MEPS HC-192
2016 Full Year
Consolidated Data File

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Agency for Healthcare Research and Quality
Center for Financing, Access, and Cost Trends
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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. 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 2016 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 2016. The file contains 1,941 variables and has a logical record length of 5,574 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 20 and Rounds 1, 2, and 3 of Panel 21, the rounds for the MEPS panels covering calendar year 2016, 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 2016 full-year consolidated data file are provided in the accompanying codebook file. The exceptions to this are weight variables and variance estimation variables. 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 34,655 persons who participated in the MEPS Household Component of the Medical Expenditure Panel Survey in 2016. 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 34,655 persons were part of one of the two MEPS panels for whom data were collected in 2016: Rounds 3, 4, and 5 of Panel 20 or Rounds 1, 2, and 3 of Panel 21. Of these persons, 33,259 were assigned a positive person-level weight. There were 13,587 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 (PERWT16F) 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 2016.

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 >= $85.10	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 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 20 and Round 1, 2, or 3 of Panel 21. Unless otherwise noted, variables that end in "16" represent status as of December 31, 2016.

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, 2016. Variable names ending in "xy" represent variables relevant to Round "x" of Panel 20 or Round "y" of Panel 21. For example, RULETR53 is a variable relevant to Round 5 of Panel 20 or Round 3 of Panel 21, depending on the panel in which the person was included. The variable PANEL indicates the panel in which the person participated.

The December 31, 2016 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 20 or Panel 21 for each person on the file. Panel 20 is the panel that started in 2015, and Panel 21 is the panel that started in 2016.

A Reporting Unit (RU) is a person or group of persons in the sampled DU who are related by blood, marriage, adoption, foster care, 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, 2016 or the last round they were in the survey) is indicated by the RULETR16 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 RUSIZE16 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 FAMID16 identify a family (i.e., persons related to one another by blood, marriage, adoption, foster care, or self-identified as a single unit) for each round and as of December 31, 2016. 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, foster children, 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.

The round-specific variables FAMSZE31, FAMSZE42, FAMSZE53, and the end-of-year status variable FAMSZE16 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, RUSIZE16, FAMSZE31, FAMSZE42, FAMSZE53, and FAMSZE16 exclude persons who are ineligible for data collection (i.e., those where ELGRND31 NE 1, ELGRND42 NE 1, ELGRND53 NE 1 or

ELGRND16 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 1/1/16
82	Entire RU is military before 1/1/16
83	Entire RU institutionalized before 1/1/16
84	Entire RU left U.S. before 1/1/16
85	Entire RU is ineligible before 1/1/16; 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 1/1/16
95	Entire RU institutionalized after 1/1/16; No proxy
96	Entire RU deceased after 1/1/16; No proxy
97	Reenumeration complete; No RU member; Non-Response
98	RU moved too far to interview
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 1/1/16
95	Entire RU institutionalized after 1/1/16; No proxy
96	Entire RU deceased after 1/1/16; 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. RUCLAS16 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 RUCLAS16 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 RUCLAS16 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 RUCLAS16 was set to RUCLAS31. If the person was not linked to a responding RU during any round, then RUCLAS16 was set to -9.

Geographic Variables

The round-specific variables REGION31, REGION42, REGION53, and the end-of-year status variable REGION16 indicate the Census region for the RU. REGION16 indicates the region for the 2016 portion of Round 5/3. For most analyses, REGION16 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, 2016 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, ENDRFM16, and ENDRFY16. 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 REFPRS16 identify the reference person for Rounds 3/1, 4/2 and 5/3, and as of December 31, 2016 (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 RESP16 identify the respondent for Rounds 3/1, 4/2, and 5/3 and as of December 31, 2016 (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 PROXY16 identify the type of respondent for Rounds 3/1, 4/2, 5/3 and as of December 31, 2016 (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, INSCOP16, INSC1231, INSCOPE, ELGRND31, ELGRND42, ELGRND53, ELGRND16, 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 a 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 2016. 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 2016, then newborns should be identified using AGE16X = 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. INSCOP16, INSC1231, and INSCOPE indicate a person's in-scope status for the portion of Round 5/3 that covers 2016, the person's in-scope status as of 12/31/16, and whether a person was ever in-scope during the calendar year 2016. 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, 2016
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, 2016 for INSCOP16)
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 2016.

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 ELGRND16 indicate a person's eligibility status for Rounds 3/1, 4/2, and 5/3 and as of December 31, 2016.

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 2016. 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, ENDRFM16, and ENDRFY16.

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 21 Round 2 and Panel 20 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 2016.

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, 2016 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, 2016 PSTATS42 and PSTATS53: Prior round interview date	Interview date
13	FT student living away from home, but associated with sampled household	--	PSTATS31: January 1, 2016 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, 2016 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 Part of CE - Condition Enumeration: Skip CE1 to CE5 HE - Health Status AC - Access to Care 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 Part of CE - Condition Enumeration: Skip CE1 to CE5 HE - Health Status AC - Access to Care Part of AP - Preventive Care: Skip AP12 to AP22	PSTATS31: January 1, 2016 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, 2016 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, 2016 PSTATS42 and PSTATS53: Prior round interview date	Date institutionalized
34	Moved from original household, outside US	--	PSTATS31: January 1, 2016 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, 2016 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, 2016 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, 2016 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, 2016 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, 2016 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 Health Status (HE) Disability Days (DD) Employment (RJ/EM/EW)	PSTATS31: January 1, 2016 if born prior to 2016. The date of birth if born in 2016. 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, 2016 PSTATS42 and PSTATS53: Prior round interview date	Interview date
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	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 20 (the panel that started in 2015); Rounds 1, 2 and 3 of Panel 21 (the panel that started in 2016); and status as of December 31, 2016. Demographic variables that are round-specific are identified by names including numbers "xy", where x and y refer to round numbers of Panel 20 and Panel 21 respectively. For example, AGE31X represents the age data relevant to Round 3 of Panel 20 or Round 1 of Panel 21. 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 20 indicates Panel 20 data and a value of 21 indicates Panel 21 data. The remaining demographic variables on this file are not round-specific.

The variables describing demographic status of the person as of December 31, 2016 were developed in two ways. First, the age variable (AGE16X) represents the exact age, calculated from date of birth and indicates age status as of 12/31/16. For the remaining December 31st variables [i.e., related to marital status (MARRY16X, SPOUID16, SPOUIN16), student status (FTSTU16X), and the relationship to reference persons (REFRL16X)], 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, AGE16X, 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 2014-2015 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 25 persons on this file. Age was determined for 18 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 2014 NHIS for Panel 20 and from the 2015 NHIS for Panel 21. 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 (no 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 2012-2016, 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 2012-2016**
RACE	**RACE**
—	RACEVER Used only in FY12-FY13.
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)
	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)
RACETHNX	RACETHX
1 Person is Hispanic	1 Hispanic
2 Person is Black – No other race reported/Not Hispanic	2 Non-Hispanic White only

FY PUFS 2002-2011	**FY PUFS 2012-2016**
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
	HISPNCAT (starting in 2013)
	1 Mexican/Mexican American/Chicano – No other Hispanic reported

FY PUFS 2002-2011	FY PUFS 2012-2016
	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 23 persons to set race and 24 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 new 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 RAVEV1X, 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 how well a person speaks English. The language questions were asked the first time a household is interviewed or when a new person joined the family in later rounds. 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 whether anyone age 5 or older in their family spoke a language other than English at home (RE102, OTHLANG). If the response to OTHLANG was 'Yes', then two other questions were asked: LANGSPK (RE102A) to indicate whether the language was Spanish or some other language, and HWELLSPE (RE102B) to indicate how well a person who lives in a family where someone speaks some other language at home, speaks English. If the response to OTHLANG was 'No' then LANGSPK and HWELLSPE were set to '-1' (Inapplicable). OTHLANG and LANGSPK were asked at the family level and HWELLSPE was asked at the person level of everyone in Round 1, except deceased and institutionalized persons and persons less than 5 years old. For these minors, HWELLSPE was coded to a value of '5' (Under 5 years old – Inapplicable).

In Rounds 2 to 5, these questions were asked only of new persons who joined the family. If it was reported they speak a language other than English at home, they were asked what language they speak at home and how well they speak English. If a minor less than 5 years old joined the family by himself/herself, that is, with no other person age 5 or older after Round 1, the language questions were not asked.

Prior to the 2015 Consolidated file, OTHLANG and LANGSPK were set to '-1' (Inapplicable) for any new persons in Rounds 2 to 5, and HWELLSPE was set to the appropriate collected value. Starting with the 2015 Consolidated file, OTHLANG and LANGSPK were set for all new persons in Rounds 2 to 5 including accompanying minors, and HWELLSPE was coded to a value of '5' for all minors less than 5 years old when OTHLANG had a reported value of '1' (Yes). Because the language questions were not asked of minors less than 5 years old who 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).

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 MARRY16X. 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 SPOUID16. 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, 2016, 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 SPOUIN16 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, 2016 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 FTSTU16X indicate whether the person was a full-time student at the interview date (or 12/31/16 for FTSTU16X). 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 21, it was based on age as of the 2015 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 REFRL16X. 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 2016 were not sufficient to identify the relationship of an individual to the reference person, relationship variables from the 2015 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, spouse, or foster 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; any values set for MOPID##X and DAPID##X were removed from any person identified as a foster child; and the PID for the person's mother and father are valid PIDs for that person's RU for the 2016 Full Year File.

2.5.4 Income and Tax Filing Variables (AFDC16-HIEUIDX)

The file provides income and tax-related variables that were constructed primarily from data collected in the Panel 20 Round 5 and Panel 21 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, WAGEP16X. Complete responses were left unedited, and this group of people was assigned WAGIMP16=1, where WAGIMP16 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 WAGIMP16=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 2016 (as in all previous years) there were a small number of cases where WAGEP16X=0 and WAGIMP16=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 WAGEP16X 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 WAGIMP16=3 were those who did not report wage and salary income and who were assigned WAGEP16X=0 based on not having been employed during the year.

Persons assigned WAGIMP16=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 WAGEP16X. Donor pools included persons whose WAGEP16X 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 WAGEP16X amounts (WAGIMP16=5). Imputations for WAGEP16X for the remaining persons were unconditional, using both workers and non-workers as donors (WAGIMP16=6).

After editing WAGEP16X for all persons in the full-year file, the remaining income sources were edited in the following sequence: INTRP16X, BUSNP16X, DIVDP16X, ALIMP16X,

SALEP16X, TRSTP16X, PENSP16X, IRASP16X, SSECP16X, UNEMP16X, WCMPP16X, VETSP16X, CASHP16X, OTHRP16X, CHLDP16X, SSIP16X, and PUBP16X. 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 CHLDP16X used family-level information concerning marital status and the number of children. Hot-deck imputations for SSIP16X and PUBP16X 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 2014 NHIS correspond to MEPS Panel 20, while those from the 2015 NHIS correspond to MEPS Panel 21. 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 xxxIMP16 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 (WAGIMP16 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 ALIMP16X 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 (TTLP16X) is the sum of all income components with the exception of SALEP16X (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, food stamp variables, and welfare participation flag are all completely unedited. Note that while the welfare participation flag is named AFDC16, in fact this variable reflects participation in Temporary Assistance for Needy Families (TANF), with respondents having been prompted with "TANF", "AFDC", and "welfare." 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.

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 2016 poverty statistics developed by the Current Population Survey (CPS). The categorical variable for 2016 family income as a percentage of poverty (POVCAT16) was constructed using the same method as in earlier years' files.

FAMINC16 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, Temporary Assistance for Needy Families, 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 (FAMINC16).

POVLEV16 is the continuous version of the POVCAT16 variable. The POVLEV16 percentage was computed by dividing CPS family income by the applicable poverty line (based on family size and composition). POVCAT16 takes the POVLEV16 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 2016. 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:

- Foster children always comprise a separate HIEUIDX.
- 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 and Pregnancy Indicator

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.

Respondents were asked if anyone had been pregnant during the round ("Since (start date) has anyone in the family been pregnant at any time?"). If it was reported that someone had been pregnant, questions about pregnancy were asked about female persons aged 15 through 55. Males, and females who were younger than 16 or older than 44 (for confidentiality purposes), were coded as "Inapplicable" (-1). PREGNT31 indicates if the person was pregnant in Round 3 of Panel 20 or Round 1 of Panel 21, PREGNT42 indicates if the person was pregnant in Round 4 of Panel 20 or Round 2 of Panel 21, and PREGNT53 indicates whether the person was pregnant in Round 5 of Panel 20 or Round 3 of Panel 21.

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 Rounds 3 and 5, 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 Rounds 3 and 5 for all current or institutionalized persons aged 18 or older, regardless of Round 1, Round 2, and Round 4 responses.

Priority condition variables whose names end in "DX" indicate whether the person was ever diagnosed with the condition. For chronic bronchitis, joint pain, and some asthma follow-up

questions (ASSTIL##, ASATAK##, and ASTHEP## described below), variables ending in "31" reflect data obtained in Round 3 of Panel 20 and Round 1 or 2 of Panel 21 and variables ending in "53" reflect data obtained in Round 4 or 5 of Panel 20 and Round 3 of Panel 21. For asthma treatment variables (ASACUT53 through ASWNFL53), the data were obtained in Round 5 of Panel 20 and Round 3 of Panel 21.

Before 2007, the DX variables contained a "53" suffix because they reflected data collected only in Rounds 3 and 5 in the Priority Conditions Supplement (PC) section. Beginning in 2007, the suffix was removed because the data were collected in all rounds. 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, JTPAIN53, CHBRON31, and CHBRON53 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 and CHBRON53 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. Through 2007, a person-level variable (CHLAGE) indicated the age of diagnosis for high cholesterol on the Person-Level Use PUF. 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 2016, 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.

REFDIAB allows the respondent to indicate that diabetes was reported in the PE section in error (REFDIAB = 2). Respondents were not prompted to confirm or deny the report of diabetes; REFDIAB was set to "2" (Person Does Not Have Diabetes) only if the respondent offered the information, and DIABDX is set to "No" (2).

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 and JTPAIN53 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.

Respondents who answered "Yes" to asthma diagnosis were asked additional questions. ASSTIL31 and ASSTIL53 asked if the person still had asthma. ASATAK31 and ASATAK53 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 (ASTHEPIS31, ASTHEPIS53) asked when the last asthma episode or asthma attack occurred.

Additional follow-up questions regarding asthma medication used for quick relief (ASACUT53), preventive medicine (ASPREV53), and peak flow meters (ASPKFL53) were asked. These questions were asked if the person reported having been diagnosed with asthma (ASTHDX = 1).

ASACUT53 asked whether the person had used the kind of prescription inhaler "that you breathe in through your mouth" that gives quick relief from asthma symptoms. ASPREV53 asked whether the person had ever taken the preventive kind of asthma medicine used every day to protect the lungs and prevent attacks, including both oral medicine and inhalers. ASPKFL53 indicates whether the person with asthma had a peak flow meter at home.

Respondents who answered "Yes" to ASACUT53 were asked whether they had used more than three canisters of this type of inhaler in the past 3 months (ASMRCN53). Respondents who answered "Yes" to ASPREV53 were asked whether they now took this kind of medication daily or almost daily (ASDALY53). Respondents who answered "Yes" to ASPKFL53 were asked if they ever used the peak flow meter (ASEVFL53). Those respondents who answered "Yes" to ASEVFL53 were asked when they last used the peak flow meter (ASWNFL53).

Because the asthma diagnosis variable reflects three rounds of data in Panel 21, 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 Round 3, ASATAK31 and ASSTIL31 will be set to "Inapplicable" (-1) as the person had not reported asthma in Round 1 or 2. If a person reported asthma in the PE section in Round 1 or 2 but was not a current RU member in Round 3, the 53 asthma variables will be set to "Inapplicable" (-1) as the Round 3 follow-up data were not collected for the person.

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-DSPRX53)

Due to the overlapping panel design of the MEPS (Round 3 for Panel 20 overlapped with Round 1 for Panel 21, Round 4 for Panel 20 coincided with Round 2 for Panel 21, and Round 5 for Panel 20 occurred at the same time as Round 3 for Panel 21), data from overlapping rounds have been combined across panels. Thus, any variable ending in "31" reflects data obtained in Round 3 of Panel 20 and Round 1 of Panel 21. Analogous comments apply to variables ending in "42" and "53". Health Status variables whose names end in "16" indicate a full-year measurement.

This data release incorporates information from calendar year 2016. However, health status data obtained in Round 3 of both Panel 20 and Panel 21 are included in variables that have names ending in "31" and "53" respectively. For persons in Panel 20, Round 3 extended from 2015 into 2016. Therefore, for these people, some information from late 2015 is included for variables that have names ending in "31". For persons in Panel 21, Round 3 extended from 2016 into 2017. Therefore, for these people, some information from early 2017 is included for variables that have names ending in "53". Note that for most Panel 20 persons, the Round 5 reference period ends on December 31, 2016; however, the Round 5 interview actually occurs in 2017. Round 5 respondents receive an instruction at the start of the Health Status (HE) section of CAPI to limit

information about health status and limitations to the period ending on December 31, 2016. Nevertheless, if respondents forget or ignore this reference period instruction, some information collected in this section in Round 5 (variables ending in "53") might reflect circumstances in early 2017. Further, health status questions asked in the Preventive Care (AP) section of CAPI in Round 5 do not contain a similar explicit instruction that the reference period ends on December 31, 2016, although this is stated at the start of the overall interview. Hence, in these sections, respondents may also be providing health status information that pertains to 2017.

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

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., individuals who were 13 years of age or older were not asked some follow-up verification questions; individuals older than 17 were not asked questions pertaining to children's health status). 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 variables (IADLHP31 and IADLHP53) were each constructed from a series of three questions administered in the

Health Status section of the interview in Panel 20 Rounds 3 and 5 and Panel 21 Rounds 1 and 3. 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 and IADLHP53 were 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 variables (ADLHLP31 and ADLHLP53) were each constructed in the same manner, and for the same persons, as the IADL help variables, but using questions HE04-HE06 in Panel 20 Rounds 3 and 5 and Panel 21 Rounds 1 and 3. 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 20 Rounds 3 and 5 and Panel 21 Rounds 1 and 3 pertained to functional limitations, which are defined as difficulty in performing certain specific physical actions. WLKLIM31 and WLKLIM53 were the filter questions, depending on the round. 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 or WLKLIM53. 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 or WLKLIM53. 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 or WLKLIM53.

For Rounds 3 (Panel 20) and 1 (Panel 21), 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.

For Rounds 5 (Panel 20) and 3 (Panel 21), the corresponding filter question was WLKLIM53.

The series of questions for which WLKLIM53 served as a filter is as follows:

LFTDIF53 – difficulty lifting 10 pounds
STPDIF53 – difficulty walking up 10 steps
WLKDIF53 – difficulty walking 3 blocks
MILDIF53 – difficulty walking a mile
STNDIF53 – difficulty standing 20 minutes
BENDIF53 – difficulty bending or stooping
RCHDIF53 – difficulty reaching over head
FNGRDF53 – difficulty using fingers to grasp

Editing conventions were the same for this "53" series of variables as they were for the corresponding "31" series described above.

Use of Assistive Technology and Social/Recreational Limitations

The variables indicating use of assistive technology (AIDHLP31 and AIDHLP53, from question HE07) and social/recreational limitations (SOCLIM31 and SOCLIM53, 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 variables indicating any limitation in work, housework, or school (ACTLIM31 and ACTLIM53) were 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 difficulty, all family members were coded as "Don't Know" (-8). Persons less than five years old were coded as "Inapplicable" (-1) on ACTLIM31 and ACTLIM53.

For Round 3 (Panel 20) or Round 1 (Panel 21), 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.

For Rounds 5 (Panel 20) or 3 (Panel 21) corresponding variables were ACTLIM53, WRKLIM53, HSELIM53, SCHLIM53, and UNABLE53. Editing conventions were the same as those described above.

Cognitive Limitations

The variables indicating any cognitive limitation (COGLIM31 or COGLIM53, depending on the round) were 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 or COGLIM53 was coded as "Yes" (1). Remaining family members not identified were coded as "No" (2) for COGLIM31 or COGLIM53.

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).

The cognitive limitations variables (COGLIM31 and COGLIM53) reflect 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 20 Round 4 and Panel 21 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 20 Round 4 and Panel 21 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 5 (Panel 20) / Rounds 1 and 3 (Panel 21)

ANYLMT16 summarizes whether a person has any IADL, ADL, functional, or activity limitations in any of the pertinent rounds. This variable was derived based on data from Rounds 3 and 5 (Panel 20) or Rounds 1 and 3 (Panel 21). ANYLMT16 was built using the component variables IADLHP31, IADLHP53, ADLHLP31, ADLHLP53, WLKLIM31, WLKLIM53, ACTLIM31, and ACTLIM53. If any of these components was coded "Yes", then ANYLMT16 was coded "Yes" (1). If all components were coded "No", then ANYLMT16 was coded "No" (2). If all the components were "Inapplicable" (-1), then ANYLMT16 was coded as "Inapplicable" (-1). If all the components had missing value codes (i.e., -7, -8, -9, or -1), ANYLMT16 was coded as "Not Ascertained" (-9). If some components were "No" and others had missing value codes, ANYLMT16 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 or ACTLIM53; for these RU members, if all other components were "No", then ANYLMT16 was coded as "No" (2). The variable label for ANYLMT16 departs slightly from conventions. Typically, variables that end in "16" refer only to 2016. However, some of the variables used to construct ANYLMT16 were assessed in 2017, so some information from early 2017 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 10,069 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, 8,850 were assigned a positive person-level weight for 2016 (PERWT16F > 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". 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)

Beginning in 2001, 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 is 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 were 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)

Note that for FY 2016, 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 2016 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 2016.

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

2.5.6.8 Preventive Care Variables

For each person, excluding deceased persons, a series of questions was asked about the receipt of preventive care or screening examinations. Questions varied in the applicable age or gender subgroups to which they pertained.

The list of preventive care variables, along with their applicable subgroup is as follows:

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)

LSTETH53 – has person lost all natural (permanent) teeth
Age >17; both genders

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

PHYEXE53 – currently spends half hour or more in moderate to vigorous physical activity at least five times a week
Age>17; both genders

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

For each of the variables above, a code of "Inapplicable" (-1) was assigned if the person was deceased or if the person did not belong to the applicable subgroups.

A Body Mass Index (BMI) variable, BMINDX53, is calculated for adults 18 years of age or older. Please note: analysts can have access to the height and weight variables and/or construct a BMI variable of their own through the AHRQ Data Center.

BMI categories for adults are the following:

- Underweight = BMI is less than 18.5,
- Normal Weight = BMI is between 18.5 – 24.9 inclusive,
- Overweight = BMI is between 25.0 – 29.9 inclusive, and
- Obesity = BMI greater than or equal to 30.0

The following formula used to calculate the BMI for adults was taken from the Centers for Disease Control and Prevention website:

$$BMI = [Weight\ in\ Pounds / (Height\ in\ Inches)^2] * 703$$

The steps used to calculate the BMI for adults are as follows:

1. Construct adult height, weight, and weight estimate variables HGHTFT53, HGHTIN53, WEIGHT53, and WGTEST53

2. Create the building block variable ADHGTIN, indicating total height in inches for adults => 18 years old

3. Create the temporary variable MIDWGT, indicating the mid-point value of a person's estimate of weight (WGTEST53)

4. Create the adult BMI variable BMINDX53 using the building block and the temporary variable, setting all deceased persons and all persons < 18 years old to Inapplicable (-1)

Adult height and weight were not top- or bottom-coded prior to the construction of the adult BMI.

The building block variable ADHGTIN was calculated as [(HGHTFT53 * 12) + (HGHTIN53)] to indicate total adult height in inches, step 2. Note that ADHGTIN was created for programming efficiency only and is not included in this data release. For cases where height in feet was > 0 (HGHTFT53 > 0) and height in inches was missing (HGHTIN53 in (-7, -8, -9)), the mid-point value for height in inches (6 inches) was used in the calculation of total height in inches [ADHGTIN = (HGHTFT53 * 12) + 6]. This use of the mid-point for inches ensures that adults who have feet but not inches in height are included in the BMI calculation. ADHGTIN was set to "Not Ascertained" (-9) for all cases where adult height in feet was "Refused", "Don't Know", or "Not Ascertained" (HGHTFT53 in (-7, -8, -9)). Deceased persons and persons whose age was less than 18 years old were set to "Inapplicable" (-1) for ADHGTIN.

The temporary variable MIDWGT was calculated to indicate the mid-point value of person's estimate of weight (WGTEST53), step 3. Note that MIDWGT was created for programming efficiency only and is not included in this data release.

The adult BMI variable BMINDX53 was calculated (step 4) using the building block variable ADHGTIN and adult weight in pounds (WEIGHT53) as follows:

$$BMINDX53 = [WEIGHT53 / (ADHGTIN)^2] * 703$$

For adults whose weight in pounds was “Don’t Know” (WEIGHT53 = -8) and whose estimate of weight was > 0 (WGTEST53 between 1 and 6), MIDWGT was used in the calculation of BMINDX53:

$$BMINDX53 = [MIDWGT / (ADHGTIN)^2] * 703$$

BMINDX53 was set to “Not Ascertained” (-9) for adults whose weight in pounds was “Refused” or “Not Ascertained” (WEIGHT53 in (-7, -9)). BMINDX53 was set to “Not Ascertained” (-9) for adults whose weight in pounds was “Don’t Know” (-8) and whose estimate of weight was “Refused”, “Don’t Know”, or “Not Ascertained” (WGTEST53 in (-7, -8, -9)). BMINDX53 was set to “Not Ascertained” (-9) for adults whose total height in inches was “Not Ascertained” (ADHGTIN = -9). Deceased persons and persons whose age was less than 18 years old were set to “Inapplicable” (-1) for BMINDX53.

BMINDX53 is not top- or bottom-coded or edited.

2.5.6.9 2016 Self-Administered Questionnaire (SAQ)

The 2016 Self-Administered Questionnaire (SAQ), a paper-and-pencil questionnaire, was fielded during Panel 20 Round 4 and Panel 21 Round 2 of the 2016 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 2016 and early 2017.

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 21) or Round 4 (for Panel 20). 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 ADPRXY42 (ADPRXY42 > 1). Prior to 2015, the variable ADPRX42 indicated the relationship of the proxy to the adult. Starting in 2015, the response categories for proxy relationship are collapsed in a new variable, ADPRXY42, and ADPRX42 has been 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 (SAQWT16F) 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

ADNDCR42 – If ADAPPT42 > 0, whether you or a doctor believed you needed any care, tests, or treatment

ADEGMC42 – If ADAPPT42 > 0 and ADNDCR42= 1, how often it was easy to get care, tests or treatment you or a doctor believed necessary

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)

General Health

ADSMOK42 – Currently smoke

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

ADDRBP42 – Blood pressure has been checked by a doctor, nurse, or other health professional

ADSPEC42 – Needed to see a specialist

ADESSP42 – If ADSPEC42 = 1, how easy to see a specialist

Health Status

The SAQ contained three measures of health status: 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). Key references for these three measures are:

1. Ware, J.E., Kosinski, M., and Keller, S.D. (1996). A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care* 34:220.

2. 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.

3. 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.

The SF-12v2 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

ADPALS42 – During past 4 weeks, as result of physical health, accomplished less than would like

ADPWLM42 – During past 4 weeks, as result of physical health, limited in kind of work or other activities

ADMALS42 – During past 4 weeks, as result of mental problems, accomplished less than you would like

ADMWLM42 –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

ADCAPE42 – During the past 4 weeks, felt calm and peaceful

ADNRGY42 – During the past 4 weeks, had a lot of energy

ADDOWN42 – During the past 4 weeks, felt downhearted and depressed

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

Short-Form 12 Version 2 (SF-12v2)

In analyzing data from the SF-12v2, the standard approach is to form two summary scores based on responses to these 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, ADPALS42, ADPWLM42, and ADPAIN42. The MCS weights more heavily responses to the following questions: ADDOWN42, ADCAPE42, ADMALS42, ADMWLM42, and ADSOCA42. The algorithm for computing the PCS and the MCS summary scores may be available through Optum™.

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 PCS42, and the MCS-12 score is MCS42. Note that negative values are possible in PCS42 and MCS42 in rare cases. There is one record in 2016 where MCS42 is set to a negative values and no records where PCS42 is set to a negative value. 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 PCS42 and MCS42. (These persons were set to missing in 2002.)

The variables PCS42 and MCS42 include cases in which the scores were imputed. SFFLAG42 indicates whether the physical component summary, PCS42, or the mental component, MCS42, was imputed for a respondent. In some cases the software could not impute a score due to amount of missing data; these cases have SFFLAG42 = 0 (No). (This represents a change from 2002, when these cases had SFFLAG42 = 1 (Yes)). 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 SFFLAG42.

In 2000, 2001, and 2002, MEPS used Version 1 of the SF-12. The PCS and MCS scores based on Version 1 of the SF-12 in these years were based on norms from 1990. Version 2 scores are based on norms from a 1998 national study. To appropriately compare Version 1 scores with Version 2 scores, Version 1 scores need to be rescaled to 1998 norms. This can be done by adding 1.07897 to PCS scores from Version 1, and by subtracting 0.16934 from Version 1 MCS scores. For full details, please consult the SF-12 reference manual:

> Ware, Jr., J.E., Kosinski, M., Turner-Bowker, DM, and Gandek, B. *How to Score Version 2 of the SF-12 (r) Health Survey.* (October, 2002). QualityMetric, Inc., Lincoln, RI.

Non-Specific Psychological Distress

The 2016 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 2016 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 (SAQWT16F, DIABW16F). 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 20, Round 5 and Panel 21, 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. REFDIAB, collected at PC02A, allows the respondent to indicate that diabetes was reported in the PE section in error (REFDIAB = 2). Respondents were not prompted to confirm or deny the report of diabetes; REFDIAB was set to "2" (Person Does Not Have Diabetes) only if the respondent offered the information. DIABDX is set to "No" (2) and the DCS was not distributed to persons who reported diabetes in error.

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 2016. 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. DSFT1753, DSFT1653, DSFT1553, DSFB1553, and DSFTNV53 indicate whether the respondent reported having his or her feet checked for sores or irritations: in 2017, in 2016, in 2015, before 2015, or never, respectively. DSEY1753, DSEY1653, DSEY1553, DSEB1553 and DSEYNV53 indicate whether the respondent reported having an eye exam in which the pupils were dilated: in 2017, in 2016, in 2015, before 2015, or never, respectively. DSCH1753, DSCH1653, DSCH1553, DSCB1553, and DSCHNV53 indicate the last time the respondent reported having his or her blood cholesterol checked: in 2017, in 2016, in 2015, before 2015, or never, respectively. DSFL1753, DSFL1653, DSFL1553, DSVB1553, and DSFLNV53 indicate when the person got a flu vaccination including the flu vaccine nasal spray: in 2017, in 2016, in 2015, before 2015, 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 2015 or the 2017 Full Year Consolidated PUF. Additional data for the second-year panel may be available on the 2015 PUF.

If a person was unable to respond to the DCS, the questionnaire was completed by a proxy (DSPRX53 = 1). A special weight variable (DIABW16F) 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 2016 (see Section 3.0 "Survey Sample Information" for details). Please note that the weighted frequencies displayed in the HC-192 codebook for the health status variables collected in the SAQ and DCS (as designated in the variable labels) are based on the full-year 2016 person weight PERWT16F. However, when using these variables in analysis, weights specific to each of these sets of questions should be used (SAQWT16F, DIABW16F). 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 20 Round 3 and Panel 21 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 asks the same question 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 21) or Round 3 (for Panel 20) 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 21) or Round 3 (for Panel 20). 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 (CSAQW16F) is to be used with the CSAQ for persons who were 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).

Cancer History

The CSAQ includes seven 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 nine 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 seven 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 four 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 seven 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 nine 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 nine 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 fifteen 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 (DDNWRK16-OTHNDD16)

The Disability Days (DD) section of the core interview contains questions about time lost from work or school 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 20, initiated in 2015, and Rounds 1, 2, and 3 of the MEPS Panel 21, initiated in 2016. 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 (16) identifies the variable as representing data from 2016. Due to confidentiality concerns, each of the annual Disability Days variables which represent the number of days a person missed work or school (DDNWRK16, DDNSCL16, and OTHNDD16) is 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 2016). 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 DDNWRK16 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 DDNWRK16 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.

DDNSCL16 indicates the number of times that a person missed a half-day or more of school during the calendar year. This question was asked of persons aged 3 to 22; persons aged less than

3 or older than 22 and persons whose age is missing did not receive this question and are coded as -1 on this variable (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). A code of -1 may also indicate that the person does not attend school. The analyst should be aware that there was no attempt to reconcile school days lost with the time of year (e.g., summer vacation).

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. OTHDYS16 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 DDNWRK16. 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).

OTHNDD16 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 OTHDYS16 are skipped out of OTHNDD16 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 (OTHDYS16 = 1) but report no days missed (OTHNDD16 = 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 20 Round 4 and Panel 21 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 PROVTY42 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 = 1

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, the source data are missing per design. For these records, PRVSPK42 was set to '-1' (Inapplicable).

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.

In previous years, 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. No variable or category was suppressed in 2016.

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.)

Text responses at AC19 ("What is the provider's race?") were not coded as new responses or new variables.

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 20 persons, the second number representing the round for Panel 21 persons. For example, EMPST31 refers to employment status on the Round 3 interview date for Panel 20 persons and employment status on the Round 1 interview date for Panel 21 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 $85.10 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 (MORE), 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 20 persons or Round 2 interview date hourly wage for Panel 21 persons) is coded as "-2", refer to HRWG31X (Round 3 interview date hourly wage for Panel 20 persons or Round 1 interview date hourly wage for Panel 21 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 worked at more than one job or whether the person held health insurance from a current main employer was asked in every round, and, therefore, those variables also have no "-2" codes.

For Panel 20 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 20 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 2015 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 2015 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 DDNWRK16 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 20, 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 20, 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 20 Round 3 or Panel 21 Round 1. For persons who are part of Panel 20, RNDFLG31 is also set to "Inapplicable" (-1) if the person is out-of-scope in the 2016 portion of Round 3. For persons who are part of Panel 21, RNDFLG31 is also set to "Inapplicable" (-1) if the person is out-of-scope in Round 1. For persons who are part of Panel 20, 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 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.

For persons who are part of Panel 21 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. Certain questions, namely those regarding benefits and hourly wage, were not asked of the self-employed. Variables constructed from these questions indicate whether the establishment reported by wage earners (those not self-employed) 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)

For persons who were self-employed at their current main job, these benefits variables were coded as "Inapplicable" (-1). Additionally, information on whether the firm had more than one business location (MORE31, MORE42, and MORE53) and whether the establishment was a private for-profit, nonprofit, or a government entity (JOBORG31, JOBORG42, and JOBORG53) was not applicable for self-employed persons. Conversely, the variables that identify whether a business was incorporated, a proprietorship, or a partnership (BSNTY31, BSNTY42, and BSNTY53) applied only to those who were self-employed at their current main job.

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

Hourly wage was asked of all persons who reported a current main job that was not self-employment (SELFCM). HRWG31/42/53X provide the wage amount reported initially for a person's current main job. If a current main job continues into subsequent rounds DIFFWG31/42/53 indicate if the wage has changed since the previous round. If the job continues and there is a different wage at that job, NHRWG31/42/53 indicate the new wage amount.

Some wage information was logically edited for consistency. Edits were performed under two circumstances:

- in some cases where wages reported as less than $1.00 per hour are updated in a subsequent round to greater than $1.00, and the wage increased by a factor of 10 or

100 (for example, if a Round 4 wage is updated to $20.00, the Round 3 wage of $0.20 could logically be updated to $20.00); in some of these cases, additional comments may have also indicated an error

- in some cases where wages changed substantially from round to round and a keying error was evident (for example, 'the number of hours on which the salary is based' is updated from '40' to '4'; the '4' could logically be updated to '40')

In all cases that result in an edit, a complete review of wage and employment history is performed; in some cases, comparisons are made to employment at similar establishments within the MEPS as well as to data reported and summarized by the Bureau of Labor Statistics.

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 variable HRWG31/42/53X was 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 variable DIFFWG31/42/53 indicates whether a person's wage amount was different in the current round at a continuing, current main job. NHRWG31/42/53 contains 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 at the main job. In these cases, users should note that HRWG31/42/53X and NHRWG31/42/53 may not differ.

For all Panel 21 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 NHRWG31/42/53. Instead, where an updated wage amount is 'not known' or is 'refused,' NHRWG31/42/53 is set to 'not ascertained.' For persons whose hourly wage variable HRWG31/42/53X was imputed and the respondent provides an updated wage amount in a subsequent round, the new wage, NHRWG31/42/53, is not presented. Instead, NHRWG31/42/53 is set to '-13' to indicate that the initial HRWG31/42/53X was imputed. Users may wish to refer to the 2016 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 reflected in the wage variables HRWG53X and NHRWG53 and will be fully reflected on all wage variables in the 2017 USE PUF.

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 $85.10. As of 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 an HRWG31/42/53X or NHRWG31/42/53X 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 Use file was also applied to the Full-Year 2016 Jobs file. Because a person can have other jobs besides a current main job which are included in the corresponding 2016 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 2016 Jobs PUF were top-coded and the wages at their current main job (HRWG31/42/53X and NHRWG31/42/53) 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 is asked again in each interview (whether a person now holds insurance). This is to determine if there has been any change in coverage. For persons with a continuing job where

- insurance ended in a prior round or
- insurance was never reported through the establishment, whether or not the person was offered insurance in the round a job was first reported or
- the respondent disavows coverage in the Health Insurance section that was previously indicated in the Employment section of the interview

and where the person has no coverage indicated at RJ08 in the current round, the respondent is asked if the person was offered insurance. This type of current round information can also affect the setting of the DISVW variable as well.

Prior to Panel 19 Round 4/Panel 20 Round 2, in the Review of Jobs section, no follow-up questions to RJ07 were asked. RJ07 is asked if insurance was offered but not taken in the round a job was first reported and no coverage has been reported since the initial round. Beginning in Panel 19 Round 4/Panel 20 Round 2, follow-up questions regarding whether insurance is offered are now asked if insurance is not now held in the current round as indicated at RJ07. As this change occurred partway through the 2015 delivery year and therefore was not reflected in all rounds, data were edited in 2015 so that all six rounds represented the same flow (i.e. no follow-up questions to RJ07). Beginning in 2016, data reflect the current CAPI flow to all follow-up questions from RJ07. This change will be evident to analysts in frequency distributions on OFFER31/42/53X.

In addition to this modification to OFFER, MEPS includes several clarifying questions regarding insurance availability to the jobholder through an employer. When a respondent indicates that the jobholder neither held nor was offered health insurance at the job, the respondent is asked if *any other* employees at the job were offered health insurance. The variable OFREMP31/42/53 indicates whether an employer offered health insurance to other employees at a firm.

Data users should note that OFREMP31/42/53 is 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 reported a categorical size, a median estimated size from donors within the reported range is used.

Beginning in Panel 20 Round 3/Panel 19 Round 5, CAPI no longer accepts a value of '0' at questions EM124 and RJ08B (JOBS.TOTLEMP) where respondents are asked to indicate the total number of employees working at a self-employed business. This change is reflected in NUMEMP53 but not in NUMEMP31 or NUMEMP42, which are set to '-9,' Not Ascertained where JOBS.TOTLEMP = '0'. It should be noted that some persons continue to have NUMEMP53 set to '-9' based on a JOBS.TOTLEMP value of '0' due to the CAPI flow. This change will be fully reflected on NUMEMP31/42/53 for self-employed main jobs in the 2017 USE 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. Beginning in 2010, Census uses 2007 Census Industry and 2010 Census Occupation Coding schemes instead of the 2003 versions used from FY2002 through FY2009. Both coding schemes were developed for the Bureau's Current Population Survey and American Community Survey. Users should note that coding schemes are comparable for the FY2002 through FY2009 data files. Earlier versions of Census coding schemes were used on files prior to FY2002.

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 20 and Rounds 1, 2, and 3 of Panel 21 are provided in this release (STJBMM31**,** STJBYY31, STJBMM42, STJBYY42, STJBMM53, and STJBYY53). In FY16, STJBYY31, STJBYY42, and STJBYY53 are bottom coded to a value of '1946' to preserve age confidentiality. This value is calculated by taking the delivery year of 2016 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 20 persons or the Round 3 interview date for Panel 21 persons (EVRETIRE). The other indicates whether a person ever worked for pay as of the Round 5 interview date for Panel 20 persons or the Round 3 interview date for Panel 21 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.

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 20 persons or between the first and second rounds for Panel 21 persons (CHGJ3142) and between the fourth and fifth rounds for Panel 20 persons or between the second and third rounds for Panel 21 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.

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 2016 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 21, the imputed employment variables use constructed employment variables from Round 1, 2 and 3 data on this file. For Panel 20, Rounds 3, 4, and 5 data from the current file are used as well as data from Rounds 1 and 2 from the 2015 Full-Year Consolidated File. Users who want to combine data on all five rounds for an individual in Panel 20, should use 2015 data for Rounds 1 and 2, from MEPS HC-181, and 2016 data for Rounds 3, 4 and 5, from the current file. (Note that MEPS HC-181 also has Round 3 information for Panel 20, but the 2016 PUF has the most up-to-date version of Round 3 information and is the most consistent with 2016 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 $85.10) 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-191). 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 20 observations reflect coverage in Round 3 in the 2016 PRPL file as well as in the 2015 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 $85.10 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 20 respondents indicates that the person held coverage during the portion of Round 3 in either the 2015 or 2016 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/53 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 (TRIJA16X-PMEDPY53)

2.5.10.1 Monthly Health Insurance Indicators (TRIJA16X-INSDE16X)

Constructed and edited variables are provided that indicate any coverage in each month of 2016 for the sources of health insurance coverage collected during the MEPS interviews (Panel 20 Rounds 3 through 5 and Panel 21 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 (TRIJA16X – TRIDE16X) 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. State-specific program participation in non-comprehensive coverage (STAJA16 – STADE16) was also identified but is not considered health insurance for the purpose of this survey.

Medicare

Medicare (MCRJA16 – MCRDE16) coverage was edited (MCRJA16X – MCRDE16X) 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 65th 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 (MCDJA16 – MCDDE16) have been edited (MCDJA16X – MCDDE16X) 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 (OPAJA16 – OPADE16); and
- The respondent did not report any managed care, Other Public B Insurance (OPBJA16 – OPBDE16).

The variables OPAJA16 – OPADE16 and OPBJA16 – OPBDE16 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 (PUBJA16X – PUBDE16X). Persons identified as covered by public insurance are those reporting coverage under TRICARE, Medicare, Medicaid or SCHIP, or other public hospital/physician programs. Persons covered only by state-specific programs that did not provide comprehensive coverage (STAJA16 – STADE16), for example, the Maryland Kidney Disease Program, were not considered to have public coverage when constructing the variables PUBJA16X – PUBDE16X. 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 MCAID16X, OTPUBA16, OTPUBB16, and PUB16X.

Private Insurance

Variables identifying private insurance in general (PRIJA16 – PRIDE16) and specific private insurance sources [such as employer/union group insurance (PEGJA16 – PEGDE16); non-group (PNGJA16 – PNGDE16); other group (POGJA16 – POGDE16)]; and private insurance through a federally-facilitated, state-based or state partnership exchange/marketplace (PRXJA16 – PRXDE16) were constructed. Private insurance sources identify coverage in effect at any time during each month of 2016. Separate variables identify covered persons and policyholders (policyholder variables begin with the letter "H", e.g., HPEJA16 – HPEDE16). 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 (PDKJA16 – PDKDE16). Covered persons (but not policyholders) are identified when the policyholder is living outside the RU (POUJA16 – POUDE16). 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 (PRSTX31/42/53/16 and PRXJA16 – PRXDE16) 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 (PEGJA16 – PEGDE16, PRSJA16 – PRSDE16) 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 (PEGJA16 – PEGDE16) 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 (PRSJA16 – PRSDE16) was initially reported in the Employment section and verified in the Health Insurance section. Unlike the other employment-related variables (PEGJA16 – PEGDE16), self-employed-firm size 1 (PRSJA16 – PRSDE16) health insurance could not be reported in the Health Insurance section for the first time. The variables PRSJA16 – PRSDE16 have been constructed to allow users to determine if the insurance should be considered employment-related.

Private insurance that was not employment-related (POGJA16 – POGDE16, PNGJA16 – PNGDE16, PDKJA16 – PDKDE16, POUJA16 – POUDE16, and PRXJA16 – PRXDE16) 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 PRSTX31/42/53/16 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. The variables PRSTX31/42/53/16 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 PRSTX31/42/53/16 variables.

Any Insurance in Month

The file also includes summary measures that indicate whether or not a person has any insurance in a month (INSJA16X – INSDE16X). 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.

Persons covered only by state-specific programs that provide non-comprehensive coverage (STAJA16 – STADE16), for example, the Maryland Kidney Disease Program, and those without hospital/physician benefits (for example, private insurance for dental or vision care only, or for accidents or specific diseases) were not considered to be insured when constructing the variables INSJA16X – INSDE16X.

2.5.10.2 Summary Insurance Coverage Indicators (PRVEV16-INSURC16)

The variables PRVEV16-UNINS16 summarize health insurance coverage for the person in 2016 for the following types of insurance: private (PRVEV16); TRICARE/CHAMPVA (TRIEV16); Medicaid or SCHIP (MCDEV16); Medicare (MCREV16); other public A (OPAEV16); other public B (OPBEV16). 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 2016. A value of 2 indicates that the person was not covered for a given type of insurance for all of 2016. The variable UNINS16 summarizes PRVEV16-OPBEV16. Where PRVEV16-OPBEV16 are all equal to 2, then UNINS16 equals 1; person was uninsured for all of 2016. Otherwise, UNINS16 is set to 2, insured for all or part of 2016.

For user convenience this file contains a constructed variable INSCOV16 that summarizes health insurance coverage for the person in 2016, with the following three values:

1 = ANY PRIVATE (Person had any private insurance coverage [including TRICARE/CHAMPVA] any time during 2016)

2 = PUBLIC ONLY (Person had only public insurance coverage during 2016)

3 = UNINSURED (Person was uninsured during all of 2016)

INSURC16 summarizes health insurance coverage for the person in 2016 using eight categories of insurance separated by age using the person's age on December 31st, 2016:

1 = ANY PRIVATE (0-64) (Person is between 0 and 64 years old and is covered by private insurance or TRICARE/CHAMPVA in 2016)

2 = PUBLIC ONLY (0-64) (Person is between 0 and 64 years old and is covered by public insurance only (excluding TRICARE/CHAMPVA) in 2016)

3 = UNINSURED (0-64) (Person is between 0 and 64 years old and is uninsured for all of 2016)

4 = EDITED MEDICARE ONLY (65+) (Person is 65 years old or more and is covered by edited Medicare only in 2016)

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 2016)

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 2016)

7 = UNINSURED (65+) (Person is 65 years old or more and is uninsured for all of 2016)

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 2016)

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 INSCOV16 and INSURC16 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 PRVEV16 and TRIEV16 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 INSCOV16 and INSURC16.

2.5.10.3 FY 2016 PUF Managed Care Variables (TRIST31X- PRVHMO16)

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 2016 are based on responses to health insurance questions asked during the Round 3, 4, and 5 interviews of Panel 20, and the Round 1, 2, and 3 interviews of Panel 21. Each managed care variable ends in "xy" where x and y denote the interview round for Panel 20 and Panel 21, 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 20 indicate whether or not a person has coverage from a managed care plan in the 2016 calendar year. Similarly, the Panel 20 Round 5 and Panel 21 Round 3 managed care variables indicate whether or not a person has coverage from a managed care plan in the 2016 calendar year, and the variables have been given the suffix "16" (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 "16" versions of the managed care variables for Panel 21 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 PRVHMO31/42/16 indicate coverage by a private HMO in Panel 21 Rounds 1 - 3, and Panel 20 Rounds 3 - 5. The variables MCRPHO31/42/16 indicate coverage by a Medicare managed care plan in Panel 21 Rounds 1 - 3, and Panel 20 Rounds 3 - 5. The variables MCRPD31/42/16 indicate coverage by Medicare prescription drug benefit, also known as Part D, in Panel 21 Rounds 1 - 3, and Panel 20 Rounds 3 - 5. The edited version of the Medicare prescription drug coverage variables (MCRPD31/42/16X) include persons who are covered by both edited Medicare and edited Medicaid. The variables MCDHMO31/42/16 and MCDMC31/42/16 indicate coverage by a Medicaid or SCHIP HMO or managed care plan in Panel 21 Rounds 1 - 3, and Panel 20 Rounds 3 - 5. For Panel 21, the "31" version indicates coverage at any time in Round 1, the "42" version indicates coverage at any time in Round 2, and the "16" version represents coverage at any time during the 2016 portion of Round 3. For Panel 20, the "31" version indicates coverage at any time during the 2016 portion of Round 3, the "42" version indicates coverage at any time in Round 4, and the "16" version represents coverage at any time during Round 5 (because Round 5 ends on 12/31/16).

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 2016. These variables indicate whether the person was covered by TRICARE Standard (TRIST31/42/16X), TRICARE Prime (TRIPR31/42/16X), TRICARE Extra (TRIEX31/42/16X), and TRICARE for Life (TRILI31/42/16X). 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 TRICH42/16X were created. The "31"

version of this variable was constructed starting in 2006. It should be noted that the TRICARE Plan information was elicited from a pick-list, code-all-that-apply question that asked which type of TRICARE plan the person obtained. It should also be noted that the TRICARE plan question was asked at the RU-level, that is, if any person in the RU reported coverage under TRICARE, a follow-up question was asked to determine which TRICARE plan anyone in the RU was covered by. After indicating the specific TRICARE plan or plans for the RU, a second question was asked to determine who in the RU was covered by TRICARE. 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 (MCRPD31/42/16) have been edited (MCRPD31/42/16X) 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 MCRPHO16 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 MCRPD16(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 MCRPB16 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 MCDHMO16 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 MCDHMO16 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 MCDMC16 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 MCDMC16 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 PRVHMO16 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 PRVHMO16 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, 2015 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-STPRAT16)

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, 2016. 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 20 members.

Variables indicating coverage for Panel 20 members for any time in the round that end in "31" indicate coverage for the portion of Round 3 that occurred in calendar year 2016, unless noted otherwise (see "Dental and Prescription Drug Private Insurance" section). Variables indicating coverage for Panel 21 members ending in "53" indicate coverage at any time in Round 3, including the portion of the round that occurred in calendar year 2017. For Round 3 coverage for Panel 21 members that occurred in calendar year 2016, users should use variables ending in "16".

The health insurance variables are constructed for the sources of health insurance coverage collected during the MEPS interviews (Panel 20 Rounds 3 through 5, and Panel 21 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. State-specific program participation in non-comprehensive coverage was also identified but is not considered health insurance for the purpose of this survey.

Medicare

Medicare coverage variables (MCARE31, MCARE42, MCARE53 and MCARE16) and the edited versions of these variables (MCARE31X, MCARE42X, MCARE53X and MCARE16X) 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 2016.

Medicaid/SCHIP and Other Public Hospital/Physician Coverage

Medicaid/SCHIP variables (MCAID31, MCAID42, MCAID53, MCAID16) and the edited versions of these variables (MCAID31X, MCAID42X, MCAID53X, MCAID16X, MCDAT31X, MCDAT42X, MCDAT53X, MCDAT16X) were constructed similarly to the month-by-month Medicaid/SCHIP variables.

Other Public A variables (OTPUBA31, OTPUBA42, OTPUBA53, OTPUBA16; and OTPAAT31, OTPAAT42, OTPAAT53, OTPAAT16) were constructed similarly to the month-by-month Other Public variables.

Any Public Insurance

Any public insurance variables (PUB31X, PUB42X, PUB53X, PUB16X, PUBAT31X, PUBAT42X, PUBAT53X, and PUBAT16X) and state-specific programs that provide non-comprehensive coverage variables (STAPR31, STAPR42, STAPR53, STAPR16, STPRAT31, STPRAT42, STPRAT53, and STPRAT16) were constructed similarly to the month-by-month any public insurance and state-specific program variables.

Private Insurance

Variables identifying private insurance in general (PRIV31, PRIV42, PRIV53, PRIV16, PRIVAT31, PRIVAT42, PRIVAT53, PRIVAT16) and specific private insurance sources (such as employer/union group insurance [PRIEU31, PRIEU42, PRIEU53, PRIEU16]; coverage through a job classified as self-employed with firm size of 1 [PRIS31, PRIS42, PRIS53, PRIS16]; non-group coverage [PRING31, PRING42, PRING53, PRING16]; other group coverage [PRIOG31, PRIOG42, PRIOG53, PRIOG16], coverage through an unknown private category [PRIDK31, PRIDK42, PRIDK53, PRIDK16]; coverage from a policyholder living outside the RU [PROUT31, PROUT42, PROUT53, PROUT16], and coverage through a private exchange [PRSTX31, PRSTX42, PRSTX53, PRSTX16]) 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, INS16X, INSAT31X, INSAT42X, INSAT53X, and INSAT16X) and state-specific programs that provide non-comprehensive coverage variables (STAPR31, STAPR42, STAPR53, STAPR16, STPRAT31, STPRAT42, STPRAT53, and STPRAT16) were constructed similarly to the month-by-month any insurance and state-specific program variables.

2.5.10.7 Dental and Prescription Drug Private Insurance Variables (DENTIN31-PMDINS16)

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 2016. 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 21 Round 3 where the end reference year could extend into 2017. DENTIN31 for Panel 20 Round 3 reflects coverage in 2015 and 2016 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 (DNTINS31/16).

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 2016. 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 21 Round 3 where the end reference year could extend into 2017. PMEDIN31 for Panel 20 Round 3 reflects coverage in 2015 and 2016 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 (PMDINS31/16).

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 (TOTTCH16-RXOSR16)

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 20 (excluding 2015 events covered in Round 3) and across Rounds 1 - 3 for Panel 21 (excluding 2017 events covered in Round 3) to produce the annual utilization and expenditure data for 2016. 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 2016. 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., 16). 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 while 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 insure 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 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.

Because payments for medical care provided under capitated reimbursement arrangements and through public clinics and Veterans' Hospitals are not tied to particular medical events, expenditures for events covered under those types of arrangements and settings were also imputed. Using a weighted sequential hot-deck procedure, events covered under capitated arrangements were imputed from events covered under managed care arrangements that were paid based on a discounted fee-for-service method, while imputations for visits to public clinics and Veterans' Hospitals were based on similar events that were paid on a fee-for-service basis. As for other events, selected predictor variables were used to form groups of donor and recipient events for the imputations.

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 there is one charge that 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 2016. For example, all payments for an orthodontist's fee that covered multiple visits over three years were included if the initial visit occurred in 2016. However, if a visit in 2016 to an orthodontist was part of a flat fee in which the initial visit occurred in 2015, 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 2016 but the first visit occurred in 2015, 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 2016. 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 Source--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 (TOTTCH16) 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 2016 (OBTOTV16) as well as the number of such visits to physicians (OBDRV16) and non-physician providers (OBOTHV16) are contained in this file. For a small proportion of sample persons, the sum of the physician and non-physician visit variables (OBDRV16+OBOTHV16) is less than the total number of office-based visits variable (OBTOTV16) because OBTOTV16 contains visits where it was not reported in the HC whether a physician or non-physician provider was seen. Non-physician visits (OBOTHV16) include visits to the following types of providers: chiropractors, midwives, nurses and nurse practitioners, optometrists, podiatrists, physician's assistants, physical therapists, occupational therapists, psychologists, social workers, technicians, receptionists/clerks/secretaries, or other medical providers. Separate utilization variables are included for selected types of more commonly seen non-physician providers including chiropractors (OBCHIR16), nurses/nurse practitioners (OBNURS16), optometrists (OBOPTO16), physician assistants (OBASST16), and physical or occupational therapists (OBTHER16).

Expenditure variables associated with all medical provider visits, physician visits, and non-physician visits in office-based settings can be identified using the attached table in Appendix 1. As for the corresponding utilization variables, the sum of the physician and non-physician visit expenditure variables (e.g. OBDEXP16+OBOEXP16) is less than the total office-based expenditure variable (OBVEXP16) for a small proportion of sample persons. This can occur because OBVEXP16 includes visits where it was not reported whether a physician or non-physician provider was seen.

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 2016 (OPTOTV16) as well as the number of outpatient department visits to physicians (OPDRV16) and non-physician providers (OPOTHV16) are contained in this file. For a small proportion of

sample persons, the sum of the physician and non-physician visit variables (OPDRV16 + OPOTHV16) is less than the total number of outpatient visits variable (OPTOTV16) because OPTOTV16 contains visits where it was not reported whether a physician or non-physician provider was seen.

Expenditure variables (both facility and SBD) associated with all medical provider visits, physician visits, and non-physician visits in outpatient departments can be identified using the attached table in Appendix 1. As for the corresponding utilization variables, the sum of the physician and non-physician expenditure variables (e.g., OPVEXP16 + OPOEXP16 for facility expenses) is less than the variable for total outpatient department expenditures (e.g., OPFEXP16 for facility expenses) for a small proportion of sample persons. This can occur because OBFEXP16 includes visits where it was not reported whether a physician or non-physician provider was seen. No expenditure variables are provided for health care consultations that occurred over the telephone.

Medical Provider (Office) and Hospital Outpatient Combined Visits

Medical provider and hospital outpatient combined visits for Chiropractor (AMCHIR16), Ambulatory Nurse/Practitioner (AMNURS16), Ambulatory Optometrist (AMOPTO16), Physician Assistant (AMASST16) and Ambulatory PT/OT Therapy (AMTHER16) are also contained in this file.

Expenditure variables (both facility and SBD) associated with medical provider plus hospital outpatient visits can be identified using attached table in Appendix 1.

Hospital Emergency Room Visits

The variable ERTOT16 represents a count of all emergency room visits reported for the survey year. Expenditure variables associated with ERTOT16 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 ERTOT16.

Hospital Inpatient Stays

Two measures of total inpatient utilization are provided on the file:

- IPDIS16 is the total number of hospital discharges. It includes hospital stays where the dates of admission and discharge were reported as identical. These “zero-night stays” can be included or excluded from inpatient analyses at the user’s discretion (see last paragraph of this section).

- IPNGTD16 is the total number of nights associated with these discharges. Please note that the variable IPNGTD16 is an imputed version of the IPNGT16 variable released earlier on HC-184. For the 49 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 (see next paragraph for more detail).

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.

Some analysts may prefer to exclude "zero-night stays" from inpatient analyses and/or count these stays as ambulatory visits. Therefore, a separate variable is provided that contains a count of the number of inpatient events where the reported dates of admission and discharge were the same (IPZERO16). This variable can be subtracted from IPDIS16 to exclude "zero-night stays" from inpatient utilization estimates. In addition, separate expenditure variables are provided for zero-night facility expenses (ZIFEXP16) and for separately billing doctor expenses (ZIDEXP16). Analysts who choose to exclude zero-night stays from inpatient expenditure analyses need to subtract the zero-night expenditure variable from the corresponding expenditure variable for total inpatient stays (e.g., IPFEXP16-ZIFEXP16 for facility expenses, IPDEXP16-ZIDEXP16 for separately billing doctor expenses).

Dental Care Visits

The total number of dental care visits variable (DVTOT16) includes those to any person(s) for dental care including general dentists, dental hygienists, dental technicians, dental surgeons, orthodontists, endodontists, and periodontists. Additional variables are provided for the numbers of dental visits to general dentists (DVGEN16) and to orthodontists (DVORTH16). For a small proportion of sample persons, the sum of the general dentist and orthodontist visit variables (DVGEN16+DVORTH16) may not be equal to the total number of dental visits (DVTOT16). This result can only occur for persons who were reported to have seen both a general dentist and orthodontist in the same visit(s). When this occurred, expenditures for the visit were included as orthodontist expenses (DVOEXP16) but not as general dentist expenses (DVGEXP16). Expenditures for dental visits where it was not reported that a general dentist or orthodontist was seen are only included in the total dental expenses variable (DVTEXP16). Expenditure variables for all three categories of dental providers can be identified using the attached table in Appendix 1.

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 2016 where home health care was received from the following: from any type of paid or unpaid caregiver (HHTOTD16), from agencies, hospitals, or nursing homes (HHAGD16), from self-employed persons (HHINDD16), and from unpaid informal caregivers not living with the sample person (HHINFD16). 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.

Vision Aids

Expenditure variables for the purchase of glasses and/or contact lenses are identified in the attached table in Appendix 1. Due to the data collection methodology, it was not possible to determine whether vision items that were reported in Round 3 had been purchased in 2015 or 2016. Therefore, expenses reported in Round 3 were only included if more than half of the person's reference period for the round was in 2016.

Other Medical Equipment and Services

This category includes expenditures for ambulance services, orthopedic items, hearing devices, prostheses, bathroom aids, medical equipment, disposable supplies, alterations/modifications, and other miscellaneous items or services that were obtained, purchased, or rented during the year. On this file, diabetic supplies and insulin are not considered to be medical equipment. All use and expenditure information for these items are included in the prescribed medicine variables. Respondents were asked only once (in Round 3) about their total annual expenditures and were not asked about their frequency of use of these services. Expenditure variables representing the combined expenses for these supplies and services are identified in the Appendix 1 table.

Prescribed Medicines

There is one total utilization variable (RXTOT16) and 13 expenditure variables included on the 2016 full-year file relating to prescribed medicines. These 13 expenditure variables include an annual total expenditure variable (RXEXP16) and 12 corresponding annual source of payment variables (RXSLF16, RXMCR16, RXMCD16, RXPRV16, RXVA16, RXTRI16, RXOFD16,

RXSTL16, RXWCP16, RXOSR16, RXOPR16, and RXOPU16). The total utilization variable is a count of all prescribed medications purchased during 2016 (includes initial purchases and refills). The total expenditure variable sums all amounts paid out-of-pocket and by third party payers for each prescription purchased in 2016. 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: whether any free samples of the medication were received; 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, month, and day 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. Also, during the Household Component, respondents were asked if they send in claim forms for their prescriptions (self-filers) or if their pharmacy providers do this automatically for them at the point of purchase (non-self-filers). For non-self-filers, charge and payment information was collected in the pharmacy component survey, unless the purchase was an insulin or diabetic supply/equipment event. However, charge and payment information was collected for self-filers in the household questionnaire, because payments by private third party payers for self-filers' purchases would not be available from the pharmacy component. Uninsured persons were treated as those whose pharmacies filed their prescription claims at the point of purchase. Persons who said they did not know if they sent in their own prescription claim forms were treated as those who did send in their own prescription claim forms.

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 2016 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. Charge and payment information was asked for these events.

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 events for which charge and payment data were collected from the household in the HC, information on payment sources was retained to the extent that these data were reported. 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.

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 (***PTR16 series) is the sum of the private and Tricare payer categories (i.e., ***PTR16=***PRV16+***TRI16). The second (***OTH16 series) is the sum of the least common source of payment categories including: 1) other federal (***OFD16), 2) state and local (***STL16), 3) other private (***OPR16), 4) other public (***OPU16), and 5) other sources (***OSR16). Since the ***PTR16 and ***OTH16 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 2016 full-year consolidated data file.

Added

- CBCK31
- CBCKYR31
- CCLHIN31
- CCNRDI31
- CDIAG31
- CDLFUP31
- CDLMNT31
- CDLOTH31
- CDLPRS31
- CDLTRT31
- CDLVST31
- CEFACT31
- CEFBCK31
- CEFCOP31
- CEFFTG31
- CEFHLT31
- CEFLCT31
- CEFMHL31
- CEFMPR31
- CEFMTL31
- CEFOG31
- CEFPAC31
- CEFPHL31
- CEFPIN31
- CEFPOS31
- CEFQLF31
- CEFRLT31
- CEFSTG31
- CEFUND31
- CERET31
- CEXTDI31
- CEXTLT31
- CEXTM31
- CEXTMT31
- CEXTRT31
- CFM2MT31
- CFMCHD31
- CFMEM31
- CFMFND31
- CFMOTR31
- CFMPAR31
- CFMREL31
- CFMSIB31
- CFMSPS31
- CFMTOF31
- CFNAMT31
- CFNBNK31
- CFNDBT31
- CFNINC31
- CFNLIV31
- CFNOTH31
- CFNPMT31
- CFNPUR31
- CFNSAV31
- CFNSPD31
- CFNSTB31
- CFNUNB31
- CFNVAC31
- CFRET31
- CFTRT31
- CINADQ31
- CINAFD31
- CINCMP31
- CINCOV31
- CINDIF31
- CINIHS31
- CINMDA31
- CINMDC31
- CINMDG31
- CINMLT31
- CINNCV31
- CINNOC31
- CINOGP31
- CINPRV31
- CINSHP31
- CINSSP31
- CLHINS31
- CLPROD31
- CLSTRT31
- CMCEFF31
- CMCFUP31
- CMCNEC31
- CMCOST31
- CMCPSY31
- CMCSTY31
- CMCTRT31
- CMNACC31
- CMNAFF31
- CMNCRE31
- CMNINS31
- CMNLNG31
- CMNOFF31
- CMNPLC31
- CMNTIM31
- CMTASK31
- CNCCHD31
- CNCHME31
- CNCLOD31
- CNCMED31
- CNCNON31
- CNCNTS31
- CNCTRP31
- CNGFLX31
- CNPTLD31
- CPROM31
- CPTASK31
- CSLHIN31
- CTMOFF31
- CTRTMT31
- CWRKP31
- CWYCNG31
- CSAQW16F

Deleted

- EDRECODE
- EDUYRDG

2.6 Linking to Other Files

2.6.1 Event and Condition Files

Records on this file can be linked to 2016 MEPS-HC public use event and conditions files by the sample person identifier (DUPERSID). The Panel 20 cases on this file (PANEL=20) can also be linked back to the 2015 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

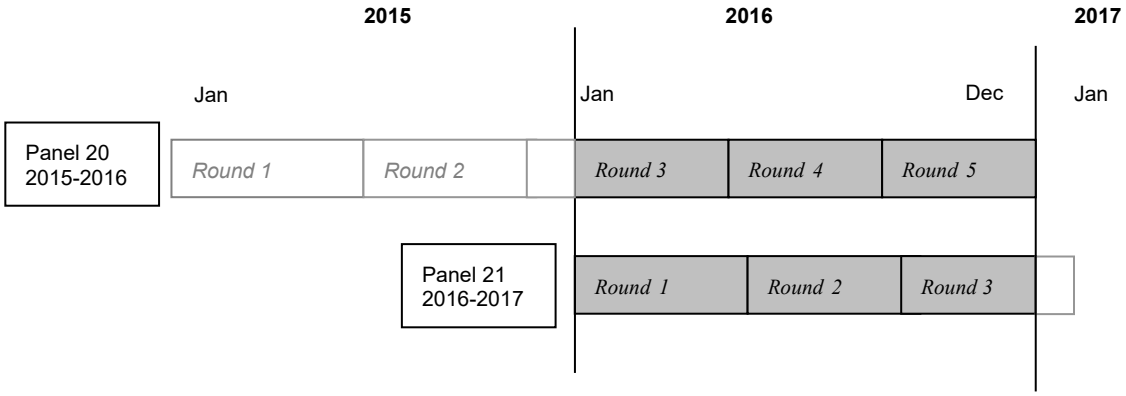
Panel-specific longitudinal files are available for downloading in the data section of the MEPS website. For each panel, the longitudinal file comprises MEPS survey data obtained in Rounds 1 through 5 of the panel and can be used to analyze changes over a two-year period. Variables in the file pertaining 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 2016. The data were collected in Rounds 1, 2, and 3 for MEPS Panel 21 and Rounds 3, 4, and 5 for MEPS Panel 20. (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 – 2015 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 2016. These data were obtained from both MEPS panels for those rounds (or portions of rounds) associated with calendar year 2016.

A sample design feature shared by both Panel 20 and Panel 21 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

There have been some published reports on the MEPS sample design. For detailed information on the MEPS sample design, see Cohen, S., Sample Design of the 1997 Medical Expenditure Panel Survey Household Component. Rockville (MD): Agency for Healthcare Research and Quality; 2000. MEPS Methodology Report, No. 11. AHRQ Pub. No. 01-0001 and Ezzati-Rice, T.M., Rohde, F., Greenblatt, J., (2008). Sample Design of the Medical Expenditure Panel Survey Household Component, 1998-2007, Methodology Report, No. 22. March 2008. Agency for Healthcare Research and Quality, Rockville, MD.

3.1.2 MEPS-Linked to the National Health Interview Survey (NHIS)

Each responding household found in this 2016 MEPS dataset is associated with one of two separate and overlapping MEPS panels, MEPS Panel 20 and MEPS Panel 21. These panels consist of subsamples of households participating in the 2014 and 2015 NHIS, respectively, and reflecting the NHIS sample design first implemented in 2006.

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. It may be noted that 2016 is the last year for which both MEPS panels reflect the 2006 NHIS sample design. MEPS Panel 22 (fielded in 2017) will reflect the new NHIS design, first implemented in 2016. To the extent that users compare MEPS estimates to 2016 NHIS estimates, they should be cognizant of this design change as it may affect the extent to which MEPS and NHIS data are comparable. An overview of the new CDC NHIS sample design can be found at the CDC website.

As background, the NHIS is a complex multi-stage sample design. A brief and simplified description of the NHIS design follows. The first stage of sample selection is an area sample of PSUs, where PSUs generally consist of one or more counties. Within PSUs, density strata are formed, generally reflecting the density of minority populations for single or groups of blocks or block equivalents that are assigned to the strata. Within each such density stratum "supersegments" are formed, consisting of clusters of housing units. Samples of supersegments are selected for use over a 10-year data collection period for the NHIS. Households within supersegments are selected for each calendar year the NHIS is carried out. In the NHIS sample design used since 2006, Asians are oversampled in addition to Hispanics and Blacks. These features of the NHIS complex survey design carry over to the MEPS. The only major difference in eligibility status for housing units between NHIS and MEPS is that college dorms represent ineligible housing units for MEPS. 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. (There is also a person-level stage of sampling for the NHIS, but that does not affect the MEPS sample design.)

The households (occupied DUs) selected for MEPS Panel 20 were a subsample of the 2014 NHIS responding households, while those in MEPS Panel 21 were a subsample of 2015 NHIS responding households. A MEPS household may contain one or more family units, each consisting of one or more individuals. Analysis using MEPS data can be undertaken using either the individual or the family as the unit of analysis.

There were 10,610 households (occupied DUs) selected for MEPS Panel 20 of which 10,571 were eligible for fielding (college dormitories were eliminated). They were randomly selected from among the households responding to the 2014 NHIS. A subsample of 9,700 households was randomly selected for MEPS Panel 21 from the households responding to the 2015 NHIS, of which 9,658 were fielded for MEPS after the elimination of college dorms.

3.1.3 Sample Weights and Variance Estimation

In the dataset "MEPS HC-192: 2016 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 PERWT16F provided in this file supersedes the corresponding person-level weight variable provided in the 2016 Full Year Population Characteristic File (HC-184). 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 20 and Panel 21.

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 2016 Full Year File (Panel 21 Rounds 1-3/Panel 20, Rounds 3-5)

	Panel 20	Panel 21	2016 Combined
A. Percentage of NHIS households designated for use in MEPS (those initially characterized as responding) *	75.1%	71.2%	—
B. Number of households sampled from the NHIS	10,610	9,700	—
C. Number of Households sampled from the NHIS and fielded for MEPS	10,571	9,658	—
D. Round 1 – Number of RUs eligible for interviewing	11,283	10,280	—
E. Round 1 – Number of RUs with completed interviews	8,287	7,643	—
F. Round 2 – Number of RUs eligible for interviewing	8,554	7,870	—
G. Round 2 – Number of RUs with completed interviews	7,991	7,319	—
H. Round 3 – Number of RUs eligible for interviewing	8,136	7,478	—
I. Round 3 – Number of RUs with completed interviews	7,743	7,035	—
J. Round 4 – Number of RUs eligible for interviewing	7,877	—	—
K. Round 4 – Number of RUs with completed interviews	7,621	—	—
L. Round 5 – Number of RUs eligible for interviewing	7,698	—	—
M. Round 5 – Number of RUs with completed interviews	7,421	—	—
Overall annual unweighted response rates P21: A x (E/D) x (G/F) x (I/H) P20: A x (E/D) x (G/F) x (I/H) x (K/J) x (M/L) Combined: 0. 510 x P20 + 0. 490 x P21	45.7% (Panel 20 through Round 5)	46.3% (Panel 21 through Round 3)	46.0%

*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 2016 based on the full MEPS sample data from the MEPS Panel 20 and Panel 21, the two panels are combined. More specifically, full calendar year 2016 data collected in Rounds 3 through 5 for the MEPS Panel 20 sample are pooled with data from the first three rounds of data collection for the MEPS Panel 21 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 20, Round 2 the ratio of 7,991 (Row G) to 8,554 (Row F) multiplied by 100 represents the response rate for the round (93.4 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 20 and Panel 21 for 2016 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 20 represents about 51.0percent of the combined sample size while Panel 21 represents the remaining 49.0 percent. Thus, the combined response rate of 46.0 percent was computed as 0.510 times 45.7, the overall Panel 20 response rate through Round 5 plus 0.490 times 46.3, the overall Panel 21 response rate through Round 3.

3.2.2 Panel 21 Response Rates

For MEPS Panel 21, Round 1, 9,658 households were fielded in 2016 (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 in each Round of Panel 21 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 71.2 (the percentage of the NHIS sampled households designated for use in selecting a sample of households for MEPS) yields an overall response rate of 46.3 percent for Panel 21 through Round 3.

3.2.3 Panel 20 Response Rates

For MEPS Panel 20, 10,571 households were fielded in 2015 (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 20. The overall response rate for Panel 20 was computed in a similar fashion to that of Panel 21 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 20 through Round 5 is 45.7 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 20 response rate was weighted by a factor of 0. 510 and Panel 21 was weighted by a factor of 0. 490, reflecting approximately the distribution of the overall sample between the two panels. The resulting combined response rate for the combined panels was computed as (0.510 x 45.7) plus (00.490 x 46.3) or 46.0 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 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 Panels 20 and 21), Asians, as well as Hispanics and Blacks, are oversampled. The average oversampling rates for the three minority groups have not yet been reported.

For both Panel 20 and Panel 21, 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 20, the "Other, complete" domain was sampled at a rate of about 84 percent while the "Other, partial complete" domain was sampled at a rate of about 53 percent. For Panel 21, the corresponding sampling rates for the "Other, complete" domain and the "Other, partial complete" domain were about 81 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 2016 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 20 and Panel 21. When one compares unweighted measures (e.g., response rates) between panels and years, one should take into account such differences. If, 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 (PERWT16F)

3.3.1 Overview

There is a single full year person-level weight (PERWT16F) 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 2016. 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 PERWT16F was developed in several stages. First, person-level weights for Panel 20 and Panel 21 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 2016 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 20 were multiplied by the factor .510 and each weight from Panel 21 by the factor .490. 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.

In developing the final person-level weight for 2016 (PERWT16F), an additional raking dimension was included beyond those based on the usual six variables. This dimension was added to adjust the distribution of inpatient hospital utilization among the elderly to reflect trends in other data sources. The table below shows ratios of weighted numbers for those 65 and older that were used to establish this additional raking dimension, modifying the corresponding estimates obtained without the additional dimension.

Ratio of Adjusted to Unadjusted Weights (Cases where AGE16X>=65 and INSC1231=1)

# of Inpatient Discharges (IPDIS16)	# of Nights in Hospital for Discharges (IPNGTD16)	Ratio
0	0	0.9746
1+	0 - 4	1.1227
1+	5 - 9	1.1548
1+	10+	1.3597

3.3.3 MEPS Panel 20 Weight Development Process

The person-level weight for MEPS Panel 20 was developed using the 2015 full year weight for an individual as a "base" weight for survey participants present in 2016. For key, in-scope members who joined an RU some time in 2016 after being out-of-scope in 2015, the initially assigned person-level weight was the corresponding 2015 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 2016. These control figures were derived by scaling back the population totals obtained from the March 2017 CPS to correspond to a national estimate for the civilian noninstitutionalized population to reflect the December 31, 2016 estimated population total (estimated based on Census projections for January 1, 2017). Variables used in the establishment of person-level control figures included: 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, 2016 but were inscope earlier in the year was the weight after the nonresponse adjustment.

3.3.4 MEPS Panel 21 Weight Development Process

The person-level weight for MEPS Panel 21 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, ratio-adjustment to NHIS-based national population estimates at the household (occupied dwelling unit) level, 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., 2015 for Panel 20 and 2016 for Panel 21). 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 2016 portion of Round 3 as well as raking to the same population control figures for December 2016 used for the MEPS Panel 20 weights. The same five variables employed for Panel 20 raking (census region, MSA status, race/ethnicity, sex, and age) were used for Panel 21 raking. Similarly, for Panel 21, key, responding persons not inscope on December 31, 2016 but inscope earlier in the year retained, as their final Panel 21 weight, the weight after the nonresponse adjustment.

3.3.5 The Final Person-Level Weight for 2016

The composite weights of two groups of persons who were out-of-scope on December 31, 2016 were poststratified. 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 poststratified to a corresponding control total obtained from the 1996 MEPS Nursing Home Component. The weights of persons who died while inscope during 2016 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 PERWT16F>0) is 323,141,687 (see Table 3.2). The corresponding total for the population that was inscope on December 31, 2016 is 319,197,609.

Table 3.2. Number of person-level respondents and corresponding population estimates for the 2016 Full Year Consolidated File

Populations of Interest	Panel 20	Panel 21	Combined	Population estimate (weighted total of combined samples)
Civilian, Noninstitutionalized Population over the course of 2016	16,823	16,436	33,259	323,141,687
Civilian, Noninstitutionalized Population on December 31, 2016	16,667	16,241	32,908	319,197,609

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 2017 CPS data serve as the basis for the 2016 MEPS weight calibration efforts. An article discussing the impact of this transition 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 2016 U.S. civilian, noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 2014 (Panel 20) and 2015 (Panel 21). New households created after the NHIS interviews for the respective panels and consisting exclusively of persons who entered the target population after 2014 (Panel 20) or after 2015 (Panel 21) 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: FAMWT16F and FAMWT16C. FAMWT16F can be used to make estimates for the cross-section of families in the U.S. civilian noninstitutionalized population on December 31, 2016 where families are identified based on the MEPS definition of a family unit. Estimates can include MEPS families that existed at some time during 2016 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, 2016. FAMWT16C can be used to make estimates for the cross-section of families in the U.S. civilian, noninstitutionalized population on December 31, 2016 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, as well as foster children (foster children are not included as members under the CPS definition of a family). 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 (FAMWT16F or FAMWT16C). 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 14 and the number in the CPS families ranges from 1 to 14. 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 12/31/16 and therefore part of a MEPS family on 12/31/16. 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, 2016, analyze only families where FAMS1231 is 2 or more). Estimates can also be made for the cross-section of CPS families on December 31, 2016 based on the 14,266 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 12/31/16	FAMWT16F>0 & FMRS1231=1	13,491	FAMS1231
Families in the Civilian Noninstitutionalized Population on 12/31/16 plus families and members of families in existence earlier in 2016 who were not part of the civilian noninstitutionalized population on 12/31/16	FAMWT16F>0	13,587	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 FAMWT16F 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 FAMWT16C 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 two ways: foster children are not considered family members and 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, 2016 containing either unmarried partners living together or foster children were partitioned into units that correspond to CPS families (families with no unmarried partners or foster children 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 (PERWT16F) of the family reference person (FAMRFPYR=1) of the MEPS family with which they were associated. These CPS family-level weights (FAMWT16C) were obtained by raking to population control figures derived from CPS estimates for December 2016 (derived by scaling the family population totals from the March 2017 CPS back to reflect December 31, 2016). 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, 2016. The family-level weight variable for MEPS families (FAMWT16F) 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, 2016 based on 14,266 CPS families in the sample is 142,444,889. Overall, the weighted population estimate for the 13,491 MEPS family units containing at least one member of the U.S. civilian, noninstitutionalized population on December 31, 2016 (those families whose members have FAMWT16F>0 and FMRS1231=1) is 137,035,127. The inclusion of families whose members left the in-scope population prior to December 31, 2016 increases the estimated total number of families represented by the 13,587 MEPS responding families (whose members have FAMWT16F>0) to 138,461,773.

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 2016 Full Year Consolidated Data File

	Panel 20	**Panel 21**	**Combined**	**Population estimate (weighted total of combined sample)**
Number	6,958	6,629	13,587	138,461,773

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, SAQWT16F, has been provided for use with the data obtained from the Self-Administered Questionnaire (SAQ). This questionnaire was administered in Panel 21, Round 2 and Panel 20, 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 2016 was constructed as follows with only those with a 2016 full year person weight (PERWT16F>0) eligible to receive the 2016 SAQ weight. First, the weight variable was developed by adjusting for questionnaire non-response. 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. Then the weights were raked to Current Population Survey (CPS) estimates corresponding to December 2016 (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 two raking efforts were used for the 2016 Consolidated file in order to maintain consistency with how the sample weights were computed in previous years.

The final 2016 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 SAQWT16F.

In all, there were 21,706 persons assigned an SAQ weight with the sum of the weights being 245,222,739 (an estimate of the civilian, noninstitutionalized population aged 18 or older at the time the SAQ was administered).

The Panel 20 unweighted response rate for the 2016 SAQ was 88.6 percent, while the Panel 21 unweighted response rate for the 2016 SAQ was 86.5 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 0.51 was associated with Panel 20, and a value of 0.49 was associated with Panel 21). The pooled unweighted response rate for the combined panels for the 2016 SAQ is 87.6 percent.

3.8 Weights and Response Rates for the Diabetes Care Survey

A person-level weight, DIABW16F, 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).

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 over the age of 17 (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 over the age of 17 (as long as they did not die during the round). In Rounds 3/5 the screening questions are asked of the RU respondent for all RU members over the age of 17 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 Rounds 3/5). Also in Rounds 3/5, an RU respondent may indicate that an RU member previously identified as having diabetes actually does not have diabetes. Any RU member who has been identified by the RU respondent as having diabetes at any time during MEPS (and not later negated in Rounds 3/5) 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, 2,197 people were assigned a DCS weight (DIABW16F>0). The sum of the DCS weights is 25,059,776, an estimate of the adult population self-reporting as having been diagnosed with diabetes based on the two-step process described above.

The Panel 20 unweighted response rate for the 2016 DCS was 84.9 percent. The Panel 21 unweighted response rate for the 2016 DCS was 82.5 percent. The pooled unweighted response rate for the combined panels for the DCS is 83.7 percent. The pooled unweighted response rate is a weighted average for the two panels, reflecting their relative sample sizes (about 50.6 percent of the MEPS respondents are from Panel 21, the remaining 49.4 percent from Panel 20).

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 2016 a questionnaire was administered in Rounds 1/3 (Round 3 for Panel 20, Rounds 1 and 3 for Panel 21) to those adults (ages 18 or older) identified as having been diagnosed with cancer after the age of 17. The basic procedure for identifying those eligible to complete a Cancer Self-Administered Questionnaire (CSAQ) was the same as that for those eligible to complete the Diabetes Care Survey, as

described in Section 3.8 (including the possible negation in Rounds 3/5 of a previous identification as having been diagnosed with cancer).

Among those eligible to complete the cancer SAQ, those who were assigned a CSAQ weight had to meet the following conditions: been assigned a 2016 full year person weight (PERWT16F>0); completed the CSAQ; and self-identified as having been diagnosed with cancer after the age of 17. In all, 1,236 people were assigned a CSAQ weight (CSAQW16F>0). The sum of the CSAQ weights is 19,756,335, 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 20 unweighted response rate for the 2016 CSAQ was 83.4 percent. The Panel 21 unweighted response rate for the 2016 CSAQ was 79.3 percent. The pooled unweighted response rate for the combined panels for the CSAQ was 81.2 percent. This pooled response rate is a weighted average for the two panels, reflecting their relative sample sizes (about 53.2 percent of the MEPS respondents are from Panel 21, the remaining 46.8 percent from Panel 20).

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 2008 file and beyond are based on the new 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.

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. So 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 2016 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, PERWT16F should always be used.

For person-level analysis involving variables from the SAQ but not the DCS, the SAQWT16F 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, SAQWT16F 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 DIABW16F should be used for those eligible to provide DCS data. Similarly, whenever data from the CSAQ are used, the weight variable CSAQW16F should be used for those eligible to provide CSAQ data.

For all family-level analyses, FAMWT16F or FAMWT16C 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. 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. 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. Data users should 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-192: 2016 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
FAMID16	Family ID (Student Merged In) – 12/31/16	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
RULETR16	RU Letter as of 12/31/16	CAPI Derived
RUSIZE31	RU Size – R3/1	CAPI Derived
RUSIZE42	RU Size – R4/2	CAPI Derived
RUSIZE53	RU Size – R5/3	CAPI Derived
RUSIZE16	RU Size as of 12/31/16	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
RUCLAS16	RU fielded as: Standard/New/Stud-12/31/16	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
FAMSZE16	RU Size Including Students as of 12/31/16	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
REGION16	Census Region as of 12/31/16	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
REFPRS16	Reference Person as of 12/31/16	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
RESP16	1st Respondent Indicator as of 12/31/16	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
PROXY16	Was Respondent a Proxy as of 12/31/16	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
ENDRFM16	2016 Reference Period End Date: Month	RE Section

VARIABLE	DESCRIPTION	SOURCE
ENDRFY16	2016 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
INSCOP16	Inscope – R5/3 Start through 12/31/16	RE Section
INSC1231	Inscope Status on 12/31/16	Constructed
INSCOPE	Was Person Ever Inscope in 2016	RE Section
ELGRND31	Eligibility – R3/1	RE Section
ELGRND42	Eligibility – R4/2	RE Section
ELGRND53	Eligibility – R5/3	RE Section
ELGRND16	Eligibility Status as of 12/31/16	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
AGE16X	Age as of 12/31/16 (Edited/Imputed)	RE 12, 57-66
AGELAST	Person's Age Last Time Eligible	AGE16X, 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
MARRY16X	Marital Status–12/31/16 (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
SPOUID16	Spouse ID – 12/31/16	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
SPOUIN16	Marital Status w/Spouse Present–12/31/16	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

VARIABLE	DESCRIPTION	SOURCE
FTSTU42X	Student Status if Ages 17-23 – R4/2	RE 11A, 106-108
FTSTU53X	Student Status if Ages 17-23 – R5/3	RE 11A, 106-108
FTSTU16X	Student Status if Ages 17-23 – 12/31/16	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
REFRL16X	Relation to Ref Pers – 12/31/16 (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
AFDC16	Did Person's Check Include Tanf	IN 44
FILEDR16	Has Person Filed A Fed Income Tax Return	IN 02
WILFIL16	Will Person File Fed Income Tax Return	IN 03
FLSTAT16	Person's Filing Status	IN 04
FILER16	Primary Or Secondary Filer	IN 04
JTINRU16	Joint Filer's Membership In RU	IN 05
JNTPID16	PID of Joint Filer	IN 05
CLMDEP16	Did/Will Pers Claim Dependents On Return	IN 06
DEPDNT16	Person Is Flagged A Dependent	IN 07
DPINRU16	Dependents In/Out Of RU	IN 07
DPOTSD16	How Many Dependents Live Outside RU	IN 08
TAXFRM16	Tax Form Person Will File	IN 09
CLMHIP16	Did/Will Pers Deduct Health Insur Prem	IN 15
EICRDT16	Did/Will Pers Receive Earned Inc Credit	IN 17
FOODST16	Did Anyone Receive Food Stamps	IN 55
FOODMN16	Number Of Months Food Stamps Received	IN 56
FOODVL16	Monthly Value Of Food Stamps	IN 58
TTLP16X	Person's Total Income	Constructed
FAMINC16	Family's Total Income	Constructed
POVCAT16	Family Income As Percent Of Poverty Line - Categorical	Constructed
POVLEV16	Family Income As Percent Of Poverty Line - Continuous	Constructed
WAGEP16X	Person's Wage Income	Constructed
WAGIMP16	Wage Imputation Flag	Constructed
BUSNP16X	Person's Business Income	Constructed
BUSIMP16	Business Income Imputation Flag	Constructed
UNEMP16X	Person's Unemployment Comp Income	Constructed
UNEIMP16	Unemployment Imputation Flag	Constructed
WCMPP16X	Person's Workers' Compensation	Constructed
WCPIMP16	Workers' Comp Imputation Flag	Constructed
INTRP16X	Person's Interest Income	Constructed
INTIMP16	Interest Imputation Flag	Constructed
DIVDP16X	Person's Dividend Income	Constructed

VARIABLE	DESCRIPTION	SOURCE
DIVIMP16	Dividend Imputation Flag	Constructed
SALEP16X	Person’s Sales Income	Constructed
SALIMP16	Sales Income Imputation Flag	Constructed
PENSP16X	Person’s Pension Income	Constructed
PENIMP16	Pension Income Imputation Flag	Constructed
SSECP16X	Person’s Social Security Income	Constructed
SSCIMP16	Social Security Imputation Flag	Constructed
TRSTP16X	Person’s Trust/Rent Income	Constructed
TRTIMP16	Trust Income Imputation Flag	Constructed
VETSP16X	Person’s Veteran’s Income	Constructed
VETIMP16	Veteran's Income Imputation Flag	Constructed
IRASP16X	Person’s Ira Income	Constructed
IRAIMP16	Ira Income Imputation Flag	Constructed
ALIMP16X	Person’s Alimony Income	Constructed
ALIIMP16	Alimony Income Imputation Flag	Constructed
CHLDP16X	Person’s Child Support	Constructed
CHLIMP16	Child Support Imputation Flag	Constructed
CASHP16X	Person’s Other Regular Cash Contrib	Constructed
CSHIMP16	Cash Contribution Imputation Flag	Constructed
SSIP16X	Person’s SSI	Constructed
SSIIMP16	SSI Imputation Flag	Constructed
PUBP16X	Person’s Public Assistance	Constructed
PUBIMP16	Public Assistance Imputation Flag	Constructed
OTHRP16X	Person’s Other Income	Constructed
OTHIMP16	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
CHBRON53	Chronc Bronchits Last 12 Mths (>17)–R5/3	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

VARIABLE	DESCRIPTION	SOURCE
CAMELANO	Cancer Diagnosed - Melanoma (>17)	PE22
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
JTPAIN53	Joint Pain Last 12 Months (>17) – RD 5/3	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
ASSTIL53	Does Person Still Have Asthma - RD 5/3	PE33A
ASATAK31	Asthma Attack Last 12 Mos– RD 3/1	PE34
ASATAK53	Asthma Attack Last 12 Mos– RD 5/3	PE34
ASTHEP31	When Was Last Episode Of Asthma – Rd 3/1	PE35
ASTHEP53	When Was Last Episode Of Asthma – Rd 5/3	PE35
ASACUT53	Used Acute Pres Inhaler Last 3 Mos-RD5/3	PC05A
ASMRCN53	Used >3Acute Cn Pres Inh Last 3 Mos-RD5/3	PC05B
ASPREV53	Ever Used Prev Daily Asthma Meds -RD5/3	PC06A
ASDALY53	Now Take Prev Daily Asthma Meds - RD 5/3	PC06B
ASPKFL53	Have Peak Flow Meter at Home – RD 5/3	PC08
ASEVFL53	Ever Used Peak Flow Meter - RD 5/3	PC08A
ASWNFL53	When Last Used Peak Flow Meter - RD 5/3	PC08B
ADHDADDX	ADHD/ADD Diagnosis (5-17)	PE36
ADHDAGED	Age of Diagnosis-ADHD/ADD	PE37
PREGNT31	Pregnant During Ref Period – RD 3/1	CE05B
PREGNT42	Pregnant During Ref Period – RD 4/2	CE05B
PREGNT53	Pregnant During Ref Period – RD 5/3	CE05B

HEALTH STATUS VARIABLES - PUBLIC USE

VARIABLE	DESCRIPTION	SOURCE
IADLHP31	IADL Screener – RD 3/1	HE 1-3
IADLHP53	IADL Screener – RD 5/3	HE 1-3
ADLHLP31	ADL Screener – RD 3/1	HE 4-6
ADLHLP53	ADL Screener – RD 5/3	HE 4-6
AIDHLP31	Used Assistive Devices – RD 3/1	HE 7-8
AIDHLP53	Used Assistive Devices – RD 5/3	HE 7-8
WLKLIM31	Limitation in Physical Functioning – RD 3/1	HE 9-10
WLKLIM53	Limitation in Physical Functioning – RD 5/3	HE 9-10
LFTDIF31	Difficulty Lifting 10 Pounds – RD 3/1	HE 11
LFTDIF53	Difficulty Lifting 10 Pounds – RD 5/3	HE 11
STPDIF31	Difficulty Walking up 10 Steps – RD 3/1	HE 12
STPDIF53	Difficulty Walking up 10 Steps – RD 5/3	HE 12
WLKDIF31	Difficulty Walking 3 Blocks – RD 3/1	HE 13
WLKDIF53	Difficulty Walking 3 Blocks – RD 5/3	HE 13
MILDIF31	Difficulty Walking a Mile – RD 3/1	HE 14
MILDIF53	Difficulty Walking a Mile – RD 5/3	HE 14
STNDIF31	Difficulty Standing 20 Minutes – RD 3/1	HE 15
STNDIF53	Difficulty Standing 20 Minutes – RD 5/3	HE 15
BENDIF31	Difficulty Bending/Stooping – RD 3/1	HE 16
BENDIF53	Difficulty Bending/Stooping – RD 5/3	HE 16
RCHDIF31	Difficulty Reaching Overhead – RD 3/1	HE 17
RCHDIF53	Difficulty Reaching Overhead – RD 5/3	HE 17
FNGRDF31	Difficulty Using Fingers to Grasp – RD 3/1	HE 18
FNGRDF53	Difficulty Using Fingers to Grasp – RD 5/3	HE 18
ACTLIM31	Any Limitation Work/Housewrk/Schl – RD 3/1	HE 19-20
ACTLIM53	Any Limitation Work/Housewrk/Schl – RD 5/3	HE 19-20
WRKLIM31	Work Limitation – RD 3/1	HE 20A
WRKLIM53	Work Limitation – RD 5/3	HE 20A
HSELIM31	Housework Limitation – RD 3/1	HE 20A
HSELIM53	Housework Limitation – RD 5/3	HE 20A
SCHLIM31	School Limitation – RD 3/1	HE 20A
SCHLIM53	School Limitation – RD 5/3	HE 20A

VARIABLE	DESCRIPTION	SOURCE
UNABLE31	Completely Unable to Do Activity – RD 3/1	HE 21
UNABLE53	Completely Unable to Do Activity – RD 5/3	HE 21
SOCLIM31	Social Limitations – RD 3/1	HE 22-23
SOCLIM53	Social Limitations – RD 5/3	HE 22-23
COGLIM31	Cognitive Limitations – RD 3/1	HE 24-25
COGLIM53	Cognitive Limitations – RD 5/3	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
ANYLMT16	Any Limitation in P20R3,4,5/P21R1,2,3	Constructed
CHPMED42	CSHCN: Child Needs Prescrb Med(0-17)-R4/2	CS03
CHPMHB42	CSHCN: Pmed for Hlth/Behv Cond (0-17)-R4/2	CS03OV1
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

VARIABLE	DESCRIPTION	SOURCE
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
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

VARIABLE	DESCRIPTION	SOURCE
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
DENTCK53	How Often Dental Check-up – RD 5/3	AP12
BPCHEK53	Time Snce Lst Blood Pres Chk (>17) – RD 5/3	PC11/AP15
CHOLCK53	How Lng Cholest Lst Chck (>17) – RD 5/3	AP16
CHECK53	How Lng Lst Routne Checkup (>17) – RD 5/3	AP17
NOFAT53	Restrict HGH Fat/Choles Food (>17)–RD 5/3	PC13_01/AP17A_01
EXRCIS53	Advised to Exercise More (>17) – RD 5/3	PC13_02/AP17A_02
FLUSHT53	How Lng Last Flu Vacination (>17) – RD 5/3	AP18
ASPRIN53	Tke Aspirn Every (Othr) Day (>17)–RD 5/3	PC15/AP18A
NOASPR53	Taking Aspirin Unsafe (>17) – RD 5/3	PC16/AP18AA
STOMCH53	Tke Asprn Unsafe B/C Stomch (>17) – RD 5/3	PC17/AP18AAA
LSTETH53	Lost All Uppr And Lowr Teeth (>17) – RD 5/3	AP18B
PSA53	How Long Since Last PSA (>39) – RD 5/3	AP19
HYSTER53	Had a Hysterectomy (>17) – RD 5/3	AP20A
PAPSMR53	How Lng Lst Pap Smear Tst (>17) – RD 5/3	AP20
BRSTEX53	How Lng Snce Lst Breast Exam (>17) – RD 5/3	AP21

VARIABLE	DESCRIPTION	SOURCE
MAMOGR53	How Lng Snce Lst Mammogram (>29) – RD 5/3	AP22
BSTST53	Mst Rcnt Bld Stool Tst Hme Kit(>39)-R5/3	AP24
BSTSRE53	Rsn Have Bld Stool Tst (>39)-R5/3	AP24A
CLNTST53	Most Recent Colonoscopy (>39) - R5/3	AP26
CLNTRE53	Rsn Have Colonoscopy (>39) – R5/3	AP26A
SGMTST53	Most recent Sigmoidoscopy (>39) – R5/3	AP27
SGMTRE53	Rsn Have Sigmoidoscopy (>39) – R5/3	AP27A
PHYEXE53	Mod/Vig Phys Exec 5X Wk (>17) – RD 5/3	AP28
BMINDX53	Adult Body Mass Index (> 17) - Rd 5/3	Constructed
SEATBE53	Wears Seat Belt (>15) – RD 5/3	AP32
SAQELIG	Eligibility Status for SAQ	Constructed
ADPRXY42	SAQ: Relationship of Proxy to Adult	Constructed
ADILCR42	SAQ 12Mos: Ill/Injury Needing Immed Care	SAQ Q1
ADILWW42	SAQ 12 Mos: Got Care When Needed Ill/Inj	SAQ Q2
ADRTCR42	SAQ 12 Mos: Made Appt Routine Med Care	SAQ Q3
ADRTWW42	SAQ 12 Mos: Got Med Appt When Wanted	SAQ Q4
ADAPPT42	SAQ 12 Mos:# Visits to Med Off for Care	SAQ Q5
ADNDCR42	SAQ 12Mos: Need Any Care, Test, Treatmnt	SAQ Q6
ADEGMC42	SAQ 12Mos: Easy Getting Needed Med Care	SAQ Q7
ADLIST42	SAQ 12 Mos: Doctor Listened to You	SAQ Q8
ADEXPL42	SAQ 12 Mos: Doc Explained So Understood	SAQ Q9
ADRESP42	SAQ 12 Mos: Dr Showed Respect	SAQ Q10
ADPRTM42	SAQ 12 Mos: Dr Spent Enuf Time with You	SAQ Q11
ADINST42	SAQ 12 Mos: Dr Gave Spcifc Instrctns	SAQ Q12
ADEZUN42	SAQ 12 Mos: Dr Given Instr. Ez Undrstd	SAQ Q13
ADTLHW42	SAQ 12 Mos: Dr Asked R Desc How Follow	SAQ Q14
ADFFRM42	SAQ 12 Mos: Had to Fill Out/Sign Forms	SAQ Q15
ADFHLP42	SAQ 12 Mos: Offrd Help Filling Out Forms	SAQ Q16
ADHECR42	SAQ 12 Mos: Rating of Health care	SAQ Q17
ADSMOK42	SAQ: Currently Smoke	SAQ Q18
ADNSMK42	SAQ 12Mos: Dr Advised to Quit Smoking	SAQ Q19
ADDRBP42	SAQ 2 Yrs: Dr Checked Blood Pressure	SAQ Q20
ADSPEC42	SAQ 12 Mos: Needed to See Specialist	SAQ Q21

VARIABLE	DESCRIPTION	SOURCE
ADESSP42	SAQ 12Mos: How Esy to See Specialist	SAQ Q22
ADGENH42	SAQ: Health in General SF-12V2	SAQ Q23
ADDAYA42	SAQ: Hlth Limits Mod Activities SF-12V2	SAQ Q24
ADCLIM42	SAQ: Hlth Limits Climbing Stairs SF-12V2	SAQ Q25
ADPALS42	SAQ 4Wks:Accmp Less B/C Phy Prbs SF-12V2	SAQ Q26
ADPWLM42	SAQ 4Wks:Work Limt B/C Phy Probs SF-12V2	SAQ Q27
ADMALS42	SAQ 4Wks:Accmp Less B/C Mnt Prbs SF-12V2	SAQ Q28
ADMWLM42	SAQ 4Wks:Work Limt B/C Mnt Probs SF-12V2	SAQ Q29
ADPAIN42	SAQ 4Wks:Pain Limits Normal Work SF-12V2	SAQ Q30
ADCAPE42	SAQ 4Wks: Felt Calm/Peaceful SF-12V2	SAQ Q31
ADNRGY42	SAQ 4Wks: Had a Lot of Energy SF-12V2	SAQ Q32
ADDOWN42	SAQ 4Wks: Felt Downhearted/Depr SF-12V2	SAQ Q33
ADSOCA42	SAQ 4Wks: Hlth Stopped Soc Activ SF-12V2	SAQ Q34
PCS42	SAQ:Phy Component Summry SF-12V2 Imputed	SAQ Q23 – Q34
MCS42	SAQ:Mnt Component Summry SF-12V2 Imputed	SAQ Q23 – Q34
SFFLAG42	SAQ: PCS/MCS Imputation Flag SF-12V2	SAQ Q23 – Q34
ADNERV42	SAQ 30 Days: How Often Felt Nervous	SAQ Q35
ADHOPE42	SAQ 30 Days: How Often Felt Hopeless	SAQ Q36
ADREST42	SAQ 30 Days: How Often Felt Restless	SAQ Q37
ADSAD42	SAQ 30 Days: How Often Felt Sad	SAQ Q38
ADEFRT42	SAQ 30 Days: How Oftn Everythng an Effort	SAQ Q39
ADWRTH42	SAQ 30 Days: How Often Felt Worthless	SAQ Q40
K6SUM42	SAQ 30 Days: Overall Rating of Feelings	SAQ Q35 – Q40
ADINTR42	SAQ 2 Wks: Little Interest in Things	SAQ Q41
ADDPRS42	SAQ 2 Wks: Felt Down/Depressed/Hopeless	SAQ Q42
PHQ242	SAQ 2 Wks: Overall Rating of Feelings	SAQ Q41 – Q42
ADINSA42	SAQ: Do Not Need Health Insurance	SAQ Q43
ADINSB42	SAQ: Health Insurance Not Worth Cost	SAQ Q44
ADRISK42	SAQ: More Likely to Take Risks	SAQ Q45
ADOVER42	SAQ: Can Overcome Ills Without Med Help	SAQ Q46
ADCMPM42	SAQ: Date Completed - Month	Constructed
ADCMPY42	SAQ: Date Completed – Year	Constructed
ADLANG42	SAQ: Language of SAQ Interview	Constructed

VARIABLE	DESCRIPTION	SOURCE
DSDIA53	DCS: Diabetes Diagnosis By Health Prof	DCS Q1
DSA1C53	DCS: Times Tested for A-One-C in 2016	DCS Q2
DSFT1753	DCS: Had Feet Checked During 2017	DCS Q3
DSFT1653	DCS: Had Feet Checked During 2016	DCS Q3
DSFT1553	DCS: Had Feet Checked During 2015	DCS Q3
DSFB1553	DCS: Had Feet Checked Before 2015	DCS Q3
DSFTNV53	DCS: Never Had Feet Checked	DCS Q3
DSEY1753	DCS: Dilated Eye Exam in 2017	DCS Q4
DSEY1653	DCS: Dilated Eye Exam in 2016	DCS Q4
DSEY1553	DCS: Dilated Eye Exam in 2015	DCS Q4
DSEB1553	DCS: Dilated Eye Exam Before 2015	DCS Q4
DSEYNV53	DCS: Never Had Dilated Eye Exam	DCS Q4
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
DSCH1753	DCS: Blood Cholesterol Checked in 2017	DCS Q5
DSCH1653	DCS: Blood Cholesterol Checked in 2016	DCS Q5
DSCH1553	DCS: Blood Cholesterol Checked in 2015	DCS Q5
DSCB1553	DCS: Blood Cholesterol Checked Before 2015	DCS Q5
DSCHNV53	DCS: Never Had Blood Cholesterol Checked	DCS Q5
DSFL1753	DCS: Got Flu Vaccination in 2017	DCS Q6
DSFL1653	DCS: Got Flu Vaccination in 2016	DCS Q6
DSFL1553	DCS: Got Flu Vaccination in 2015	DCS Q6
DSVB1553	DCS: Got Flu Vaccination Before 2015	DCS Q6
DSFLNV53	DCS: Never Got Flu Vaccination	DCS Q6

VARIABLE	DESCRIPTION	SOURCE
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
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

VARIABLE	DESCRIPTION	SOURCE
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
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

VARIABLE	DESCRIPTION	SOURCE
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
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

VARIABLE	DESCRIPTION	SOURCE
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
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
DDNWRK16	# Days Missed Work Due to Ill/Inj 2016	DD02 DD02A
DDNSCL16	# Days Missd School Due to Ill/Inj 2016	DD05 DD05A
OTHDYS16	Miss Any Work Day to Care for Oth 2016	DD10
OTHNDD16	# Day Missed Work to Care for Oth 2016	DD11 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
ONJOB42	AC08 Oth Reas No USC: Dr at Work-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

VARIABLE	DESCRIPTION	SOURCE
TYPEPE42	USC Type of Provider – R4/2	AC15, AC16, AC16OV, AC17, AC17OV
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

VARIABLE	DESCRIPTION	SOURCE
PMUNAB42	Unable to Get Necessary Pres Med – R4/2	AC48A, AC48, AC49
PMUNRS42	AC50 Rsn Unable to Get Nec Pres Med-R4/2	AC50
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 12/31/16	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
TRImm16X	Covered by TRICARE/CHAMPVA in mm 16 (Ed), where mm = JA-DE	HX12, 13, PR19-22, HQ Section
MCRmm16	Covered by Medicare in mm 16, where mm = JA-DE	HX05-07, 27, 29, 29OV
MCRmm16X	Covered by Medicare in mm 16 (Ed), where mm = JA-DE	HX05-07, 27, 29, 29OV, see Section 2.5.10.1 for additional edit specifications
MCDmm16	Cov by Medicaid or SCHIP in mm 16, where mm = JA-DE	HX10-11, PR07-10 and HQ Section
MCDmm16X	Cov by Medicaid or SCHIP in mm 16 (Ed), where mm = JA-DE	MCDmm16, HX14-16, 18-19, 41-43, 45, PR11-14, 23-32, 39-42
OPAmm16	Cov by Other Public A Ins in mm 16, where mm = JA-DE	HX14-15, 41-45, PR 23-32 and HQ Section
OPBmm16	Cov by Other Public B Ins in mm 16, where mm = JA-DE	HX14-15, 41-43, PR23-30 and HQ Section
STAmm16	Covered by Other State Prog in mm 16, where mm = JA-DE	HX16-19, PR35-38 and HQ Section
PUBmm16X	Covr by Any Public Ins in mm 16 (Ed), where mm = JA-DE	TRImm16X, MCRmm16X, MCDmm16X, OPAmm16, OPBmm16
PEGmm16	Covered by Empl Union Ins in mm 16, where mm = JA-DE	HX2-4, 21-24, 48; HP, OE, HQ, EM, RJ Sections
PDKmm16	Covr by Priv Ins (Source Unknwn) mm 16, where mm = JA-DE	HX21-24, 48, HP, OE, and HQ Sections

VARIABLE	DESCRIPTION	SOURCE
PNGmm16	Covered by Nongroup Ins in mm 16, where mm = JA-DE	HX21-24, 48, HP, OE, and HQ Sections
POGmm16	Covered by Other Group Ins in mm 16, where mm = JA-DE	HX21-24, 48, HP, OE, and HQ Sections
PRSmm16	Covered by Self-Emp-1 Ins in mm 16, where mm = JA-DE	HX3, 4, 48, HQ, OE, RJ and EM sections
POUmm16	Covered by Holder Outside of RU in mm 16, where mm = JA-DE	HX21-24, 48, HP, OE, and HQ Sections
PRXmm16	Cov by Priv Ins through Exchng in mm 16, where mm = JA-DE	HX21-24, 48, HP, OE, and HQ Sections
PRImm16	Covered by Private Ins in mm 16, where mm = JA-DE	POGmm16, PDKmm16, PEGmm16, PRSmm16, POUmm16, PNGmm16, PRXmm16
HPEmm16	Holder of Empl Union Ins in mm 16, where mm = JA-DE	PEGmm16, HP9, 11
HPDmm16	Holder of Priv Ins (Source Unknwn) mm 16, where mm = JA-DE	PDKmm16; HP11
HPNmm16	Holder of Nongroup Ins in mm 16, where mm = JA-DE	PNGmm16; HP11
HPOmm16	Holder of Other Group Ins in mm 16, where mm = JA-DE	POGmm16; HP11
HPSmm16	Holder of Self-Emp-1 Ins in mm 16, where mm = JA-DE	PRSmm16; HP9
HPXmm16	Holder of Priv Ins through Exch in mm 16, where mm = JA-DE	PRXmm16; HP11
HPRmm16	Holder of Private Insurance in mm 16, where mm = JA-DE	HPEmm16, HPSmm16, HPOmm16, HPNmm16, HPDmm16, HPXmm16

VARIABLE	DESCRIPTION	SOURCE
INSmm16X	Covr by Hosp/Med Ins in mm 16 (Ed), where mm = JA-DE	PUBmm16X, PRImm16

SUMMARY HEALTH INSURANCE COVERAGE INDICATORS

VARIABLE	DESCRIPTION	SOURCE
PRVEV16	Ever Have Private Insurance during 2016	Constructed
TRIEV16	Ever Have TRICARE/CHAMPVA during 2016	Constructed
MCREV16	Ever Have Medicare during 2016 (ED)	Constructed
MCDEV16	Ever Have MCAID/SCHIP during 2016 (ED)	Constructed
OPAEV16	Ever Have Other Public A Ins during 2016	Constructed
OPBEV16	Ever Have Other Public B Ins during 2016	Constructed
UNINS16	Uninsured All of 2016	Constructed
INSCOV16	Health Insurance Coverage Indicator 2016	Constructed
INSURC16	Full Year Insurance Coverage Status 2016	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
TRIST16X	Cv By TRICARE Standard-R5/3 Til 12/31/16	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
TRIPR16X	Cov By TRICARE Prime-R5/3 Until 12/31/16	HX12, 12A, 13, PR19, 19A, 20-22, HQ Section

VARIABLE	DESCRIPTION	SOURCE
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
TRIEX16X	Cov By TRICARE Extra - R5/3 Til 12/31/16	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
TRILI16X	Cv By TRICARE For Life-R5/3 Til 12/31/16	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
TRICH16X	Covered By CHAMPVA - R5/3 Until 12/31/16	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
MCRPD16	Cov By Medicare Pmed Benefit – 12/31/16	HX05-07, HX33A, HX35A, PR05, PR06B, HQ Section

VARIABLE	DESCRIPTION	SOURCE
MCRPD31X	Cov By Medicare Pmed Benefit – R3/1 (ED)	MCARE31X, MCAID31X, MCRPD31
MCRPD42X	Cov By Medicare Pmed Benefit – R4/2 (ED)	MCARE42X, MCAID42X, MCRPD42
MCRPD16X	Cov By Mcare Pmed Benefit–12/31/16 (ED)	MCARE16X, MCAID16X, MCRPD16
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
MCRPB16	Cov By Medicare Part B – 12/31/16	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
MCRPHO16	Cov By Medicare Managed Care – 12/31/16	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

VARIABLE	DESCRIPTION	SOURCE
MCDHMO16	Cov By Mcaid/SCHIP HMO-R5/3 Til 12/31/16	HX10-11, HX14-16, HX18-19, HX41-43, HX45, PR07-10, PR11-14, PR23-32, PR39-42 and HQ Section
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
MCDMC16	Cv Mcd/CHIP Gtkpr Pln-R5/3 Til 12/31/16	MCDHMO16, 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
PRVHMO16	Covered By Private HMO-R5/3 Til 12/31/16	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 21 Only	HX64
COVRMM	Month Most Recently Covered–Pnl 21 Only	HX65
COVRYY	Year Most Recently Covered–Panel 21 Only	HX65
WASESTB	Was Prev Ins by Empl or Union–Pn 21 Only	HX66, HX78
WASMCARE	Was Prev Ins by Medicare–Panel 21 Only	HX66, HX78
WASMCAID	Was Prev Ins by Mcaid/SCHIP–Pnl 21 Only	HX66, HX78
WASCHAMP	Was Prev Ins TRICARE/Champva–Pnl 21 Only	HX66, HX78
WASVA	Was Prev Ins VA/Militar Care–Pnl 21 Only	HX66, HX78
WASPRIV	Was Prev Ins Grp/Assoc/Ins Co–Pn 21 Only	HX66, HX78
WASOTGOV	Was Prev Ins by Oth Gov Prg–Pnl 21 Only	HX66, HX78
WASAFDC	Was Prev Ins by Public AFDC–Pnl 21 Only	HX66, HX78
WASSSI	Was Prev Ins by SSI Program–Pnl 21 Only	HX66, HX78
WASSTAT1	Was Prev Ins by Stat Prog 1–Pnl 21 Only	HX66, HX78
WASSTAT2	Was Prev Ins by Stat Prog 2–Pnl 21 Only	HX66, HX78
WASSTAT3	Was Prev Ins by Stat Prog 3–Pnl 21 Only	HX66, HX78
WASSTAT4	Was Prev Ins by Stat Prog 4–Pnl 21 Only	HX66, HX78
WASOTHER	Was Prev Ins by Oth Source–Panel 21 Only	HX66, HX78
NOINSBEF	Evr Wout Hlth Insr Prev Yr–Panel 21 Only	HX70
NOINSTM	# Wks/Mon Wout Hlth Ins Prv Yr–P21 Only	HX71
NOINUNIT	Unit Of Time Wout Hlth Ins–Panel 21 Only	HX71OV
MORECOVR	Cov by Mor Compr Pl Prev 2 Yr–Pn 21 Only	HX76
INSENDMM	Month Most Recently Covd–Panel 21 Only	HX77
INSENDYY	Year Most Recently Covd–Panel 21 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
TRICR16X	Cov by TRICR/CHAMV - 12/31/16 (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
TRIAT16X	Cov TRICARE/CHAMPVA-R5/3 Until 12/31/16	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
MCAID16	Cov by Medicaid or SCHIP - 12/31/16	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
MCAID16X	Cov by Medicaid or SCHIP - 12/31/16 (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
MCARE16	Cov by Medicare - 12/31/16	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
MCARE16X	Cov by Medicare - 12/31/16 (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
MCDAT16X	Cv Mcd/CHIP-Any Tme In R5/3 Til 12/31/16	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
OTPAAT16	Cv Ot Gov Mcd/CHIP HMO-R5/3 Til 12/31/16	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
OTPBAT16	Cv Otgv Nt Mcd/CHP HMO-R5/3 Til 12/31/16	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
OTPUBA16	Cov/Pay Oth Gov Mcaid/SCHIP HMO-12/31/16	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
OTPUBB16	Cov Oth Gov Not Mcaid/SCHIP HMO-12/31/16	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
PRIDK16	Cov by Priv Ins (Dk Plan) - 12/31/16	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
PRIEU16	Cov by Empl/Union Grp Ins - 12/31/16	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
PRING16	Cov by Non-Group Ins - 12/31/16	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
PRIOG16	Cov by Other Group Ins - 12/31/16	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
PRIS16	Cov by Self-Emp-1 Ins - 12/31/16	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
PRSTX16	Priv Exchange Insurance on 12/31/16	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
PRIV16	Cov by Priv Hlth Ins - 12/31/16	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
PRIVAT16	Cov by Private Ins - R5/3 Until 12/31/16	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
PROUT16	Cov by Someone Out Of RU - 12/31/16	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
PUB16X	Cov by Public Ins - 12/31/16 (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
PUBAT16X	Cov by Public - R5/3 Until 12/31/16	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
INS16X	Insured - 12/31/16 (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
INSAT16X	Insured Any Time in R5/R3 until 12/31/16	Constructed
STAPR31	Cov by State-Spec Prog - R3/1 Int Dt	Constructed
STAPR42	Cov by State-Spec Prog - R4/2 Int Dt	Constructed

VARIABLE	DESCRIPTION	SOURCE
STAPR53	Cov by State-Spec Prog 12-31/R3 Int Dt	Constructed
STAPR16	Cov by State-Spec Prog - 12/31/16	Constructed
STPRAT31	Coverage by State Ins - Any Time in R3/1	Constructed
STPRAT42	Coverage by State Ins - Any Time in R4/2	Constructed
STPRAT53	Coverage by State Ins - Any Time in R5/3	Constructed
STPRAT16	Cov by State Ins - R5/3 Until 12/31/16	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 2016	HX48, OE10, OE24, OE37
DNTINS16	Dentl Ins-Any Time in R5/R3 Til 12/31/16	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 2016	HX48, OE10, OE24, OE37
PMDINS16	Pmed Ins - R5/R3 until 12/31/16	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
OBTOTV16	# Office-Based Provider Visits 2016	Constructed
OBDRV16	# Office-Based Physician Visits 2016	Constructed
OBOTHV16	# Office-Based Non-Physician Vsts 2016	Constructed
OBCHIR16	# Office-Based Chiropractor Visits 2016	Constructed
OBNURS16	# Off-Based Nurse/Practitioner Vsts 2016	Constructed
OBOPTO16	# Office-Based Optometrist Visits 2016	Constructed
OBASST16	# Office-Based Physician Ass't Vsts 2016	Constructed
OBTHER16	# Office-Based PT/OT Visits 2016	Constructed
OPTOTV16	# Outpatient Dept Provider Visits 2016	Constructed
OPDRV16	# Outpatient Dept Physician Visits 2016	Constructed
OPOTHV16	# Outpatient Dept Non-DR Visits 2016	Constructed
AMCHIR16	# Chiropractor Visits (Office-based plus Outpatient) 2016	Constructed
AMNURS16	# Ambulatory Nurse/Practitioner Visits (Office-based plus Outpatient) 2016	Constructed
AMOPTO16	# Ambulatory Optometrist Visits (Office-based plus Outpatient) 2016	Constructed
AMASST16	# Physician Assistant Visits (Office-based plus Outpatient) 2016	Constructed
AMTHER16	# Ambulatory PT/OT Therapy Visits (Office-based plus Outpatient) 2016	Constructed
ERTOT16	# Emergency Room Visits 2016	Constructed
IPZERO16	# Zero-Night Hospital Stays 2016	Constructed
IPDIS16	# Hospital Discharges 2016	Constructed
IPNGTD16	# Nights in Hosp for Discharges 2016	Constructed
DVTOT16	# Dental Care Visits 2016	Constructed
DVGEN16	# General Dentist Visits 2016	Constructed
DVORTH16	# Orthodontist Visits 2016	Constructed
HHTOTD16	# Home Health Provider Days 2016	Constructed
HHAGD16	# Agency Home Health Provider Days 2016	Constructed
HHINDD16	# Non-Agency Home Hlth Providr Days 2016	Constructed
HHINFD16	# Informal Home Hlth Provider Days 2016	Constructed
RXTOT16	# Prescribed Medicines including Refills 2016	Constructed

WEIGHTS VARIABLES - PUBLIC USE

VARIABLE	DESCRIPTION	SOURCE
PERWT16F	Final Person Weight, 2016	Constructed
FAMWT16F	Final Family Weight, 2016	Constructed
FAMWT16C	Pov Adj Family Weight-CPS Fam on 12/31/16	Constructed
SAQWT16F	Final SAQ Person Weight, 2016	Constructed
DIABW16F	Final Diabetes Care Supplement Weight	Constructed
CSAQW16F	CSAQ: Final Cancer SAQ Person Weight - 2016	Constructed
VARSTR	Variance Estimation Stratum - 2016	Constructed
VARPSU	Variance Estimation PSU - 2016	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***16
Office Based Visits		
Total Office Based Visits (Physician + Non-physician + Unknown)	OBTOTV16	OBV***16
Office Based Visits to Physicians	OBDRV16	OBD***16
Office Based Visits to Non-Physicians	OBOTHV16	OBO***16
Office Based Visits to Chiropractors	OBCHIR16	OBC***16
Office Based Nurse or Nurse Practitioner Visits	OBNURS16	OBN***16
Office Based Visits to Optometrists	OBOPTO16	OBE***16
Office Based Physician Assistant Visits	OBASST16	OBA***16
Office Based Physical or Occupational Therapist Visits	OBTHER16	OBT***16
Hospital Outpatient Visits		
Total Outpatient Visits (Physician + Non-physician + Unknown)	OPTOTV16	--
Sum of Facility and SBD Expenses	--	OPT***16
Facility Expense	--	OPF***16
SBD Expense	--	OPD***16
Outpatient Visits to Physicians	OPDRV16	--
Facility Expense	--	OPV***16
SBD Expense	--	OPS***16
Outpatient Visits to Non-Physicians	OPOTHV16	--
Facility Expense	--	OPO***16
SBD Expense	--	OPP***16
Office Based Plus Outpatient Visits		
# Chiropractor Visits	AMCHIR16	AMC***16
# Ambulatory Nurse/Practitioner Visits	AMNURS16	AMN***16
# Ambulatory Optometrist Visits	AMOPT16	AME***16

1 See key at end of table for specific categories for ***.

HEALTH SERVICE CATEGORY	UTILIZATION VARIABLE(S)	EXPENDITURE VARIABLE(S)[1]
# Physician Assistant Visits	AMASST16	AMA***16
# Ambulatory PT/OT Therapy Visits	AMTHER16	AMT***16

Emergency Room Visits		
Total Emergency Room Visits	ERTOT16	**--**
Sum of Facility and SBD Expenses	--	ERT***16
Facility Expense	--	ERF***16
SBD Expense	--	ERD***16

Inpatient Hospital Stays (Including Zero Night Stays)		
Total Inpatient Stays (Including Zero Night Stays)	IPDIS16, IPNGTD16	--
Sum of Facility and SBD Expenses	--	IPT***16
Facility Expense	--	IPF***16
SBD Expense	--	IPD***16
Zero night Hospital Stays	IPZERO16	--
Facility Expense	--	ZIF***16
SBD Expense	--	ZID***16

Prescription Medicines		
Total Prescription Medicines	RXTOT16	RX***16

Dental Visits		
Total Dental Visits	DVTOT16	DVT***16
General Dental Visits	DVGEN16	DVG***16
Orthodontist Visits	DVORTH16	DVO***16

Home Health Care		
Total Home Health Care	HHTOTD16	--
Agency Sponsored	HHAGD16	HHA***16
Paid Independent Providers	HHINDD16	HHN***16
Informal	HHINFD16	--

HEALTH SERVICE CATEGORY	UTILIZATION VARIABLE(S)	EXPENDITURE VARIABLE(S)[1]
Other Medical Expenses		
Vision Aids	--	VIS***16
Other Medical Supplies and Equipment	--	OTH***16

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.