters for these persons.

For persons who are part of Panel 22 and reported a Round 1 CMJ, RNDFLG31 is set to "1" indicating that the job information represented in the "31" variables was collected in Round 1.

**Self-Employed (SELFCM31, SELFCM42, and SELFCM53)**

Information on whether an individual was self-employed at the current main job was obtained for all persons who reported a current main job. If an individual reports that they are self-employed at their current main job, they are also asked to identify whether the self-employed business was incorporated, a proprietorship, or a partnership (BSNTY31, BSNTY42, BSNTY53). These questions are not asked of individuals who were not self-employed and, as a result, individuals who are not self-employed are coded with "Inapplicable" (-1).

Alternatively, there are several variables that are only constructed for wage earners (not self-employed). These include benefits, employment characteristics, and hourly wage variables (covered in the following two sections). As noted below, self-employed individuals are coded with "Inapplicable" (-1) for benefits, employment characteristics, and hourly wage variables.

**Benefits and Employment Characteristics (PAYDR31, PAYDR42, PAYDR53, SICPAY31, SICPAY42, SICPAY53, PAYVAC31, PAYVAC42, PAYVAC53, RETPLN31, RETPLN42, RETPLN53, MORE31, MORE42, MORE53, JOBORG31, JOBORG42, and JOBORG53)**

Several variables are constructed only for individuals who report not being self-employed at their current main job. These individuals are asked questions to indicate whether the establishment reported as the main source of employment offered any of the following benefits:

- Paid leave to visit a doctor (PAYDR31, PAYDR42, and PAYDR53)
- Paid sick leave (SICPAY31, SICPAY42, and SICPAY53)
- Paid vacation (PAYVAC31, PAYVAC42, and PAYVAC53)
- Pension plan (RETPLN31, RETPLN42, and RETPLN53)

They are also asked information on whether the firm had more than one business location (MORE31, MORE42, MORE53) and whether the establishment was a private for-profit, nonprofit, or a government entity (JOBORG31, JOBORG42, JOBORG53). For persons who were self-employed at their current main job, these variables were coded as "Inapplicable" (-1).

**Hourly Wage (HRWG31X, HRWG42X, HRWG53X), Wage Update Variable (DIFFWG31, DIFFWG42, DIFFWG53), and Updated Hourly Wage (NHRWG31, NHRWG42, NHRWG53)**

Hourly wage was constructed for all persons who reported a current main job that was not self-employment (SELFCM). HRWG31X, HRWG42X, and HRWG53X provide the wage amount reported initially for a person's current main job. If a current main job continues into subsequent rounds DIFFWG31, DIFFWG42, and DIFFWG53 indicate if the wage has changed since the previous round. If the job continues and there is a different wage at that job, NHRWG31, NHRWG42, and NHRWG53 indicate the new wage amount.

Some wage information was logically edited for consistency. Users should note that limited editing of wage variables was performed during data preparation in 2017 making the data generation process different for 2017 than in other years. In 2018, data editing will resume and is intended to be consistent with editing that occurred through 2016. The initial hourly wage variables (HRWG31X, HRWG42X, HRWG53X) on this file should be considered along with their accompanying variables – HRHOW31, HRHOW42, and HRHOW53 – which indicate how the respective round hourly wage was constructed. Hourly wage could be derived, as applicable, from a large number of source variables. In the simplest case, hourly wage was reported directly by the respondent. For other persons, construction of the hourly wage was based upon salary, the time period on which the salary was based, and the number of hours worked per time period. If the number of hours worked per time period was not available, a value of 40 hours per week was assumed, as identified in the HRHOW variable.

The initial hourly wage variables HRWG31X, HRWG42X, and HRWG53X were imputed using a weighted sequential hot-deck procedure for those identified as having a current main job who were not self-employed and who did not know their wage or refused to report a wage. Hourly wage for persons for whom employment status was not known was coded as "Not Ascertained" (-9). Additionally, wages were imputed for wage earners reporting a wage range and not a specific value. For each of these persons, a value was imputed from other persons on the file who did report a specific value that fell within the reported range. The variables HRWGIM31, HRWGIM42, and HRWGIM53 identify persons whose wages were imputed. Note that wages were imputed only for persons with a positive person and/or positive family weight.

The variables DIFFWG31, DIFFWG42, and DIFFWG53 indicate whether a person's wage amount was different in the current round at a continuing, current main job. NHRWG31, NHRWG42, and NHRWG53 contain the updated wage amount in cases where a person indicates

a change in wages (DIFFWG = 1). While the question regarding wage changes pertains to the primary wage at the main job, occasionally respondents update a person's supplemental wage (tips, bonus, and commission, except the case where the employee is paid primarily by bonus or commission) at the main job. Users should note that supplemental wage and changes in supplemental wage are not recorded in the HRWG31X, HRWG42X, HRWG53X and NHRWG31, NHRWG42, NHRWG53 variables. Consequently, in cases where a person updates a supplemental wage only, HRWG31X, HRWG42X, HRWG53X variables may contain the same value as NHRWG31, NHRWG42, NHRWG53 variables.

For all Panel 22 Round 1 persons, DIFFWG31 and NHRWG31 are set to 'inapplicable' because this was the first round that wages could be reported for those persons. In Rounds 2 through 5, no imputation was performed on NHRWG31, NHRWG42, and NHRWG53. Instead, where an updated wage amount is 'not known' or is 'refused,' NHRWG31, NHRWG42, and NHRWG53 are set to 'not ascertained.' For persons whose hourly wage variable HRWG31X, HRWG42X, and HRWG53X was imputed and the respondent provides an updated wage amount in a subsequent round, the new wage, NHRWG31, NHRWG42, and/or NHRWG53, is not presented. Instead, NHRWG31, NHRWG42, and/or NHRWG53 is set to '-13' to indicate that the initial HRWG31X, HRWG42X, and/or HRWG53X was imputed. Users may wish to refer to the 2017 Full-Year Jobs PUF to obtain updated wage amounts for these jobs.

Beginning in Panel 20 Round 3 and Panel 19 Round 5, CAPI prompts the respondent to confirm wages reported in the Employment Wage section if a wage amount falls outside a specified wage range. Ranges vary depending on the unit of pay as follows:

| Unit of Pay | Wage Range |
|---|---:|
| PER YEAR | $5,000.00 - $200,000.00 |
| PER MONTH | $375.00 - $20,000.00 |
| PER 2-WEEK PERIOD | $150.00 - $10,000.00 |
| PER WEEK | $75.00 - $5,000.00 |
| PER DAY | $10.00 - $750.00 |
| PER HOUR | $1.00 - $125.00 |

These changes are fully reflected on all wage variables in the 2017 Full-Year Consolidated PUF.

Beginning Panel 22 Round 3 and Panel 21 Round 5, for persons reporting to be paid "piecework" or "by the job/mile," the response categories "PER HOUR" and "PER TWO WEEK PERIOD" were removed as response options in CAPI. As such, persons who would have chosen those options as their "unit of payment" had to select an alternative response including "other specify." Note that, although this is one of several variables used in the construction of HRHOW53, HRWG53X, and NHRWG53, no logical changes were required on these variables as a result of this change.

For reasons of confidentiality, the hourly wage variables were top-coded. A value of –10 indicates that the hourly wage was greater than or equal to $96.15. Starting from Full-Year 2004, the wage top-code process used the highest reported wage on the file for an individual regardless of whether it was reported in HRWG31X, HRWG42X, and HRWG53X or NHRWG31, NHRWG42, and NHRWG53 variable. Prior to Full-Year 2004, only the initial reported wage in

Rounds 3 or 1 (HRWG31X) was used to calculate the wage top-code amount. Also beginning with the 2004 file, all wages for a person were top-coded if any wage variable was above the top-code amount.

In order to protect the confidentiality of persons across deliveries, the same top-code amount used in this Full-Year Consolidated file was also applied to the Full-Year 2017 Jobs file. Because a person can have other jobs besides a current main job which are included in the corresponding 2017 Full Year Jobs PUF, wages at these other jobs were reviewed in the top-coding process. In some cases for these persons, wages reported at the current main job were below the top-code amount while the wage at another job had to be top-coded. To further protect the confidentiality of such persons across deliveries, wages reported at all jobs in the Full-Year 2017 Jobs PUF were top-coded and the wages at their current main job (HRWG31X, HRWG42X, HRWG53X,NHRWG31, NHRWG42, and NHRWG53) included in this file were also top-coded.

**Health Insurance (HELD31X, HELD42X, HELD53X, OFFER31X, OFFER42X, OFFER53X, CHOIC31, CHOIC42, CHOIC53, DISVW31X, DISVW42X, DISVW53X, OFREMP31, OFREMP42, OFREMP53)**

There are several employment-related health insurance measures included in this release: health insurance held at a current main job (HELD31X, HELD42X, HELD53X), health insurance offered through a current main job (OFFER31X, OFFER42X, OFFER53X), and a choice of health plans available through the current main job (CHOIC31, CHOIC42, CHOIC53).

Several persons indicated that they held health insurance through a current main job in the employment section and then denied this coverage later in the interview in the health insurance section. Employment section health insurance HELD variables were edited for consistency to match the health insurance measures obtained in the health insurance section. To allow for easy identification of these individuals, round-specific flag variables were constructed (DISVW31X, DISVW42X, DISVW53X).

Responses in the employment section for health insurance held were recoded to be consistent with the variables in the health insurance section of the survey. Due to questionnaire skip patterns, the responses to health insurance offered were affected by editing the HELD variable. For example, if a person responded that health insurance was held from a current main job, the question relating to whether health insurance was offered was skipped. For persons who responded in the employment section that they held health insurance coverage and then disavowed the coverage in the health insurance section, it could not be ascertained whether they were offered a policy. These individuals are coded as –9 for the OFFER variables.

In the first round in which a person is reported as having a specific CMJ, MEPS asks if the person holds health insurance through that job. If the person does not hold insurance, then a follow-up question is asked as to whether the person was offered insurance (but declined coverage). However, if a person does hold insurance, then that person is skipped over the offered question and the offer variable (OFFER31X, OFFER42X, OFFER53X) is automatically set to "Yes" (1).

In the rounds after a CMJ is initially reported, the "held" question (whether a person now holds insurance through their CMJ) is asked again in each interview. This is to determine if there has been any change in coverage. The "offer" question (whether the jobholder was offered insurance through their CMJ) is also asked again in later rounds where the person has indicated no coverage on a continuing job at RJ07 or RJ08. Persons are asked these questions where

- insurance coverage through the job ended in a prior round
- the jobholder has never had insurance coverage through the job, even in cases where it was offered
- insurance coverage reported in the Employment section was disavowed in the Health Insurance section in the prior round

This type of current round information can also affect the setting of the DISVW31X, DISVW42X, and DISVW53X variables.

Beginning Panel 22 Round 3 and Panel 21 Round 5, where newly reported employment insurance coverage is disavowed in the Health Insurance section, follow-up questions are asked regarding whether insurance is offered (to the jobholder or to other employees) and whether more than one plan is available. This information is used in a new edit process whereby responses in the Health Insurance section are transferred into the Employment or Review of Jobs sections. Consequently, more information is now available on OFFER53X, OFREMP53, and CHOIC53. DISVW53X continues to be constructed to reflect the disavowal at a job. It should be noted that, due to a processing error in Panel 22 Round 3 and Panel 21 Round 5, data users may see an increase in values of -9 NOT ASCERTAINED in these rounds on several insurance-related variables collected in the Review of Jobs section including HELD53X, OFFER53X, and OFREMP53.

Prior to Panel 19 Round 4/Panel 20 Round 2, in the Review of Jobs section, no follow-up questions were asked of persons in a continuing CMJ who were offered employment insurance coverage but it was not taken in the round a job was first reported (EMA114 = YES) and no coverage has been reported through the job since the round the job was first reported (RJ07 = 2 NO, -7 REFUSED, -8 DON'T KNOW, or -9 NOT ASCERTAINED in the current round and all prior rounds). Beginning in Panel 19 Round 4/Panel 20 Round 2, follow-up questions ask whether health insurance is still offered to the employee by the CMJ and, if not, whether other employees at their establishment are currently offered insurance. This change occurred partway through the 2015 delivery year and therefore was not reflected in all rounds. As a result, data were edited and released in 2015 so that all six rounds represented the same flow (i.e. no follow-up questions). Beginning in 2016, the data reflect the current CAPI flow and include all follow-up questions. This change will be evident to analysts reviewing frequency distributions over time on OFFER31X, OFFER42X, and OFFER53X as well as OFREMP31, OFREMP42, and OFREMP53.

The variables OFREMP31, OFREMP42, and OFREMP53 indicate whether an employer offered health insurance to other employees at a firm where insurance was not offered to the jobholder. Data users should note that OFREMP31, OFREMP42, and OFREMP53 are automatically set to '1' in cases where HELD and OFFER are '1,' thus indicating that the jobholder has health insurance coverage through the employer, that coverage is offered to the employee, and that the employer offers insurance to its employees.

The employment-related insurance variables, HELD, OFFER, DISVW, and OFREMP for each round are logically edited for consistency.

**Hours (HOUR31, HOUR42, HOUR53)**

The hours measure refers to usual hours worked per week at the current main job. Note that, in cases where the respondent estimated hours worked per week at 35 hours or more, HOUR31, HOUR42, and HOUR53 were set to '40.'

**Temporary (TEMPJB31, TEMPJB42, TEMPJB53) and Seasonal (SSNLJB31, SSNLJB42, SSNLJB53) Jobs**

The temporary job variables (TEMPJB31, TEMPJB42, TEMPJB53) indicate whether a *newly reported* current main job lasts for only a limited amount of time or until the completion of a project.

The seasonal job variables (SSNLJB31, SSNLJB42, SSNLJB53) indicate whether the *newly reported* current main job is only available during certain times of the year. SSNLJB is "YES" ('1') if the job is only available during certain times of the year, SSNLJB is "NO" ('2') if the job is year round. Teachers and other school personnel who work only during the school year are considered to work year round.

Both variables are set on current main jobs whether a person is self-employed or not. These questions are asked only in the round the job is newly reported. Consequently, in rounds following the initial report, a code of '-2', "Determined In Previous Round", is used to indicate that the information in the question was obtained in a previous round. This differs from some previous files where both questions were asked in each round and '-2' was not an allowed value.

**Number of Employees (NUMEMP31, NUMEMP42, NUMEMP53)**

NUMEMP indicates the number of employees at the location of the person's current main job. Due to confidentiality concerns, this variable indicating the number of employees at the establishment has been top-coded at 500 or more employees. For persons who do not know the specific number of employees at their establishment, a categorical question is offered as an alternative. In these cases, a numerical value for NUMEMP is constructed using a median estimated size calculated from donors within the reported categorical range.

Beginning in Panel 20 Round 3/Panel 19 Round 5, CAPI no longer accepts a value of '0' when self-employed respondents are asked to indicate the total number of employees working at their self-employed business. This change is fully reflected in NUMEMP31, NUMEMP42, and NUMEMP53 in the 2017 Full-Year Consolidated PUF. It should also be noted that, due to a processing error for Panel 22 Round 3 and Panel 21 Round 5 in the Review of Jobs section, NUMEMP53 was automatically set to its prior round value for self-employed establishments on cases impacted by the processing error.

Beginning Panel 22 Round 3 and Panel 21 Round 5, there were changes in the categorical establishment sizes available to respondents not reporting a numerical value for number of employees. This information is used when calculating medians for constructed values of

NUMEMP31, NUMEMP42, and NUMEMP53. For continuity purposes, ranges used in calculating medians for these variables were not revised from previous years; they continue to conform to prior categories. Users can find more details on the new categories in the 2017 Jobs PUF.

**Other Employment Variables**

Information about industry and occupation types for a person's current main job at the interview date is also contained in this release. Based on verbatim text fields collected during the interview, numeric industry and occupation codes are assigned by trained coders at the Bureau of the Census. The coders used 2007 Census Industry and 2010 Census Occupation Coding schemes, which were developed for the Bureau's Current Population Survey and American Community Survey. Users should note that coding schemes are comparable for the FY2010 through FY2017 data files. Earlier versions of Census coding schemes were used on files prior to FY2010.

Current main jobs were initially coded at the 4-digit level for both industry and occupation. Then, for confidentiality reasons, these codes were condensed into broader groups for release on the file. INDCAT31, INDCAT42, and INDCAT53 represent the condensed industry codes for a person's current main job at the interview date. OCCCAT31, OCCCAT42, and OCCCAT53 represent the condensed occupation codes for a person's current main job at the interview date.

This release incorporates crosswalks showing how the detailed 2007 Census industry and 2010 Census occupation codes were collapsed into the condensed codes on the file, in both HTML and PDF formats. The schemes used in this file can be linked directly to the 2007 North American Industry Code System (NAICS) and the 2010 Standard Occupation Code scheme (SOC) by going to the Bureau of the Census website where a variety of additional crosswalks is also available.

Information indicating whether a person belonged to a labor union (UNION31, UNION42, and UNION53) is also contained in this release.

The month and year that the current main job started for Rounds 3, 4, and 5 of Panel 21 and Rounds 1, 2, and 3 of Panel 22 are provided in this release (STJBMM31, STJBYY31, STJBMM42, STJBYY42, STJBMM53, and STJBYY53). In FY17, STJBYY31, STJBYY42, and STJBYY53 are bottom coded to a value of '1947' to preserve age confidentiality. This value is calculated by taking the delivery year of 2017 and subtracting the age top code value of 85, then adding back 15, the age of a person in the year before entering the work force as defined in MEPS. Thus, the bottom code value will be different in each delivery year.

There are two measures included in this release that relate to a person's work history over a lifetime. One indicates whether a person ever retired from a job as of the Round 5 interview date for Panel 21 persons or the Round 3 interview date for Panel 22 persons (EVRETIRE). The other indicates whether a person ever worked for pay as of the Round 5 interview date for Panel 21 persons or the Round 3 interview date for Panel 22 persons (EVRWRK). The latter was asked of everyone who indicated that they were not working as of the round interview date. Therefore, anyone who indicated current employment or who had a job during any of the previous or

current rounds was skipped past the question identifying whether the person ever worked for pay. These individuals were coded as "Inapplicable" (-1). All persons who ever reported a job and were 55 years or older as of the round interview date were asked if they "ever retired". Since both of these variables are not round specific, there are no "-2" codes.

This release contains variables indicating the main reason a person did not work since the start of the reference period (NWK31, NWK42, and NWK53). If a person was not employed at all during the reference period (at the interview date or at any time during the reference period) but was employed some time prior to the reference period, the person was asked to choose from a list the main reason he or she did not work during the reference period. The "Inapplicable" (-1) category for the NWK variables includes:

- Persons who were employed during the reference period;
- Persons who were not employed during the reference period and who were never employed;
- Persons who were out-of-scope the entire reference period and;
- Persons who were less than 16 years old.

Beginning Panel 22 Round 3 and Panel 21 Round 5, a different set of response categories was available for the question used in setting NWK53 that asks why a person did not work at a job for pay in the reference period. New values were converted into the prior schema where possible. Otherwise, the variable was set to 91 "Other." A crosswalk is available below:

**Prior to Panel 22 Round 3/Panel 21 Round 5**

| Categories | As collected (EM126) | Recoded Value NWK53 |
|---|---|---|
| Could not find work | 1 | 1 |
| Retired | 2 | 2 |
| Unable to work because ill/disabled | 3 | 3 |
| On temporary layoff | 4 | 4 |
| Maternity/Paternity leave | 5 | 5 |
| Going to school | 6 | 6 |
| Taking care of home or family | 7 | 7 |
| Wanted some time off | 8 | 8 |
| Waiting to start new job | 9 | 9 |
| Other | 91 | 91 |
| Refused | -7 | -7 |
| Don't Know | -8 | -8 |

**Beginning Panel 22 Round 3/Panel 21 Round 5**

| Categories | As collected (EM750) | Recoded Value NWK53 |
|---|---|---|
| Could not find work | 1 | 1 |
| Retired | 2 | 2 |

| Categories | As collected (EM750) | Recoded Value NWK53 |
|---|---|---|
| Unable to work because ill/disabled | 3 | 3 |
| Going to school | 4 | 6 |
| Taking care of home or family | 5 | 7 |
| Don't want to work | 6 | 91 |
| Other | 91 | 91 |
| Refused | -7 | -7 |
| Don't Know | -8 | -8 |

A measure of whether an individual had more than one job on the round interview date (MORJOB31, MORJOB42, and MORJOB53) is provided on this release. In addition to those under 16 and those individuals who were out-of-scope, the "Inapplicable" category includes those who did not report having a current main job. Because this is not a job-specific variable, there are no "–2" codes.

This release contains variables indicating if a current main job changed between the third and fourth rounds for Panel 21 persons or between the first and second rounds for Panel 22 persons (CHGJ3142) and between the fourth and fifth rounds for Panel 21 persons or between the second and third rounds for Panel 22 persons (CHGJ4253). In addition to the "Inapplicable", "Refused", "Don't Know", and "Not Ascertained" categories, the change job variables were coded to represent the following:

1 person left previous round current main job and now has a new current main job;
2 person still working at the previous round's current main job but, as of the new round, no longer considers this job to be the current main job and defines a new main job (previous round's current main job is now a current miscellaneous job);
3 person left previous round's current main job and does not have a new job;
4 person did not change current main job.

Finally, this release contains the reason given by the respondent for the job change (YCHJ3142 and YCHJ4253). The reasons for a job change were listed in the CAPI questionnaire and a respondent was asked to choose the main reason from this list. In addition to those out-of-scope, those under 16, and those not having a current main job, the "Inapplicable" category for YCHJ3142 and YCHJ4253 includes workers who did not change jobs.

Beginning Panel 22 Round 3 and Panel 21 Round 5, a different set of response categories was available for the question used in setting YCHG4253 that asks why a person left a job that continued from the previous round but ended in the current round. New values selected were converted into the prior schema where possible. Otherwise, the variable was set to 91 "Other." A crosswalk is available below:

**Prior to Panel 22 Round 3/Panel 21 Round 5**

| Categories | As collected (RJ10) | Recoded Value YCH4253 |
|---|---|---|
| Job ended | 1 | 1 |
| Business dissolved/sold | 2 | 2 |
| Retired | 3 | 3 |
| Illness/Injury | 4 | 4 |
| Laid off | 5 | 5 |
| Quit to have a baby | 6 | 6 |
| Quit to go to school | 7 | 7 |
| Quit to take care of home or family | 8 | 8 |
| Quit because wanted time off | 9 | 9 |
| Quit to take other job | 10 | 10 |
| Unpaid leave | 11 | 11 |
| Other | 91 | 91 |
| Refused | -7 | -7 |
| Don't Know | -8 | -8 |

**Beginning Panel 22 Round 3/Panel 21 Round 5**

| Categories | As collected (RJ130) | Recoded Value YCH4253 |
|---|---|---|
| Job ended, temporary, seasonal, contract, etc. | 1 | 1 |
| Business closed or sold | 2 | 2 |
| Retired | 3 | 3 |
| Illness, Injury, any health problem | 4 | 4 |
| Terminated, fired, dismissed | 5 | 91 |
| Laid off, let go | 6 | 5 |
| Quit - family reason, maternity leave | 7 | 8 |
| Quit - school | 8 | 7 |
| Quit – any other reason | 10 | 91 |
| Quit – job related | 9 | 91 |
| Other | 91 | 91 |
| Refused | -7 | -7 |

## Employment Variables Imputed for Missing Values (EMPST31H – RTPLN53H)

To further assist analysts, a series of fully-imputed employment variables is available on the Full Year Consolidated Data File (FY PUF). For the years 2000 to 2013 these variables can be found on MEPS HC-131 (MEPS Employment Variables 2000-2013). For the years 2014 and beyond, these variables can be found in the FY PUF for each data year. The fully-imputed variables in this file are developed from the constructed Employment variables in the 2017 FY PUF.

Observations for these employment variables with values of -7 (refused), -8 (don't know) or -9 (not ascertained) were imputed using weighted sequential hot-decking. The imputations were performed separately for each MEPS HC panel across the five survey rounds of the MEPS. First, all missing values of a given variable were imputed for Round 1. If a person remained in the same job in Round 2, and the MEPS questionnaire did not ask for updated job information (i.e., if the variable on the FY PUF was coded as -2), then the value for that variable was pulled forward from Round 1 to Round 2 (including values that had been imputed in Round 1). After pulling values forward from Round 1, any remaining missing values were imputed for Round 2. This process was repeated for Rounds 3-5. For Panel 22, the imputed employment variables use constructed employment variables from Round 1, 2 and 3 data on this file. For Panel 21, Rounds 3, 4, and 5 data from the current file are used as well as data from Rounds 1 and 2 from the 2016 Full-Year PUF. Users who want to combine data on all five rounds for an individual in Panel 21, should use 2016 data for Rounds 1 and 2, from MEPS HC-192, and 2017 data for Rounds 3, 4 and 5, from the current file. (Note that MEPS HC-192 also has Round 3 information for Panel 21, but the 2017 PUF has the most up-to-date version of Round 3 information and is the most consistent with 2017 Round 4 and 5 variables.)

Following imputation, no values of -2, -7, -8, or -9 remain on any variable. Due to skip patterns, the majority of -1s (question was not asked due to skip pattern) remain. For reasons of confidentiality, values of -10 (hourly wage was top-coded at $96.15) also remain and employer size (number of employees in establishment) is top-coded at 500.

**Variable Naming**

The names of the imputed variables are similar to the names of the corresponding constructed variables in this file. An 'H' suffix is added and the resulting name is shortened to 8 characters when necessary (e.g., the imputed version of SELFCM31 is SLFCM31H). The variables CMJHLD31/42/53 differ from this naming convention because they are not imputed (they contain no missing values) but were constructed using information from the Person Round Plan (PRPL) File (MEPS HC-200). CMJHLD31/42/53 may be compared with the constructed Employment variables HELD31X/42X/53X. Both of these sets of variables provide information on the insurance coverage individuals obtain through their current main jobs. However, these variables may differ since they are constructed from two different data files and because the CMJHLD31/42/53 variables capture information on some additional sources of employment-related insurance that were identified in the insurance section of the instrument while the HELD31X/42X/53X variables only contain information on sources of coverage identified in the employment section. In addition the values of CMJHLD31 for Panel 21 observations reflect coverage in Round 3 in the 2017 PRPL file as well as in the 2016 PRPL file. Note that the variables CMJHLD31/42/53 are included on this file because they were used to perform logical edits on the OFFER31H/42H/53H and OFEMP31H/42H/53H variables (edits are described below). The CMJHLD31H/42H/53H variables were used to edit the OFFER31H/42H/53H and OFEMP31H/42H/53H variables (rather than the HELD31X/42X/53X variables) because they were more consistent with the other health insurance variables on the FY PUF for each year.

The following table provides the name of the constructed Employment variables that correspond with each imputed Employment variable.

**Employment Variable Crosswalk**

| Imputed | Constructed |
|---|---|
| EMPST31H | EMPST31 |
| EMPST42H | EMPST42 |
| EMPST53H | EMPST53 |
| SLFCM31H | SELFCM31 |
| SLFCM42H | SELFCM42 |
| SLFCM53H | SELFCM53 |
| NMEMP31H | NUMEMP31 |
| NMEMP42H | NUMEMP42 |
| NMEMP53H | NUMEMP53 |
| MORE31H | MORE31 |
| MORE42H | MORE42 |
| MORE53H | MORE53 |
| INDCT31H | INDCAT31 |
| INDCT42H | INDCAT42 |
| INDCT53H | INDCAT53 |
| OCCCT31H | OCCCAT31 |
| OCCCT42H | OCCCAT42 |
| OCCCT53H | OCCCAT53 |
| HOUR31H | HOUR31 |
| HOUR42H | HOUR42 |
| HOUR53H | HOUR53 |
| JBORG31H | JOBORG31 |
| JBORG42H | JOBORG42 |
| JBORG53H | JOBORG53 |
| UNION31H | UNION31 |
| UNION42H | UNION42 |
| UNION53H | UNION53 |
| BSNTY31H | BSNTY31 |
| BSNTY42H | BSNTY42 |
| BSNTY53H | BSNTY53 |
| HRWG31H | HRWG31X |

| Imputed | Constructed |
|---|---|
| HRWG42H | HRWG42X |
| HRWG53H | HRWG53X |
| CMJHLD31* | HELD31X |
| CMJHLD42* | HELD42X |
| CMJHLD53* | HELD53X |
| OFFER31H | OFFER31X |
| OFFER42H | OFFER42X |
| OFFER53H | OFFER53X |
| OFEMP31H | OFREMP31 |
| OFEMP42H | OFREMP42 |
| OFEMP53H | OFREMP53 |
| PYVAC31H | PAYVAC31 |
| PYVAC42H | PAYVAC42 |
| PYVAC53H | PAYVAC53 |
| SCPAY31H | SICPAY31 |
| SCPAY42H | SICPAY42 |
| SCPAY53H | SICPAY53 |
| PAYDR31H | PAYDR31 |
| PAYDR42H | PAYDR42 |
| PAYDR53H | PAYDR53 |
| RTPLN31H | RETPLN31 |
| RTPLN42H | RETPLN42 |
| RTPLN53H | RETPLN53 |

* Both CMJHLD and HELDX reflect the insurance status at a current main job but are constructed from different sources of data. See the text for a description of possible differences in these variables. CMJHLD is *not* an imputed version of HELDX.

**Imputation Strategy**

The first variables to be imputed were the employment status variables (EMPST31H/42H/53H) which identify all persons (EMPST31H/42H/53H = 1 or 2) who should have valid information related to their current main job.

EMPST31H/42H/53H are created from EMPST31/42/53. The EMPST31/42/53 variables have separate response categories for individuals who were “employed during the reference period”

and those who were "not employed with no job to return to." In the imputed variables EMPST31H/42H/53H these responses are collapsed into a single category for analytic purposes. The resulting three responses are mutually exclusive as follows:

| Value | Label |
|---|---|
| -1 | INAPPLICABLE |
| 1 | EMPLOYED AT RD#/# INT DATE |
| 2 | JOB TO RETURN TO AT RD #/# INT DATE |
| 34 | NOT EMPLOYED DURING RD #/# |

Respondents with EMPST31H/42H/53H equal to 1 or 2 go through the imputation process. Respondents with EMPST31H/42H/53H equal to -1 or 34 have values of -1 for all remaining imputed employment variables.

The next set of variables to be imputed were the self-employment/wage-earner variables (SLFCM31H/42H/53H) which determine skip patterns for the remaining variables (e.g., self-employed persons are not asked about wages).

Many of the remaining variables were imputed separately for wage-earners and the self-employed for the following reasons: 1) self-employed and wage-earners were asked different sets of questions about their current main jobs; 2) even when variables were asked for both groups, the quality of the imputations was improved by specifying separate sets of class variables tailored to the wage-earner and self-employed populations.

The weighted sequential hot decking process requires class variables to impute missing values. These class variables were identified with regression models in order to identify the predictive quality of a set of variables for each variable to be imputed. The set of possible class variables, includes age, gender, region, educational attainment, industry and occupation code, and the set of variables have been consistently used to impute a given variable across panels.

As mentioned above, self-employed and wage-earners were asked different sets of questions about their current main job. These variables can be categorized into the following sets:

**Variables with Valid Data for Wage-Earners but Not for Self-Employed Individuals**

- Hourly wage (HRWG31H, HRWG42H, HRWG53H)
- Paid sick leave (SCPAY31H, SCPAY42H, SCPAY53H)
- Paid leave to visit a doctor (PAYDR31H, PAYDR42H, PAYDR53H)
- Paid vacation (PYVAC31H, PYVAC42H, PYVAC53H)
- Pension plan (RTPLN31H, RTPLN42H, RTPLN53H),

- Business has more than one location (MORE31H, MORE42H, MORE53H)
- Sector: private-foreign govt/federal government/state-local government (JBORG31H, JBORG42H, JBORG53H)

**Variables with Valid Data for Self-Employed Individuals but Not for Wage-Earners**

- Business was incorporated, a proprietorship, or a partnership (BSNTY31H, BSNTY42H, and BSNTY53H)

**Variables with Valid Data for All Workers**

- Usual hours worked per week (HOUR31H, HOUR42H, HOUR53H)
- Number of employees (NMEMP31H, NMEMP42H, NMEMP53H)
    - Establishment size for wage-earners
    - Business size for self-employed
- Union status (UNION31H, UNION42H, UNION53H)
- Industry category (INDCT31H, INDCT42H, INDCT53H)
- Occupation category (OCCCT31H, OCCCT42H, OCCCT53H)

**Variables with Valid Data for All Workers Except for Self-Employed Individuals with No Employees (i.e., persons for whom SLFCM31H/42H/53H = 1 and NMEMP31H/42H/53H = 1 within each round)**

- Insurance coverage from current main job (CMJHLD31, CMJHLD42, CMJHLD53)
- Eligible for insurance offered at current main job (OFFER31H, OFFER42H, OFFER53H)
- Insurance offered to anyone at current main job (OFEMP31H, OFEMP42H, OFEMP53H)

**Additional Detail on Specific Variables**

**Hourly Wage (HRWG31H, HRWG42H, HRWG53H)**

Valid data for imputed hourly wages is available for all wage-earners (SLFCM31H/42H/53H equal to 2). The values for the imputed hourly wage variables (HRWG31H/42H/53H) reflect the most up-to-date version of hourly wages for the wage-earner in each round. By contrast, the constructed hourly wage variables (HRWG31X/42X/53X) identify the wage reported in the round a current main job is first reported. Information on any wage changes after that round are

contained in the variables DIFFWG31/42/53 and NHRWG31/42/53. These variables, as well as HRWG31X/42X/53X are used in the construction of the imputed hourly wage variables.

For reasons of confidentiality, the hourly wage variables are top-coded. Like the constructed hourly wage variables, imputed hourly wages greater than or equal to $96.15 are top-coded to a value of -10.

**Union Membership (UNION31H/42H/53H)**

In addition to using weighted sequential hot-decking techniques, individuals who were identified as being employed by the military had their union membership status logically edited to -1 (inapplicable).

**Health Insurance (CMJHLD31, CMJHLD42, CMJHLD53, OFFER31H, OFFER42H, OFFER53H, OFEMP31H, OFEMP42H, OFEMP53H)**

This file includes several employment-related health insurance variables, CMJHLD31/42/53, OFFER31H/42H/53H, and OFEMP31H/42H/53H. These variables are valid for wage-earners (SLFCM31H/42H/53H = 2) and self-employed individuals with employees (SLFCM31H/42H/53H = 1 and NMEMP31H/42H/53H > 1).

The variables CMJHLD31/42/53 are constructed from the Person-Round-Plan (PRPL) public use file and indicate whether the person held insurance coverage from his/her current main job at some point during the round. This is primarily defined using the PRPL public use file variable CMJINS which identifies insurance obtained through a current main job, and STATUS1-24, which indicates whether the coverage is in effect during the round. Since Round 3 crosses two calendar years, CMJHLD31 for Panel 21 respondents indicates that the person held coverage during the portion of Round 3 in either the 2016 or 2017 PRPL public use file for the individual.

The variables OFFER31H/42H/53H indicate whether the person was offered (was eligible for) insurance at their current main job at some point during the round. For records that had a value of -9, valid reported values for OFFER31H/42H/53H were brought forward from a previous round (including imputed values from that round) if the person did not change jobs before any further imputations were performed.

The variables OFEMP31H/42H/53H indicate whether an employer offered health insurance to any employees in the establishment and rely on OFFER31H/42H/53H during their construction.

OFFER31H/42H/53H and the related variable OFEMP31H/42H/53H were logically edited as follows. If a person indicates that they held insurance from their current main job (CMJHLD31/42/53 = 1) then OFFER31H/42H/53H was set equal to 1. For Round 3, OFFER31H/53H was set to 1 if the person held coverage at any point in Round 3 in either calendar year. If a person indicated that they held insurance (CMJHLD31/42/53 = 1) or were offered insurance (OFFER31H/42H/53H = 1) at their current main job, then OFEMP31H/42H/53H, the variable indicating that the employer offered insurance to at least one employee, was set equal to 1.

**Number of Employees (NMEMP31H, NMEMP42H, NMEMP53H)**

Like the corresponding constructed NUMEMP31/42/53, NMEMP31H/42H/53H indicate the number of employees at the location of the person's current main job. Due to confidentiality concerns, this variable has been top-coded at 500. Missing value imputation is done using weighted sequential hot-decking techniques. Note that the definition of NMEMP31H/42H/53H, like that for NUMPEMP31/42/53, differs for wage-earners and self-employed individuals. For wage-earners, it represents the size of the worker's establishment. For self-employed individuals, it represents the size of the self-employed individual's entire business.

### 2.5.10 Health Insurance Variables (TRIJA17X-PMEDPY53)

Beginning Panel 21 Round 5/Panel 22 Round 3, design changes to the health insurance section may impact trend analyses. Analysts should note that a series of questions were added to the HX section of the questionnaire to confirm whether a person who initially did not report any comprehensive coverage during a round has insurance. If a respondent indicates that a person does have coverage, they are then asked a series of questions to determine the type of coverage (e.g. Medicaid, Private, etc.). This may cause analysts to see changes to the insurance variables—particularly, changes to the summary insurance variables (PUB53X, PUB17X, PUBAT53X, PUBAT17X, PUBmm17X, PRIV53, PRIV17, PRIVAT53, PRIVAT17, PRIVmm17, INS53X, INS17X, INSAT53X, INSAT17X, INSmm17X, UNINS17, INSCOV17, INSURC17).

Secondly, respondents were allowed to report both Medicaid and other public hospital/physician coverage. Previously, these types of coverage were mutually exclusive. Analysts should be aware that they may now see trend changes in Medicaid, edited Medicaid or Other Public coverage as well as respondents reporting both (MCAID53, MCAID17, MCDmm17, MCAID53X, MCAID17X, MCDAT53X, MCDAT17X, MCDmm17X, MCDEV17, OTPUBA53, OTPUBA17, OTPAAT53, OTPAAT17, OPAmm17, OPAEV17, OTPUBB53, OTPUBB17, OTPBAT53, OTPBAT17, OPBmm17, OPBEV17).

The aforementioned changes to the administration of the insurance section may also be evident in the Managed Care Variables (TRIST17X–PRVHMO17) because more respondents are now more likely to be asked about managed care.

Lastly, respondents were no longer asked about State-specific program participation in non-comprehensive coverage so variables related to this type of coverage were no longer constructed (STAPR31, STAPR42, STAPR53, STAPR17, STPRAT31, STPRAT42, STPRAT53, and STPRAT17, STAmm17).

#### 2.5.10.1 Monthly Health Insurance Indicators (TRIJA17X-INSDE17X)

Constructed and edited variables are provided that indicate any coverage in each month of 2017 for the sources of health insurance coverage collected during the MEPS interviews (Panel 21 Rounds 3 through 5 and Panel 22 Rounds 1 through 3). In Rounds 2, 3, 4, and 5, insurance that was in effect at the previous round's interview date was reviewed with the respondent. Most of the insurance variables have been logically edited to address issues that arose during such reviews in Rounds 2, 3, 4, and 5. One edit to the private insurance variables corrects for a problem concerning covered benefits that occurred when respondents reported a change in any of

their private health insurance plan names. Additional edits address issues of missing data on the time period of coverage for both public and private coverage that was either reviewed or initially reported in a given round. Additional edits, described below, were performed on the Medicare and Medicaid or State Children's Health Insurance Program (SCHIP) variables to assign persons to coverage from these sources. Observations that contain edits assigning persons to Medicare or Medicaid/SCHIP coverage can be identified by comparing the edited and unedited versions of the Medicare and Medicaid/SCHIP variables. Starting October 1, 2001, persons 65 years and older have been able to retain TRICARE coverage in addition to Medicare. Therefore, unlike in earlier MEPS public use files, persons 65 years and older do not have their reported TRICARE coverage (TRIJA17X – TRIDE17X) overturned. TRICARE acts as a supplemental insurance for Medicare, similar to Medigap insurance.

Public sources include Medicare, TRICARE/CHAMPVA, Medicaid, SCHIP, and other public hospital/physician coverage. Beginning Panel 21 Round 5/Panel 22 Round 3, questions related to coverage in state-specific non-comprehensive programs were removed from the survey. Therefore, state-specific constructed variables that had appeared on previous public use files (e.g., STAJA16 – STADE16) will no longer be constructed beginning FY 2017.

**Medicare**

Medicare (MCRJA17 – MCRDE17) coverage was edited (MCRJA17X – MCRDE17X) for persons age 65 or over. Within this age group, individuals were assigned Medicare coverage if:

- They answered "Yes" to a follow-up question on whether they received Social Security benefits; or
- They were covered by Medicaid/SCHIP, other public hospital/physician coverage or Medigap coverage; or
- Their spouse was age 65 or over and covered by Medicare; or
- They reported TRICARE coverage.

Note that age (AGE##X) is checked for edited Medicare (where ## represents the different MEPS rounds), however date of birth is not considered. Edited Medicare is somewhat imprecise with regard to a person's 65$^{th}$ birthday.

**Medicaid/SCHIP and Other Public Hospital/Physician Coverage**

Questions about other public hospital/physician coverage were asked in an attempt to identify Medicaid or SCHIP recipients who may not have recognized their coverage as such. These questions were asked only if a respondent did not report Medicaid or SCHIP directly. Respondents reporting other public hospital/physician coverage were asked follow-up questions to determine if the coverage was through a specific Medicaid HMO or if it included some other managed care characteristics. Respondents who identified managed care from either path were asked if the recipient paid anything for the coverage and/or if a government source paid for the coverage.

The Medicaid/SCHIP variables (MCDJA17 – MCDDE17) have been edited (MCDJA17X – MCDDE17X) to include persons who paid nothing for their other public hospital/physician

insurance when such coverage was through a Medicaid HMO or reported to include some other managed care characteristics.

To assist users in further editing sources of insurance, this file contains variables constructed from the other public hospital/physician series that measure whether:

- The respondent reported some type of managed care and paid something for the coverage, Other Public A Insurance (OPAJA17 – OPADE17); and
- The respondent did not report any managed care, Other Public B Insurance (OPBJA17 – OPBDE17).

The variables OPAJA17 – OPADE17 and OPBJA17 – OPBDE17 are provided only to assist in editing and should not be used to make separate insurance estimates for these types of insurance categories.

**Any Public Insurance in Month**

The file also includes summary measures that indicate whether or not a sample person has any public insurance in a month (PUBJA17X – PUBDE17X). Persons identified as covered by public insurance are those reporting coverage under TRICARE, Medicare, Medicaid or SCHIP, or other public hospital/physician programs. Note that further edits may be made to the public insurance variables in later MEPS data releases to address cases where private coverage through a federally-facilitated, state-based or state partnership exchange/marketplace may have been originally reported as public insurance. These potential edits could affect the variables MCAID17X, OTPUBA17, OTPUBB17, and PUB17X.

**Private Insurance**

Variables identifying private insurance in general (PRIJA17 – PRIDE17) and specific private insurance sources [such as employer/union group insurance (PEGJA17 – PEGDE17); non-group (PNGJA17 – PNGDE17); other group (POGJA17 – POGDE17)]; and private insurance through a federally-facilitated, state-based or state partnership exchange/marketplace (PRXJA17 – PRXDE17) were constructed. Private insurance sources identify coverage in effect at any time during each month of 2017. Separate variables identify covered persons and policyholders (policyholder variables begin with the letter "H", e.g., HPEJA17 – HPEDE17). These variables indicate coverage or policyholder status within a source and do not distinguish between persons who are covered or are policyholders on one or more than one policy within a given source. In some cases, the policyholder was unable to characterize the source of insurance (PDKJA17 – PDKDE17). Covered persons (but not policyholders) with coverage reported through the category of "under plan of someone not living here" are identified (POUJA17 – POUDE17). Some respondents reported a category other than "under plan of someone not living here" such as "from a group or association" or "directly from an HMO," and then later reported, when asked to identify the policyholder, a policyholder that was outside the RU. Respondents reporting policyholders outside the RU in this manner were not identified in the POUJA17-POUDE17 variables. An individual was considered to have private health insurance coverage if, at a minimum, that coverage provided benefits for hospital and physician services (including Medigap coverage). Note, however, that persons covered by private insurance through an

exchange/marketplace (PRSTX31/42/53/17 and PRXJA17 – PRXDE17) were considered to have private health coverage if that coverage provided hospital/physician services, but excluded coverage that was explicitly identified as Medigap coverage (EPRS.MSUPINS=1). If a person reported Medigap coverage through the exchange/marketplace, then the source of the insurance purchased was edited to reflect coverage "from a professional association" (EPRS.PURCHTYP=1) or "from a group or association" coverage (EPRS.PRIVINS=1). Further descriptions of the exchange variables are detailed below. Sources of insurance with missing information regarding the type of coverage were assumed to contain hospital/physician coverage. Persons who reported private insurance that did not provide hospital/physician insurance were not counted as privately insured. Coverage indicated by these variables may be from any type of job where the Employment section insurance variables delivered on this file reflect only coverage through a current main job.

Health insurance through a job or union (PEGJA17 – PEGDE17, PRSJA17 – PRSDE17) was initially asked about in the Employment section of the interview and later confirmed in the Health Insurance section. Respondents also had an opportunity to report employer and union group insurance (PEGJA17 – PEGDE17) for the first time in the Health Insurance section, but this insurance was not linked to a specific job.

All insurance reported to be through a job classified as self-employed with firm size of 1 (PRSJA17 – PRSDE17) was initially reported in the Employment section and verified in the Health Insurance section. Unlike the other employment-related variables (PEGJA17 – PEGDE17), self-employed-firm size 1 (PRSJA17 – PRSDE17) health insurance could not be reported in the Health Insurance section for the first time. The variables PRSJA17 – PRSDE17 have been constructed to allow users to determine if the insurance should be considered employment-related.

Private insurance that was not employment-related (POGJA17 – POGDE17, PNGJA17 – PNGDE17, PDKJA17 – PDKDE17, POUJA17 – POUDE17, and PRXJA17 – PRXDE17) was reported in the Health Insurance section only.

Beginning in Panel 12 Round 2, the response category "Health Insurance Purchasing Alliance" was removed from HX03 (EPRS.PURCHTYP=4) and HX23 (EPRS.PRIVINS=2) because it was infrequently reported and it was not clear how respondents were using this category.

Beginning in Panel 14 Round 5/Panel 15 Round 3, "High Risk Pool" was added to the list of categories at HX03 (EPRS.PURCHTYP=10) and HX23 (EPRS.PRIVINS=13). Beginning FY 2010, High Risk Pool was included in all Other Group insurance categories.

Beginning in Panel 18 Round 3/Panel 19 Round 1, "Federal/State Exchange" was added to the list of private insurance categories at HX03 (EPRS.PURCHTYP=11) and HX23 (EPRS.PRIVINS=14). Additionally, beginning in Panel 18 Round 3/Panel 19 Round 1, variables EPRS.STEXCH03 and EPRS.STEXCH23 were collected at question HP04A ("Is this coverage through {state exchange name}?") for respondents reporting insurance from a group, directly from an insurance company or HMO, from an insurance agent or from an "other" unspecified source. Beginning in Panel 20 Round 3, the variable EPRS.OESTEXCH was collected at OE28A ("Is this coverage through {state exchange name}?") for respondents who previously reported

private insurance coverage from an insurance company or HMO, or from an insurance agent that was not through an exchange/marketplace. Note that the state-specific name for the exchange/marketplace was used when asking these questions and was also used on the list of private insurance categories at HX03 and HX23. The variables PRSTX31/42/53/17 have been constructed to include persons less than 65 years old who report private insurance through a federally-facilitated, state-based or state partnership exchange/marketplace at HX03 or HX23, or persons 65 years old or older who report private insurance through a federally-facilitated, state-based or state partnership exchange/marketplace at HX03 or HX23 and who were not covered by Medicare. In addition, persons who reported a source of insurance at HX23 that was not through an exchange/marketplace (e.g. through a group or directly from an insurance company) but who answered yes to HP04A or OE28A, were also classified as having exchange/marketplace coverage instead of being assigned to the category they originally reported. In addition to reporting coverage through an exchange/marketplace, coverage needed to have been identified as hospital/physician coverage (either as Yes (1) or missing (-7, -8, -9)), but not identified as having Medicare supplemental coverage. Note that the variables PRSTX31/42/53/17 contain information on private coverage that was reported as obtained through a federally-facilitated, state-based or state partnership marketplace. Consistent with the approach used in the Current Population Survey and the National Health Interview Survey, MEPS respondents reporting public coverage were asked whether the public coverage was obtained through a federal or state marketplace in case respondents were confused about whether the source of coverage was public or private. Responses to these questions were not used to edit the PRSTX31/42/53/17 variables.

**Any Insurance in Month**

The file also includes summary measures that indicate whether or not a person has any insurance in a month (INSJA17X – INSDE17X). Persons identified as insured are those reporting coverage under TRICARE, Medicare, Medicaid, SCHIP, or other public hospital/physician or private hospital/physician insurance (including Medigap plans). A person is considered uninsured if not covered by one of these insurance sources.

### 2.5.10.2 Summary Insurance Coverage Indicators (PRVEV17-INSURC17)

The variables PRVEV17-UNINS17 summarize health insurance coverage for the person in 2017 for the following types of insurance: private (PRVEV17); TRICARE/CHAMPVA (TRIEV17); Medicaid or SCHIP (MCDEV17); Medicare (MCREV17); other public A (OPAEV17); other public B (OPBEV17). Each variable was constructed based on the values of the corresponding 12 month-by-month health insurance variables described above. **For persons not in scope for the full year, these summary variables are based on the period of eligibility.** If the person was not in scope for all 12 months throughout the year, the values are based on the months the person was eligible. A value of 1 indicates that the person was covered for at least one day of at least one month during 2017. A value of 2 indicates that the person was not covered for a given type of insurance for all of 2017. The variable UNINS17 summarizes PRVEV17-OPBEV17. Where PRVEV17-OPBEV17 are all equal to 2, then UNINS17 equals 1; person was uninsured for all of 2017. Otherwise, UNINS17 is set to 2, insured for all or part of 2017.

For user convenience this file contains a constructed variable INSCOV17 that summarizes health insurance coverage for the person in 2017, with the following three values:

1 = ANY PRIVATE (Person had any private insurance coverage [including TRICARE/CHAMPVA] any time during 2017)

2 = PUBLIC ONLY (Person had only public insurance coverage during 2017)

3 = UNINSURED (Person was uninsured during all of 2017)

INSURC17 summarizes health insurance coverage for the person in 2017 using eight categories of insurance separated by age using the person's age on December 31st, 2017:

1 = ANY PRIVATE (0-64) (Person is between 0 and 64 years old and is covered by private insurance or TRICARE/CHAMPVA in 2017)

2 = PUBLIC ONLY (0-64) (Person is between 0 and 64 years old and is covered by public insurance only (excluding TRICARE/CHAMPVA) in 2017)

3 = UNINSURED (0-64) (Person is between 0 and 64 years old and is uninsured for all of 2017)

4 = EDITED MEDICARE ONLY (65+) (Person is 65 years old or more and is covered by edited Medicare only in 2017)

5 = EDITED MEDICARE & PRIV (65+) (Person is 65 years old or more and is covered by edited Medicare and (private insurance or TRICARE/CHAMPVA) in 2017)

6 = EDITED MEDICARE & OTH PUB ONLY (65+) (Person is 65 years old or more and is covered by edited Medicare and (edited Medicaid/SCHIP, Other Government (type A) or Other Government (type B)) in 2017)

7 = UNINSURED (65+) (Person is 65 years old or more and is uninsured for all of 2017)

8 = NO MEDICARE BUT ANY PUBLIC/PRIVATE (65+) (Person is 65 years old or more and is not covered by Medicare but is covered by private insurance or Medicaid, TRICARE/CHAMPVA, Other Public A, or Other Public B in 2017)

Please note, beginning in 2012, Category 7 was revised to categorize persons who are 65 years or older and uninsured, and Category 8 was added to include persons 65 years or older who do not have Medicare, but are covered by public or private insurance.

Please note that both INSCOV17 and INSURC17 categorize TRICARE as private coverage. All other health insurance indicators included in this data release categorize TRICARE as public coverage. If an analyst wishes to consider TRICARE public coverage, the variable can easily be reconstructed using the PRVEV17 and TRIEV17 variables. Also note that these categories are mutually exclusive, with preference given to private insurance and TRICARE. Persons with both private insurance/TRICARE and public insurance will be coded as "1" for INSCOV17 and INSURC17.

### 2.5.10.3 FY 2017 PUF Managed Care Variables (TRIST31X- PRVHMO17)

In addition to the month-by-month indicators of coverage, there are round-specific health insurance variables indicating coverage by an HMO or managed care plan. Managed care variables have been constructed from information on health insurance coverage at any time in a reference period and the characteristics of the plan. A separate set of managed care variables has been constructed for private insurance, Medicaid/SCHIP, and Medicare coverage. The purpose of these variables is to provide information on managed care participation during the portion of the three rounds (i.e., reference periods) that fall within the same calendar year.

Managed care variables for calendar year 2017 are based on responses to health insurance questions asked during the Round 3, 4, and 5 interviews of Panel 21, and the Round 1, 2, and 3 interviews of Panel 22. Each managed care variable ends in "xy" where x and y denote the interview round for Panel 21 and Panel 22, respectively. The variables ending in "31" and "42" correspond to the first two interviews of each panel in the calendar year. Because Round 3 interviews typically overlap the final months of one year and the beginning months of the next year, the "31" managed care variables for Panel 21 indicate whether or not a person has coverage from a managed care plan in the 2017 calendar year. Similarly, the Panel 21 Round 5 and Panel 22 Round 3 managed care variables indicate whether or not a person has coverage from a managed care plan in the 2017 calendar year, and the variables have been given the suffix "17" (as opposed to "53") to emphasize the restricted time frame. Further descriptions of the implications to managed care plan coverage due to the overlapping calendar year in Round 3 are detailed below.

Construction of the managed care variables is straightforward, but three caveats are appropriate. First, MEPS estimates of the number of persons in HMOs are higher than figures reported by other sources, particularly those based on HMO industry data. The differences stem from the use of household-reported information, which may include respondent error, to determine HMO coverage in MEPS.

Second, the managed care questions are asked about the last plan held by a person through his or her establishment (employer or insurer) even though the person could have had a different plan through the establishment at an earlier point during the interview period. As a result, in instances where a person changed his or her establishment-related insurance, the managed care variables describe the characteristics of the last plan held through the establishment.

Third, the "17" versions of the managed care variables for Panel 22 are developed from Round 3 variables that cover different time frames. The health insurance variable for Round 3 is restricted to the same calendar year as the Round 1 and 2 data. The Round 3 variables describing plan type, on the other hand, overlap the next calendar year. As a consequence, the Round 3 managed care variables may not describe the characteristics of the last plan held in the calendar year if the person changed plans after the first of the year.

The variables PRVHMO31/42/17 indicate coverage by a private HMO in Panel 22 Rounds 1 - 3, and Panel 21 Rounds 3 - 5. The variables MCRPHO31/42/17 indicate coverage by a Medicare managed care plan in Panel 22 Rounds 1 - 3, and Panel 21 Rounds 3 - 5. The variables MCRPD31/42/17 indicate coverage by Medicare prescription drug benefit, also known as Part D,

in Panel 22 Rounds 1 - 3, and Panel 21 Rounds 3 - 5. The edited version of the Medicare prescription drug coverage variables (MCRPD31/42/17X) include persons who are covered by both edited Medicare and edited Medicaid. The variables MCDHMO31/42/17 and MCDMC31/42/17 indicate coverage by a Medicaid or SCHIP HMO or managed care plan in Panel 22 Rounds 1 - 3, and Panel 21 Rounds 3 - 5. For Panel 22, the "31" version indicates coverage at any time in Round 1, the "42" version indicates coverage at any time in Round 2, and the "17" version represents coverage at any time during the 2017 portion of Round 3. For Panel 21, the "31" version indicates coverage at any time during the 2017 portion of Round 3, the "42" version indicates coverage at any time in Round 4, and the "17" version represents coverage at any time during Round 5 (because Round 5 ends on 12/31/17).

In the health insurance section of the questionnaire, respondents reporting private health insurance were asked to identify what types of coverage a person had via a checklist. If the respondent selected prescription drug or dental coverage from this checklist, variables were constructed to indicate prescription drug or dental coverage respectively. It should be noted, however, that in some cases respondents may have failed to identify prescription drug or dental coverage that was included as part of a hospital and physician plan.

**TRICARE Plan Variables**

Round-specific variables are provided that indicate which TRICARE plan the person was covered by for each round of 2017. These variables indicate whether the person was covered by TRICARE Standard (TRIST31/42/17X), TRICARE Prime (TRIPR31/42/17X), TRICARE Extra (TRIEX31/42/17X), and TRICARE for Life (TRILI31/42/17X). Beginning in Panel 9 Rounds 4 and 5/Panel 10 Rounds 1 through 3, CHAMPVA was added to the list of TRICARE/CHAMPVA Plans collected in the instrument. Therefore, the variables TRICH42/17X were created. The "31" version of this variable was constructed starting in 2006. Beginning in Panel 21 Round 5/Panel 22 Round 3, TRICARE plan information was elicited from a pick-list, code-all-that-apply question that asked the specific type of TRICARE plan for each person who reported TRICARE coverage. Person-level TRICARE plan type questions differed from the previous method of asking TRICARE plan type at the RU-level. In each round, each TRICARE Plan variable has five possible values:

1 The person was covered by the applicable TRICARE plan [Standard, Prime, Extra, For Life, or CHAMPVA].
2 The person was covered by TRICARE, but it was not through that particular plan [Standard, Prime, Extra, For Life, or CHAMPVA].
3 The person was not covered by TRICARE.
-9 The person was covered by TRICARE but the plan type was not ascertained.
-1 The person was out-of-scope.

**Medicare Managed Care Plans, Part B, and Prescription Drug Benefit**

Persons were assigned Medicare coverage based on their responses to the health insurance questions or through logical editing of the survey data. A small number of persons were edited to have Medicare. For this group, coverage through a managed care plan, Part B, and coverage by prescription drug plan questions were not asked. Since no Medicare establishment-person pair

exists for this group, the persons' Medicare managed care, Part B, and prescription drug benefit statuses are set to not ascertained. For those persons who reported Medicare coverage based on their responses to the health insurance questions, the Medicare managed care plan, Part B, and prescription drug benefit questions were asked. Medicare managed care plan and prescription drug benefit questions were asked for each round a person indicates Medicare coverage. Medicare Part B questions were asked during the first report of Medicare only. The Medicare Part B indicator for those persons who indicated not having a Medicare card available was introduced for Panel 14 Round 2 and Panel 13 Round 4. For those persons who reported having Medicare coverage in Round 1, but did not have a Medicare card available, Medicare Part B coverage was set to not ascertained (-9).

The Medicare prescription drug benefit variables (MCRPD31/42/17) have been edited (MCRPD31/42/17X) to turn on coverage for all persons who are covered by both edited Medicare and edited Medicaid regardless of the status on their unedited Medicare prescription drug benefit variable.

In each round, the variables MCRPHO31, MCRPHO42, and MCRPHO17 have five possible values:

- 1 The person was covered by Medicare and covered through a Medicare Managed Care Plan.
- 2 The person was covered by Medicare but not covered through a Medicare Managed Care Plan.
- 3 The person was not covered by Medicare.
- -9 The person was covered by Medicare but whether the coverage is through a Medicare Managed Care Plan is refused, don't know, or not ascertained.
- -1 The person was out-of-scope.

In each round, the variables MCRPD31(X), MCRPD42(X), and MCRPD17(X) have five possible values:

- 1 The person was covered by Medicare and covered by prescription drug benefit.
- 2 The person was covered by Medicare but not covered by prescription drug benefit.
- 3 The person was not covered by Medicare.
- -9 The person was covered by Medicare but prescription drug benefit coverage is refused, don't know, or not ascertained.
- -1 The person was out-of-scope.

In each round, the variables MCRPB31, MCRPB42, and MCRPB17 have five possible values:

- 1 The person was covered by Medicare and covered by Part B.
- 2 The person was covered by Medicare but not covered by Part B.
- 3 The person was not covered by Medicare.
- -9 The person was covered by Medicare but Part B is refused, don't know, or not ascertained.
- -1 The person was out-of-scope.

**Medicaid/SCHIP Managed Care Plans**

Persons were assigned Medicaid or SCHIP coverage based on their responses to the health insurance questions or through logical editing of the survey data. The number of persons who were edited to have Medicaid or SCHIP coverage is small. These persons indicated coverage through an Other Government program that was identified as being in a Medicaid HMO or gatekeeper plan that did not require premium payment from the insured party. By definition, respondents were asked about the managed care characteristics of this insurance coverage.

**Medicaid/SCHIP HMOs**

If Medicaid/SCHIP or Other Government programs were identified as the source of hospital/physician insurance coverage, the respondent was asked about the characteristics of the plan. Starting in Panel 19 Round 1, the variables MCDHMO31, MCDHMO42, and MCDHMO17 have been set to "Yes" if an affirmative response was provided to the following question:

> Under {Medicaid/{STATE NAME FOR MEDICAID}/the program sponsored by a state or local government agency which provides hospital and physician benefits} (are/is) (READ NAME(S) FROM BELOW) signed up with an HMO, that is a Health Maintenance Organization?
>
> [With an HMO, you must generally receive care from HMO physicians. If another doctor is seen, the expense is not covered unless you were referred by the HMO, or there was a medical emergency.]

In subsequent rounds, for persons who had been previously identified as covered by Medicaid, the respondent was asked whether the name of the person's insurance plan had changed since the previous interview. An affirmative response triggered the previous set of questions about managed care (name on list of Medicaid HMOs or signed up with an HMO).

In each round, the variables MCDHMO31, MCDHMO42, and MCDHMO17 have five possible values:

1 The person was covered by a Medicaid/SCHIP HMO.
2 The person was covered by Medicaid/SCHIP but the plan was not an HMO.
3 The person was not covered by Medicaid/SCHIP.
-9 The person was covered by Medicaid/SCHIP but the plan type was not ascertained.
-1 The person was out-of-scope.

**Medicaid/SCHIP Gatekeeper Plans**

If a person did not belong to a Medicaid/SCHIP HMO, a third question was used to determine whether the person was in a gatekeeper plan. The variables MCDMC31, MCDMC42, and MCDMC17 were set to "Yes" if the respondent provided an affirmative response to the following question:

Does {Medicaid /{STATE NAME FOR MEDICAID}} require (READ NAME(S) BELOW) to sign up with a certain primary care doctor, group of doctors, or with a certain clinic which they must go to for all of their routine care?

Probe: Do not include emergency care or care from a specialist they were referred to.

In each round, the variables MCDMC31, MCDMC42, and MCDMC17 have five possible values:

1 The person was covered by a Medicaid/SCHIP gatekeeper plan.
2 The person was covered by Medicaid/SCHIP, but it was not a gatekeeper plan.
3 The person was not covered by Medicaid/SCHIP.
-9 The person was covered by Medicaid/SCHIP but the plan type was not ascertained.
-1 The person was out-of-scope.

**Private Managed Care Plans**

Persons with private insurance were identified from their responses to questions in the health insurance section of the MEPS questionnaire. In some cases, persons were assigned private insurance as a result of comments collected during the interview, but data editing was minimal. As a consequence, most persons with private insurance were asked about the characteristics of their plan, and their responses were used to identify HMO and gatekeeper plans.

**Private HMOs**

Persons with private insurance were classified as being covered by an HMO if they met any of the three following conditions:

1. The person reported that his or her insurance was purchased directly through an HMO,

2. The person reporting private insurance coverage identified the type of insurance company as an HMO, or

3. The person answered "Yes" to the following question:

   Now I will ask you a few questions about how (POLICYHOLDER)'s insurance through (ESTABLISHMENT) works for non-emergency care.

   We are interested in knowing if (POLICYHOLDER)'s (ESTABLISHMENT) plan is an HMO, that is, a health maintenance organization. With an HMO, you must generally receive care from HMO physicians. For other doctors, the expense is not covered unless you were referred by the HMO or there was a medical emergency. Is (POLICYHOLDER)'s (INSURER NAME) an HMO?

In subsequent rounds, policyholders were asked whether the name of their insurance plan had changed since the previous interview. An affirmative response triggered the detailed question about managed care (i.e., was the insurer an HMO).

Some insured persons have more than one private plan. In these cases, if the policyholder identified any plan as an HMO, the variables PRVHMO31, PRVHMO42, and PRVHMO17 were set to "Yes." If a person had multiple plans and one or more were identified as not being an HMO and the other(s) had missing plan type information, the person-level variable was set to missing. Additionally, if a person had multiple plans and none were identified as an HMO, the person-level variable was set to "No." In each round, the variables PRVHMO31, PRVHMO42, and PRVHMO17 have five possible values:

1 The person was covered by a private HMO.
2 The person was covered by private insurance, but it was not an HMO.
3 The person was not covered by private insurance.
-9 The person was covered by private insurance, but the plan type was not ascertained.
-1 The person was out-of-scope.

#### 2.5.10.4 Flexible Spending Accounts (FSAGT31-FSAAMT31)

Respondents in Round 1 or Round 3 were asked if any RU members set aside pre-tax dollars of their own money to pay for out-of-pocket health care expenses. If an RU has a Flexible Spending Account (FSA), then FSAGT31 was set to 1 (Yes) and follow-up questions ascertained who has an FSA (HASFSA31) and the amount of the FSA (FSAAMT31). When an RU has an FSA, HASFSA31 is set for each RU member to indicate which RU member has an FSA. FSAAMT31 is asked at the RU level and collects the total amount contributed to all FSAs belonging to an RU. If no RU member has an FSA, then both HASFSA31 and FSAAMT31 are set to -1 (Inapplicable).

#### 2.5.10.5 Unedited Health Insurance Variables (PREVCOVR-INSENDYY)

**Duration of Uninsurance**

If a person was identified as being without insurance as of January 1st in the MEPS Round 1 interview, a series of follow-up questions was asked to determine the duration of uninsurance prior to the start of the MEPS survey. Persons who were insured as of January 1st, and persons with a date of birth on or after December 31, 2016 or whose age category was less than 1 year old were skipped past this loop of questions. These questions are asked in Round 1 only.

If the person said he/she was covered by insurance in the two years prior to the MEPS Round 1 interview (PREVCOVR), the month, year (COVRMM, COVRYY), and type of coverage (Employer-sponsored (WASESTB), Medicare (WASMCARE), Medicaid/SCHIP (WASMCAID), TRICARE/CHAMPVA (WASCHAMP), VA/Military Care (WASVA), Other public (WASOTGOV, WASAFDC, WASSSI, WASSTAT1-4, WASOTHER) or Private coverage purchased through a group, association or insurance company (WASPRIV)) was ascertained. Note that under the types of coverage, up to 4 state programs (WASSTAT1-4) can be listed as response options, but only the number of programs available in the state in which the RU is located (up to 4) will be displayed. If the state in which the RU is located has fewer than 4 state programs available, the remaining state programs will be -1 (Inapplicable). The only exception is if the response is Refused (-7) or Don't Know (-8). In that case, WASTAT1-4 are all coded with the same missing value, regardless of the number of plans available in that specific

state. Note that this is a code-all-that-apply question, so more than one source of previous insurance can be selected. For persons who were covered by health insurance on January 1st, it was ascertained if they were ever without health insurance in the previous year (NOINSBEF). The number of weeks/months without health insurance was also ascertained (NOINSTM, NOINUNIT). For persons who reported only non-comprehensive coverage as of January 1st, a question was asked to determine if they had been covered by more comprehensive coverage that paid for medical and doctors' bills in the previous two years (MORECOVR). If they were, the most recent month and year of coverage was ascertained (INSENDMM, INSENDYY) as was the type of coverage (see the variable names above).

Note that these variables are unedited and have been taken directly as they were recorded from the raw data. There may be inconsistencies with the health insurance variables released on public use files that indicate that an individual is uninsured in January. Out-of-scope persons in both panels have been set to "Inapplicable" (-1) for PREVCOVR – INSENDYY. All other persons have PREVCOVR – INSENDYY copied directly from the value of the unedited source variable.

Persons whose January 1st insurance coverage status could not be determined due to their reference period beginning after January 1st were also asked the follow-up questions described above. In these cases, persons who reported comprehensive coverage were asked if they were ever without insurance. Those who were uninsured were asked to determine the duration of uninsurance prior to the start of their reference period. Those who reported only non-comprehensive coverage were asked if they had been covered by comprehensive coverage that paid for medical and doctors' bills in the previous two years. Coverage is determined by health insurance status during the whole reference period or the month of January and ignores that these persons were not in the household on January 1st.

#### 2.5.10.6 Health Insurance Coverage Variables – At Any Time/At Interview Date/At 12-31 Variables (TRICR31X-INSAT17X)

Constructed and edited variables are provided that indicate health insurance coverage at any time in a given round as well as at the MEPS interview dates and on December 31, 2017. Note that for persons who left the RU before the MEPS interview date or before December 31st, the variables measuring coverage at the interview date or on December 31st represent coverage at the date the person left the RU. In addition, since Round 5 only covers the time period from the Round 4 interview date up to December 31st, values for the December 31st variables are equivalent to those for Round 5 variables for Panel 21 members.

Variables indicating coverage for Panel 21 members for any time in the round that end in "31" indicate coverage for the portion of Round 3 that occurred in calendar year 2017, unless noted otherwise (see "Dental and Prescription Drug Private Insurance" section). Variables indicating coverage for Panel 22 members ending in "53" indicate coverage at any time in Round 3, including the portion of the round that occurred in calendar year 2018. For Round 3 coverage for Panel 22 members that occurred in calendar year 2017, users should use variables ending in "17".

The health insurance variables are constructed for the sources of health insurance coverage collected during the MEPS interviews (Panel 21 Rounds 3 through 5, and Panel 22 Rounds 1

through 3). Note that the Medicare variables on this file as well as the private insurance variables that indicate the particular source of private coverage (rather than any private coverage) only measure coverage at the interview date and on December 31st. Users should also note that the same general editing rules were followed for the month-by-month health insurance variables released on this public use file (see Section 2.5.10.1 "Monthly Health Insurance Indicators" for details). Editing programs checking for consistencies between these sets of variables were developed in order to provide as much consistency as possible between the round-specific indicators and the month-by-month indicators of insurance.

Public sources include Medicare, TRICARE, Medicaid/SCHIP, and other public hospital/physician coverage.

**Medicare**

Medicare coverage variables (MCARE31, MCARE42, MCARE53 and MCARE17) and the edited versions of these variables (MCARE31X, MCARE42X, MCARE53X and MCARE17X) were constructed similarly to the month-by-month Medicare variables. Since Medicare coverage is logically edited to continue for a person once it has been reported in MEPS, the Medicare coverage variables can be considered as either "coverage at any time in the round" or "coverage at the interview date" variables, with the same caveats as noted above regarding persons who left the RU prior to the interview date or regarding coverage on December 31st variables and restrictions on Round 3 coverage to reflect coverage in 2017.

**Medicaid/SCHIP and Other Public Hospital/Physician Coverage**

Medicaid/SCHIP variables (MCAID31, MCAID42, MCAID53, MCAID17) and the edited versions of these variables (MCAID31X, MCAID42X, MCAID53X, MCAID17X, MCDAT31X, MCDAT42X, MCDAT53X, MCDAT17X) were constructed similarly to the month-by-month Medicaid/SCHIP variables.

Other Public A variables (OTPUBA31, OTPUBA42, OTPUBA53, OTPUBA17; and OTPAAT31, OTPAAT42, OTPAAT53, OTPAAT17) were constructed similarly to the month-by-month Other Public variables.

**Any Public Insurance**

Any public insurance variables (PUB31X, PUB42X, PUB53X, PUB17X, PUBAT31X, PUBAT42X, PUBAT53X, and PUBAT17X) were constructed similarly to the month-by-month any public insurance variables. Beginning FY 2017, the state-specific constructed variables on previous public use files (e.g., STAPR31, STAPR42, STAPR53, STAPR16, STPRAT31, STPRAT42, STPRAT53, and STPRAT16) will no longer be constructed.

**Private Insurance**

Variables identifying private insurance in general (PRIV31, PRIV42, PRIV53, PRIV17, PRIVAT31, PRIVAT42, PRIVAT53, PRIVAT17) and specific private insurance sources (such as employer/union group insurance [PRIEU31, PRIEU42, PRIEU53, PRIEU17]; coverage through a job classified as self-employed with firm size of 1 [PRIS31, PRIS42, PRIS53,

PRIS17]; non-group coverage [PRING31, PRING42, PRING53, PRING17]; other group coverage [PRIOG31, PRIOG42, PRIOG53, PRIOG17], coverage through an unknown private category [PRIDK31, PRIDK42, PRIDK53, PRIDK17]; coverage from a policyholder living outside the RU [PROUT31, PROUT42, PROUT53, PROUT17], and private coverage through an exchange/marketplace [PRSTX31, PRSTX42, PRSTX53, PRSTX17]) were constructed similarly to the month-by-month variables in section 2.5.10.1. Variables indicating any private insurance coverage are available for the following time periods: at any time in a given round, at the interview date, and on December 31st. The variables for the specific sources of private coverage are only available for coverage on the interview dates and on December 31st.

**Any Insurance in Period**

Any insurance variables (INS31X, INS42X, INS53X, INS17X, INSAT31X, INSAT42X, INSAT53X, and INSAT17X) were constructed similarly to the month-by-month any insurance variables.

### 2.5.10.7 Dental and Prescription Drug Private Insurance Variables (DENTIN31-PMDINS17)

**Dental Private Insurance Variables**

Round-specific variables (DENTIN31/42/53) are provided that indicate the person was covered by a private health insurance plan that included at least some dental coverage for each round of 2017. It should be noted that the information was elicited from a pick-list, code-all-that-apply, question that asked what type of health insurance a person obtained through an establishment. The list included: hospital and physician benefits including coverage through an HMO, Medigap coverage, vision coverage, dental, and prescription drugs. It is possible that some dental coverage provided by hospital and physician plans was not independently enumerated in this question. Users should also note that persons with missing information on dental benefits for all reported private plans and those who reported that they did not have dental coverage for one or more plans but had missing information on other plans are coded as not having private dental coverage. Persons with reported dental coverage from at least one reported private plan were coded as having private dental coverage.

DENTIN53 reflects coverage for all of Panel 22 Round 3 where the end reference year could extend into 2018. DENTIN31 for Panel 21 Round 3 reflects coverage in 2016 and 2017 since the Round 3 reference period spans both years. A second version of these dental coverage indicators was built to reflect only current year coverage (DNTINS31/17).

**Prescription Drug Private Insurance Variables**

Round-specific variables (PMEDIN31/42/53) are provided that indicate the person was covered by a private health insurance plan that included at least some prescription drug insurance coverage for each round of 2017. It should be noted that the information was elicited from a pick-list, code-all-that-apply, question that asked what type of health insurance a person obtained through an establishment. The list included: hospital and physician benefits including coverage through an HMO, Medigap coverage, vision coverage, dental, and prescription drugs. It is possible some prescription drug coverage provided by hospital and physician plans was not

independently enumerated in this question. Persons with reported prescription drug coverage from at least one reported private plan were coded as having private prescription drug coverage. Users should note that persons with missing information on prescription drug benefits for all reported private plans and those who reported that they did not have prescription drug coverage for one or more plans but had missing information on other plans are coded as not having private prescription drug coverage.

PMEDIN53 reflects coverage for all of Panel 22 Round 3 where the end reference year could extend into 2018. PMEDIN31 for Panel 21 Round 3 reflects coverage in 2016 and 2017 since the Round 3 reference period spans both years. A second version of these prescription drug coverage indicators was built to reflect only current year coverage (PMDINS31/17).

#### 2.5.10.8 Medical Debt Variables (PROBPY42 – PYUNBL42)

Questions relating to medical debt were asked in the health insurance section. Respondents in Round 2 or Round 4 were asked questions HX81 (HOME.PROBPAY, "In the past 12 months did anyone in the family have problems paying or were unable to pay any medical bills?"), HX82 (HOME.CURFMPAY, "Does anyone in your family currently have any medical bills that are being paid off over time?"), and HX83 (HOME.PYUNABL, "Does anyone in your family currently have any medical bills that you are unable to pay at all?"). The corresponding constructed variables PROBPY42, CRFMPY42, and PYUNBL42 are included in this file. PROBPY42 was set to 1 (Yes) if the respondent indicated that someone in their family had problems paying or were unable to pay any medical bills. Additional questions ascertained if anyone in the family currently had medical bills that were being paid off over time (CRFMPY42), and if anyone in the family currently had any medical bills that were unable to be paid at all (PYUNBL42). If the respondent indicated that someone in their family currently has any medical bills that are being paid off over time, then CRFMPY42 was set to 1 (Yes). Note that if the respondent indicates that no one in their family had problems paying medical bills, then PYUNBL42 is set to -1 (Inapplicable).

#### 2.5.10.9 Prescription Drug Usual Third Party Payer Variables (PMEDUP31-PMEDPY53)

Round-specific variables are provided that indicate whether the sample member had a usual third party payer for prescription medications (PMEDUP31, PMEDUP42, PMEDUP53), and if so, what type of payer (PMEDPY31, PMEDPY42, PMEDPY53). These questions were asked only of sample members who reportedly had at least one prescription medication purchase in the round. In each interview, if the sample member reportedly had a third party payer, then the respondent was asked the name of the sample member's usual third party payer. These responses were coded into the following source of payment categories in PMEDPY31, PMEDPY42, PMEDPY53: Private Insurance, Medicare, Medicaid, VA/CHAMPVA, TRICARE, State/Local Government, and Other. Users should note that these questions were asked in the Charge and Payment (CP) section of the questionnaire, and that no attempt was made to reconcile the responses with information collected in the health insurance section of the questionnaire.

### 2.5.11 Utilization, Expenditures, and Sources of Payment Variables (TOTTCH17-RXOSR17)

The MEPS Household Component (HC) collects data in each round on use and expenditures for office- and hospital-based care, home health care, dental services, vision aids, and prescribed medicines. Data were collected for each sample person at the event level (e.g., doctor visit, hospital stay) and summed across Rounds 3 - 5 for Panel 21 (excluding 2016 events covered in Round 3) and across Rounds 1 - 3 for Panel 22 (excluding 2018 events covered in Round 3) to produce the annual utilization and expenditure data for 2017. In addition, the MEPS Medical Provider Component (MPC) is a follow-back survey that collected data from a sample of medical providers and pharmacies that were used by sample persons in 2017. Expenditure data collected in the MPC are generally regarded as more accurate than information collected in the HC and were used to improve the overall quality of MEPS expenditure data in this file (see below for description of methodology used to develop expenditure data).

This file contains utilization and expenditure variables for several categories of health care services. In general, there is one utilization variable (based on HC responses only), 13 expenditure variables (derived from both HC and MPC responses), and one charge variable for each category of health care service. The utilization variable is typically a count of the number of medical events reported for the category. The 13 expenditure variables consist of an aggregate total payments variable, 10 main component source of payment category variables, and two additional source of payment category variables (see below for description of source of payment categories). Expenditure variables for all categories of health care combined are also provided. These variables generally represent a full year of use and expenditures. However, for persons who were not inscope for the entire year, these variables reflect only the period of eligibility.

The table in Appendix 1 provides an overview of the utilization and expenditure variables included in this file. For each health service category, the table lists the corresponding utilization variable(s) and provides a general key to the expenditure variable names (13 per service category). The first three characters of the expenditure variable names reflect the service category (except only two characters for prescription medicines) while the subsequent three characters (*** in table) reflect the naming convention for the source of payment categories described below (except only two characters for Veterans Administration). The last two positions of all utilization and expenditure variable names reflect the survey year (i.e., 17). More details are provided on the utilization and expenditure variables in sections 2.5.11.1 and 2.5.11.2 below.

#### 2.5.11.1 Expenditures Definition

Expenditures on this file refer to what is paid for health care services. More specifically, expenditures in MEPS are defined as the sum of direct payments for care provided during the year, including out-of-pocket payments and payments by private insurance, Medicaid, Medicare, and other sources. Payments for over-the-counter drugs are not collected in MEPS. Indirect payments not related to specific medical events, such as Medicaid Disproportionate Share and Medicare Direct Medical Education subsidies, are also not included.

The definition of expenditures used in MEPS is somewhat different from the 1987 NMES and 1977 NMCES surveys where charges rather than sum of payments were used to measure

expenditures. This change was adopted because charges became a less appropriate proxy for medical expenditures during the 1990s due to the increasingly common practice of discounting charges. Another change from the two prior surveys is that charges associated with uncollected liability, bad debt, and charitable care (unless provided by a public clinic or hospital) are not counted as expenditures because there are no payments associated with those classifications.

While the concept of expenditures in MEPS has been operationalized as payments for health care services, variables reflecting charges for services received are also provided on the file (see below). Analysts should use caution when working with the charge variables because they do not typically represent actual dollars exchanged for services or the resource costs of those services.

**Data Sources on Expenditures**

The expenditure data included on this file were derived from the MEPS Household and Medical Provider Components. Only HC data were collected for non-physician visits, dental and vision services, other medical equipment and services, and home health care not provided by an agency. Data on expenditures for care provided by home health agencies were only collected in the MPC. In addition to HC data, MPC data were collected for a sample of office-based visits to physicians (or medical providers supervised by physicians), hospital-based events (e.g., inpatient stays, emergency room visits, and outpatient department visits), and prescribed medicines. For these types of events, MPC data were used if complete; otherwise, HC data were used if complete. Missing data for events where HC data were not complete and MPC data were not collected or complete were derived through an imputation process (see below).

A series of logical edits were applied to both the HC and MPC data to correct for several problems including, but not limited to, outliers, copayments or charges reported as total payments, and reimbursed amounts that were reported as out-of-pocket payments. In addition, edits were implemented to correct for misclassifications between Medicare and Medicaid and between Medicare HMOs and private HMOs as payment sources. Data were not edited to ensure complete consistency between the health insurance and source of payment variables on the file.

**Imputation for Missing Expenditures and Data Adjustments**

Expenditure data were imputed to 1) replace missing data, 2) provide estimates for care delivered under capitated reimbursement arrangements, and 3) to adjust household-reported insurance payments because respondents were often unaware that their insurer paid a discounted amount to the provider. This section contains a general description of the approaches used for these three situations. A more detailed description of the editing and imputation procedures is provided in the documentation for the MEPS event-level files.

The predictive mean matching (PMM) imputation method was used to impute missing expenditures. This procedure uses regression models (based on events with completely reported expenditure data) to predict total expenses for each event. Then, for each event with missing payment information, a donor event with the closest predicted payment with the same pattern of expected payment sources as the event with missing payment was used to impute the missing payment value.

The general approach that was used to impute missing expenditure data on prescribed medicines is described in section 2.5.11.2 below.

Payments under capitated arrangement and public clinics including VA healthcare are not tied to individual episodes of medical care. Therefore, expenditures for medical care covered under capitated arrangement or received in such public settings were imputed. Using a weighted sequential hot-deck procedure, events covered under capitated arrangements were imputed using donor events covered by a managed care organization but paid on a fee-for-service basis. For other events, including public clinic and VA, expenditures were imputed using the PMM method where selected predictor variables were used to predict expenditures and match recipient and donor events.

An adjustment was also applied to some HC-reported expenditure data because an evaluation of matched HC/MPC data showed that respondents who reported that charges and payments were equal were often unaware that insurance payments for the care had been based on a discounted charge. To compensate for this systematic reporting error, a weighted sequential hot-deck imputation procedure was implemented to determine an adjustment factor for HC-reported insurance payments when charges and payments were reported to be equal. As for the other imputations, selected predictor variables were used to form groups of donor and recipient events for the imputation process.

**Methodology for Flat Fee Expenditures**

Most of the expenditures for medical care reported by MEPS participants are associated with single medical events. However, in some situations one charge covers multiple contacts between a medical provider and patient (e.g., obstetrician services, orthodontia). In these situations (generally called flat or global fees), total payments for the flat or global fee were included if the initial service was provided in 2017. For example, all payments for an orthodontist's fee that covered multiple visits over three years were included if the initial visit occurred in 2017. However, if a visit in 2017 to an orthodontist was part of a flat fee in which the initial visit occurred in 2016, then none of the payments for the flat fee were included.

The approach used to count expenditures for flat fees may create what appear to be inconsistencies between utilization and expenditure variables. For example, if several visits under a flat fee arrangement occurred in 2017 but the first visit occurred in 2016, then none of the expenditures were included, resulting in low expenditures relative to utilization for that person. Conversely, the flat fee methodology may result in high expenditures for some persons relative to their utilization. For example, all of the expenditures for an expensive flat fee were included even if only the first visit covered by the fee had occurred in 2017. On average, the methodology used for flat fees should result in a balance between overestimation and underestimation of expenditures in a particular year.

**Zero Expenditures**

There are some medical events reported by respondents where the payments were zero. This could occur for several reasons including (1) free care was provided, (2) bad debt was incurred, (3) care was covered under a flat fee arrangement and it was not the initial event of the bundle

(see prior section on Methodology for Flat Fee Expenditures), or (4) follow-up visits were provided without a separate charge (e.g., after a surgical procedure). In summary, these types of events have no impact on totals for the person-level expenditure variables contained in this file.

**Source of Payment Categories**

In addition to total expenditures, variables are provided that itemize expenditures according to the major source of payment categories. These categories are:

1. Out of pocket by patient or patient's family (SLF);
2. Medicare (MCR);
3. Medicaid (MCD);
4. Private Insurance (PRV);
5. Veterans' Administration/CHAMPVA, excluding TRICARE (VA);
6. TRICARE (TRI);
7. Other Federal Sources--includes Indian Health Service, military treatment facilities, and other care provided by the federal government (OFD);
8. Other State and Local Sources--includes community and neighborhood clinics, state and local health departments, and state programs other than Medicaid (STL);
9. Worker's Compensation (WCP);
10. Other Unclassified Sources--includes sources such as automobile, homeowner's, liability, and other miscellaneous or unknown sources (OSR).

Two additional source of payment variables were created to classify payments for particular persons that appear inconsistent due to differences between the survey questions on health insurance coverage and sources of payment for medical events. These variables include:

11. Other Private (OPR) - any type of private insurance payments reported for persons not reported to have any private health insurance coverage during the year as defined in MEPS (i.e., for hospital and physician services); and
12. Other Public (OPU) - Medicaid payments reported for persons who were not reported to be enrolled in the Medicaid program at any time during the year.

Though relatively small in magnitude, users should exercise caution when interpreting the expenditures associated with the OPR and OPU categories. While these payments stem from apparent inconsistent responses to the health insurance and source of payment questions in the survey, some of these inconsistencies may have logical explanations. For example, private insurance coverage in MEPS is defined as having a major medical plan covering hospital and physician services. If a MEPS sample person did not have such coverage but had a single service type insurance plan (e.g., dental insurance) that paid for a particular episode of care, those payments may be classified as "other private." Some of the "other public" payments may stem from confusion between Medicaid and other state and local programs or may be for persons who were not enrolled in Medicaid, but were presumed eligible by a provider who ultimately received payments from the program.

The naming conventions used for the source of payment expenditure variables are shown in parentheses in the list of categories above and in the key to the attached table in Appendix 1. In

addition, total expenditure variables (EXP in key) based on the sum of the 12 source of payment variables above are provided.

**Charge Variables**

In addition to the expenditure variables described above, a variable reflecting total charges is provided for each type of service category (except prescribed medicines). This variable represents the sum of all fully established charges for care received and usually does not reflect actual payments made for services, which can be substantially lower due to factors such as negotiated discounts, bad debt, and free care (see above). The weighted sequential hot-deck procedure was used to impute the missing total charges. The naming convention used for the charge variables (TCH) is also included in the key to the attached table in Appendix 1. The total charge variable across services (TOTTCH17) excludes prescribed medicines.

### 2.5.11.2 Utilization and Expenditure Variables by Type of Medical Service

The following sections summarize definitional, conceptual, and analytic considerations when using the utilization and expenditure variables in this file. Separate discussions are provided for each MEPS medical service category. There is also a discussion in the section dealing with analyses of trends using MEPS data (section 3.11).

**Medical Provider Visits (i.e., Office-Based Visits)**

Medical provider visits consist of encounters that took place primarily in office-based settings and clinics. Care provided in other settings such as a hospital, nursing home, or a person's home are not included in this category.

The total number of office-based visits reported for 2017 (OBTOTV17) as well as the number of such visits to physicians (OBDRV17) are contained in this file.

Expenditure variables associated with all medical provider visits and physician visits can be identified using the attached table in Appendix 1.

**Hospital Events**

Separate utilization variables for hospital care are provided for each type of setting (outpatient department, emergency room, and inpatient stays) along with three expense variables per setting: one for basic hospital facility expenses, one for payments to physicians who billed separately for services provided at the hospital (referred to as "separately billing doctor" or SBD expenses) and one that aggregates the facility and SBD expenses (aggregated variable not included in files prior to 2007).

Hospital facility expenses include all expenses for direct hospital care, including room and board, diagnostic and laboratory work, x-rays, and similar charges, as well as any physician services included in the hospital charge. SBD expenses typically cover services provided to patients in hospital settings by providers like radiologists, anesthesiologists, and pathologists, whose charges are often not included in hospital bills.

**Hospital Outpatient Visits**

Variables for the total number of reported visits to hospital outpatient departments in 2017 (OPTOTV17) as well as the number of outpatient department visits to physicians (OPDRV17) are contained in this file.

Expenditure variables (both facility and SBD) associated with all medical provider visits and physician visits can be identified using the attached table in Appendix 1.

**Hospital Emergency Room Visits**

The variable ERTOT17 represents a count of all emergency room visits reported for the survey year. Expenditure variables associated with ERTOT17 are identified in the attached table in Appendix 1. It should be noted that hospitals usually include expenses associated with emergency room visits that immediately result in an inpatient stay with the charges and payments for the inpatient stay. Therefore, to avoid the potential for double counting when imputing missing expenses, separately reported facility expenditures for emergency room visits that were identified in the MPC as directly linked to an inpatient stay were included as part of the inpatient stay only (see section on Hospital Inpatient Stays below). This strategy to avoid double counting resulted in $0 facility expenditures for these emergency room visits (but there still may be associated SBD expenses). However, these $0 emergency room visits are still counted as separate visits in the utilization variable ERTOT17.

**Hospital Inpatient Stays**

Two measures of total inpatient utilization are provided on the file:

- IPDIS17 is the total number of hospital discharges.
- IPNGTD17 is the total number of nights associated with these discharges. Please note that the variable IPNGTD17 is an imputed version of the IPNGT17 variable released earlier on HC-194. For the 34 cases that were missing length of stay information, data were imputed using a median imputation method.

Expenditure variables associated with hospital inpatient stays are identified in the attached table in Appendix 1. As described in the previous section, payments associated with emergency room visits that immediately preceded an inpatient stay are included with the inpatient expenditures. In addition, payments associated with healthy newborns are included with expenditures for the mother. Specifically, data used to construct the inpatient utilization and expenditure variables for newborns were edited to exclude stays where the newborn left the hospital on the same day as the mother. This edit was applied because discharges for infants without complications after birth were not consistently reported in the survey and charges for newborns without complications are typically included in the mother's hospital bill. However, if the newborn was discharged at a later date than the mother was discharged, then the discharge was considered a separate stay for the newborn when constructing the utilization and expenditure variables.

## Dental Care Visits

The total number of dental care visits variable (DVTOT17) includes those to any person(s) for dental care including general dentists, dental hygienists, dental technicians, dental surgeons, orthodontists, endodontists, and periodontists.

## Home Health Care

In contrast to other types of medical events where data were collected on a per visit basis, information on home health care utilization is collected in MEPS on a per month basis. Variables are provided that indicate the total number of days in 2017 where home health care was received from the following: from any type of paid or unpaid caregiver (HHTOTD17), from agencies, hospitals, or nursing homes (HHAGD17), from self-employed persons (HHINDD17), and from unpaid informal caregivers not living with the sample person (HHINFD17). The number of provider days represents the sum across months of the number of days on which home health care was received, with days summed across all providers seen. For example, if a person received care in one month from one provider on two different days, then the number of provider days would equal two. The number of provider days would also equal two if a person received care from two different providers on the same day. However, if a person received care from one provider two times on the same day, then the provider days would equal one. These variables were assigned missing values if the number of provider days could not be computed for any month in which the specific type of home health care was received.

Separate expenditure variables are provided for agency-sponsored home health care (includes care provided by home health agencies, hospitals, and nursing homes) and care provided by self-employed persons. The attached table in Appendix 1 identifies the home health care utilization and expenditure variables contained in the file.

## Other Medical Equipment and Services

In Panel 21 Round 5 and Panel 22 Round 3, MEPS started using a new CAPI instrument to collect data. The new instrument collects round-specific OM use and expenditures for all OM types (glasses/contact lenses, ambulance, disposable supplies, and long-term equipment), while the old CAPI instrument collected round-specific use and expenditures for only one OM type (glasses/contact lenses). For the remaining three OM types (e.g., ambulance services, long-term equipment and disposable supplies), the old instrument collected annual use and expenditures only in the year-end round of each panel.

Due to the change in the CAPI instrument, expenditure data for ambulance services, long-term equipment, and disposable supplies were not explicitly collected for Panel 22 Rounds 1 and 2, and Panel 21 Rounds 3 and 4. Supplemental research indicated that persons reporting expenditures for disposable supplies or long-term medical equipment in part of the year were likely to have similar expenditures in the remaining portion of the year. Thus, expenditures for these two OM types were annualized. Specifically, for Panel 21 Round 5 and Panel 22 Round 3, expenditures were inflated by the number of days in the reference period (i.e., expenditures x 365/reference days in 2017).

An additional change is that the new CAPI instrument collects the total charge and out-of-pocket expenditures for disposable supplies in a range format. In Panel 21 Round 5 and Panel 22 Round 3, the ranges were replaced with mean dollar amounts of respective expenditures reported in each range in prior years.

**Prescribed Medicines**

There is one total utilization variable (RXTOT17) and 13 expenditure variables included on the 2017 full-year file relating to prescribed medicines. These 13 expenditure variables include an annual total expenditure variable (RXEXP17) and 12 corresponding annual source of payment variables (RXSLF17, RXMCR17, RXMCD17, RXPRV17, RXVA17, RXTRI17, RXOFD17, RXSTL17, RXWCP17, RXOSR17, RXOPR17, and RXOPU17). The total utilization variable is a count of all fills and refills of prescribed medications purchased during 2017. The total expenditure variable sums all amounts paid out-of-pocket and by third party payers for each prescription purchased in 2017. No variables reflecting charges for prescription medicines are included because a large proportion of respondents to the MEPS pharmacy component survey did not provide charge data (see below).

**Prescribed Medicines Data Collected**

Data regarding prescription drugs were obtained through the household questionnaire and a pharmacy component survey. During each round of the MEPS-HC, all respondents were asked to supply the name of any prescribed medication they or their family members purchased or otherwise obtained during that round. For each medication and in each round, the following information was collected: the name(s) of any health conditions the medication was prescribed for; the number of times the prescription drug was obtained or purchased; the year and month on which the person first used the medication; and a list of the names, addresses, and types of pharmacies that filled the household's prescriptions. Payment information was collected in the pharmacy component survey.

Pharmacy providers identified by the household were contacted by telephone in the pharmacy component if permission to release their pharmacy records was obtained in writing from the person with the prescription. The signed permission forms were provided to the various establishments prior to making any requests for information. Each establishment was informed of all persons participating in the survey that had prescriptions filled there in 2017 and a computerized printout containing information about these prescriptions was sought. For each medication listed, the following information was requested: date filled, national drug code (NDC), medication name, strength of medicine (amount and unit), quantity (package size and amount dispensed), and payments by source.

When diabetic supplies, such as syringes and insulin, were reported in the other medical supply section of the MEPS-HC questionnaire as having been obtained during the round, the interviewer was directed to collect information on these items in the prescription drug section of MEPS.

## Prescribed Medicines Data Editing and Imputation

The general approach to preparing the household prescription data for this file was to utilize the pharmacy component prescription data to assign expenditure values to the household drug mentions. For those with Pharmacy Component data, a matching program was adopted to link pharmacy component drugs and the corresponding drug information to household drug mentions. To improve the quality of these matches, all drugs on the household and pharmacy files were coded based on the medication names provided by the household and pharmacy, and when available, the national drug code (NDC) provided in the pharmacy survey. Considerable editing was done prior to the matching to correct data inconsistencies in both data sets, fill in missing data, and correct outliers on the pharmacy file.

Drug price per unit outliers were analyzed on the pharmacy file by first identifying the average wholesale unit price (AWUP) of the drug by linkage through the NDC to a proprietary database. In general, prescription drug unit prices were deemed to be outliers by comparing unit prices reported in the pharmacy database to the AWUP and were edited, as necessary. Beginning with the 2007 data, the rules used to identify outlier prices for prescription medications in the PC changed. New outlier thresholds were established based on the distribution of the ratio of retail unit prices relative to the AWUP in the 2007 MarketScan Outpatient Pharmaceutical Claims database.

Starting with the 2008 Prescribed Medicine file, improvements in the data editing changed the distribution of payments by source: (1) more spending on Medicare beneficiaries is by private insurance, rather than Medicare, and (2) there are less out-of-pocket payments and more Medicaid payments among Medicaid enrollees. Beginning with the 2009 data, another change affected the data for Medicare beneficiaries with both Part D and Medicaid coverage: reported Medicaid and other state and local program payments were no longer edited to be Medicare payments. Beginning with the 2017 data, changes in the price imputation procedures for specialty drugs with missing payment information resulted in higher total prescribed medicines expenditures.

For Round 3, which spans two years, drug mentions in that round were allocated between the years based on the number of times the respondent said the drug was purchased in the respective year, the year the person started taking the drug, the length of the person's round, the dates of the person's round, and the number of fills of that drug for that person in the round.

## Collapsed Source of Payment Variables

Two additional source of payment variables are included for each health care service category as a convenience to data users since they are common analytic groupings of the payment sources. The first (***PTR17 series) is the sum of the private and Tricare payer categories (i.e., ***PTR17=***PRV17+***TRI17). The second (***OTH17 series) is the sum of the least common source of payment categories including: 1) other federal (***OFD17), 2) state and local (***STL17), 3) other private (***OPR17), 4) other public (***OPU17), and 5) other sources (***OSR17). Since the ***PTR17 and ***OTH17 variable series represent combined totals of existing individual source of payment variables, analysts should exercise caution to avoid inappropriate double counting of expenditures when working with these variables.

### 2.5.12 Changes in Variable List

Following is a list of changes to the variable list for the 2017 full-year consolidated data file.

**Added**

ADSNSP42
ADSPCL42
OFTSMK53
VMCS42
VPCS42
VRFLAG42

**Deleted**

ACTLIM53
ADDRBP42
ADEGMC42
ADESSP42
ADLHLP53
ADNDCR42
ADSPEC42
AFDCyy
AIDHLP53
AMA***yy
AMASSTyy
AMC***yy
AMCHIRyy
AMDRCyy
AME***yy
AMN***yy
AMNURSyy
AMOPTOyy
AMT***yy
AMTOTCyy
AMTHERyy
ASACUT53
ASATAK53
ASDALY53
ASEVFL53
ASMRCN53
ASPKFL53
ASPREV53
ASPRIN53
ASSTIL53
ASTHEP53
ASWNFL53
BENDIF53
BMINDX53
BPCHEK53
BRSTEX53
BSTSRE53
BSTST53
CHBRON53
CHECK53
CHOLCK53
CLMDEPyy
CLMHIPyy
CLNTRE53
CLNTST53
COGLIM53
DDNSCLyy
DENTCK53
DEPDNTyy
DPINRUyy
DPOTSDyy
DVG***yy
DVGENyy
DVO***yy
DVORTHyy
EICRDTyy
EXRCIS53
FLUSHT53
FNGRDF53
HSELIM53
HYSTER53
IADLHP53
IPZEROyy
JTPAIN53
LFTDIF53
MAMOGR53
MCS42
MILDIF53
NOASPR53
NOFAT53
OBA***yy
OBASSTyy
OBC***yy
OBCHIRyy
OBE***yy
OBN***yy
OBNURSyy
OBO***yy
OBOPTOyy
OBOTHVyy
OBT***yy
OBTHERyy
ONJOB42
OPO***yy
OPOTHVyy
OPP***yy
PAPSMR53
PCS42
PREGNT31
PREGNT42
PREGNT53
PSA53
RCHDIF53
SCHLIM53
SEATBE53
SFFLAG42
SGMTRE53
SGMTST53
SOCLIM53
STAmmyy
STAPR31
STAPR42
STAPR53
STAPRyy
STNDIF53
STOMCH53
STPDIF53
STPRAT31

| | | |
|---|---|---|
| STPRAT42 | UNABLE53 | WRKLIM53 |
| STPRAT53 | WLKDIF53 | ZID***yy |
| STPRATyy | WLKLIM53 | ZIF***yy |

***EXP, MCD, MCR, OFD, OPR, OPU, OSR, OTH, PRV, PTR, SLF, STL, TCH, TRI, VA, WCP

**Variables Renamed**

| | | |
|---|---|---|
| From | ANYLIMyy | Any Limitation in P20R3,4/P21R1,2 |
| To | ANYLMIyy | Any Limitation in P21R3,4/P22R1,2 |
| From | ADPALS42 | SAQ 4Wks:Accmp Less B/C Phy Prbs SF-12V2 |
| To | ADACLS42 | SAQ 4WKS:Accmp Less B/c Phy Prbs VR-12 |
| From | ADPWLM42 | SAQ 4Wks:Work Limt B/C Phy Probs SF-12V2 |
| To | ADWKLM42 | SAQ 4WKS:Work Limt B/c Phy Probs VR-12 |
| From | ADMALS42 | SAQ 4Wks:Accmp Less B/C Mnt Prbs SF-12V2 |
| To | ADEMLS42 | SAQ 4WKS:Accmp Less B/c Mnt Prbs VR-12 |
| From | ADMWLM42 | SAQ 4Wks:Work Limt B/C Mnt Probs SF-12V2 |
| To | ADMWCF42 | SAQ 4WKS:Work Limt B/c Mnt Probs VR-12 |
| From | ADCAPE42 | SAQ 4Wks: Felt Calm/Peaceful SF-12V2 |
| To | ADPCFL42 | SAQ 4WKS: Felt Calm/Peaceful VR-12 |
| From | ADNRGY42 | SAQ 4Wks: Had a Lot of Energy SF-12V2 |
| To | ADENGY42 | SAQ 4WKS: Had a Lot of Energy VR-12 |
| From | ADDOWN42 | SAQ 4Wks: Felt Downhearted/Depr SF-12V2 |
| To | ADPRST42 | SAQ 4WKS: Felt Downhearted/Depr VR-12 |
| From | ADPRXY42 | SAQ: Relationship of Proxy to Adult |
| To | ADPROX42 | SAQ: Relationship Of Proxy To Adult |

**Category Changes**

ADENGY42, ADPCFL42, ADPRST42 - Added category “A good bit of the time”
ADPROX42 - Categories collapsed

## 2.6 Linking to Other Files

### 2.6.1 Event and Condition Files

Records on this file can be linked to 2017 MEPS-HC public use event and conditions files by the sample person identifier (DUPERSID). The Panel 21 cases on this file (PANEL=21) can also be linked back to the 2016 MEPS-HC public use event and condition files.

### 2.6.2 National Health Interview Survey

The set of households selected for MEPS is a subsample of those participating in the National Health Interview Survey (NHIS), thus, each MEPS panel can also be linked back to the previous year's NHIS public use data files. For information on obtaining MEPS/NHIS link files please see the AHRQ website.

### 2.6.3 Longitudinal Analysis

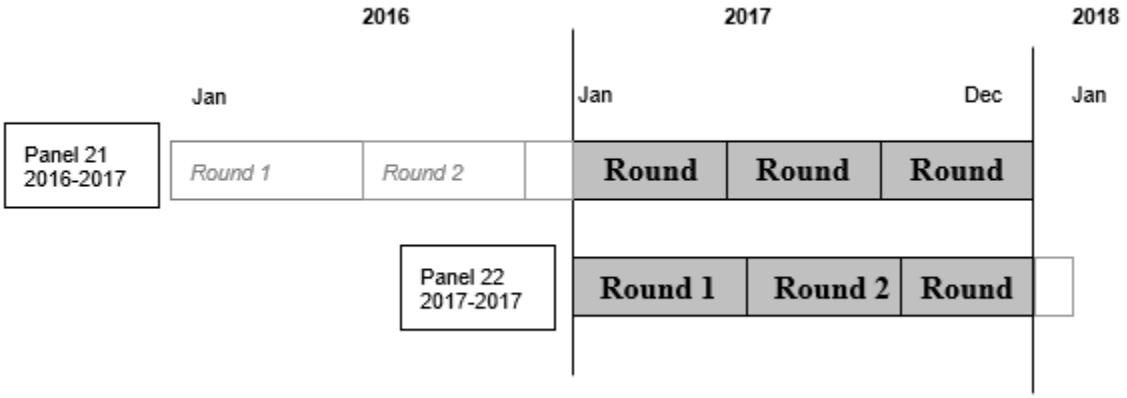
Panel-specific longitudinal files are available for downloading in the data section of the MEPS website. For each panel, the longitudinal file comprises MEPS survey data obtained in Rounds 1 through 5 of the panel and can be used to analyze changes over a two-year period. Variables in the file pertaining to survey administration, demographics, employment, health status, disability days, quality of care, patient satisfaction, health insurance, and medical care use and expenditures were obtained from the MEPS full-year Consolidated files from the two years covered by that panel.

For more details or to download the data files, please see Longitudinal Weight Files at the AHRQ website.

## 3.0 Survey Sample Information

### 3.1 Background on Sample Design and Response Rates

The MEPS is designed to produce estimates at the national and regional level over time for the civilian, noninstitutionalized population of the United States and some subpopulations of interest. The data in this public use file pertain to calendar year 2017. The data were collected in Rounds 1, 2, and 3 for MEPS Panel 22 and Rounds 3, 4, and 5 for MEPS Panel 21. (Note that Round 3 for a MEPS panel is designed to overlap two calendar years, as illustrated below.)




Variables convey the same information for this full year consolidated file that has been provided for the full year consolidated files associated with years 1996 – 2016 of MEPS.

The only utilization data that appear on this file are those associated with health care events reported by MEPS respondents and occurring in calendar year 2017. These data were obtained

from both MEPS panels for those rounds (or portions of rounds) associated with calendar year 2017.

A sample design feature shared by both Panel 21 and Panel 22 involved the partitioning of the sample domain "Other" (serving as the catchall stratum, and consisting mainly of households with "White" members) into two sample domains. This was done for the first time in Panel 16. The two domains were defined as those households characterized as "complete" respondents to the NHIS; and those characterized as "partial completes." NHIS "partial completes" typically have a lower response rate to MEPS and for both MEPS panels the "partial" domain was sampled at a lower rate than the "complete" domain. This approach has served to reduce survey costs, since the "partials" tend to have higher costs in gaining survey participation, but has also increased sample variability due to the resulting increased variance in sampling rates.

### 3.1.1 References

For detailed information on the MEPS sample design, see Chowdhury, S.R., Machlin, S.R., Gwet, K.L. Sample Designs of the Medical Expenditure Panel Survey Household Component, 1996–2006 and 2007–2016. Methodology Report #33. January 2019. Agency for Healthcare Research and Quality, Rockville, MD.

For more information on the modified BRR method, see Fay, R.E. (1989). Theory and Application of Replicate Weighting for Variance Calculations.
*Proceedings of the Survey Research Methods Sections, ASA*, 212-217.

### 3.1.2 MEPS-Linked to the National Health Interview Survey (NHIS)

Each responding household found in this 2017 MEPS dataset is associated with one of two separate and overlapping MEPS panels, MEPS Panel 21 and MEPS Panel 22. These panels consist of subsamples of households participating in the 2015 and 2016 NHIS, respectively. Panel 21 is the last MEPS panel reflecting the NHIS sample design first implemented in 2006 while Panel 22 is the first MEPS panel reflecting the new NHIS sample design first implemented in 2016.

Whenever there is a change in sample or study design, it is good survey practice to assess whether such a change could affect the sample estimates. For example, increased coverage of the target populations with an updated sample design based on data from the latest Census can improve the accuracy of the sample estimates. MEPS estimates have been and will continue to be evaluated to determine if an important change in the survey estimates might be associated with a change in design. Background on the two NHIS sample designs of interest is provided next.

***Background on the NHIS Sample Redesign Implemented in 2006 (associated with MEPS Panel 21)***

The sample for the NHIS is redesigned approximately every 10 years. From 1995 to 2005 the NHIS used the same sample design, an area probability sample of PSUs (one or more counties) and Secondary Sampling Units (SSUs, to be referred to as segments here and generally consisting of one or more census blocks). Segments with a higher concentration of blacks or Hispanics were oversampled to increase the sample yields of these two minority groups for the NHIS. The segments were designed to be large enough to support the sample selection of

housing units within each segment for up to 12 years. The initial MEPS sample design, which began in 1996, was based on that NHIS design through MEPS Panel 11, thus clustering the MEPS sample in the same general geographic areas from 1996-2006.

A new NHIS sample design was implemented in 2006 that was very similar in structure to the previous NHIS sample design. The PSUs and segments were sampled independently from the prior design. The major difference was that a third minority group, Asians, was oversampled under the 2006 NHIS sample design. Thus, the sample selection of segments was designed to oversample all three minority groups. All three of these minority groups were also oversampled for MEPS from among the NHIS responding households from 2007 through to 2016. The only major difference in eligibility status for housing units between NHIS under the 1996 and 2006 designs and MEPS was that college dorms were eligible for sampling for the NHIS but not for MEPS. That is, college aged students living away from home during the school year were interviewed at their place of residence for the NHIS but were identified by and linked to their parents' household for MEPS.

### *Panel 21 Household Sample Size*

There were 9,700 households (occupied DUs) selected for MEPS Panel 21, of which 9,658 were fielded for MEPS after the elimination of any units characterized as ineligible for fielding.

The only major difference in eligibility status for housing units between NHIS under the 1996 and 2006 designs and MEPS was that college dorms were eligible for sampling for the NHIS but not for MEPS. That is, college aged students living away from home during the school year were interviewed at their place of residence for the NHIS but were identified by and linked to their parents' household for MEPS.

#### *Background on the NHIS Sample Redesign Implemented in 2016 (associated with MEPS Panel 22)*

Beginning in 2016, NCHS implemented another new sample design for the NHIS which differed substantially from the prior design. Each of the 50 states as well as the District of Columbia served as explicit strata for sample selection purposes with the intent of providing the capability of state level NHIS estimates obtained through pooling across years if the sample size for a single year would result in unreliable estimates. In contrast to the previous design, households in areas with higher concentrations of minorities are not oversampled. PSUs are still formed at the county level. However, within sampled PSUs, the clusters of addresses that have been sampled for each year are not in the form of segments as described above for the previous designs. For the 2016 NHIS each such cluster consisted of roughly 25 subclusters selected using random systematic sampling across the full geography of the PSU. Each subcluster is made up of, generally, four nearby addresses. Thus, for 2016 each cluster contained approximately 100 addresses in all. The number of subclusters per cluster can vary from year to year.

Another major change is that the list of DUs (addresses) was obtained from the Computerized Delivery Sequence File (CDSF) of the U.S. Post Office, which is a different approach than the standard listing process for area probability samples used in the pre-2016 designs. While addresses in the CDSF provide very high coverage of most areas of the country, coverage in rural areas can be somewhat lower. For rural areas where this was a concern, address lists were

created through the conventional listing process. A description of the NHIS sample design is provided by NCHS on the NHIS website.

***Panel 22 Household Sample Size***

A subsample of 9,700 households was randomly selected for MEPS Panel 22 from the households responding to the 2016 NHIS, of which 9,693 were fielded for MEPS after the elimination of any units characterized as ineligible for fielding.

***Implications of the New Design on MEPS Estimates***

Under the new design, MEPS sampled households will not be clustered within the same segments as in the previous designs. Due to the use of PSU-wide lists of addresses, sampled households will be widely scattered within PSUs serving to limit the impact of clustering on the variance of MEPS estimates. Also, in contrast to the previous design, the NHIS sampling rates at the address level currently do not vary due to oversampling of minorities (although this could change in subsequent years). On balance, the overall variation in sampling rates/weights at the national level is expected to be lower with a corresponding positive impact on the precision of MEPS estimates. However, with a reduction in the sample sizes of minority households, precision levels of MEPS estimates for Blacks, Hispanics, and Asians may be reduced to some extent.

For the calendar year 2017, unlike prior or subsequent data years when both MEPS panels are/will be based on the same NHIS sample design, Panel 21 was based on the 2006 design while Panel 22 was based on the 2016 design. As a result, the 2017 MEPS sample is based on more PSUs than a typical year, serving to increase the precision of 2017 MEPS estimates compared to prior and later years. Also, since the samples selected under the two designs are independent, there are many more degrees of freedom available for variance estimation for MEPS 2017 data, improving the precision of variance estimates.

### 3.1.3 Sample Weights and Variance Estimation

In the dataset "MEPS HC-201: 2017 Full Year Consolidated Data File," weight variables are provided for generating MEPS estimates of totals, means, percentages, and rates for persons and families in the civilian noninstitutionalized population. The person-level weight variable PERWT17F provided in this file supersedes the corresponding person-level weight variable provided in the 2017 Full Year Population Characteristic File (HC-194). Procedures and considerations associated with the construction and interpretation of person and family-level estimates using these and other variables are discussed below.

## 3.2 The MEPS Sampling Process and Response Rates: An Overview

For most MEPS panels, a sample representing about three-eighths of the NHIS responding households is made available for use in MEPS. This was the case for both MEPS Panel 21 and Panel 22.

Because the MEPS subsampling has to be done soon after NHIS responding households are identified, a small percentage of the NHIS households initially characterized as NHIS

respondents are later classified as nonrespondents for the purposes of NHIS data analysis. This actually serves to increase the overall MEPS response rate slightly since the percentage of NHIS households designated for use in MEPS (all those characterized initially as respondents from the NHIS panels and quarters used by MEPS for a given year) is slightly larger than the final NHIS household-level response rate and some NHIS nonresponding households do participate in MEPS. However, as a result, these NHIS nonrespondents who are MEPS participants have no NHIS data available to link with MEPS data. Once the MEPS sample is selected from among the NHIS households characterized as NHIS respondents, RUs representing students living in student housing or consisting entirely of military personnel are deleted from the sample. For the NHIS, college students living in student housing are sampled independently from their families. For MEPS, such students are identified through the sample selection of their parents' RU. Removing from MEPS those college students found in college housing sampled for the NHIS eliminates the opportunity of multiple chances of selection for MEPS for these students. Military personnel not living in the same RU as civilians are ineligible for MEPS. After such exclusions, all RUs associated with households selected from among those identified as NHIS responding households are then fielded in the first round of MEPS.

Table 3.1 shows in Rows A, B, and C the three informational components just discussed. Row A indicates the percentage of NHIS households eligible for MEPS. Row B indicates the number of NHIS households sampled for MEPS. Row C indicates the number of sampled households actually fielded for MEPS (after dropping the students and military members discussed above). Note that all response rates discussed here are unweighted.

Table 3.1. Sample Size and Unweighted Response Rates for 2017 Full Year File (Panel 22 Rounds 1-3/Panel 21, Rounds 3-5)

| Components | Panel 21 | Panel 22 | 2017 Combined |
|---|---|---|---|
| A. Percentage of NHIS households designated for use in MEPS (those initially characterized as responding) * | 71.2% | 69.2% | — |
| B. Number of households sampled from the NHIS | 9,700 | 9,700 | — |
| C. Number of Households sampled from the NHIS and fielded for MEPS | 9,658 | 9,693 | — |
| D. Round 1 – Number of RUs eligible for interviewing | 10,280 | 10,142 | — |
| E. Round 1 – Number of RUs with completed interviews | 7,643 | 7,358 | — |
| F. Round 2 – Number of RUs eligible for interviewing | 7,870 | 7,528 | — |
| G. Round 2 – Number of RUs with completed interviews | 7,319 | 7,023 | — |

| Components | Panel 21 | Panel 22 | 2017 Combined |
|---|---|---|---|
| H. Round 3 – Number of RUs eligible for interviewing | 7,478 | 7,164 | — |
| I. Round 3 – Number of RUs with completed interviews | 7,035 | 6,808 | — |
| J. Round 4 – Number of RUs eligible for interviewing | 7,133 | — | — |
| K. Round 4 – Number of RUs with completed interviews | 6,904 | — | — |
| L. Round 5 – Number of RUs eligible for interviewing | 6,930 | — | — |
| M. Round 5 – Number of RUs with completed interviews | 6,778 | — | — |
| Overall annual unweighted response rates<br>P22: A x (E/D) x (G/F) x (I/H)<br>P21: A x (E/D) x (G/F) x (I/H) x (K/J) x (M/L)<br>Combined: 0. 500 x P21 + 0. 500 x P22 | 43.8% (Panel 21 through Round 5) | 44.5% (Panel 22 through Round 3) | 44.2% |

*Among the panels and quarters of the NHIS allocated to MEPS, the percentage of households that were considered to be NHIS respondents at the time the MEPS sample was selected.

### 3.2.1 Response Rates

In order to produce annual health care estimates for calendar year 2017 based on the full MEPS sample data from the MEPS Panel 21 and Panel 22, the two panels are combined. More specifically, full calendar year 2017 data collected in Rounds 3 through 5 for the MEPS Panel 21 sample are pooled with data from the first three rounds of data collection for the MEPS Panel 22 sample (the general approach is described below).

As mentioned above, all response rates discussed here are unweighted. To understand the calculation of MEPS response rates, some features related to MEPS data collection should be noted. When an RU is visited for a round of data collection, changes in RU membership are identified. Such changes include the formation of student RUs as well as other new RUs created when RU members from a previous round have moved to another location in the U.S. Thus, the number of RUs eligible for MEPS interviewing in a given round is determined after data collection is fully completed. The ratio of the number of RUs completing the MEPS interview in a given round to the number of RUs characterized as eligible to complete the interview for that round represents the "conditional" response rate for that round expressed as a proportion. It is "conditional" in that it pertains to the set of RUs characterized as eligible for MEPS for that round and thus is "conditioned" on prior participation rather than representing the overall response rate through that round. For example, in Table 3.1, for Panel 21, Round 2 the ratio of 7,023 (Row G) to 7,528 (Row F) multiplied by 100 represents the response rate for the round

(93.3 percent when computed), conditioned on the set of RUs characterized as eligible for MEPS for that round. Taking the product of the percentage of the NHIS sample eligible for MEPS (Row A) with the product of the ratios for a consecutive set of MEPS rounds beginning with Round 1 produces the overall response rate through the last MEPS round specified.

The overall unweighted response rate for the combined sample of Panel 21 and Panel 22 for 2017 was obtained by computing the products of the relative sample sizes and the corresponding overall panel response rates and then summing the two products. Panel 21 represents about 50.0 percent of the combined sample size while Panel 22 represents the remaining 50.0 percent. Thus, the combined response rate of 44.2 percent was computed as 0.500 times 43.8, the overall Panel 21 response rate through Round 5 plus 0.500 times 44.5, the overall Panel 22 response rate through Round 3.

### 3.2.2 Panel 22 Response Rates

For MEPS Panel 22, Round 1, 9,693 households were fielded in 2017 (Row C of Table 3.1), a randomly selected subsample of the households responding to the 2016 National Health Interview Survey (NHIS).

Table 3.1 shows the number of RUs eligible for interviewing in each Round of Panel 22 as well as the number of RUs completing the MEPS interview. Computing the individual round "conditional" response rates as described in section 3.2.1 and then taking the product of these three response rates and the factor 69.2 (the percentage of the NHIS sampled households designated for use in selecting a sample of households for MEPS) yields an overall response rate of 44.5 percent for Panel 22 through Round 3.

### 3.2.3 Panel 21 Response Rates

For MEPS Panel 21, 9,658 households were fielded in 2016 (as indicated in Row C of Table 3.1), a randomly selected subsample of the households responding to the 2015 National Health Interview Survey (NHIS).

Table 3.1 shows the number of RUs eligible for interviewing and the number completing the interview for all five rounds of Panel 21. The overall response rate for Panel 21 was computed in a similar fashion to that of Panel 22 but covering all five rounds of MEPS interviewing as well the factor representing the percentage of NHIS sampled households eligible for MEPS. The overall response rate for Panel 21 through Round 5 is 43.8 percent.

### 3.2.4 Annual (Combined Panel) Response Rate

A combined panel response rate for the survey respondents in this data set is obtained by taking a weighted average of the panel-specific response rates. The Panel 21 response rate was weighted by a factor of 0.500 and Panel 22 was weighted by a factor of 0.500, reflecting approximately the distribution of the overall sample between the two panels. The resulting combined response rate for the combined panels was computed as (0.500 x 43.8) plus (0.500 x 44.5) or 44.2 percent (as shown in Table 3.1).

### 3.2.5 Oversampling

Oversampling is a feature of the MEPS sample design, helping to increase the precision of estimates for some subgroups of interest. Before going into details related to MEPS, the concept of oversampling will be discussed.

In a sample where all persons in a population are selected with the same probability and survey coverage of the population is high, the sample distribution is expected to be proportionate to the population distribution. For example, if Hispanics represent 15 percent of the general population, one would expect roughly 15 percent of the persons sampled to be Hispanic. However, in order to improve the precision of estimates for specific subgroups of a population, one might decide to select samples from those subgroups at higher rates than the remainder of the population. Thus, one might select Hispanics at twice the rate (i.e., at double the probability) of persons not oversampled. As a result, an oversampled subgroup comprises a higher proportion of the sample than it represents in the general population. Sample weights ensure that population estimates are not distorted by a disproportionate contribution from oversampled subgroups. Base sample weights for oversampled groups will be smaller than for the portion of the population not oversampled. For example, if a subgroup is sampled at roughly twice the rate of sample selection for the remainder of the population not oversampled, members of the oversampled subgroup will receive base or initial sample weights (prior to nonresponse or poststratification adjustments) that are roughly half the size of the group not oversampled.

As mentioned above, oversampling is implemented to increase the sample sizes and thus improve the precision of survey estimates for particular subgroups of the population. The "cost" of oversampling is that the precision of estimates for the general population and subgroups not oversampled will be reduced to some extent compared to the precision one could have achieved if the same overall sample size were selected without any oversampling.

The oversampling of Hispanic, Black, and Asian households for the 2015 NHIS carries over to MEPS through the set of NHIS responding households eligible for sample selection for MEPS. In the NHIS under the sample design utilized through 2005, Hispanic households were oversampled at a rate of roughly 2 to 1. That is, the probability of selecting a Hispanic household for participation in the NHIS was roughly twice that for households in the general population that were not oversampled. The oversampling rate for Black households under the old design was roughly 1.5 to 1. Under the NHIS sample design employed through 2015 (which is the sample design applicable for MEPS Panel 21), Asians, as well as Hispanics and Blacks, are oversampled. The average oversampling rates for the three minority groups was not reported. The new NHIS sample design introduced in 2016 (which is the sample design applicable for MEPS Panel 22) discontinued oversampling these minority groups.

For both Panel 21 and Panel 22, all households in the Asian, Hispanic, and Black domains were sampled with certainty (i.e., all households assigned to those domains were included in the MEPS). For Panel 21, the "Other, complete" domain was sampled at a rate of about 81 percent while the "Other, partial complete" domain was sampled at a rate of about 49 percent. For Panel 22, the corresponding sampling rates for the "Other, complete" domain and the "Other, partial complete" domain were about 77 percent and 49 percent, respectively.

Within strata (domains) for both panels, responding NHIS households were selected for MEPS using a systematic sample selection procedure from among those eligible. For the "non-Other" strata households were all selected with certainty. Within strata involving "Others" (two strata for both panels) the selection was with probability proportionate to size (pps) where the size measure was the inverse of the NHIS initial probability of selection. The pps sampling was undertaken to help reduce the variability in the MEPS weights incurred due to the variability of the NHIS sampling rates. With the subsampling, households that were oversampled for MEPS in calendar year 2017 were those responding households in the NHIS identified as having members whose race/ethnicity was Hispanic, Black, or Asian for both panels.

Typically, sample allocations across sample domains change from one MEPS panel to another. The sample domains used may also vary by panel although this was not the case for Panel 21 and Panel 22. When one compares unweighted measures (e.g., response rates) between panels and years, one should take into account such differences. Suppose, for example, members of one domain have a lower propensity to respond than those of another domain. Then if that domain has been allocated a higher proportion of the sample, the corresponding panel may have a lower unweighted response rate simply because of the differences in sample allocation.

Within each domain (sample stratum) systematic samples of the MEPS-eligible households were selected from among the NHIS household respondents made available for MEPS sample selection purposes.

## 3.3 Person-Level Weight (PERWT17F)

### 3.3.1 Overview

There is a single full year person-level weight (PERWT17F) assigned to each record for each key, in-scope person who responded to MEPS for the full period of time that he or she was inscope during 2017. A key person was either a member of a responding NHIS household at the time of interview or joined a family associated with such a household after being out-of-scope at the time of the NHIS (the latter circumstance includes newborns as well as those returning from military service, an institution, or residence in a foreign country). A person is inscope whenever he or she is a member of the civilian noninstitutionalized portion of the U.S. population.

### 3.3.2 Details on Person-Level Weights Construction

The person-level weight PERWT17F was developed in several stages. First, person-level weights for Panel 21 and Panel 22 were created separately. The weighting process for each panel included adjustments for nonresponse over time and a calibration to independent population totals. The calibration was initially accomplished separately for each panel by raking the corresponding sample weights to Current Population Survey (CPS) population estimates based on five variables. The five variables used in the establishment of the initial person-level control figures were: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic; Black, non-Hispanic; Asian, non-Hispanic; and other); sex; and age. A 2017 composite weight was then formed by multiplying each individual panel weight by a factor which reflected the relative sample size of the individual panel compared to the sample size for the two panels combined. The individual panel weights from Panel 21 were multiplied by the

factor .500 and each weight from Panel 22 by the factor .500. Using such factors to form composite weights serves to limit the variance of estimates obtained from pooling the two samples. The resulting composite weight was raked to the same set of CPS-based control totals. Then, when the poverty status information (derived from the MEPS income variables) became available, another raking was to be undertaken, using dimensions reflecting poverty status in addition to the previously mentioned five variables. Control totals were established using poverty status (five categories: below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, and at least 400 percent of poverty) for this purpose. Thus, the raking for the final weight reflected poverty status as well as the other five variables previously used in the weight calibration.

### 3.3.3 MEPS Panel 21 Weight Development Process

The person-level weight for MEPS Panel 21 was developed using the 2016 full year weight for an individual as a "base" weight for survey participants present in 2017. For key, in-scope members who joined an RU some time in 2017 after being out-of-scope in 2016, the initially assigned person-level weight was the corresponding 2016 family weight. The weighting process included an adjustment for nonresponse over Rounds 4 and 5 as well as a raking to population control figures for December 2017. These control figures were derived by scaling back the population totals obtained from the March 2018 CPS to correspond to a national estimate for the civilian noninstitutionalized population to reflect the December 31, 2017 estimated population total (estimated based on Census projections for January 1, 2018). Variables used in the establishment of person-level control figures included: education of the reference person (no degree, high school/GED no college, some college, Bachelor's degree or higher); census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic; Black, non-Hispanic; Asian, non-Hispanic; and other); sex; and age. For confidentiality reasons, the MSA status variables are no longer released for public use (this policy began in 2013). The final weight for key, responding persons who were not inscope on December 31, 2017 but were inscope earlier in the year was the weight after the nonresponse adjustment.

Note that the 2016 full-year weight that was used as the base weight for Panel 21 was derived using the MEPS Round 1 weight and adjusting it further for nonresponse over the remaining data collection rounds in 2016 and raking to the December 2016 population control figures.

### 3.3.4 MEPS Panel 22 Weight Development Process

The person-level weight for MEPS Panel 22 was developed using the MEPS Round 1 person-level weight as a "base" weight. The MEPS Round 1 weights incorporated the following components: the original household probability of selection for the NHIS and for the NHIS subsample reserved for MEPS and an adjustment for NHIS nonresponse, the probability of selection for MEPS from NHIS, adjustment for nonresponse at the dwelling unit level for Round 1, and poststratification to figures at the family and person level obtained from the March CPS data base of the corresponding year (i.e., 2016 for Panel 21 and 2017 for Panel 22). For key, in-scope respondents who joined an RU after Round 1, the Round 1 family weight served as a "base" weight.

The weighting process also included an adjustment for nonresponse over Round 2 and the 2017 portion of Round 3 as well as raking to the same population control figures for December 2017 used for the MEPS Panel 21 weights. The same six variables employed for Panel 21 raking (education level, census region, MSA status, race/ethnicity, sex, and age) were also used for Panel 22 raking. Similar to Panel 21, key, responding persons not in-scope on December 31, 2017 but in-scope earlier in the year retained, as their final Panel 22 weight, the weight after the nonresponse adjustment.

### 3.3.5 The Final Person-Level Weight for 2017

The composite weights of two groups of persons who were out-of-scope on December 31, 2017 were adjusted for expected undercoverage. Specifically, the weights of those who were inscope some time during the year, out-of-scope on December 31, and entered a nursing home during the year were adjusted to compensate for expected undercoverage of this population. The weights of persons who died while inscope during 2017 were poststratified to corresponding estimates derived using data obtained from the Medicare Current Beneficiary Survey (MCBS) and Vital Statistics information available from the National Center for Health Statistics (NCHS). Separate decedent control totals were developed for the "65 and older" and "under 65" civilian noninstitutionalized populations.

The sum of the person-level weights across all persons assigned a positive person-level weight, (i.e., for the civilian, noninstitutionalized or in-scope population over the course of the year (based on PERWT17F>0) is 324,779,909 (see Table 3.2). The corresponding total for the population that was inscope on December 31, 2017 is 321,529,965.

Table 3.2. Number of person-level respondents and corresponding population estimates for the 2017 Full Year Consolidated File

| **Populations of Interest** | **Panel 21** | **Panel 22** | **Combined** | **Population estimate (weighted total of combined samples)** |
|---|---|---|---|---|
| Civilian, Noninstitutionalized Population over the course of 2017 | 15,429 | 15,287 | 30,716 | 324,779,909 |
| Civilian, Noninstitutionalized Population on December 31, 2017 | 15,297 | 15,130 | 30,427 | 321,529,965 |

### 3.3.6 A Note on MEPS Population Estimates

Beginning with the 2011 Full Year data, MEPS transitioned to 2010 census-based population estimates from the CPS for poststratification and raking. CPS estimates began reflecting 2010 census-based data in 2012, and the March 2018 CPS data serve as the basis for the 2017 MEPS weight calibration efforts. An article discussing the impact of the transition to 2018 census-based population estimates for poststratification and raking on CPS estimates can be found at the Bureau of Labor statistics website.

Use of the updated population controls will have a noticeable effect on estimated totals for some population subgroups. The article compares some 2011 CPS estimates for those aged 16 and older "as published" with those that would have been generated had the updated population controls been used. Among the more notable increases were for the following subgroups: those aged 55 or older (about 1.3 million more, a 1.7 percent increase); those aged 16-24 (about a half million more, a 1.4 percent increase); Blacks (400 thousand more, a 1.4 percent increase); Hispanics (1.3 million more, a 3.8 percent increase); and Asians (1.2 million more, a 10 percent increase). Corresponding changes can be anticipated for MEPS full year data beginning with the 2011 MEPS PUF.

## 3.4 Coverage

The target population associated with this MEPS database is the 2017 U.S. civilian, noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 2015 (Panel 21) and 2016 (Panel 22). New households created after the NHIS interviews for the respective panels and consisting exclusively of persons who entered the target population after 2015 (Panel 21) or after 2016 (Panel 22) are not covered by MEPS. Neither are previously out-of-scope persons who join an existing household but are unrelated to the current household residents. Persons not covered by a given MEPS panel thus include some members of the following groups: immigrants, persons leaving the military, U.S. citizens returning from residence in another country, and persons leaving institutions. Those not covered represent only a small proportion of the MEPS target population.

## 3.5 Background on Family-Level Estimation Using This MEPS Public Use File

### 3.5.1 Overview

There are two family weight variables provided in this release: FAMWT17F and FAMWT17C. FAMWT17F can be used to make estimates for the cross-section of families in the U.S. civilian noninstitutionalized population on December 31, 2017 where families are identified based on the MEPS definition of a family unit. Estimates can include MEPS families that existed at some time during 2017 but whose members became out-of-scope prior to the end of the year (e.g., all family members moved out of the country, died, etc.) as well as MEPS families in existence on December 31, 2017. FAMWT17C can be used to make estimates for the cross-section of families in the U.S. civilian, noninstitutionalized population on December 31, 2017 where families are identified based on the CPS definition of a family unit.

### 3.5.2 Definition of "Family" for Estimation Purposes

A MEPS family generally consists of two or more persons living together in the same household who are related by blood, marriage, or adoption. MEPS also defines as a family unmarried persons living together who consider themselves a family unit (these are not families under the CPS definition). Single people who live with neither a relative nor a person identified as a "significant other" have also been assigned a family ID value and a family-level weight. Thus, they can be included or excluded from family-level estimates, as desired. Relatives identified as usual residents of the household who were not present at the time of the interview, such as college students living away from their parents' home during the school year, were considered as members of the family that identified them.

To make estimates at the family level, it is necessary to prepare a family-level file containing one record per family (see instructions below), family-level summary characteristics, and the family-level weight variable (FAMWT17F or FAMWT17C). Each MEPS family unit is uniquely identified by the combination of the variables DUID and FAMIDYR while each CPS family unit is uniquely identified by the combination of the variables DUID and CPSFAMID. The number of persons in a MEPS sample family ranges from 1 to 13 and the number in the CPS families ranges from 1 to 13. Only persons with positive nonzero family weight values are candidates for inclusion in family estimates.

Two sets of families for whom estimates can be obtained are defined in Table 3.3 below (along with respective sample sizes). Persons with FMRS1231=1 were inscope for the survey on 12/31/17 and therefore part of a MEPS family on 12/31/17. The more expansive definition of families (second row in Table 3.3) includes families and members of families who were not inscope at the end of the year. While MEPS includes individual persons as family units (about one-third of all units), analysts may restrict their analyses to families with two or more members using the family size variables shown in Table 3.3 (for example, to limit consideration to the cross-section of families with two or more members on December 31, 2017, analyze only families where FAMS1231 is 2 or more). Estimates can also be made for the cross-section of CPS families on December 31, 2017 based on the 13,370 sample CPS families in this data file.

Table 3.3. Identifying MEPS Families and Corresponding Sample Sizes

| Population of Interest | Cases to Include | Sample Size (Includes single person units) | Family Size Variable |
|---|---|---|---|
| Cross-section of Families in the Civilian Noninstitutionalized Population on 12/31/17 | FAMWT17F>0 & FMRS1231=1 | 12,667 | FAMS1231 |
| Families in the Civilian Noninstitutionalized Population on 12/31/17 plus families and members of families in existence earlier in 2017 who were not part of the civilian noninstitutionalized population on 12/31/17 | FAMWT17F>0 | 12,756 | FAMSZEYR |

### 3.5.3 Instructions to Create Family Estimates

The following is a summary of the steps and the variables to be used for family-level estimation based on the MEPS definition of families.

- Concatenate the variables DUID and FAMIDYR into a new variable (e.g., DUIDFAMY).
- To create a family-level file, sort by DUIDFAMY and then subset to one record per DUIDFAMY value by retaining only the reference person record (FAMRFPYR=1) for each value of DUIDFAMY. Some family-level measures needed for analytic purposes (e.g., means or totals) can be obtained after aggregating person-level information across all members of a family. For other types of measures, analysts frequently use the characteristics of the reference person to characterize his or her family unit (e.g., the race/ethnicity, marital status, or age of the reference person).
- Apply the weight FAMWT17F to the analytic variable(s) of interest to obtain national MEPS family estimates.

The following is a summary of the steps and the variables to be used for family-level estimation based on the CPS definition of families.

- Concatenate the variables DUID and CPSFAMID into a new variable (e.g., DUIDFAMC).
- To create a family-level file, sort by DUIDFAMC and then subset to one record per DUIDFAMC value by retaining only the reference person record (FCRP1231=1) for each value of DUIDFAMC. Some family-level measures needed for analytic purposes (e.g., means or totals) can be obtained after aggregating person-level information across all members of a family. For other types of measures, analysts frequently use the characteristics of the reference person to characterize his or her family unit (e.g., the race/ethnicity, marital status, or age of the reference person). (Note that to be strictly comparable to the CPS definition of families, only those with two or more family members should be included in analyses.)
- Apply the weight FAMWT17C to the analytic variable(s) of interest to obtain national CPS family estimates.

### 3.5.4 Details on Family Weight Construction and Estimated Number of Families

Because health care related decisions are influenced by a family's economic status, poverty status is incorporated into the poststratification component of the weighting process. However, poverty status is defined based on the CPS definition of a family, which differs from the MEPS family definition in that unmarried partners living together are considered separate family units. Since data are collected in MEPS family units (RUs), prior to poststratification MEPS families in existence on December 31, 2017 containing unmarried partners living together were partitioned into units that correspond to CPS families (families with no unmarried partners are defined as family units in both MEPS and CPS).

The process of calibrating the family weights to achieve consistency with CPS control figures was carried out in several steps. First, all CPS-like family units were assigned an initial family-

level weight based on the person-level weight (PERWT17F) of the family reference person (FAMRFPYR=1) of the MEPS family with which they were associated. These CPS family-level weights (FAMWT17C) were obtained by raking to population control figures derived from CPS estimates for December 2017 (derived by scaling the family population totals from the March 2018 CPS back to reflect December 31, 2017). In addition to poverty status, the calibration process for the family-level weights incorporated the following variables: Census region; MSA status; race/ethnicity of reference person (Hispanic, Black but non-Hispanic, Asian, and other); family type (reference person married, living with spouse; male reference person, unmarried or spouse not present; female reference person, unmarried or spouse not present); age of reference person; and family size on December 31, 2017. The family-level weight variable for MEPS families (FAMWT17F) was then constructed by putting MEPS families that consisted of more than one CPS-like family back together and assigning the MEPS family-level weight based on the CPS family weight of the MEPS family reference person.

The weighted population estimate for CPS families on December 31, 2017 based on 13,370 CPS families in the sample is 144,141,965. Overall, the weighted population estimate for the 12,667 MEPS family units containing at least one member of the U.S. civilian, noninstitutionalized population on December 31, 2017 (those families whose members have FAMWT17F>0 and FMRS1231=1) is 138,040,250. The inclusion of families whose members left the in-scope population prior to December 31, 2017 increases the estimated total number of families represented by the 12,756 MEPS responding families (whose members have FAMWT17F>0) to 139,156,121.

It may be of interest to note that CPS is planning to incorporate the ability to identify same sex marriages but this has yet to be implemented. Thus, the MEPS raking effort to CPS family control figures serving to reflect consistent population distributions between MEPS' "CPS-like families" and CPS families does not incorporate that component of the population. It should be noted that MEPS families (as opposed to the MEPS "CPS-like families") have been based on self-identification as well as legal and biological relationships. People who self-identify as a family unit, regardless of marital status, have been considered a MEPS family for analytic purposes.

Table 3.4. Families with a family weight >0 for the 2017 Full Year Consolidated Data File

| | **Panel 21** | **Panel 22** | **Combined** | **Population estimate (weighted total of combined sample)** |
|---|---|---|---|---|
| Number | 6,314 | 6,442 | 12,756 | 139,156,121 |

### 3.6 Analysis Using Health Insurance Eligibility Units

To construct a weight for use in analysis using Health Insurance Eligibility Units, as identified by the variable HIEUIDX:

1. Identify the HIEU head by your analytic intent, i.e. if only studying health insurance unit with female heads of households, choose the female adult as head of household.

2. If the weight of the HIEU head is non-zero, use the weight of the HIEU head for all members of that HIEU; or

If the weight of the HIEU head is zero, delete the case.

### 3.7 Weights and Response Rates for the Self-Administered Questionnaire

For analytic purposes, a single person-level weight variable, SAQWT17F, has been provided for use with the data obtained from the Self-Administered Questionnaire (SAQ). This questionnaire was administered in Panel 22, Round 2 and Panel 21, Round 4 and was to be completed by each adult (person aged 18 or older) in the family. Thus, the target population for the SAQ is adults in the civilian, noninstitutionalized population at the time data were collected for Rounds 2/4 (generally speaking, the fall of the year in question).

The final full-year person-level SAQ weight for 2017 was constructed as follows with only those with a 2017 full year person weight (PERWT17F>0) eligible to receive the 2017 SAQ weight. The weighting process was similar to that of the full sample person-level weights: nonresponse adjustments for the weights for each panel separately; raking to CPS control totals; compositing the weights from the two panels; and finally re-raking of the composited weights.

Variables used in the nonresponse adjustment process were region, MSA status, family size, marital status, level of education, health status, health insurance status, age, sex, and race/ethnicity. The weights were raked to Current Population Survey (CPS) estimates corresponding to December 2017 (the same source of control figures used for the full year person weights). The variables used to form control figures (region, MSA status, age, sex, and race/ethnicity) are the same variables that were used for the full year person weights. The only difference was that age categories were developed after excluding ages under 18, since only adults were eligible for the SAQ.

The final 2017 SAQ weight for this consolidated data file was then obtained by raking the preliminary weight to CPS estimates that were based on poverty status as well as the aforementioned variables. This final weight was assigned the variable name SAQWT17F.

In all, there were 20,616 persons assigned an SAQ weight with the sum of the weights being 247,930,897 (an estimate of the civilian, noninstitutionalized population aged 18 or older at the time the SAQ was administered).

The Panel 21 unweighted response rate for the 2017 SAQ was 83.0 percent, while the Panel 22 unweighted response rate for the 2017 SAQ was 87.5 percent. Pooled unweighted response rates for the survey respondents have been computed by taking a weighted average of the panel-specific response rates, where the weights were the relative proportion of persons with sample weights associated with each panel (a value of 0.50 was associated with Panel 21, and a value of 0.50 was associated with Panel 22). The pooled unweighted response rate for the combined panels for the 2017 SAQ is 85.3 percent.

### 3.8 Weights and Response Rates for the Diabetes Care Survey

A person-level weight, DIABW17F, was developed for use with the data obtained from the Diabetes Care Survey (DCS). This weight was assigned to each person with an SAQ weight who completed the DCS and self-reported as having diabetes (thus, no one aged 17 or under receives a DCS weight). The general weighting process was to assign each individual eligible for a DCS weight the SAQ expenditure weight as the initial weight. This weight was adjusted to compensate for RU level nonresponse to the question as to whether or not each RU member had diabetes and then for nonresponse among those receiving the DCS questionnaire.

Prior to Panel 12, the identification of people eligible to receive the DCS questionnaire was focused on the Rounds 3/5 interview. During the Rounds 3/5 regular MEPS interview, each RU respondent was asked to complete a "conditions" question to identify all current/deceased/institutionalized RU members of any age who had been diagnosed with diabetes. Each RU member who was identified as having diabetes by the RU respondent was then eligible to receive the DCS questionnaire. To determine which DCS respondents actually had diabetes (and thus were members of the target population), each DCS respondent was asked if s/he was told by a physician that s/he had diabetes. While the DCS questionnaire has been distributed to persons under the age of 18, the constructed DCS variables released in the person-level PUF apply only to adults. Beginning in Panel 12, a different screening process has been employed to identify those eligible to receive the DCS questionnaire. This process involves asking screener questions in each round, but the group of persons about whom these questions asks varies from round to round.

In Round 1, the RU respondent is asked to identify all RU members (including those who went out of scope unless they died prior to the date of interview) with diabetes. In Rounds 2/4, the same screening information is gathered but only for new RU members (as long as they did not die during the round). In Round 3 the screening questions are asked of the RU respondent for all RU members who were: (a) inscope sometime during the round but had not died prior to the date of interview; and (b) had not been identified as having diabetes in a previous round (this includes people with missing data, classified as not having diabetes in all previous rounds of MEPS, and all new members of the RU in Round 3). Any RU member who has been identified by the RU respondent as having diabetes at any time during MEPS will be asked to complete a DCS questionnaire. This process has been designed to help ensure that all RU members with diabetes will be given a DCS questionnaire to complete.

In all, 2,232 people were assigned a DCS weight (DIABW17F>0). The sum of the DCS weights is 26,255,075, an estimate of the adult population self-reporting as having been diagnosed with diabetes based on the two-step process described above.

The Panel 21 unweighted response rate for the 2017 DCS was 81.8 percent. The Panel 22 unweighted response rate for the 2017 DCS was 81.0 percent. The pooled unweighted response rate for the combined panels for the DCS is 81.4 percent. The pooled unweighted response rate is a weighted average for the two panels, reflecting their relative sample sizes (about 50 percent of the MEPS respondents are from Panel 22, the remaining 50 percent from Panel 21).

## 3.9 Weights and Response Rates for the Cancer Self-Administered Questionnaire

In addition to the annual questionnaire administered to those identified through the MEPS standard questionnaire as having been diagnosed with diabetes, for 2017 a questionnaire was administered in Round 1 for Panel 22 to those adults (ages 18 or older) identified as having been diagnosed with cancer after the age of 17. A corresponding questionnaire was not administered to all such adults in Round 3 for Panel 21. As a result, the weights were only developed for members of Panel 22 but, of course, still represent the adult population identified as having been diagnosed with cancer as an adult.

Among those eligible to complete the cancer SAQ, those who were assigned a CSAQ weight had to meet the following conditions: been assigned a Panel 22 individual panel 2017 full year person weight; completed the CSAQ; and self-identified as having been diagnosed with cancer after the age of 17. The Panel 22 2017 full year person weight was assigned as the initial weight. This weight was then adjusted to compensate for RU level nonresponse to a screener question and then to CSAQ nonresponse. In all, 718 people were assigned a CSAQ weight (CSAQW17F>0). The sum of the CSAQ weights is 19,541,150, an estimate of the adult population self-reporting as having been diagnosed with or treated for cancer as an adult (i.e., after the age of 17). Estimates of cancer prevalence based on this question can be expected to differ from estimates based on data in the Medical Conditions File due to definitional differences in the population being targeted as well as methodological differences.

The Panel 22 unweighted response rate for the 2017 CSAQ was 82.4 percent.

## 3.10 Variance Estimation

The MEPS is based on a complex sample design. To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for MEPS estimates, analysts need to take into account the complex sample design of MEPS for both person-level and family-level analyses. Several methodologies have been developed for estimating standard errors for surveys with a complex sample design, including the Taylor-series linearization method, balanced repeated replication, and jackknife replication. Various software packages provide analysts with the capability of implementing these methodologies. MEPS analysts most commonly use the Taylor Series approach. However, an option is also provided to apply the BRR approach when needed to develop variances for more complex estimators.

### 3.10.1 Taylor-series Linearization Method

The variables needed to calculate appropriate standard errors based on the Taylor-series linearization method are included on this and all other MEPS public use files. Software packages that permit the use of the Taylor-series linearization method include SUDAAN, Stata, SAS (version 8.2 and higher), and SPSS (version 12.0 and higher). For complete information on the capabilities of each package, analysts should refer to the corresponding software user documentation.

Using the Taylor-series linearization method, variance estimation strata and the variance estimation PSUs within these strata must be specified. The variables VARSTR and VARPSU on

this MEPS data file serve to identify the sampling strata and primary sampling units required by the variance estimation programs. Specifying a "with replacement" design in one of the previously mentioned computer software packages will provide estimated standard errors appropriate for assessing the variability of MEPS survey estimates. It should be noted that the number of degrees of freedom associated with estimates of variability indicated by such a package may not appropriately reflect the number available. For variables of interest distributed throughout the country (and thus the MEPS sample PSUs), one can generally expect to have at least 100 degrees of freedom associated with the estimated standard errors for national estimates based on this MEPS database.

Prior to 2002, MEPS variance strata and PSUs were developed independently from year to year, and the last two characters of the strata and PSU variable names denoted the year. However, beginning with the 2002 Point-in-Time PUF, the variance strata and PSUs were developed to be compatible with all future PUFs until the NHIS design changed. Thus, when pooling data across years 2002 through the Panel 11 component of the 2007 files, the variance strata and PSU variables provided can be used without modification for variance estimation purposes for estimates covering multiple years of data. There were 203 variance estimation strata, each stratum with either two or three variance estimation PSUs.

From Panel 12 of the 2007 files, a new set of variance strata and PSUs were developed because of the introduction of a new NHIS design. There are 165 variance strata with either two or three variance estimation PSUs per stratum starting from Panel 12. Therefore, there are a total of 368 (203+165) variance strata in the 2007 Full Year file as it consists of two panels that were selected under two independent NHIS sample designs. Since both MEPS panels in the Full Year files from 2008 through 2016 were based on the next NHIS design, there are only 165 variance strata. These variance strata (VARSTR values) have been numbered from 1001 to 1165 so that they can be readily distinguished from those developed under the former NHIS sample design in the event that data are pooled for several years.

As discussed, the most recent change in the NHIS sample design took place in 2016, effectively changing the MEPS design beginning with calendar year 2017, where Panel 22 is based on the new NHIS design while Panel 21 is based on the old one. There were 117 variance strata formed for Panel 22. With the 165 available from Panel 21, there are a total of 282 variance strata appearing on the 2017 Full Year PUF. The 117 variance strata from Panel 22 are numbered from 2001-2117 to distinguish them from Panel 21 variance strata numbered from 1001 to 1165.

To ensure that variance strata are identified appropriately for variance estimation purposes when pooling MEPS data across several years, one can proceed as follows:

1. When pooling any year from 2002 or later, one can use the variance strata numbering as is.

2. When pooling any year from 1996 to 2001 with any year from 2002 or later, use the pooled linkage public use file HC-036 that contains the proper variance structure to use when making estimates from MEPS data that have been pooled over multiple years and where one or more years are from 1996-2001.

3. The HC-036 file is updated every year to allow pooling of any year from 1996 to 2001 with any year from 2002 up to the latest year. Further details on the HC-036 file can be found in the public use documentation of the HC-036 file.

### 3.10.2 Balanced Repeated Replication (BRR) Method

BRR replicate weights are not provided on this MEPS PUF for the purposes of variance estimation. However, a file containing a BRR replication structure is made available so that the users can form replicate weights, if desired, from the final MEPS weight to compute variances of MEPS estimates using either BRR or Fay's modified BRR (Fay 1989) methods. The replicate weights are useful to compute variances of complex non-linear estimators for which a Taylor linear form is not easy to derive and not available in commonly used software. For instance, it is not possible to calculate the variances of a median or the ratio of two medians using the Taylor linearization method. For these types of estimators, users may calculate a variance using BRR or Fay's modified BRR methods. However, it should be noted that the replicate weights have been derived from the final weight through a shortcut approach. Specifically, the replicate weights are not computed starting with the base weight and all adjustments made in different stages of weighting are not applied independently in each replicate. Thus, the variances computed using this one-step BRR do not capture the effects of all weighting adjustments that would be captured in a set of full developed BRR replicate weights. The Taylor Series approach does not fully capture the effects of the different weighting adjustments either.

The dataset HC-036BRR contains the information necessary to construct the BRR replicates. It contains a set of 128 flags (BRR1—BRR128) in the form of half sample indicators, each of which is coded 0 or 1 to indicate whether the person should or should not be included in that particular replicate. These flags can be used in conjunction with the full-year weight to construct the BRR replicate weights. For analysis of MEPS data pooled across years, the BRR replicates can be formed in the same way using the HC-036 file. For more information about creating BRR replicates, users can refer to the documentation for the HC-036BRR pooled linkage file.

## 3.11 Guidelines for Determining which Weight to Use for Analyses Involving Data/Variables from Multiple Sources and Supplements: MEPS 2017 Full-Year Use File

Which weight variable to use is decided based on a hierarchy.

For person-level analyses not involving variables from the SAQ or DCS, PERWT17F should always be used.

For person-level analysis involving variables from the SAQ but not the DCS, the SAQWT17F should be used. For example, if examining access to care or quality of care variables from the SAQ by socio-demographics, health status, or health insurance status, SAQWT17F is the appropriate weight even though person-level socio-demographic, health status, and health insurance status variables are part of the core person-level questionnaire. Whenever data from the Diabetes Care Survey (DCS) are used, alone or in conjunction with data from other questionnaires, the weight variable DIABW17F should be used for those eligible to provide DCS data. Similarly, whenever data from the CSAQ are used, the weight variable CSAQW17F should be used for those eligible to provide CSAQ data.

For all family-level analyses, FAMWT17F or FAMWT17C should be used.

### 3.12 Using MEPS Data for Trend Analysis

MEPS began in 1996, and the utility of the survey for analyzing health care trends expands with each additional year of data; however, there are a variety of methodological and statistical considerations when examining trends over time using MEPS. Examining changes over longer periods of time can provide a more complete picture of underlying trends. In particular, large shifts in survey estimates over short periods of time (e.g. from one year to the next) that are statistically significant should be interpreted with caution unless they are attributable to known factors such as changes in public policy, economic conditions, or survey methodology.

In 2013 MEPS survey operations introduced an effort to obtain more complete information about health care utilization from MEPS respondents with full implementation in 2014. This effort resulted in improved data quality and a reduction in underreporting in the second half of 2013 and throughout 2014. The impacts of these efforts are important to consider when assessing trends. For example, respondents reported more visits, especially non-physician visits, by sample members. This increase in the number of reported visits was especially large for those that tend to have relatively large numbers of visits such as the elderly, Medicare beneficiaries, and people with multiple chronic conditions, disabilities, or poor health. This had a corresponding impact on expenditures, particularly among such subgroups. Thus, the interpretation of trends in both visits and expenditures has been affected. The weight adjustments based on hospital stays discussed in Section 3.3.2 could also potentially affect the evaluation of trends in utilization for those ages 65 or older.

Changes to the MEPS survey instrument should also be considered when analyzing trends. Thus, the note on the title page of this document is repeated here:

The MEPS instrument design changed beginning in Spring of 2018, affecting Panel 23 Round 1, Panel 22 Round 3, and Panel 21 Round 5. For the Full-Year 2017 PUFs, the Panel 22 Round 3 and Panel 21 Round 5 data were transformed to the degree possible to conform to the previous design. **Data users should be aware of possible impacts on the data and especially trend analysis for these data years due to the design transition.**

For example, users should refer to section 2.5.11.2 above and, for more detail, the documentation for the prescription drug file (HC-188A) when analyzing prescription drug spending before and after 2010 and 2011 and before and after 2017. Similarly, as a result of improved methods for collecting priority conditions data implemented in 2007, prevalence measures prior to 2007 are not comparable to those from 2007 and beyond for many of these conditions. Users should refer to Section 2.5.4 above and the documentation for the conditions file (HC-190) for details. As always, it is recommended data users review relevant sections of the documentation for descriptions of these types of changes before undertaking trend analyses.

Analysts may also wish to consider using statistical techniques to smooth or stabilize analyses of trends using MEPS data such as comparing pooled time periods (e.g. 1996-97 versus 2011-12), working with moving averages or using modeling techniques with several consecutive years of MEPS data to test the fit of specified patterns over time.

Finally, statistical significance tests should be conducted to assess the likelihood that observed trends are not attributable to sampling variation. In addition, researchers should be aware of the impact of multiple comparisons on Type I error. Without making appropriate allowance for multiple comparisons, undertaking numerous statistical significance tests of trends increases the likelihood of concluding that a change has taken place when one has not.

# D. VARIABLE-SOURCE CROSSWALK

**VARIABLE-SOURCE CROSSWALK**

**FOR MEPS HC-201: 2017 CONSOLIDATED DATA FILE**

**SURVEY ADMINISTRATION VARIABLES - PUBLIC USE**

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| DUID | Dwelling Unit ID | Assigned in Sampling |
| PID | Person Number | Assigned in Sampling or by CAPI |
| DUPERSID | Person ID (DUID + PID) | Assigned in Sampling |
| PANEL | Panel Number | Constructed |
| FAMID31 | Family ID (Student Merged In) – R3/1 | CAPI Derived |
| FAMID42 | Family ID (Student Merged In) – R4/2 | CAPI Derived |
| FAMID53 | Family ID (Student Merged In) – R5/3 | CAPI Derived |
| FAMID17 | Family ID (Student Merged In) – 12/31/17 | CAPI Derived |
| FAMIDYR | Annual Family Identifier | Constructed |
| CPSFAMID | CPS-Like Family Identifier | Constructed |
| FCSZ1231 | Family Size Responding 12/31 CPS Family | Constructed |
| FCRP1231 | Ref Person of 12/31 CPS Family | Constructed |
| RULETR31 | RU Letter – R3/1 | CAPI Derived |
| RULETR42 | RU Letter – R4/2 | CAPI Derived |
| RULETR53 | RU Letter – R5/3 | CAPI Derived |
| RULETR17 | RU Letter as of 12/31/17 | CAPI Derived |
| RUSIZE31 | RU Size – R3/1 | CAPI Derived |
| RUSIZE42 | RU Size – R4/2 | CAPI Derived |
| RUSIZE53 | RU Size – R5/3 | CAPI Derived |
| RUSIZE17 | RU Size as of 12/31/17 | CAPI Derived |
| RUCLAS31 | RU fielded as: Standard/New/Student – R3/1 | CAPI Derived |
| RUCLAS42 | RU fielded as: Standard/New/Student – R4/2 | CAPI Derived |
| RUCLAS53 | RU fielded as: Standard/New/Student – R5/3 | CAPI Derived |
| RUCLAS17 | RU fielded as: Standard/New/Stud-12/31/17 | CAPI Derived |
| FAMSZE31 | RU Size Including Students – R3/1 | CAPI Derived |
| FAMSZE42 | RU Size Including Students – R4/2 | CAPI Derived |
| FAMSZE53 | RU Size Including Students – R5/3 | CAPI Derived |
| FAMSZE17 | RU Size Including Students as of 12/31/17 | CAPI Derived |
| FMRS1231 | Member of Responding 12/31 Family | Constructed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| FAMS1231 | Family Size of Responding 12/31 Family | Constructed |
| FAMSZEYR | Size of Responding Annualized Family | Constructed |
| FAMRFPYR | Reference Person of Annualized Family | Constructed |
| REGION31 | Census Region – R3/1 | Assigned in Sampling |
| REGION42 | Census Region – R4/2 | Assigned in Sampling |
| REGION53 | Census Region – R5/3 | Assigned in Sampling |
| REGION17 | Census Region as of 12/31/17 | Assigned in Sampling |
| REFPRS31 | Reference Person at - R3/1 | RE 42-45 |
| REFPRS42 | Reference Person at - R4/2 | RE 42-45 |
| REFPRS53 | Reference Person at - R5/3 | RE 42-45 |
| REFPRS17 | Reference Person as of 12/31/17 | RE 42-45 |
| RESP31 | 1st Respondent Indicator for R3/1 | RE 6, 8 |
| RESP42 | 1st Respondent Indicator for R4/2 | RE 6, 8 |
| RESP53 | 1st Respondent Indicator for R5/3 | RE 6, 8 |
| RESP17 | 1st Respondent Indicator as of 12/31/17 | RE 6, 8 |
| PROXY31 | Was Respondent a Proxy in R3/1 | RE 2 |
| PROXY42 | Was Respondent a Proxy in R4/2 | RE 2 |
| PROXY53 | Was Respondent a Proxy in R5/3 | RE 2 |
| PROXY17 | Was Respondent a Proxy as of 12/31/17 | RE 2 |
| INTVLANG | Language Interview Was Completed | RS02 |
| BEGRFM31 | R3/1 Reference Period Begin Date: Month | CAPI Derived |
| BEGRFY31 | R3/1 Reference Period Begin Date: Year | CAPI Derived |
| ENDRFM31 | R3/1 Reference Period End Date: Month | CAPI Derived |
| ENDRFY31 | R3/1 Reference Period End Date: Year | CAPI Derived |
| BEGRFM42 | R4/2 Reference Period Begin Date: Month | CAPI Derived |
| BEGRFY42 | R4/2 Reference Period Begin Date: Year | CAPI Derived |
| ENDRFM42 | R4/2 Reference Period End Date: Month | CAPI Derived |
| ENDRFY42 | R4/2 Reference Period End Date: Year | CAPI Derived |
| BEGRFM53 | R5/3 Reference Period Begin Date: Month | CAPI Derived |
| BEGRFY53 | R5/3 Reference Period Begin Date: Year | CAPI Derived |
| ENDRFM53 | R5/3 Reference Period End Date: Month | CAPI Derived |
| ENDRFY53 | R5/3 Reference Period End Date: Year | CAPI Derived |
| ENDRFM17 | 2017 Reference Period End Date: Month | RE Section |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| ENDRFY17 | 2017 Reference Period End Date: Year | RE Section |
| KEYNESS | Person Key Status | RE Section |
| INSCOP31 | Inscope – R3/1 | RE Section |
| INSCOP42 | Inscope – R4/2 | RE Section |
| INSCOP53 | Inscope – R5/3 | RE Section |
| INSCOP17 | Inscope – R5/3 Start through 12/31/17 | RE Section |
| INSC1231 | Inscope Status on 12/31/17 | Constructed |
| INSCOPE | Was Person Ever Inscope in 2017 | RE Section |
| ELGRND31 | Eligibility – R3/1 | RE Section |
| ELGRND42 | Eligibility – R4/2 | RE Section |
| ELGRND53 | Eligibility – R5/3 | RE Section |
| ELGRND17 | Eligibility Status as of 12/31/17 | RE Section |
| PSTATS31 | Person Disposition Status – R3/1 | RE Section |
| PSTATS42 | Person Disposition Status – R4/2 | RE Section |
| PSTATS53 | Person Disposition Status – R5/3 | RE Section |
| RURSLT31 | RU Result – R3/1 | Assigned by CAPI |
| RURSLT42 | RU Result – R4/2 | Assigned by CAPI |
| RURSLT53 | RU Result – R5/3 | Assigned by CAPI |

## DEMOGRAPHIC VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| AGE31X | Age – R3/1 (Edited/Imputed) | RE 12, 57-66 |
| AGE42X | Age – R4/2 (Edited/Imputed) | RE 12, 57-66 |
| AGE53X | Age – R5/3 (Edited/Imputed) | RE 12, 57-66 |
| AGE17X | Age as of 12/31/17 (Edited/Imputed) | RE 12, 57-66 |
| AGELAST | Person's Age Last Time Eligible | AGE17X, AGE42X, AGE31X |
| DOBMM | Date of Birth: Month | RE 12, 57-66 |
| DOBYY | Date of Birth: Year | RE 12, 57-66 |
| SEX | Sex | RE 12, 57, 61 |
| RACEV1X | Race (Edited/Imputed) | RE 101A |
| RACEV2X | Race (Edited/Imputed) | RE 101A |
| RACEAX | Asian Among Races Rptd (Edited/Imputed) | RE 101A |
| RACEBX | Black Among Races Rptd (Edited/Imputed) | RE 101A |
| RACEWX | White Among Races Rptd (Edited/Imputed) | RE 101A |
| RACETHX | Race/Ethnicity (Edited/Imputed) | RE 98A, 101A |
| HISPANX | Hispanic Ethnicity (Edited/Imputed) | RE 98A |
| HISPNCAT | Hispanic Ethnicity (Edited/Imputed) | RE 98A, 100A |
| MARRY31X | Marital Status – R3/1 (Edited/Imputed) | RE 13, 97 |
| MARRY42X | Marital Status – R4/2 (Edited/Imputed) | RE 13, 97 |
| MARRY53X | Marital Status – R5/3 (Edited/Imputed) | RE 13, 97 |
| MARRY17X | Marital Status–12/31/17 (Edited/Imputed) | RE 13, 97 |
| SPOUID31 | Spouse ID – R3/1 | RE 13, 76A, 97 |
| SPOUID42 | Spouse ID – R4/2 | RE 13, 76A, 97 |
| SPOUID53 | Spouse ID – R5/3 | RE 13, 76A, 97 |
| SPOUID17 | Spouse ID – 12/31/17 | RE 13, 76A, 97 |
| SPOUIN31 | Marital Status w/ Spouse Present – R3/1 | RE 13, 76A, 97 |
| SPOUIN42 | Marital Status w/ Spouse Present – R4/2 | RE 13, 76A, 97 |
| SPOUIN53 | Marital Status w/ Spouse Present – R5/3 | RE 13, 76A, 97 |
| SPOUIN17 | Marital Status w/Spouse Present–12/31/17 | RE 13, 76A, 97 |
| EDUCYR | Years of Educ When First Entered MEPS | RE 103-105 |
| HIDEG | Highest Degree When First Entered MEPS | RE 103-105 |
| FTSTU31X | Student Status if Ages 17-23 – R3/1 | RE 11A, 106-108 |
| FTSTU42X | Student Status if Ages 17-23 – R4/2 | RE 11A, 106-108 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| FTSTU53X | Student Status if Ages 17-23 – R5/3 | RE 11A, 106-108 |
| FTSTU17X | Student Status if Ages 17-23 – 12/31/17 | RE 11A, 106-108 |
| ACTDTY31 | Military Full-Time Active Duty – R3/1 | RE 14, 94A-96B1 |
| ACTDTY42 | Military Full-Time Active Duty – R4/2 | RE 14, 96B1 |
| ACTDTY53 | Military Full-Time Active Duty – R5/3 | RE 14, 96B1 |
| HONRDC31 | Honorably Discharged from Military | RE 18A, 96F-G |
| HONRDC42 | Honorably Discharged from Military | RE 18A, 96G |
| HONRDC53 | Honorably Discharged from Military | RE 18A, 96G |
| REFRL31X | Relation to Ref Pers – R3/1 (Edit/Imp) | RE 76-77 |
| REFRL42X | Relation to Ref Pers – R4/2 (Edit/Imp) | RE 76-77 |
| REFRL53X | Relation to Ref Pers – R5/3 (Edit/Imp) | RE 76-77 |
| REFRL17X | Relation to Ref Pers – 12/31/17 (Edit/Imp) | RE 76-77 |
| OTHLANG | In Family with Someone Spkng Other Lang | RE102 |
| LANGSPK | Language Spoken at Home Other Than Engl | RE102A |
| HWELLSPE | How Well Person Speaks English | RE102B |
| BORNUSA | Person Born in the US | RE102C |
| YRSINUS | Years Person Lived in the US | RE102D, RE102E |
| MOPID31X | PID of Person's Mom – RD 3/1 | RE 76-77 |
| MOPID42X | PID of Person's Mom – RD 4/2 | RE 76-77 |
| MOPID53X | PID of Person's Mom – RD 5/3 | RE 76-77 |
| DAPID31X | PID of Person's Dad – RD 3/1 | RE 76-77 |
| DAPID42X | PID of Person's Dad – RD 4/2 | RE 76-77 |
| DAPID53X | PID of Person's Dad – RD 5/3 | RE 76-77 |

## INCOME VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| FILEDR17 | Has Person Filed A Fed Income Tax Return | IN 20 |
| WILFIL17 | Will Person File Fed Income Tax Return | IN 30 |
| FLSTAT17 | Person's Filing Status | IN 40 |
| FILER17 | Primary Or Secondary Filer | IN 40 |
| JTINRU17 | Joint Filer's Membership In RU | IN 50 |
| JNTPID17 | PID of Joint Filer | IN 50 |
| TAXFRM17 | Tax Form Person Will File | IN 60 |
| FOODST17 | Did Anyone Receive Food Stamps | IN 700 |
| FOODMN17 | Number Of Months Food Stamps Received | IN 710 |
| FOODVL17 | Monthly Value Of Food Stamps | IN 720 |
| TTLP17X | Person's Total Income | Constructed |
| FAMINC17 | Family's Total Income | Constructed |
| POVCAT17 | Family Income As Percent Of Poverty Line - Categorical | Constructed |
| POVLEV17 | Family Income As Percent Of Poverty Line - Continuous | Constructed |
| WAGEP17X | Person's Wage Income | Constructed |
| WAGIMP17 | Wage Imputation Flag | Constructed |
| BUSNP17X | Person's Business Income | Constructed |
| BUSIMP17 | Business Income Imputation Flag | Constructed |
| UNEMP17X | Person's Unemployment Comp Income | Constructed |
| UNEIMP17 | Unemployment Imputation Flag | Constructed |
| WCMPP17X | Person's Workers' Compensation | Constructed |
| WCPIMP17 | Workers' Comp Imputation Flag | Constructed |
| INTRP17X | Person's Interest Income | Constructed |
| INTIMP17 | Interest Imputation Flag | Constructed |
| DIVDP17X | Person's Dividend Income | Constructed |
| DIVIMP17 | Dividend Imputation Flag | Constructed |
| SALEP17X | Person's Sales Income | Constructed |
| SALIMP17 | Sales Income Imputation Flag | Constructed |
| PENSP17X | Person's Pension Income | Constructed |
| PENIMP17 | Pension Income Imputation Flag | Constructed |
| SSECP17X | Person's Social Security Income | Constructed |
| SSCIMP17 | Social Security Imputation Flag | Constructed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| TRSTP17X | Person’s Trust/Rent Income | Constructed |
| TRTIMP17 | Trust Income Imputation Flag | Constructed |
| VETSP17X | Person’s Veteran’s Income | Constructed |
| VETIMP17 | Veteran's Income Imputation Flag | Constructed |
| IRASP17X | Person’s Ira Income | Constructed |
| IRAIMP17 | Ira Income Imputation Flag | Constructed |
| ALIMP17X | Person’s Alimony Income | Constructed |
| ALIIMP17 | Alimony Income Imputation Flag | Constructed |
| CHLDP17X | Person’s Child Support | Constructed |
| CHLIMP17 | Child Support Imputation Flag | Constructed |
| CASHP17X | Person’s Other Regular Cash Contrib | Constructed |
| CSHIMP17 | Cash Contribution Imputation Flag | Constructed |
| SSIP17X | Person’s SSI | Constructed |
| SSIIMP17 | SSI Imputation Flag | Constructed |
| PUBP17X | Person’s Public Assistance | Constructed |
| PUBIMP17 | Public Assistance Imputation Flag | Constructed |
| OTHRP17X | Person’s Other Income | Constructed |
| OTHIMP17 | Other Income Imputation Flag | Constructed |
| HIEUIDX | Health Insurance Eligibility Unit Identifier | Constructed |

## PERSON-LEVEL CONDITION VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| RTHLTH31 | Perceived Health Status – RD 3/1 | PE00A |
| RTHLTH42 | Perceived Health Status – RD 4/2 | PE00A |
| RTHLTH53 | Perceived Health Status – RD 5/3 | PE00A |
| MNHLTH31 | Perceived Mental Health Status – RD 3/1 | PE00B |
| MNHLTH42 | Perceived Mental Health Status – RD 4/2 | PE00B |
| MNHLTH53 | Perceived Mental Health Status – RD 5/3 | PE00B |
| HIBPDX | High Blood Pressure Diag (>17) | PE02 |
| HIBPAGED | Age of Diagnosis-High Blood Pressure | PE03 |
| BPMLDX | Mult Diag High Blood Press (>17) | PE04 |
| CHDDX | Coronary Hrt Disease Diag (>17) | PE05 |
| CHDAGED | Age of Diagnosis–Coronary Heart Disease | PE06 |
| ANGIDX | Angina Diagnosis (>17) | PE07 |
| ANGIAGED | Age of Diagnosis-Angina | PE08 |
| MIDX | Heart Attack (MI) Diag (>17) | PE09 |
| MIAGED | Age of Diagnosis-Heart Attack (MI) | PE10 |
| OHRTDX | Other Heart Disease Diag (>17) | PE11 |
| OHRTAGED | Age of Diagnosis-Other Heart Disease | PE12 |
| STRKDX | Stroke Diagnosis (>17) | PE13 |
| STRKAGED | Age of Diagnosis-Stroke | PE14 |
| EMPHDX | Emphysema Diagnosis (>17) | PE15 |
| EMPHAGED | Age of Diagnosis-Emphysema | PE16 |
| CHBRON31 | Chronc Bronchits Last 12 Mths (>17)–R3/1 | PE17 |
| CHOLDX | High Cholesterol Diagnosis (>17) | PC11A/PE19 |
| CHOLAGED | Age of Diagnosis-High Cholesterol | PE20 |
| CANCERDX | Cancer Diagnosis (>17) | PE21 |
| CABLADDR | Cancer Diagnosed - Bladder (>17) | PE22 |
| CABREAST | Cancer Diagnosed - Breast (>17) | PE22 |
| CACERVIX | Cancer Diagnosed - Cervix (>17) | PE22 |
| CACOLON | Cancer Diagnosed - Colon (>17) | PE22 |
| CALUNG | Cancer Diagnosed - Lung (>17) | PE22 |
| CALYMPH | Cancer Diagnosed - Lymphoma (>17) | PE22 |
| CAMELANO | Cancer Diagnosed - Melanoma (>17) | PE22 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CAOTHER | Cancer Diagnosed - Other (>17) | PE22 |
| CAPROSTA | Cancer Diagnosed - Prostate (>17) | PE22 |
| CASKINNM | Cancer Diagnosed – Skin-Nonmelano (>17) | PE22 |
| CASKINDK | Cancer Diagnosed – Skin-Unknown Type (>17) | PE22 |
| CAUTERUS | Cancer Diagnosed - Uterus (>17) | PE22 |
| DIABDX | Diabetes Diagnosis (>17) | PE26 |
| DIABAGED | Age of Diagnosis-Diabetes | PE27 |
| JTPAIN31 | Joint Pain Last 12 Months (>17) – RD 3/1 | PE28 |
| ARTHDX | Arthritis Diagnosis (>17) | PE29 |
| ARTHTYPE | Type Of Arthritis Diagnosed (>17) | PE30 |
| ARTHAGED | Age of Diagnosis-Arthritis | PE31 |
| ASTHDX | Asthma Diagnosis | PE32 |
| ASTHAGED | Age of Diagnosis-Asthma | PE33 |
| ASSTIL31 | Does Person Still Have Asthma – RD 3/1 | PE33A |
| ASATAK31 | Asthma Attack Last 12 Mos– RD 3/1 | PE34 |
| ASTHEP31 | When Was Last Episode Of Asthma – Rd 3/1 | PE35 |
| ADHDADDX | ADHD/ADD Diagnosis (5-17) | PE36 |
| ADHDAGED | Age of Diagnosis-ADHD/ADD | PE37 |

## HEALTH STATUS VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| IADLHP31 | IADL Screener – RD 3/1 | HE 1-3 |
| ADLHLP31 | ADL Screener – RD 3/1 | HE 4-6 |
| AIDHLP31 | Used Assistive Devices – RD 3/1 | HE 7-8 |
| WLKLIM31 | Limitation in Physical Functioning – RD 3/1 | HE 9-10 |
| LFTDIF31 | Difficulty Lifting 10 Pounds – RD 3/1 | HE 11 |
| STPDIF31 | Difficulty Walking up 10 Steps – RD 3/1 | HE 12 |
| WLKDIF31 | Difficulty Walking 3 Blocks – RD 3/1 | HE 13 |
| MILDIF31 | Difficulty Walking a Mile – RD 3/1 | HE 14 |
| STNDIF31 | Difficulty Standing 20 Minutes – RD 3/1 | HE 15 |
| BENDIF31 | Difficulty Bending/Stooping – RD 3/1 | HE 16 |
| RCHDIF31 | Difficulty Reaching Overhead – RD 3/1 | HE 17 |
| FNGRDF31 | Difficulty Using Fingers to Grasp – RD 3/1 | HE 18 |
| ACTLIM31 | Any Limitation Work/Housewrk/Schl – RD 3/1 | HE 19-20 |
| WRKLIM31 | Work Limitation – RD 3/1 | HE 20A |
| HSELIM31 | Housework Limitation – RD 3/1 | HE 20A |
| SCHLIM31 | School Limitation – RD 3/1 | HE 20A |
| UNABLE31 | Completely Unable to Do Activity – RD 3/1 | HE 21 |
| SOCLIM31 | Social Limitations – RD 3/1 | HE 22-23 |
| COGLIM31 | Cognitive Limitations – RD 3/1 | HE 24-25 |
| DFHEAR42 | Serious Difficulty Hearing-RD4/2 | HE26-27 |
| DEAF42 | Person Is Deaf – RD 4/2 | HE 28 |
| DFSEE42 | Serious Difficulty See w/Glasses-RD4/2 | HE29-30 |
| BLIND42 | Person Is Blind – RD 4/2 | HE 31 |
| DFCOG42 | Serious Cognitive Difficulties-RD4/2 | HE32-33 |
| DFWLKC42 | Serious Difculty Wlk/Climb Stairs-RD4/2 | HE34-35 |
| DFDRSB42 | Difficulty Dressing/Bathing-RD4/2 | HE36-37 |
| DFERND42 | Difficulty Doing Errands Alone-RD4/2 | HE38-39 |
| HEARAD42 | Person Wears Hearing Aid – RD 4/2 | HE 40-41 |
| WRGLAS42 | Wears Eyeglasses or Contacts – RD 4/2 | HE 42-43 |
| ANYLMI17 | Any Limitation in P21R3,4,5/P22R1,2,3 | Constructed |
| CHPMED42 | CSHCN: Child Needs Prescrb Med(0-17)-R4/2 | CS03 |
| CHPMHB42 | CSHCN: Pmed for Hlth/Behv Cond (0-17)-R4/2 | CS03OV1 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CHPMCN42 | CSHCN: Pmed Cond Last 12+ Mos (0-17)-R4/2 | CS03OV2 |
| CHSERV42 | CSHCN: Chld Needs Med&Oth Serv (0-17)-R4/2 | CS04 |
| CHSRHB42 | CSHCN: Serv for Hlth/Behv Cond(0-17)-R4/2 | CS04OV1 |
| CHSRCN42 | CSHCN: Serv Cond Last 12+ Mos (0-17)-R4/2 | CS04OV2 |
| CHLIMI42 | CSHCN: Limited in Any Way (0-17)-R4/2 | CS05 |
| CHLIHB42 | CSHCN: Limt for Hlth/Behv Cond(0-17)-R4/2 | CS05OV1 |
| CHLICO42 | CSHCN: Limit Cond Last 12+ Mos (0-17)-R4/2 | CS05OV2 |
| CHTHER42 | CSHCN: Chld Needs Spec Therapy (0-17)-R4/2 | CS06 |
| CHTHHB42 | CSHCN: Spec Ther for Hlth+Cond(0-17)-R4/2 | CS06OV1 |
| CHTHCO42 | CSHCN: Ther Cond Last 12+ Mos (0-17)-R4/2 | CS06OV2 |
| CHCOUN42 | CSHCN: Child Needs Counseling (0-17)-R4/2 | CS07 |
| CHEMPB42 | CSHCN: Couns Prob Last 12+ Mos (0-17)-R4/2 | CS07OV |
| CSHCN42 | CSHCN:Child w/Spec HC Needs (0-17)-R4/2 | CS03-CS07OV |
| MOMPRO42 | Problem Getting Along w/Mom (5-17)-R4/2 | CS08_01 |
| DADPRO42 | Problem Getting Along w/Dad (5-17)-R4/2 | CS08_02 |
| UNHAP42 | Problem Feeling Unhappy/Sad (5-17)-R4/2 | CS08_03 |
| SCHLBH42 | Problem Behavior at School (5-17)-R4/2 | CS08_04 |
| HAVFUN42 | Problem Having Fun (5-17) – R4/2 | CS08_05 |
| ADUPRO42 | Prblm Getting Along w/Adults (5-17)-R4/2 | CS08_06 |
| NERVAF42 | Prblm Feeling Nervous/Afraid (5-17)-R4/2 | CS08_07 |
| SIBPRO42 | Prblm Getting Along w/Sibs (5-17)-R4/2 | CS08_08 |
| KIDPRO42 | Prblm Getting Along w/Kids (5-17)-R4/2 | CS08_09 |
| SPRPRO42 | Problem w/Sports/Hobbies (5-17)–R4/2 | CS08_10 |
| SCHPRO42 | Problem With Schoolwork (5-17)-R4/2 | CS08_11 |
| HOMEBH42 | Problem w/Behavior at Home (5-17)-R4/2 | CS08_12 |
| TRBLE42 | Prblm Stay out Of Trouble (5-17)-R4/2 | CS08_13 |
| CHILCR42 | CAHPS:12Mos: Ill/Inj Need Care (0-17)R4/2 | CS09A |
| CHILWW42 | CAHPS:12Mos: Ill Care Whn Needed (0-17)R4/2 | CS10A |
| CHRTCR42 | CAHPS:12Mos: Make Apt (0-17)R4/2 | CS11A |
| CHRTWW42 | CAHPS:12Mos: Apt Whn Needed (0-17)R4/2 | CS12A |
| CHAPPT42 | CAHPS:12Mos: # of Off/Clin Apts (0-17)R4/2 | CS13 |
| CHNDCR42 | CAHPS:12Mos:Need Any Care/Trt(0-17)-R4/2 | CS14A |
| CHENEC42 | CAHPS:12Mos: Esy Get Nec Care (0-17)R4/2 | CS14 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CHLIST42 | CAHPS:12Mos: Chld Dr Lsn to You (0-17)R4/2 | CS15 |
| CHEXPL42 | CAHPS:12Mos: Chld Dr Expl Thng (0-17)R4/2 | CS16 |
| CHRESP42 | CAHPS:12Mos: Chld's Dr Shw Resp(0-17)R4/2 | CS17 |
| CHPRTM42 | CAHPS:12Mos: Child Dr Engh Time(0-17)R4/2 | CS18 |
| CHHECR42 | CAHPS:12Mos: Rate Chld Hlt Care (0-17)R4/2 | CS19 |
| CHSPEC42 | CAHPS:12Mos: Chld Needed Spec (0-17)R4/2 | CS20 |
| CHEYRE42 | CAHPS:12Mos: Esy w/Rfr to Spec (0-17)R4/2 | CS21 |
| MESHGT42 | Doctor Ever Measured Height (0-17)-R4/2 | CS22 |
| WHNHGT42 | When Doctor Measured Height (0-17)-R4/2 | CS22OV |
| MESWGT42 | Doctor Ever Measured Weight (0-17)-R4/2 | CS24 |
| WHNWGT42 | When Doctor Measured Weight (0-17)-R4/2 | CS24OV |
| CHBMIX42 | Child's Body Mass Index (6-17)-R4/2 | Constructed |
| MESVIS42 | Doctor Checked Child's Vision (3-6)-R4/2 | CS26 |
| MESBPR42 | Dr Checked Blood Pressure (2-17)-R4/2 | CS27 |
| WHNBPR42 | When Dr Checked Blood Press (2-17)-R4/2 | CS27OV |
| DENTAL42 | Dr Advise Reg Dental Checkup (2-17)-R4/2 | CS28 |
| WHNDEN42 | When Dr Advise Dent Checkup (2-17)-R4/2 | CS28OV |
| EATHLT42 | Dr Advise Eat Healthy (2-17)-R4/2 | CS29 |
| WHNEAT42 | When Dr Advise Eat Healthy (2-17)-R4/2 | CS29OV |
| PHYSCL42 | Dr Advise Exercise (2-17)-R4/2 | CS30 |
| WHNPHY42 | When Dr Advise Exercise (2-17)-R4/2 | CS30OV |
| SAFEST42 | Dr Advise Chld Safety Seat (Wt<=40)-R4/2 | CS31 |
| WHNSAF42 | When Dr Advise Safety Seat (Wt<=40)-R4/2 | CS31OV |
| BOOST42 | Dr Advise Booster Seat (40<Wt<=80)-R4/2 | CS32 |
| WHNBST42 | Whn Dr Advise Booster Seat(40<Wt<=80)-R4/2 | CS32OV |
| LAPBLT42 | Dr Advise Lap/Shoulder Belt (80<Wt)-R4/2 | CS33 |
| WHNLAP42 | Whn Dr Advise Lap/Shldr Blt (80<Wt)-R4/2 | CS33OV |
| HELMET42 | Dr Advise Bike Helmet (2-17)-R4/2 | CS34 |
| WHNHEL42 | When Dr Advise Bike Helmet (2-17)-R4/2 | CS34OV |
| NOSMOK42 | Dr Advise Smkg in Home is Bad(0-17)-R4/2 | CS35 |
| WHNSMK42 | Whn Dr Advis Smkg in Home Bad(0-17)-R4/2 | CS35OV |
| TIMALN42 | Doctor Spend Any Time Alone (12-17)-R4/2 | CS36 |
| LSTETH53 | Lost All Uppr And Lowr Teeth (>17) – RD 5/3 | AP18B |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PHYEXE53 | Mod/Vig Phys Exec 5X Wk (>17) – RD 5/3 | AP28 |
| OFTSMK53 | How Oftn Smoke Cigarettes (>17) - RD 5/3 | |
| SAQELIG | Eligibility Status for SAQ | Constructed |
| ADPROX42 | SAQ: Relationship of Proxy to Adult | Constructed |
| ADGENH42 | SAQ: Health in General VR-12 | SAQ Q1 |
| ADDAYA42 | SAQ: Hlth Limits Mod Activities VR-12 | SAQ Q2a |
| ADCLIM42 | SAQ: Hlth Limits Climbing Stairs VR-12 | SAQ Q2b |
| ADACLS42 | SAQ 4Wks:Accmp Less B/C Phy Prbs VR-12 | SAQ Q3a |
| ADWKLM42 | SAQ 4Wks:Work Limt B/C Phy Probs VR-12 | SAQ Q3b |
| ADEMLS42 | SAQ 4Wks:Accmp Less B/C Mnt Prbs VR-12 | SAQ Q4a |
| ADMWCF42 | SAQ 4Wks:Work Limt B/C Mnt Probs VR-12 | SAQ Q4b |
| ADPAIN42 | SAQ 4Wks:Pain Limits Normal Work VR-12 | SAQ Q5 |
| ADPCFL42 | SAQ 4Wks: Felt Calm/Peaceful VR-12 | SAQ Q6a |
| ADENGY42 | SAQ 4Wks: Had a Lot of Energy VR-12 | SAQ Q6b |
| ADPRST42 | SAQ 4Wks: Felt Downhearted/Depr VR-12 | SAQ Q6c |
| ADSOCA42 | SAQ 4Wks: Hlth Stopped Soc Activ VR-12 | SAQ Q7 |
| VPCS42 | SAQ: Phy Component Summry VR-12 Imputed | Constructed |
| VMCS42 | SAQ: Mnt Component Summry VR-12 Imputed | Constructed |
| VRFLAG42 | SAQ: VPCS42/VMCS42 Imputation Flag VR-12 | Constructed |
| ADNERV42 | SAQ 30 Days: How Often Felt Nervous | SAQ Q8a |
| ADHOPE42 | SAQ 30 Days: How Often Felt Hopeless | SAQ Q8b |
| ADREST42 | SAQ 30 Days: How Often Felt Restless | SAQ Q8c |
| ADSAD42 | SAQ 30 Days: How Often Felt Sad | SAQ Q8d |
| ADEFRT42 | SAQ 30 Days: How Oftn Everythng an Effort | SAQ Q8e |
| ADWRTH42 | SAQ 30 Days: How Often Felt Worthless | SAQ Q8f |
| K6SUM42 | SAQ 30 Days: Overall Rating of Feelings | SAQ Q8a – Q8f |
| ADINTR42 | SAQ 2 Wks: Little Interest in Things | SAQ Q9a |
| ADDPRS42 | SAQ 2 Wks: Felt Down/Depressed/Hopeless | SAQ Q9b |
| PHQ242 | SAQ 2 Wks: Overall Rating of Feelings | SAQ Q9a – Q9b |
| ADINSA42 | SAQ: Do Not Need Health Insurance | SAQ Q10a |
| ADINSB42 | SAQ: Health Insurance Not Worth Cost | SAQ Q10b |
| ADRISK42 | SAQ: More Likely to Take Risks | SAQ Q10c |
| ADOVER42 | SAQ: Can Overcome Ills Without Med Help | SAQ Q10d |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| ADILCR42 | SAQ 12Mos: Ill/Injury Needing Immed Care | SAQ Q11 |
| ADILWW42 | SAQ 12 Mos: Got Care When Needed Ill/Inj | SAQ Q12 |
| ADRTCR42 | SAQ 12 Mos: Made Appt Routine Med Care | SAQ Q13 |
| ADRTWW42 | SAQ 12 Mos: Got Med Appt When Wanted | SAQ Q14 |
| ADAPPT42 | SAQ 12 Mos:# Visits to Med Off for Care | SAQ Q15 |
| ADHECR42 | SAQ 12 Mos: Rating of Health care | SAQ Q16 |
| ADINST42 | SAQ 12 Mos: Dr Gave Spcifc Instrctns | SAQ Q17 |
| ADEZUN42 | SAQ 12 Mos: Dr Given Instr. Ez Undrstd | SAQ Q18 |
| ADTLHW42 | SAQ 12 Mos: Dr Asked R Desc How Follow | SAQ Q19 |
| ADFFRM42 | SAQ 12 Mos: Had to Fill Out/Sign Forms | SAQ Q20 |
| ADFHLP42 | SAQ 12 Mos: Offrd Help Filling Out Forms | SAQ Q21 |
| ADEXPL42 | SAQ 12 Mos: Doc Explained So Understood | SAQ Q22 |
| ADLIST42 | SAQ 12 Mos: Doctor Listened to You | SAQ Q23 |
| ADRESP42 | SAQ 12 Mos: Dr Showed Respect | SAQ Q24 |
| ADPRTM42 | SAQ 12 Mos: Dr Spent Enuf Time with You | SAQ Q25 |
| ADSMOK42 | SAQ: Currently Smoke | SAQ Q26 |
| ADNSMK42 | SAQ 12Mos: Dr Advised to Quit Smoking | SAQ Q27 |
| ADSPCL42 | SAQ 12 MOS: Needed to See Specialist | SAQ Q28 |
| ADSNSP42 | SAQ 12MOS: How Esy to See Specialist | SAQ Q29 |
| ADCMPM42 | SAQ: Date Completed - Month | Constructed |
| ADCMPY42 | SAQ: Date Completed – Year | Constructed |
| ADLANG42 | SAQ: Language of SAQ Interview | Constructed |
| DSDIA53 | DCS: Diabetes Diagnosis By Health Prof | DCS Q1 |
| DSA1C53 | DCS: Times Tested for A-One-C in 2017 | DCS Q2 |
| DSFT1853 | DCS: Had Feet Checked During 2018 | DCS Q3 |
| DSFT1753 | DCS: Had Feet Checked During 2017 | DCS Q3 |
| DSFT1653 | DCS: Had Feet Checked During 2016 | DCS Q3 |
| DSFB1653 | DCS: Had Feet Checked Before 2016 | DCS Q3 |
| DSFTNV53 | DCS: Never Had Feet Checked | DCS Q3 |
| DSEY1853 | DCS: Dilated Eye Exam in 2018 | DCS Q4 |
| DSEY1753 | DCS: Dilated Eye Exam in 2017 | DCS Q4 |
| DSEY1653 | DCS: Dilated Eye Exam in 2016 | DCS Q4 |
| DSEB1653 | DCS: Dilated Eye Exam Before 2016 | DCS Q4 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| DSEYNV53 | DCS: Never Had Dilated Eye Exam | DCS Q4 |
| DSCH1853 | DCS: Blood Cholesterol Checked in 2018 | DCS Q5 |
| DSCH1753 | DCS: Blood Cholesterol Checked in 2017 | DCS Q5 |
| DSCH1653 | DCS: Blood Cholesterol Checked in 2016 | DCS Q5 |
| DSCB1653 | DCS: Blood Cholesterol Checked Before 2016 | DCS Q5 |
| DSCHNV53 | DCS: Never Had Blood Cholesterol Checked | DCS Q5 |
| DSFL1853 | DCS: Got Flu Vaccination in 2018 | DCS Q6 |
| DSFL1753 | DCS: Got Flu Vaccination in 2017 | DCS Q6 |
| DSFL1653 | DCS: Got Flu Vaccination in 2016 | DCS Q6 |
| DSVB1653 | DCS: Got Flu Vaccination Before 2016 | DCS Q6 |
| DSFLNV53 | DCS: Never Got Flu Vaccination | DCS Q6 |
| DSKIDN53 | DCS: Has Diabetes Caused Kidney Problems | DCS Q7 |
| DSEYPR53 | DCS: Has Diabetes Caused Eye Probs | DCS Q6 |
| DSDIET53 | DCS: Treat Diabetes w/Diet Modification | DCS Q9 |
| DSMED53 | DCS: Treat Diabetes w/Meds by Mouth | DCS Q10 |
| DSINSU53 | DCS: Treat Diabetes w/Insulin Injections | DCS Q11 |
| DSCPCP53 | DCS: Learned Diab Care from Prim Care Prov | DCS Q13 |
| DSCNPC53 | DCS: Learned Diab Care from Other Prov | DCS Q13 |
| DSCPHN53 | DCS: Learned Diab Care from Phn Call w/Prov | DCS Q13 |
| DSCINT53 | DCS: Learned Diab Care from Reading Internet | DCS Q13 |
| DSCGRP53 | DCS: Learned Diab Care by Taking Grp Class | DCS Q13 |
| DSCONF53 | DSC: Confident Taking Care of Diabetes | DCS Q14 |
| DSPRX53 | DCS: Was Respondent a Proxy | Constructed |
| CCNRDI31 | CSAQ: Cancer Diagnosis by Health Prof | CSAQ Q1 |
| CDIAG31 | CSAQ: Cancer Diagnosis Before Age 18 | CSAQ Q2 |
| CTRTMT31 | CSAQ: Currently Treated for Cancer | CSAQ Q3 |
| CLSTRT31 | CSAQ: Last Cancer Treatment | CSAQ Q4 |
| CBCK31 | CSAQ: Cancer Back told by Health Prof | CSAQ Q5 |
| CBCKYR31 | CSAQ: Year told Cancer Back | CSAQ Q6 |
| CFTRT31 | CSAQ: First Time Treated for Cancer | CSAQ Q7 |
| CWRKP31 | CSAQ: Work for Pay Since Diagnosed | CSAQ Q8 |
| CTMOFF31 | CSAQ: Take Time off Since Diagnosed | CSAQ Q9 |
| CWYCNG31 | CSAQ: Why Make Work Changes | CSAQ Q10 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CEXTM31 | CSAQ: Take Paid Time off | CSAQ Q11 |
| CEXTDI31 | CSAQ: Paid Time off at Diagnosis | CSAQ Q12A |
| CEXTRT31 | CSAQ: Paid Time off During Treatment | CSAQ Q12B |
| CEXTLT31 | CSAQ: Paid Time off <1 Year Aft Trtmnt | CSAQ Q12C |
| CEXTMT31 | CSAQ: Paid Time off >=1 Year Aft Trtmnt | CSAQ Q12D |
| CNPTLD31 | CSAQ: Chnge Part Time or Less Demand Job | CSAQ Q13 |
| CNGFLX31 | CSAQ: Flexible Work Schedule | CSAQ Q14 |
| CPROM31 | CSAQ: Did Not Pursue Promotion | CSAQ Q15 |
| CERET31 | CSAQ: Early Retirement | CSAQ Q16 |
| CPTASK31 | CSAQ: interfere With Physical Tasks | CSAQ Q17 |
| CMTASK31 | CSAQ: interfere With Mental Tasks | CSAQ Q18 |
| CLPROD31 | CSAQ: Feel Less Productive | CSAQ Q19 |
| CFRET31 | CSAQ: Might Be forced to Retire | CSAQ Q20 |
| CLHINS31 | CSAQ: Stay at Job-Worry Lose Hlth ins | CSAQ Q21 |
| CCLHIN31 | CSAQ: Concerned Losing Hlth ins to Cncr | CSAQ Q22 |
| CSLHIN31 | CSAQ: Fmem Stay at Job-Worry Lose ins | CSAQ Q23 |
| CFMEM31 | CSAQ: Fmem Provide Care | CSAQ Q24 |
| CFMSPS31 | CSAQ: Fmem Spouse Provided Care | CSAQ Q25A |
| CFMCHD31 | CSAQ: Fmem Child Provided Care | CSAQ Q25B |
| CFMSIB31 | CSAQ: Fmem Sibling Provided Care | CSAQ Q25C |
| CFMPAR31 | CSAQ: Fmem Parent Provided Care | CSAQ Q25D |
| CFMREL31 | CSAQ: Fmem Oth Relative Provided Care | CSAQ Q25E |
| CFMFND31 | CSAQ: Fmem Friend Provided Care | CSAQ Q25F |
| CFMOTR31 | CSAQ: Fmem Other Provided Care | CSAQ Q25G |
| CFMTOF31 | CSAQ: Fmem Take Extended Time off | CSAQ Q26 |
| CFM2MT31 | CSAQ: Fmem Take Extnd Tim off >= 2 Mnth | CSAQ Q27 |
| CINCOV31 | CSAQ: Covered by Health insurance | CSAQ Q28 |
| CINPRV31 | CSAQ: Covered by Private Hlth ins | CSAQ Q29A |
| CINMDC31 | CSAQ: Covered by Medicare Hlth ins | CSAQ Q29B |
| CINMDG31 | CSAQ: Covered by Medi-Gap Hlth ins | CSAQ Q29C |
| CINMDA31 | CSAQ: Covered by Medicaid Hlth ins | CSAQ Q29D |
| CINMLT31 | CSAQ: Covered by Military Hlth ins | CSAQ Q29E |
| CINIHS31 | CSAQ: Covered by I.H.S. Hlth ins | CSAQ Q29F |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CINSHP31 | CSAQ: Covered by State Hlth ins | CSAQ Q29G |
| CINOGP31 | CSAQ: Covered by Oth Govt Hlth ins | CSAQ Q29H |
| CINSSP31 | CSAQ: Covered by Single Serv Hlth ins | CSAQ Q29I |
| CINNCV31 | CSAQ: Covered by No Hlth ins | CSAQ Q29J |
| CINNOC31 | CSAQ: Hlth ins Refused to Cover Care | CSAQ Q30 |
| CINADQ31 | CSAQ: Hlth ins Coverage Not Adequate | CSAQ Q31 |
| CINCMP31 | CSAQ: Current Hlth ins Compare | CSAQ Q32 |
| CINDIF31 | CSAQ: Difficulty Finding Hlth ins | CSAQ Q33 |
| CINAFD31 | CSAQ: Difficulty Affording Hlth ins | CSAQ Q34 |
| CNCMED31 | CSAQ: Uncovered Medical Expenses | CSAQ Q35A |
| CNCTRP31 | CSAQ: Uncovered Transportation Expenses | CSAQ Q35B |
| CNCLOD31 | CSAQ: Uncovered Lodging Expenses | CSAQ Q35C |
| CNCCHD31 | CSAQ: Uncovered Child Care Expenses | CSAQ Q35D |
| CNCHME31 | CSAQ: Uncovered Home Care Expenses | CSAQ Q35E |
| CNCNON31 | CSAQ: No Uncovered Expenses | CSAQ Q35F |
| CNCNTS31 | CSAQ: Not Sure If Uncovered Expenses | CSAQ Q35G |
| CFNDBT31 | CSAQ: Money Borrowed or in Debt | CSAQ Q36 |
| CFNAMT31 | CSAQ: Amount of Borrowed or in Debt | CSAQ Q37 |
| CFNVAC31 | CSAQ: Sacrificed Leisure Spending | CSAQ Q38A |
| CFNPUR31 | CSAQ: Sacrificed Big Purchases | CSAQ Q38B |
| CFNSPD31 | CSAQ: Sacrificed Basic Spending | CSAQ Q38C |
| CFNSAV31 | CSAQ: Sacrificed Savings | CSAQ Q38D |
| CFNLIV31 | CSAQ: Sacrificed Living Situation | CSAQ Q38E |
| CFNOTH31 | CSAQ: Sacrificed Other Cost | CSAQ Q38F |
| CFNUNB31 | CSAQ: Unable to Cover Medical Bills | CSAQ Q39 |
| CFNBNK31 | CSAQ: Self or Fmem File Bankruptcy | CSAQ Q40 |
| CFNPMT31 | CSAQ: Worry Pay Medical Bills | CSAQ Q41 |
| CFNSTB31 | CSAQ: Worry Family Financial Stability | CSAQ Q42 |
| CFNINC31 | CSAQ: Worry income Stability | CSAQ Q43 |
| CMCFUP31 | CSAQ: Discuss Regular Foll-Up Care | CSAQ Q44A |
| CMCEFF31 | CSAQ: Discuss Side Effects | CSAQ Q44B |
| CMCPSY31 | CSAQ: Discuss Emo/Soc Needs | CSAQ Q44C |
| CMCSTY31 | CSAQ: Discuss Lifestyle or Health | CSAQ Q44D |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CMCOST31 | CSAQ: Discuss Costs for Cancer Care | CSAQ Q44E |
| CMCTRT31 | CSAQ: Discuss Cancer Treatments | CSAQ Q44F |
| CDLPRS31 | CSAQ: Dly or forego Prescription | CSAQ Q45A |
| CDLVST31 | CSAQ: Dly or forego Visit Specialist | CSAQ Q45B |
| CDLTRT31 | CSAQ: Dly or forego Treatment | CSAQ Q45C |
| CDLFUP31 | CSAQ: Dly or forego Follow Up Care | CSAQ Q45D |
| CDLMNT31 | CSAQ: Dly or forego Mental Health Srvcs | CSAQ Q45E |
| CDLOTH31 | CSAQ: Dly or forego Other | CSAQ Q45F |
| CMCNEC31 | CSAQ: Received Necessary Medical Care | CSAQ Q46 |
| CMNAFF31 | CSAQ: Could Not Afford Care | CSAQ Q47A |
| CMNINS31 | CSAQ: ins Company Didn't Approve or Pay | CSAQ Q47B |
| CMNACC31 | CSAQ: Doctor Did Not Accept insurance | CSAQ Q47C |
| CMNOFF31 | CSAQ: Problems Getting to Doctor office | CSAQ Q47D |
| CMNTIM31 | CSAQ: No Time off From Work | CSAQ Q47E |
| CMNPLC31 | CSAQ: Didn't Know Where to Go | CSAQ Q47F |
| CMNCRE31 | CSAQ: No Child/Adult Care | CSAQ Q47G |
| CMNLNG31 | CSAQ: No Time for Care/Treatment | CSAQ Q47H |
| CEFACT31 | CSAQ: Activities Limited Due to Cancer | CSAQ Q48 |
| CEFLCT31 | CSAQ: How Long Activities Limited | CSAQ Q49 |
| CEFOG31 | CSAQ: Is Limitation Ongoing | CSAQ Q50 |
| CEFMTL31 | CSAQ: Mental Tasks Affected by Cancer | CSAQ Q51 |
| CEFUND31 | CSAQ: Undstnding insrnce/Medical Bill | CSAQ Q52 |
| CEFBCK31 | CSAQ: Worry Cancer Come Back/Get Worse | CSAQ Q53 |
| CEFSTG31 | CSAQ: Exp-Made a Stronger Person | CSAQ Q54A |
| CEFCOP31 | CSAQ: Exp-Cope Better W/ Challenges | CSAQ Q54B |
| CEFPOS31 | CSAQ: Exp-Reason for Positive Changes | CSAQ Q54C |
| CEFHLT31 | CSAQ: Exp-Made Healthier Habits | CSAQ Q54D |
| CEFPHL31 | CSAQ: Rate Physical Health | CSAQ Q55 |
| CEFPAC31 | CSAQ: Rate Physical Activity Extent | CSAQ Q56 |
| CEFPIN31 | CSAQ: Rate Average Pain in 7 Days | CSAQ Q57 |
| CEFFTG31 | CSAQ: Rate Average Fatigue in 7 Days | CSAQ Q58 |
| CEFQLF31 | CSAQ: Rate Quality of Life | CSAQ Q59 |
| CEFMHL31 | CSAQ: Rate Mental Health | CSAQ Q60 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| CEFRLT31 | CSAQ: Rate Social Activity/Relationship | CSAQ Q61 |
| CEFMPR31 | CSAQ: Rate Emotional Problem in 7 Days | CSAQ Q62 |

**DISABILITY DAYS VARIABLES – PUBLIC USE**

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| DDNWRK17 | # Days Missed Work Due to Ill/Inj 2017 | DD02<br>DD02A |
| OTHDYS17 | Miss Any Work Day to Care for Oth 2017 | DD10 |
| OTHNDD17 | # Day Missed Work to Care for Oth 2017 | DD11<br>DD11A |

## ACCESS TO CARE VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| ACCELI42 | Pers Eligible for Access Supplement-R4/2 | Constructed |
| HAVEUS42 | AC05 Does Person Have USC Provider-R4/2 | AC05 |
| YNOUSC42 | AC07 Main Reas Pers Doesnt Have USC-R4/2 | AC07 |
| NOREAS42 | AC08 Oth Reas No USC:No Oth Reasons-R4/2 | AC08 |
| SELDSI42 | AC08 Oth Reas No USC:Seldm/Nev Sick-R4/2 | AC08 |
| NEWARE42 | AC08 Oth Reas No USC:Recently Moved-R4/2 | AC08 |
| DKWHRU42 | AC08 Oth Reas No USC:Dk Where to Go-R4/2 | AC08 |
| USCNOT42 | AC08 Oth Reas No USC: USC Not Avail-R4/2 | AC08 |
| PERSLA42 | AC08 Oth Reas No USC: Language - R4/2 | AC08 |
| DIFFPL42 | AC08 Oth Reas No USC:Diffrnt Places-R4/2 | AC08 |
| INSRPL42 | AC08 Oth Reas No USC:Just Chngd Ins-R4/2 | AC08 |
| MYSELF42 | AC08 Oth Reas No USC:No Doc/Trt Slf-R4/2 | AC08 |
| CARECO42 | AC08 Oth Reas No USC:Cost Of Med Cr-R4/2 | AC08 |
| NOHINS42 | AC08 Oth Reas No USC:No Hlth Insrnc-R4/2 | AC08 |
| OTHINS42 | AC08 Oth Reas No USC: Ins Related-R4/2 | AC08 |
| JOBRSN42 | AC08 Oth Reas No USC: Job Related-R4/2 | AC08 |
| NEWDOC42 | AC08 Oth Reas No USC: Lookng for Dr-R4/2 | AC08 |
| DOCELS42 | AC08 Oth Reas No USC: Dr Elsewhere-R4/2 | AC08 |
| NOLIKE42 | AC08 Oth Reas No USC: Dont Like Drs-R4/2 | AC08 |
| HEALTH42 | AC08 Oth Reas No USC: Hlth Related-R4/2 | AC08 |
| KNOWDR42 | AC08 Oth Reas No USC: Knows/Is a Dr-R4/2 | AC08 |
| NOGODR42 | AC08 Oth Reas No USC: Wont Go to Dr-R4/2 | AC08 |
| TRANS42 | AC08 Oth Reas No USC: Transprt/Time R4/2 | AC08 |
| CLINIC42 | AC08: Oth Reas No USC: Hosp/ER/Clnic-R4/2 | AC08 |
| OTHREA42 | AC08 Oth Reas No USC: Other Reason–R4/2 | AC08 |
| PROVTY42 | Provider Type – R4/2 | PV01, PV03, PV05, PV10 |
| PLCTYP42 | USC Type of Place – R4/2 | AC11 |
| TMTKUS42 | AC13 How Long It Takes Get to USC-R4/2 | AC13 |
| TYPEPE42 | USC Type of Provider – R4/2 | AC15, AC16, AC16OV, AC17, AC17OV |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| LOCATN42 | USC Location – R4/2 | Constructed |
| HSPLAP42 | AC18 Is Provider Hispanic or Latino–R4/2 | AC18 |
| WHITPR42 | AC19 Is Provider White – R4/2 | AC19 |
| BLCKPR42 | AC19 Is Provider Black/African Amer-R4/2 | AC19 |
| ASIANP42 | AC19 Is Provider Asian – R4/2 | AC19 |
| NATAMP42 | AC19 Is Provider Native American – R4/2 | AC19 |
| PACISP42 | AC19 Is Provider Oth Pacific Islndr-R4/2 | AC19 |
| OTHRCP42 | AC19 Is Provider Some Other Race – R4/2 | AC19 |
| GENDRP42 | AC20 Is Provider Male or Female – R4/2 | AC20 |
| MINORP42 | AC22 Go To USC For New Health Prob-R4/2 | AC22 |
| PREVEN42 | AC22 Go To USC For Prvntve Hlt Care-R4/2 | AC22 |
| REFFRL42 | AC22 Go To USC For Referrals – R4/2 | AC22 |
| ONGONG42 | AC22 Go To USC For Ongoing Hlth Prb-R4/2 | AC22 |
| PHNREG42 | AC23 How Diff Contact USC By Phone-R4/2 | AC23 |
| OFFHOU42 | AC24 USC Has Offce Hrs Nghts/Wkends-R4/2 | AC24 |
| AFTHOU42 | AC25 How Diff Contact USC Aft Hours-R4/2 | AC25 |
| TREATM42 | AC26 Prov Ask About Oth Treatments-R4/2 | AC26 |
| RESPCT42 | AC27 Prov Shows Respect For Trtmnts-R4/2 | AC27 |
| DECIDE42 | AC28 Prov Asks Pers to Help Decide-R4/2 | AC28 |
| EXPLOP42 | AC30 Prov Explns Options to Pers – R4/2 | AC30 |
| PRVSPK42 | AC31 Prov Speaks Person's Language–R4/2 | AC31 |
| MDUNAB42 | Unable To Get Necessry Medical Care–R4/2 | AC32A, AC32, AC33 |
| MDUNRS42 | AC34 Rsn Unable Get Necsry Med Care-R4/2 | AC34 |
| MDDLAY42 | Delayed In Getting Necsry Med Care-R4/2 | AC36, AC37 |
| MDDLRS42 | AC38 Rsn Dlayd Getting Nec Med Care-R4/2 | AC38 |
| DNUNAB42 | Unable To Get Necessary Dental Care-R4/2 | AC40A, AC40, AC41 |
| DNUNRS42 | AC42 Rsn Unable Get Ncsry Dent Care-R4/2 | AC42 |
| DNDLAY42 | Delayed In Getting Nec Dental Care-R4/2 | AC44, AC45 |
| DNDLRS42 | AC46 Rsn Dlayd Gettng Nec Dent Care-R4/2 | AC46 |
| PMUNAB42 | Unable to Get Necessary Pres Med – R4/2 | AC48A, AC48, AC49 |
| PMUNRS42 | AC50 Rsn Unable to Get Nec Pres Med-R4/2 | AC50 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PMDLAY42 | Delayed In Getting Necsry Pres Med-R4/2 | AC52, AC53 |
| PMDLRS42 | AC54 Rsn Dlayd Getting Nec Pres Med-R4/2 | AC54 |

## EMPLOYMENT VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| EMPST31 | Employment Status RD 3/1 | EM 1-3; RJ 1, 6 |
| EMPST42 | Employment Status RD 4/2 | EM 1-3; RJ 1, 6 |
| EMPST53 | Employment Status RD 5/3 | EM 1-3; RJ 1, 6 |
| RNDFLG31 | Data Collection Round for RD 3/1 CMJ | Constructed |
| MORJOB31 | Has More than One Job RD 3/1 Int Date | EM 1-4, 51; RJ 1, 6; Constructed |
| MORJOB42 | Has More than One Job RD 4/2 Int Date | EM 1-4, 51; RJ 1, 6; Constructed |
| MORJOB53 | Has More than One Job RD 5/3 Int Date | EM 1-4, 51; RJ 1, 6; Constructed |
| EVRWRK | Ever Wrkd for Pay in Life as of 12/31/17 | EM 1-4, 51; RJ 1, 6; Constructed |
| HRWG31X | Hourly Wage RD 3/1 CMJ (Imp) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |
| HRWG42X | Hourly Wage RD 4/2 CMJ (Imp) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |
| HRWG53X | Hourly Wage RD 5/3 CMJ (Imp) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |
| HRWGIM31 | HRWG31X Imputation Flag | Constructed |
| HRWGIM42 | HRWG42X Imputation Flag | Constructed |
| HRWGIM53 | HRWG53X Imputation Flag | Constructed |
| HRHOW31 | How Hourly Wage Was Calculated RD 3/1 | EM 2-3, 51, 104, 111; EW 2-24 |
| HRHOW42 | How Hourly Wage Was Calculated RD 4/2 | EM 2-3, 51, 104, 111; EW 2-24 |
| HRHOW53 | How Hourly Wage Was Calculated RD 5/3 | EM 2-3, 51, 104, 111; EW 2-24 |
| DIFFWG31 | Persons Wages Different this RD31 at CMJ | RJ02 |
| DIFFWG42 | Persons Wages Different this RD42 at CMJ | RJ02 |
| DIFFWG53 | Persons Wages Different this RD53 at CMJ | RJ02 |
| NHRWG31 | Updated Hrly Wage RD 3/1 CMJ (Edited) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| NHRWG42 | Updated Hrly Wage RD 4/2 CMJ (Edited) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |
| NHRWG53 | Updated Hrly Wage RD 5/3 CMJ (Edited) | EW 3-5, 7, 11-13, 17-18, 24; EM 104, 111 |
| HOUR31 | Hours Per Week at RD 3/1 CMJ | EM 1-3, 51, 104-105, 111; EW 17 |
| HOUR42 | Hours Per Week at RD 4/2 CMJ | EM 1-3, 51, 104-105, 111; EW 17 |
| HOUR53 | Hours Per Week at RD 5/3 CMJ | EM 1-3, 51, 104-105, 111; EW 17 |
| TEMPJB31 | Is CMJ a Temporary Job RD 3/1 | EM 105C, 111C |
| TEMPJB42 | Is CMJ a Temporary Job RD 4/2 | EM 105C, 111C |
| TEMPJB53 | Is CMJ a Temporary Job RD 5/3 | EM 105C, 111C |
| SSNLJB31 | Is CMJ a Seasonal Job RD 3/1 | EM 105D, 111D |
| SSNLJB42 | Is CMJ a Seasonal Job RD 4/2 | EM 105D, 111D |
| SSNLJB53 | Is CMJ a Seasonal Job RD 5/3 | EM 105D, 111D |
| SELFCM31 | Self-Employed at RD 3/1 CMJ | EM 1-3, 51; RJ 01 |
| SELFCM42 | Self-Employed at RD 4/2 CMJ | EM 1-3, 51; RJ 01 |
| SELFCM53 | Self-Employed at RD 5/3 CMJ | EM 1-3, 51; RJ 01 |
| DISVW31X | Disavowed Health Ins at RD 3/1 CMJ (Ed) | EM113, 117; RJ07, 08, 08A; HX and OE Sections |
| DISVW42X | Disavowed Health Ins at RD 4/2 CMJ (Ed) | EM113, 117; RJ07, 08, 08A; HX and OE Sections |
| DISVW53X | Disavowed Health Ins at RD 5/3 CMJ (Ed) | EM113, 117; RJ07, 08, 08A; HX and OE Sections |
| CHOIC31 | Choice of Health Plans at RD 3/1 CMJ | EM 1-3, 51, 96, 113-115, 124; RJ08 |
| CHOIC42 | Choice of Health Plans at RD 4/2 CMJ | EM 1-3, 51, 96, 113-115, 124; RJ08 |
| CHOIC53 | Choice of Health Plans at RD 5/3 CMJ | EM 1-3, 51, 96, 113-115, 124; RJ08 |
| INDCAT31 | Industry Group RD 3/1 CMJ | EM 97-100; RJ01; Constructed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| INDCAT42 | Industry Group RD 4/2 CMJ | EM 97-100; RJ01; Constructed |
| INDCAT53 | Industry Group RD 5/3 CMJ | EM 97-100; RJ01; Constructed |
| NUMEMP31 | Number of Employees at RD 3/1 CMJ | EM 91-92, 124; RJ01 |
| NUMEMP42 | Number of Employees at RD 4/2 CMJ | EM 91-92, 124; RJ01 |
| NUMEMP53 | Number of Employees at RD 5/3 CMJ | EM 91-92, 124; RJ01 |
| MORE31 | RD 3/1 CMJ Firm Has More than 1 Locat | EM 1-3, 51, 94; RJ01 |
| MORE42 | RD 4/2 CMJ Firm Has More than 1 Locat | EM 1-3, 51, 94; RJ01 |
| MORE53 | RD 5/3 CMJ Firm Has More than 1 Locat | EM 1-3, 51, 94; RJ01 |
| UNION31 | Union Status at RD 3/1 CMJ | EM 1-3, 51, 96, 116; RJ01 |
| UNION42 | Union Status at RD 4/2 CMJ | EM 1-3, 51, 96, 116; RJ01 |
| UNION53 | Union Status at RD 5/3 CMJ | EM 1-3, 51, 96, 116; RJ01 |
| NWK31 | Reason Not Working During RD 3/1 | EM 1-3, 101-102, 126-127, 132-133, 138-139, 141, 141OV; RJ10 |
| NWK42 | Reason Not Working During RD 4/2 | EM 1-3, 101-102, 126-127, 132-133, 138-139, 141, 141OV; RJ10 |
| NWK53 | Reason Not Working During RD 5/3 | EM 1-3, 101-102, 126-127, 132-133, 138-139, 141, 141OV; RJ10 |
| CHGJ3142 | Changed Job between RD 3/1 and RD 4/2 | RJ01, 01A |
| CHGJ4253 | Changed Job between RD 4/2 and RD 5/3 | RJ01, 01A |
| YCHJ3142 | Why Chngd Job between RD 3/1 and RD 4/2 | RJ10, 10OV |
| YCHJ4253 | Why Chngd Job between RD 4/2 and RD 5/3 | RJ10, 10OV |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| STJBMM31 | Month Started RD 3/1 CMJ | EM10, 10OV, 10OV2; RJ01, 02A |
| STJBYY31 | Year Started RD 3/1 CMJ | EM10, 10OV, 10OV2; RJ01, 01A |
| STJBMM42 | Month Started RD 4/2 CMJ | EM10, 10OV, 10OV2; RJ01, 01A |
| STJBYY42 | Year Started RD 4/2 CMJ | EM10, 10OV, 10OV2; RJ01, 01A |
| STJBMM53 | Month Started RD 5/3 CMJ | EM10, 10OV, 10OV2; RJ01, 01A |
| STJBYY53 | Year Started RD 5/3 CMJ | EM10, 10OV, 10OV2; RJ01, 01A |
| EVRETIRE | Person Has Ever Retired | EM 1-3, 101-102, 126-127, 132-133, 138-139, 141, 141OV; RJ 02, 10 |
| OCCCAT31 | Occupation Group RD 3/1 CMJ | EM99-100; RJ 01, 01A; Constructed |
| OCCCAT42 | Occupation Group RD 4/2 CMJ | EM99-100; RJ 01, 01A; Constructed |
| OCCCAT53 | Occupation Group RD 5/3 CMJ | EM99-100; RJ 01, 01A; Constructed |
| PAYVAC31 | Paid Vacation at RD 3/1 CMJ | EM 1-3, 51, 109; RJ 01, 02 |
| PAYVAC42 | Paid Vacation at RD 4/2 CMJ | EM 1-3, 51, 109; RJ 01, 02 |
| PAYVAC53 | Paid Vacation at RD 5/3 CMJ | EM 1-3, 51, 109; RJ 01, 02 |
| SICPAY31 | Paid Sick Leave at RD 3/1 CMJ | EM 1-3, 51, 107; RJ 01, 02 |
| SICPAY42 | Paid Sick Leave at RD 4/2 CMJ | EM 1-3, 51, 107; RJ 01, 02 |
| SICPAY53 | Paid Sick Leave at RD 5/3 CMJ | EM 1-3, 51, 107; RJ 01, 02 |
| PAYDR31 | Paid Leave to Visit Dr RD 3/1 CMJ | EM 1-3, 51, 107-108; RJ 01, 02 |
| PAYDR42 | Paid Leave to Visit Dr RD 4/2 CMJ | EM 1-3, 51, 107-108; RJ 01, 02 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PAYDR53 | Paid Leave to Visit Dr RD 5/3 CMJ | EM 1-3, 51, 107-108; RJ 01, 02 |
| RETPLN31 | Pension Plan at RD 3/1 CMJ | EM 1-3, 51, 110; RJ 01, 02 |
| RETPLN42 | Pension Plan at RD 4/2 CMJ | EM 1-3, 51, 110; RJ 01, 02 |
| RETPLN53 | Pension Plan at RD 5/3 CMJ | EM 1-3, 51, 110; RJ 01, 02 |
| BSNTY31 | Sole Prop, Partner, Corp, RD 3/1 CMJ | EM 1-3, 51, 94-95; RJ 01, 02 |
| BSNTY42 | Sole Prop, Partner, Corp, RD 4/2 CMJ | EM 1-3, 51, 94-95; RJ 01, 02 |
| BSNTY53 | Sole Prop, Partner, Corp, RD 5/3 CMJ | EM 1-3, 51, 94-95; RJ 01, 02 |
| JOBORG31 | Priv (Profit,Nonprofit) Gov RD 3/1 CMJ | EM 1-3, 51, 96; RJ 01, 02 |
| JOBORG42 | Priv (Profit,Nonprofit) Gov RD 4/2 CMJ | EM 1-3, 51, 96; RJ 01, 02 |
| JOBORG53 | Priv (Profit,Nonprofit) Gov RD 5/3 CMJ | EM 1-3, 51, 96; RJ 01, 02 |
| HELD31X | Health Insur Held from RD 3/1 CMJ (Ed) | EM117; HX, HP and OE Sections |
| HELD42X | Health Insur Held from RD 4/2 CMJ (Ed) | EM117; HX, HP and OE Sections |
| HELD53X | Health Insur Held from RD 5/3 CMJ (Ed) | EM117; HX, HP and OE Sections |
| OFFER31X | Health Insur Offered by RD 3/1 CMJ (Ed) | EM113, 114, 117; RJ and HX Sections |
| OFFER42X | Health Insur Offered by RD 4/2 CMJ (Ed) | EM113, 114, 117; RJ and HX Sections |
| OFFER53X | Health Insur Offered by RD 5/3 CMJ (Ed) | EM113, 114, 117; RJ and HX Sections |
| OFREMP31 | Employer Offers Health Ins RD 3/1 CMJ | EM115A, RJ08AAA |
| OFREMP42 | Employer Offers Health Ins RD 4/2 CMJ | EM115A, RJ08AAA |
| OFREMP53 | Employer Offers Health Ins RD 5/3 CMJ | EM115A, RJ08AAA |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| EMPST31H | EMPLOYMENT STATUS RD 3/1 (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| EMPST42H | EMPLOYMENT STATUS RD 4/2 (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| EMPST53H | EMPLOYMENT STATUS RD 5/3 (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SLFCM31H | SELF-EMPLOYED AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SLFCM42H | SELF-EMPLOYED AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SLFCM53H | SELF-EMPLOYED AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| NMEMP31H | NUMBER OF EMPLOYEES AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| NMEMP42H | NUMBER OF EMPLOYEES AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| NMEMP53H | NUMBER OF EMPLOYEES AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| MORE31H | RD 3/1 CMJ FIRM MORE THAN 1 LOCAT (IMP) | Full-Year Consolidated File: Missing Values Imputed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| MORE42H | RD 4/2 CMJ FIRM MORE THAN 1 LOCAT (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| MORE53H | RD 5/3 CMJ FIRM MORE THAN 1 LOCAT (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| INDCT31H | INDUSTRY GROUP RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| INDCT42H | INDUSTRY GROUP RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| INDCT53H | INDUSTRY GROUP RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OCCCT31H | OCCUPATION GROUP RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OCCCT42H | OCCUPATION GROUP RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OCCCT53H | OCCUPATION GROUP RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| HOUR31H | HOURS PER WEEK AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| HOUR42H | HOURS PER WEEK AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| HOUR53H | HOURS PER WEEK AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| JBORG31H | PRV, ST-LC GOV, FED GOV RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| JBORG42H | PRV, ST-LC GOV, FED GOV RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| JBORG53H | PRV, ST-LC GOV, FED GOV RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| UNION31H | UNION STATUS AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| UNION42H | UNION STATUS AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| UNION53H | UNION STATUS AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| BSNTY31H | SOL PROP, PRTNR, CORP, RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| BSNTY42H | SOL PROP, PRTNR, CORP, RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| BSNTY53H | SOL PROP, PRTNR, CORP, RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| HRWG31H | HOURLY WAGE RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| HRWG42H | HOURLY WAGE RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| HRWG53H | HOURLY WAGE RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| CMJHLD31 | HLTH INSUR HELD FROM RD 3/1 CMJ (PRPL) | PRPL PUF |
| CMJHLD42 | HLTH INSUR HELD FROM RD 4/2 CMJ (PRPL) | PRPL PUF |
| CMJHLD53 | HLTH INSUR HELD FROM RD 5/3 CMJ (PRPL) | PRPL PUF |
| OFFER31H | HEALTH INSUR OFFERED BY RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OFFER42H | HEALTH INSUR OFFERED BY RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OFFER53H | HEALTH INSUR OFFERED BY RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OFEMP31H | EMP OFFERS HEALTH INS RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OFEMP42H | EMP OFFERS HEALTH INS RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| OFEMP53H | EMP OFFERS HEALTH INS RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PYVAC31H | PAID VACATION AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| PYVAC42H | PAID VACATION AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| PYVAC53H | PAID VACATION AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SCPAY31H | PAID SICK LEAVE AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SCPAY42H | PAID SICK LEAVE AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| SCPAY53H | PAID SICK LEAVE AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| PAYDR31H | PAID LEAVE TO VISIT DR RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| PAYDR42H | PAID LEAVE TO VISIT DR RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| PAYDR53H | PAID LEAVE TO VISIT DR RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| RTPLN31H | PENSION PLAN AT RD 3/1 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| RTPLN42H | PENSION PLAN AT RD 4/2 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |
| RTPLN53H | PENSION PLAN AT RD 5/3 CMJ (IMP) | Full-Year Consolidated File: Missing Values Imputed |

**HEALTH INSURANCE VARIABLES - PUBLIC USE**
**MONTHLY HEALTH INSURANCE COVERAGE INDICATORS**

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| TRImm17X | Covered by TRICARE/CHAMPVA in mm 17 (Ed), where mm = JA-DE | HX12, 13, PR19-22, HQ Section |
| MCRmm17 | Covered by Medicare in mm 17, where mm = JA-DE | HX05-07, 27, 29, 29OV |
| MCRmm17X | Covered by Medicare in mm 17 (Ed), where mm = JA-DE | HX05-07, 27, 29, 29OV, see Section 2.5.10.1 for additional edit specifications |
| MCDmm17 | Cov by Medicaid or SCHIP in mm 17, where mm = JA-DE | HX10-11, PR07-10 and HQ Section |
| MCDmm17X | Cov by Medicaid or SCHIP in mm 17 (Ed), where mm = JA-DE | MCDmm17, HX14-16, 18-19, 41-43, 45, PR11-14, 23-32, 39-42 |
| OPAmm17 | Cov by Other Public A Ins in mm 17, where mm = JA-DE | HX14-15, 41-45, PR 23-32 and HQ Section |
| OPBmm17 | Cov by Other Public B Ins in mm 17, where mm = JA-DE | HX14-15, 41-43, PR23-30 and HQ Section |
| PUBmm17X | Covr by Any Public Ins in mm 17 (Ed), where mm = JA-DE | TRImm17X, MCRmm17X, MCDmm17X, OPAmm17, OPBmm17 |
| PEGmm17 | Covered by Empl Union Ins in mm 17, where mm = JA-DE | HX2-4, 21-24, 48; HP, OE, HQ, EM, RJ Sections |
| PDKmm17 | Covr by Priv Ins (Source Unknwn) mm 17, where mm = JA-DE | HX21-24, 48, HP, OE, and HQ Sections |
| PNGmm17 | Covered by Nongroup Ins in mm 17, where mm = JA-DE | HX21-24, 48, HP, OE, and HQ Sections |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| POGmm17 | Covered by Other Group Ins in mm 17, where mm = JA-DE | HX21-24, 48, HP, OE, and HQ Sections |
| PRSmm17 | Covered by Self-Emp-1 Ins in mm 17, where mm = JA-DE | HX3, 4, 48, HQ, OE, RJ and EM sections |
| POUmm17 | Covered by Holder Outside of RU in mm 17, where mm = JA-DE | HX21-24, 48, HP, OE, and HQ Sections |
| PRXmm17 | Cov by Priv Ins through Exchng in mm 17, where mm = JA-DE | HX21-24, 48, HP, OE, and HQ Sections |
| PRImm17 | Covered by Private Ins in mm 17, where mm = JA-DE | POGmm17, PDKmm17, PEGmm17, PRSmm17, POUmm17, PNGmm17, PRXmm17 |
| HPEmm17 | Holder of Empl Union Ins in mm 17, where mm = JA-DE | PEGmm17, HP9, 11 |
| HPDmm17 | Holder of Priv Ins (Source Unknwn) mm 17, where mm = JA-DE | PDKmm17; HP11 |
| HPNmm17 | Holder of Nongroup Ins in mm 17, where mm = JA-DE | PNGmm17; HP11 |
| HPOmm17 | Holder of Other Group Ins in mm 17, where mm = JA-DE | POGmm17; HP11 |
| HPSmm17 | Holder of Self-Emp-1 Ins in mm 17, where mm = JA-DE | PRSmm17; HP9 |
| HPXmm17 | Holder of Priv Ins through Exch in mm 17, where mm = JA-DE | PRXmm17; HP11 |
| HPRmm17 | Holder of Private Insurance in mm 17, where mm = JA-DE | HPEmm17, HPSmm17, HPOmm17, HPNmm17, HPDmm17, HPXmm17 |
| INSmm17X | Covr by Hosp/Med Ins in mm 17 (Ed), where mm = JA-DE | PUBmm17X, PRImm17 |

## SUMMARY HEALTH INSURANCE COVERAGE INDICATORS

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PRVEV17 | Ever Have Private Insurance during 2017 | Constructed |
| TRIEV17 | Ever Have TRICARE/CHAMPVA during 2017 | Constructed |
| MCREV17 | Ever Have Medicare during 2017 (ED) | Constructed |
| MCDEV17 | Ever Have MCAID/SCHIP during 2017 (ED) | Constructed |
| OPAEV17 | Ever Have Other Public A Ins during 2017 | Constructed |
| OPBEV17 | Ever Have Other Public B Ins during 2017 | Constructed |
| UNINS17 | Uninsured All of 2017 | Constructed |
| INSCOV17 | Health Insurance Coverage Indicator 2017 | Constructed |
| INSURC17 | Full Year Insurance Coverage Status 2017 | Constructed |

## MANAGED CARE VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| TRIST31X | Cov By TRICARE Standard-Any Time in R3/1 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIST42X | Cov By TRICARE Standard-Any Time in R4/2 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIST17X | Cv By TRICARE Standard-R5/3 Til 12/31/17 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIPR31X | Cov By TRICARE Prime - Any Time in R3/1 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIPR42X | Cov By TRICARE Prime - Any Time in R4/2 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIPR17X | Cov By TRICARE Prime-R5/3 Until 12/31/17 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIEX31X | Cov By TRICARE Extra - Any Time in R3/1 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRIEX42X | Cov By TRICARE Extra - Any Time in R4/2 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| TRIEX17X | Cov By TRICARE Extra - R5/3 Til 12/31/17 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRILI31X | Cov By TRICARE For Life-Any Time in R3/1 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRILI42X | Cov By TRICARE For Life-Any Time in R4/2 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRILI17X | Cv By TRICARE For Life-R5/3 Til 12/31/17 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRICH31X | Covered By CHAMPVA - Any Time in R3/1 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRICH42X | Covered By CHAMPVA - Any Time in R4/2 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| TRICH17X | Covered By CHAMPVA - R5/3 Until 12/31/17 | HX12, 12A, 13, PR19, 19A, 20-22, HQ Section |
| MCRPD31 | Cov By Medicare Pmed Benefit – R3/1 | HX05-07, HX33A,HX35A, PR05, PR06B, HQ Section |
| MCRPD42 | Cov By Medicare Pmed Benefit – R4/2 | HX05-07, HX33A, HX35A, PR05, PR06B, HQ Section |
| MCRPD17 | Cov By Medicare Pmed Benefit – 12/31/17 | HX05-07, HX33A, HX35A, PR05, PR06B, HQ Section |
| MCRPD31X | Cov By Medicare Pmed Benefit – R3/1 (ED) | MCARE31X, MCAID31X, MCRPD31 |
| MCRPD42X | Cov By Medicare Pmed Benefit – R4/2 (ED) | MCARE42X, MCAID42X, MCRPD42 |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| MCRPD17X | Cov By Mcare Pmed Benefit–12/31/17 (ED) | MCARE17X, MCAID17X, MCRPD17 |
| MCRPB31 | Cov By Medicare Part B – R3/1 | HX05-07, HX25-27 and HQ section |
| MCRPB42 | Cov By Medicare Part B – R4/2 | HX05-07, HX25-27 and HQ section |
| MCRPB17 | Cov By Medicare Part B – 12/31/17 | HX05-07, HX25-27 and HQ section |
| MCRPHO31 | Cov By Medicare Managed Care – R3/1 | HX05-07, HX31-32, PR02-PR04, HQ Section |
| MCRPHO42 | Cov By Medicare Managed Care – R4/2 | HX05-07, HX31-32, PR02-PR04, HQ Section |
| MCRPHO17 | Cov By Medicare Managed Care – 12/31/17 | HX05-07, HX31-32, PR02-PR04, HQ Section |
| MCDHMO31 | Cov By Mcaid/SCHIP HMO -Any Time in R3/1 | HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |
| MCDHMO42 | Cov By Mcaid/SCHIP HMO -Any Time in R4/2 | HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |
| MCDHMO17 | Cov By Mcaid/SCHIP HMO-R5/3 Til 12/31/17 | HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| MCDMC31 | Cv Mcaid/CHIP Gtkpr Pln-Any Time in R3/1 | MCDHMO31, HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |
| MCDMC42 | Cv Mcaid/CHIP Gtkpr Pln-Any Time in R4/2 | MCDHMO42, HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |
| MCDMC17 | Cv Mcd/CHIP Gtkpr Pln-R5/3 Til 12/31/17 | MCDHMO17, HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section |
| PRVHMO31 | Covered By Private HMO-Any Time in R3/1 | MC01, HX2-4, 21-24,48; HP, OE, HQ, EM, and RJ Sections |
| PRVHMO42 | Covered By Private HMO-Any Time in R4/2 | MC01, HX2-4, 21-24,48; HP, OE, HQ, EM, and RJ Sections |
| PRVHMO17 | Covered By Private HMO-R5/3 Til 12/31/17 | MC01, HX2-4, 21-24,48; HP, OE, HQ, EM, and RJ Sections |

## FLEXIBLE SPENDING ACCOUNT VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| FSAGT31 | Anyone in RU Have FSA - R3/1 | HX63C |
| HASFSA31 | Person is FSA Holder - R3/1 | HX63D |
| FSAAMT31 | FSA Total Amount for RU - R3/1 | HX63E |

## DURATION OF HEALTH INSURANCE VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PREVCOVR | Per Cov by Ins in Prev 2 Yrs–Pnl 22 Only | HX64 |
| COVRMM | Month Most Recently Covered–Pnl 22 Only | HX65 |
| COVRYY | Year Most Recently Covered–Panel 22 Only | HX65 |
| WASESTB | Was Prev Ins by Empl or Union–Pn 22 Only | HX66, HX78 |
| WASMCARE | Was Prev Ins by Medicare–Panel 22 Only | HX66, HX78 |
| WASMCAID | Was Prev Ins by Mcaid/SCHIP–Pnl 22 Only | HX66, HX78 |
| WASCHAMP | Was Prev Ins TRICARE/Champva–Pnl 22 Only | HX66, HX78 |
| WASVA | Was Prev Ins VA/Militar Care–Pnl 22 Only | HX66, HX78 |
| WASPRIV | Was Prev Ins Grp/Assoc/Ins Co–Pn 22 Only | HX66, HX78 |
| WASOTGOV | Was Prev Ins by Oth Gov Prg–Pnl 22 Only | HX66, HX78 |
| WASAFDC | Was Prev Ins by Public AFDC–Pnl 22 Only | HX66, HX78 |
| WASSSI | Was Prev Ins by SSI Program–Pnl 22 Only | HX66, HX78 |
| WASSTAT1 | Was Prev Ins by Stat Prog 1–Pnl 22 Only | HX66, HX78 |
| WASSTAT2 | Was Prev Ins by Stat Prog 2–Pnl 22 Only | HX66, HX78 |
| WASSTAT3 | Was Prev Ins by Stat Prog 3–Pnl 22 Only | HX66, HX78 |
| WASSTAT4 | Was Prev Ins by Stat Prog 4–Pnl 22 Only | HX66, HX78 |
| WASOTHER | Was Prev Ins by Oth Source–Panel 22 Only | HX66, HX78 |
| NOINSBEF | Evr Wout Hlth Insr Prev Yr–Panel 22 Only | HX70 |
| NOINSTM | # Wks/Mon Wout Hlth Ins Prv Yr–P22 Only | HX71 |
| NOINUNIT | Unit Of Time Wout Hlth Ins–Panel 22 Only | HX71OV |
| MORECOVR | Cov by Mor Compr Pl Prev 2 Yr–Pn 22 Only | HX76 |
| INSENDMM | Month Most Recently Covd–Panel 22 Only | HX77 |
| INSENDYY | Year Most Recently Covd–Panel 22 Only | HX77 |

## OTHER HEALTH INSURANCE COVERAGE VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| TRICR31X | Cov by TRICR/CHAMV - R3/1 Int Dt (Ed) | Constructed |
| TRICR42X | Cov by TRICR/CHAMV - R4/2 Int Dt (Ed) | Constructed |
| TRICR53X | Cov by TRICR/CHAMV 12-31/R3 Int Dt (Ed) | Constructed |
| TRICR17X | Cov by TRICR/CHAMV - 12/31/17 (Ed) | Constructed |
| TRIAT31X | Cov TRICARE/CHAMPVA - Any Time in R3/1 | Constructed |
| TRIAT42X | Cov TRICARE/CHAMPVA - Any Time in R4/2 | Constructed |
| TRIAT53X | Cov TRICARE/CHAMPVA - Any Time in R5/3 | Constructed |
| TRIAT17X | Cov TRICARE/CHAMPVA-R5/3 Until 12/31/17 | Constructed |
| MCAID31 | Cov by Medicaid or SCHIP - R3/1 Int Dt | Constructed |
| MCAID42 | Cov by Medicaid or SCHIP - R4/2 Int Dt | Constructed |
| MCAID53 | Cov by Medicaid or SCHIP 12-31/R3 Int Dt | Constructed |
| MCAID17 | Cov by Medicaid or SCHIP - 12/31/17 | Constructed |
| MCAID31X | Cov by Medicaid/SCHIP - R3/1 Int Dt (Ed) | Constructed |
| MCAID42X | Cov by Medicaid/SCHIP - R4/2 Int Dt (Ed) | Constructed |
| MCAID53X | Cov Medicaid/SCHIP 12-31/R3 Int Dt (Ed) | Constructed |
| MCAID17X | Cov by Medicaid or SCHIP - 12/31/17 (Ed) | Constructed |
| MCARE31 | Cov by Medicare - R3/1 Int Dt | Constructed |
| MCARE42 | Cov by Medicare - R4/2 Int Dt | Constructed |
| MCARE53 | Cov by Medicare 12-31/R3 Int Dt | Constructed |
| MCARE17 | Cov by Medicare - 12/31/17 | Constructed |
| MCARE31X | Cov by Medicare - R3/1 Int Dt (Ed) | Constructed |
| MCARE42X | Cov by Medicare - R4/2 Int Dt (Ed) | Constructed |
| MCARE53X | Cov by Medicare 12-31/R3 Int Dt (Ed) | Constructed |
| MCARE17X | Cov by Medicare - 12/31/17 (Ed) | Constructed |
| MCDAT31X | Cov Medicaid Or SCHIP - Any Time in R3/1 | Constructed |
| MCDAT42X | Cov Medicaid Or SCHIP - Any Time in R4/2 | Constructed |
| MCDAT53X | Cov Medicaid Or SCHIP - Any Time in R5/3 | Constructed |
| MCDAT17X | Cv Mcd/CHIP-Any Tme In R5/3 Til 12/31/17 | Constructed |
| OTPAAT31 | Cov Ot Gov Mcd/CHIP HMO-Any Time in R3/1 | Constructed |
| OTPAAT42 | Cov Ot Gov Mcd/CHIP HMO-Any Time in R4/2 | Constructed |
| OTPAAT53 | Cov Ot Gov Mcd/CHIP HMO-Any Time in R5/3 | Constructed |
| OTPAAT17 | Cv Ot Gov Mcd/CHIP HMO-R5/3 Til 12/31/17 | Constructed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| OTPBAT31 | Cv Otgv Nt Mcd/CHIP HMO-Any Time in R3/1 | Constructed |
| OTPBAT42 | Cv Otgv Nt Mcd/CHIP HMO-Any Time in R4/2 | Constructed |
| OTPBAT53 | Cv Otgv Nt Mcd/CHIP HMO-Any Time in R5/3 | Constructed |
| OTPBAT17 | Cv Otgv Nt Mcd/CHP HMO-R5/3 Til 12/31/17 | Constructed |
| OTPUBA31 | Cov/Pay Oth Gov Mcaid/SCHIP HMO-R3/1 Int | Constructed |
| OTPUBA42 | Cov/Pay Oth Gov Mcaid/SCHIP HMO-R4/2 Int | Constructed |
| OTPUBA53 | Cov/Pay Oth Gov Mcaid/SCHIP HMO 12-31/R3 | Constructed |
| OTPUBA17 | Cov/Pay Oth Gov Mcaid/SCHIP HMO-12/31/17 | Constructed |
| OTPUBB31 | Cov Oth Gov Not Mcaid/SCHIP HMO-R3/1 Int | Constructed |
| OTPUBB42 | Cov Oth Gov Not Mcaid/SCHIP HMO-R4/2 Int | Constructed |
| OTPUBB53 | Cov Oth Gov Not Mcaid/SCHIP HMO 12-31/R3 | Constructed |
| OTPUBB17 | Cov Oth Gov Not Mcaid/SCHIP HMO-12/31/17 | Constructed |
| PRIDK31 | Cov by Priv Ins (Dk Plan) - R3/1 Int | Constructed |
| PRIDK42 | Cov by Priv Ins (Dk Plan) - R4/2 Int | Constructed |
| PRIDK53 | Cov by Priv Ins (Dk Plan) 12-31/R3 Int | Constructed |
| PRIDK17 | Cov by Priv Ins (Dk Plan) - 12/31/17 | Constructed |
| PRIEU31 | Cov by Empl/Union Grp Ins - R3/1 Int Dt | Constructed |
| PRIEU42 | Cov by Empl/Union Grp Ins - R4/2 Int Dt | Constructed |
| PRIEU53 | Cov by Empl/Union Grp Ins 12-31/R3 Int | Constructed |
| PRIEU17 | Cov by Empl/Union Grp Ins - 12/31/17 | Constructed |
| PRING31 | Cov by Non-Group Ins - R3/1 Int Dt | Constructed |
| PRING42 | Cov by Non-Group Ins - R4/2 Int Dt | Constructed |
| PRING53 | Cov by Non-Group Ins 12-31/R3 Int Dt | Constructed |
| PRING17 | Cov by Non-Group Ins - 12/31/17 | Constructed |
| PRIOG31 | Cov by Other Group Ins - R3/1 Int Dt | Constructed |
| PRIOG42 | Cov by Other Group Ins - R4/2 Int Dt | Constructed |
| PRIOG53 | Cov by Other Group Ins 12-31/R3 Int Dt | Constructed |
| PRIOG17 | Cov by Other Group Ins - 12/31/17 | Constructed |
| PRIS31 | Cov by Self-Emp-1 Ins - R3/1 Int Dt | Constructed |
| PRIS42 | Cov by Self-Emp-1 Ins - R4/2 Int Dt | Constructed |
| PRIS53 | Cov by Self-Emp-1 Ins 12-31/R3 Int Dt | Constructed |
| PRIS17 | Cov by Self-Emp-1 Ins - 12/31/17 | Constructed |
| PRSTX31 | Cov by Priv Exchange Ins - R3/1 Int Dt | Constructed |

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PRSTX42 | Cov by Priv Exchange Ins – R4/2 Int Dt | Constructed |
| PRSTX53 | Priv Exchange Ins on 12-31 R5/R3 Int Dt | Constructed |
| PRSTX17 | Priv Exchange Insurance on 12/31/17 | Constructed |
| PRIV31 | Cov by Priv Hlth Ins - R3/1 Int Date | Constructed |
| PRIV42 | Cov by Priv Hlth Ins - R4/2 Int Date | Constructed |
| PRIV53 | Cov by Priv Hlth Ins 12-31/R3 Int Date | Constructed |
| PRIV17 | Cov by Priv Hlth Ins - 12/31/17 | Constructed |
| PRIVAT31 | Cov by Private Ins - Any Time in R3/1 | Constructed |
| PRIVAT42 | Cov by Private Ins - Any Time in R4/2 | Constructed |
| PRIVAT53 | Cov by Private Ins - Any Time in R5/3 | Constructed |
| PRIVAT17 | Cov by Private Ins - R5/3 Until 12/31/17 | Constructed |
| PROUT31 | Cov by Someone Out Of RU - R3/1 Int | Constructed |
| PROUT42 | Cov by Someone Out Of RU - R4/2 Int | Constructed |
| PROUT53 | Cov by Someone Out Of RU 12-31/R3 Int Dt | Constructed |
| PROUT17 | Cov by Someone Out Of RU - 12/31/17 | Constructed |
| PUB31X | Cov by Public Ins - R3/1 Int Dt (Ed) | Constructed |
| PUB42X | Cov by Public Ins - R4/2 Int Dt (Ed) | Constructed |
| PUB53X | Cov by Public Ins 12-31/R3 Int Dt (Ed) | Constructed |
| PUB17X | Cov by Public Ins - 12/31/17 (Ed) | Constructed |
| PUBAT31X | Cov by Public - Any Time in R3/1 | Constructed |
| PUBAT42X | Cov by Public - Any Time in R4/2 | Constructed |
| PUBAT53X | Cov by Public - Any Time in R5/3 | Constructed |
| PUBAT17X | Cov by Public - R5/3 Until 12/31/17 | Constructed |
| INS31X | Insured - R3/1 Int Date (Ed) | Constructed |
| INS42X | Insured - R4/2 Int Date (Ed) | Constructed |
| INS53X | Insured 12-31/R3 Int Date (Ed) | Constructed |
| INS17X | Insured - 12/31/17 (Ed) | Constructed |
| INSAT31X | Insured Any Time in R3/1 | Constructed |
| INSAT42X | Insured Any Time in R4/2 | Constructed |
| INSAT53X | Insured Any Time in R5/3 | Constructed |
| INSAT17X | Insured Any Time in R5/R3 until 12/31/17 | Constructed |

## DENTAL AND PRESCRIPTION DRUG PRIVATE INSURANCE VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| DENTIN31 | Dental Insurance– Any Time in RD 3/1 | HX48, OE10, OE24, OE37 |
| DENTIN42 | Dental Insurance– Any Time in RD 4/2 | HX48, OE10, OE24, OE37 |
| DENTIN53 | Dental Insurance– Any Time in RD 5/3 | HX48, OE10, OE24, OE37 |
| DNTINS31 | Dental Ins - Any Time In Rd 3/1 in 2017 | HX48, OE10, OE24, OE37 |
| DNTINS17 | Dentl Ins-Any Time in R5/R3 Til 12/31/17 | HX48, OE10, OE24, OE37 |
| PMEDIN31 | PMED Ins - Any Time in Rd 3/1 | HX48, OE10, OE24, OE37 |
| PMEDIN42 | PMEDINS - Any Time in Rd 4/2 | HX48, OE10, OE24, OE37 |
| PMEDIN53 | PMEDINS - Any Time in Rd 5/3 | HX48, OE10, OE24, OE37 |
| PMDINS31 | Pmed Ins - RD 3/1 in 2017 | HX48, OE10, OE24, OE37 |
| PMDINS17 | Pmed Ins - R5/R3 until 12/31/17 | HX48, OE10, OE24, OE37 |

## MEDICAL DEBT VARIABLES

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PROBPY42 | Family Having Prob Paying Medical Bills | HX81 |
| CRFMPY42 | Family Med Bills Being Paid Over Time | HX82 |
| PYUNBL42 | Unable to Pay Family Medical Bills | HX83 |

## THIRD PARTY PAYER VARIABLES – PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PMEDUP31 | Has Usual 3rd Party Payer for Pmeds – R3/1 | CP01A |
| PMEDUP42 | Has Usual 3rd Party Payer for Pmeds – R4/2 | CP01A |
| PMEDUP53 | Has Usual 3rd Party Payer for Pmeds – R5/3 | CP01A |
| PMEDPY31 | Usual 3rd Party Payer for Pmeds – R3/1 | CP01B |
| PMEDPY42 | Usual 3rd Party Payer for Pmeds – R4/2 | CP01B |
| PMEDPY53 | Usual 3rd Party Payer for Pmeds – R5/3 | CP01B |

## PERSON-LEVEL UTILIZATION VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| OBTOTV17 | # Office-Based Provider Visits 2017 | Constructed |
| OBDRV17 | # Office-Based Physician Visits 2017 | Constructed |
| OPTOTV17 | # Outpatient Dept Provider Visits 2017 | Constructed |
| OPDRV17 | # Outpatient Dept Physician Visits 2017 | Constructed |
| ERTOT17 | # Emergency Room Visits 2017 | Constructed |
| IPDIS17 | # Hospital Discharges 2017 | Constructed |
| IPNGTD17 | # Nights in Hosp for Discharges 2017 | Constructed |
| DVTOT17 | # Dental Care Visits 2017 | Constructed |
| HHTOTD17 | # Home Health Provider Days 2017 | Constructed |
| HHAGD17 | # Agency Home Health Provider Days 2017 | Constructed |
| HHINDD17 | # Non-Agency Home Hlth Providr Days 2017 | Constructed |
| HHINFD17 | # Informal Home Hlth Provider Days 2017 | Constructed |
| RXTOT17 | # Prescribed Medicines including Refills 2017 | Constructed |

## WEIGHTS VARIABLES - PUBLIC USE

| VARIABLE | DESCRIPTION | SOURCE |
|---|---|---|
| PERWT17F | Final Person Weight, 2017 | Constructed |
| FAMWT17F | Final Family Weight, 2017 | Constructed |
| FAMWT17C | Pov Adj Family Weight-CPS Fam on 12/31/17 | Constructed |
| SAQWT17F | Final SAQ Person Weight, 2017 | Constructed |
| DIABW17F | Final Diabetes Care Supplement Weight | Constructed |
| CSAQW17F | CSAQ: Final Cancer SAQ Person Weight - 2017 | Constructed |
| VARSTR | Variance Estimation Stratum - 2017 | Constructed |
| VARPSU | Variance Estimation PSU - 2017 | Constructed |

# Appendix 1:

## Summary of Utilization and Expenditure Variables by Health Service Category

| HEALTH SERVICE CATEGORY | UTILIZATION VARIABLE(S) | EXPENDITURE VARIABLE(S)[1] |
|---|---|---|
| ***All Health Services*** | -- | TOT***17 |
| *Office Based Visits* | | |
| **Total Office Based Visits (Physician + Non-physician + Unknown)** | OBTOTV17 | OBV***17 |
| Office Based Visits to Physicians | OBDRV17 | OBD***17 |
| *Hospital Outpatient Visits* | | |
| **Total Outpatient Visits (Physician + Non-physician + Unknown)** | OPTOTV17 | -- |
| Sum of Facility and SBD Expenses | -- | OPT***17 |
| Facility Expense | -- | OPF***17 |
| SBD Expense | -- | OPD***17 |
| **Outpatient Visits to Physicians** | OPDRV17 | -- |
| Facility Expense | -- | OPV***17 |
| SBD Expense | -- | OPS***17 |
| *Emergency Room Visits* | | |
| **Total Emergency Room Visits** | ERTOT17 | -- |
| Sum of Facility and SBD Expenses | -- | ERT***17 |
| Facility Expense | -- | ERF***17 |
| SBD Expense | -- | ERD***17 |
| *Inpatient Hospital Stays (Including Zero Night Stays)* | | |
| **Total Inpatient Stays (Including Zero Night Stays)** | IPDIS17, IPNGTD17 | -- |
| Sum of Facility and SBD Expenses | -- | IPT***17 |
| Facility Expense | -- | IPF***17 |
| SBD Expense | -- | IPD***17 |
| *Prescription Medicines* | | |
| **Total Prescription Medicines** | RXTOT17 | RX***17 |
| *Dental Visits* | | |
| **Total Dental Visits** | DVTOT17 | DVT***17 |
| *Home Health Care* | | |
| **Total Home Health Care** | HHTOTD17 | -- |
| Agency Sponsored | HHAGD17 | HHA***17 |

1 See key at end of table for specific categories for ***.

| HEALTH SERVICE CATEGORY | UTILIZATION VARIABLE(S) | EXPENDITURE VARIABLE(S)[1] |
|---|---|---|
| Paid Independent Providers | HHINDD17 | HHN***17 |
| Informal | HHINFD17 | -- |
| *Other Medical Expenses* | | |
| Vision Aids | -- | VIS***17 |
| Other Medical Supplies and Equipment | -- | OTH***17 |

KEY: To complete variable name, replace *** with a particular source of payment category as identified in the following tables:

| **Source of Payment Category** | *** |
|---|---|
| Total payments (sum of all sources) | EXP |
| Out of Pocket | SLF |
| Medicare | MCR |
| Medicaid | MCD |
| Private Insurance | PRV |
| Veteran's Administration/CHAMPVA | VA |
| TRICARE | TRI |
| Other Federal Sources | OFD |
| Other State and Local Sources | STL |
| Workers' Compensation | WCP |
| Other Private | OPR |
| Other Public | OPU |
| Other Unclassified Sources | OSR |
| **Collapsed Source of Payment Category** | *** |
| Private and TRICARE | PTR |
| Other Federal, Other State and Local, Other Private, Other Public, and Other Unclassified Sources | OTH |
| **Total charges**[2] | TCH |

[2] No charge variables on file for prescription medicines.