MEPS HC 243
2022 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:

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

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

No one will attempt to link this dataset with individually identifiable records from any datasets 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 care. Estimates can be produced for individuals, families, and selected population subgroups. The panel design of the survey includes 5 rounds of interviews covering 2 full calendar years. Additional rounds were added to Panel 24 in 2021 and 2022, covering the third and fourth years, respectively, to compensate for the smaller number of completed interviews in later panels. These extra rounds provide data for examining person-level changes in selected variables such as expenditures, health insurance coverage, and health status. Information about each household member is collected through computer-assisted personal interviewing (CAPI) technology, 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. Historically, each annual MEPS HC sample consists of approximately up to 15,000 households. Data can be analyzed at the person, the family, 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 (NCHS). The NHIS sampling frame provides a nationally representative sample of the U.S. civilian noninstitutionalized population. In 2006, the NCHS implemented a new sample design for the NHIS, to include households with Asian persons in addition to households with Black and Hispanic persons in the oversampling of minority populations. In 2016, NCHS introduced another sample design that discontinued the oversampling of these minority groups.

2.0 Medical Provider Component

When the household CAPI interview is completed, and permission is obtained from the household survey respondents to contact their medical provider(s), a sample of these providers is contacted by telephone to obtain information that household sample members cannot accurately provide. This part of the MEPS is called the Medical Provider Component (MPC), and it collects information on dates of visits, diagnosis and procedure codes, and charges and payments. The Pharmacy Component (PC), a subcomponent of the MPC, does not collect data on charges or on diagnosis and procedure codes, but it does collect detailed information on drugs, including the National Drug Code (NDC) and medicine name, as well as 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. The MEPS HC data are collected under contract with Westat, Inc. and the MEPS MPC data are collected under contract with Research Triangle Institute. Datasets and summary statistics are edited and published in accordance with the confidentiality provisions of the Public Health Service Act and the Privacy Act. The NCHS provides consultation and technical assistance.

As soon as the MEPS data are collected and edited, they are released to the public in stages of microdata files and tables via the MEPS website and datatools.ahrq.gov.

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 2022 Full-Year Consolidated Public Use File (hereafter referred to as the Consolidated PUF) from the MEPS HC. It was released as an ASCII file (with related SAS, Stata, SPSS, and R programming statements and data user information) and as a SAS dataset, a SAS transport dataset, a Stata dataset, and an Excel file. The Consolidated PUF provides information collected from a nationally representative sample of the U.S. civilian noninstitutionalized population for calendar year 2022. It contains 1,420 variables and has a logical record length of 4,070 with an additional 2-byte carriage return/line feed at the end of each record.

The data in the Consolidated PUF were obtained in the 2022 portion of Round 7, and all of Rounds 8 and 9 of Panel 24; the 2022 portion of Round 3, and all of Rounds 4 and 5 of Panel 26; and Rounds 1, 2, and the 2022 portion of Round 3 of Panel 27 (i.e., the rounds for the MEPS panels covering calendar year 2022). Panel 24 was extended to include Rounds 7, 8, and 9. This file does not include a third-year panel because there are no Panel 25 persons in the 2022 data. Panel 25 ended with Round 5 on December 31, 2021. The impact of the Panel 24 expansion to Round 9 on variables and variable names is described in Section 2.4.

The variables in the Consolidated PUF pertain 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.

This documentation offers a brief overview of the types and levels of data provided, a detailed description of the content and structure of the files, and programming information. It is organized into the following sections:

- Data File Information (Section 2.0)
- Survey Sample Information (Section 3.0)
- Variable-Source Crosswalk (Section D)

Both weighted and unweighted frequencies of most variables included in the Consolidated PUF are provided in the accompanying codebook file. The exceptions to this are weight variables, variance estimation variables, and variables that have a separate weight. Variables with separate weights are in the Self-Administered Questionnaire (SAQ) and the Diabetes Care Survey (DCS). Only unweighted frequencies of these variables are included in the codebook file. Section D: Variable-Source Crosswalk lists the weights and variables.

A database of all MEPS products released to date can be found on the MEPS website.

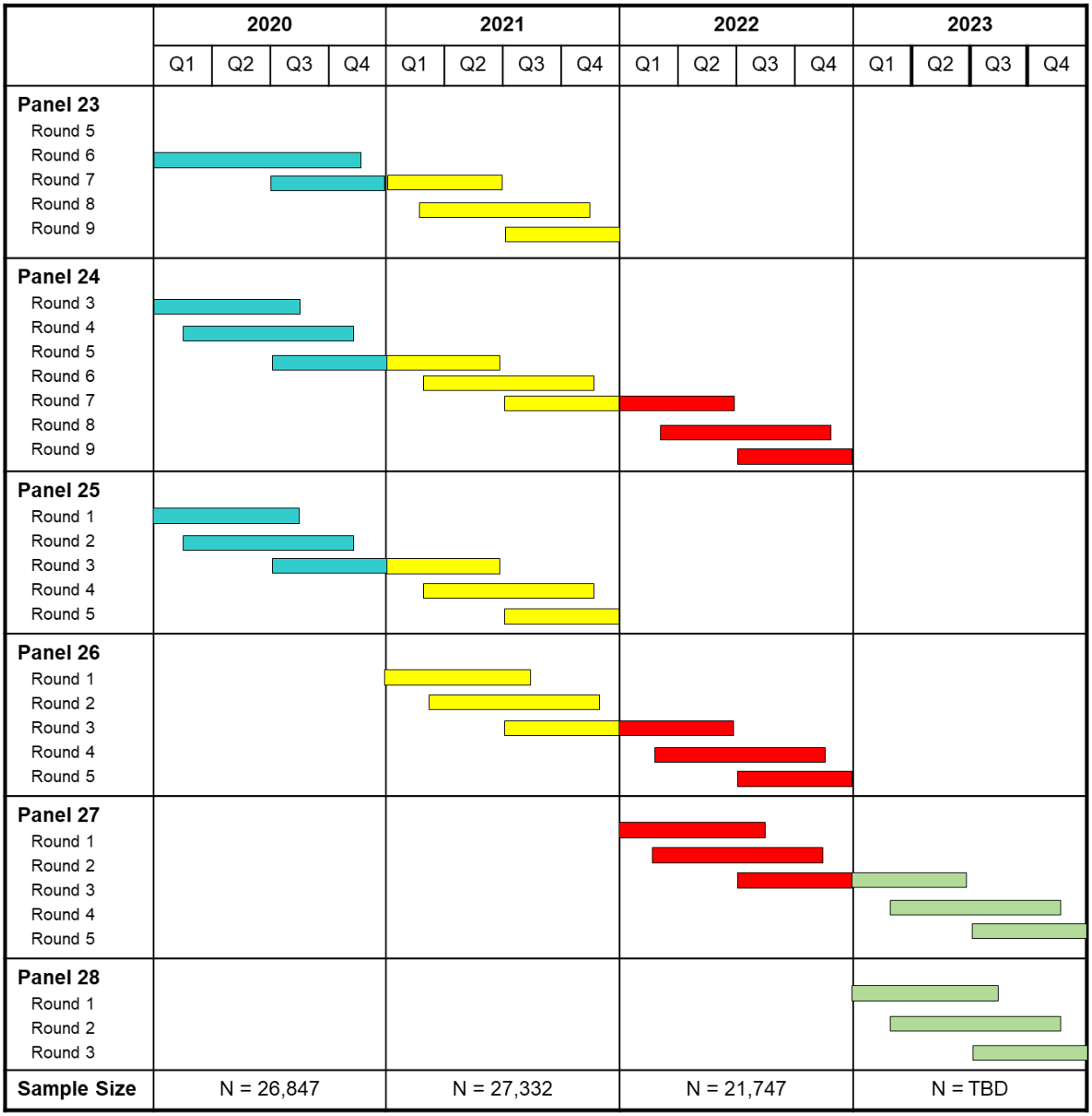
2.0 Data File Information

This PUF contains variables and frequency distributions associated with 22,431 persons who participated in the MEPS HC in 2022. These persons received a positive person-level weight, a positive 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 22,431 persons were part of one of the three MEPS panels for whom data were collected in 2022: Rounds 7, 8, and 9 of Panel 24; Rounds 3, 4, and 5 of Panel 26; or Rounds 1, 2, and 3 of Panel 27. Of these persons, 21,747 were assigned a positive person-level weight. There were 10,034 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 (PERWT22F) provided on this PUF, data for persons with a positive person-level weight can be used to make estimates for the U.S. civilian noninstitutionalized population for 2022.

The MEPS CAPI design changed significantly beginning with Panel 21 Round 5, Panel 22 Round 3, and Panel 23 Round 1. In addition, three rounds of data collection were added for Panel 24 (Rounds 7, 8, and 9) in 2022.

MEPS Panel Design: Data Reference Periods



N is equal to the number of people with a positive person weight on the file

Table 1

Sections of the CAPI Instrument Asked in New Rounds

CAPI section[a]	Variable grouping	Asked in Round 6	Asked in Round 7	Asked in Round 8	Asked in Round 9
ST, RE-A, RE-B, CL	Survey Administration and Demographics	X	X	X	X
PE	Person-Level Conditions	X	X	X	X
AH, DCS	Health Status		X		X
CS, SAQ	Health Status	X		X	
HE	Health Status	X	X	X	
AH	Disability Days	X	X	X	X
AC	Access to Care	X		X	
CV	Health Status	X	X	X	X
RJ, EM, EW	Employment	X	X	X	X
HX, OE, HP, HQ, MC, PR	Health insurance	X	X	X	X
CA, EV, PP, ED, EF, DN, ER, HS, MV, OP, HH, PM, TH	Use and expenditures	X	X	X	X

[a] See Appendix 1 for a list of abbreviations and their meanings.

2.1 Codebook Structure

The codebook and data file list 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 and COVID 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

This Consolidated PUF includes several reserved code values:

Table 2

Reserved Code Values and Definitions

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	Don't Know	Question was asked and respondent did not know answer or the information could not be ascertained
-10	Hourly Wage >= $119.23	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 PUF
-15	Cannot Be Computed	Value cannot be derived from data

The value Cannot Be Computed (-15) was assigned to the MEPS constructed variables when there was not enough information from the instrument to calculate the constructed variables. Not having enough information is often the result of skip patterns in the data or of missing information stemming from the responses Refused (-7) or Don't Know (-8). Note that, in addition to Don't Know, reserved code -8 also includes cases for which the information from the question was Not Ascertained.

2.3 Codebook Format

This codebook describes an ASCII dataset (although the data are also being provided in a SAS dataset, SAS transport file, Stata dataset, and Excel file) and provides programming identifiers for each variable:

Table 3

Programming Identifiers for Each Variable in the Consolidated PUF

Identifier	Description
Name	Variable name
Description	Variable descriptor
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, the variable names reflect the content of the variable. Edited variables end in an X and are so noted in the variable name. In the past, the last two characters in round-specific variables have denoted the rounds of data collection in a given panel, for example, Round 3, 4, or 5 of Panel 26, and Round 1, 2, or 3 of Panel 27. Historically, the dates of the rounds have been indicated by two numbers that follow the variable name, the first number representing the round for second-panel persons (Panel 26), and the second number representing the round for first-panel persons (Panel 27). For example, EMPST31 refers to employment status on the Round 3 interview date for Panel 26 persons and to employment status on the Round 1 interview date for Panel 27 persons.

The variable names in the 2022 Consolidated PUF have not been renamed from prior years despite the addition of Rounds 7, 8, and 9 in Panel 24. The numbers of these three rounds are therefore not included in the variable names. Variable names that contain "53" (for example, AGE53X, INS53X, INSAT53X, EMPST53, and HELD53X) have data from Round 9 of Panel 24, Round 5 of Panel 26, and Round 3 of Panel 27. Variable names that contain "42" (for example, AGE42X, INS42X, INSAT42X, EMPST42, and HELD42X) have data from Round 8 of Panel 24, Round 4 of Panel 26, and Round 2 of Panel 27. Variable names that contain "31" have data from Round 7 of Panel 24, Round 3 of Panel 26, and Round 1 of Panel 27.

As the collection, universe, or categories of variables were altered, the variable names have been appended with "_Myy" to indicate the collection year in which the alterations took place. These alterations are described in detail throughout this document.

Variables in this PUF were derived either from the questionnaire itself or from the CAPI. The source of each variable is identified in 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 are indicated by the question number(s) in the Source column of the crosswalk, and (4) variables constructed from multiple questions by using complex algorithms are labeled "Constructed."

2.5 File Contents

Users of the MEPS data should be aware that contents of the file include data collected for all sample persons who were in the survey target population (U.S. civilian noninstitutionalized population) at any time during the survey period. In other words, a small proportion of individuals in the MEPS analytic files were not members of the target population for the entire survey period. These persons include those who, at some point, lived in an institution (e.g., nursing home or prison), were in the military, lived out of the country, were born (or adopted) into MEPS sample households, or died during the year. They are considered sample persons for analytic purposes and are included in MEPS annual files with positive person-level weights, but no data were collected for the periods in which they were not in scope and their annual data for variables such as health care utilization, expenditures, and insurance coverage reflect only the part of the year in which they were in scope for the survey. These persons should not be confused with nonrespondents. The latter, sample members who did not respond to one or more rounds of data collection (i.e., initial nonrespondents and dropouts over time), are not included in the MEPS annual PUFs, 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 in scope only part of the year.

2.5.1 Survey Administration Variables (DUID - RURSLT53)

The survey administration variables contain information related to conducting the interview, household and family composition, and person-level and reporting unit (RU)-level status codes. Data for the survey administration variables were derived from the sampling process or the CAPI programs, or they were computed on the basis of information provided by the respondent in the Reenumeration (RE) section of the questionnaire. Questions pertaining to most survey administration variables on this Consolidated PUF were asked during every round of the MEPS interview. The variables describe data for Rounds 7/3/1, 8/4/2, and 9/5/3 status, and for the status as of December 31, 2022.

As mentioned, the data collected in 2022 includes a third panel, Panel 24, which was extended past the previous seven rounds of data collection to include an eighth and ninth round of interviews. To incorporate the fourth-year Panel 24 Round 7, Round 8, and Round 9 data into the Consolidated PUF without adding new variables, a decision was made by AHRQ to use the "31"/"42"/"53" variables to also hold the fourth-year panel data. Retaining these three standard variable names, even with the addition of the fourth-year panel, will make it easier to compare the 2022 data to previous full year (FY) data. Alternatively, Panel 26 data collection was planned to end at five rounds, so data for Panel 26 Round 5 was collected as a (2022) terminal round (not as a 2022-2023 cross-year round).

For example, where variables ending in "53" would normally hold data for Panel 26 Round 5 and Panel 27 Round 3, they also now hold data for Panel 24 Round 9. Similarly, Panel 24 Round 8 data have been added to the "42" variables. Panel 24 Round 7 data have been added to the "31" variables. These changes mean that the "31" variables contain data for Rounds 1, 3, and 7; the

"42" variables contain data for Rounds 2, 4, and 8; and the "53" variables contain data for Rounds 3, 5, and 9.

The December 31, 2022 variables were developed in two ways. Those used to construct eligibility, in scope, and the end reference date were based on an exact date. The remaining variables were constructed by 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 to construct the variable. 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 HC are generally consistent with the definitions in the NHIS. The Dwelling Unit ID (DUID) is a 7-digit ID number consisting of a 2-digit panel number followed by a 5-digit random number assigned after the case was sampled for MEPS. A 3-digit person number (PID) uniquely identifies each person within the DU. The variable DUPERSID is the combination of DUID and PID. As part of the new CAPI design, the lengths of the ID variables on the Consolidated PUF have changed. An additional 2 bytes in the IDs resulted from adding a 2-digit panel number to the beginning of all the IDs. Users should be mindful of the different ID structures/lengths when combining MEPS PUFs from 1996-2017 with MEPS PUFs from 2018-2022.

PANEL is a constructed variable used to specify the panel number (24, 26, or 27) for each person on the Consolidated PUF. Panel 24 started in 2019, Panel 26 started in 2021, and Panel 27 started in 2022. The panel number is included as the first two digits of the DUID and DUPERSID.

The variable DATAYEAR was added to the Consolidated PUF in FY 2022 and is set to the reference year for the data. DATAYEAR was added to the Consolidated PUF to aid in the differentiation of datasets when merging multiple years of data.

An RU is a person or group of persons in the sampled DU who are related by blood, marriage, adoption, or other family association. Each RU was interviewed as a single entity for MEPS. Thus, the RU serves chiefly as a family-based "survey" operations unit rather than an analytic unit.

Standard or primary RUs are the original RUs from the 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 (younger than 24) who is considered a usual member of the household but was living away from home while going to school, and was treated as an RU separate from their parents' RU for the purpose of data collection.

RUCLAS22 indicates the type of RU (standard, new, or student) when fielded for MEPS and was set on the basis of the RUCLAS values from Rounds 7/3/1, 8/4/2, and 9/5/3. If the person was present in the responding RU in Round 9/5/3, then RUCLAS22 was set to RUCLAS53. If the person was not present in the responding RU in Round 9/5/3 but was present in Round 8/4/2, then RUCLAS22 was set to RUCLAS42. If the person was not present in either Rounds 9/5/3 or 8/4/2

but was present in Round 7/3/1, then RUCLAS22 was set to RUCLAS31. If the person was not linked to a responding RU during any round, then RUCLAS22 was set to -15.

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, 2022 or the last round in which RU members were in the survey) is indicated by the RULETR22 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 include the following:

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, aged 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).

The round-specific variables RUSIZE31, RUSIZE42, and RUSIZE53, and the end-of-year status variable RUSIZE22 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. The family identifier and size variables are described below and include students with their parents' RU.

The round-specific variables FAMID31, FAMID42, and FAMID53, and the end-of-year status variable FAMID22 identify a family (i.e., persons related to one another by blood, marriage, adoption, or self-identified as a single unit) for each round and as of December 31, 2022. 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 PUF. The annualized family ID letter, FAMIDYR, identifies eligible members of the eligible annualized families within a DU. The CPSFAMID represents a redefinition of MEPS families into families defined by the Current Population Survey (CPS). Some of the distinctions between CPS-and MEPS-defined families are that MEPS families include and CPS families do not include: non-married partners, and in-laws. These persons are considered as members of separate families for CPS-like families. CPS-like families are defined so a poverty status classification variable consistent with established definitions of poverty can be assigned to the CPS-like families and used for weight poststratification purposes. 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.

Foster care relationships and fostered members of households are no longer included in the MEPS data. This change was implemented as of the 2017 Consolidated PUF, so users combining many years of data may encounter foster relationships/members in earlier MEPS PUFs.

The round-specific variables FAMSZE31, FAMSZE42, and FAMSZE53, and the end-of-year status variable FAMSZE22 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, RUSIZE22, FAMSZE31, FAMSZE42, FAMSZE53, and FAMSZE22 exclude persons who are ineligible for data collection (i.e., identified by the following variables: ELGRND31 NE 1, ELGRND42 NE 1, ELGRND53 NE 1, or ELGRND22 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.

Table 4

Values and Definitions for RURSLT31

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 1/1/22
82	Entire RU was military before 1/1/22
83	Entire RU institutionalized before 1/1/22
84	Entire RU left United States before 1/1/22
85	Entire RU was ineligible before 1/1/22; Multi-reason
86	Entire RU was 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

Value	Definition
94	Entire RU is military or left U.S. after 1/1/22
95	Entire RU institutionalized after 1/1/22; No proxy
96	Entire RU deceased after 1/1/22; No proxy
97	Reenumeration complete; No RU member; Nonresponse
98	RU moved too far to interview
99	Final other nonresponse

Table 5

Values and Definitions for RURSLT42 and RURSLT53

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 1/1/22
95	Entire RU institutionalized after 1/1/22; No proxy
96	Entire RU deceased after 1/1/22; No proxy
97	Reenumeration complete; No RU member; Nonresponse
98	RU moved too far to interview
99	Final other nonresponse

Geographic Variables

The round-specific variables REGION31, REGION42, and REGION53, and the end-of-year status variable REGION22 indicate the Census region for the RU. REGION22 indicates the region for the 2022 portion of Round 9/5/3. For most analyses, REGION22 should be used.

Table 6

Values, Labels, and States for Each Region

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 in 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. The variables that identify these dates include BEGRFM31, BEGRFY31, BEGRFM42, BEGRFY42, BEGRFM53, and BEGRFY53. The reference period for Round 1 for most persons began on January 1, 2022 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 on which 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. For persons who joined after the previous round's interview, beginning of the reference period was set to the day on which they joined the RU.

The round-specific ending reference period dates for Rounds 7/3/1, 8/4/2, and 9/5/3, 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, ENDRFM22, and ENDRFY22. 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 precedes the date of the interview if the person was deceased during the round, left the RU, was institutionalized before that round's interview, or left the RU to join the military. For a small number of cases, the reference period dates may have been recoded for confidentiality.

Reference Person Identifiers

The round-specific variables REFPRS31, REFPRS42, and REFPRS53, and the end-of-year status variable REFPRS22 identify the reference person for Rounds 7/3/1, 8/4/2, and 9/5/3, and as of December 31, 2022 (or the last round in which they were in the survey). In general, the reference person is defined as the household member aged 16 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 RE section of the CAPI questionnaire.

Respondent Identifiers

The respondent is the person who answered the interview questions for the RU. The round-specific variables RESP31, RESP42, and RESP53, and the end-of-year status variable RESP22 identify the respondent for Rounds 7/3/1, 8/4/2, and 9/5/3, and as of December 31, 2022 (or the last round in which they were in the survey). Only one respondent is identified for each RU. When the interview was completed in more than one session, only the first respondent is indicated.

There are two types of respondents: an RU member or a non-RU member proxy. The round-specific variables PROXY31, PROXY42, and PROXY53, and the end-of-year status variable PROXY22 identify the type of respondent for Rounds 7/3/1, 8/4/2, and 9/5/3, and as of December 31, 2022 (or the last round in which they were in the survey).

Language of Interview

The language of interview variable (INTVLANG) is a summary value of the round-specific, RU-level question (CL350) in the Closing section of the CAPI questionnaire. This question 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 in which the person participated in the survey and the person's associated RU for that round, INTVLANG was assigned the interview language value reported for the person's RU for the round.

Type of Interview

Beginning in FY 2022, the interviewer records at CL340 the primary mode of conducting the MEPS interview. This information is used to construct the round-specific type of interview variables INTVTYPE31, INTVTYPE42, and INTVTYP53, with the following response categories: In Person (1), By Telephone (2), or By Video (CAVI) (3).

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, INSCOP22, INSC1231, INSCOPE, ELGRND31, ELGRND42, ELGRND53, ELGRND22, PSTATS31, PSTATS42, and PSTATS53. They were set on the basis of sampling information and responses provided in the RE section of the CAPI questionnaire.

Through the RE section of the CAPI questionnaire, each member of an RU was classified as Key or non-Key, in scope or out of scope, and eligible or ineligible for data collection. To be included in the set of persons used to derive the MEPS person-level estimates, a person also had to be a member of the U.S. civilian noninstitutionalized population for at least one day during 2022. 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 in scope at some time during the year, who were Key, and who also responded for the full period in which they were in scope were assigned positive person-level weights. Analysts should therefore use these persons to derive person-level national estimates from the MEPS.

If analysts want to subset their analysis to infants born during 2022, then newborns should be identified by using AGE22X = 0 rather than PSTATSxy = 51.

In Scope

The round-specific variables INSCOP31, INSCOP42, and INSCOP53 indicate a person's in scope status for Rounds 7/3/1, 8/4/2, and 9/5/3. INSCOP22, INSC1231, and INSCOPE indicate a person's in-scope status for the portion of Round 9/5/3 that covers 2022, the person's in-scope status as of December 31, 2022, and whether a person was ever in scope during calendar year 2022. A person was considered in scope during a round or a referenced period if they were 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 analysts to determine in-scope status over time (for example, becoming in scope in the middle of a round, as would be the case for newborns). These variables contain the following values and definitions:

Table 7

Values and Definitions for INSCOPxy, INSCOP22, INSC1231, and INSCOPE

Value	Definition
0	Incorrectly listed or on NHIS roster but out of scope prior to January 1, 2022
1	Person is in scope for the whole reference period
2	Person is in scope at the start of the RU reference period, but not at the end of the RU reference period

Value	Definition
3	Person is not in scope at the start of RU reference period, but is in scope at the end of the RU reference period. (For example, the person is in scope from the date they 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 in scope during the reference period, but neither at the reference start date nor on the reference end date. (For example, the person leaves an institution, goes into community, and then dies.)
5	Person is out of scope for all of the reference period during which they are an RU member. (For example, the person is in the military.)
6	Person is out of scope for the entire reference period, is not a member of the RU during this period, and was in scope 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, 2022, for INSCOP22)
8	RU nonresponse and Key persons who left an RU with no tracing information, so a new RU was not formed
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 the MEPS. A person is Key if they are linked for sampling purposes to the set of NHIS sampled households designated for inclusion in the MEPS. More 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 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 being selected for the NHIS (and the MEPS) was associated with a household eligible but not sampled for the NHIS and who later became a member of a MEPS RU. MEPS data (e.g., utilization and expenditures) were collected for the period over which a non-Key person was part of a 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 were not given 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 when a person enters MEPS, and this person's Keyness status never changes. Once a person is determined to be Key, they will always be Key.

It should be pointed out that a person might be Key even though they are not part of the civilian noninstitutionalized portion of the U.S. population. For example, a person in the military may have been living with their civilian spouse and children in a household sampled for the NHIS. The person in the military would be considered Key for purposes of the MEPS; however, such a person would not be eligible to receive a person-level sample weight if they were never in scope during 2022.

Eligibility

The eligibility of a person for the MEPS pertains to whether data are to be collected for that person. All Key, in-scope persons of a sampled RU are eligible for data collection. The only non-Key persons eligible for data collection are those who happen to be living in an RU with at least one Key, in-scope person. Their eligibility continues only for as long as they live with at least one such person. The only out-of-scope persons eligible for data collection are those who are living with a Key, in-scope person - again, only for as long as they live with such persons. Only military persons fit this description (for example, a person who is full-time, active duty military and 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 who may have been institutionalized during a round), data are collected for the period during which that person is classified as eligible. The round-specific variables ELGRND31, ELGRND42, and ELGRND53, and the end-of-year status variable ELGRND22 indicate a person's eligibility status for Rounds 7/3/1, 8/4/2, and 9/5/3, and as of December 31, 2022.

Person Disposition Status

The round-specific variables PSTATS31, PSTATS42, and PSTATS53 indicate a person's disposition status - that is, their response and eligibility status for each round of interviewing. These variables indicate the reasons for either continuing or terminating data collection for each person in the MEPS. Using these variables, analysts can identify persons who moved during the reference period, died, were born, institutionalized, or were in the military. Analysts should note that PSTATS53 summarizes all of Round 9/5/3, including transitions that occurred after 2022. Note that some categories may have been collapsed for confidentiality purposes.

Table 8

Values and Definitions for PSTATSxy

Value	Definition
-1	The person was not fielded during the round, or the RU was nonresponse
0	Incorrectly listed in RU at NHIS - applies to MEPS Round 1 only
11	Person in original RU, not full-time active military duty

Value	Definition
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 in scope 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 8/4/2 and 9/5/3 only
22	The person leaves an institution (health care or non-health care) and rejoins the community - Rounds 8/4/2 and 9/5/3 only
23	The person leaves an institution and dies - Rounds 8/4/2 and 9/5/3 only
24	The person dies in a health care institution during the round (former RU member) - Rounds 8/4/2 and 9/5/3 only
31	Person from original RU, dies during reference period
32	Went to health care institution during reference period
33	Went to non-health care 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
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 in scope during the round
51	Newborn in reference period
61	Died prior to reference period (not eligible) - Round 7/3/1 only
62	Institutionalized prior to reference period (not eligible) - Round 7/3/1 only
63	Moved outside U.S. prior to reference period (not eligible) - Round 7/3/1 only
64	Full-time military, living on a military facility, moved prior to reference period (not eligible)-Round 7/3/1 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

Value	Definition
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

Because the variables PSTATS31, PSTATS42, and PSTATS53 indicate the reasons for either continuing or terminating data collection for each person in the 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 that each individual did not receive. By using this information, shown in the table at the end of this section, analysts will be able to determine which sections of the MEPS questionnaire collected data elements for each individual.

Some individuals have a reference period that spans an entire round, while for others, it spans only a portion of the round. When an individual's reference period does not coincide with the RU reference period, the individual's beginning date may be later than the RU's beginning date, the ending date may be earlier, or both may be true. In addition, for some individuals, the reference period information was coded as Inapplicable (-1) (e.g., for individuals who were not actually in the household). The information in the table at the end of this section indicates the beginning and ending dates of the reference periods for persons with various values of PSTATS31, PSTATS42, and PSTATS53. The actual dates for each individual are in the following variables in this PUF: BEGRFM31, BEGRFM42, BEGRFM53, BEGRFY31, BEGRFY42, BEGRFY53, ENDRFM31, ENDRFM42, ENDRFM53, ENDRFY31, ENDRFY42, ENDRFY53, ENDRFM22, and ENDRFY22.

The table at the end of this section also shows the section or sections of the questionnaire that were *not* asked for each value of PSTATS31, PSTATS42, and PSTATS53. For example, the Priority Condition Enumeration (PE) section has 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 they died, became institutionalized, or otherwise left the RU; however, no one was considered to have skipped the entire section. Some questions or sections (e.g., Health Status [HE], Employment [RJ, EM, EW]) were skipped if individuals were 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 SAQ was designed to collect information during Panel 27 Round 2, Panel 26 Round 4, and Panel 24 Round 8. A person was considered eligible to receive an SAQ if that person was key; their status was not deceased or institutionalized; they did not move out of the United States or to a military facility; they were not a nonresponse at the time of the Round 2, Round 4, or Round 8 interview date; and they were aged 18 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 (Section 2.5.6).

Please note that the ending reference date shown in the following table for PSTATS53 reflects the Round 9/5/3 reference period rather than the portion of Round 9/5/3 that occurred during 2022.

Table 9

PSTATS Values and Definitions, the Instrument Sections that Persons with that Value are Not Asked, and Reference Period Dates

PSTATS Value	PSTATS Definition	Sections in the instrument that persons with this PSTATS value do NOT receive	Beginning reference date	Ending reference date
-1	The person was not fielded during the round or the RU was nonresponse	All sections	Inapplicable	Inapplicable
0	Incorrectly listed in RU in NHIS - Round 1 only	All sections after Reenumeration (RE)	Inapplicable	Inapplicable
11	Person in original household, not FT (full-time) active military duty (person is in the same RU as the previous round)	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Interview date
12	Person in original household, FT active military duty, out-of-scope for whole reference period.	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Interview date
13	FT student living away from home, but associated with sampled household	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Interview date

PSTATS Value	PSTATS Definition	Sections in the instrument that persons with this PSTATS value do NOT receive	Beginning reference date	Ending reference date
14	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, 2022 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 in scope, then the date the person joined the military
21	The person remains in a health care institution for the whole round - Rounds 8/4/2 and 9/5/3 only	All sections after RE	Inapplicable	Inapplicable
22	The person leaves a health care institution and rejoins the community - Rounds 8/4/2 and 9/5/3 only	-	Date rejoined the community	Interview date
23	The person leaves a health care institution, goes into community, and then dies - Rounds 8/4/2 and 9/5/3 only	PE - Priority Conditions Enumeration HE - Health Status AC - Access to Care	Date rejoined the community	Date of death
24	The person dies in a health care institution during the round (former household member) - Rounds 8/4/2 and 9/5/3 only	All sections after RE	Inapplicable	Inapplicable
31	Person from original household, dies during reference period	PE HE AC	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Date of death
32	Went to health care institution during reference period	AC	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Date institutionalized

PSTATS Value	PSTATS Definition	Sections in the instrument that persons with this PSTATS value do NOT receive	Beginning reference date	Ending reference date
33	Went to non-health care institution during reference period	AC	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Date institutionalized
34	Moved from original household, outside U.S.	-	PSTATS31: January 1, 2022 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, 2022 PSTATS42 and PSTATS53: Prior round interview date	Date left the RU
36	Went to institution (type unknown) during reference period	AC	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Date institutionalized
41	Moved from the original household to new household within U.S. (new households include RUs originally classified as a student RU but that converted to a new RU; these are individuals in an RU that has split from an RU since the previous round)	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Interview date
42	The person joins household and is not FT military during round	-	January 1, 2022, or the date the person joined the RU, whichever is later	Interview date
43	The person's disposition as to why they are 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

PSTATS Value	PSTATS Definition	Sections in the instrument that persons with this PSTATS value do NOT receive	Beginning reference date	Ending reference date
44	The person leaves an RU, joins an existing RU, and is not both in the military and coded as in scope during the round	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date of the RU the person has joined. This may not be the interview date of the person's RU.	Interview date
51	Newborn in reference period	Questions in which age must be > 1 HE Employment (RJ/EM/EW)	PSTATS31: January 1, 2022, if born prior to 2022. The date of birth if born in 2022. PSTATS42 and PSTATS53: The prior round interview date or date of birth, whichever is later	Interview date
61	Died prior to reference period (not eligible) - Round 7/3/1 only	All sections after RE	Inapplicable	Inapplicable
62	Institutionalized prior to reference period (not eligible) - Round 7/3/1 only	All sections after RE	Inapplicable	Inapplicable
63	Moved outside U.S., prior to reference period (not eligible) - Round 7/3/1 only	All sections after RE	Inapplicable	Inapplicable
64	FT military, moved prior to reference period (not eligible) - Round 7/3/1 only	All sections after RE	Inapplicable	Inapplicable
71	Student younger than 24 living away at school in grades 1 - 12 (non-Key)	-	PSTATS31: January 1, 2022 PSTATS42 and PSTATS53: Prior round interview date	Interview date

PSTATS Value	PSTATS Definition	Sections in the instrument that persons with this PSTATS value do NOT receive	Beginning reference date	Ending reference 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 FT military, moved without someone Key and in scope (not eligible)	All sections after RE	Inapplicable	Inapplicable
74	Moved as FT military but not to a military facility and without 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 in the MEPS HC. The characteristics include age, sex, race, ethnicity, marital status, educational attainment, and military service. As noted in this section, some variables have edited and imputed values. The questions pertaining to most demographic variables on this PUF were asked during every round of the MEPS interview. These variables contain data for Rounds 7, 8, and 9 of Panel 24 (the panel that started in 2019); Rounds 3, 4, and 5 of Panel 26 (the panel that started in 2021); Rounds 1, 2 and 3 of Panel 27 (the panel that started in 2022); and the status as of December 31, 2022.

Demographic variables whose names contain "31," "42," or "53" are round-specific variables. As mentioned in Section 2.4: Variable Naming, fourth-year panel data for Rounds 7, 8, and 9 of Panel 24 are included in the "31"/"42"/"53" sets of variables. For example, AGE31X represents the age data relevant to Round 7 of Panel 24, Round 3 of Panel 26, or Round 1 of Panel 27. The variable PANEL indicates the panel from which the data were derived. A value of 24 indicates Panel 24 data, a value of 26 indicates Panel 26 data, and a value of 27 indicates Panel 27 data. The remaining demographic variables on this PUF are not round specific.

The variables describing the demographic status of the person as of December 31, 2022 were developed in two ways. First, the age variable (AGE22X), which represents the exact age, was

calculated from the date of birth and indicates age status as of December 31, 2022. For the remaining December 31 variables (i.e., related to marital status [MARRY22X, SPOUID22, SPOUIN22], student status [FTSTU22X], and the relationship to reference persons [REFRL22X]), the following algorithm was used: data were taken from the Round 9/5/3 counterpart if nonmissing; else, if missing, data were taken from the Round 8/4/2 counterpart; else from the Round 7/3/1 counterpart. If no valid data were available during any of these rounds of data collection, the algorithm assigned the missing value (other than Inapplicable [-1]) from the first round in which the person was part of the study. When all three rounds were set to -1, Cannot be Computed (-15) 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 the date of birth was available, age was calculated on the basis of the difference between the date of birth and the date of the 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, AGE22X, and AGELAST were top-coded at 85 years of age.

When date of birth was not provided but age was provided (either from the MEPS interviews or the 2017-2021 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 either of the following:

1. The mean age difference between MEPS participants with certain family relationships (when available) or

2. The mean age value for MEPS participants.

For example, a mother's age was 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 was 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 8 persons on this PUF.

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 0-85.

Sex

Data on the gender of each RU member (SEX) were initially determined from the 2018 NHIS for Panel 24, from the 2020 NHIS for Panel 26, and from the 2021 NHIS for Panel 27. 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 determined 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 it was obvious (1 case was resolved in this way in 2022). If the person's first name provided no indication of gender, then family relationships were reviewed (1 case was resolved in this way in 2022). If neither of these approaches made it possible to determine the individual's gender, gender was randomly assigned (no cases were resolved in this way in 2022).

Race and Ethnicity

The race and the ethnicity 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 change affected data starting with the 2012 Population Characteristics PUF. Before that time, there were two race questions, but starting with the data collection in 2013, there has been 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. As a result of these changes, race/ethnicity data before 2012 may not be directly comparable with data collected in 2012 and later. The following table shows the variables used for FY 2002-2011 and FY 2012-2022, with two exceptions: (1) in FY 2012, RACEV1X categories 4 and 5 were not combined but were combined starting with 2013, and (2) RACEV2X and HISPNCAT were first introduced in 2013.

Table 10

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

FY PUFs 2002-2011	FY PUFs 2012-2022
Race	Race
	RACEVER Used only in FY12-FY13 1 Old race questions 2 New race questions

FY PUFs 2002-2011	FY PUFs 2012-2022
RACEX 1 White - No other race reported 2 Black - No other race reported 3 American Indian/Alaska Native - No other race reported 4 Asian - No other race reported 5 Native Hawaiian/Pacific Islander - No other race reported 6 Multiple races reported	RACEV1X 1 White - No other race reported 2 Black - No other race reported 3 American Indian/Alaska Native - 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 (used only in FY12; starting in 2013, Category 5 collapses into Category 4.) 6 Multiple races reported
	RACEV2X (starting in 2013) Treatment of categories 10 and 12 differed between 2013-2015 and 2016-2019 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 1 Person is Hispanic 2 Person is Black - No other race reported/Not Hispanic 3 Person is Asian - No other race reported/Not Hispanic 4 Other race/Not Hispanic	RACETHX 1 Hispanic 2 Non-Hispanic White only 3 Non-Hispanic Black only 4 Non-Hispanic Asian only 5 Non-Hispanic Other race or multi-race
RACEAX 1 Asian - No other race reported 2 Asian - Other race(s) reported 3 All other race assignments	RACEAX 1 Asian - No other race reported 2 Asian - Other race(s) reported 3 All other race assignments

FY PUFs 2002-2011	FY PUFs 2012-2022
RACEBX 1 Black - No other race reported 2 Black - Other race(s) reported 3 All other race assignments	RACEBX 1 Black - No other race reported 2 Black - Other race(s) reported 3 All other race assignments
RACEWX 1 White - No other race reported 2 White - Other race(s) reported 3 All other race assignments	RACEWX 1 White - No other race reported 2 White - Other race(s) reported 3 All other race assignments
Ethnicity	Ethnicity
HISPANX 1 Hispanic 2 Not Hispanic	HISPANX 1 Hispanic 2 Not Hispanic
HISPCAT 1 Puerto Rican 2 Cuban/Cuban American 3 Dominican 4 Mexican/Mexican American 5 Central or South American 6 Non-Hispanic 91 Other Latin American 92 Other Hispanic/ Latino	HISPCAT (used only in FY12-FY13) 1 Puerto Rican 2 Cuban/Cuban American 3 Dominican 4 Mexican/Mexican American 5 Central or South American 6 Non-Hispanic 91 Other Latin American 92 Other Hispanic/ Latino -1 Inapplicable

FY PUFs 2002-2011	FY PUFs 2012-2022
	HISPNCAT (starting in 2013) 1 Mexican/Mexican American/Chicano - No other Hispanic reported 2 Puerto Rican - No other Hispanic reported 3 Cuban/Cuban American - No other Hispanic reported 4 Dominican - No other Hispanic reported 5 Central or South American - No other Hispanic reported 6 Oth Lat Am/Hisp/Latino/Spnsh orgn - No other Hispanic reported 8 Multiple Hispanic groups reported 9 Non-Hispanic -1 Inapplicable (used only in FY13)

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

Values for these variables were obtained according to 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 (17 cases were resolved in this way for race, and 13 cases were resolved in this way for ethnicity). If still not determined, race and/or ethnicity were assigned on the basis of the relationship to other members of the DU by using a priority order that gave precedence to blood relatives in the immediate family (this approach was used for 22 persons to set race and for 9 persons to set ethnicity).

For the FY 2012 and FY 2013 PUFs, three new race variables were constructed for both the old and the new questions: RACEVER, RACEV1X, and RACETHX. The variable RACEVER was constructed to indicate which version of the race question(s) was asked and was included in only the 2012 and 2013 FY PUFs. RACEVER has been dropped starting with the 2014 PUF. The variables RACEV1X and RACETHX replace the variables RACEX and RACETHNX from 2002-2011. A new race variable, RACEV2X, was constructed only for the new race question and was added for the first time to the 2013 files. RACEV2X was set to Inapplicable (-1) for persons who were not asked the new race question in FY 2013 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 of multiple Asian races or multiple Hawaiian/Pacific Islander races were considered multiple races for RACEV2X but were not considered multiple races for RACEV1X. Starting with the 2016 PUFs,

persons of multiple Asian races or multiple Hawaiian/Pacific Islander races were no longer considered multiple races for RACEV2X.

For the FY 2012 and FY 2013 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 FY 2012 and FY 2013; HISPCAT was dropped starting with the 2014 PUF. A new ethnicity variable, HISPNCAT, based on the new question, was introduced in 2013. HISPNCAT includes categories that are similar to HISPCAT but in a different order; it also contains an additional category, Multiple Hispanic Groups Reported (8), to represent any multiple responses reported. HISPNCAT was set to Inapplicable (-1) for persons who were not asked the new ethnicity question in FY 2013. This variable continues to be constructed for all PUFs.

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

Language Variables: OTHLGSPK, WHTLGSPK, and HWELLSPK

Data on language variables (OTHLGSPK, WHTLGSPK, and HWELLSPK) were collected at the person level in the round in which the person entered the MEPS. Beginning with Panel 23 Round 1, the household respondent was asked, for each person aged 5 or older, a person-level question to determine whether that person speaks a language other than English at home (RE1170, OTHLGSPK). If the response to OTHLGSPK was "Yes," then two other questions were asked. WHTLGSPK (RE1170) is a person-level question that asks whether the non-English language spoken at home is Spanish or some other language, and HWELLSPK (RE1170) is a person-level question that asks how well that person can speak English. If the response to OTHLGSPK was "No," then WHTLGSPK and HWELLSPK were set to Inapplicable (-1). Family members who were deceased or institutionalized in Round 1 were coded with a value of Inapplicable (-1). For minors younger than 5, all three variables were coded to Under 5 years old - Inapplicable (5).

Language variables have changed over time, so users doing multiyear analyses should carefully review the documentation from prior years to ensure that they are collecting all relevant language variables and correctly interpreting the various language variables over time.

Foreign Born Status

Three questions regarding foreign-born status were asked in the Demographics section to ascertain whether a person was born in the United States (RE1170), what year they came to the U.S. (RE1170) if not born in the U.S., and years lived in the U.S. (RE1170) if the response to RE1170 was "Don't Know." These questions replaced similar questions that had been asked in the Access to Care (AC) section before 2013.

These three questions were only asked once for each eligible person - that is, in the first round in which the person was included in the interview. The questions were asked of everyone except deceased and institutionalized persons. The data from RE1170 are reported as the constructed variable BORNUSA. The data from RE1170 (YRCAMEUS) and RE1170 (YRSINUSA) were used to calculate the number of years a person has lived in the United States for the constructed variable YRSINUS. Please note that YRSINUS is a discrete variable that has five collapsed categories:

1 - Less than 1 year

2 - 1 year, less than 5 years

3 - 5 years, less than 10 years

4 - 10 years, 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 RE100 and RE1170 and is reported as MARRY31X, MARRY42X, MARRY53X, and MARRY22X. Persons younger than 16 were coded as Under 16 - Inapplicable (6). If marital status in 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).

When there were discrepancies between the marital status 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 was reported as widowed, the data were reviewed to determine whether one partner should be coded as Widowed in Round (8).

The data were edited 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 previously being coded as any other marital status. Third, a person could not be coded as Married in Round after being coded as Married in the immediately preceding round. Fourth, a person could not be assigned an in-round code (e.g., Widowed in Round) in two consecutive rounds. Since marital status can change across rounds, and since 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-level identifier for each individual's spouse is reported in SPOUID31, SPOUID42, SPOUID53, and SPOUID22. These are the PIDs (within each family) of the person identified as the spouse during Round 7/3/1, Round 8/4/2, and Round 9/5/3 and as of December 31, 2022, respectively. If no spouse was identified in the household, the variable was coded as No Spouse

in House (995). Those with unknown marital status were coded as Marital Status Unknown (996). Persons younger than 16 were coded as Less than 16 Years Old (997).

The SPOUIN31, SPOUIN42, SPOUIN53, and SPOUIN22 variables indicate whether a person's spouse was present in the RU during Round 7/3/1, Round 8/4/2, and Round 9/5/3, and as of December 31, 2022, respectively. If the person had no spouse in the household, the response was coded as Not Married/No Spouse (2). For persons younger than 16, the response was coded as Under 16 - Inapplicable (3).

The SPOUID and SPOUIN variables were obtained from question RE900, in which 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 about marital status. While editing was performed to ensure that SPOUID and SPOUIN were 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 a result of any of the following three causes:

1. Ambiguity as to when, during a round, a change in marital status occurred. This uncertainty 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 are separating but are 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 FTSTU22X indicate whether the person was a full-time student at the interview date (or on December 31, 2022, for FTSTU22X). These variables have valid values for all persons aged 17-23. When this education question was asked during Round 1 of Panel 27, it was based on age as of the 2021 NHIS interview date.

Education questions were asked only when persons first entered MEPS, typically in 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 to 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 in which a person first entered the MEPS. The documentation for each of the 2011-2015 years explains which education variables are in the respective files. Starting in FY 2016, EDUCYR and HIDEG are the only education variables in the PUFs.

EDUCYR contains the number of years of education completed when entering MEPS for individuals aged 5 or older. Children younger than 5 were coded as Inapplicable (-1) regardless of whether they attended school. Individuals who were aged 5 or older and had never attended school were coded as 0. The user should note that EDUCYR is an unedited variable for which the data were only minimally cleaned.

HIDEG contains information on the highest degree of education attained when the individual entered MEPS. This information was obtained from three questions: highest grade completed, high school diploma, and highest degree. Persons younger than 16 when they first entered MEPS were coded as Under 16 - Inapplicable (8). When the response to the question about highest degree was No Degree, and the response to the question about highest grade was 13 -17, the variable HIDEG was coded as High School Diploma (3). If the response to the question about highest grade completed was Refused or Don't Know, and the response to the question about highest degree was No Degree, the variable HIDEG was coded as No Degree (1). The user should note that HIDEG is an unedited variable for which the data were only minimally cleaned.

Military Service

Information on active duty military status was collected during each round of the MEPS interview. Persons on full-time active duty status at the time of the interview are identified by the variables ACTDTY31, ACTDTY42, and ACTDTY53. Those younger than 16 were coded as Under 16 - Inapplicable (3), and those older than 59 were coded as Over 59 - Inapplicable (4).

Relationship to the Reference Person within Reporting Units

For each 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 Dwelling Units, Reporting Units, and Families in Section 2.5.1: Survey Administration Variables.) The relationship variables indicate the relationship of each individual to the reference person of the RU in a given round.

Starting in 2013, detailed relationships were combined for confidentiality into more general categories in the variables REFRL31X, REFRL42X, REFRL53X, and REFRL22X. These variables replaced RFREL31X, RFREL42X, RFREL53X, and RFRELyyX, which were used before 2013. The new and old variables are defined differently, so researchers using multiple years of MEPS data should refer to the documentation for prior years to ensure that their data are consistent.

Note that the categories for Child (4), Parent (7), and Sibling (8) for REFRL31X, REFRL42X, and REFRL53X, and REFRL22X changed in 2017. In 2013-2016, these categories included biological, adoptive, and step relationships, as well as in-law and foster relationships. Starting in 2017, in-law relationships have been included in Other Related, Specify (91). Foster children were no longer included in the MEPS starting in 2017, so this relationship no longer appears in any of the categories.

Table 11

Child, Parent, and Sibling Relationship Categories and Labels

Categories	2013-2016	2017-2022
4	CHILD (BIOLGCL/ADOPT/ IN-LAW/STEP/FOSTR)	CHILD BIOLOGICAL/ADOPT/STEP
7	PARENT (BIOLGCL/ADOPT/ IN-LAW/STEP/FOSTR)	PARENT BIOLOGICAL/ADOPT/STEP
8	SIBLING (BIOLGCL/ADOPT/ IN-LAW/STEP/FOSTR)	SIBLING BIOLOGICAL/ADOPT/STEP

For the reference person, these variables have the value Household Reference Person; for all other persons in the RU, the relationship to the reference person is indicated by codes representing Spouse, Unmarried Partner, Child, and so forth. A code of 91, meaning Other Related, Specify indicates rarely observed relationships such as Mother of Partner, Partner of Sister, and so forth. If the relationship of an individual to the reference person was not determined during the round-specific interview, relationships between other RU members were used, when possible, to assign a relationship to the reference person. If MEPS data from calendar year 2022 were not sufficient to identify the relationship of an individual to the reference person, relationship variables from the 2021 MEPS or NHIS data were used to assign a relationship. In the event that a meaningful value could not be determined, or if data were missing, the relationship variable was assigned a missing value code.

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

Parent Identifiers

The variables MOPID31X, MOPID42X, MOPID53X and DAPID31X, DAPID42X, DAPID53X are round-specific and are used to identify the parents (biological, adopted, or step) of the person represented on that record. MOPID##X contains the person identifier (PID) for each individual's mother if she lived in the RU in that panel/round of the survey, or a value of Inapplicable (-1) 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 Inapplicable (-1) 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 RE900, 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 Inapplicable (-1).

Edits were performed to ensure that MOPID##X and DAPID##X were consistent with each individual's age, sex, and other relationships within the family. For instance, the gender of the

parent must be consistent with the indicated relationship; mothers are at least 12 years older than the person and no more than 55 years older than the person; fathers are at least 12 years older than the person; each person has no more than one mother and no more than one father; and the PID for the person's mother and father are valid PIDs for that person's RU for the 2022 Full Year PUF.

2.5.4 Income and Tax Filing Variables (FILEDR22-HIEUIDX)

The file provides income and tax-related variables that were constructed primarily from data collected in the Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3 Income sections. Person-level income amounts have been edited and imputed for every record on the full-year PUF, 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.

Beginning with the income data collected for Panel 21 Round 5 and Panel 22 Round 3, two skip patterns were introduced to reduce respondent burden. Prior to Panel 21 Round 5 and Panel 22 Round 3, unemployment compensation income (IN360) was asked of all respondents eligible for income collection. Beginning with Panel 21 Round 5 and Panel 22 Round 3, IN360 was not administered for respondents who reported employment at the same current main job in the current round and the previous two rounds. Similarly, prior to Panel 21 Round 5 and Panel 22 Round 3, alimony income (IN170) was collected for all respondents eligible for income collection. Beginning with Panel 21 Round 5 and Panel 22 Round 3, IN170 was not administered for respondents who were married in the current round and married in the previous two rounds. As detailed below, weighted, sequential hot-decks were used to estimate amounts for unemployment compensation (UNEMP22X) and alimony income (ALIMP22X) for these respondents. Users should note that the introduction of these skip patterns may affect comparability of these income measures across survey years.

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 PUF 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, WAGEP22X. Complete responses were left unedited, and this group of people was assigned WAGIMP22=1, where WAGIMP22 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). 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 as well as a specific question on the wage income of the respondent (IN110) 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 WAGIMP22=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 2022 (as in all previous years) there were a small number of cases where WAGEP22X=0 and WAGIMP22=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 WAGEP22X 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 WAGIMP22=3 were those who did not report wage and salary income and who were assigned WAGEP22X=0 based on not having been employed during the year.

Persons assigned WAGIMP22=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 WAGEP22X. Donor pools included persons whose WAGEP22X 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 WAGEP22X amounts (WAGIMP22=5). Imputations for WAGEP22X for the remaining persons were unconditional, using both workers and non-workers as donors (WAGIMP22=6).

After editing WAGEP22X for all persons in the full-year PUF, the remaining income sources were edited in the following sequence: INTRP22X, BUSNP22X, DIVDP22X, ALIMP22X, SALEP22X, TRSTP22X, PENSP22X, IRASP22X, SSECP22X, UNEMP22X, WCMPP22X, VETSP22X, CASHP22X, OTHRP22X, CHLDP22X, SSIP22X, and PUBP22X. 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 CHLDP22X used family-level information concerning marital status and the number of children. Hot-deck imputations for SSIP22X and PUBP22X 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 2018 NHIS correspond to MEPS Panel 24, data from the 2021 NHIS correspond to MEPS Panel 26, and data from the 2022 NHIS correspond to Panel 27. 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 xxxIMP22 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 (WAGIMP22 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 ALIMP22X 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 (TTLP22X) is the sum of all income components with the exception of SALEP22X (to match as closely as possible the CPS definition of income; see Section 2.5.4). Some researchers may wish to define their own income measure by adding in one or both of these excluded components.

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

Income Top-Coding

All person-level income amounts in this PUF, 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 PUF. 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.

Poverty Status

The definitions of income, family, and poverty categories used to construct the related variables in this PUF were taken from the 2022 poverty statistics developed by the Current Population Survey (CPS). The categorical variable for 2022 family income as a percentage of poverty (POVCAT22) was constructed using the same method as in earlier years' PUFs.

FAMINC22 contains total family income for each person's CPS family. Family income was derived by constructing person-level total income comprising annual earnings from wages, salaries, bonuses, tips, commissions; business and farm gains and losses; unemployment and workers' compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, IRA withdrawals, social security, and veterans payments; supplemental security income and cash welfare payments from public assistance, and related programs; gains or losses from estates, trusts, partnerships, S corporations, rent, and royalties; and a small amount of "other" income. Person-level income excluded tax refunds and capital gains. Person-level income totals were then summed over family members, as defined by CPSFAMID, to yield CPS family-level total income (FAMINC22).

POVLEV22 is the continuous version of the POVCAT22 variable. The POVLEV22 percentage was computed by dividing CPS family income by the applicable poverty line (based on family size and composition). POVCAT22 takes the POVLEV22 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 2022. 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. Prior to the 2018 data year, only opposite-sex spouses were eligible to be included in the same HIEU. Beginning with the 2018 data year, both same-sex and opposite-sex spouses are included in the same HIEU. We also include children under age 24 who are full-time students (living at home or away from home). Other children who do not live with their natural/adoptive adult parents are placed in an HIEUIDX as follows:

- Other unmarried children are placed in stepparent HIEUIDX, grandparent HIEUIDX, great-grandparent HIEUIDX, or aunt/uncle HIEUIDX.

- Children of unmarried minors are placed (along with their minor parents) in the HIEUIDX of their adult grandparents (if possible). Married minors are placed into separate HIEUs along with any spouses and children they might have.

- Some HIEUs are headed by unmarried minors, when there is no adult family member present in the CPSFAMID.

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

2.5.5 Person-Level Priority Condition Variables (HIBPDX-ADHDAGED)

The Priority Conditions Enumeration (PE) section was asked in its entirety in Round 1 for all current or institutionalized persons, and in Panel 27 Round 2, Panel 26 Round 4, and Panel 24 Round 8 for only new RU members. In Panel 27 Round 3, the questions about specific conditions (except joint pain and chronic bronchitis) were asked only if the person had not reported the condition in a previous round.

In FY 2020 and FY2021, "53" versions of joint pain, chronic bronchitis, and asthma follow-up variables were constructed to account for extended panels and rounds due to the COVID-19 pandemic. Beginning in FY 2022, these variables are no longer constructed, and only the "31" versions appear on the Consolidated PUF.

Priority-condition variables that end in "DX" indicate whether the person was ever diagnosed with the condition. Follow-up questions on chronic bronchitis, joint pain, and asthma (ASSTIL31, ASATAK31, and ASTHEP31) reflect data obtained in Round 7 of Panel 24, Round 3 of Panel 26, and Rounds 1 and 3 of Panel 27. Diagnoses data (except for attention deficit hyperactivity disorder/attention deficit disorder [ADHD/ADD], diabetes, and asthma) were collected for persons older than 17. If the edited age is within range for the variable to be set, but the source data are missing because the person's age in the CAPI instrument is not within range, the constructed variable was set to Cannot be Computed (-15). Following the same pattern, the question on ADHD/ADD was asked about persons aged 5-17, and the questions on diabetes and asthma were asked about persons of all ages. Exceptions to this pattern are the variables JTPAIN31_M18 and CHBRON31, which are described in detail in the sections below on joint pain and chronic bronchitis.

Questions were asked about the following priority conditions:

- High blood pressure, including multiple diagnoses
- Heart disease (including coronary heart disease, angina, myocardial infarction, and other unspecified heart disease)
- Stroke
- Emphysema
- High cholesterol
- Cancer

- Arthritis
- Diabetes
- Asthma
- ADHD/ADD
- Joint pain
- Chronic bronchitis
- COVID-19 and Long COVID

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

The data were collected at the person-by-round level (indicating whether 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 Yes (1), and a condition record for that medical condition was created.

The editing of the variables that represent these conditions focused on ensuring that skip patterns were consistent.

High Blood Pressure

Questions about high blood pressure, or hypertension, (HIBPDX) were asked only of persons aged 18 or older. Consequently, persons aged 17 or younger were coded as Inapplicable (-1) on these variables. These questions 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 whether they had been told on two or more visits that they had high blood pressure (BPMLDX). The age of diagnosis for high blood pressure (HIBPAGED) is included in this PUF. This variable was top-coded at 85 years of age.

Heart Disease

Questions about heart disease 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. These variables include the following:

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 kinds of heart disease (OHRTAGED) is included in this PUF. These variables were top-coded at 85 years of age.

Respondents who answered "Yes" to a person being diagnosed with any other kind of heart disease or condition (OHRTDX) were asked a follow-up question (OHRTTYPE) to specify other heart diseases or conditions.

Stroke

Questions about stroke (STRKDX) asked if the person (aged 18 or older) had ever been diagnosed as having had a stroke or a 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 PUF and was top-coded at 85 years of age.

Emphysema

EMPHDX indicates whether a 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 PUF and was top-coded at 85 years of age.

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. These questions ascertained whether the person had ever been diagnosed as having high cholesterol (CHOLDX). The age of diagnosis for high cholesterol (CHOLAGED) is included in this PUF and was top-coded at 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. Questions about cancer (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 question PE140 what type of cancer was diagnosed. CABLADDR, CABREAST, CACERVIX, CACOLON,

CALUNG, CALYMPH, CAMELANO, CAOTHER, CAPROSTA, CASKINNM, CASKINDK, and CAUTERUS indicate that the respondent selected cancer of the bladder, breast, cervix, colon, or lung; lymphoma or melanoma; other type of cancer; and 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 of fewer than 20 and diagnoses 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 2022, the clinically rare cancers include the following:

- Bone
- Brain
- Esophagus
- Gallbladder
- Kidney
- Larynx
- Leukemia
- Liver
- Mouth
- Ovary
- Pancreas
- Rectum
- Stomach
- Testis
- Throat
- Thyroid

The variable CABREAST, which indicates a 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 Cannot be Computed (-15), and the corresponding values of the remaining cancer variables were recoded to Inapplicable (-1).

Arthritis

ARTHDX indicates whether a 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 whether the diagnosis was for rheumatoid arthritis (1), osteoarthritis (2), or nonspecific arthritis (3). The age of diagnosis for arthritis (ARTHAGED) is included in this PUF and may have been recoded in some cases to Cannot be Computed (-15) for confidentiality reasons. This variable was top-coded at 85 years of age.

Diabetes

Before 2018, the question about a diabetes diagnosis (DIABDX) was asked for each person aged 18 or older. Beginning in 2018, DIABDX_M18 replaced DIABDX, so questions about diabetes are now asked for all ages. DIABDX_M18 indicates whether each person had ever been diagnosed with diabetes (excluding gestational diabetes). The age of diagnosis of diabetes (DIABAGED) is included in this PUF and was top-coded at 85 years of age.

Each person aged 18 or older said to have received a diagnosis of diabetes was asked to complete a special SAQ. The documentation for this questionnaire will appear in the DCS section of the Consolidated PUF.

Asthma

ASTHDX indicates whether a person had ever been diagnosed with asthma. The age of diagnosis for asthma (ASTHAGED) is included in this PUF and was top-coded at 85 years.

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

Additional follow-up questions regarding asthma medication used for quick relief (ASACUT31), preventive medicine (ASPREV31), and peak flow meters (ASPKFL31) were asked if the person reported having been diagnosed with asthma (ASTHDX = 1). ASACUT31 indicates whether, during the last three months, the person had used the kind of prescription inhaler "that you breathe in through your mouth" to get quick relief from asthma symptoms. ASPREV31 indicates 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. ASPKFL31 indicates whether the person with asthma has a peak flow meter at home.

Respondents who answered "Yes" to ASACUT31 were asked whether the person had used more than three canisters of the quick-relief inhaler in the past three months (ASMRCN31). Respondents who answered "Yes" to ASPREV31 were asked whether the person now takes this kind of medication daily or almost daily (ASDALY31). Respondents who answered "Yes" to ASPKFL31 were asked if the person ever used a peak flow meter (ASEVFL31). Respondents who answered "Yes" to ASEVFL31 were asked when the person last used the peak flow meter (ASWNFL31).

Beginning in 2018, questions regarding asthma medication used for quick relief, as preventive medicine, and via peak flow meters have been implemented starting with Panel 22 Round 3 and Panel 23 Round 1. The following asthma variables are included in this PUF:

ASSTIL31 Does Person Still Have Asthma - Round 3/1

ASATAK31 Asthma Attack Last 12 Mos - Round 3/1

ASTHEP31 When Was Last Episode of Asthma - Round 3/1

ASACUT31 Used Acute Pres Inhaler Last 3 Mos- Round 3/1

ASPREV31 Ever Used Prev Daily Asthma Meds - Round 3/1

ASPKFL31 Have Peak Flow Meter at Home - Round 3/1

ASMRCN31 Used >3 Acute Cn Pres Inh Last 3 Mos - Round 3/1

ASDALY31 Now Take Prev Daily Asthma Meds - Round 3/1

ASEVFL31 Ever Used Peak Flow Meter - Round 3/1

ASWNFL31 When Last Used Peak Flow Meter - Round 3/1

It may appear that there are discrepancies between the diagnosis variable and the follow-up variables. If a person reported asthma in the PE section in Panel 27 Round 3, ASATAK31 and ASSTIL31 were set to Inapplicable (-1) as the person had not reported asthma in Round 1.

Attention Deficit Hyperactivity Disorder/Attention Deficit Disorder

ADHDADDX indicates whether persons aged 5 through 17 had ever been diagnosed with ADHD/ADD. Persons younger than 5 or older than 17 were coded as Inapplicable (-1). The age of diagnosis for ADHD/ADD (ADHDAGED) is included in this PUF.

Joint Pain

JTPAIN31_M18 indicates whether a 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).

This question was skipped if the person already has an arthritis condition that is specified on the conditions roster in the PE section.

Chronic Bronchitis

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

Ever Had COVID-19 or Long COVID

Questions administered in Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3 determined whether a person had ever been diagnosed with COVID-19. When it was reported that a person had been diagnosed with COVID-19 (COVIDEVER53=Yes [1]), a series of questions about long COVID is asked. LCEVER53 indicates whether a person has had symptoms lasting three months or longer that they did not have prior to having COVID-19 (long COVID). If a person had symptoms lasting three months or longer that they did not have prior to having COVID-19, two additional questions are asked: (1) whether each person currently shows symptoms of COVID-19 (COVSYMNOW53) and (2) how much these symptoms reduced the person's ability to carry out day-to-day activities (COVREDABIL53). Although children under the age of 18 were asked the series of questions about long COVID, responses for children are coded to Inapplicable (-1) for confidentiality reasons.

All persons who answer Yes (1) to COVIDEVER53 are asked whether their most recent COVID-19 diagnosis was within the past 12 months. If Yes (COVID12MO53=1), then the month (COVMNTHX53) and year (COVYRDX53) that they last had COVID-19 are asked.

2.5.6 Health Status Variables (RTHLTH31- DSPRX53)

Because the MEPS has an overlapping panel design (Round 7 for Panel 24, Round 3 for Panel 26, and Round 1 for Panel 27 overlapped; Round 8 for Panel 24, Round 4 for Panel 26, and Round 2 for Panel 27 overlapped; and Round 9 for Panel 24, Round 5 for Panel 26, and Round 3 for Panel 27 overlapped), data from the overlapping rounds have been combined across panels. For a description of variable naming for the overlapping panels, see Section 2.4. For FY 2020 and FY 2021, "53" versions of the Health Status variables were constructed to account for extended panels and rounds due to the COVID-19 pandemic. Beginning in FY 2022, these variables are no longer constructed, and only the "31" versions appear on the Consolidated PUF.

Health status variables in this Consolidated PUF can be classified into the conceptually distinct sets listed below and described in this section:

- Perceived health status
- IADL (instrumental activities of daily living) and ADL (activities of daily living) limitations
- Functional and activity limitations
- Hearing, vision problems
- Disability status
- Any limitations
- Child health and preventive care

- Additional health

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 questions in this section were initially asked at the family level to ascertain whether anyone in the household had a particular problem or limitation. These questions 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 PUF. Logical edits were performed in constructing the person-level variables to ensure that family-level and person-level values were consistent. Particular attention was given to cases in which missing values were reported at the family level to ensure that the appropriate information was carried to the person level.

Cases were considered inapplicable when a question was never asked because of a skip pattern in the survey (e.g., some follow-up verification questions were not asked about individuals who were aged 13 or older; questions pertaining to children's health status were not asked about individuals older than 17). Inapplicable cases were coded as -1. Deceased persons were also coded as Inapplicable (-1).

Perceived Health Status

Data on perceived health status (RTHLTH31, RTHLTH42, and RTHLTH53) and perceived mental health status (MNHLTH31, MNHLTH42, and MNHLTH53) were collected in the PE section. The target persons of the questions in this section were current or institutionalized persons regardless of age. These questions (PE10 and PE20) asked the respondent to rate the general health and mental health of each person in the family according to the following categories: excellent, very good, good, fair, and poor.

IADL and ADL Limitations

IADL Help

The IADL help or supervision variable IADLHP31 was constructed from a series of three questions administered in the Health Status section of the interview in Panel 24 Round 7, Panel 26 Round 3, and Panel 27 Round 1.

The initial question (HE10) determined whether 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 (HE20) was asked to determine which household member(s) received this help or supervision. For persons under age 13, a final verification question (HE30) was asked to confirm that the IADL help or supervision was the result of an impairment or of a physical or mental health problem. If the response to the final verification question was No, IADLHP31 was coded No (2) for persons younger than 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. When the response to the family-level question was Refused (-7), Don't Know (-8), or Cannot be Computed (-15), all persons were coded according to the family-level response. When the response to the family-

level question (HE10) 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 ADL help or supervision variable ADLHLP31 was constructed in the same manner, and for the same persons, as the IADL help variable, but it is based on questions HE40-HE60 in Panel 24 Round 7, Panel 26 Round 3 and Panel 27 Round 1. Coding conventions for missing data are the same as the conventions for the IADL variable.

Functional and Activity Limitations

A series of health status questions was asked about functional limitations; use of assistive technology and social/recreational limitations; work, housework, and school limitations; and cognitive limitations. The “31” versions of these variables incorporate data collected in Panel 24 Round 7, Panel 26 Round 3, and Panel 27 Round 1.

Functional Limitations

A series of questions was asked about functional limitations, which are defined as difficulty in performing certain specific physical actions. WLKLIM31 is the gate question. These variables were derived from a question (HE90) that was asked at the family level: “Does anyone in the family have difficulties walking, climbing stairs, grasping objects, reaching overhead, lifting, bending or stooping, or standing for long periods of time?” If the answer was “No,” then all family members were coded as No (2) on WLKLIM31. If the answer was “Yes,” then the specific persons who had any of these difficulties were identified and coded as Yes (1), and the remaining family members were coded as No (2). If the response to the family-level question was Don’t Know (-8), Refused (-7), Cannot be Computed (-15), or Inapplicable (-1), then the corresponding missing value code was applied to each family member’s value for WLKLIM31. If the answer to HE90 was Yes (1), but no specific individual was named as experiencing such difficulties, then each family member was coded as Don’t Know (-8). Deceased persons were coded as Inapplicable (-1) for WLKLIM31.

If WLKLIM31 was coded Yes (1) for any family member, a subsequent series of questions was administered. The following variables correspond to the series of questions for which WLKLIM31 served as a filter:

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 family members whose response to WLKLIM31 was No (2). In addition, this series was not asked about family members who were younger than 13 regardless of their status on WLKLIM31. These questions were also not asked about deceased family members. In such cases (i.e., WLKLIM31 = 2, or age < 13, or PSTATS31 = 23, 24, 31, or 61), each question in the series was coded as Inapplicable (-1). Finally, if responses to WLKLIM31 were Refused (-7), Don't Know (-8), Cannot be Computed (-15), or otherwise Inapplicable (-1), then each question in this series was coded as Inapplicable (-1).

Analysts should note that questions about functional limitations (WLKLIM31) were asked of all household members regardless of age. For the subsequent series of questions, however, persons younger than 13 were skipped and coded as Inapplicable (-1). Therefore, it is possible for someone aged 12 or younger to have been coded Yes (1) on WLKLIM31, and to have been coded Inapplicable (-1) on the subsequent series of questions.

Use of Assistive Technology and Social/Recreational Limitations

The variables indicating use of assistive technology (AIDHLP31 from question HE70) and social/recreational limitations (SOCLIM31, from question HE230) 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 this 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 Cannot be Computed (-15), all persons were coded with the family-level response. When the family-level response was "Yes," but no specific individual was identified as having difficulty, all family members were coded as Don't Know (-8).

Work, Housework, and School Limitations

The variable indicating any limitation in work, housework, or school (ACTLIM31) was constructed from questions HE190-HE200. Specifically, information was collected initially at the family level. If there was a Yes (1) response to the family-level question (HE190), a second question (HE200) identified the specific individual(s) to whom this 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 Cannot be Computed (-15), all persons were coded with the family-level response. When the family-level response was Yes, (1) but no specific individual was identified as having the limitation, all family members were coded as Don't Know (-8). Persons younger than 5 were coded as Inapplicable (-1) on ACTLIM31.

If ACTLIM31 was coded Yes (1), and the person was aged 5 or older, a follow-up question (HE210) was asked to identify the specific limitation or limitations for each person. These limitations 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 the value of 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 Cannot be Computed (-15), these variables were all coded as Cannot be Computed (-15). If a person was younger than 5 or was deceased, WRKLIM31, HSELIM31, and SCHLIM31 were each coded as Inapplicable (-1).

An additional question (corresponding to UNABLE31) asked whether the person was completely unable to work at a job, do housework, or go to school. Persons who were coded No (2), Refused (-7), Don't Know (-8), or Cannot be Computed (-15) on ACTLIM31, were under age 5, or were deceased were coded as Inapplicable (-1) on UNABLE31. The question related to UNABLE31 was asked once for whichever set of WRKLIM31, HSELIM31, and SCHLIM31 the person had limitations in; if a person was limited in more than one of these three activities, UNABLE31 did **not** specify whether the person was completely unable to perform all of them or only some of them.

Cognitive Limitations

The variable indicating any cognitive limitation (COGLIM31) was collected at the family level as a three-part question (HE250A to HE250C), asking whether any of the adults in the family (a) experience confusion or memory loss, (b) have problems making decisions, or (c) require supervision for their own safety. If a "Yes" response was obtained to any item, the persons affected were identified in HE260, and COGLIM31 was coded as Yes (1). Remaining family members not identified were coded as No (2) for COGLIM31.

If the responses to HE250A-HE250C were all No (2) or if two of the three were No (2), and the remaining one was Refused (-7), Don't Know (-8), or Cannot be Computed (-15), 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 HE260, all persons were coded as Don't Know (-8).

COGLIM31 reflects whether the answer to *any* of the three component questions was Yes (1). Family members with one, two, or three specific cognitive limitations cannot be distinguished from each other. In addition, because the question asked specifically about adult family members, all persons younger than 18 were coded as Inapplicable (-1) on this question.

Hearing and Vision Problems

A series of questions (HE270 to HE310) - asked in Panel 24 Round 8, Panel 26 Round 4, and Panel 27 Round 2 - provides information on hearing and visual impairment. Household members younger than 1 and deceased RU members were coded as Inapplicable (-1).

The hearing impairment variable, DFHEAR42, indicates whether a person has serious difficulty hearing. This variable is based on two questions, HE270 and HE280. The initial question (HE270) determined whether anyone in the family has difficulty hearing. If the response was Yes (1), a follow-up question (HE280) 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 Cannot be Computed (-15), all persons were coded with the family-level response. When 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).

The visual impairment variable, DFSEE42, indicates whether a person has serious difficulty seeing. This variable is based on two questions, HE290C and HE300. The initial question (HE290C) determined whether anyone in the family has difficulty seeing. If the response was Yes (1), a follow-up question (HE300) was asked to determine which household member(s) have a seeing impairment. If the family-level response was Don't Know (-8), Refused (-7), or Cannot be Computed (-15), all persons were coded with the family-level response. When 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).

Disability Status

A series of questions (HE310 - HE380) in Panel 24 Round 8, Panel 26 Round 4, and Panel 27 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 for household members aged 5 or older. The question regarding difficulty doing errands was asked of household members aged 15 or older. Deceased RU members were coded as Inapplicable (-1).

DFCOG42 indicates whether a person has serious cognitive difficulty. This variable is based on two questions, HE310 and HE320. The initial question (HE310) determined whether anyone in the family has difficulty concentrating, remembering, or making decisions. If the response was Yes (1), a follow-up question (HE320) was asked to determine which household member(s) have difficulty concentrating, remembering, or making decisions. If the family-level response was Don't Know (-8), Refused (-7), or Cannot be Computed (-15), all persons were coded with the family-level response. When 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 is based on two questions, HE330 and HE340. The initial question (HE330) determined whether anyone in the family has serious difficulty walking or climbing stairs. If the response was Yes (1), a follow-up question (HE340) was asked to determine which household member(s) have difficulty walking or climbing stairs. If the family-level response was Don't Know (-8), Refused (-7), or Cannot be Computed (-15), all persons were coded with the family-level response. When 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 is based on two questions, HE350 and HE360. The initial question (HE350) determined whether anyone in the family has difficulty dressing or bathing. If the response was Yes (1), a follow-up question (HE360) was asked to determine which household member(s) have difficulty dressing or bathing. If the family-level response was Don't Know (-8), Refused (-7), or Cannot be Computed (-15), all persons were coded with the family-level response. When 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 is based on two questions, HE370 and HE380. The initial question (HE370) determined whether anyone in the family has difficulty doing errands alone. If the response was Yes (1), a follow-up question (HE380) was asked to determine which household member(s) have difficulty doing errands alone. If the family-level response was Don't Know (-8), Refused (-7), or Cannot be Computed (-15), all persons were coded with the family-level response. When 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).

Any Limitation Rounds 7 and 8 (Panel 24) / Rounds 3 and 4 (Panel 26) / Rounds 1 and 2 (Panel 27)

ANYLMI22 summarizes whether a person had any IADL, ADL, functional, or activity limitations in any of the pertinent rounds. ANYLMI22 was built from the component variables IADLHP31, ADLHLP31, WLKLIM31, ACTLIM31, DFSEE42, and DFHEAR42. If any of these components was coded Yes (1), then ANYLMI22 was coded Yes (1). If all components were coded No (2), then ANYLMI22 was coded No (2). If all the components were coded Inapplicable (-1), then ANYLMI22 was coded as Inapplicable (-1). If all the components had missing value codes (i.e., -7, -8, or -1), ANYLMI22 was coded as Cannot be Computed (-15). If some components were coded No (2), and others had missing value codes, ANYLMI22 was coded as Cannot be Computed (-15). The exception to this last rule is for children younger than 5, for whom questions that are the basis for ACTLIM31 were not asked; for these RU members, if all other components were coded No (2), then ANYLMI22 was coded No (2). The variable name of ANYLMI22 departs slightly from conventions. Variables that end in "22" typically refer only to 2022. However, some of the variables used to construct ANYLMI22 were assessed in 2023, so some information from early 2023 was incorporated into this variable.

Child Health and Preventive Care

Questions were asked about each child (younger than 18 excluding deceased children) in the applicable age subgroups to which the questions pertain. For the Child Preventive Health (CS) variables, a code of Inapplicable (-1) was assigned if a person was deceased; was not in the appropriate round (2, 4, or 8); or was not in the applicable age subgroup as of the interview date. The Consolidated PUF contains variables and frequency distributions from the CS section associated with 5,653 children who were eligible for the CS section. Children were eligible when PSTATS42 was not equal to 23, 24, 31, 61 (Deceased) and when 0 <= AGE42X <= 17. Of these children, 4,199 were assigned a positive person-level weight for 2022 (PERWT22F > 0). Cases not eligible for the CS section should be excluded from estimates made with the data in this section.

Starting in 2018, the series of questions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) and the Columbia Impairment Scale (CIS) has been administered every other year. CAHPS is an AHRQ-sponsored family of survey instruments designed to measure

quality of care from the consumer's perspective. CAPI is being used to administer the CAHPS and CIS series as follows:

- In Rounds 2 and 6 for the panels whose Round 1 collection occurred in an odd year and
- In Rounds 4 and 8 for the panels whose Round 1 collection occurred in an even year.

Therefore, because the Panel 27 Round 1 collection started in 2022, the Panel 26 Round 1 collection started in 2021, and the Panel 24 Round 1 collection started in 2019, the CAHPS and CIS questions were not asked in 2022, and their corresponding variables are not included in the 2022 dataset.

In addition, the child preventive care series has been administered every other year since 2018. CAPI is being used to administer the child preventive care series as follows:

- In Rounds 2 and 6 for the panels whose Round 1 collection occurred in an even year and
- In Rounds 4 and 8 for the panels whose Round 1 collection occurred in an odd year.

Therefore, the child preventive care questions were asked in 2022 and are included in the 2022 dataset.

Table 12

Data Years in which the Subsections of the CS Section have been Asked

Child Health Survey Section	2018	2019	2020	2021	2022
Special Health Care Needs	X	X	X	X	X
Child Preventive Care	X		X		X
Columbia Impairment Scale (CIS)		X		X	
Consumer Assessment of Healthcare Providers and Systems (CAHPS)		X		X	

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 coordinated by the Foundation for Accountability. Bethel, Read, & Stein (2002) provide a key description and evaluation of this screener instrument.

Questions in the screener are asked about children aged 0-17. In general, the screener identifies children with activity limitations or who need or use 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 Cannot be Computed (-15), the variables corresponding to follow-up questions based on the gate question were coded as Inapplicable (-1).

The variable CSHCN42 identifies children with special health care needs and was created by using the CSHCN screener questions according to the specifications in Bethel, Read, & Stein (2002). The CSHCN screener consists of a series of question sequences about the following five health consequences: the need for or use of medicines prescribed by a doctor; the need for or use of more medical care, mental health, or education services than is usual for most children; being limited in or prevented from doing things most children can do; the need for or use of special therapy such as physical, occupational, or speech therapy; and the need for or use of treatment or counseling for emotional, developmental, or behavioral problems. Parents who responded "Yes" to any of the gate 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" to all five health consequences were *not* considered to have a special health care need. Children whose special health care need status could not be determined (because of missing data for any of the questions) were coded as Unknown (3) for CSHCN42. More information about the CSHCN screener questions can be obtained from the website for the Child and Adolescent Health Measurement Initiative.

The variables corresponding to the CSHCN screener questions include the following:

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 they need or get 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

Child Preventive Care (age range depends on question)

A series of questions asked about amounts and types of preventive care a child may receive when going to see a doctor or other health provider. Questions were 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 Cannot be Computed (-15), follow-up variables based on the gate question were coded as Inapplicable (-1). Variables in this set include the following:

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)

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)

Because of confidentiality concerns and restrictions, child height and weight variables are not included on the Consolidated PUF. Instead, a Body Mass Index (BMI) variable, CHBMIX42, is included. For the 2001 and 2002 PUFs, CHBMIX42 was included for children aged 3-17; all children aged 2 or younger were given an Inapplicable (-1) code. Starting with the 2003

Population Characteristics PUF, CHBMIX42 is included for children aged 6-17; children aged 5 or younger were given an Inapplicable (-1) 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 aged 6-17 are as follows:

1. Construct child height and weight variables HGTFT42, HGTIN42, WGTLB42 using collected data

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

3. Generate a preliminary child BMI using the preliminary dataset 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 deceased persons, persons aged 18 or older, and persons aged 5 or younger to Inapplicable (-1)

As indicated in step 2 above, a preliminary SAS data set containing height, weight, sex, and age data for children aged 6-17 in FY 2022 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 dataset 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 dataset. Similarly, height in feet and inches was converted to height in centimeters in the preliminary dataset.

As indicated in step 4 above, the child BMI variable CHBMIX42 was calculated using this preliminary BMI from step 3. Deceased persons, persons aged 18 or older, and children aged 5 or younger were set to Inapplicable (-1) for CHBMIX42. Children aged 6-17 with a missing value for height in feet (HGTFT42 is Refused [-7], Don't Know [-8], or Cannot be Computed [-15]) and/or weight in pounds (WGTLB42 is Refused [-7], Don't Know [-8], or Cannot be Computed [-15]) were set to Cannot be Computed [-15] for CHBMIX42. Children whose height in feet was 0 and height in inches was missing (HGTIN42 is Refused [-7], Don't Know [-8], or Cannot be Computed [-15]) were set to Cannot be Computed [-15] for CHBMIX42.

CHBMIX42 is top-coded at 50 and bottom-coded at 10. CHBMIX42 was recoded to Cannot be Computed (-15) for children with a height of fewer than 3 feet or greater than 8 feet.

All other children aged 6-17 have a calculated BMI for FY 2022.

Additional Health Variables

The Additional Healthcare (AH) section of the MEPS includes questions that correspond to the following variables: LSTETH53 (has person lost all natural [permanent] teeth), PHYEXE53 (currently spends half hour or more in moderate to vigorous physical activity at least five times a week), and OFTSMK53 (how often smokes cigarettes). These questions are asked every year of each person aged 18 or older. A code of Inapplicable (-1) was assigned if the person was deceased or younger than 18. In 2022, these variables include data collected in Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3.

COVID-19 Vaccination Status

The CV section gathered information regarding vaccination and booster shots ever received for COVID-19 for all members of the RU in Panel 24 Rounds 7 and 8, Panel 26 Rounds 3 and 4, and Panel 27 Rounds 1 and 2. COVAXEVR31 and COVAXEVR42 are round-specific measures of ever having received a COVID-19 vaccination. Sample members who were reported as ever vaccinated as of 2021 (CVVACCINE42=1 in the 2021 Consolidated PUF) had COVAXEVR31/42 coded Yes (1). BOOSTERSHOT31/42 indicates whether the person had ever received a COVID-19 vaccine booster shot. In Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3, the COVID-19 vaccination variables transitioned from being collected in the CV section to the AH section, and COVAXEVR53 was constructed from the AH questions. Persons who previously answered questions about receiving a COVID-19 vaccination were only asked whether they received a vaccination since the prior round, which is indicated by COVAXNEW53.

2022 Self-Administered Questionnaires

The MEPS distributes several hard-copy, self-administered questionnaires (SAQs) to collect health-related information from different subpopulations of MEPS participants. The Diabetes Care Survey is distributed every year, while other SAQs are distributed only in select years. The table below lists the SAQs distributed in select years and the years they are collected, while the remainder of this section describes in detail the SAQs collected in the current data year.

Table 13

SAQ Data Year Collections

Self-Administered Questionnaire	2018	2019	2020	2021	2022
SAQ		X		X	
Preventive SAQ (PSAQ)	X		X		X

Preventative Self-Administered Questionnaire (PSAQ)

The SAQ is a paper-and-pencil questionnaire that includes core questions about health status, health care quality, and preventive health care measures for adults.

The preventive health questions are asked in alternating years and are included in this PUF; they will not be included in the 2023 SAQ. In 2022, questions regarding quality of health care, general health questions, and questions about health-related attitudes were asked in the SAQ and are included in this PUF.

The 2022 SAQ was fielded during Panel 24 Round 8, Panel 26 Round 4, and Panel 27 Round 2 of the 2022 MEPS data collection.

Adults aged 18 or older as of the Round 2, 4, or 8 interview date (AGE42X >= 18) in MEPS households were asked to complete an SAQ. The questionnaires were administered in late 2022 and early 2023.

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 Not Eligible for SAQ (0) 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, if the person was non-Key, or if the person was younger than 18. SAQELIG was coded Eligible for SAQ and Has SAQ Data (1) if an SAQ record existed for the person in Round 2 (for Panel 27), Round 4 (for Panel 26), or Round 8 (for Panel 24). SAQELIG was coded Eligible for SAQ, but No SAQ Data (2) if no SAQ record existed for the person in the round. This variable was used as a building block for all other constructed SAQ variables.

A question on the form asked if the respondent was the person represented in the form. If a person was unable to respond to the SAQ, the questionnaire was completed by a proxy. The relationship of the proxy to the adult represented in the questionnaire is indicated by the variable ADPROX42. Prior to 2015, the variable ADPRX42 indicated the relationship of the proxy to the adult. Starting in 2015, the response categories for proxy relationship were collapsed in a new variable ADPRXY42. ADPROX42 was coded Self-administered (1) if the respondent was the person represented in the questionnaire. A code of Inapplicable (-1) was assigned if a person was not eligible or was eligible but no data existed (SAQELIG = 0 or 2).

If a person was not assigned a positive SAQ weight, all SAQ variables except 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 left missing (-15), follow-up variable answers were left as reported. A special weight variable (SAQWT22F) has been designed to be used with the SAQ for persons who were aged 18 or older at the interview date. This weight adjusts for nonresponse 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," except SAQELIG.

Preventive Health (included in alternating years only)

ADSLEEP42 - During past 30 days, how often experienced trouble getting to sleep or staying asleep

ADMNTRT42 - During past 12 months, get counseling, treatment or medicine for any of these reasons

ADPROBTRT42 - During past 12 months, difficulty getting counseling or treatment needed

ADUNABTRT42 - During past 12 months, unable to get counseling or treatment needed

ADTRTEXP42 - Ever worried about family's financial stability because of mental health, its treatment, or lasting effects of that treatment

ADBRTC42 - FEMALES Had birth control counseling, last 12 months

ADMDVT42 - Last time visited doctor or nurse for check-up

ADFLST42 - Had flu vaccine, last 12 months

ADWGHD42 - Was weighed by health professional, last 12 months

ADWTAD42 - Given health professional advice on managing weight, weight goals, or referral to weight loss program, lasts 12 months

ADASKALC42 - Asked by health professional how much and often drinks alcohol, last 12 months

ADNUMDRK42 - Number of alcoholic drinks on typical day of drinking

ADRNK542_M20 - MALES Had five or more drinks in one day, last 12 months

ADRNK442_M20 - FEMALES Had four or more drinks in one day, last 12 months

ADOFALC42 - How often health care professional asked about alcohol use, last 12 months

ADSTAL42 - Advised to stop or cut back on alcohol, last 12 months

ADTBAC42 - Asked if smoke or use tobacco by health professional, last 12 months

ADOFTB42 - How often use smoke or use tobacco, last 12 months, GATE

ADQTTB42 - If ADOFTB42=1 or 2: Advised by health professional to quit smoking or using tobacco, last 12 months

ADQTMD42 - If ADOFTB42=1 or 2: Advised by health professional to take med to quit smoking or using tobacco, last 12 months

ADQTHP42 - If ADOFTB42=1 or 2: Health professional discussed methods to quit smoking or using tobacco, last 12 months

ADMOOD42 - Health professional asked about mood, last 12 months

ADBPCK42 - Blood pressure checked by health professional, last 24 months

ADCHLC42 - Cholesterol checked by health professional, last 5 years

ADUTRM42 - FEMALES Ever had hysterectomy or cervical cancer, GATE

ADPAP42 - FEMALES If ADUTRM42=2: Had PAP or HPB test, last 5 years

ADPAPG42 - FEMALES If ADUTRM42=2: Age at last PAP or HPV test

Preventive Health - Respondents 50 years of age or older (included in alternating years only)

ADPNEU42 - Ever had pneumonia shot

ADSHNG42 - Ever had shingles vaccine

ADNOAP42 - Is medical reason cannot take aspirin, GATE

ADDSCU42 - IF ADNOAP42=2: Health professional ever discussed aspirin use to prevent heart attack or stroke

ADCOLN42 - Had colon cancer or colon removed, GATE

ADCLNS42 - If ADCOLN42=2: Had a colonoscopy, last 10 years

ADSGMD42 - Had sigmoidoscopy, last 5 years

ADBLDS42 - Had home test blood stool test, last 12 months

ADPROS42 - MALES Had prostate cancer, GATE

ADPSAG42 - MALES If ADPROS42=2: Age at last PSA test

ADOSTP42 - FEMALES Health professional ever told have osteoporosis, GATE

ADBNDN42 - FEMALES If ADOSTP42=2: Ever had bone density measured

ADBRST42 - FEMALES Ever had breast cancer or had both breasts removed, GATE

ADMMGR42 - FEMALES If ADBRST42=2: Had mammogram, last 2 years

Height, Weight, and BMI (included in alternating years only)

Due to confidentiality concerns and restrictions, adult height and weight variables, ADHGTIN (Total height in inches) and ADWGHT42 (Weight without shoes), are not included in this PUF.

If the weight of the adult was set to 0, then ADBMI42 was coded to Cannot be Computed (-15). Since 2004, adult height and weight will not be top-coded or bottom-coded prior to the construction of ADBMI42. This will result in more values at the high and low ends for ADBMI42. Starting in 2020, ADBMI42 is top-coded at 50 and bottom-coded at 10.

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 adults >17 are as follows:

1. Construct adult height and weight variables ADHGTIN and ADWGHT42 based on collected data

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

3. Generate a preliminary BMI using the preliminary dataset and the procedure for calculating the BMI for adults as described on the Centers for Disease Control and Prevention website.

4. Create the adult BMI variable ADBMI42 using the preliminary adult BMI, setting all respondents that have SAQELIG=0 to Inapplicable (-1).

Health Status

The SAQ contained three measures of health status: the Veteran RAND (VR-12), a registered trademark, the Kessler Index (K6) of non-specific psychological distress, and the Patient Health Questionnaire (PHQ-2). More information about the VR-12 is available through the Boston University School of Public Health website. Key references for these three measures are Kessler et al. (2002), Kroenke et al. (2003), Selim et al. (2018) and Selim et al. (2009).

Veterans RAND 12 Version (VR-12©)

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

The VR instrument uses five-point ordinal response choices for four items in the VR-12. Response choices are five-point response choices:

No, none of the time

Yes, a little of the time

Yes, some of the time

Yes, most of the time

Yes, all of the time.

These answers then contribute to the scales for role limitations due to physical and emotional problems (PCS) and the physical and mental summary scores (MCS).

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

The comparability of the 2017 MEPS VR-12 PCS and MCS summary scores from the standard scoring algorithm and the SF-12v2 PCS and MCS summary scores obtained from prior years of MEPS was assessed, and it was determined that the scores were misaligned. A bridging algorithm specific to MEPS was developed by a team at the Boston University School of Public Health. The goal of this bridging algorithm was to align the VR-12 PCS and MCS scores from the 2017 MEPS as closely as possible with the SF-12v2 PCS and MCS scores from prior MEPS years across a wide range of MEPS subpopulations. This bridging algorithm was applied to the VR-12 PCS and MCS score variables (VPCS42 and VMCS42) available on this PUF.

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. The bridging algorithm used for these measures was developed to be tolerant of missing data in item responses when computing PCS and MCS scores.

Therefore, the variables VPCS42 and VMCS42 include some cases in which the scores have been imputed. Some cases were unable to be scored in the bridging algorithm due to the amount of missing data in item responses; these cases have VRFLAG42 = No (0). VRFLAG42 indicates whether the physical component summary, VPCS42, or the mental component, VMCS42, was imputed for a respondent. Persons who were not eligible for the SAQ, or who were eligible but for whom no data existed based on SAQELIG, or who did not have a positive SAQ weight, were set to Inapplicable (-1) for VRFLAG42, VPCS42 and VMCS42. Any remaining persons who could not be scored were set to Cannot be Computed (-15) for VPCS42 and VMCS42. Additionally, beginning in 2017, there are no negative score values of VPCS42 and VMCS42 because they are both top- and bottom-coded.

More information on the VR-12© can be found on the Boston University website VR-12 page. The report containing information on the methodology used for the bridging algorithm can be requested from mepsprojectdirector@ahrq.hhs.gov.

The VR-12 questions are as follows:

ADGENH42 - General health today

ADDAYA42 - During a typical day, limitations in moderate activities

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

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

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

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

ADMWDF42 - During past 4 weeks, as result of emotional problems, did work or other activities less carefully than usual

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

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

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

ADPRST42 - During the past 4 weeks, felt downhearted and blue

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

Non-specific Psychological Distress

The 2022 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, how often felt nervous

ADHOPE42 - During the past 30 days, how often felt hopeless

ADREST42 - During the past 30 days, how often felt restless or fidgety

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

ADEFRT42 - During the past 30 days, how often felt that everything was an effort

ADWRTH42 - During the past 30 days, how often 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 2022 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. (2003) 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.

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 English Version SAQ Was Administered (1). If the Spanish version of the SAQ was completed, or if the English version was translated into Spanish, ADLANG42 was coded Spanish Version SAQ Was Administered (2). If the language in which the SAQ was administered could not be determined from the data, ADLANG42 was coded Cannot be Computed (-15).

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

When using the SAQ variables in analysis, the weight specific to these questions should be used (SAQWT22F). 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.

Diabetes Care Survey

The DCS is a self-administered paper-and-pencil questionnaire fielded during Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3. Households received a DCS based on their response to DIABDX_M18 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 they had diabetes. Note that only those aged 18 or older were asked to complete a DCS questionnaire.

The DCS asks the same question as DIABDX_M18 with responses summarized in the variable DSDIA53. DSDIA53 confirms that the person has ever been told by a health professional that they had diabetes or sugar diabetes. Every year, a small number of people (38 in 2022) answer no to the diabetes diagnosis question (DCS.DIABDIAG) on the DCS. These people have DSDIA53 initially set to No (2). DCS.DIABDIAG is used in the development of the diabetes weight (DIABWyyF); if the person has DCS.DIABDIAG = No (2) 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_M18 =Yes (1) but DSDIA53 = No (2). The DCS data are unedited and, therefore, these and other data inconsistencies remain in the data. For persons aged 17 or younger, the DCS variables are set to Inapplicable (-1) because there is not an appropriate weight included in this PUF to make national estimates for this population.

DSA1C53 indicates the number of times the respondent reported having a hemoglobin A1c blood test in 2022. 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. DSFT2353, DSFT2253, DSFT2153, DSFB2153, and DSFTNV53 indicate whether the respondent reported having their feet checked for sores or irritations: in 2023, in 2022, in 2021, before 2021, or never, respectively. DSEY2353, DSEY2253, DSEY2153, DSEB2153 and DSEYNV53 indicate whether the respondent reported having an eye exam in which the pupils were dilated: in 2023, in 2022, in 2021, before 2021, or never, respectively. DSCH2353, DSCH2253, DSCH2153, DSCB2153, and DSCHNV53 indicate the last time the respondent reported having their blood cholesterol checked: in 2023, in 2022, in 2021, before 2021, or never, respectively. DSFL2353, DSFL2253, DSFL2153, DSVB2153, and DSFLNV53 indicate when the person got a flu vaccination including the flu vaccine nasal spray: in 2023, in 2022, in 2021, before 2021, or never, respectively. DSKIDN53 and DSEYPR53 indicate 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 their diabetes. Those variables that indicate a range of care outside the data year may represent persons with additional information included on the 2021 or the 2023 Consolidated PUF. Additional data for the second-year panel may be available on the 2021 PUF.

If a person was unable to respond to the DCS, the questionnaire was completed by a proxy (DSPRX53 = 1). A special weight variable (DIABW22F) 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 2022 (see Section 3.0: Survey Sample Information for details). When using DCS variables in analysis, the weight specific to this set of questions should be used (DIABW22F). 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.

2.5.7 Disability Days Indicator Variables (DDNWRK22-OTHNDD22)

The Disability Days (DD) questions in the AH section of the core interview ask about time lost from work because of a physical illness or injury, or a mental or emotional problem. Data were collected on each individual in the household. The questions were repeated in each round of interviews; this Consolidated PUF contains data from Rounds 7, 8, and 9 for Panel 24, initiated in 2019; Rounds 3, 4, and 5 for Panel 26, initiated in 2021; and Rounds 1, 2, and 3 for Panel 27, initiated in 2022.

Beginning in FY 2015, annualized versions of these variables were constructed for release rather than using the previously released versions, which were round- and panel-specific. The number at the end of the variable name (22) identifies the variable as representing data from 2022. Because of confidentiality concerns, the annual DD variables, which represent the number of days a person missed work (DDNWRK22 and OTHNDD22), were top-coded to mask values that exceed the top one-half of 1 percent of the population.

The reference period for the DD questions runs from the beginning of the panel or the previous interview date to the current interview date. Analysts should be aware that Round 7 of Panel 24 and Round 3 of Panel 26 are conducted across years. The DD variables reflect only the data pertinent to the calendar year (i.e., the current delivery year of 2022). Analysts who are interested in examining DD data across years can link to other person-level PUFs using the DUPERSID.

The flow of the DD questions rely on the person's age as of the interview date. Therefore, the round-specific constructed age variables (AGE31X, AGE42X, and AGE53X) were used to construct the comparable round-specific DD building-block variables. Because of the age-specific nature of the DD questions, age data from other rounds should not be used when the person's age for the round is missing.

The variable DDNWRK22 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 0; if the person did not work, this variable was

coded Inapplicable (-1). Analysts should note that responses to DD questions regarding "days not able to work" may not be consistent with employment status reflected in EMPST. For instance, EMPST may indicate person working as of the interview date and DDNWRK22 may indicate person did not work at all in the reference period due to illness or injury. This situation occurs because the responses to DD questions in the AH section are independent of the responses to employment questions. Persons who were younger than 16 or whose age is missing (AGE##X was set to -1) were not asked about work days lost, so the variable was coded Inapplicable (-1) for these persons.

A final set of DD variables indicates both whether 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. OTHDYS22 indicates whether 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 based on the setting of DDNWRK22: Yes-missed work to care for another (1); No-did not miss work to care for another (2); or the person does not work (-1). Persons younger than 16 and persons whose age is missing were not asked this question and were also coded as -1 (in a small number of cases this was not done for the 1996 data, so analysts will need to make this edit when doing longitudinal analyses).

OTHNDD22 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 answered "No" to OTHDYS22 were skipped out of OTHNDD22 and coded as Inapplicable (-1).

Note that, because DD variables use only the data from Round 7 of Panel 24 and Round 3 of Panel 26 that are pertinent to the data year, it is possible for a person to report missing work to care for the health problems of another individual (OTHDYS22 = 1) but to also report no days missed (OTHNDD22 = 0). This combination indicates that the person did not miss those workdays during the data year. These variables were edited to preserve the skip patterns. Data were not imputed for persons with missing data.

The variables DDNWRK22 and OTHNDD22 are annualized variables derived from responses to questions at each interview round. If the round-specific responses included a mix of missing values (-1, -7, -8, or 0), then the annualized variables were set to Cannot be Computed (-15) on the Consolidated PUF. This editing results in elevated rates of -15 values for these variables compared with other variables on the Consolidated PUF.

2.5.8 Access to Care Variables (ACCELI42-AFRDPM42)

The variables ACCELI42 through AFRDPM42 describe data from the Access to Care (AC) section of the MEPS HC questionnaire, which was administered in Panel 24 Round 8, Panel 26 Round 4, and Panel 27 Round 2. This supplement gathers information on family members' usual source of health care (USC); characteristics of the USC provider; access to and satisfaction with the USC provider; and affordability of medical treatment, dental treatment, and prescription medicines.

The variable ACCELI42 indicates whether persons were eligible to receive the AC section. Persons with ACCELI42 set to Inapplicable (-1) should be excluded from estimates made with the AC data.

Family Members' Usual Source of Health Care

For each 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 they are sick or need advice about their health (HAVEUS42).

PRACTP42 indicates whether a USC provider has their own practice that is not part of a group practice, health center, clinic, or other facility. For family members who have a USC provider, question AC30 ascertains the type of practice, which was coded as follows:

1 Own Practice, Not Part of Group/Facility

2 Practice Associated with Group/Facility

YNOUSC42_M18 indicates the main reason why a person does not have a USC provider. For family members who do not, question AC40 ascertains the main reason why. The reasons were coded as follows:

1 Seldom or Never Sick

2 Recently Moved to Area

3 Just Changed Insurance Plans

4 No Health Insurance, Oth Insurance-Related Issue

5 Don't Know Where to Go for Care

6 USC in This Area No Longer Available

7 Likes to Go to Different Places for Different Health Needs

8 Don't Use Doctors/Treat Self

9 Cost of Medical Care

10 No Health Insurance

91 Other Reason

In 2018, YNOUSC42 was renamed as YNOUSC42_M18 because the list of answer categories changed.

Characteristics of Usual Source of Health Care Providers

The AC section collects information about the characteristics of each unique USC provider for a given family. If a person does not have a USC provider-that is, HAVEUS42 was set to No (2), Refused (-7), Don't Know (-8), or Cannot be Computed (-15)-these variables were set to Inapplicable (-1).

The basis for the AC provider questions is PROVTY42_M18. This variable indicates whether the person's provider is a Facility (1), a Person (2), or a Person-in-Facility (3). PROVTY42_M18 is a copy of PROVTYPE_M18 (Provider Type) for persons who have a USC provider. Depending on how PROVTYPE_M18 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. In 2018, PROVTY42 was renamed PROVTY42_M18 because of changes to CAPI.

Provider Location

Two variables indicate the location of the provider. For facility or person-in-facility types of 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 the CAPI flow, persons do not report the type of facility for person-type providers; therefore, if PROVTY42_M18 was set to Person (2), PLCTYP42 was set to Inapplicable (-1).

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 types of providers, TYPEPE42 indicates the person's type of doctor or other medical provider. The possible values include the following:

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 was constructed from variables collected at several questions:

- AC70: "Is provider a medical doctor?" (PROV.MEDTYPE_M18);
- AC80: "Is provider a nurse, nurse practitioner, physician's assistant, midwife, or some other kind of person?" (PROV.OTHTYPE_M18); and
- AC90: "What is provider's specialty?" (PROV.MDSPECLT_M18).

If respondents chose Other (91) at AC80 or AC90, they were asked at AC80OS or AC90OS, respectively, to verbally explain the type of provider or medical doctor. These explanations, known as text strings, can be recoded to one of the existing categorical values listed above or, if the frequency of the response warrants it, to additional categorical values. Recoding is described in greater detail below under Satisfaction with the Provider.

The AC section also collects demographic information about person and person-in-facility types of 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 AC110.

In addition to the race variables, two other demographic variables were 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

The 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 a hospital is coded as follows:

3 -	PROVTY42_M18	2 -	ASIANP42
1 -	PLCTYP42	2 -	NATAMP42
3 -	TYPEPE42	2 -	PACISP42
1 -	HSPLAP42	2 -	OTHRCP42
1 -	WHITPR42	2 -	GENDRP42
2 -	BLCKPR42	2 -	LOCATN42

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 USC provider that may make it difficult for the person to contact this 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

The variables in this section reflect the person's satisfaction with the USC provider. The level of satisfaction was examined through four questions: Does the USC provider (a) usually ask about prescription medications and treatments other doctors may give them (TREATM42), (b) ask the person to help make decisions about treatment options (DECIDE42), (c) present and explain all

options to the person (EXPLOP42), and (d) speak the person's language or provide translator services (PRVSPK42).

PRVSPK42 was set to a value other than Inapplicable (-1) for persons eligible for the AC supplement who had a usual source of care, were identified as speaking a language other than English at home (OTHLGSPK = 1), and speak English either Not Well or Not at All (HWELLSPK = 3 or 4). PRVSPK42 was set to Inapplicable (-1) for all persons not meeting these criteria or who were deceased, institutionalized, or younger than 5.

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

Affordability of Medical Care, Dental Care, and Prescription Medicines

The AC supplement gathers information on whether care was not received or was delayed because of cost in the past 12 months. These questions are split into three sections that ask about medical care, dental care, and prescription medicines. Each section asks whether the person did not receive care because they could not afford it (AFRDCA42, AFRDDN42, AFRDPM42). The affordability variables indicate with a value of Yes (1) that the person needed care but was unable to afford it and a value of No (2) that the person did not have any unmet needs for that type of care because of the cost.

Respondents were also asked if anyone in the household delayed receiving care because of worry about cost (DLAYCA42, DLAYDN42, DLAYPM42). The delay variables indicate with a value of Yes (1) that the person was delayed in receiving that type of care because of worry about the cost and a value of No (2) that the person was not delayed in seeking that type of care because of the worry about the cost.

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 "other specify" text items into existing or new categorical values, which are described in the section directly below.

Not all variables or categories that appear in the AC section of the MEPS questionnaire are included on the Consolidated PUF, as some small cells have been suppressed to maintain confidentiality.

Recoding of Additional Other Specify Text Items

For items AC80 and AC90, the "other specify" text responses were reviewed and coded as an existing or new value for the related categorical variables.

OTHTYPE_M18 and MDSPECLT_M18 were used to construct the variable TYPEPE42. The variables' text strings can be recoded to each other's categories. For example, for persons who indicated 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 which is "GYNECOLOGIST," TYPEPE42 would be set to MD - OB/GYN (4) instead of OTHER NON-MD PROVIDER (11).

Delayed Medical Care, Dental Care, and Prescription Medicines due to the Coronavirus Pandemic

Questions that ascertained whether anyone in the household delayed receiving care because of the COVID-19 pandemic are no longer asked, and the variables CVDLAYCA31, CVDLAYCA42, CVDLAYCA53 (Delay Med Care For COVID R3/1, R4/2, R5/3), CVDLAYDN31, CVDLAYDN42, CVDLAYDN53 (Delay Getting Dental For COVID R3/1, R4/2, R5/3), and CVDLAYPM31, CVDLAYPM42, CVDLAYPM53 (Delay Getting PMED For COVID R3/1, R4/2, R5/3) have been removed from the Consolidated PUF.

COVID-19 Vaccination Status

The CV section also gathers information regarding vaccination and booster shots ever received for COVID-19 for all members of the RU. CVVACCINE42 and CVVACCINE53 represent round-specific measures of ever having received the COVID-19 vaccination. Sample members who were reportedly ever vaccinated as of Round 4/2 (CVVACINE42=1) had CVVACINE53 coded Ever Vaccinated (1) even though they were not asked in Round 5/3 whether they were ever vaccinated. BOOSTERSHOT53 was collected only for Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, and it indicates whether the person had ever received a COVID-19 vaccine booster shot before the end of the reference period.

2.5.9 Employment Variables (EMPST31-RTPLN53H)

Employment questions were asked of all persons aged 16 or 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 for persons whose edited age is 16 or older. All job-specific variables refer to a person's current main job (CMJ). This job, defined by the respondent, indicates the main source of employment.

Historically, most employment variables pertain to the interview date for Rounds 1-4, and to December 31 of the delivery year for Round 5 of a second-year panel. In 2022, employment variables were constructed to reflect responses from an additional panel. Panel 24 was fielded for a fourth year and includes responses from the Round 7, Round 8, and Round 9 interviews. (Panel 25 is not included in the 2022 file because it ended after five rounds, on December 31, 2021.)

In 2022, Panel 26 Round 3 and Panel 24 Round 7 were fielded as cross-year rounds in which respondents were asked to provide information about the reference period between the prior interview date in 2021 (Rounds 2 and 6 respectively) and the current round interview date in 2022. Panel 27 Round 3 was also fielded as a cross-year round in which respondents were asked to provide information about the reference period between the prior interview date in 2022 (Round 2) and the Round 3 interview date (occurring in 2023).

In contrast, Panel 26 Round 5 and Panel 24 Round 9 were fielded as 2022 terminal rounds in which respondents were asked to provide relevant information between the prior interview date in 2022 (Rounds 4 and 8, respectively) and December 31, 2022.

Table 14

Reference Periods Used in the Construction of Employment Variables

Panel/round	Reference period (construction)	EM variable ref year(s)
Panel 24		
Round 7	Round 6 2021 intvw thru Round 7 2022 intvw date	2021-2022
Round 8	Round 7 2022 intvw thru Round 8 2022 intvw date	2022
Round 9	Round 8 2022 intvw thru Dec 31, 2022	2022
Panel 26		
Round 3	Round 2 2021 thru Round 3 2022 intvw date	2021-2022
Round 4	Round 3 2022 intvw thru Round 4 2022 intvw date	2022
Round 5	Round 4 2022 intvw thru Dec 31, 2022	2022
Panel 27		
Round 1	Jan 1, 2022 thru Round 1 2022 intvw date	2022
Round 2	Round 1 2022 intvw thru Round 2 2022 intvw date	2022
Round 3	Round 2 2022 intvw thru Round 3 2023 intvw date	2022-2023

No additional adjustments were necessary for the 2022 variables. When performing longitudinal analyses, analysts combining 2022 data with 2021 and 2020 MEPS data should refer to the 2020 documentation to fully understand the adjustments that were made for Panel 23 variables in Round 5 and Round 6 in the 2020 file.

The variable naming protocol for 2022 is consistent with all prior years. As mentioned in Section 2.4, the dates of rounds have historically been indicated by two numbers following the variable name. The first number represents the round for second-panel persons (Panel 26), the second number represents the round for first-panel persons (Panel 27). For example, EMPST31 refers to employment status on the Round 3 interview date for Panel 26 persons and to employment status on the Round 1 interview date for Panel 27 persons. In 2022, a third panel is included in each of the "31", "42", and "53" variables, but the fourth-year round numbers of this panel (7/8/9) are not included in the variable names. For example, the 2022 version of EMPST31 (noted above) will also include employment status on the Round 7 interview date for Panel 24. All employment variables reflect the inclusion of the fourth year of Panel 24. Panel 24 Round 7 information is contained in the "31" variables, Panel 24 Round 8 information is contained in the "42" variables, and Panel 24 Round 9 information is contained in the '"53" variables. (Some users might find it helpful to think of these variables as "[7]31," "[8]42," and "[9]53," even though the naming convention remains as "31," "42," and "53").

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. Because of confidentiality concerns, hourly wages greater than or equal

to $119.23 were top-coded to -10 and the variable for the number of employees was top-coded at 500. With the exception of a variable indicating whether the employer has more than one location (MORE31, MORE42, MORE53), all employer-specific variables on the Full Year PUF refer to the specific establishment that is the location of a person's CMJ.

For users interested in additional jobs (i.e., current miscellaneous, former main job, and others) or in additional details about the CMJ (including any wage update NHRWG that occurred in a prior year), please refer to the Jobs Public Use File (hereafter referred to as the Jobs PUF) for the current delivery year.

The MEPS Employment (EM) section used dependent interviewing in Rounds 2-9. 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 EM section. The code Determined in Previous Round (-2) is used to indicate that the information in the question was obtained in a previous round. Determined in Previous Round (-2) is not an allowed value for any "31" variables. It may only be used on "42" or "53" variables.

For example, if HRWG42X (Round 8 interview date hourly wage for Panel 24 persons, or Round 4 interview date hourly wage for Panel 26 persons, or Round 2 interview date hourly wage for Panel 27 persons) is coded as Determined in Previous Round (-2), it means that hourly wage was collected in a previous round. In this case, analysts would need to refer to HRWG31X (Round 7 interview date hourly wage for Panel 24 persons, or Round 3 interview date hourly wage for Panel 26 persons, or Round 1 interview date hourly wage for Panel 27 persons) to obtain the value for HRWG42X. The -2 value for HRWG42X indicates that the person was skipped past the hourly wage question at the time of the Round 8/4/2 interview. The same coding applies to HRWG53X when a person was skipped past the Round 9/5/3 interview. Note that analysts may find a positive value in the HRWG31X (Round 7/3/1 hourly wage) or they may find that the variable was coded Inapplicable (-1). Unlike HRWG42X and HRWG53X, the Round 3 variable HRWG31X does not contain -2 values.

The following variables contain information from the first report of the CMJ. They will contain the reported value in the round in which the job is first reported and then will be set to -2 in subsequent rounds as long as the person is still employed at the same CMJ in Round 42 or in Round 53. If the same CMJ continues across years to the Round 31 interview date of the second year (Panel 26 Round 3 or Panel 24 Round 7), the original reported value from the prior year will be carried forward into the current year Round 31 variable, and RNDFLG31 can be used to determine the original round in which the job was first reported (RNDFLG31 is describe more fully below). If a person changes their CMJ to a new CMJ in the current round, the variable will not contain -2. Instead, it will reflect the value reported in the current round for the new CMJ. If the person leaves their CMJ during the current round and does not start a new CMJ in the round, the current round variables will be set to -1. With the exception of wage variables, questions associated with these variables are asked only one time for a CMJ.

- BSNTY
- CHOIC
- HOUR
- HRHOW
- HRWGX
- HRWGIM

- INDCAT
- JOBORG
- MORE
- NUMEMP
- OCCCAT
- PAYDR
- PAYVAC
- RETPLN
- SICPAY
- STJBMM
- STJBYY
- SELFCM
- SSNLJB
- TEMPJB
- UNION

To determine who should be skipped through the various employment questions, certain information, such as employment status (EMPST), had to be asked in every round. Note that -2 codes do not apply to questions asked in every round, such as questions about employment status. Moreover, questions about whether the person currently works at more than one job (MORJOB) or whether the person holds health insurance from a current main employer (HELDX) are asked in every round, so these variables also do not have a -2 code. The -2 code also does not apply to the RNDFLG variable, the variables associated with a change in wage at the CMJ (DIFFWG, NHRWG), most insurance variables, or to the full set of imputed employment variables. (Imputed variables are described more fully below.)

Therefore, in addition to "31" variables, variables that do not use -2 codes because associated questions may be asked in every round or in multiple rounds are as follows:

- Person's Work Experience/Status Variables
  - CHGJ/CHGJ
  - EMPST
  - EVRETIRE
  - EVRWRK
  - MORJOB
  - NWK
  - YCHJ/YCHJ
- Insurance Variables
  - DISVWX
  - HELDX
  - OFFERX
  - OFREMP

- Change in Wage Variables
  - DIFFWG
  - NHRWG
- Imputed Employment Variables
  - EMPST31H - RTPLN53H
- Round flag variable for Round 31 jobs
  - RNDFLG31

While wage questions are asked in each round, responses are stored differently. As noted above, HRWGX will contain the value calculated from responses of the initial report of the job and will be stored in the round in which it is first reported, or in Round 31 if the CMJ has continued from prior year. In subsequent rounds, when the respondent indicates the wage has changed (DIFFWG=1), NHRWG stores the updated wage information and HRWGX = -2 (except for Round 31 for a year two continuing CMJ). NHRWG only contains a positive wage value in the round in which the update is reported. If no update is reported in the current round, NHRWG = -1 for that round. Thus, -2 is not applicable to either DIFFWG or NHRWG, and prior year values are not carried forward into the current year Round 31 variable for a continuing CMJ that continues into the current year. NHRWG31 will reflect the same value as NHRWG53 from the previous delivery year. Because -2 processing does not apply to these variables, it is important to note, that DIFFWG and NHRWG on this 2022 Consolidated PUF will not contain any information related to a wage change for the CMJ if it occurred before 2022. Users must access the prior year Consolidated PUF(s) or the 2022 Jobs PUF to obtain the value of NHRWG when the most recent CMJ wage update occurred in a prior year.

For variables using the -2 dependent interviewing, CMJ job characteristic values from the prior year Round 53 are carried forward into Round 31 if the CMJ continues into the next year. Therefore, (a) Panel 24 persons who had a CMJ in Round 7 that continued from a job first reported in Round 1 or 2 of 2019, (b) Panel 24 persons who had a CMJ in Round 7 that continued from a job first reported in Round 3 or 4 of 2020, (c) Panel 24 persons who had a CMJ in Round 7 that continued from a job first reported in Round 5 or Round 6 of 2021, and (d) Panel 26 persons who have a CMJ in Round 3 that continued from a job first reported in Round 1 or Round 2 of 2021 will not have the -2 code in the 2022 Consolidated PUF Round 31 variables. Instead, the 2022 Consolidated PUF Round 31 variables will have values copied forward from a prior year Consolidated PUF from the year and round in which the CMJ was first reported. The reason for not using code -2 in these cases is that prior year employment variables are not included in the current year Consolidated PUF and, therefore, are not easily accessible for users (and in some cases, the data could be impossible to obtain). Instead, the values for the variables resulting from skipped questions were copied from the appropriate prior year files (2019, 2020,

or 2021) to the 2022 Consolidated PUF "31" variable, depending on the round in which the job first became the CMJ, as follows:

- The Panel 24 Round 1 or 2 constructed variable from the 2019 Consolidated PUF, or
- The Panel 24 Round 3 or 4 constructed variable from the 2020 Consolidated PUF, or
- The Panel 24 Round 5 or 6 constructed variable from the 2021 Consolidated PUF, or
- The Panel 26 Round 1 or 2 constructed variable from the 2021 Consolidated PUF.

The accompanying 2022 variable RNDFLG31 indicates the round from which these employment data were collected. For example, if a Panel 26 person has a Round 3 CMJ that continues from Round 2 and was first reported as the CMJ in Round 2, then HRWG31X in the 2022 Consolidated PUF will be a copy of the HRWG42X variable from the 2021 Consolidated PUF, and RNDFLG31 in the 2022 Consolidated PUF will be 2, indicating the round in which the job was first reported as the CMJ. More information regarding construction of "31" variables is found throughout this section.

Employment Status (EMPST31, EMPST42, and EMPST53)

All persons aged 16 or older were asked about their employment status. Allowable responses to these 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; and
- "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 they could return.

These responses are mutually exclusive. A CMJ was defined for persons who either reported that they were currently employed and identified a CMJ or who reported and identified a job to return to. Therefore, job-specific information such as hourly wage exists for persons not currently working at the interview date but who have a job to return to as of the interview date. EMPST was constructed using the edited age variable AGEX described in Section 2.5.3 Demographic Variables. Due to differences between reported and edited age values, job records may appear on the Jobs PUF where the person's edited age is less than 16. In these cases, the full year person-level variables will indicate no employment, even though the job records for these individuals will continue to contain valid employment information. While this typically occurs in the second panel of a full year delivery, it may, in rare instances, occur in the first panel as well.

Analysts should note that responses to Disability Days questions regarding "days not able to work" may not be consistent with employment status reflected in EMPST. For instance, EMPST may indicate a person is working as of the interview date (EMPST = 1) or has a job to return to as of the interview date (EMPST=2) but DDNWRK22 may indicate the person did not work at all in the reference period due to illness or injury. This situation occurs because these questions are asked in two different sections; Disability Days are posed in the Additional Health Questions section (AH) and employment status is asked the Employment section (EM). Responses to AH questions are independent of the responses to EM questions.

Data Collection Round for Round 7, 3, or 1 (RNDFLG31)

As mentioned, the values for most "31" variables for the second-year panel were copied forward from the variable in the 2019, 2020, or 2021 Consolidated PUF that represents the round in which the job was first reported as the CMJ. This includes the following: (a) a Panel 26 person with a Round 3 CMJ that is a continuation CMJ from Round 1 or Round 2, or (b) a Panel 24 person with a Round 7 CMJ that is a continuation CMJ from Round 1, 2, 3, 4, 5, or 6. Therefore, for persons in Panel 24 or Panel 26, RNDFLG31 indicates the 2019, 2020, or 2021 round in which the Round 7 or Round 3 CMJ was first reported as the CMJ. This variable also provides a time frame for the reported wage information and other job details. RNDFLG31 is used with the following "31" variables to indicate the round in which the reported information is based.

- BSNTY
- CHOIC
- HOUR
- HRHOW
- HRWGX
- HRWGIM
- INDCAT
- JOBORG
- MORE
- NUMEMP
- OCCCAT
- PAYDR
- PAYVAC
- RETPLN
- SICPAY
- STJBMM
- STJBYY
- SELFCM
- SSNLJB
- TEMPJB
- UNION

RNDFLG31 was set to Inapplicable (-1) for persons in any panel who were younger than 16 or who did not have a CMJ in Panel 24 Round 7, Panel 26 Round 3, or Panel 27 Round 1. For persons who were part of Panel 24, RNDFLG31 was also set to Inapplicable (-1) if the person was out-of-scope in the 2022 portion of Round 7. For persons who were part of Panel 26, RNDFLG31 was also set to Inapplicable (-1) if the person was out-of-scope in the 2022 portion of Round 3. For persons who were part of Panel 27, RNDFLG31 was also set to Inapplicable (-1) if the person was out-of-scope in Round 1. Values for RNDFLG31 were set as follows:

1 Continuing Panel 24 Round 7 CMJ reported first in Round 1, continuing Panel 26 Round 3 CMJ reported first in Round 1, or newly reported Panel 27 Round 1 CMJ

2 Continuing Panel 24 Round 7 CMJ reported first in Round 2, or continuing Panel 26 Round 3 CMJ reported first in Round 2

3 Continuing Panel 24 Round 7 CMJ first reported in Round 3, or newly reported Panel 26 Round 3 CMJ

4 Continuing Panel 24 Round 7 CMJ reported first in Round 4

5 Continuing Panel 24 Round 7 CMJ reported first in Round 5

6 Continuing Panel 24 Round 7 CMJ reported first in Round 6

7 Panel 24 Round 7 CMJ newly reported as current main in Round 7

-15 Panel 24 Round 7 CMJ or Panel 26 Round 3 CMJ is a continuation CMJ (wage information and other details were not collected in Round 7/Round 3), but the Panel 24 Round 6 or Panel 26 Round 2 CMJ record either does not exist or is not the same job. This setting applies even when there is a corresponding CMJ from prior round (Round 1, 2, 3, 4, or 5 for Panel 24 and Round 1 for Panel 26). This pattern can occur in rare instances when corrections made to a person's record in a current file cannot be made to that record in an earlier file because of database processing constraints. Such corrections are made on the basis of respondents' comments in subsequent rounds that affect employment information previously reported. Users may refer to previously released Jobs PUFs to review rosters as follows:

- 2019 Jobs PUF - for Panel 24 Rounds 1-3 rosters, or
- 2020 Jobs PUF - for Panel 24 Rounds 3-5, rosters, and
- 2021 Jobs PUF - for Panel 24 Rounds 5-7, rosters or Panel 26 Rounds 1-3 rosters

Variable Construction Where CMJ is New in Cross-Year Round

As noted above, in cases where a person's CMJ continues from a prior PUF, data are copied into the Round 31 variables from prior year PUF files using RNDFLG31 to select the correct round.

Information for new CMJs reported in cross-year rounds, such as Round 7 for Panel 24 and Round 3 for Panel 26 in 2022, have RNDFLG31 of 7 and 3, respectively and are processed differently. Data for these rounds are constructed twice, once in the first delivery year of the round and a second time in the second delivery year of the round. In the first delivery year, new CMJ information is constructed on "53" variables. In the second delivery year, new CMJ information is constructed for a second time and stored on "31" variables. Values from "53" variables are not copied into "31" variables. Instead, variables are constructed for a second time. Thus, users may notice different values.

For instance, a Panel 24 Round 7 respondent reports working 30 hours per week at a new Round 7 CMJ. Therefore, in the 2021 Consolidated PUF, which was the first delivery year of Panel 24 Round 7, HOUR53 was set to 30. However, a comment provided in Round 8 indicates that the job holder has always worked 40 hours per week at the job. The variable on which the Consolidated PUF variable HOUR is based, HRSPRWK, is updated from 30 to 40. Then, in the second delivery year, RNDFLG31 is set to 7 and HOUR31 is set to 40.

Constructing variables again in the second delivery year ensures that their values can reflect more current feedback provided by respondents in Round 8 or Round 9 for Panel 24 or Round 4 or Round 5 for Panel 26.

In cases where a wage at a new CMJ reported in a cross-year round requires imputation, the wage is imputed separately in each delivery year. Similarly, the bottom code value of the variable STJBYY is also recalculated based on the second delivery year. Refer to the section below that describes STJBYY.

For employment variables with review questions in subsequent rounds beyond the initial job report (such as HELD, OFFER, NHRWG, DIFFWG), the "31" variables are set based on updated information collected in the current round and reflect responses from the current round.

Self-Employed (SELFCM31, SELFCM42, and SELFCM53)

Information on whether an individual is self-employed at the CMJ was obtained for all persons who reported a CMJ. If an individual reported that they are self-employed at their CMJ, they were also asked to identify whether the self-employed business is incorporated, a proprietorship, or a partnership (BSNTY31, BSNTY42, BSNTY53). These questions were not asked of individuals who are not self-employed and, as a result, individuals who are not self-employed are coded with Inapplicable (-1). Self-employed are not considered "wage earners". As a result, they are not asked questions related to hourly wage and will have hourly wage coded with Inapplicable (HRWGX = -1).

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

Benefits and Employment Characteristics (PAYDR31/42/53, SICPAY31/42/53, PAYVAC31/42/53, RETPLN31/42/53, MORE31/42/53, JOBORG31/42/53)

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

- Paid leave to visit a doctor (PAYDR31, PAYDR42, and PAYDR53),

- Paid sick leave (SICPAY31, SICPAY42, and SICPAY53),
- Paid vacation (PAYVAC31, PAYVAC42, and PAYVAC53), or
- Pension plan (RETPLN31, RETPLN42, and RETPLN53).

These individuals were also asked about whether the firm had more than one business location (MORE31, MORE42, MORE53) and whether the establishment was a private for-profit, nonprofit, or a government entity (JOBORG31, JOBORG42, JOBORG53). These questions are only asked once, in the round when the CMJ is first reported. For persons who are self-employed at their CMJ, all of the variables detailed in this section were coded as Inapplicable (-1).

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

Hourly wage was constructed for all persons who reported a CMJ that is not self-employment (SELFCM). HRWG31X, HRWG42X, and HRWG53X provide the wage amount reported initially for a person's CMJ. HRWGX is collected only once, in the round when the CMJ is first reported. It does not reflect any changes in CMJ wage over time.

Changes in wage are captured in variables for updated wage (NHRWG31, NHRWG42, and NHRWG53). If the CMJ continues into subsequent rounds, DIFFWG31, DIFFWG42, and DIFFWG53 indicate whether the wage changed in the current round, and NHRWG31, NHRWG42, and NHRWG53 indicate the updated wage reported in the current round. It is important to note that DIFFWG and NHRWG apply only to the current round of the current year. Users wishing to analyze the most recent wage will need to consider a combination of HRWGX and NHRWG in all rounds of the CMJ, potentially including rounds from prior years. For example, consider a Panel 26 person who reported a CMJ in Round 1 (2021) with an initial wage (HRWG31X on the 2021 Consolidated PUF), and then reported a wage change in Round 2 (2021) (NHRWG42 on the 2021 Consolidated PUF), and continued the job through 2022 with no other wage changes. HRWG31X from 2021 would be copied forward to HRWG31X on the 2022 file, but NHRWG31, NHRWG42, and NHRWG53 on the 2022 file would contain -1 because the wage was not updated during Rounds 3-5. In order to obtain the updated wage for this scenario, users would need to link back to the 2021 Consolidated PUF to collect the 2022 value of NHRWG42 or link to the 2022 Jobs PUF (where more detailed job information is stored).

The initial hourly wage variables (HRWG31X, HRWG42X, HRWG53X) in this Consolidated PUF should be considered along with their accompanying variables, HRHOW31, HRHOW42, and HRHOW53, which indicate how the initial report of the hourly wage was constructed for the respective round. (HRHOW does not apply to updated hourly wage NHRWG).

HRWGX and HRHOW will use -2 to indicate the first reported wage may be found in a preceding round. RNDFLG31 is also applicable to HRWG31X/HRHOW31 since it will indicate the round the initial "31" CMJ was reported. In cases where more than one HRWGX variable is set to a positive value (HRWGX > 0 in multiple rounds on the same Consolidated PUF), it

indicates the person has changed CMJs at some point in the round. HRWGX will reflect the wage at the new CMJ. NHRWG reflects an updated wage amount for the CMJ in the current round of the current year only. Values for NHRWG do not copy forward, and NHRWG does not use -2. As a result, if a person had a continuing CMJ in 2022 and the most recent wage update had occurred in the prior year, data users will not have access to that prior year updated wage value (NHRWG from 2021, 2020, or 2019) on the 2022 Consolidated PUF, nor will the user be able to assess whether or not there had been a wage update in a prior year by just using the 2022 Consolidated PUF. The only way for users to know about, and to collect, wage updates (NHRWG) from the prior years would be to link to the 2022 Jobs PUF (which contains information for all rounds of the CMJ, over all years of the job) or to link to the prior year Consolidated PUFs (to obtain the prior year values for NHRWG). For Panel 26 persons, it is necessary to link to the 2021 Consolidated PUF to access Round 2 NHRWG. For Panel 24 persons it is necessary to link to the Consolidated PUFS for 2019 (for NHRWG in Round 2), 2020 (for NHRWG in Rounds 3-4), and 2021 (for NHRWG in Rounds 5-6).

Hourly wage was derived from a large number of source variables. In the simplest case, hourly wage was reported directly by the respondent. For other persons, the construction of the hourly wage was based on wage amount reported, 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 and is as identified in the HRHOW variable.

To assist interviewers during the collection of wage amounts, CAPI prompts the respondent to confirm wages reported in the Employment Wage section if a wage amount falls outside a specified range. Ranges vary depending on the unit of pay as follows:

Table 15

Units of Pay and Corresponding Wage Ranges

Unit of pay	Wage range
Per year	$5,000 - $200,000
Per month	$375 - $20,000
Per 2-week period	$150 - $10,000
Per week	$75 - $5,000
Per day	$10 - $750
Per hour	$1 - $125

When there was not enough information to calculate the initial hourly wage, the initial hourly wage variables HRWG31X, HRWG42X, and HRWG53X were imputed by using a weighted sequential hot-deck procedure for individuals who reported a CMJ (and were not self-employed) but did not know their wage or refused to report a wage. The hourly wage for persons whose employment status was not known was coded as Cannot be Computed (-15). Wages were also imputed for earners who reported a wage range instead of a specific wage value. For each of these persons, a value was imputed from other persons on the file who did report a specific wage value that fell within the reported range. Wages from 2019, 2020, 2021, and 2022 were eligible

“donors” in this process, expanding the donor pool to cover 4 years instead of the typical 2 years. This expansion of the donor pool allowed AHRQ to maintain a donor pool that is the similar in size to pools in prior releases, but it does mean that some recipients were assigned a donor wage from 4 years prior.

The variables HRWGIM31, HRWGIM42, and HRWGIM53 identify persons whose initial hourly wage (HRWG31X, HRWG42X, or HRWG53X) was imputed. The variables HRHOW31, HRHOW42, and HRHOW53 are also set to indicate that these wages were imputed, and whether they were imputed using a range estimate (1) or not using a range estimate (2). Note that wages were imputed only for persons with a positive person-level and/or a positive family-level weight.

The variables DIFFWG31, DIFFWG42, and DIFFWG53 indicate whether a person’s wage amount changed in the current round from the amount in the previous round at a continuing CMJ. NHRWG31, NHRWG42, and NHRWG53 contain the updated wage amount that was reported in the current round. Neither DIFFWG nor NHRWG use -2 or RNDFLG31 since they reflect responses (or lack thereof) in the current round. DIFFWG and NHRWG apply only to the current round.

While the question regarding wage changes pertains to the primary wage at the CMJ, respondents occasionally update a person’s supplemental wage at this question. It is important to note that there is no variable on the Consolidated PUF for supplemental wages and that NHRWG only pertains to primary hourly wage at the CMJ (HRWGX). So, in these cases, analysts should note that DIFFWG will indicate an updated wage in the round, but the updated hourly wage in the round, NHRWG, may contain the same value as the initial hourly wage, HRWGX, or an updated wage from a previous round, i.e. NHRWG from a different round. Analysts can obtain the supplemental wage value (from all rounds of the CMJ) from the 2022 Jobs PUF.

For all Panel 27 Round 1 persons, DIFFWG31 and NHRWG31 were set to Inapplicable (-1) because this was the first round that wages could be reported for these persons. Unlike HRWGX, NHRWG is never imputed, so in Rounds 2-9 for all panels, no imputation was performed on NHRWG31, NHRWG42, or NHRWG53. Instead, when an updated wage amount was Don’t Know (-8) or Refused (-7), NHRWG31, NHRWG42, and/or NHRWG53 were set to Cannot be Computed (-15).

For persons whose hourly wage variable HRWG31X, HRWG42X, and/or HRWG53X was imputed and the respondent provides an updated wage amount in a subsequent round, the new wage in that round (NHRWG31, NHRWG42, and/or NHRWG53) is not presented. Instead, NHRWG31, NHRWG42, and/or NHRWG53 for that round was set to Initial Wage Imputed (-13) to indicate that the initial HRWG31X, HRWG42X, and/or HRWG53X was imputed. Users are able to access the value reported for updated wage for these jobs by referring to the 2022 Jobs PUF. Lastly, because NHRWG and DIFFWG always reflect current round of current year, NHRWG31 and DIFFWG31 were constructed from the current round response and are not a copy of NHRWG53 and DIFFWG53 from the prior year.

In 2022, wage information has been logically edited for consistency by using established rules and guidance from AHRQ. Outliers are checked for persons who report a wage change and the new reported wage is (a) substantially different from the prior wage (change >=100%), (b) no

different from prior wage, (c) low in value ($0 < wage < $1) or, (d) higher in value than the prior year's top-code value. There are numerous sources for these types of errors, including keystroke or respondent error. In 2022, approximately 100 wages were reviewed per panel, resulting in approximately 64 persons whose wage variables, HRWGX/NHRWG were edited overall. In rare circumstances, updates were applied to a current year HRWG31X value that had been copied forward from a value reported in the prior year Consolidated PUF. These edits are performed in the current year Consolidated PUF only and are not edited historically in the prior year Consolidated PUF (no edit is made to the originally reported HRWGX value from prior year). For this reason and others, editing of wage outliers is another reason a "53" wage may differ from a "31" wage across delivery years. These editing decisions were made by AHRQ after careful review of extreme wage reports.

Users should note that outlier editing did not occur in the processing of the 2020 Consolidated PUF. This included Panel 24 Rounds 3-5, so users should be mindful when using the wage variables, especially when comparing 2020 wages to wages in other data years. To help users identify cases that would have been reviewed (but not necessarily edited) in this process, the 2020 data includes variables that flag outliers (OUTFLAG). These round-specific flag variables OUTFLAG31, OUTFLAG42, and OUTFLAG53 indicate that a person's updated wage at the CMJ would have been programmatically selected for review during the 2020 wage outlier editing process (but not necessarily edited). Although the OUTFLAG variables only appear on the 2020 Consolidated PUF, they could be relevant to continuing wages on the 2021 and 2022 Consolidated PUFs that were first reported in 2020. More information on these variables may be found in the documentation MEPS HC-224: 2020 Full Year Consolidated PUF. OUTFLAG variables were not constructed for the 2021 or 2022 Consolidated PUF because outliers were reviewed in 2021 and 2022.

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 $119.23. The top-coding process used the highest calculated wage for an individual regardless of whether it was reported in the HRWG31X, HRWG42X, and HRWG53X variable or the NHRWG31, NHRWG42, and NHRWG53 variable. All wages for a person were top-coded if any wage variable was at or above the top-code amount.

To protect the confidentiality of persons across deliveries, the same top-code amount of $119.23 used in this Consolidated PUF was also applied to the 2022 Jobs PUF. Moreover, any person who was top coded in the Consolidated PUF also had their job records top coded for all wage variables in the Jobs PUF. Because a person can have other jobs besides a CMJ that are included in the corresponding 2022 Jobs PUF, wages at these other jobs were reviewed in the top-coding process. In some cases, wages reported at the CMJ were below the top-code amount while the wage at another job (i.e., former main job or current miscellaneous job) had to be top-coded.

In rare cases, additional top coding may be required due to CMJ wages reported in the 2022 Jobs PUF that were last delivered in the 2019-2021 Consolidated PUF for Panel 24 or in the 2021 Consolidated PUF for Panel 26. These are cases where the wage at a continuing Round 7 of Panel 24 or Round 3 of Panel 26 CMJ was updated in a prior PUF and it has not changed since. That wage exists on the 2022 Jobs PUF and, when greater than or equal to the top coded value,

was top coded in the current year. Therefore, wages for these persons were also top coded in the 2022 Consolidated PUF.

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

Several employment-related health insurance measures are included in this Consolidated PUF: health insurance held at a CMJ (HELD31X, HELD42X, HELD53X), health insurance offered through a CMJ (OFFER31X, OFFER42X, OFFER53X), health insurance offered to any other employees through the CMJ employer (OFREMP31, OFREMP42, OFREMP53), and choice of health plans available through the CMJ (CHOIC31, CHOIC42, CHOIC53). This collection of variables reflects the insurance status and the availability of employer-sponsored insurance in the current round. They were logically edited for consistency in each round.

MEPS asks whether the person holds health insurance through the CMJ (HELDX) in the first round in which the person is reported as having that job. If the person does not hold health insurance at the job, then a follow-up question is asked as to whether the person was offered insurance but declined coverage (OFFERX). If the person neither holds nor was offered health insurance at the job, then an additional question is asked to determine whether any other employees at the CMJ were offered health insurance by the job (OFREMP). If the person either holds insurance from the job or was offered insurance at the job, then an additional question is asked to determine whether a choice of health plans is available at the job (CHOIC). Before Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, when the responses to the questions that correspond to HELDX or OFFERX were Refused (-7) or Don't Know (-8), CHOIC was also coded -7/-8, even though the question that populates CHOIC was not asked. As of Panel 23 Round 9, Panel 24 Round 7, Panel 26 Round 5, and Panel 27 Round 3, CHOIC is coded Cannot be Computed (-15) for these variables if the responses to HELDX or OFFERX were Refused (-7) or Don't Know (-8) to reflect that a value cannot be calculated for CHOIC as a result of skip patterns.

In the rounds after a job is first reported, the Review of Jobs (RJ) section has the same series of insurance questions with one exception; it does not ask whether there is a choice of health insurance plans at an employer. This question is only asked in the round in which the job is first reported (in the EM section).

In rounds after the job is first reported, one of two "held" questions (whether a person now holds health insurance through the employer) is asked in the RJ section to determine whether there was any change in coverage.

Question RJ70 (HELDX) is asked if insurance was offered but not taken by the employee when the job was first reported and when no coverage has been reported since the initial round.

Question RJ80 (HELDX) is asked under the following circumstances:

- Insurance coverage through the job ended in a prior round; or

- Insurance coverage through the job was never reported and the person was not offered insurance through the job in the round in which the job was first reported or

- The respondent disavowed insurance coverage in the Health Insurance (HX) section despite having previously indicated insurance coverage through the job in the EM section of the interview; or

- Beginning in Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, persons who reported new employer-sponsored health insurance coverage in the prior round through the CMJ but the insurance covered the person for only part of that round (see the detailed explanation in the remainder of this section).

MEPS then includes several clarifying questions regarding health insurance status and availability of coverage to the job holder through an employer. When the person did not report, did not know, or refused to indicate holding employment-sponsored health insurance coverage through their job at RJ70 (HELDX), or when the person did not report holding health insurance coverage through their job at RJ80 (HELDX), the respondent was asked if the person was offered insurance through their job at RJ90 (OFFERX). Last, when a respondent indicated that the job holder of a reviewed job neither holds nor was offered health insurance at the job, the respondent was asked whether *any other* employees at the job were offered health insurance at RJ100 (OFREMP).

If a person does hold insurance through their job, then that person was not asked the offer question and the OFFERX variable was automatically set to Yes (1). Analysts should note that OFREMP was automatically set to 1 when the job holder has health insurance coverage through the job (HELDX=1) or when health insurance is offered to the employee at their job (OFFERX=1).

Responses in the EM and RJ sections for health insurance held were recoded to be consistent with the variables in the HX section of the survey.

For persons who responded in the EM section or RJ sections that they held health insurance coverage through the employer but then disavowed (said they did not have) the coverage in the HX section, the MEPS includes follow-up questions regarding whether health insurance was offered (either to the employee or to any other employee depending on responses to questions) and whether more than one plan was available. This information was used in an edit process whereby responses to these questions in the Health Insurance section were transferred to insurance variables set in EM section or the RJ section. These additional questions, along with the edit process, allow users to have access to insurance related information in OFFERX, OFREMP, and CHOIC for persons who have disavowed coverage. The round-specific flag variable DISVWX reflects the respondent's disavowal of coverage at the CMJ in the current round.

Beginning with Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, two CAPI changes have affected how insurance information is collected in the EM and RJ sections.

1. RJ80 (reflected in HELDX) is asked if a person reported new health insurance in the prior round but that coverage was not active at the interview date, that is, a response of No (2) at HQ01 "Was {PERSON} covered the whole time from {START DATE} until {END DATE}" and at HQ02 "Is {PERSON} covered now?". This CAPI change means that more respondents could be asked whether the person was offered insurance or whether other employees were offered insurance at the employer establishment. The result is that HELDX, OFFERX, OFREMP could have fewer Cannot be Computed (-15) values.

2. If a job holder has insurance through the employer (Yes [1] at EM660), and that person belongs to a union (Yes [1] at EM700), respondents were asked to indicate whether the health insurance is from the employer/business or the union at EM710. Either or both establishments may be the source of insurance. Before the CAPI change, when both establishments were selected, two sets of private insurance coverage were created in the HX section. Now, only the primary source of private insurance coverage is created in the HX section.

   Respondents are required to identify the *primary* source-either employer/business or the union-if the person indicates both provide insurance, as follows.

   1 - Employer

   2 - Union

   3 - Both Employer and Union (Employer Is Primary)

   4 - Both Employer and Union (Union Is Primary)

The result of these CAPI changes is that persons who report having insurance through both union and employer sources in the EM section will no longer have the secondary source of insurance coverage recorded in the HX section. However, respondents continue to have the opportunity to report any additional private coverage in the HX section at HX190/HX200.

Hours (HOUR31, HOUR42, HOUR53)

The hours variables refer to usual hours worked per week at the CMJ. Note that when 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* CMJ lasts for only a limited amount of time or until a project is completed.

The seasonal job variables (SSNLJB31, SSNLJB42, SSNLJB53) indicate whether the *newly reported* CMJ is only available during certain times of the year. SSNLJB was coded Yes (1) if the job is only available during certain times of the year; SSNLJB was coded 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 CMJs regardless of whether a person is self-employed or not. These questions were asked only in the round in which the job was newly reported. Consequently, in rounds following the initial report, a code of Determined in Previous Round (-2) is used to indicate that the information in the question was obtained in a previous round. This differs from some previous files in which both questions were asked in each round and -2 was not an allowed value. Analysts using either of these variables over multiple years of MEPS should refer to documentation for each year to ensure that the data they are using for the variable are consistent.

Number of Employees (NUMEMP31, NUMEMP42, NUMEMP53)

NUMEMP indicates the number of employees at the location of the person's CMJ. For confidentiality reasons, this variable has been top-coded at 500 or more employees. For respondents who do not know the specific number of employees at the establishment, a categorical question was offered as an alternative. In these cases, a numerical value for NUMEMP was constructed by using a median estimated size calculated from donors within the reported categorical range. As always, median values may vary across panels/rounds because calculations are panel/round specific. One noticeable difference in 2022, however, was on medians calculated for NUMEMP53 in the highest estimated range (101-500 employees). The median establishment sizes were 200 in Round 3 of Panel 27, 150 in Round 5 of Panel 26, and 300 in Round 9 of Panel 24. Otherwise, differences were generally less pronounced.

CAPI does not accept an establishment size value of 0 as an indication of the total number of employees working at a *self-employed business*. However, CAPI does allow a person who is *not self-employed* at a job to indicate an establishment size of 0. NUMEMP was set to Cannot be Computed (-15) when 0 was entered as establishment size for *not self-employed*.

Other Employment CMJ Characteristic Variables

Information about industry and occupation types for a person's CMJ at the interview date is contained in this Consolidated PUF. Based on verbatim text strings collected during the interview, numeric industry and occupation codes are assigned by trained coders at the Census Bureau. The coders used 2007 Census Industry (based on 2007 NAICS) and 2010 Census Occupation Coding schemes (based on 2010 SOC) which were developed for the Bureau's Current Population Survey (CPS) and American Community Survey. Users should note that

coding schemes are comparable for the FY 2010 through FY 2022 PUFs. Earlier versions of Census coding schemes were used in files before FY 2010.

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

This Consolidated PUF incorporates crosswalks showing how the detailed 2007 Census industry codes (Appendix 2) and the 2010 Census occupation codes (Appendix 3) were collapsed into the condensed codes on the file. The schemes used in this file can be linked directly to the 2007 North American Industry Code System and the 2010 Standard Occupation Code scheme by going to the U.S. Census Bureau 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 in which a person's CMJ started are provided in this Consolidated PUF (STJBMM31**,** STJBYY31, STJBMM42, STJBYY42, STJBMM53, and STJBYY53). A value for start month and start year will only appear in the round in which the job is first reported (as the job continues, other rounds will contain -2).

In the 2022 Consolidated PUF, STJBYY31, STJBYY42, and STJBYY53 were bottom coded to a value of 1952 to keep the respondents' age confidential if the CMJ was newly reported in 2022. This value was calculated by taking the delivery year of 2022 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 the MEPS. Thus, the bottom code value will be different in each delivery year.

Because a current main job that continues from prior rounds into Panel 24 Round 7 or Panel 26 Round 3 may have been reported in a previous delivery year, bottom code values vary for each panel. Therefore, the bottom codes on STJBYY31 are as follows:

- For Panel 24 Round 7 the value is 1949 since the job may have first been reported in Round 1 or Round 2 of 2019
- For Panel 26 Round 3 the value is 1951 since the job may have first been reported in Round 1 or Round 2 of 2021
- For Panel 27 Round 1 the value is 1952.

Other Employment Status-Related Variables

Two measures in this PUF relate to a person's work history over a lifetime.

The first measure indicates whether a person ever retired from a job as of the Round 9 interview date for Panel 24 persons, or as of the Round 5 interview date for Panel 26 persons, or as of the Round 3 interview date for Panel 27 persons (EVRETIRE). All persons who reported or reviewed a job in the current round and were aged 55 or older as of the interview date were asked if they "ever retired." This question is not asked for persons who were 54 or younger.

EVRETIRE was constructed differently for the 2022 Consolidated PUF than in prior years. This analytic change was not prompted by a change to CAPI but to better capture retirement across multiple variables with differing skip patterns. Persons who indicate retirement as the main reason for not working in the reference period at EM750 (NWK) now use the NWK report of retirement to supersede their response to whether they retired in the round at EM350 (EVRETIRE). If a person reports retirement as the main reason for not working in the round but then report they did not retire in the round, EVRETIRE is set to Yes (1). Prior to 2022, these cases set EVRETIRE to No (2). This revision more accurately represents whether persons have "ever" retired.

The second measure indicates whether a person ever worked for pay as of the Round 9 interview date for Panel 24 persons, as of the Round 5 interview date for Panel 26 persons, or as of the Round 3 interview date for Panel 27 persons (EVRWRK). The response to question EM300 that sets EVRWRK was asked of persons in the round of their first interview who indicated that they were not working as of the round interview date. It is important for analysts to note that EVRWRK is intended to provide prior work information for persons who were not employed during the MEPS survey. After the person's first round, anyone who indicated current employment status 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). Analysts wishing to define an "ever worked" measure that applies to the entire MEPS sample will need to combine MEPS work history using EMPST (to capture persons who reported employment or jobs in the MEPS survey) with EVRWRK (to capture non-workers in MEPS who reported having worked before the MEPS survey period).

Since both EVRETIRE and EVRWRK are not round specific, these variables do not use Determined in Previous Round (-2).

The Consolidated PUF contains variables indicating the main reason for a person not working 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 at some time before the start of the round, the person was asked to choose the main reason why they did not work during the reference period from a list of reasons at EM750.

Beginning Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3, two new groups are now asked to select a reason for not working.

1. Persons who are in their first MEPS interview in Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3 who did not report a job. For these cases, either a) the person did not work prior to MEPS or b) the respondent 'does not know' or 'refuses'

to indicate whether the person worked prior to MEPS. The job roster for these persons is empty in first MEPS interview.

2. Persons in cross-over Panel 27 Round 3, terminal Panel 24 Round 9, or terminal Panel 26 Round 5 who are not new to the MEPS in the round and who have never reported a job either before or during the MEPS. The job roster for these persons is empty.

Prior to Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3, these persons were skipped past this question.

The Inapplicable (-1) category for the NWK variables includes the following:

- Persons who were employed during the reference period,
- Prior to Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3, persons who were not employed during the reference period and who were never employed,
- Persons who were out-of-scope for the entire reference period, and
- Persons who were younger than 16.

Note that CAPI flow changed in other ways that will impact this variable, however, the changes are not applicable to rounds contained in the 2022 Consolidated PUF. These changes will be addressed in the 2023 Consolidated PUF.

A measure of whether an individual had more than one job on the round interview date (MORJOB31, MORJOB42, and MORJOB53) is provided in this Consolidated PUF. For the MORJOB variable, the Inapplicable (-1) category includes individuals who were younger than 16, individuals who were out-of-scope, and individuals who did not report having a CMJ. Because this variable is not job-specific, no responses were coded as Determined in Previous Rounds (-2).

This Consolidated PUF also contains a variable indicating whether a CMJ changed between the seventh and eighth rounds for Panel 24 persons, between the third and fourth rounds for Panel 26 persons, or between the first and second rounds for Panel 27 persons (CHGJ3142). It contains another variable indicating whether a CMJ changed between the eighth and ninth rounds for Panel 24 persons, between the fourth and fifth rounds for Panel 26 persons, or between the second and third rounds for Panel 27 persons (CHGJ4253). In addition to the Inapplicable (-1), Refused (-7), Don't Know (-8), and Cannot be Computed (-15) codes, 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 current 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 Consolidated PUF 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. Beginning with Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, in addition to those out-of-scope, those younger than 16, those not having a CMJ, and workers who did not change jobs, the Inapplicable (-1) category for YCHJ3142 and YCHJ4253 now also includes workers who continue to work at the CMJ but no longer consider it their main job (CHGJrrrr = Changed CMJ/Previous CMJ is Now Current Miscellaneous job [2]). These persons did not leave the job and therefore were not asked why they left a job. Before this change, YCHJ values for persons who remained at their job (but no longer had it as their CMJ) were set to Cannot be Computed (-15).

Retirement from a Job/Workforce

MEPS reflects the complex status of "retired" in several ways. For persons aged 55 years or older who either (a) worked at some point in the round, or (b) are in their first MEPS interview and did not work in the round, but worked prior to MEPS, the question EM350 (EVRETIRE) probes for instances of retirement in the round. If they report a retirement, the respondent may then select an existing former job (at question EM380) or create a new retirement job whose Jobs PUF variables SUBTYPE is set to Retirement Job (6) at question EM390. More than one job may be selected, as well.

In the case of persons who worked in the round (i.e., person has a former main job [SUBTYPE=3] or former miscellaneous job [SUBTYPE=4]), a setting of Yes (1) on the Jobs PUF variable RETIRJOB indicates the job holder was actively employed at the job in the round but stopped working due to retirement. This information is represented in the Consolidated PUF variable EVRETIRE if the person is in scope and aged 55 or older in the round. These persons may continue to work in the round and have current job records, that is, jobs with SUBTYPE values of Current Main Job (1) and Current Miscellaneous Job (2).

Jobs reported by persons in their first interview who worked prior to MEPS but not in the round where SUBTYPE is Last Job Outside Reference Period (5), may also be selected at EM380 and RETIRJOB will be set to Yes (1). The designation is automatic when a new retirement job is reported instead of selected at EM390. These persons will have EVRETIRE set to Yes (1) where the person is in scope and edited age of 55 years or older in the round.

As long as CAPI conditions are met, a person may report any number of retirement jobs in any round.

When a person aged 55 years or older is not employed in a round (i.e., not actively employed at any point in the round), the retirement question EM350 (EVRETIRE) is skipped. Instead, the MEPS collects information on the reason the person is not working in the round at question EM750 (NWK), where a workforce status of "retired" can be selected. This question is also

asked in a person's first MEPS round, when the person was employed prior to MEPS but not in the current round or never employed at all. The response selected at EM750 (NWK) to indicate why the person is not employed is captured in the Consolidated PUF variable NWKrr.

Lastly, the construction logic of the Consolidated PUF variable EVRETIRE also impacts how "retirement" is reflected. Beginning with the 2022 Consolidated PUF, EVRETIRE now prioritizes persons indicating "retirement" as the reason for not working in the round at EM750 (reflected in NWKrr) over whether "retirement" is indicated in the current round at EM350 (EVRETIRE). With this change, along with improved response rates, users will notice an increase of almost 8% of persons who have ever retired reflected in the 2022 Consolidated PUF variable EVRETIRE.

It is important to note that the retirement job classification is independent of any retirement response in the following variables included in the Jobs PUF:

- YNOBUSN_M18 (EM530), which indicates why a person no longer has a self-employed business;
- WHY_LEFT_M18 (RJ110), which indicates why a person left a job in the current round.

Responses to these questions and to EM750 (reflected in NWKrr) are not age-dependent.

For users interested in capturing retirement information for persons aged 54 or younger, reports of retirement can be found in YNOBUSN_M18 and WHY_LEFT_M18 from the Jobs PUF and in NWKrr from the Consolidated PUF. These will only cover persons who are not working in a round when EM750 (NWK) is asked, persons who ended a self-employment job during the round, and persons who left a CMJ in the round. There is no question equivalent to EVRETIRE asked of persons aged 54 or younger to assess whether a person who is currently working or had a job history of work when entering MEPS has ever retired.

Employment Variables Imputed for Missing Values (EMPST31H - RTPLN53H)

To further assist analysts, a series of fully-imputed employment variables is available on the Consolidated 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 PUF are developed from the constructed Employment variables in the 2022 FY PUF. The imputed employment variables do not use the Determined in Previous Round (-2) coding.

Observations for these employment variables with values of Refused (-7), Don't Know (-8), or Cannot be Computed (-15) were imputed using weighted sequential hot-decking. The imputations were performed separately for each MEPS HC panel across the nine 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 3-9. For Panel 26, the imputed employment variables use constructed employment variables from Round 1, 2 and 3 data in this PUF. However, in order to impute employment variables for Panel 24 and Panel 26, data from the current and prior delivery years are required as follows:

Table 16

Employment Variable Imputation Panels and Rounds

Panel	MEPS HC 216 2019	MEPS HC 224 2020	MEPS HC 233 2021	MEPS HC 243 2022
Panel 24	Round 1 - Round 2	Round 3 - Round 4	Round 5 - Round 6	Round 7 - Round 9
Panel 26			Round 1 - Round 2	Round 3 - Round 5
Panel 27				Round 1 - Round 3

For Panel 24 Round 7 and Panel 26 Round 3 that cross the calendar year from 2021 to 2022, the most up-to-date version of data in the round are used. While MEPS HC-233 also has Round 3 information for Panel 26 and Round 7 information for Panel 24, the 2022 PUF has the most up-to-date version of Round 3-Round 7 information. These data are the most consistent with subsequent rounds in 2022.

Analysts who wish to combine data on all rounds for an individual can obtain prior round data from the MEPS HC PUFs noted in the table above. Some inconsistencies may exist on imputed variables across rounds. Analysts may wish to use a combination of imputed and unimputed variables, select a single round for analysis, or combine rounds in a variety of ways. Access to both imputed and unimputed variables provides analysts with maximum flexibility for research.

Following imputation, no values of -2, -7, -8, -13, or -15 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 $119.23) 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 PUF. An ‘H’ suffix was added and the resulting name was 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 PUF (MEPS HC-242) (hereafter referred to as the PRPL PUF). CMJHLD31/42/53 may be compared with the constructed Employment variables HELD31X/42X/53X. Both 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 PUFs 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, for rounds that cross the calendar year from 2021 to 2022 (Panel 24 Round 7 and Panel 26 Round 3) the values of CMJHLD31 reflect coverage in the 2022 PRPL PUF as well as in the 2021 PRPL PUF. Note that the variables CMJHLD31/42/53 are included on this PUF 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.

Table 17

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

Imputed	Constructed
HOUR53H	HOUR53
JBORG31H	JOBORG31
JBORG42H	JOBORG42
JBORG53H	JOBORG53
UNION31H	UNION31
UNION42H	UNION42
UNION53H	UNION53
BSNTY31H	BSNTY31
BSNTY42H	BSNTY42
BSNTY53H	BSNTY53
HRWG31H	HRWG31X
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

Imputed	Constructed
RTPLN53H	RETPLN53

* Both CMJHLD and HELDX reflect the insurance status at a current main job but were 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 were 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 were collapsed into a single category for analytic purposes. The resulting three responses are mutually exclusive as follows:

Table 18

EMPST Variables Values

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

Respondents with EMPST31H/42H/53H equal to 1 or 2 went 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 codes. The same set of variables has 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)

In situations where SLFCM31/42/53 was imputed to "Self employed at the current main job" because SELFCM31/42/53 was set to Refused (-7) or Don't Know (-8), imputed job characteristic and wage variables were set to Inapplicable (-1). Corresponding unimputed variables, however, contain job characteristic and wage information. This is because persons who indicated Refused (-7) or Don't Know (-8) during the interview when asked if the jobholder is self-employed at the current main job followed skip patterns for persons who are not self-employed. Job characteristic and wage information was collected.

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, were 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 $119.23 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 Inapplicable (-1).

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

This PUF 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 were constructed from the PRPL PUF 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 PUF variable CMJINS which identifies insurance obtained through a current main job, and STAT1-12, which indicates whether the coverage is in effect during the month in the delivery year. Since Panel 24 Round 7 and Panel 26 Round 3 cross two calendar years, CMJHLD31 indicates if the person held coverage during the portion of Round 7 or Round 3 in either the 2021 or 2022 PRPL PUF 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 Cannot be Computed (-15), valid reported values for OFFER31H/42H/53H were brought forward from a previous round (including imputed values from that round) if the person did not change jobs before any further imputations were performed.

The variables OFEMP31H/42H/53H indicate whether an employer offered health insurance to any employees in the establishment and rely on OFFER31H/42H/53H for 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 rounds that cross the calendar year from 2021 to 2022 (Panel 24 Round 7 and Panel 26 Round 3), OFFER31H/53H was set to Yes (1) if the person held coverage at any point in the round in either the first or second calendar year of the round. 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 Yes (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 was 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 (TRIJAyyX- PMEDPY53)

Throughout this section references to "yy" represent the year (22); references to "mm" indicate the month (JA through DE); and references to "rr" indicate either a combination of rounds ("31"/"42"/"53"), where the first r denotes the interview round for Panel 26, and the second r denotes the round for Panel 27 or the end of the calendar year (22). For the extended panel, Panel 24, the "31" variables contain data from Round 7, the "42" variables contain data from Round 8, and the "53" variables contain data from Round 9.

Beginning with Panel 22 Round 3, Panel 23 Round 1, design changes to the Health Insurance section may impact trend analyses. Analysts should note that a series of questions was added to

the Health Insurance section of the questionnaire to confirm whether a person who did not initially report any comprehensive coverage during a round has insurance. Starting at HX210, questions were presented to respondents who at that point in the instrument had not yet reported any sources of health insurance coverage, or they had only reported a source of health insurance without hospital and physician benefits, to determine whether they had coverage that included hospital and physician benefits. If the respondent answered affirmatively at HX210, subsequent questions identified the specific type of coverage (e.g. Medicaid, private, etc.). This may cause analysts to see changes to the insurance variables, and in particular, changes both to the monthly health insurance coverage indicators: PUBmmyyX, PRImmyyX, INSmmyyX; and to the summary health insurance coverage indicators: UNINSyy, INSCOVyy, INSURCyy, PUBrrX, PUBATrrX, PRIVrr, PRIVATrr, INSrrX, and INSATrrX.

Other changes were made in FY 2018 to the health insurance questions that may affect the continuity of estimates. These changes include modifications to the Medicaid/SCHIP, and the TRICARE/CHAMPVA questions to ask whether each person in the household is covered by referencing the person's name in the question text (e.g., Was Person 1 covered? What about Person 2?, and so on). Moreover, in Rounds 2 and 3, respondents are now required to answer "Yes" or "No" for each person individually when reviewing coverage from a previous round for these insurance sources. Changes to the Medicare Round 1 series were also made to probe separately for persons in the RU who were aged 65 or older versus RU members who were younger than 65. Similar to the Medicaid and TRICARE series, Medicare coverage questions were asked for each RU member who was at least aged 65.

The aforementioned changes to the administration of the insurance section may also be evident in the managed care variables (TRICH31X-PRVHMOyy) because more respondents are now more likely to be asked about managed care.

Respondents were allowed to simultaneously report Medicaid and other public hospital/physician coverage. As a result, analysts should be aware that they might see changes in coverage trends in the constructed variables relating to Medicaid, edited Medicaid, or other public coverage as well as respondents reporting both types of coverage after FY 2018.

The variables VERFLG31, VERFLG42, and VERFLGyy indicate the round in which comprehensive health insurance coverage was first reported through the verification series of questions collected in the loop that starts at HX210 (HXLoop_40). These values will be carried through to subsequent rounds (e.g., from VERFLG31 to VERFLG42) if the coverage initially added through the verification loop continues, and if no other comprehensive source of coverage is reported for that person outside of the verification loop. If previously reported coverage through the verification series ends and, in a future round, new comprehensive coverage is reported through the verification loop, then the VERFLG31/42/yy variable will reflect the corresponding round of the newly reported coverage. The VERFLG variables were set to 95 to indicate that: (a) coverage was reported outside verification; (b) the person did not have coverage; or (c) the person would have been assigned edited coverage even though they may have reported coverage in the verification loop. As an example of the last condition, a person who is aged 65 or older and reports Medicare coverage through verification but also reports the receipt of Social Security would have MCARErrX set to "1" because of the reporting of Social Security, so the report of coverage in the verification module would not have changed the

person's coverage status in the MEPS. In FY 2019, the construction of the VERFLG variables was modified such that all persons aged 65 or older who gained edited Medicare through the Medicare coverage of their spouse also have a value of 95 in the verification variables, provided that the coverage of the spouse was added outside of the verification series.

Persons who report coverage under the Indian Health Service (IHS) are identified in the constructed variables IHSrr, IHSATrr, and IHSmmyy. Persons reporting only IHS coverage are not considered covered for the summary insurance measures, including: PUBmmyyX, PUByyX, INSmmyyX, INSCOVyy, and INSURCyy. Persons who report coverage under the Veteran's Administration (VA) can be identified in this PUF in the constructed variables VAPROGrr, VAPRATrr, and VAEVyy, as well as in the monthly variables VAPmmyy.

Several design changes were made beginning with the Spring 2023 CAPI instrument to eliminate underutilized questions and/or response categories. Several response options for the source of private, direct purchase coverage and coverage from an employer were dropped, including purchase from an HMO and purchase through a school. Additionally, several response options for types of services covered were eliminated. Respondents now have the following options: hospital/physician coverage, Medicare supplemental, dental, vision, prescription medicine, and "other" coverage. All items on the types of Medicare coverage, including participation in Medicare Part B, were eliminated. All questions on Medicaid premium payments were dropped, and questions on amounts for premiums for other government-sponsored coverage were also eliminated. Two questions on dental coverage were added: one question on private standalone dental coverage, and, for respondents reporting Medicare Advantage enrollment, a question on dental coverage through their Medicare Advantage plan.

Monthly Health Insurance Indicators (TRIJAyyX-INSDEyyX)

Constructed and edited variables in the Consolidated PUF indicate any coverage in each month of 2022 for the sources of health insurance coverage collected during the MEPS interviews (Panel 24 Rounds 7-9, Panel 26 Rounds 3-5, and Panel 27 Rounds 1-3). 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. Other edits described in this section 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 were edited to assign 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 on October 1, 2001, persons aged 65 or older have been able to retain TRICARE coverage in addition to Medicare. Therefore, unlike in earlier MEPS PUFs, persons aged 65 or older do not have their reported TRICARE coverage (TRIJAyyX-TRIDEyyX) overturned. TRICARE acts as supplemental insurance for Medicare, similar to Medigap insurance.

Public sources of coverage include Medicare, TRICARE/CHAMPVA, VA, Medicaid, SCHIP, and other public hospital/physician coverage. Reported enrollment in the IHS is not included as a public source of coverage.

Medicare

Medicare (MCRJAyy-MCRDEyy) coverage was edited (MCRJAyyX-MCRDEyyX) for persons aged 65 or older. 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 aged 65 or older and covered by Medicare; or
- They reported TRICARE coverage.

Note that age (AGErrX) is checked for edited Medicare, but 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. Beginning with Panel 22 Round 3, Panel 23 Round 1, these questions were asked even if a respondent reported Medicaid or SCHIP directly. (In interviews from previous years, questions about other public hospital/physician coverage were asked only of respondents who did not report Medicaid or SCHIP.) Respondents reporting other public hospital/physician coverage were asked follow-up questions to determine whether the coverage was through a specific Medicaid HMO or if it included some other managed care characteristics. Respondents who identified managed care from either source were asked whether the recipient paid anything for the coverage and/or whether a government source paid for the coverage.

The Medicaid/SCHIP variables (MCDJAyy-MCDDEyy) have been edited (MCDJAyyX-MCDDEyyX) 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 PUF contains variables constructed from the other public hospital/physician series that indicate the following:

- Respondents who reported coverage through other public hospital/physician insurance (GVAJAyy-GVADEyy);
- Respondents who reported coverage through other public hospital/physician insurance, and the source was identified as an HMO or the source required the covered person to sign up with a doctor or clinic (GVBJAyy-GVBDEyy); and
- Respondents who reported coverage through other public hospital/physician insurance and they pay a monthly premium for this coverage (GVCJAyy-GVCDEyy).

The variables GVAJAyy-GVADEyy, GVBJAyy-GVBDEyy, and GVCJAyy-GVCDEyy 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 Consolidated PUF also includes summary measures that indicate whether a sample person had any public insurance in a month (PUBJAyyX-PUBDEyyX). Persons identified as covered by public insurance are those who reported coverage under TRICARE/CHAMPVA, Medicare, Medicaid or SCHIP, other public hospital/physician programs, or the VA. As mentioned, the IHS is not included as a public source of coverage. Note that further edits may be made to the public insurance variables in later MEPS data releases to address cases in which private coverage through a federally-facilitated, or a state-based or state partnership exchange/marketplace may have been originally reported as public insurance. These potential edits could affect the variables MCAIDyyX, GOVTAyy, GOVTByy, GOVTCyy, and PUByyX.

Private Insurance

Variables identifying private insurance in general (PRIJAyy-PRIDEyy) and specific private insurance sources such as employer/union group insurance (PEGJAyy-PEGDEyy); non-group (PNGJAyy-PNGDEyy); other group (POGJAyy-POGDEyy); and private insurance through a federally facilitated, state-based, or state partnership exchange/marketplace (PRXJAyy-PRXDEyy) were constructed. Private insurance sources identify coverage in effect at any time during each month of 2022. Separate variables beginning with the letter "H" identify policyholders (e.g., HPEJAyy-HPEDEyy). Both types of variables indicate the coverage or policyholder status for a particular source of insurance but do not identify persons who may be covered by more than one policy from the same type of insurance. For example, as someone who is a policyholder for one employer/union group plan and also a dependent on another employer/union group plan held by their spouse. In some cases, the policyholder was unable to characterize the source of insurance (PDKJAyy PDKDEyy).

Before FY 2018, persons covered under a policy held by someone living outside the RU were identified in POUJAyy-POUDEyy and in PROUTrr. Beginning in FY 2018, the constructed variables PRIEUOrr and PRINEOrr were included instead. PRIEUOrr indicates coverage from a policyholder living outside the RU when the source of coverage is through an employer, and PRINEOrr indicates coverage from a policyholder living outside the RU when the source is not through an employer. These variables are based on responses to a follow-up question for respondents who indicated that they have coverage from a policyholder outside the household. The question HP130 asks: "Is the {INSURANCE SOURCE NAME} health coverage {POLICYHOLDER} has through an employer or previous employer?" If the respondent's answer to HP130 was unknown, their coverage is now included in PRIDKrr.

An individual was considered to have private health insurance coverage if, at a minimum, that coverage provided benefits for hospital and physician services (including Medicare supplemental coverage). Note, however, that persons covered by private insurance through an exchange/marketplace (PRSTXrr and PRXJAyy-PRXDEyy) were considered to have private health coverage if that coverage provided hospital/physician services, but excluded coverage that was explicitly identified as Medicare supplemental coverage (HX620/OE130=5). If a person reported Medicare supplemental coverage through the exchange/marketplace, then the source of

the insurance purchased was edited to reflect coverage "from a professional association" (HP40=1) or coverage "from a group or association" (HX200/HX300=1). The exchange variables are further described at the end of this section. Sources of insurance with missing information regarding the type of coverage were assumed to include 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 whereas the Employment section insurance variables in this PUF reflect only coverage through a CMJ.

Questions about health insurance through a job or union (PEGJAyy-PEGDEyy) were initially asked in the Employment section of the interview and were later confirmed in the Health Insurance section.

Insurance that was reported in the Employment section through a job classified as self-employed with a firm size of 1 is included in the other private insurance variables: PEGJAyy-PEGDEyy; PNGJAyy-PNGDEyy; POGJAyy-POGDEyy; PDKJAyy-PDKDEyy; HPEJAyy-HPEDEyy; HPNJAyy-HPNDEyy; HPOJAyy-HPODEyy; HPDJAyy-HPDDEyy; and PRIEUrr, PRINGrr, PRIOGrr, and PRIDKrr based on responses at HP40.

Private insurance that was not employment related (POGJAyy-POGDEyy, PNGJAyy-PNGDEyy, PDKJAyy-PDKDEyy, PNEJAyy-PNEDEyy, and PRXJAyy-PRXDEyy) was reported in the Health Insurance section only.

Federal/State Exchange is included in the list of private insurance categories (HP40 = 4 and HX200/HX300 = 2). Information on federal/state exchanges is also collected at question HP50 ("Is this coverage through {state exchange name}?") for respondents reporting insurance from a group, directly from an insurance company or insurance agent or from an "other" unspecified source, and at OE40 in Round 3 for Panels 26 and 27, and Rounds 5 and 7 for Panel 24 only ("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 also in the list of private insurance categories at HP40, HX200, and HX300. The variables PRSTXrr were constructed to include persons younger than 65 who reported private insurance through a federally-facilitated, state-based, or state partnership exchange/marketplace at HP40, HX200, or HX300, or persons aged 65 or older who reported private insurance through a federally facilitated, state-based, or state partnership exchange/marketplace at HP40, HX200, or HX300 and who were not covered by Medicare. In addition, persons who reported a source of insurance at HX200 or HX300 that was not through an exchange/marketplace (e.g., through a group or directly from an insurance company) but who answered "Yes" to HP50 or OE40 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, respondents had to identify coverage as hospital/physician coverage at HX620/OE130 (=1 or missing [-7, -8]) but not as having Medicare supplemental coverage (HX620/OE130 = 5). The variables PRSTXrr 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 CPS and the NHIS, MEPS respondents reporting public coverage were asked whether this

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 PRSTXrr variables.

Any Insurance in Month

The Consolidated PUF also includes summary measures that indicate whether a person had any insurance in a month (INSJAyyX-INSDEyyX). Persons identified as insured are those reporting coverage under TRICARE/CHAMPVA, Medicare, Medicaid, SCHIP, other public hospital/physician or private hospital/physician insurance (including Medigap plans), or the VA. A person is considered uninsured if they are not covered by one of these insurance sources. The IHS is not included as a source of coverage.

Summary Insurance Coverage Indicators (PRVEVyy-INSURCyy)

The variables PRVEVyy-UNINSyy summarize health insurance coverage for the person in 2022 for the following types of insurance: private (PRVEVyy), TRICARE/CHAMPVA (TRIEVyy), VA (VAEVyy), Medicaid or SCHIP (MCDEVyy), Medicare (MCREVyy), other public coverage (GVAEVyy), other public coverage that is an HMO (GVBEVyy), and other public coverage for which a premium is paid (GVCEVyy). Each variable was constructed on the basis of the values of the corresponding 12 month-by-month health insurance variables described above in Monthly Health Insurance Indicators. 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 in which the person was eligible. A value of 1 indicates that the person was covered for at least 1 day of at least 1 month during 2022. A value of 2 indicates that the person was not covered for a given type of insurance for all of 2022. The variable UNINSyy summarizes PRVEVyy-GVAEVyy. When PRVEVyy-GVAEVyy are all equal to 2, then UNINSyy equals 1, as the person was uninsured for all of 2022. Otherwise, UNINSyy was set to 2, insured for all or part of 2022.

For the user's convenience, this PUF contains the constructed variable INSCOVyy, which summarizes health insurance coverage for the person in 2022, and has the following three values:

1 - Any private (Person had any private insurance coverage [including TRICARE/CHAMPVA] at any time during 2022)

2 - Public only (Person had only public insurance coverage [excluding TRICARE/CHAMPVA] during 2022)

3 - Uninsured (Person was uninsured during all of 2022)

INSURCyy summarizes health insurance coverage for the person in 2022 using eight categories of insurance defined by the person's age on December 31, 2022:

1 - Any private (0-64) (Person is 0-64 years old and is covered by private insurance or TRICARE/CHAMPVA in 2022)

2 - Public only (0-64) (Person is 0-64 years old and is covered by public insurance only (excluding TRICARE/CHAMPVA) in 2022)

3 - Uninsured (0-64) (Person is 0-64 years old and is uninsured for all of 2022)

4 - Edited Medicare only (65+) (Person is aged 65 or older and is covered by edited Medicare only in 2022)

5 - Edited Medicare & priv (65+) (Person is aged 65 or older and is covered by edited Medicare and private insurance or TRICARE/CHAMPVA in 2022)

6 - Edited Medicare & oth pub only (65+) (Person is aged 65 or older and is covered by edited Medicare and public insurance including edited Medicaid/SCHIP or other public coverage but excluding TRICARE/CHAMPVA in 2022)

7 - Uninsured (65+) (Person is aged 65 or older and is uninsured for all of 2022)

8 - No Medicare but any public/private (65+) (Person is aged 65 or older and is not covered by Medicare but is covered by private insurance, Medicaid, TRICARE/CHAMPVA, VA, or other public coverage in 2022)

Please note the following:

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

- The IHS is not included as a source of coverage for either INSCOVyy or INSURCyy.

- Both INSCOVyy and INSURCyy 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 by using the PRVEVyy and TRIEVyy 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 are coded as 1 for INSCOVyy and INSURCyy.

Users wishing to compare INSCOVyy and INSURCyy across years should also note at least two changes beginning in 2018 that may affect the continuity of estimates: (1) an increase in the number of reports of coverage because the coverage verification series was included and (2) the inclusion of VA coverage as a public coverage source.

Flexible Spending Accounts (FSAGT31-PFSAMT31)

Respondents in Rounds 1, 3, and 7 were asked whether 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 Yes (1), and two follow-up questions were asked-HASFSA31 and PFSAMT31. HASFSA31 was set for each RU member to indicate which one has an FSA. The constructed variable PFSAMT31 indicates the total amount the individual

RU member contributed to their FSA. If no RU member has an FSA, then both HASFSA31 and PFSAMT31 were set to Inapplicable (-1).

Unedited Health Insurance Variables (PREVCOVR-MORECOVR)

Duration of Uninsurance

If a person was identified as being without insurance as of January 1 in the MEPS Round 1 interview, a series of follow-up questions was asked to determine the duration of uninsurance before the start of the MEPS survey. Persons who were insured as of January 1, and persons with a date of birth on or after December 31, 2022 or whose age was younger than 1 were skipped past this loop of questions. These questions were asked in Round 1 only.

PREVCOVR indicates whether the person was covered by insurance in the 2 years before the MEPS Round 1 interview. For persons who reported only noncomprehensive coverage as of January 1, a question was asked to determine whether they had been covered by more comprehensive coverage that paid for medical and doctors' bills in the previous 2 years (MORECOVR). Beginning with Panel 23 Round 1, several follow-up questions to PREVCOVR and MORECOVR are no longer being asked. These questions collected information on the most recent month and year of coverage (COVRMM, COVRYY, INSENDMM, INSENDYY) and on type of coverage, including employer-sponsored (WASESTB), Medicare (WASMCARE), Medicaid/SCHIP (WASMCAID), TRICARE/CHAMPVA (WASCHAMP), VA/Military Care (WASVA), other public (WASOTGOV, WASAFDC, WASSSI, WASTAT1-4, WASOTHER), as well as private coverage purchased through a group, association, or insurance company (WASPRIV). Therefore, these variables will no longer be constructed.

Note that these variables are unedited and have been taken directly as they were recorded from the raw data. There may be inconsistencies in the health insurance variables released in PUFs that indicate that an individual is uninsured in January. Out-of-scope persons have been set to Inapplicable (-1) for PREVCOVR and MORECOVR. For all other persons, PREVCOVR and MORECOVR were copied directly from the value of the unedited source variable.

Persons whose January 1 insurance coverage status could not be determined because their reference period began after January 1 were also asked the follow-up questions described at the beginning of this section. In these cases, persons who reported comprehensive coverage were asked whether they were ever without insurance. Those who were uninsured were asked to determine the duration of uninsurance before the start of their reference period. Those who reported only noncomprehensive coverage were asked whether they had been covered by comprehensive coverage that paid for medical and doctors' bills in the previous 2 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 1.

Health Insurance Coverage Variables: At Any Time/At Interview Date/At 12-31 (TRICR31X-INSATyyX)

Constructed and edited variables in the Consolidated PUF indicate that the person had health insurance coverage at any time in a given round, at the MEPS interview dates and on December 31, 2022. Note that for persons who left the RU before the MEPS interview date or before

December 31, the variables measuring coverage at the interview date or on December 31 represent coverage on the date that the person left the RU.

Variables indicating coverage for Panel 26 members for any time in the round that end in "31" reflect the portion of Round 3 that occurred in calendar year 2022 unless otherwise noted (see the section Dental and Prescription Drug Private Insurance). This is also true for data from Panel 24 Round 7: the 2022 portion of this round is contained in the "31" variables. Variables indicating coverage for Panel 27 members that end in "53" indicate coverage at any time in Round 3, including the portion of the round that occurred in calendar year 2023. For Round 3 data for Panel 27 members, users should use variables ending in "yy." The Panel 24 Round 8 data, Panel 26 Round 4 data, and Panel 27 Round 2 data are contained in the 42 variables.

As mentioned at the beginning of this section, the health insurance variables were constructed for the sources of health insurance coverage collected during the MEPS interviews (Panel 24 Rounds 7-9, Panel 26 Rounds 3-5, and Panel 27 Rounds 1-3). Note that the Medicare variables on this PUF 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 31, 2022. Users should also note that the same general editing rules were followed for the month-by-month health insurance variables released on this PUF (see the section Monthly Health Insurance Indicators for details). Editing programs checking for consistencies between these sets of variables were developed to ensure as much consistency as possible between the round-specific indicators and the month-by-month indicators of insurance.

Public sources of coverage include Medicare, TRICARE/CHAMPVA, the VA, Medicaid/SCHIP, and other public hospital/physician coverage. The IHS was not considered a public coverage source.

Medicare

Medicare coverage variables (MCARErr) and the edited versions of these variables (MCARErrX) were constructed in a way that is similar to how the month-by-month Medicare variables were constructed. Since Medicare coverage is logically edited to continue for a person once it has been reported in the MEPS, the Medicare coverage variables can be considered as either "coverage at any time in the round" or "coverage at the interview date," with the same caveats noted above regarding (a) persons who left the RU before the interview date, (b) coverage on the December 31, 2022 variables, and (c) the restrictions on Round 3 and Round 7 coverage to reflect coverage in 2022.

Medicaid/SCHIP and Other Public Hospital/Physician Coverage

Medicaid/SCHIP variables (MCAIDrr) and the edited versions of these variables (MCAIDrrX and MCDATrrX) were constructed in a way that is similar to how the month-by-month Medicaid/SCHIP variables were constructed.

The variables indicating coverage through other public hospital/physician insurance (GOVTArr and GOVAATrr); other public coverage that is an HMO (GOVTBrr and GOVBATrr); and other public coverage for which a premium is paid (GOVTCrr and GOVCATrr) were constructed in a way that is similar to how the month-by-month other public variables were constructed.

Any Public Insurance

The any public insurance variables (PUBrrX and PUBATrrX) were constructed in a way that is similar to how the month-by-month any public insurance variables were constructed. The variables indicating coverage through the VA (VAPROGrr and VAPRATrr) are included in this PUF and were constructed in a way that is similar to how the VA month-by-month variables were constructed.

Private Insurance

The variables identifying private insurance were constructed in a way that is similar to how the month-by-month variables in the Monthly Health Insurance Indicators section were constructed. These variables indicate private insurance in general (PRIVrr and PRIVATrr) and specific private insurance sources (such as employer/union group insurance [PRIEUrr], other group coverage [PRIOGrr], coverage through an unknown private category [PRIDKrr], coverage from a policyholder living outside the RU that is employer-based coverage [PRIEUOrr]; coverage from a policyholder living outside the RU that is not employer-based coverage [PRINEOrr]; and coverage through an exchange [PRSTXrr]). 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 31, 2022. The variables for the specific sources of private coverage are only available for coverage on the interview dates and on December 31, 2022.

Any Insurance in Period

The any insurance variables (INSrrX and INSATrrX) were constructed in a way that is similar to how the month-by-month any insurance variables were constructed.

2022 Consolidated PUF Managed Care Variables (TRICH31X- PRVHMOyy)

In addition to the month-by-month indicators of coverage, there are round-specific health insurance variables indicating coverage by an HMO or another type of managed care plan. Managed care variables have been constructed from information on health insurance coverage at any time in a reference period and from 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 2022 are based on responses to health insurance questions asked during the Round 7, 8, and 9 interviews of Panel 24; the Round 3, 4, and 5 interviews of Panel 26; and the Round 1, 2, and 3 interviews of Panel 27. Each managed care variable ends in "rr," where the first r denotes the interview round for Panel 26, and the second r denotes the round for Panel 27. For the extended panel, Panel 24, the "31" variables contain data from Round 7, the "42" variables contain data from Round 8, and the "53" variables contain data from Round 9. 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 26 indicate whether a person had coverage from a managed care plan in the 2022 calendar year. This is also the case for the Panel 24 Round 7- data: the "31" managed care variables are limited to the 2022 calendar year. Similarly, Panel 27 Round 3 managed care variables indicate whether

a person had coverage from a managed care plan in the 2022 calendar year, and the variables have been given the suffix “yy” (as opposed to “53”) to emphasize the restricted time frame. The implications for managed care plan coverage resulting from the overlapping calendar year in Rounds 3-7 are described in more detail directly below.

Constructing the managed care variables is straightforward, but three caveats are appropriate. First, the MEPS estimates of the number of persons in HMOs are higher than figures reported by other sources, particularly for estimates 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 the MEPS.

Second, the managed care questions focus on the last plan held by a person through their 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, when a person changed their establishment-related insurance, the managed care variables describe the characteristics of the last plan held through the establishment.

Third, the “yy” versions of the managed care variables were developed from two sets of Round 3 source variables that cover different time frames. Using Round 3 managed care variables as an example, the first set of source variables-Round 3 health insurance status variables for Round 3- are restricted to the same calendar year as the Rounds 1 and 2 data. The second set of source variables-Round 3 variables describing plan type overlap with the next calendar year, 2023. As a consequence, the “yy” managed care variables may not describe the characteristics of the last plan held in the calendar year if the person changed plans in the beginning of the following year.

The variables PRVHMOrr indicate coverage by a private HMO in Panel 27 Rounds 1-3, Panel 26 Rounds 3-5, and Panel 24 Rounds 7-9. The variables MCRPHOrr indicate coverage by a Medicare managed care plan (or “Medicare Advantage” plan) in Panel 27 Rounds 1-3, Panel 26 Rounds 3-5, and Panel 24 Rounds 7-9. The variables MCRPDrr indicate coverage by the Medicare prescription drug benefit, also known as Part D, in Panel 27 Rounds 1-3, Panel 26 Rounds 3-5, and Panel 24 Rounds 7-9. The edited version of the Medicare prescription drug coverage variables (MCRPDrrX) include persons who are covered by both edited Medicare and edited Medicaid. The variables MCDHMOrr and MCDMCrr indicate coverage by a Medicaid or SCHIP HMO or managed care plan in Panel 27 Rounds 1-3, Panel 26 Rounds 3-5, and Panel 24 Rounds 7-9. The TRICARE plan variables are similarly defined.

For Panel 27, the “31” version indicates coverage at any time in Round 1, the “42” version indicates coverage at any time in Round 2, and the “yy” version represents coverage at any time during the 2022 portion of Round 3. For Panel 26, the “31” version indicates coverage at any time during the 2022 portion of Round 3, the “42” version indicates coverage at any time in Round 4, and the “yy” version represents coverage at any time during Round 5 since Round 5 ends on December 31, 2022 for Panel 26. For Panel 24, the “31” version indicates coverage at any time during the 2022 portion of Round 7, the “42” version indicates coverage at any time during Round 8, and the “yy” version represents coverage at any time during Round 9, since Round 9 ends on December 31,2022 for Panel 24.

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 these two coverages. It should be noted, however, that in some cases respondents may have failed to identify prescription drug or dental coverage that was part of a hospital and physician plan.

TRICARE Plan Variables

In fall 2022, the response options for the CAPI TRICARE questions HX125_01, HX260, and PR280_01 were changed. The options TRICARE Standard, TRICARE Prime, TRICARE Extra, and TRICARE for Life were replaced by the single response option TRICARE. As a result, the previous plan-specific variables TRICARE Standard (TRISTrrX), TRICARE Prime (TRIPRrrX), TRICARE Extra (TRIEXrrX), and TRICARE for Life (TRILIrrX) were dropped from the 2021 Consolidated PUF, and the new variable TRIrrX (Person Covered by Tricare at Any Time During the Reference Period) was added.

Beginning in Panel 9 Rounds 4 and 5, Panel 10 Rounds 1-3, CHAMPVA was added to the list of TRICARE/CHAMPVA plans for which data were collected, so the corresponding variables TRICH42/yyX 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. Beginning with Panel 22 Round 3, Panel 23 Round 1, questions related to military health coverage were asked at the person-level. If it was reported that someone in the RU had coverage through military health care, a follow-up question was asked to determine who in the RU was covered; then, the pick-list, code-all-that-apply question was asked to determine the type of military coverage the person obtained. VA was added to this list beginning with Panel 22 Round 3, Panel 23 Round 1.

In each round, the TRICARE variable has four possible values:

1	The person was covered by TRICARE
2	The person was covered by CHAMPVA but not TRICARE
3	The person was not covered by TRICARE/CHAMPVA
-1	The person was out of scope

Medicare Managed Care Plans, and Prescription Drug Benefit

Questions on Medicare Part B were dropped from the survey in spring 2023; as a result, variables MCRPB31/42/yy will no longer be constructed.

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, most often because a person had a spouse receiving Social Security or Medicare and they were aged 65 or older but did not report receiving Medicare. This group was not asked about coverage through a managed care plan or a prescription drug plan. Since no Medicare establishment-person pair exists for this group, the persons' status in terms of Medicare managed care, and the prescription drug benefit were set to Cannot be Computed (-15). Persons who

reported Medicare coverage based on their responses to the health insurance questions were asked about a Medicare managed care plan and the prescription drug benefit. The Medicare prescription drug benefit variables (MCRPDrr) have been edited (MCRPDrrX) 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.

The Medicare Advantage dental coverage variable (MCRPHDyy) was created from the Medicare managed care information and the new Medicare Advantage dental coverage question added in spring 2023. Because this question was not asked in spring or fall of 2022, the variables MCRPHD31 and MCRPHD42 cannot be constructed for the 2022 Consolidated PUF.

In each round, the variables MCRPHOrr have five possible values:

1	The person was covered by Medicare and covered through a Medicare managed care or Medicare Advantage plan
2	The person was covered by Medicare but not covered through a Medicare managed care or Medicare Advantage plan
3	The person was not covered by Medicare
-15	The person was covered by Medicare but whether the coverage is through a Medicare managed care or Medicare Advantage plan cannot be computed
-1	The person was out of scope

In each round, the variables MCRPDrr/MCRPDrrX 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
-15	The person was covered by Medicare but prescription drug benefit coverage cannot be computed
-1	The person was out of scope

Variable MCRPHDyy has five possible values:

1	The person was covered by a Medicare managed care plan and reported dental coverage
2	The person was covered by a Medicare managed care plan but did not report dental coverage
3	The person was covered by Medicare that was not a managed care plan

4 The person was not covered by Medicare

-15 The person was covered by Medicare, but managed care dental coverage was 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 a Medicaid HMO or gatekeeper plan that did not require a 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 coverage, the respondent was asked about the characteristics of the plan. The variables MCDHMOrr were set to Yes (1) if the respondent answered in the affirmative to the following question:

> Under {Medicaid{, also known as {STATE NAME FOR MEDICAID},} or {STATE CHIP NAME}/{PROGRAM NAME FROM HX160/HX270}, the program sponsored by a state or local government agency which provides hospital and physician benefits,}} {{are/is}/{were/was}} {PERSON 1}, {PERSON 2}, {PERSON 3}, {PERSON 4}, {PERSON N} enrolled in an HMO, that is a Health Maintenance Organization {between {START DATE} and {END DATE}}?
>
> [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 were 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 a list of Medicaid HMOs or signed up with an HMO).

In each round, the variables MCDHMOrr 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

-15 The person was covered by Medicaid/SCHIP but the plan type cannot be computed

-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 MCDMCrr were set to Yes (1) if the respondent answered in the affirmative to the following question:

{Does/Between {START DATE} and {END DATE}, did} {Medicaid{,{STATE NAME FOR MEDICAID},} or{STATE CHIP NAME}/{PROGRAM NAME FROM HX160/HX270}, the program sponsored by a state or local government agency which provides hospital and physician benefits,} require {PERSON 1}, {PERSON 2},
{PERSON 3}, {PERSON 4}, {PERSON N} 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 MCDMCrr 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

-15 The person was covered by Medicaid/SCHIP but the plan type cannot be computed

-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 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 HMOs and other gatekeeper plans.

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 their 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:

{Is/Was} {your/{POLICYHOLDER}'s} {NAME OF INSURER} an HMO {as of {END DATE}}? {When answering this question, do not consider {your/his/her} insurance through Medicare.}

[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.]

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 under item 3 above about managed care (i.e., whether the insurer was 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 PRVHMOrr were set to Yes (1). If a person had multiple plans and one or more were identified as not being an HMO and the other(s) were missing plan type information, the person-level variable was set to missing. Moreover, if a person had multiple plans and none was identified as an HMO, the person-level variable was set to No (2). In each round, the variables PRVHMOrr 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
-15	The person was covered by private insurance, but the plan type cannot be computed
-1	The person was out of scope.

Dental and Prescription Drug Private Insurance Variables (DENTIN31-PMDINSyy)

Dental Private Insurance Variables

Round-specific variables (DENTINrr) on the Consolidated PUF indicate that the person was covered by a private health insurance plan that included at least some dental coverage for each round of 2022. 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 comprised hospital and physician benefits including coverage through an HMO, Medigap coverage, vision coverage, and dental and prescription drug coverage. For policyholders that did not report dental coverage initially, an additional question asking whether policyholders had a separate policy with dental coverage was included beginning in the spring 2023 interview. Affirmative responses to that question were included in the coding of the DENTIN53 variable. As a result of this change to the logic, the variable name was changed to DENTIN53_M23.

It is possible that some dental coverage provided by hospital and physician plans was not independently enumerated in these questions. 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 were coded as not having private dental coverage. Persons who reported having dental coverage from at least one reported private plan or who reported a separate policy with dental coverage were coded as having private dental coverage.

DENTIN53_M23 reflects coverage for all of Panel 27 Round 3, all of Panel 26 Round 5, and all of Panel 24 Round 9, where the end of the reference year for Panel 27 could extend into 2023. DENTIN31 for Panel 26 Round 3 and Panel 24 Round 7 reflects coverage in 2021 and 2022, since the reference period for all three rounds spans both years. A second version of these dental coverage indicators was built to reflect only current year coverage (DNTINSrr). Note that variable DNTINSyy also includes data from the new question on dental coverage through a separate policy noted above, and thus also has been renamed as DNTINSyy_M23.

Prescription Drug Private Insurance Variables

Round-specific variables (PMEDINrr) on the Consolidated PUF indicate that the person was covered by a private health insurance plan that included at least some prescription drug coverage for each round of 2022. 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 comprised hospital and physician benefits, Medicare supplemental coverage, vision coverage, dental coverage, and prescription drug coverage. It is possible that some prescription drug coverage provided by hospital and physician plans was not independently enumerated in this question. Persons who 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 were coded as not having private prescription drug coverage.

PMEDIN53 reflects coverage for all of Panel 27 Round 3, all of Panel 26 Round 5, and all of Panel 24 Round 9, where the end of the reference year for Panel 27 could extend into 2023. PMEDIN31 for Panel 26 Round 3 and Panel 24 Round 7 reflects coverage in 2021 and 2022 since the reference period for both rounds spans both years. A second version of these prescription drug coverage indicators was built to reflect only current year coverage (PMDINSrr).

Medical Debt Variables (PROBPY42 - PYUNBL42)

Questions relating to medical debt were asked in the Health Insurance section. Respondents in Round 2, Round 4, or Round 8 were asked the following questions HX770 (“In the past 12 months did anyone in the family have problems paying or were unable to pay any medical bills?”), HX780 (“Does anyone in your family currently have any medical bills that are being paid off over time?”), and HX790 (“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 PUF. PROBPY42 was set to Yes (1) if the respondent indicated that someone in their family had problems paying or were unable to pay any medical bills. Additional questions ascertained whether anyone in the family currently had

medical bills that were being paid off over time (CRFMPY42) and whether anyone in the family currently had any medical bills that could not be paid at all (PYUNBL42). If the respondent indicated that someone in their family currently had any medical bills that were being paid off over time, then CRFMPY42 was set to Yes (1). Note that if the respondent indicated that no one in their family had problems paying medical bills, then PYUNBL42 was set to Inapplicable (-1).

Prescription Drug Usual Third Party Payer Variables (PMEDUP31-PMEDPY53)

Round-specific variables on the Consolidated PUF indicate whether the sample member had a usual third party payer for prescription medications (PMEDUPrr), and if so, what type of payer this was (PMEDPYrr). 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 PMEDPYrr: Private Insurance, Medicare, Medicaid, VA/CHAMPVA, TRICARE, State/Local Government, and Other. Analysts should note that the questions were asked in the Prescribed Medicines 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. In particular, respondents may report the names of private entities (such as insurance companies) that contract with public programs, and these may be coded as private insurance instead of the public programs.

2.5.11 Utilization, Expenditures, and Sources of Payment Variables (TOTTCH22-RXOSR22)

The MEPS 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 7-9 for Panel 24 (excluding 2021 events covered in Round 7), Rounds 3-5 for Panel 26 (excluding 2021 events covered in Round 3) and across Rounds 1-3 for Panel 27 (excluding 2023 events covered in Round 3) to produce the annual utilization and expenditure data for 2022. In addition, the MEPS MPC is a follow-back survey that collected data from a sample of medical providers and pharmacies that were used by sample persons in 2022. 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 PUF (see below for description of methodology used to develop expenditure data).

This PUF contains utilization and expenditure variables for several categories of health care services. In general, there is one utilization variable (based on HC responses only), 11 expenditure variables (derived from both HC and MPC responses), and one charge variable for each category of health care service (derived from both HC and MPC responses). The utilization variable is typically a count of the number of medical events reported for the category. The 11 expenditure variables consist of an aggregate total payments variable and 10 main component 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 in scope for the entire year, these variables reflect only the period of eligibility.

The table in Appendix 4 provides an overview of the utilization and expenditure variables included in this PUF. For each health service category, the table lists the corresponding utilization variable(s) and provides a general key to the expenditure variable names (11 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., 22).

Expenditures Definition

Expenditures on this PUF refer to payments for health care services. More specifically, expenditures in the 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 the 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 the MEPS is 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. Currently, 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 associated payments.

While the concept of expenditures in the MEPS has been operationalized as payments for health care services, variables reflecting charges for services received are also provided in this PUF (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 PUF were derived from the MEPS HC and MPC. Only HC data were collected for non-physician visits, dental and vision services, other medical equipment and services, and home health care not provided by an agency. Data on expenditures for care provided by home health agencies were only collected in the MPC. In addition to HC data, MPC data were collected for a sample of office-based visits to physicians (or medical providers supervised by physicians), hospital-based events (e.g., inpatient stays, emergency room visits, and outpatient department visits), and prescribed medicines. For these types of events, MPC data were used if complete; otherwise, HC data were used if complete. Missing data for events where HC data were not complete and MPC data were not collected or complete were derived through an imputation process (see below).

A series of logical edits were applied to both the HC and MPC data to correct for several problems including, but not limited to, outliers, copayments or charges reported as total payments, and reimbursed amounts that were reported as out-of-pocket payments. In addition, edits were implemented to correct for misclassifications between Medicare and Medicaid and between Medicare HMOs and private HMOs as payment sources. Data were not edited to ensure complete consistency between the health insurance and source of payment variables in this PUF.

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 PUFs.

Predictive mean matching (PMM) 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, the donor event with the closest predicted payment and the same pattern of expected payment sources as the event with missing payment information was used to impute the missing payment value.

The general approach that was used to impute missing expenditure data on prescribed medicines is described below.

Payments under capitated arrangement and, in some cases, public clinics are not tied to individual episodes of medical care. Therefore, expenditures for medical care covered under capitated arrangement or for some services delivered in public settings were imputed. Using a weighted sequential hot-deck procedure, events covered under capitated arrangements were imputed using donor events covered by a managed care organization but paid on a fee-for-service basis. For other events, including public clinics, expenditures were imputed using the PMM method where selected predictor variables were used to predict expenditures and match recipient and donor events.

An adjustment was also applied to some HC-reported expenditure data because an evaluation of matched HC/MPC data showed that respondents who reported that charges and payments were equal were often unaware that insurance payments for the care were 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. Similar to the other imputations, selected predictor variables were used to form groups of donor and recipient events for the imputation process.

Methodology for Flat Fee Expenditures

Most of the expenditures for medical care reported by MEPS participants are associated with single medical events. However, in some situations one charge covers multiple contacts between a medical provider and patient (e.g., obstetrician services, orthodontia). In these situations (generally called flat or global fees), total payments for the flat or global fee were included if the

initial service was provided in 2022. For example, all payments for an orthodontist's fee that covered multiple visits over three years were included if the initial visit occurred in 2022. However, if a visit in 2022 to an orthodontist was part of a flat fee in which the initial visit occurred in 2021, then none of the payments for the flat fee were included.

Certain flat fee bundle types reported by household respondents were identified as having a high likelihood of being simple events misidentified as bundle events. To address this, starting in 2021, HC-reported flat fee bundles were considered flat fees only if the bundle consisted only of dental events, or the bundle started in the previous year and had events in the current year.

Other HC-reported bundles were not allowed as flat fee bundles, and events in these bundles were treated as simple events. HC-reported bundles that included a mix of emergency room and hospitalization events were treated as linked events. All emergency room expenditures were combined with hospital inpatient expenditures. Provider-reported flat fees were processed in a similar way to prior years.

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). These types of events have no impact on totals for the person-level expenditure variables contained in this PUF.

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) - includes any deductible, coinsurance, and copayment amounts not covered by other sources, as well as payments for services and providers not covered by the person's insurance or other sources;

2. Medicare (MCR);

3. Medicaid (MCD);

4. Private Insurance (PRV);

5. Veterans' Administration/CHAMPVA, excluding TRICARE (VA);

6. TRICARE (TRI);

7. Other Federal Sources - includes Indian Health Service, military treatment facilities, and other care provided by the federal government (OFD);

8. Other State and Local Sources - includes community and neighborhood clinics, state and local health departments, and state programs other than Medicaid (STL);

9. Worker's Compensation (WCP);

10. Other Unclassified Sources - includes sources such as automobile, homeowner's, liability, and other miscellaneous or unknown sources (OSR).

Prior to 2019, for cases where reported insurance coverage and sources of payment appear inconsistent, the positive amount from a source inconsistent with reported insurance coverage was moved to one or both of the source categories Other Private and Other Public. Beginning in 2019, this step is removed and the apparent inconsistency between the payment sources and insurance coverage is allowed to remain-the amounts are not moved to Other Private and Other Public categories anymore. The two source of payment categories, Other Private and Other Public, are no longer available. Some inconsistencies arise from either misreporting of health insurance coverage or sources of payment. However, apparent inconsistencies may also 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 private. Apparent inconsistencies in 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 4. In addition, total expenditure variables (EXP in Appendix 4 key) based on the sum of the 10 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 missing total charges. The naming convention used for the charge variables (TCH) is also included in the key to the attached table in Appendix 4. The total charge variable across services (TOTTCH22) excludes prescribed medicines.

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 PUF. 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: Using MEPS Data for Trend Analysis).

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 2022 (OBTOTV22) as well as the number of such visits to physicians (OBDRV22) are contained in this PUF.

Expenditure variables associated with all medical provider visits and physician visits can be identified using the attached table in Appendix 4.

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 PUFs 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 2022 (OPTOTV22) as well as the number of outpatient department visits to physicians (OPDRV22) are contained in this PUF.

Expenditure variables (both facility and SBD) associated with all medical provider visits and physician visits can be identified using the attached table in Appendix 4.

Hospital Emergency Room Visits

The variable ERTOT22 represents a count of all emergency room visits reported for the survey year. Expenditure variables associated with ERTOT22 are identified in the attached table in Appendix 4. It should be noted that for emergency room visits that immediately preceded an inpatient stay, the facility expenditures associated with the emergency room visits are included in the inpatient expenditures. To avoid double counting, these emergency room visits resulted in $0 facility expenditures (but there still may be associated SBD expenses). However, these $0 emergency room visits are still counted as separate visits in the utilization variable ERTOT22.

Hospital Inpatient Stays

Two measures of total inpatient utilization are provided in this PUF:

- IPDIS22 is the total number of hospital discharges.
- IPNGTD22 is the total number of nights associated with these discharges. Please note that the variable IPNGTD22 is an imputed version of the IPNGT22 variable released earlier on HC 238. For the FY 2022 data, the number of imputed length of stay cases is 6.

Expenditure variables associated with hospital inpatient stays are identified in Appendix 4. As described in the previous section, payments associated with emergency room visits that immediately preceded an inpatient stay are included in inpatient expenditures. In addition, payments associated with healthy newborns are included in expenditures for the mother. Specifically, data used to construct the inpatient utilization and expenditure variables for newborns were edited to exclude stays where the newborn left the hospital on the same day as the mother. This edit was applied because discharges for infants without complications after birth were not consistently reported in the survey, and charges for newborns without complications are typically included in the mother's hospital bill. However, if the newborn was discharged at a later date than the mother was discharged, then the discharge was considered a separate stay for the newborn when constructing the utilization and expenditure variables.

Telehealth Events

The Telehealth (TH) module is asked of all events tagged as TH events by the respondent. As part of the TH module, a question is asked about whether the provider or facility is owned or operated by a hospital. Post-collection, the response to this question is used to reclassify all TH events as either office-based or outpatient. The TH module items were designed to align with the office-based or outpatient items to easily allow for reclassifying the event type.

Dental Care Visits

The total number of dental care visits variable (DVTOT22) includes visits to any person(s) for dental care including general dentists, dental hygienists, dental technicians, dental surgeons, orthodontists, endodontists, and periodontists.

Home Health Care

In contrast to other types of medical events where data were collected on a per visit basis, information on home health care utilization is collected in MEPS on a per month basis. Variables are provided that indicate the total number of days in 2022 where home health care was received from the following: from any type of paid or unpaid caregiver (HHTOTD22), from agencies, hospitals, or nursing homes (HHAGD22), from self-employed persons (HHINDD22), and from unpaid informal caregivers not living with the sample person (HHINFD22). 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 (including care provided by home health agencies, hospitals, and nursing homes) and care provided by self-employed persons. Appendix 4 identifies the home health care utilization and expenditure variables contained in the file.

Other Medical Equipment and Services

The new CAPI instrument collects round-specific Other Medical (OM) expenditures for all OM types (glasses/contact lenses, ambulance, disposable supplies, and long-term equipment). Please note for disposable supplies, the total charge and out-of-pocket expenditures are collected in a range format. The ranges were replaced with mean dollar amounts of respective expenditures reported in each range in prior years.

Prescribed Medicines

There are one total utilization variable (RXTOT22) and 11 expenditure variables included on the 2022 full-year PUF relating to prescribed medicines. These 11 expenditure variables include an annual total expenditure variable (RXEXP22) and 10 corresponding annual source of payment variables (RXSLF22, RXMCR22, RXMCD22, RXPRV22, RXVA22, RXTRI22, RXOFD22, RXSTL22, RXWCP22, and RXOSR22). The total utilization variable is a count of all fills and refills of prescribed medications obtained during 2022. The total expenditure variable sums all amounts paid out-of-pocket and by third party payers for each prescription obtained in 2022. No variables reflecting charges for prescription medicines are included because a large proportion of respondents to the MEPS pharmacy component survey did not provide charge data (see below).

Prescribed Medicines Data Collected

Data regarding prescription drugs were obtained through the household questionnaire and a pharmacy component survey. During each round of the MEPS HC, all respondents were asked to supply the name of any prescribed medication they or their family members purchased or otherwise obtained during that round. For each medication and in each round, the following information was collected: the number of times the prescription drug was obtained or purchased. In the round each medication was first reported, the following information was collected: the name(s) of any health conditions the medication was prescribed for, and the year and month which the person first used the medication. Respondents were also asked the names, addresses, and types of pharmacies that filled the household's prescriptions. Payment information was collected in the pharmacy component survey.

Pharmacy providers identified by the household were contacted by telephone in the pharmacy component if permission to release their pharmacy records was obtained in writing from the person with the prescription. The signed permission forms were provided to the various establishments prior to making any requests for information. Each establishment was informed of all persons participating in the survey that had prescriptions filled there in 2022 and a computerized printout containing information about these prescriptions was sought. For each medication listed, the following information was requested: national drug code (NDC), medication name, strength of medicine (amount and unit), quantity (package size and amount dispensed), and payments by source.

Information about diabetic supplies and equipment, such as syringes and test strips, were reported in the prescription drug section of MEPS, and use of and expenditures for these items are included in the person-level prescribed medicine variables.

Prescribed Medicines Data Editing and Imputation

The general approach to preparing the household prescription data for this PUF was to utilize the pharmacy component prescription data to assign expenditure values to the household drug

mentions. For those with PC 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 PUFs 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 datasets, fill in missing data, and correct outliers on the pharmacy PUF.

Drug price per unit outliers were analyzed on the pharmacy PUF by first identifying the national average drug acquisition cost (NADAC) per unit, wholesale acquisition unit cost (WAUC), and average wholesale unit price (AWUP) of the drug by linkage through the NDC to secondary databases. In general, prescription drug unit prices were deemed to be outliers by comparing unit prices reported in the pharmacy database to the NADAC per unit and were edited, as necessary. Prior to 2021, AWUP was the benchmark used to identify outlier prices for prescription medications in the PC. Beginning with the 2007 data, the rules used to identify outlier prices relative to the AWUP changed. New outlier thresholds were established based on the distribution of the ratio of retail unit prices relative to the AWUP in the 2006 MarketScan Outpatient Pharmaceutical Claims database.

Starting with the 2008 Prescribed Medicine PUF, improvements in the data editing changed the distribution of payments by source: (1) more spending on Medicare beneficiaries is by private insurance, rather than Medicare, and (2) there are less out-of-pocket payments and more Medicaid payments among Medicaid enrollees. Beginning with the 2009 data, another change affected the data for Medicare beneficiaries with both Part D and Medicaid coverage: reported Medicaid and other state and local program payments were no longer edited to be Medicare payments. Beginning with the 2017 data, changes in the price imputation procedures for specialty drugs with missing payment information resulted in higher total prescribed medicines expenditures.

Beginning with the 2021 data, the rules used to identify outlier prices for prescription medications in the PC were improved based on newer price benchmarks and analyses (Ding & Hill, 2022). New outlier thresholds were established based on the distribution of the ratio of retail unit prices relative to the NADAC per unit, collected for the Centers for Medicare and Medicaid Services. When the NADAC per unit is not available, then the WAUC is used, and if neither are available, the AWUP is used. AWUP and WAUC are list prices, not averages, so the NADAC per unit better reflects the prices paid for drugs, and as a result the prices paid for generics are lower in the 2020 data, compared with the 2019 data, and fewer generic fills have third party payments.

For Round 3 and Round 7, which span two years, drug mentions in those rounds were allocated between the years based on the following information: 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 analysts since they are common analytic groupings of the payment sources. The first (***PTR22 series) is the sum of the private and Tricare payer categories (i.e., ***PTR22=***PRV22+***TRI22). The second (***OTH22 series) is the sum of the least common source of payment categories including: 1) other federal (***OFD22), 2) state and local (***STL22), and 3) other sources (***OSR22). Since the ***PTR22 and ***OTH22 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

Variables were added and removed from the PUF due to changes in the questions asked in 2022 relative to prior years. The MEPS HC questionnaires can be found on the MEPS website.

The following variables were added to or deleted from the 2022 Consolidated PUF.

Added

- BOOSTERSHOT31
- BOOSTERSHOT42
- COVAXEVR31
- COVAXEVR42
- COVAXEVR53
- COVAXNEW53
- COVID12MO53
- COVIDEVER53
- COVMNTHX53
- COVREDABIL53
- COVSYMNOW53
- COVYRDX53
- DATAYEAR
- INTVTYPE31
- INTVTYPE42
- INTVTYPE53
- LCEVER53
- MCRPHDyy

Added (included in alternating years only, will not be included in 2023)

- ADAGE42
- ADASKALC42
- ADBLDS42
- ADBMI42
- ADBNDN42
- ADBPCK42
- ADBRST42
- ADBRTC42
- ADCHLC42
- ADCLNS42
- ADCOLN42
- ADCOMPAN42
- ADDAYEXER42
- ADDEBT42
- ADDSCU42
- ADFLST42
- ADISOL42
- ADLATERENT42

- ADLATEUTIL42
- ADLEFTOUT42
- ADMDVT42
- ADMINSEXER42
- ADMISSCCLN42
- ADMMGR42
- ADMNTRT42
- ADMOOD42
- ADNOAP42
- ADNUMDRK42
- ADOFTALC42
- ADOFTB42
- ADOSTP42
- ADPAP42
- ADPAPG42
- ADPNEU42
- ADPROBTRT42
- ADPROS42
- ADPSAG42
- ADQTHP42
- ADQTMD42
- ADQTTB42
- ADRNK442_M20
- ADRNK542_M20
- ADSEX42
- ADSGMD42
- ADSHNG42
- ADSLEEP42
- ADSTAL42
- ADTBAC42
- ADTRTEXP42
- ADUNABTRT42
- ADUNEXPEXP42
- ADUTRM42
- ADWGHD42
- ADWTAD42
- BOOST42
- CHBMIX42
- EATHLT42
- HELMET42
- LAPBLT42
- MESHGT42
- MESVIS42
- MESWGT42
- NOSMOK42
- PHYSCL42
- SAFEST42
- TIMALN42
- WHNBST42
- WHNEAT42
- WHNHEL42
- WHNHGT42
- WHNLAP42
- WHNPHY42
- WHNSAF42
- WHNSMK42
- WHNWGT42

Deleted

- ACTLIM53
- ADLHLP53
- AIDHLP53
- ASACUT53
- ASATAK53
- ASDALY53
- ASEVFL53
- ASMRCN53
- ASPKFL53
- ASPREV53
- ASSTIL53
- ASTHEP53

- ASWNFL53
- BENDIF53
- BOOSTERSHOT53
- CHBRON53
- COGLIM53
- CVDLAYCA31
- CVDLAYCA42
- CVDLAYCA53
- CVDLAYDN31
- CVDLAYDN42
- CVDLAYDN53
- CVDLAYPM31
- CVDLAYPM42
- CVDLAYPM53
- CVVACCINE42
- CVVACCINE53
- FNGRDF53
- HSELIM53
- ADLHP53
- JTPAIN53_M18
- LFTDIF53
- MCRPB31
- MCRPB42
- MCRPByy
- MILDIF53
- RCHDIF53
- SCHLIM53
- SDAFRDHOME
- SDCHURCH
- SDCLUBORG
- SDCMPM
- SDCMPY
- SDCOMM
- SDCOMPAN
- SDDAYEXER
- SDDEBT
- SDDSCRMDR
- SDDSCRMHS
- SDDSCRMJOB
- SDDSCRMPOL
- SDDSCRMPUB
- SDDSCRMSTR
- SDDSCRMWRK
- SDENICPROD
- SDFAMILY
- SDFRCSXCH
- SDFRIENDS
- SDGETTGT
- SDHLTHFOOD
- SDHMALC
- SDHMBEAT
- SDHMDEPR
- SDHMDIV
- SDHMDRG
- SDHMJAIL
- SDHOME
- SDHURTCHLD
- SDINSCHLD
- SDINSULT
- SDISOL
- SDLATERENT
- SDLATEUTIL
- SDLEFTOUT
- SDLIFE
- SDMEDCARE
- SDMINSEXER
- SDMISSCCLN
- SDNOFOOD
- SDNOTRANS
- SDOHELIG
- SDOHWT22F
- SDPARKS

- SDPAYBASICS
- SDPHYSHURT
- SDPROBCOOK
- SDPROBHEAT
- SDPROBLEAD
- SDPROBLEAKS
- SDPROBMOLD
- SDPROBNONE
- SDPROBPEST
- SDPROBSMKDET
- SDPROX
- SDPUBTRANS
- SDSCREAM
- SDSFCRIME
- SDSHUTUTIL
- SDSTRESS
- SDTCHADLT
- SDTCHCHLD
- SDTHRHARM
- SDTLKPHN
- SDUNEXPEXP
- SDWRRYFD
- SOCLIM53
- STNDIF53
- STPDIF53
- UNABLE53
- WLKDIF53
- WLKLIM53
- WRKLIM53

Deleted (included in alternating years only, will be included in 2023):

- ADAPPT42
- ADEXPL42
- ADEZUN42
- ADFFRM42
- ADFHLP42
- ADHECR42
- ADILCR42
- ADILWW42
- ADINSA42
- ADINSB42
- ADINST42
- ADLIST42
- ADNSMK42
- ADOVER42
- ADPRTM42
- ADRESP42
- ADRISK42
- ADRTCR42
- ADRTWW42
- ADSMOK42
- ADSNSP42
- ADSPCL42
- ADTLHW42
- ADUPRO42
- CHAPPT42
- CHEXPL42
- CHEYRE42_M18
- CHHECR42
- CHILCR42
- CHILWW42
- CHLIST42
- CHPRTM42
- CHRESP42
- CHRTCR42
- CHRTWW42
- CHSPEC42_M18
- DADPRO42
- GETTRB42
- HAVFUN42

- HOMEBH42
- KIDPRO42
- MOMPRO42
- NERVAF42
- SCHLBH42
- SCHPRO42
- SIBPRO42
- SPRPRO42
- UNHAP42

2.6 Linking to Other Files

2.6.1 Event and Condition Files

Records in this PUF can be linked to 2022 MEPS HC event and conditions PUFs by the sample person identifier (DUPERSID). The Panel 26 cases on this PUF (PANEL=26) and the Panel 24 cases on this PUF (PANEL=24) can also be linked back to the 2021 MEPS HC event and Medical Conditions PUFs. In addition, the Panel 24 cases can be linked back to the 2020 and 2019 MEPS HC event and Medical Conditions PUFs.

2.6.2 National Health Interview Survey

The set of households selected for MEPS is a subsample of those participating in the 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 all three panels (Panel 24, Panel 26, and Panel 27), the longitudinal file comprises MEPS survey data obtained all rounds of the panel and can be used to analyze changes over the entire length of the panel. Variables in this PUF 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 Consolidated PUFs from the years covered by that panel.

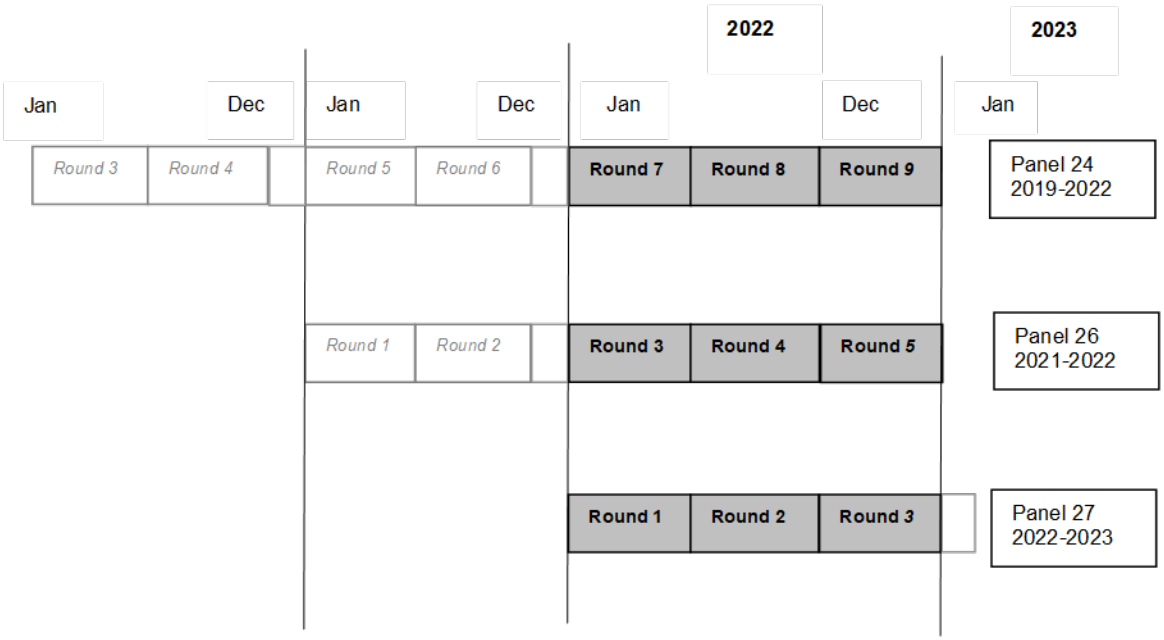
For more details or to download the data files, please see Longitudinal Weight Files at the AHRQ website.

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 U.S. civilian, noninstitutionalized population and some subpopulations of interest. The data in this PUF pertain to calendar year 2022.

Modifications to the MEPS sample design in 2020 and 2021 because of the COVID-19 pandemic continued into 2022 in two forms. First, AHRQ decided to collect data for Panel 24 for nine rounds so that this panel ultimately contributes to MEPS estimates for 4 calendar years. In so doing, the number of respondents to the MEPS is kept at a relatively high level despite potential decline in response rates resulting from the pandemic. Thus, the data in this PUF were collected in Rounds 1, 2, and 3 for Panel 27; Rounds 3, 4, and 5 for Panel 26; and Rounds 7, 8, and 9 for Panel 24. (Note that Round 3 for a MEPS panel is designed to overlap two calendar years, as illustrated below.)



Second, given the issues in the NHIS discussed below in Section 3.1.1, the MEPS Panel 26 sample was selected from responding households in all four NHIS Panels in Quarter 1 of 2020 and from NHIS Panels 1 and 3 of Quarter 3 of 2020, as opposed to the usual NHIS Panels 1 and 3 of Quarters 1, 2, and 3. As an adjunct to this modification, AHRQ also took advantage of and oversampled from the additional primary sampling units (PSUs, i.e., sampled localities) available from NHIS Panels 2 and 4 and appearing in the MEPS sample for the first time. State-level estimation is of interest to MEPS users, and the added PSUs would increase the precision of these estimates. The estimates that would be expected to benefit the most from the added PSUs were for the "middle-sized" states. The largest states already had large samples, while precision for the smallest states would remain low.

A sample design feature shared by Panel 24 and Panel 27 involves 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 distinguished between households characterized as "complete" respondents to the NHIS and those characterized as "partial completes." Starting with Panel 25, the "Other, Partial" domain also includes NHIS households that have provided only a roster of household members.

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 reduced survey costs because the partials tend to have higher costs in gaining survey participation, but it has also increased sample variability stemming from the resulting increased variability in sampling rates. For detailed information on the MEPS sample design, see Chowdhury, et al. (2019). This feature was not particularly emphasized in Panel 26 because of the oversampling of "middle-sized" states discussed in the paragraph above.

3.1.1 MEPS-Links to the National Health Interview Survey

Each responding household in the 2022 MEPS dataset is associated with one of the three separate and overlapping panels: Panel 24, Panel 26, and Panel 27. These panels consist of subsamples of households that participated in the 2018, 2020, and 2021 NHIS, respectively. The 2018 Population Characteristics PUF was the first one in which all MEPS panels reflect the new NHIS sample design first implemented in 2016.

Whenever there is a change in sample or study design, it is good survey practice to assess whether such a change could affect the sample estimates. For example, increased coverage of the target populations with an updated sample design based on data from the latest Census can improve the accuracy of the sample estimates. MEPS estimates have been and will continue to be evaluated to determine whether an important change in the survey estimates might be associated with a change in design. Background on the two NHIS sample redesigns of interest here is discussed directly below, followed by a discussion of potential effects on MEPS estimates stemming from data quality concerns of the NHIS during the pandemic.

Background on the NHIS Sample Redesign Implemented in 2016

Beginning in 2016, NCHS implemented another new sample design for the NHIS, which differed substantially from the prior design. Each of the 50 states as well as the District of Columbia served as explicit strata for sample selection purposes with the intent of providing the capability of state-level NHIS estimates obtained through pooling across years if the sample size for a single year would result in unreliable estimates. In contrast to the previous design, households in areas with relatively high concentrations of minorities were not oversampled. PSUs are still formed at the county level. However, within the sampled PSUs, the clusters of addresses that have been sampled for each year of the NHIS are not in the form of segments (consisting of one or more Census blocks) as they were in the previous NHIS designs. For the 2016 NHIS, each such cluster consisted of roughly 25 subclusters selected by using random systematic sampling across the full geography of the PSU. Each subcluster is made up of, generally, 4 nearby addresses or roughly 100 addresses in all. The number of subclusters per cluster can vary from year to year.

Another major change is that the list of DUs (addresses) was obtained from the Computerized Delivery Sequence File (CDSF) of the U.S. Postal Service, and its approach differs from the standard listing process for area probability samples used in the pre-2016 designs. While addresses in the CDSF provide very high coverage of most areas of the country, coverage in rural areas can be somewhat lower. For rural areas in which this was a concern, address lists

were created through the conventional listing process. NCHS describes the NHIS sample design on the NHIS website.

Panel 24 Household Sample Size

A subsample of 9,700 households was randomly selected for Panel 24 from the households responding to the 2018 NHIS, of which 9,684 were fielded for MEPS after the elimination of any units characterized as ineligible for fielding.

Panel 26 Household Sample Size

A subsample of 9,510 households was randomly selected for MEPS Panel 26 from the households responding to the 2020 NHIS, of which all 9,510 were fielded for MEPS after the elimination of any units characterized as ineligible for fielding.

Panel 27 Household Sample Size

A subsample of 9,700 households was randomly selected for Panel 27 from the households responding to the 2021 NHIS, of which all 9,694 were fielded for MEPS after the elimination of any units characterized as ineligible for fielding.

Implications of the New Design on MEPS Estimates

Under the new design, the MEPS sampled households reflect the clustering of the NHIS as described above but to a somewhat lesser degree because of the sampling from NHIS respondents. Because the NHIS sample is spread in small subclusters across the PSU, and because the sampling is limited to NHIS respondents only, the impact of clustering on the variance of MEPS estimates may be more limited. Also, in contrast to the previous design, the NHIS sampling rates at the address level currently do not vary as a function of the oversampling of minorities (although this could change in subsequent years). On balance, the overall variation in sampling rates/weights at the national level for the NHIS is expected to be lower, with a corresponding positive impact on the precision of MEPS estimates. However, with a reduction in the sample sizes of minority households, the precision levels of MEPS estimates for Asians, Blacks, and Hispanics may be reduced to some extent.

Impact on the MEPS Sample Associated with Data Quality Concerns for the 2020 NHIS

Households fielded for Round 1 of the MEPS in each year have been selected as a subsample from among the NHIS responding households from the prior year (e.g., Panel 25 of the MEPS was selected from NHIS respondents in 2019). It is important to note here that the NHIS households eligible for use in the MEPS are restricted to NHIS Panels 1 and 3 of the first three quarters of the NHIS, as the fourth-quarter households cannot be made available in time for the MEPS data collection early in the next calendar year, and households in NHIS Panels 2 and 4 of each quarter are reserved by NCHS for other use.

The onset of the pandemic took place in mid-March of 2020, when the NHIS data collection for Quarter 1 of 2020 was virtually completed and that of Quarter 2 was about to begin. The NHIS rapidly shifted from in-person to telephone interviewing to gather data from Quarter 2 of 2020. While NCHS was able to make this transition, the agency's assessments at the time showed a much lower response rate than is typically seen during Quarter 2 and the quality of the Quarter 2 data was of particular concern. NCHS thus modified the 2020 NHIS sample design for Quarters 3 and 4. A randomly selected subset of the sampled housing units originally selected for fielding in Quarters 3 and 4 of 2020 was removed from the sample to be fielded. The reduced sample for Quarters 3 and 4 was then enhanced by randomly selecting responding households from the 2019 NHIS for re-interviewing in 2020.

Given the issues and modification of the 2020 NHIS, two key factors were expected to raise concerns for the MEPS plans for fielding a 2021 sample. First, 2020 NHIS data quality and sample size issues were a concern for Quarter 2 of that year. Second, roughly half of the NHIS sampled households for Quarter 3 would also have been respondents in the 2019 NHIS, so many of the Quarter 3 NHIS respondents were expected to have already been sampled and fielded for Panel 25 of the MEPS. It thus became clear that the 2021 sample design for Panel 26 of the MEPS would need to be modified.

AHRQ proposed, and NCHS approved, for responding households in NHIS Panels 2 and 4 from Quarter 1 of 2020 to be made available for the MEPS Panel 26 sample selection. Virtually all of these households were interviewed in person before the major onset of the pandemic, so the Quarter 1 response rates for all four NHIS panels were consistent with prior years, and the data quality issues associated with the pandemic could be avoided. Thus, for MEPS Panel 26, the NHIS responding households subsampled for the MEPS were selected from among all NHIS responding households in Quarter 1 and from those responding in Quarter 3 that were not originally sampled for the 2019 NHIS.

3.1.2 Discussion of Pandemic Effects on Quality of MEPS Data

The challenges associated with MEPS data collection in 2020 after the onset of the pandemic continued through 2021 and possibly into 2022. The major modifications to the standard MEPS study design remained in effect, permitting data to be collected safely but with accompanying concerns related to the quality of the data obtained. The suggestion made in the documentation for the FY 2020 and FY 2021 MEPS Consolidated PUF data still holds. Researchers are counseled to take care in the interpretation of estimates based on data collected from these three calendar years. This includes the comparison of such estimates to those of other years and corresponding trend analyses.

Section 3.1 of the documentation for the 2020 Consolidated PUF provides a general discussion of the impact of the pandemic on several other major in-person federal surveys as well as on MEPS. In addition, it offers a detailed look at how MEPS was modified to permit safe data collection and the development of useful estimates at a time when the way the U.S. health care system functioned underwent many transformations to meet population needs. Three sources of potential bias were identified for MEPS for FY 2020: (1) long recall period for Round 6 of Panel 23, (2) switching from in-person to telephone interviewing which likely had a larger impact on

Panel 25, and (3) the impact of CPS bias on the MEPS weights. Statistically significant differences were found between panels for FY 2020. Those findings are discussed in MEPS HC 224.

Concerns of potential bias for FY 2021 and between panel differences are discussed in Section 3.1 of the documentation for the 2021 Consolidated PUF. Additional analysis has also uncovered a concerning trend on event reporting in MEPS following the pandemic. While reporting of other event types has rebounded from the dip experienced in 2020, inpatient (IP) and emergency room (ER) utilization reports collected in FY 2021 did not rebound as much as key benchmarks, even though these are the most salient event types. Modifications made to the MEPS sample design discussed in the 2022 Population Characteristics PUF may have partially contributed to the concerning trend.

Concerns for potential bias for FY 2022 include:

- The impact of the pandemic on NHIS data collection and the resulting Panel 26 MEPS sample (Section 3.1.1 of the 2022 Population Characteristics PUF). NHIS response rates in the pandemic and shifts in the resulting MEPS sample may have increased the likelihood that the MEPS Panel 26 respondents differed in composition compared to previous years.

- The extension of panels (beginning of Section 3.1 of the 2022 Population Characteristics PUF). While there is a benefit in boosting the MEPS sample size by keeping pre-pandemic panels active for an additional two years to counter reduced response rates, there are two risks with this approach: attrition in these panels beyond what is experienced in two years, which may lead households with more serious health issues to leave MEPS, and a conditioning effect whereby respondents learn over time that reporting events results in a longer interview.

- Significantly lower response rates (Section 3.2 of the 2022 Population Characteristics PUF) that could differentially exclude households more likely to experience IP stays. The demographic shifts on MEPS between 2019 and 2021 suggest a more educated, higher-income, older MEPS.

Analyses undertaken to examine the quality of the MEPS FY 2022 data compared health care utilization for the MEPS target population between the panels fielded. These comparisons were undertaken for the full sample and the three age groups of 0-17, 18-64, and 65+.

These comparisons found no major differences in IP or ER visits between the three panels. Slight differences were observed in dental visits and outpatient visits. For dental visits, Panel 26 reported at a higher rate than Panel 24 or Panel 27 in the age range 18-64. For outpatient visits, Panel 24 reported at a lower rate than Panel 26 and Panel 27 in the age range 18-64.

The various actions taken in the development of the person-level weights for the MEPS FY 2022 data were designed to limit the potential for bias in the data due to changes in data collection and response bias. However, evaluations of MEPS data quality in 2021 and 2022 suggest that users of the MEPS FY 2022 PUFs should continue to exercise caution when interpreting estimates and

assessing analyses based on these data, as well as in comparing 2022 estimates to those of prior years.

3.1.3 Sample Weights and Variance Estimation

Weight variables in the 2022 Consolidated PUF can be used to generate estimates of totals, means, percentages, and rates for persons and families in the U.S. civilian noninstitutionalized population. The person-level weight variable PERWT22F provided in this PUF supersedes the corresponding person-level weight variable provided in the 2022 Full Year Population Characteristic PUF (HC-238). Procedures and considerations associated with the construction and interpretation of person and family-level estimates using these and other variables are discussed in this section. NCHS has modified the NHIS sample design since 2016, and that has affected the MEPS variance structure. This is discussed in detail in Section 3.9.1.

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. This was the case for MEPS Panel 24, Panel 26, and Panel 27.

Because the MEPS subsampling has to be done soon after the 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 adjustment actually increases the overall MEPS response rate slightly, since the percentage of NHIS households designated for use in the MEPS (all those characterized initially as respondents from the NHIS panels and quarters used by the MEPS for a given year) is slightly larger than the final NHIS household-level response rate, and some NHIS nonresponding households do participate in the MEPS. However, as a result, these NHIS nonrespondents who are MEPS participants have no NHIS data that can be linked with MEPS data. Once the MEPS sample is selected from among the NHIS households, characterized as NHIS respondents, RUs consisting entirely of military personnel are deleted from the sample. Military personnel not living in the same RU as civilians are ineligible for the MEPS. After these exclusions, all RUs associated with households, selected from among those identified as NHIS responding households, are then fielded in the first round of the MEPS.

Table 19 shows in Rows A, B, and C the three informational components just discussed. Row A indicates the percentage of NHIS households eligible for the MEPS. Row B indicates the number of NHIS households sampled for the MEPS. Row C indicates the number of sampled households actually fielded for the MEPS (after the military members discussed above were dropped and a small number of NHIS households were sampled in error). Note that all response rates discussed here are unweighted.

Table 19

Sample Size and Unweighted Response Rates for the 2022 Consolidated PUF (Panel 27 Rounds 1-3/Panel 26 Rounds 3-5/Panel 24 Rounds 7-9)

Components	Panel 24	Panel 26	Panel 27	2022 Combined
A. Percentage of NHIS households designated for use in the MEPS (those initially characterized as responding) [a]	64.3%	60.6%	59.4%	-
B. Number of households sampled from the NHIS	9,700	9,510	9,700	-
C. Number of households sampled from the NHIS and fielded for the MEPS	9,684	9,510	9,694	-
D. Round 1 - Number of RUs eligible for interviewing	10,090	9,795	10,007	-
E. Round 1 - Number of RUs with completed interviews	7,186	5,882	6,158	-
F. Round 2 - Number of RUs eligible for interviewing	7,323	6,045	6,285	-
G. Round 2 - Number of RUs with completed interviews	6,777	4,799	5,368	-
H. Round 3 - Number of RUs eligible for interviewing	6,890	4,876	5,429	-
I. Round 3 - Number of RUs with completed interviews	6,289	4,103	4,818	-
J. Round 4 - Number of RUs eligible for interviewing	6,371	4,159	-	-
K. Round 4 - Number of RUs with completed interviews	5,446	3,805	-	-
L. Round 5 - Number of RUs eligible for interviewing	5,495	3,809	-	-
M. Round 5 - Number of RUs with completed interviews	4,770	2,541	-	-
N. Round 6 - Number of RUs eligible for interviewing	4,808	-	-	-
O. Round 6 - Number of RUs with completed interviews	3,959	-	-	-
P. Round 7 - Number of RUs eligible for interviewing	4,002	-	-	-

Components	Panel 24	Panel 26	Panel 27	2022 Combined
Q. Round 7 - Number of RUs with completed interviews	3,500	-	-	-
R. Round 8 - Number of RUs eligible for interviewing	3,519	-	-	-
S. Round 8 - Number of RUs with completed interviews	3,121	-	-	-
T. Round 9 - Number of RUs eligible for interviewing	3,156	-	-	-
U. Round 9 - Number of RUs with completed interviews	3,015	-	-	-
Overall annual unweighted response rates P27: A x (E/D) x (G/F) x (I/H) P26: A x (E/D) x (G/F) x (I/H) x (K/J) x (M/L) P24: A x (E/D) x (G/F) x (I/H) x (K/J) x (M/L) x (O/N) x (Q/P) x (S/R) x (U/T) Combined: 0.22 x P24 + 0.29 x P26 + 0.49 x P27	17.5% (Panel 24 through Round 9)	20.7% (Panel 26 through Round 5)	27.7% (Panel 27 through Round 3)	23.4%

[a]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

To produce annual health care estimates for calendar year 2022 based on the full MEPS sample, data from Panel 24, Panel 26, and Panel 27 were combined. More specifically, full calendar year 2022 data collected in Rounds 7 - 9 for Panel 24 and Rounds 3 - 5 for Panel 26 were pooled with data from the first three rounds of data collection for the Panel 27 sample (the general approach is described below).

As mentioned above, all response rates discussed in this section are unweighted. To understand how the MEPS response rates were calculated, some features related to 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 United States. Thus, the number of RUs eligible for an interview in a given round is determined after data collection is fully completed. The ratio of the number of RUs completing the 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 the MEPS in that round and is thus "conditioned" on prior participation rather than on representing the overall

response rate through that round. For example, in Table 19, for Panel 27 Round 2, the ratio of 5,368 (Row G) to 6,285 (Row F) multiplied by 100 represents the response rate for the round (85.4 percent when computed), conditioned on the set of RUs characterized as eligible for the MEPS for that round. Taking the product of the percentage of the NHIS sample eligible for the 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 round specified.

The overall unweighted response rate for 2022 for the combined sample after pooling the respondents across the three panels was obtained by computing the product of the compositing factor associated with each panel (discussed in Section 3.3.6 which describes the development of the final weight for the FY 2022 Consolidated PUF) and the corresponding overall panel response rate and then summing the three products. Panel 27 represents about 48.8 percent of the combined sample size, Panel 26 represents about 29.3 percent of the combined sample size, and Panel 24 represents the remaining 21.9 percent.

Thus, the combined response rate of 23.4 percent was computed as 0.22 times 17.5 (17.5 is the overall Panel 24 response rate through Round 9) plus 0.29 times 20.7 (20.7 is the overall Panel 26 response rate through Round 5) plus 0.49 times 27.7 (27.7 is the overall Panel 27 response rate through Round 3.)

3.2.2 Panel 27 Response Rates

A total of 9,694 households were fielded in 2022 for Panel 27 Round 1 (as indicated in Row C of Table 19), which is a randomly selected subsample of the households responding to the 2021 NHIS.

Table 19 shows the number of RUs eligible for interviewing in each round of Panel 27 as well as the number of RUs completing the 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 59.4 (the percentage of the NHIS sampled households characterized as responding when the household sample was selected for the MEPS) yields an overall response rate of 27.7 percent for Panel 27 through Round 3.

3.2.3 Panel 26 Response Rates

A total of 9,510 households were fielded in 2021 for Panel 26 (as indicated in Row C of Table 19), a randomly selected subsample of the households responding to the 2020 NHIS.

Table 19 shows the number of RUs eligible for interviewing and the number completing the interview for all five rounds of Panel 26 The overall response rate for Panel 26 was computed in a similar fashion to that of Panel 27, but it covered all five rounds of interviewing as well as representing the percentage of the NHIS sampled households eligible for the MEPS. The overall response rate for Panel 26 through Round 5 is 20.7 percent.

3.2.4 Panel 24 Response Rates

A total of 9,684 households were fielded in 2019 for MEPS Panel 24 (as indicated in Row C of Table 19), a randomly selected subsample of the households responding to the 2018 NHIS.

Table 19 shows the number of RUs eligible for interviewing and the number completing the interview for all nine rounds of Panel 24. The overall response rate for Panel 24 was computed in a similar fashion to that of Panel 26, but it covered all nine rounds of MEPS interviewing as well as the factor representing the percentage of NHIS sampled households eligible for the MEPS. The overall response rate for Panel 24 through Round 9 is 17.5 percent.

3.2.5 Annual (Combined Panel) Response Rate

A combined panel response rate for this dataset was obtained by taking a weighted average of the panel-specific response rates. The Panel 24 response rate was weighted by a factor of 0.22, the Panel 26 response rate was weighted by a factor of 0.29, and the Panel 27 response rate was weighted by a factor of 0.49, reflecting approximately the distribution of the overall sample across the three panels. The resulting combined response rate for the combined panels was computed as (0.22 x 17.2) + (0.29 x 20.7) + (0.49 x 20.7), or 23.4 percent (as shown in Table 19).

3.2.6 Oversampling

Oversampling is a feature of the MEPS sample design that helps to increase the precision of estimates for some subgroups of interest. This section discusses the concept of oversampling and how it relates to the MEPS.

For a sample in which 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, 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 are 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 (before 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 size 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 the subgroups not

oversampled will be reduced to some extent compared with the precision one could have achieved if the same overall sample size were selected without any oversampling.

The NHIS no longer oversamples households with members who are Asian, Black, or Hispanic. Nevertheless, these minority groups are still of analytic interest for the MEPS. As a result, for Panels 24 and 27, 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 24, the corresponding sampling rates for the Other, complete domain and the Other, partial complete domain were about 79 percent and 50 percent, respectively. For Panel 27, the corresponding sampling rates for the Other, complete domain and the Other, partial complete domain were a little over 80 percent and slightly under 80 percent, respectively.

Within the "noncertainty" strata (the "Other" domains) for both Panel 24 and Panel 27, responding NHIS households were selected for the MEPS by using a systematic sample selection procedure from among the eligible households. Households were selected with probability proportionate to size (PPS), where the size measure was the inverse of the NHIS initial probability of selection. The purpose of PPS sampling was to help reduce the variability in the MEPS weights incurred as a result of the variability of the NHIS sampling rates.

As discussed in Section 3.1, the Panel 26 sample focused on oversampling the "middle-sized" states rather than Asians, Blacks, and Hispanics.

A note with respect to the interpretation of the MEPS response rates, which are unweighted. Sample allocations across sample domains typically change from one MEPS panel to another. The sample domains may also vary by panel, as is the case for Panel 26 versus Panel 24 and Panel 27. When one compares unweighted measures (e.g., response rates) between panels and years, one should take into account such differences. Suppose, for example, that members of one domain have a lower propensity to respond than those of another domain. If the former 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.

3.3 Background on Person-Level Estimation Using this MEPS Public Use Release

3.3.1 Requirements to Receive a Person-Level Weight

There is a single full year person-level weight (PERWT22F) assigned to each record for each Key, in-scope person who responded to MEPS for the full period of time that they were in scope during 2022. A Key person is 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 in scope whenever they are 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 PERWT22F was developed in several stages. Initially, weights were developed for the Full Year 2022 Population Characteristics PUF, released a number of months earlier. Preliminary person-level weights for Panel 24, Panel 26, and Panel 27 were first created separately. The weighting process for each panel included adjustments for nonresponse over time and a calibration to the same independent population figures. Only those who were in scope on December 31, 2022, were raked to Current Population Survey (CPS) control totals.

The calibration was undertaken for each panel separately by raking the nonresponse adjusted weights to CPS population estimates based on six variables. The six variables used in the establishment of the person-level control figures were: education of the reference person (no degree, high school/GED only or some college, bachelor's degree or higher); census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic; Black, non-Hispanic; Asian, non-Hispanic; and other); sex; and age (0-18, 19-25, 26-34, 35-44, 45-64, and 65 or older). (Note, however, that for confidentiality reasons, the MSA status variables are no longer released for public use.)

A weight for the full sample was created by applying compositing factors to the weights associated with each panel where the factors are all greater than 0 and sum to 1. The compositing factors for these weights reflect the relative "effective sample size" of each panel, representing the inverse of the relative amount of variability in the individual panel estimates attributable to the variability of the sample weights and sample size. Using these factors helps limit the variability of the estimates obtained using the composited weights across the three samples pooled.

The effective sample sizes were computed for each panel by dividing the sample size by the design effect associated with the variability of the nonresponse-adjusted person weights in that panel (i.e., before raking the weights of a panel) across the person-level respondents in the panel. The relative effective sample size was then computed by taking the ratio of the effective sample size for a panel to the sum of the effective sample sizes across the three panels.

Using the relative nominal sample sizes (the proportions that the number of respondents in a panel represent among the total number of respondents in the three panels) as compositing factors has worked well for MEPS in previous years. However, using the relative effective sample size for 2022 data increases the effectiveness of the compositing factors to limit variance to some extent in a year where the panel weights are more variable due to the higher than usual nonresponse. This approach is planned for MEPS in future years as well.

In terms of the actual details, the individual panel weights from Panel 24 were multiplied by the factor .22, each weight from Panel 26 by the factor .29, and each weight from Panel 27 by the factor .49. Once the compositing factors were applied to produce a full-sample weight, a final raking was undertaken, based on the same six variables used in the raking of the individual panel weights. This weight served as the person-level weight appearing on the Full Year 2022 Population Characteristics PUF.

The standard approach for establishing the 2022 Consolidated PUF weight from the 2022 Population Characteristics PUF is as follows. When MEPS poverty status information derived from MEPS income variables becomes available, a final raking is undertaken. The full sample weight appearing on the Population Characteristics PUF for a given year is re-raked, replacing educational attainment with poverty status while retaining the other five raking variables previously indicated. Specifically, control totals based on CPS estimates of poverty status (five categories: less than 100% of poverty, 100% to less than 125% of poverty, 125% to less than 200% of poverty, 200% to less than 400% of poverty, greater than or equal to 400% of poverty) as well as age, race/ethnicity, sex, region, and MSA status are used to calibrate weights. Only those in scope on December 31, 2022 were included in the raking process.

3.3.3 MEPS Panel 24 Weight Development Process

The person-level weight for MEPS Panel 24 was developed using the 2021 full-year weight for an individual as the initially assigned weight for 2021 survey participants present in 2022. For Key, in-scope members who joined an RU some time in 2022 after being out of scope in 2021, the initially assigned person-level weight was the corresponding 2021 family weight. The weighting process included an adjustment for person-level nonresponse over Rounds 8 and 9 as well as raking to population control figures for December 2022 for Key, responding persons in scope on December 31, 2022. These control totals were derived by scaling back the population distribution obtained from the March 2023 CPS to reflect the December 31, 2022 estimated population total (estimated based on Census projections for January 1, 2023). Variables used for person-level raking included: education of the reference person (no degree; high school/GED only or some college; bachelor's or a higher degree); 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 (0-18, 19-25, 26-34, 35-44, 45-64, and 65 or older). (Note, however, that for confidentiality reasons, the MSA status variables are no longer released for public use.) The final weight for Key, responding persons who were not in scope on December 31, 2022 but were in scope earlier in the year was the nonresponse-adjusted person weight without raking.

The 2021 full-year weight used as the base weight for Panel 24 was derived from the 2019 MEPS Round 1 weight and reflected adjustment for nonresponse over the remaining data collection rounds in 2019, 2020, and 2021 as well as raking to the December 2019, December 2020, and December 2021 population control figures.

3.3.4 MEPS Panel 26 Weight Development Process

The person-level weight for MEPS Panel 26 was developed using the 2021 full-year weight for an individual as a "base" weight for survey participants present in 2022.

For Key, in-scope members who joined an RU sometime in 2022 after being out of scope in 2021, the initially assigned person-level weight was the corresponding 2021 family weight. The weighting process also included an adjustment for person-level nonresponse over Rounds 4 and 5 as well as raking to the same population control figures for December 2022 used for the Panel 24 weight for Key, responding persons in scope on December 31, 2022. The same six variables

employed for Panel 24 raking (education level, Census region, MSA status, race/ethnicity, sex, and age) were also used for Panel 26 raking. Similar to Panel 24, the Panel 26 final weight for Key, responding persons not in scope on December 31, 2022 but in scope earlier in the year was the nonresponse-adjusted person weight without raking.

Note that the 2021 full-year weight that was used as the base weight for Panel 26 was derived using the 2021 MEPS Round 1 weight and reflected adjustment for nonresponse over the remaining data collection rounds in 2021 as well as raking to the December 2021 population control figures.

3.3.5 MEPS Panel 27 Weight Development Process

The person-level weight for MEPS Panel 27 was developed using the 2022 MEPS Round 1 person-level weight as a "base" weight. The Round 1 weights incorporated the following components: the original household probability of selection for the NHIS adjusted to reflect the NHIS subsample reserved for MEPS, an adjustment for NHIS nonresponse, the probability of selection for MEPS from the NHIS, an adjustment for nonresponse at the dwelling unit level for Round 1, and raking to control figures at the person level obtained from the March CPS of 2022. For Key, in-scope members who joined an RU after Round 1, the Round 1 DU weight served as a "base" weight.

The weighting process also included an adjustment for nonresponse over the remaining data collection rounds in 2022 as well as raking to the same population control figures for December 2022 used for the Panel 24 and Panel 26 weights for Key, responding persons in scope on December 31, 2022. The same six variables used for Panel 24 and Panel 26 raking (education level of the reference person, Census region, MSA status, race/ethnicity, sex, and age) were also used for Panel 27 raking. Similar to Panel 24 and Panel 26, the Panel 27 final weight for Key, responding persons who were not in scope on December 31, 2022 but were in scope earlier in the year was the nonresponse-adjusted person weight without raking.

3.3.6 The Final Person-Level Weight for 2022

As described in Section 3.3.2, person-level weights from the three panels were then composited using factors identified in 3.3.2 and, for those persons in scope on December 31, 2022, raked to CPS based control totals reflecting poverty status as well as Census region, MSA status, race/ethnicity, sex, and age. In addition, the composite weights of two groups of persons who were out of scope on December 31, 2022 underwent weight calibration to adjust for expected undercoverage. Specifically, the weights of those who were out of scope on December 31, 2022, but in scope at some time during the year and were residing in a nursing home at the end of the year were poststratified to an estimated number of persons who were residents of Medicare- and Medicaid-certified nursing homes for part of the year (approximately 3-9 months) during 2014. This estimate was developed from data on the Minimum Data Set (MDS) of the Center for Medicare and Medicaid Services (CMS). The weights of persons who died while in scope during 2022 were poststratified to corresponding estimates derived using data obtained from the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Provisional Mortality Statistics, 2018 through Last Week on CDC WONDER Online Database,

released in 2023, the latest available data at the time. 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 PERWT22F>0) is 333,053,243 (see Table 20). The corresponding total for the population that was in scope on December 31, 2022 is 329,059,733.

Table 20

Number of Person-level Respondents and Corresponding Population Estimates for the 2022 Full Year Consolidated PUF

Populations of Interest	Panel 24	Panel 26	Panel 27	Combined	Population estimate (weighted total of combined samples)
Civilian, Noninstitutionalized Population over the course of 2022	5,222	6,632	9,893	21,747	333,053,243
Civilian, Noninstitutionalized Population on December 31, 2022	5,172	6,544	9,775	21,491	329,059,733

3.3.7 A Note on MEPS Population Estimates

Beginning with the 2021 full-year data, MEPS was transitioned to 2020 Census-based population estimates from the CPS for poststratification and raking. CPS estimates began reflecting 2020 Census-based data in 2022, and the March 2023 CPS data serve as the basis for the 2022 MEPS weight calibration efforts. An article ("Adjustments to Household Survey Population Estimates in January 2022") discussing the impact of this transition can be found at the Bureau of Labor statistics website.

The updated population controls will have a noticeable effect on estimated totals for some population subgroups. In the article, the Bureau of Labor Statistics (2022) compares some 2021 CPS estimates for those aged 16 or older "as published" with estimates that would have been generated had the updated population controls been used. The more notable increases in estimated totals occurred in the following subgroups: those aged 16-19 (about a half million more, a 3.5 percent increase) and Asians (170,000 more, a 1 percent increase). Corresponding changes were thus anticipated for the MEPS full-year data beginning with the 2021 PUFs.

3.4 Coverage

The target population associated with this MEPS database is the 2022 U.S. civilian noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 2018 (Panel 24), 2020 (Panel 26), and 2021 (Panel 27). New households created after the NHIS interviews for the respective panels and consisting exclusively of persons who entered the target population after 2018 (Panel 24), after 2020 (Panel 26), or after 2021 (Panel 27) are not covered by the 2022 MEPS. Nor are previously out of scope persons who joined an existing household but are not related 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 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: FAMWT22F and FAMWT22C. FAMWT22F can be used to make estimates for the cross-section of families in the U.S. civilian noninstitutionalized population on December 31, 2022 where families are identified based on the MEPS definition of a family unit. Estimates can include MEPS families that existed at some time during 2022 but whose members became out of scope before 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, 2022. FAMWT22C can be used to make estimates for the cross-section of families in the U.S. civilian, noninstitutionalized population on December 31, 2022 where families are identified based on the CPS definition of a family unit. Note that married couples, regardless of gender, are assigned to the same family unit for the CPS. This represents a definitional change in family structure for the CPS with the 2021 CPS ASEC file, associated specifically with March, 2021. It is reflected in MEPS starting with the 2019 Consolidated PUF.

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. The MEPS definition of family includes unmarried persons living together who consider themselves a family unit (these are not families under the CPS definition). Single people who do not live with a relative or 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 (FAMWT22F or FAMWT22C). 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. 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 21 below (along with respective sample sizes). Persons with FMRS1231=1 were a member of a MEPS family on 12/31/22. The more expansive definition of families (second row in Table 21) includes families and members of families who were not in scope at the end of the year. While MEPS includes individual persons as family units (over 40% of all units), analysts may restrict their analyses to families with two or more members using the family size variables shown in Table 21 (for example, to limit consideration to the cross-section of families with two or more members on December 31, 2022, analyze only families where FAMS1231 is 2 or more). Estimates can also be made for the cross-section of CPS families on December 31, 2022 based on the 10,374 sample CPS families in this PUF.

Table 21

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 12/31/22	FAMWT22F>0 & FMRS1231=1	9,949	FAMS1231
Families in the civilian noninstitutionalized population on 12/31/22 plus families and members of families in existence earlier in 2022 who were not part of the civilian noninstitutionalized population on 12/31/22	FAMWT22F>0	10,034	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.

- Restrict the records of interest to those where FAMWT22F>0
- 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 their family unit (e.g., the race/ethnicity, marital status, or age of the reference person).

- Apply the weight FAMWT22F to the analytic variable(s) of interest to obtain national MEPS family estimates.

Note that the MEPS families defined above include members who were out-of-scope on December 31, 2022 although they were members of the family immediately before going out of scope for the remainder of the year. If an analyst wishes to restrict MEPS family members to those who were a family member on December 31, 2022, the analyst should restrict family members to those with FMRS1231=1.

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.

- Restrict the records of interest to those where FAMWT22C>0

- 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 their 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 FAMWT22C to the analytic variable(s) of interest to obtain national CPS family estimates.

Note that these CPS-families consist solely of those who were family members on December 31, 2022.

3.5.4 Details on Family Weight Construction and Estimated Number of Families

Because health care related decisions are influenced by a family's economic status, poverty status is incorporated into the poststratification component of the weighting process. However, poverty status is defined based on the CPS definition of a family, which differs from the MEPS family definition in that unmarried partners living together are considered separate family units for the CPS. Since data are collected in MEPS family units (RUs) prior to poststratification, MEPS families in existence on December 31, 2022 containing unmarried partners living together were

partitioned into units that correspond to CPS families (families with no unmarried partners are defined as family units in both MEPS and CPS).

The process of calibrating the family weights to achieve consistency with CPS control figures was carried out in several steps. First, all CPS-like family units were assigned an initial family-level weight based on the person-level weight (PERWT22F) of the family reference person (FAMRFPYR=1) of the MEPS family with which they were associated. These CPS family-level weights (FAMWT22C) were obtained by raking to population control figures derived from CPS estimates for December 2022 (derived by projecting the family population totals for the March 2022 CPS forward to reflect December 31, 2022). 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, 2022. The family-level weight variable for MEPS families (FAMWT22F) 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, 2022 based on 10,374 CPS families in the sample is 148,283,764. Overall, the weighted population estimate for the 9,949 MEPS family units containing at least one member of the U.S. civilian noninstitutionalized population on December 31, 2022 (those families whose members have FAMWT22F>0 and FMRS1231=1) is 141,304,337. The inclusion of families whose members left the in-scope population before December 31, 2022 increases the estimated total number of families represented by the 10,034 MEPS responding families (whose members have FAMWT22F>0) to 142,421,103.

Table 22

Families with a Family Weight >0 for the 2022 Full Year Consolidated PUF

	Panel 24	Panel 26	Panel 27	Combined	Population estimate (weighted total of combined samples)
Number	2,632	3,139	4,263	10,034	142,421,103

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, SAQWT22F, has been provided for use with the data obtained from the Self-Administered Questionnaire (SAQ). This questionnaire was administered in Panel 27 Round 2, Panel 26 Round 4, and Panel 24 Round 8 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 2/4/8 (generally speaking, the fall of the year in question).

The final full-year person-level SAQ weight for 2022 was constructed as follows with only those with a 2022 full-year person-level weight (PERWT22F>0) eligible to receive the 2022 SAQ weight. The weighting process was similar to that of the full sample person-level weights: nonresponse adjustments for the weights for each panel separately; raking to CPS control totals; compositing the weights from the three panels; and finally re-raking of the composited weights.

Variables used in the nonresponse adjustment process were region, MSA status, family size, marital status, level of education, health status, health insurance status, age, sex, race/ethnicity, NHIS panel, and NHIS quarter. The weights were raked to CPS estimates corresponding to December 2022 (the same source of control figures used for the full-year person-level weights). The variables used to form control figures (education of the reference person, region, MSA status, age, sex, and race/ethnicity) are the same variables that were used for the full-year person-level weights. The only difference was that age categories were developed after excluding ages under 18 since only adults were eligible for the SAQ.

The final 2022 SAQ weight for this Consolidated PUF was then obtained by raking the preliminary weight to CPS estimates that were based on poverty status (replacing education of the reference person) as well as the aforementioned variables. This final weight was assigned the variable name SAQWT22F.

In all, there were 11,299 persons assigned an SAQ weight with the sum of the weights being 257,038,493 (an estimate of the civilian noninstitutionalized population aged 18 or older at the time the SAQ was administered).

The Panel 24 unweighted response rate for the 2022 SAQ was 56.3 percent, the Panel 26 unweighted response rate for the 2022 SAQ was 62.0 percent, while the Panel 27 unweighted response rate for the 2022 SAQ was 57.1 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 adults with sample weights associated with each panel (a value of 0.21 was associated with Panel 24, a value of 0.30 was

associated with Panel 26, and a value of 0.49 was associated with Panel 27). The pooled unweighted response rate for the combined panels for the 2022 SAQ is 58.4 percent.

3.8 Weights and Response Rates for the Diabetes Care Survey

A person-level weight, DIABW22F, was developed for use with the data obtained from the Diabetes Care Survey (DCS). This weight was assigned to each person aged 18 or older with an SAQ weight who completed the DCS and self-reported as having diabetes. (Although diabetes diagnosis is now asked of all ages, the DCS is only given to participants if they are aged 18 or older.) The general weighting process was to assign the final SAQ weight as the initial weight to each individual eligible for a DCS weight. This weight was adjusted to compensate for RU-level nonresponse to the question as to whether or not each RU member had diabetes and then for nonresponse among those receiving the DCS questionnaire.

Prior to Panel 12, the identification of people eligible to receive the DCS questionnaire was focused on the Rounds 3/5 interview. During the Rounds 3/5 regular MEPS interview, each RU respondent was asked to complete a "conditions" question to identify all current/deceased/institutionalized RU members of any age who had been diagnosed with diabetes. Each RU member who was identified as having diabetes by the RU respondent was then eligible to receive the DCS questionnaire. To determine which DCS respondents actually had diabetes (and thus were members of the target population), each DCS respondent was asked if they were told by a physician that they had diabetes. While the DCS questionnaire was distributed to persons under the age of 18, the constructed DCS variables released in the person-level PUF applied only to adults. Beginning in Panel 12, a different screening process is used to identify those eligible to receive the DCS questionnaire. This process, described next, involves asking screener questions in each round, with the group of persons about whom these questions are asked varying from round to round.

In Round 1, the RU respondent is asked to identify all RU members (including those who went out of scope unless they died before the date of interview) with diabetes. In Rounds 2/4/8, the same screening information is gathered but only for new RU members (as long as they did not die during the round). In Round 3 and Round 7, the screening questions are asked of the RU respondent for all RU members who were: (a) in scope sometime during the round but had not died before the date of interview; and (b) had not been identified as having diabetes in a previous round (this includes people with missing data, classified as not having diabetes in all previous rounds of MEPS, and all new members of the RU in Round 3 or Round 7). Any RU member aged 18 years or older who was identified by the RU respondent as having diabetes at any time during MEPS was asked to complete a DCS questionnaire. This process was designed to ensure that all RU members who are 18 years or older with diabetes are given a DCS questionnaire to complete.

In all, 1,077 people were assigned a DCS weight (DIABW22F>0). The sum of the DCS weights is 28,314,544, an estimate of the adult population self-reporting as having been diagnosed with diabetes based on the two-step process described above.

The Panel 24 unweighted response rate for the 2022 DCS was 47.2 percent. The Panel 26 unweighted response rate for the 2022 DCS was 48.3 percent. The Panel 27 unweighted response rate for the 2022 DCS was 45.6 percent. The pooled unweighted response rate, calculated based on applying the compositing factors described in Section 3.7, for the combined panels for the DCS is 46.7 percent.

3.9 Variance Estimation

To obtain estimates of variability in the MEPS estimates (such as the standard error of sample estimates or corresponding confidence intervals), analysts should consider the complex sample design of the 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 (BRR), and jackknife replication (JK). Various software packages provide analysts with the capability of implementing these methodologies. MEPS analysts most commonly use the Taylor-series approach. Although this PUF does not contain replicate weights, analysts can use the BRR methodology to construct replicate weights to develop variances for more complex estimators (see Section 3.9.2: Balanced Repeated Replication).

3.9.1 Taylor-series Linearization Method

The variables needed to calculate appropriate standard errors based on the Taylor-series linearization method are included on this file as well as all other MEPS PUFs. Software packages that permit the use of the Taylor-series linearization method include SUDAAN, R, Stata, SAS (version 8.2 and higher), and SPSS (version 12.0 and higher). For complete information on the capabilities of a package, analysts should refer to the user documentation for the software.

With 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 PUF 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 software packages will provide estimated standard errors appropriate for assessing the variability of the MEPS estimates. Note 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 see at least 100 degrees of freedom associated with the estimated standard errors for national estimates based on this MEPS database.

Before 2002, the 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. Beginning with the 2002 Point-in-Time PUF, the approach changed with the intention that variance strata and PSUs would be developed to be compatible with all future PUFs until the NHIS design changed. Thus, when pooling data across years 2002 through Panel 11 of the 2007 files, analysts can use the variance strata and PSU variables provided without modifying them

for variance estimation purposes for estimates covering multiple years of data. There are 203 variance estimation strata, each stratum with either two or three variance estimation PSUs.

Beginning in Panel 12 of the 2007 files, a new set of variance strata and PSUs was 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. Therefore, there are a total of 368 (203+165) variance strata in the 2007 Consolidated PUF, as it consisted of two panels that were selected under two independent NHIS sample designs. Since both MEPS panels in the full-year files from 2008 through 2016 are based on the same NHIS design, there are only 165 variance strata. These 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 if data are pooled for several years.

The NHIS sample design was changed again in 2016, effectively changing the MEPS design beginning with calendar year 2017. Beginning in Panel 22 of the 2017 files, a new set of variance strata and PSUs were developed. There are 117 variance strata with either two or three variance estimation PSUs per stratum. Therefore, there are a total of 282 (165+117) variance strata in the 2017 Consolidated PUF as it consisted of two panels that were selected under two independent NHIS sample designs. To make the pooling of data across multiple years of the MEPS more straightforward, the numbering system for the variance strata was changed. The strata associated with the new design are numbered from 2001 to 2117.

The NHIS sample design was further modified in 2018, so the MEPS variance structure for the 2019 Consolidated PUF was also modified, reducing the number of variance strata to 105. Consistency was maintained with the prior structure in that the 2019 variance strata were also numbered within the range of values from 2001-2117, although there are now gaps in the values assigned within this range. Because of the modification, each stratum could contain up to 5 variance estimation PSUs.

For Panel 26 in the 2021 and 2022 Consolidated PUFs, an additional NHIS sample was used for the MEPS to account for increasing nonresponse during the pandemic (as discussed in Section 3.1). The additional sample was assigned to the existing variance strata, so the 2022 PUF continues to have 105 variance strata, numbered 2001-2117, with a few gaps in the values in that range. In many cases, the additional sample was assigned to new variance estimation PSUs, so in the 2022 Consolidated PUF, each stratum contains up to eight variance estimation PSUs.

Some analysts may be interested in pooling data across multiple years of MEPS data. When doing so, analysts should note that, to obtain appropriate standard errors, it is necessary to specify a common variance structure. Before 2002, each annual PUF was released with a variance structure unique to the particular MEPS sample in that year. Starting in 2002, the annual PUFs were released with a common variance structure that allowed users to pool data from 2002 through 2018. However, analysts can no longer do this routinely because the variance structure had to be modified beginning with 2019.

To ensure that variance strata are identified appropriately for variance estimation purposes when pooling MEPS data across several years, analysts can proceed as follows:

1. When pooling any year from 2002 through 2018, use the variance strata numbering as is.

2. When pooling (a) any year from 1996 to 2001 with any year from 2002 or later, or (b) the year 2019 and beyond with any earlier year, use the pooled linkage PUF HC-036, which contains the proper variance structure. The HC-036 PUF is updated every year so that appropriate variance structures are available with pooled data. Further details on the HC-036 PUF are included in the public use documentation of the HC-036 PUF.

3.9.2 Balanced Repeated Replication 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 analysts 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 for computing variances of complex nonlinear estimators for which a Taylor linear form is neither easy to derive nor available in commonly used software. For instance, it is not possible to calculate the variances of a median or the ratio of two medians by using the Taylor linearization method. For these types of estimators, users can calculate a variance using BRR or Fay's modified BRR methods. However, it should be noted that the replicate weights have been derived from the final weight through a shortcut approach. Specifically, the replicate weights are not computed starting with the base weight, and all adjustments made in different stages of weighting are not applied independently in each replicate. Thus, the variances computed using this one-step BRR do not capture the effects of all weighting adjustments that would be captured in a set of fully developed BRR replicate weights. The Taylor-series approach does not fully capture the effects of the different weighting adjustments either.

The dataset HC-036BRR, MEPS 1996-2021 Replicates for Variance Estimation File, contains the information necessary to construct the BRR replicates. It includes 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 by using the HC-036, MEPS 1996-2021 Pooled Linkage Variance Estimation File. For more information about creating BRR replicates, users can refer to the documentation for the HC-036BRR pooled linkage file on the AHRQ website.

3.10 Guidelines for Determining which Weight to Use for Analyses Involving Data/Variables from Multiple Sources and Supplements: MEPS 2022 Consolidated PUF

Which weight variable to use is decided based on a hierarchy.

For person-level analyses not involving variables from the SAQ or DCS, PERWT22F should always be used.

For person-level analysis involving variables from the SAQ but not the DCS, the weight variable SAQWT22F 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, SAQWT22F 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 DIABW22F should be used for those eligible to provide DCS data.

For all family-level analyses, FAMWT22F (for MEPS families) or FAMWT22C (for CPS-like families) should be used.

3.11 Using MEPS Data for Trend Analysis

For analysts using the MEPS data for trend analysis, we note that there are uncertainties associated with 2020, 2021, and possibly 2022 data quality for reasons discussed throughout Section 3.1.2. Evaluations of important MEPS estimates suggest that they are of reasonable quality. Nevertheless, analysts are advised to exercise caution in interpreting these estimates, particularly in terms of trend analyses, since access to health care was substantially affected by the pandemic, as were related factors such as health insurance and employment status for many persons.

The MEPS began in 1996, and the utility of the survey for analyzing health care trends expands with each additional year of data; however, when examining trends over time using the MEPS, the length of time being analyzed should be considered. 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 the MEPS survey methodology.

With respect to methodological considerations, changes in data collection methods, such as interviewer training, were introduced in 2013 to obtain more complete information about health care utilization from MEPS respondents; the changes were fully implemented in 2014. This effort likely resulted in improved data quality and a reduction in underreporting starting in the second half of 2013 and continuing throughout the 2014 full-year files; the changes have also had some impact on analyses involving trends in utilization across years. The changes in the NHIS sample design in 2016 and 2018 could also potentially affect trend analyses. The new NHIS sample design is based on more up-to-date information related to the distribution of

housing units across the United States. As a result, it can be expected to better cover the full civilian noninstitutionalized population, the target population for MEPS, as well as many of its subpopulations. Better coverage of the target population helps to reduce the potential for bias in both NHIS and MEPS estimates.

Another change with the potential to affect trend analysis involved major modifications to the MEPS instrument design and data collection process, particularly in the events sections of the instrument. These were introduced in the spring of 2018 and thus affected data beginning with Round 1 of Panel 23, Round 3 of Panel 22, and Round 5 of Panel 21. Since the full-year 2017 MEPS PUFs were established from data collected in Rounds 1-3 of Panel 22 and Rounds 3-5 of Panel 21, they reflected two instrument designs. To mitigate the effect of such differences within the same full-year file, the Panel 22 Round 3 data and the Panel 21 Round 5 data were transformed to make them as consistent as possible with data collected under the previous design. The changes in the instrument were designed to make the data collection effort more efficient and easier to administer. In addition, expectations were that data on some items, such as those related to health care events, would be more complete with the potential of identifying more events. Increases in service use reported since the implementation of these changes are consistent with these expectations. *Analysts should be aware of the possible impacts of these changes on the data and especially trend analyses that include the year 2018 because of the design transition*.

Process changes, such as data editing and imputation, may also affect trend analyses. For example, users should refer to Section 2.5.11: Utilization, Expenditures, and Sources of Payment Variables above and, for more detail, to the documentation for the prescription drug PUF (HC-239A) when analyzing prescription drug spending over time.

As always, it is recommended that, before conducting trend analyses, analysts should review relevant sections of the documentation for descriptions of these types of changes that might affect the interpretation of changes over time.

To smooth or stabilize trend analyses based on the MEPS data, analysts may also wish to consider using statistical techniques such as comparing pooled time periods (e.g., 1996-1997 versus 2011-2012), working with moving averages, or using modeling techniques with several consecutive years of the data.

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, the use of numerous statistical significance tests of trends will increase the likelihood of concluding that a change has taken place when one has not.

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D. Variable-Source Crosswalk

FOR MEPS HC 243: 2022 CONSOLIDATED DATA FILE

SURVEY ADMINISTRATION VARIABLES - PUBLIC USE

Variable	Description	Source
DUID	Panel # + Encrypted DU Identifier	Assigned in Sampling
PID	Person Number	Assigned in Sampling or by CAPI
DUPERSID	Person ID (DUID + PID)	Assigned in Sampling
PANEL	Panel Number	Constructed
DATAYEAR	Survey Data Year	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
FAMID22	Family ID (Student Merged In) - 12/31/22	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
RULETR22	RU Letter as of 12/31/22	CAPI Derived
RUSIZE31	RU Size - R3/1	CAPI Derived
RUSIZE42	RU Size - R4/2	CAPI Derived
RUSIZE53	RU Size - R5/3	CAPI Derived
RUSIZE22	RU Size as of 12/31/22	CAPI Derived
RUCLAS31	RU fielded as: Standard/New/Student - R3/1	CAPI Derived
RUCLAS42	RU fielded as: Standard/New/Student - R4/2	CAPI Derived

Variable	Description	Source
RUCLAS53	RU fielded as: Standard/New/Student - R5/3	CAPI Derived
RUCLAS22	RU fielded as: Standard/New/Stud-12/31/22	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
FAMSZE22	RU Size Including Students as of 12/31/22	CAPI Derived
FMRS1231	Member of Responding 12/31 Family	Constructed
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
REGION22	Census Region as of 12/31/22	Assigned in Sampling
REFPRS31	Reference Person at - R3/1	RE480-RE500
REFPRS42	Reference Person at - R4/2	RE480-RE500
REFPRS53	Reference Person at - R5/3	RE480-RE500
REFPRS22	Reference Person as of 12/31/22	RE480-RE500
RESP31	1st Respondent Indicator for R3/1	ST30
RESP42	1st Respondent Indicator for R4/2	ST30
RESP53	1st Respondent Indicator for R5/3	ST30
RESP22	1st Respondent Indicator as of 12/31/22	ST30
PROXY31	Was Respondent a Proxy in R3/1	ST30
PROXY42	Was Respondent a Proxy in R4/2	ST30
PROXY53	Was Respondent a Proxy in R5/3	ST30
PROXY22	Was Respondent a Proxy as of 12/31/22	ST30
INTVLANG	Language Interview Was Completed	CL350
INTVTYPE31	Was Interview In-Person, By Phone, Or By Video R3/1	ST65
INTVTYPE42	Was Interview In-Person, By Phone, Or By Video R4/2	ST65
INTVTYPE53	Was Interview In-Person, By Phone, Or By Video R5/3	ST65

Variable	Description	Source
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
ENDRFM22	2022 Reference Period End Date: Month	RE Section
ENDRFY22	2022 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
INSCOP22	Inscope - R5/3 Start through 12/31/22	RE Section
INSC1231	Inscope Status on 12/31/22	Constructed
INSCOPE	Was Person Ever Inscope in 2022	RE Section
ELGRND31	Eligibility - R3/1	RE Section
ELGRND42	Eligibility - R4/2	RE Section
ELGRND53	Eligibility - R5/3	RE Section
ELGRND22	Eligibility Status as of 12/31/22	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)	RE80, 650, 680, 750
AGE42X	Age - R4/2 (Edited/Imputed)	RE80, 650, 680, 750
AGE53X	Age - R5/3 (Edited/Imputed)	RE80, 650, 680, 750
AGE22X	Age as of 12/31/22 (Edited/Imputed)	RE80, 650, 680, 750
AGELAST	Person's Age Last Time Eligible	AGE22X, AGE42X, AGE31X
DOBMM	Date of Birth: Month	RE70, 650, 680, 730
DOBYY	Date of Birth: Year	RE70, 650, 680, 730
SEX	Sex	RE60, 650, 680, RE 720
RACEV1X	Race (Edited/Imputed)	RE1170
RACEV2X	Race (Edited/Imputed)	RE1170
RACEAX	Asian Among Races Rptd (Edited/Imputed)	RE1170
RACEBX	Black Among Races Rptd (Edited/Imputed)	RE1170
RACEWX	White Among Races Rptd (Edited/Imputed)	RE1170
RACETHX	Race/Ethnicity (Edited/Imputed)	RE1170
HISPANX	Hispanic Ethnicity (Edited/Imputed)	RE1170
HISPNCAT	Hispanic Ethnicity (Edited/Imputed)	RE1170
MARRY31X	Marital Status - R3/1 (Edited/Imputed)	RE100, 1170
MARRY42X	Marital Status - R4/2 (Edited/Imputed)	RE100, 1170
MARRY53X	Marital Status - R5/3 (Edited/Imputed)	RE100, 1170
MARRY22X	Marital Status-12/31/22 (Edited/Imputed)	RE100, 1170
SPOUID31	Spouse ID - R3/1	RE900
SPOUID42	Spouse ID - R4/2	RE900
SPOUID53	Spouse ID - R5/3	RE900
SPOUID22	Spouse ID - 12/31/22	RE900
SPOUIN31	Marital Status w/ Spouse Present - R3/1	RE900
SPOUIN42	Marital Status w/ Spouse Present - R4/2	RE900
SPOUIN53	Marital Status w/ Spouse Present - R5/3	RE900
SPOUIN22	Marital Status w/Spouse Present-12/31/22	RE900
EDUCYR	Years of Educ When First Entered MEPS	RE1180-1200
HIDEG	Highest Degree When First Entered MEPS	RE1180-1200
FTSTU31X	Student Status if Ages 17-23 - R3/1	RE50, 1210

Variable	Description	Source
FTSTU42X	Student Status if Ages 17-23 - R4/2	RE50, 1210
FTSTU53X	Student Status if Ages 17-23 - R5/3	RE50, 1210
FTSTU22X	Student Status if Ages 17-23 - 12/31/22	RE50, 1210
ACTDTY31	Military Full-Time Active Duty - R3/1	RE110, 1050, 1080, 1100
ACTDTY42	Military Full-Time Active Duty - R4/2	RE110, 1050, 1080, 1100
ACTDTY53	Military Full-Time Active Duty - R5/3	RE110, 1050, 1080, 1100
REFRL31X	Relation to Ref Pers - R3/1 (Edit/Imp)	RE900
REFRL42X	Relation to Ref Pers - R4/2 (Edit/Imp)	RE900
REFRL53X	Relation to Ref Pers - R5/3 (Edit/Imp)	RE900
REFRL22X	Relation to Ref Pers - 12/31/22 (Edit/Imp)	RE900
OTHLGSPK	Speak Other Language at Home	RE1170
WHTLGSPK	What Language Spoken Other Than English	RE1170
HWELLSPK	How Well Person Speaks English	RE1170
BORNUSA	Person Born in the US	RE1170
YRSINUS	Years Person Lived in the US	RE1170
MOPID31X	PID of Person’s Mom - RD 3/1	RE900
MOPID42X	PID of Person’s Mom - RD 4/2	RE900
MOPID53X	PID of Person’s Mom - RD 5/3	RE900
DAPID31X	PID of Person’s Dad - RD 3/1	RE900
DAPID42X	PID of Person’s Dad - RD 4/2	RE900
DAPID53X	PID of Person’s Dad - RD 5/3	RE900

INCOME VARIABLES

Variable	Description	Source
FILEDR22	Has Person Filed A Fed Income Tax Return	IN20
WILFIL22	Will Person File Fed Income Tax Return	IN30
FLSTAT22	Person's Filing Status	IN40
FILER22	Primary Or Secondary Filer	IN40
JTINRU22	Joint Filer's Membership In RU	IN50
JNTPID22	PID of Joint Filer	IN50
TAXFRM22	Tax Form Person Will File	IN60
FOODST22	Did Anyone Receive Food Stamps	IN700
FOODMN22	Number Of Months Food Stamps Received	IN710
FOODVL22	Monthly Value Of Food Stamps	IN720
TTLP22X	Person's Total Income	Constructed
FAMINC22	Family's Total Income	Constructed
POVCAT22	Family Income As Percent Of Poverty Line - Categorical	Constructed
POVLEV22	Family Income As Percent Of Poverty Line - Continuous	Constructed
WAGEP22X	Person's Wage Income	Constructed
WAGIMP22	Wage Imputation Flag	Constructed
BUSNP22X	Person's Business Income	Constructed
BUSIMP22	Business Income Imputation Flag	Constructed
UNEMP22X	Person's Unemployment Comp Income	Constructed
UNEIMP22	Unemployment Imputation Flag	Constructed
WCMPP22X	Person's Workers' Compensation	Constructed
WCPIMP22	Workers' Comp Imputation Flag	Constructed
INTRP22X	Person's Interest Income	Constructed
INTIMP22	Interest Imputation Flag	Constructed
DIVDP22X	Person's Dividend Income	Constructed
DIVIMP22	Dividend Imputation Flag	Constructed
SALEP22X	Person's Sales Income	Constructed
SALIMP22	Sales Income Imputation Flag	Constructed
PENSP22X	Person's Pension Income	Constructed
PENIMP22	Pension Income Imputation Flag	Constructed
SSECP22X	Person's Social Security Income	Constructed

Variable	Description	Source
SSCIMP22	Social Security Imputation Flag	Constructed
TRSTP22X	Person’s Trust/Rent Income	Constructed
TRTIMP22	Trust Income Imputation Flag	Constructed
VETSP22X	Person’s Veteran’s Income	Constructed
VETIMP22	Veteran's Income Imputation Flag	Constructed
IRASP22X	Person’s Ira Income	Constructed
IRAIMP22	Ira Income Imputation Flag	Constructed
ALIMP22X	Person’s Alimony Income	Constructed
ALIIMP22	Alimony Income Imputation Flag	Constructed
CHLDP22X	Person’s Child Support	Constructed
CHLIMP22	Child Support Imputation Flag	Constructed
CASHP22X	Person’s Other Regular Cash Contrib	Constructed
CSHIMP22	Cash Contribution Imputation Flag	Constructed
SSIP22X	Person’s SSI	Constructed
SSIIMP22	SSI Imputation Flag	Constructed
PUBP22X	Person’s Public Assistance	Constructed
PUBIMP22	Public Assistance Imputation Flag	Constructed
OTHRP22X	Person’s Other Income	Constructed
OTHIMP22	Other Income Imputation Flag	Constructed
HIEUIDX	Health Insurance Eligibility Unit Identifier	Constructed

PERSON-LEVEL CONDITION VARIABLES - PUBLIC USE

Variable	Description	Source
HIBPDX	High Blood Pressure Diag (>17)	PE30A
HIBPAGED	Age of Diagnosis-High Blood Pressure	PE40
BPMLDX	Mult Diag High Blood Press (>17)	PE50
CHDDX	Coronary Hrt Disease Diag (>17)	PE30B
CHDAGED	Age of Diagnosis-Coronary Heart Disease	PE60
ANGIDX	Angina Diagnosis (>17)	PE30C
ANGIAGED	Age of Diagnosis-Angina	PE70
MIDX	Heart Attack (MI) Diag (>17)	PE30D
MIAGED	Age of Diagnosis-Heart Attack (MI)	PE80
OHRTDX	Other Heart Disease Diag (>17)	PE30E
OHRTAGED	Age of Diagnosis-Other Heart Disease	PE100
OHRTTYPE	Type of Other Heart Disease (>17)	PE90
STRKDX	Stroke Diagnosis (>17)	PE30F
STRKAGED	Age of Diagnosis-Stroke	PE110
EMPHDX	Emphysema Diagnosis (>17)	PE30G
EMPHAGED	Age of Diagnosis-Emphysema	PE120
CHBRON31	Chronc Bronchits Last 12 Mths (>17)-R3/1	PE330
CHOLDX	High Cholesterol Diagnosis (>17)	PE30H
CHOLAGED	Age of Diagnosis-High Cholesterol	PE130
CANCERDX	Cancer Diagnosis (>17)	PE30I
CABLADDR	Cancer Diagnosed - Bladder (>17)	PE140
CABREAST	Cancer Diagnosed - Breast (>17)	PE140
CACERVIX	Cancer Diagnosed - Cervical (>17)	PE140
CACOLON	Cancer Diagnosed - Colon (>17)	PE140
CALUNG	Cancer Diagnosed - Lung (>17)	PE140
CALYMPH	Cancer Diagnosed - Lymphoma (Non-Hodgkin's) (>17)	PE140
CAMELANO	Cancer Diagnosed - Skin Melanoma (>17)	PE140
CAOTHER	Cancer Diagnosed - Other (>17)	PE140
CAPROSTA	Cancer Diagnosed - Prostate (>17)	PE140
CASKINNM	Cancer Diagnosed - Skin-Nonmelano (>17)	PE140
CASKINDK	Cancer Diagnosed - Skin-Unknown Type (>17)	PE140

Variable	Description	Source
CAUTERUS	Cancer Diagnosed - Uterine (>17)	PE140
DIABDX_M18	Diabetes Diagnosis	PE30K
DIABAGED	Age of Diagnosis-Diabetes	PE190
JTPAIN31_M18	Joint Pain Last 12 Months (>17) - RD 3/1	PE320
ARTHDX	Arthritis Diagnosis (>17)	PE30J
ARTHTYPE	Type Of Arthritis Diagnosed (>17)	PE170
ARTHAGED	Age of Diagnosis-Arthritis	PE180
ASTHDX	Asthma Diagnosis	PE30L
ASTHAGED	Age of Diagnosis-Asthma	PE200
ASSTIL31	Does Person Still Have Asthma - RD 3/1	PE210
ASATAK31	Asthma Attack Last 12 Mos- RD 3/1	PE220
ASTHEP31	When Was Last Episode Of Asthma - RD 3/1	PE230
ASACUT31	Used Acute Pres Inhaler Last 3 Mos - RD 3/1	PE260
ASMRCN31	Used >3 Acute Cn Pres Inh Last 3 Mos - RD 3/1	PE270
ASPREV31	Ever Used Prev Daily Asthma Meds - RD 3/1	PE240
ASDALY31	Now Take Prev Daily Asthma Meds - RD 3/1	PE250
ASPKFL31	Have Peak Flow Meter At Home - RD 3/1	PE280
ASEVFL31	Ever Used Peak Flow Meter - RD 3/1	PE290
ASWNFL31	When Last Used Peak Flow Meter - RD 3/1	PE300
ADHDADDX	ADHD/ADD Diagnosis (5-17)	PE30M
ADHDAGED	Age of Diagnosis-ADHD/ADD	PE310
COVIDEVER53	Ever Had COVID-19 - RD 5/3	PE350
LCEVER53	Ever had COVID-19 Symptoms Lasting ≥ 3 Months (Long Covid) - RD 5/3	PE362
COVSYMNOW53	Has COVID-19 or Long COVID-19 Symptoms Now - RD 5/3	PE364
COVREDABIL53	Reduced Ability from COVID-19 or Long COVID-19 Symptoms- RD 5/3	PE366
COVID12MO53	Had COVID-19 in the Past 12 MONTHS - RD 5/3	PE370
COVMNTHX53	Month Last had COVID-19 - RD 5/3	PE380 01
COVYRDX53	Year Last had COVID-19 - RD 5/3	PE380 02

HEALTH STATUS VARIABLES - PUBLIC USE

Variable	Description	Source
RTHLTH31	Perceived Health Status - RD 3/1	PE10
RTHLTH42	Perceived Health Status - RD 4/2	PE10
RTHLTH53	Perceived Health Status - RD 5/3	PE10
MNHLTH31	Perceived Mental Health Status - RD 3/1	PE20
MNHLTH42	Perceived Mental Health Status - RD 4/2	PE20
MNHLTH53	Perceived Mental Health Status - RD 5/3	PE20
IADLHP31	IADL Screener - RD 3/1	HE10-30
ADLHLP31	ADL Screener - RD 3/1	HE40-60
AIDHLP31	Used Assistive Devices - RD 3/1	HE70-80
WLKLIM31	Limitation in Physical Functioning - RD 3/1	HE90-100
LFTDIF31	Difficulty Lifting 10 Pounds - RD 3/1	HE110
STPDIF31	Difficulty Walking up 10 Steps - RD 3/1	HE120
WLKDIF31	Difficulty Walking 3 Blocks - RD 3/1	HE130
MILDIF31	Difficulty Walking a Mile - RD 3/1	HE140
STNDIF31	Difficulty Standing 20 Minutes - RD 3/1	HE150
BENDIF31	Difficulty Bending/Stooping - RD 3/1	HE160
RCHDIF31	Difficulty Reaching Overhead - RD 3/1	HE170
FNGRDF31	Difficulty Using Fingers to Grasp - RD 3/1	HE180
ACTLIM31	Any Limitation Work/Housewrk/Schl - RD 3/1	HE190-200
WRKLIM31	Work Limitation - RD 3/1	HE210
HSELIM31	Housework Limitation - RD 3/1	HE210
SCHLIM31	School Limitation - RD 3/1	HE210
UNABLE31	Completely Unable to Do Activity - RD 3/1	HE220
SOCLIM31	Social Limitations - RD 3/1	HE230-240
COGLIM31	Cognitive Limitations - RD 3/1	HE250A, 250B, 250C, 260
DFHEAR42	Serious Difficulty Hearing-RD4/2	HE270-280
DFSEE42	Serious Difficulty See w/Glasses-RD4/2	HE290C-300
DFCOG42	Serious Cognitive Difficulties-RD4/2	HE310-320
DFWLKC42	Serious Difculty Wlk/Climb Stairs-RD4/2	HE330-340
DFDRSB42	Difficulty Dressing/Bathing-RD4/2	HE350-360
DFERND42	Difficulty Doing Errands Alone-RD4/2	HE370-380

Variable	Description	Source
ANYLMI22	Any Limitation in P24R7,8/P26R3,4/P27R1,2	Constructed
CHPMED42	CSHCN: Child Needs Prescrb Med(0-17)-R4/2	CS10
CHPMHB42	CSHCN: Pmed for Hlth/Behv Cond (0-17)-R4/2	CS20
CHPMCN42	CSHCN: Pmed Cond Last 12+ Mos (0-17)-R4/2	CS30
CHSERV42	CSHCN: Chld Needs Med&Oth Serv (0-17)-R4/2	CS40
CHSRHB42	CSHCN: Serv for Hlth/Behv Cond(0-17)-R4/2	CS50
CHSRCN42	CSHCN: Serv Cond Last 12+ Mos (0-17)-R4/2	CS60
CHLIMI42	CSHCN: Limited in Any Way (0-17)-R4/2	CS70
CHLIHB42	CSHCN: Limt for Hlth/Behv Cond(0-17)-R4/2	CS80
CHLICO42	CSHCN: Limit Cond Last 12+ Mos (0-17)-R4/2	CS90
CHTHER42	CSHCN: Chld Needs Spec Therapy (0-17)-R4/2	CS100
CHTHHB42	CSHCN: Spec Ther for Hlth+Cond(0-17)-R4/2	CS110
CHTHCO42	CSHCN: Ther Cond Last 12+ Mos (0-17)-R4/2	CS120
CHCOUN42	CSHCN: Child Needs Counseling (0-17)-R4/2	CS130
CHEMPB42	CSHCN: Couns Prob Last 12+ Mos (0-17)-R4/2	CS140
CSHCN42	CSHCN:Child w/Spec HC Needs (0-17)-R4/2	CS10-140
MESHGT42	Doctor Ever Measured Height (0-17) - R4/2	CS310
WHNHGT42	When Doctor Measured Height (0-17) - R4/2	CS320
MESWGT42	Doctor Ever Measured Weight (0-17) - R4/2	CS340
WHNWGT42	When Doctor Measured Weight (0-17) - R4/2	CS350
CHBMIX42	Child’s Body Mass Index (6-17) - R4/2	Constructed
MESVIS42	Doctor Checked Child’s Vision (3-6) - R4/2	CS370
EATHLT42	Dr Advise Eat Healthy (2-17) - R4/2	CS380
WHNEAT42	When Dr Advise Eat Healthy (2-17) - R4/2	CS390
PHYSCL42	Dr Advise Exercise (2-17) - R4/2	CS400
WHNPHY42	When Dr Advise Exercise (2-17) - R4/2	CS410
SAFEST42	Dr Advise Chld Safety Seat (Wt<=40) - R4/2	CS420
WHNSAF42	When Dr Advise Safety Seat (Wt<=40) - R4/2	CS430
BOOST42	Dr Advise Booster Seat (40<Wt<=80) - R4/2	CS440

Variable	Description	Source
WHNBST42	Whn Dr Advise Booster Seat(40<Wt<=80) - R4/2	CS450
LAPBLT42	Dr Advise Lap/Shoulder Belt (80<Wt) - R4/2	CS460
WHNLAP42	Whn Dr Advise Lap/Shldr Blt (80<Wt) - R4/2	CS470
HELMET42	Dr Advise Bike Helmet (2-17) - R4/2	CS480
WHNHEL42	When Dr Advise Bike Helmet (2-17) - R4/2	CS490
NOSMOK42	Dr Advise Smkg in Home is Bad(0-17) - R4/2	CS500
WHNSMK42	Whn Dr Advis Smkg in Home Bad(0-17) - R4/2	CS510
TIMALN42	Doctor Spend Any Time Alone (12-17) - R4/2	CS520
LSTETH53	Lost All Uppr And Lowr Teeth (>17) - RD 5/3	AH100
PHYEXE53	Mod/Vig Phys Exec 5X Wk (>17) - RD 5/3	AH110
OFTSMK53	How Oftn Smoke Cigarettes (>17) - RD 5/3	AH120
COVAXEVR31	Ever Had COVID-19 Vaccine-RD 3/1	CV70-80
COVAXEVR42	Ever Had COVID-19 Vaccine-RD 4/2	CV70-80
COVAXEVR53	Ever Had COVID-19 Vaccine-RD 5/3	AH91-93
BOOSTERSHOT31	Ever Had COVID-19 Booster Shot-RD 3/1	CV90
BOOSTERSHOT42	Ever Had COVID-19 Booster Shot-RD 4/2	CV90
COVAXNEW53	Had COVID-19 Vaccine Since Prior Round-RD 5/3	AH91-93
SAQELIG	Eligibility Status for SAQ	Constructed
ADPROX42	SAQ: Relationship of Proxy to Adult	Constructed
ADSEX42	SAQ: Survey Gender	SAQ Q1
ADAGE42	SAQ: Survey Age	SAQ Q2
ADGENH42	SAQ: Health in General VR-12	SAQ Q3
ADDAYA42	SAQ: Hlth Limits Mod Activities VR-12	SAQ Q4a
ADCLIM42	SAQ: Hlth Limits Climbing Stairs VR-12	SAQ Q4b
ADACLS42	SAQ 4Wks:Accmp Less B/C Phy Prbs VR-12	SAQ Q5a
ADWKLM42	SAQ 4Wks:Work Limt B/C Phy Probs VR-12	SAQ Q5b
ADEMLS42	SAQ 4Wks:Accmp Less B/C Mnt Prbs VR-12	SAQ Q6a
ADMWCF42	SAQ 4Wks:Work Limt B/C Mnt Probs VR-12	SAQ Q6b
ADPAIN42	SAQ 4Wks:Pain Limits Normal Work VR-12	SAQ Q7
ADPCFL42	SAQ 4Wks: Felt Calm/Peaceful VR-12	SAQ Q8a
ADENGY42	SAQ 4Wks: Had a Lot of Energy VR-12	SAQ Q8b

Variable	Description	Source
ADPRST42	SAQ 4Wks: Felt Downhearted/Depr VR-12	SAQ Q8c
ADSOCA42	SAQ 4Wks: Hlth Stopped Soc Activ VR-12	SAQ Q9
ADCOMPAN42	SAQ: Feel Lack Companionship	SAQ 10a
ADLEFTOUT42	SAQ: Feel Left Out	SAQ 10b
ADISOL42	SAQ: Feel Isolated	SAQ 10c
ADNERV42	SAQ 30 Days: How Often Felt Nervous	SAQ Q11a
ADHOPE42	SAQ 30 Days: How Often Felt Hopeless	SAQ Q11b
ADREST42	SAQ 30 Days: How Often Felt Restless	SAQ Q11c
ADSAD42	SAQ 30 Days: How Often Felt Sad	SAQ Q11d
ADEFRT42	SAQ 30 Days: How Oftn Everythng an Effort	SAQ Q11e
ADWRTH42	SAQ 30 Days: How Often Felt Worthless	SAQ Q11f
K6SUM42	SAQ 30 Days: Overall Rating of Feelings	Constructed
ADINTR42	SAQ 2 Wks: Little Interest in Things	SAQ Q12a
ADDPRS42	SAQ 2 Wks: Felt Down/Depressed/Hopeless	SAQ Q12b
PHQ242	SAQ 2 Wks: Overall Rating of Feelings	Constructed
ADSLEEP42	SAQ How Often Trouble With Sleep	SAQ Q13
ADDAYEXER42	SAQ: 30 DAYS Avg Days Per Wk Mod Exrcs	SAQ 14
ADMINSEXER42	SAQ: 30 DAYS Min Per Day Mod Exrcs	SAQ 15
ADASKALC42	SAQ 12 MTHS: Alcohol Consumption	SAQ 16
ADNUMDRK42	SAQ 12 MTHS: Number Drinks Typical Day	SAQ Q17
ADRNK542_M20	SAQ 12 MTHS: Had 5+ Drinks Per Day	SAQ M-Q18
ADRNK442_M20	SAQ 12 MTHS: Had 4+ Drinks Per Day	SAQ F-Q18
ADOFTALC42	SAQ 12 MTHS: Asked How Much Or Often Alcohol	SAQ Q19
ADSTAL42	SAQ 12 MTHS: Advised To Stop Alcohol	SAQ Q20
ADMNTRT42	SAQ 12 MTHS: Get Counsel Trtment Medicine	SAQ Q21
ADPROBTRT42	SAQ 12 MTHS: Problem Needed Counsel Trtment	SAQ Q23
ADUNABTRT42	SAQ 12 MTHS: Not Get Needed Counsel Trtment	SAQ Q22
ADTRTEXP42	SAQ Worry Family Finance Stability M Health	SAQ Q24
ADLATERENT42	SAQ: 12 MTHS Pay Rent/Mortg Late	SAQ Q25
ADLATEUTIL42	SAQ: 12 MTHS Pay Utility Late	SAQ Q26

Variable	Description	Source
ADMISSCCLN42	SAQ: 12 MTHS Miss Card Or Loan Pymt	SAQ Q27
ADDEBT42	SAQ: 12 MTHS Contact Collection	SAQ Q28
ADUNEXPEXP42	SAQ: Cover Unexpected Expense	SAQ Q29
ADBRTC42	SAQ 12 MTHS: Birth Control Counseling Or Info	SAQ F-Q30
ADMDVT42	SAQ: Last Time Dr Visit	SAQ M-Q30 SAQ F-Q31
ADFLST42	SAQ 12 MTHS: Flu Vaccination	SAQ M-Q31 SAQ F-Q32
ADWGHD42	SAQ 12 MTHS: Weighed By Professional	SAQ M-Q32 SAQ F-Q33
ADWTAD42	SAQ 12 MTHS: Weight Management Advice	SAQ M-Q35 SAQ F-Q36
ADTBAC42	SAQ 12 MTHS: Did Dr Ask About Tobacco	SAQ M-Q36 SAQ F-Q37
ADOFTB42	SAQ 12 MTHS: How Often Use Tobacco	SAQ M-Q37 SAQ F-Q38
ADQTTB42	SAQ 12 MTHS: Did Dr Advise Quit Tobacco	SAQ M-Q38 SAQ F-Q39
ADQTMD42	SAQ 12 MTHS: Dr Advs Meds To Quit Tobac	SAQ M-Q39 SAQ F-Q40
ADQTHP42	SAQ 12 MTHS: Dr Advs Oth Way Quit Tobac	SAQ M-Q40 SAQ F-Q41
ADMOOD42	SAQ 12 MTHS: Dr Ask Anxious/Deprssed	SAQ M-Q41 SAQ F-Q42
ADBPCK42	SAQ 24 MTHS: Dr Check Blood Pressure	SAQ M-Q42 SAQ F-Q43
ADCHLC42	SAQ 5 YRS: Dr Check Cholesterol	SAQ M-Q43 SAQ F-Q44
ADPNEU42	SAQ: Ever Had Pneumonia Shot	SAQ M-Q44 SAQ F-Q48
ADSHNG42	SAQ: Ever Had Shingles Vaccine	SAQ M-Q45 SAQ F-Q49
ADNOAP42	SAQ: Can't Take Asprin For Med Reason	SAQ M-Q46 SAQ F-Q50

Variable	Description	Source
ADDSCU42	SAQ: Discuss Aspirin Preventive Use	SAQ M-Q47 SAQ F-Q51
ADCOLN42	SAQ: Had Colon Cancer/Colon Removed	SAQ M-Q48 SAQ F-Q56
ADCLNS42	SAQ 10 YRS: Had Colonoscopy	SAQ M-Q49 SAQ F-Q57
ADSGMD42	SAQ 5 YRS: Had Sigmoidoscopy	SAQ M-Q50 SAQ F-Q58
ADBLDS42	SAQ 12 MTHS: At Home Blood Stool Test	SAQ M-Q51 SAQ F-Q59
ADPROS42	SAQ: Had Prostate Cancer	SAQ M-Q52
ADPSAG42	SAQ: Age Last PSA Test	SAQ M-Q53
ADUTRM42	SAQ: Had Hystrctmy/Crvcl Cancer	SAQ F-Q45
ADPAP42	SAQ 5 YRS: Had Pap Smear Test	SAQ F-Q46
ADPAPG42	SAQ: Age At Last Pap Smear Test	SAQ F-Q47
ADOSTP42	SAQ: Dx With Osteoporosis	SAQ F-Q52
ADBNDN42	SAQ: Bone Density Scan	SAQ F-Q53
ADBRST42	SAQ: Have Brst Cancer\Brst Removed	SAQ F-Q54
ADMMGR42	SAQ 2 YRS: Had Mammogram	SAQ F-Q55
ADBMI42	Adult Body Mass Index (> 17) - RD 4/2	Constructed
VPCS42	SAQ: Phy Component Summry VR-12 Imputed	Constructed
VMCS42	SAQ: Mnt Component Summry VR-12 Imputed	Constructed
VRFLAG42	SAQ: VPCS42/VMCS42 Imputation Flag VR-12	Constructed
ADCMPM42	SAQ: Date Completed - Month	SAQ Completed Month field
ADCMPY42	SAQ: Date Completed - Year	SAQ Completed Year field
ADLANG42	SAQ: Language of SAQ Interview	Constructed
DCSELIG	DCS: Eligibility Status for DCS	Constructed
DSDIA53	DCS: Diabetes Diagnosis By Health Prof	DCS Q1
DSA1C53	DCS: Times Tested for A-One-C in 2022	DCS Q2
DSFT2253	DCS: Had Feet Checked During 2023	DCS Q3

Variable	Description	Source
DSFT2253	DCS: Had Feet Checked During 2022	DCS Q3
DSFT2053	DCS: Had Feet Checked During 2022	DCS Q3
DSFB2053	DCS: Had Feet Checked Before 2022	DCS Q3
DSFTNV53	DCS: Never Had Feet Checked	DCS Q3
DSEY2353	DCS: Dilated Eye Exam in 2023	DCS Q4
DSEY2253	DCS: Dilated Eye Exam in 2022	DCS Q4
DSEY2153	DCS: Dilated Eye Exam in 2021	DCS Q4
DSEB2153	DCS: Dilated Eye Exam Before 2021	DCS Q4
DSEYNV53	DCS: Never Had Dilated Eye Exam	DCS Q4
DSCH2353	DCS: Blood Cholesterol Checked in 2023	DCS Q5
DSCH2253	DCS: Blood Cholesterol Checked in 2022	DCS Q5
DSCH2153	DCS: Blood Cholesterol Checked in 2021	DCS Q5
DSCB2153	DCS: Blood Cholesterol Checked Before 2021	DCS Q5
DSCHNV53	DCS: Never Had Blood Cholesterol Checked	DCS Q5
DSFL2353	DCS: Got Flu Vaccination in 2023	DCS Q6
DSFL2253	DCS: Got Flu Vaccination in 2022	DCS Q6
DSFL2153	DCS: Got Flu Vaccination in 2021	DCS Q6
DSVB2153	DCS: Got Flu Vaccination Before 2021	DCS Q6
DSFLNV53	DCS: Never Got Flu Vaccination	DCS Q6
DSKIDN53	DCS: Has Diabetes Caused Kidney Problems	DCS Q7
DSEYPR53	DCS: Has Diabetes Caused Eye Probs	DCS Q6
DSDIET53	DCS: Treat Diabetes w/Diet Modification	DCS Q9
DSMED53	DCS: Treat Diabetes w/Meds by Mouth	DCS Q10
DSINSU53	DCS: Treat Diabetes w/Insulin Injections	DCS Q11
DSCPCP53	DCS: Learned Diab Care from Prim Care Prov	DCS Q13
DSCNPC53	DCS: Learned Diab Care from Other Prov	DCS Q13
DSCPHN53	DCS: Learned Diab Care from Phn Call w/Prov	DCS Q13
DSCINT53	DCS: Learned Diab Care from Reading Internet	DCS Q13
DSCGRP53	DCS: Learned Diab Care by Taking Grp Class	DCS Q13
DSCONF53	DSC: Confident Taking Care of Diabetes	DCS Q14
DSPRX53	DCS: Was Respondent a Proxy	Constructed

DISABILITY DAYS VARIABLES - PUBLIC USE

Variable	Description	Source
DDNWRK22	# Days Missed Work Due to Ill/Inj 2022	AH10, 20, 30
OTHDYS22	Miss Any Work Day to Care for Oth 2022	AH40
OTHNDD22	# Day Missed Work to Care for Oth 2022	AH50, 60

ACCESS TO CARE VARIABLES - PUBLIC USE

Variable	Description	Source
ACCELI42	Pers Eligible for Access Supplement-R4/2	Constructed
HAVEUS42	Does Person Have USC Provider-R4/2	AC10, 20
PRACTP42	Provider Own/Group Practice-R4/2	AC20, 30
YNOUSC42_M18	Main Reas Pers Doesnt Have USC-R4/2	AC40
PROVTY42_M18	Provider Type - R4/2	PV30LU, 70
PLCTYP42	USC Type of Place - R4/2	AC50
TMTKUS42	How Long It Takes Get to USC-R4/2	AC60
TYPEPE42	USC Type of Provider - R4/2	AC70, 80, 90
LOCATN42	USC Location - R4/2	Constructed
HSPLAP42	Is Provider Hispanic or Latino-R4/2	AC100
WHITPR42	Is Provider White - R4/2	AC110
BLCKPR42	Is Provider Black/African Amer-R4/2	AC110
ASIANP42	Is Provider Asian - R4/2	AC110
NATAMP42	Is Provider Native American - R4/2	AC110
PACISP42	Is Provider Oth Pacific Islndr-R4/2	AC110
OTHRCP42	Is Provider Some Other Race - R4/2	AC110
GENDRP42	Is Provider Male or Female - R4/2	AC120
PHNREG42	How Diff Contact USC By Phone-R4/2	AC140
OFFHOU42	USC Has Offce Hrs Nghts/Wkends-R4/2	AC150
AFTHOU42	How Diff Contact USC Aft Hours-R4/2	AC160
TREATM42	Prov Ask About Oth Treatments-R4/2	AC170
DECIDE42	Prov Asks Pers to Help Decide-R4/2	AC180
EXPLOP42	Prov Explns Options to Pers - R4/2	AC190
PRVSPK42	Prov Speaks Person’s Language-R4/2	AC200
DLAYCA42	Delay Med Care For Cost-R4/2	AC210, 220
AFRDCA42	Could Not Afford Med Care-R4/2	AC230, 240
DLAYDN42	Delay Getting Dental for Cost-R4/2	AC250, 260
AFRDDN42	Could Not Afford Dental Care-R4/2	AC270, 280
DLAYPM42	Delay Getting Pmed For Cost-R4/2	AC290, 300
AFRDPM42	Could Not Afford Pmed Care-R4/2	AC310, 320

EMPLOYMENT VARIABLES - PUBLIC USE

Variable	Description	Source
EMPST31	Employment Status RD 3/1	EM10-30; RJ10, 60
EMPST42	Employment Status RD 4/2	EM10-30; RJ10, 60
EMPST53	Employment Status RD 5/3	EM10-30; RJ10, 60
RNDFLG31	Data Collection Round for RD 3/1 CMJ	RJ10; Constructed
MORJOB31	Has More than One Job RD 3/1 Int Date	EM40, 230; RJ10, 60**;** Constructed
MORJOB42	Has More than One Job RD 4/2 Int Date	EM40, 230; RJ10, 60**;** Constructed
MORJOB53	Has More than One Job RD 5/3 Int Date	EM40, 230; RJ10, 60**;** Constructed
EVRWRK	Ever Wrkd for Pay in Life as of 12/31/22	EM300; Constructed
HRWG31X	Hourly Wage RD 3/1 CMJ (Imp)	EW10, 20, 30, 40, 50, 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290, EM420, 540, 550
HRWG42X	Hourly Wage RD 4/2 CMJ (Imp)	EW10, 20, 30, 40, 50, 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290, EM420, 540, 550
HRWG53X	Hourly Wage RD 5/3 CMJ (Imp)	EW10, 20, 30, 40, 50, 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290, EM420, 540, 550
HRWGIM31	HRWG31X Imputation Flag	Constructed
HRWGIM42	HRWG42X Imputation Flag	Constructed
HRWGIM53	HRWG53X Imputation Flag	Constructed
HRHOW31	How Hourly Wage Was Calculated RD 3/1	EM420, 540, EW20-220, 260, 270, 280, 290
HRHOW42	How Hourly Wage Was Calculated RD 4/2	EM420, 540, EW20-220, 260, 270, 280, 290

Variable	Description	Source
HRHOW53	How Hourly Wage Was Calculated RD 5/3	EM420, 540, EW20-220, 260, 270, 280, 290
DIFFWG31	Persons Wages Different this RD 3/1 at CMJ	EM420, RJ10, 30
DIFFWG42	Persons Wages Different this RD 4/2 at CMJ	EM420, RJ10, 30
DIFFWG53	Persons Wages Different this RD 5/3 at CMJ	EM420, RJ10, 30
NHRWG31	Updated Hrly Wage RD 3/1 CMJ (Edited)	EW10, 20, 30, 40, 50 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290; RJ10, 30, 60, EM420, 540, 550
NHRWG42	Updated Hrly Wage RD 4/2 CMJ (Edited)	EW10, 20, 30, 40, 50 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290; RJ10, 30, 60, EM420, 540, 550
NHRWG53	Updated Hrly Wage RD 5/3 CMJ (Edited)	EW10, 20, 30, 40, 50 60, 70, 110, 120, 130, 140, 180, 190, 260, 270, 280, 290; RJ10, 30, 60, EM420, 540, 550
HOUR31	Hours Per Week at RD 3/1 CMJ	EM540-550
HOUR42	Hours Per Week at RD 4/2 CMJ	EM540-550, RJ10
HOUR53	Hours Per Week at RD 5/3 CMJ	EM540-550, RJ10
TEMPJB31	Is CMJ a Temporary Job RD 3/1	EM560
TEMPJB42	Is CMJ a Temporary Job RD 4/2	EM560
TEMPJB53	Is CMJ a Temporary Job RD 5/3	EM560
SSNLJB31	Is CMJ a Seasonal Job RD 3/1	EM570
SSNLJB42	Is CMJ a Seasonal Job RD 4/2	EM570
SSNLJB53	Is CMJ a Seasonal Job RD 5/3	EM570
SELFCM31	Self-Employed at RD 3/1 CMJ	EM420
SELFCM42	Self-Employed at RD 4/2 CMJ	EM420, RJ10
SELFCM53	Self-Employed at RD 5/3 CMJ	EM420, RJ10

Variable	Description	Source
DISVW31X	Disavowed Health Ins at RD 3/1 CMJ (Ed)	EM480, 660-670, 710-720, 740; RJ70, 80; HX and OE Sections
DISVW42X	Disavowed Health Ins at RD 4/2 CMJ (Ed)	EM480, 660-670, 710-720, 740; RJ70, 80; HX and OE Sections
DISVW53X	Disavowed Health Ins at RD 5/3 CMJ (Ed)	EM480, 660-670, 710-720, 740; RJ70, 80; HX and OE Sections
CHOIC31	Choice of Health Plans at RD 3/1 CMJ	EM480, 660 - 680, 740
CHOIC42	Choice of Health Plans at RD 4/2 CMJ	EM480, 660 - 680, 740, RJ10
CHOIC53	Choice of Health Plans at RD 5/3 CMJ	EM480, 660 - 680, 740, RJ10
INDCAT31	Industry Group RD 3/1 CMJ	EM50, 80, 110, 240, 480, 490, 500, 510; RJ10; Constructed
INDCAT42	Industry Group RD 4/2 CMJ	EM50, 80, 110, 240, 480, 490, 500, 510; RJ10; Constructed
INDCAT53	Industry Group RD 5/3 CMJ	EM50, 80, 110, 240, 480, 490, 500, 510; RJ10; Constructed
NUMEMP31	Number of Employees at RD 3/1 CMJ	EM420, 430-440, 740; Imputed
NUMEMP42	Number of Employees at RD 4/2 CMJ	EM420, 430-440, 740; Imputed
NUMEMP53	Number of Employees at RD 5/3 CMJ	EM420, 430-440, 740; Imputed
MORE31	RD 3/1 CMJ Firm Has More than 1 Location	EM420, 450
MORE42	RD 4/2 CMJ Firm Has More than 1 Location	EM10-30, 230, 420, 450; RJ10
MORE53	RD 5/3 CMJ Firm Has More than 1 Location	EM10-30, 230, 420, 450; RJ10
UNION31	Union Status at RD 3/1 CMJ	EM10-30, 230, 480, 700; RJ10

Variable	Description	Source
UNION42	Union Status at RD 4/2 CMJ	EM10-30, 230, 480, 700; RJ10
UNION53	Union Status at RD 5/3 CMJ	EM10-30, 230, 480, 700; RJ10
NWK31	Reason Not Working During RD 3/1	EM300, 750
NWK42	Reason Not Working During RD 4/2	EM300, 750
NWK53	Reason Not Working During RD 5/3	EM300, 750
CHGJ3142	Changed Job between RD 3/1 and RD 4/2	RJ10
CHGJ4253	Changed Job between RD 4/2 and RD 5/3	RJ10
YCHJ3142	Why Chngd Job between RD 3/1 and RD 4/2	RJ10, 130
YCHJ4253	Why Chngd Job between RD 4/2 and RD 5/3	RJ10, 130
STJBMM31	Month Started RD 3/1 CMJ	EM60_01-02, 90_01-02, 110_01-02, 250_01-02; RJ10
STJBYY31	Year Started RD 3/1 CMJ	EM60_01, 90_01, 110_01, 250_01; RJ10
STJBMM42	Month Started RD 4/2 CMJ	EM60_01-02, 90_01-02, 110_01-02, 250_01-02; RJ10
STJBYY42	Year Started RD 4/2 CMJ	EM60_01, 90_01, 110_01, 250_01; RJ10
STJBMM53	Month Started RD 5/3 CMJ	EM60_01-02, 90_01-02, 110_01-02, 250_01-02; RJ10
STJBYY53	Year Started RD 5/3 CMJ	EM60_01, 90_01, 110_01, 250_01; RJ10
EVRETIRE	Person Has Ever Retired	EM350, Constructed
OCCCAT31	Occupation Group RD 3/1 CMJ	EM480, 490, 500, 510; Constructed
OCCCAT42	Occupation Group RD 4/2 CMJ	EM480, 490, 500, 510; RJ10; Constructed
OCCCAT53	Occupation Group RD 5/3 CMJ	EM480, 490, 500, 510; RJ10; Constructed

Variable	Description	Source
PAYVAC31	Paid Vacation at RD 3/1 CMJ	EM420, 600
PAYVAC42	Paid Vacation at RD 4/2 CMJ	EM420, 600; RJ10
PAYVAC53	Paid Vacation at RD 5/3 CMJ	EM420, 600; RJ10
SICPAY31	Paid Sick Leave at RD 3/1 CMJ	EM420, 580
SICPAY42	Paid Sick Leave at RD 4/2 CMJ	EM420, 580; RJ10
SICPAY53	Paid Sick Leave at RD 5/3 CMJ	EM420, 580; RJ10
PAYDR31	Paid Leave to Visit Dr RD 3/1 CMJ	EM420, 580-590
PAYDR42	Paid Leave to Visit Dr RD 4/2 CMJ	EM420, 580-590; RJ10
PAYDR53	Paid Leave to Visit Dr RD 5/3 CMJ	EM420, 580-590; RJ10
RETPLN31	Pension Plan at RD 3/1 CMJ	EM420, 610
RETPLN42	Pension Plan at RD 4/2 CMJ	EM420, 610; RJ10
RETPLN53	Pension Plan at RD 5/3 CMJ	EM420, 610; RJ10
BSNTY31	Sole Prop, Partner, Corp, RD 3/1 CMJ	EM420 ,460-470
BSNTY42	Sole Prop, Partner, Corp, RD 4/2 CMJ	EM420, 460-470; RJ10
BSNTY53	Sole Prop, Partner, Corp, RD 5/3 CMJ	EM420, 460-470; RJ10
JOBORG31	Priv (Profit,Nonprofit) Gov RD 3/1 CMJ	EM420, 480
JOBORG42	Priv (Profit,Nonprofit) Gov RD 4/2 CMJ	EM420, 480; RJ10
JOBORG53	Priv (Profit,Nonprofit) Gov RD 5/3 CMJ	EM420, 480; RJ10
HELD31X	Health Insur Held from RD 3/1 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70, 80, 110; HX, HP, and OE Sections
HELD42X	Health Insur Held from RD 4/2 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70, 80, 110; HX, HP, and OE Sections
HELD53X	Health Insur Held from RD 5/3 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70, 80, 110; HX, HP, and OE Sections
OFFER31X	Health Insur Offered by RD 3/1 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70-90, 110, HX Sections

Variable	Description	Source
OFFER42X	Health Insur Offered by RD 4/2 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70-90, 110, HX Sections
OFFER53X	Health Insur Offered by RD 5/3 CMJ (Ed)	EM480, 660, 670, 710, 740; RJ70-90, 110, HX Sections
OFREMP31	Employer Offers Health Ins RD 3/1 CMJ	EM690, 740; RJ100
OFREMP42	Employer Offers Health Ins RD 4/2 CMJ	EM690, 740; RJ100
OFREMP53	Employer Offers Health Ins RD 5/3 CMJ	EM690, 740; RJ100
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

Variable	Description	Source
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
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

Variable	Description	Source
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
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

Variable	Description	Source
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
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

Variable	Description	Source
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
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

Variable	Description	Source
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
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
TRImm22X	Covered by TRICARE/CHAMPVA in mm 22 (Ed), where mm = JA-DE	HX120_01, 125_01, 230,PR260_01-280_01, HQ Section
MCRmm22	Covered by Medicare in mm 22, where mm = JA-DE	HX40_01, 50_01, 60,230
MCRmm22X	Covered by Medicare in mm 22 (Ed), where mm = JA-DE	HX40_01, 50_01, 60, 230, see Section 2.5.10 for additional edit specifications
MCDmm22	Cov by Medicaid or SCHIP in mm 22, where mm = JA-DE	HX100, 230, PR150_01-160_01 and HQ Section
MCDmm22X	Cov by Medicaid or SCHIP in mm 22 (Ed), where mm = JA-DE	HX100_01, 230, PR150_01-160_01 and MCDmm20, Section 2.5.10 for additional edit specifications
GVAmm22	Cov by Other Public Coverage in mm 22, where mm = JA-DE	HQ Section, HX170_01, 230, PR310_01-320_01 and HQ Section
GVBmm22	Cov by Other Public HMO in mm 22, where mm = JA-DE	HX170_01, 230, 530-540, PR310_01-320_01, 340-350 and HQ Section

Variable	Description	Source
GVCmm22	Cov by Other Public Pays Prem in mm 22, where mm = JA-DE	HX170_01, 230, 560-570, PR310_01-320_01, 370-380 and HQ Section
VAPmm22	Covered by VA in mm 22, where mm=JA-DE	HX120_01-125_01, 230, PR260_01 - 280_01
IHSmm22	Cov by Indian Health Service in mm 22, where mm=JA-DE	HX140, PR290_01, 300_01
PUBmm22X	Covr by Any Public Ins in mm 22 (Ed), where mm = JA-DE	TRImm22X, MCRmm22X, MCDmm22X, GVAmm22, VAPmm22
PEGmm22	Covered by Empl Union Ins in mm 22, where mm = JA-DE	HX20, HX200, 300, 620; HP, OE, HQ, EM, RJ Sections
PDKmm22	Covr by Priv Ins (Source Unknwn) mm 22, where mm = JA-DE	HX200, 300, 620, HP, OE, and HQ Sections
PNGmm22	Covered by Nongroup Ins in mm 22, where mm = JA-DE	HX200, 300, 620, HP, OE, and HQ Sections
POGmm22	Covered by Other Group Ins in mm 22, where mm = JA-DE	HX200, 300, 620, HP, OE, and HQ Sections
POEmm22	Cov by ESI, Pholder Outside RU in mm 22, where mm = JA-DE	HX200, 300, 620, HP130, HQ, OE, RJ and EM sections
PNEmm22	Cov by Non-ESI, Phldr Outside RU in mm 22, where mm = JA-DE	HX200, 300, 620, HP130, OE, and HQ Sections
PRXmm22	Cov by Priv Ins through Exchng in mm 22, where mm = JA-DE	HX200, 300, 620,HP, OE, and HQ Sections

Variable	Description	Source
PRImm22	Covered by Private Ins in mm 22, where mm = JA-DE	POGmm22, PDKmm22, PEGmm22, PNEmm22, POEmm22, PNGmm22, PRXmm22
HPEmm22	Pholder of Empl Union Ins in mm 22, where mm = JA-DE	PEGmm22, HP70
HPDmm22	Pholder of Priv Ins (Source Unknwn) mm 22, where mm = JA-DE	PDKmm22; HP90
HPNmm22	Pholder of Nongroup Ins in mm 22, where mm = JA-DE	PNGmm22; HP90
HPOmm22	Pholder of Other Group Ins in mm 22, where mm = JA-DE	POGmm22; HP90
HPXmm22	Pholder of Priv Ins through Exch in mm 22, where mm = JA-DE	PRXmm22; HP90
HPRmm22	Pholder of Private Insurance in mm 22, where mm = JA-DE	HPEmm22, HPNmm22, HPDmm22, HPXmm22
INSmm22X	Covr by Hosp/Med Ins in mm 22 (Ed), where mm = JA-DE	PUBmm22X, PRImm22

SUMMARY HEALTH INSURANCE COVERAGE INDICATORS

Variable	Description	Source
PRVEV22	Ever Have Private Insurance during 2022	Constructed
TRIEV22	Ever Have TRICARE/CHAMPVA during 2022	Constructed
MCREV22	Ever Have Medicare during 2022 (ED)	Constructed
MCDEV22	Ever Have MCAID/SCHIP during 2022 (ED)	Constructed
VAEV22	Ever Have VA during 2022	Constructed
GVAEV22	Ever Have Other Public during 2022	Constructed
GVBEV22	Ever Have Other Public HMO during 2022	Constructed
GVCEV22	Ever Have Oth Pub Pays Prem during 2022	Constructed
UNINS22	Uninsured All of 2022	Constructed
INSCOV22	Health Insurance Coverage Indicator 2022	Constructed

Variable	Description	Source
INSURC22	Full Year Insurance Coverage Status 2022	Constructed

MANAGED CARE VARIABLES

Variable	Description	Source
TRICH31X	Covered By CHAMPVA - Any Time in R3/1	HX230, 260, PR260_01, 270_01, 280_01, HQ Section
TRICH42X	Covered By CHAMPVA - Any Time in R4/2	HX230, 260, PR260_01, 270_01, 280_01, HQ Section
TRICH22X	Covered By CHAMPVA - R5/3 Until 12/31/22	HX230, 260, PR260_01, 270_01, 280_01, HQ Section
TRI31X	Cov By TRICARE - Any Time in R3/1	HX125_01, 260, PR280_01
TRI42X	Cov By TRICARE - Any Time in R4/2	HX125_01, 260, PR280_01
TRI22X	Cov By TRICARE - R5/3 Til 12/31/22	HX125_01, 260, PR280_01
MCRPHD22	Cov By Medicare Mnged Care Dntl Benefit -12/31/22	HX40_01, 50_01, 60, 390, 415, PR10, 35
MCRPD31	Cov By Medicare Pmed Benefit - R3/1	HX40_01, 50_01, 60, 230, 410, 470, PR30, 90, HQ Section
MCRPD42	Cov By Medicare Pmed Benefit - R4/2	HX40_01, 50_01, 60, 230, 410, 470, PR30, 90, HQ Section
MCRPD22	Cov By Medicare Pmed Benefit - 12/31/22	HX40_01, 50_01, 60, 230, 410, 470, PR30, 90, 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
MCRPD22X	Cov By Mcare Pmed Benefit-12/31/22 (ED)	MCARE22X, MCAID22X, MCRPD22
MCRPHO31	Cov By Medicare Managed Care/Medicare Advantage - R3/1	HX40_01, 50_01, 60, 230, 390, PR10, HQ Section
MCRPHO42	Cov By Medicare Managed Care/Medicare Advantage - R4/2	HX40_01, 50_01, 60, 230, 390, PR10, HQ Section
MCRPHO22	Cov By Medicare Managed Care/Medicare Advantage - 12/31/22	HX40_01, 50_01, 60, 230, 390, PR10, HQ Section
MCDHMO31	Cov By Mcaid/SCHIP HMO -Any Time in R3/1	MCDAT31X, HX100, 230, 530 PR150_01-160_01, 180, 340, and HQ Section
MCDHMO42	Cov By Mcaid/SCHIP HMO -Any Time in R4/2	MCDAT42X, HX100, 230, 530 PR150_01-160_01, 180, 340, and HQ Section
MCDHMO22	Cov By Mcaid/SCHIP HMO-R5/3 Til 12/31/22	MCDAT22X, HX100, 230, 530 PR150_01-160_01, 180, 340, and HQ Section
MCDMC31	Cv Mcaid/CHIP Gtkpr Pln-Any Time in R3/1	MCDHMO31, MCDAT31X, HX100, 230, 540 PR150_01-160_01, 190, 350, and HQ Section

Variable	Description	Source
MCDMC42	Cv Mcaid/CHIP Gtkpr Pln-Any Time in R4/2	MCDHMO42, MCDAT42X, HX100, 230, 540, PR150_01-160_01, 190, 350 and HQ Section
MCDMC22	Cv Mcd/CHIP Gtkpr Pln-R5/3 Til 12/31/22	MCDHMO22, MCDAT22X, HX100, 230, 540, PR150_01-160_01, 190, 350 and HQ Section
PRVHMO31	Covered By Private HMO-Any Time in R3/1	MC10, HX200, 300, 620; HP, OE, HQ, EM, and RJ Sections
PRVHMO42	Covered By Private HMO-Any Time in R4/2	MC10, HX200, 300, 620; HP, OE, HQ, EM, and RJ Sections
PRVHMO22	Covered By Private HMO-R5/3 Til 12/31/22	MC10, HX620; HP, OE, HQ, EM, and RJ Sections

FLEXIBLE SPENDING ACCOUNT VARIABLES

Variable	Description	Source
FSAGT31	Anyone in RU Have FSA - R3/1	HX720
HASFSA31	Person is FSA Holder - R3/1	HX730
PFSAMT31	Person-level FSA Total Amount - R3/1	HX740_01

DURATION OF HEALTH INSURANCE VARIABLES

Variable	Description	Source
PREVCOVR	Per Cov by Ins in Prev 2 Yrs-Pnl 25 Only	HX750
MORECOVR	Cov by Mor Compr Pl Prev 2 Yr-Pn 25 Only	HX760

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
TRICR22X	Cov by TRICR/CHAMV - 12/31/22 (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
TRIAT22X	Cov TRICARE/CHAMPVA-R5/3 Until 12/31/22	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
MCAID22	Cov by Medicaid or SCHIP - 12/31/22	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
MCAID22X	Cov by Medicaid or SCHIP - 12/31/22 (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
MCARE22	Cov by Medicare - 12/31/22	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
MCARE22X	Cov by Medicare - 12/31/22 (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
MCDAT22X	Cv Mcd/CHIP-Any Tme In R5/3 Til 12/31/22	Constructed
GOVTA31	Cov by Other Public Cov - R3/1 Int Dt	Constructed
GOVTA42	Cov by Other Public Cov - R4/2 Int Dt	Constructed
GOVTA53	Cov by Other Public Cov 12-31/R3 Int Dt	Constructed

Variable	Description	Source
GOVTA22	Cov by Other Public Cov - 12/31/22	Constructed
GOVAAT31	Cov by Other Public -Any Time in R3/1	Constructed
GOVAAT42	Cov by Other Public -Any Time in R4/2	Constructed
GOVAAT53	Cov by Other Public -Any Time in R5/3	Constructed
GOVAAT22	Cv Oth Pub- Any Time in R5/3 Til 12/31/22	Constructed
GOVTB31	Cov By Oth Pub HMO - R3/1 Int Dt	Constructed
GOVTB42	Cov By Oth Pub HMO - R4/2 Int Dt	Constructed
GOVTB53	Cov By Oth Pub HMO 12-31/R3 Int Dt	Constructed
GOVTB22	Cov By Oth Pub HMO - 12/31/22	Constructed
GOVBAT31	Cov By Oth Pub HMO-Any Time in R3/1	Constructed
GOVBAT42	Cov By Oth Pub HMO-Any Time in R4/2	Constructed
GOVBAT53	Cov By Oth Pub HMO-Any Time in R5/3	Constructed
GOVBAT22	Cov Oth Pb HMO-Any Tm R5/3 Til 12/31/22	Constructed
GOVTC31	Cov By Oth Pub Pays Prem - R3/1 Int Dt	Constructed
GOVTC42	Cov By Oth Pub Pays Prem - R4/2 Int Dt	Constructed
GOVTC53	Cov By Oth Pub Pays Prem 12-31/R3 Int Dt	Constructed
GOVTC22	Cov By Oth Pub Pays Prem - 12/31/22	Constructed
GOVCAT31	Cv By Oth Pub Pays Prem-Any Time in R3/1	Constructed
GOVCAT42	Cv By Oth Pub Pays Prem-Any Time in R4/2	Constructed
GOVCAT53	Cv By Oth Pub Pays Prem-Any Time in R5/3	Constructed
GOVCAT22	Cv Oth Pub Pays Prem- R5/3 Til 12/31/22	Constructed
VAPROG31	Cov By VA - R3/1 Int Dt	Constructed
VAPROG42	Cov By VA - R4/2 Int Dt	Constructed
VAPROG53	Cov By VA 12-31/R3 Int Dt	Constructed
VAPROG22	Cov By VA- 12/31/22	Constructed
VAPRAT31	Cov By VA - Any Time in R3/1	Constructed
VAPRAT42	Cov By VA - Any Time in R4/2	Constructed
VAPRAT53	Cov By VA - Any Time in R5/3	Constructed
VAPRAT22	Cov By VA-Any Tme In R5/3 Til 12/31/22	Constructed
IHS31	Cv By Indian Health Service- R3/1 Int Dt	Constructed
IHS42	Cv By Indian Health Service- R4/2 Int Dt	Constructed
IHS53	Cv By IHS 12-31/R3 Int Dt	Constructed
IHS22	Cov By IHS - 12/31/22	Constructed

Variable	Description	Source
IHSAT31	Cov By IHS - Any Time in R3/1	Constructed
IHSAT42	Cov By IHS - Any Time in R4/2	Constructed
IHSAT53	Cov By IHS - Any Time in R5/3	Constructed
IHSAT22	Cov By IHS-Any Tme In R5/3 Til 12/31/22	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
PRIDK22	Cov by Priv Ins (Dk Plan) - 12/31/22	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
PRIEU22	Cov by Empl/Union Grp Ins - 12/31/22	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
PRING22	Cov by Non-Group Ins - 12/31/22	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
PRIOG22	Cov by Other Group Ins - 12/31/22	Constructed
PRINEO31	Cov By Non-ESI, PHoldr Out RU - R3/1 Int Dt	Constructed
PRINEO42	Cov By Non-ESI, PHoldr Out RU - R4/2 Int Dt	Constructed
PRINEO53	Cov By Non-ESI, PHoldr Out RU 12-31/R3 Int Dt	Constructed
PRINEO22	Cov By Non-ESI, PHoldr Out RU- 12/31/22	Constructed
PRIEUO31	Cov By ESI, Pholdr Outside RU - R3/1 Int	Constructed
PRIEUO42	Cov By ESI, Pholdr Outside RU - R4/2 Int	Constructed
PRIEUO53	Cv By ESI, Phldr Outside RU 12-31/R3 Int	Constructed
PRIEUO22	Cov By ESI, PHoldr Outside RU - 12/31/22	Constructed
PRSTX31	Cov by Priv Exchange Ins - R3/1 Int Dt	Constructed
PRSTX42	Cov by Priv Exchange Ins - R4/2 Int Dt	Constructed
PRSTX53	Priv Exchange Ins on 12-31 R5/R3 Int Dt	Constructed
PRSTX22	Priv Exchange Insurance on 12/31/22	Constructed
PRIV31	Cov by Priv Hlth Ins - R3/1 Int Date	Constructed

Variable	Description	Source
PRIV42	Cov by Priv Hlth Ins - R4/2 Int Date	Constructed
PRIV53	Cov by Priv Hlth Ins 12-31/R3 Int Date	Constructed
PRIV22	Cov by Priv Hlth Ins - 12/31/22	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
PRIVAT22	Cov by Private Ins - R5/3 Until 12/31/22	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
PUB22X	Cov by Public Ins - 12/31/22 (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
PUBAT22X	Cov by Public - R5/3 Until 12/31/22	Constructed
VERFLG31	PID Gained Covg Thru Verification R3/1	Constructed
VERFLG42	PID Gained Covg Thru Verification R4/2	Constructed
VERFLG22	PID Gained Covg Thru Verification in R5/R3 Until 12/31/22	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
INS22X	Insured - 12/31/22 (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
INSAT22X	Insured Any Time in R5/R3 until 12/31/22	Constructed

DENTAL AND PRESCRIPTION DRUG PRIVATE INSURANCE VARIABLES

Variable	Description	Source
DENTIN31	Dental Insurance- Any Time in RD 3/1	Constructed
DENTIN42	Dental Insurance- Any Time in RD 4/2	Constructed

Variable	Description	Source
DENTIN53_M23	Dental Insurance- Any Time in RD 5/3	Constructed
DNTINS31	Dental Ins - Any Time In Rd 3/1 in 2022	Constructed
DNTINS22_M23	Dentl Ins-Any Time in R5/R3 Til 12/31/22	Constructed
PMEDIN31	PMED Ins - Any Time in Rd 3/1	Constructed
PMEDIN42	PMEDINS - Any Time in Rd 4/2	Constructed
PMEDIN53	PMEDINS - Any Time in Rd 5/3	Constructed
PMDINS31	Pmed Ins - RD 3/1 in 2022	Constructed
PMDINS22	Pmed Ins - R5/R3 until 12/31/22	Constructed

MEDICAL DEBT VARIABLES

Variable	Description	Source
PROBPY42	Family Having Prob Paying Medical Bills	HX770
CRFMPY42	Family Med Bills Being Paid Over Time	HX780
PYUNBL42	Unable to Pay Family Medical Bills	HX790

THIRD PARTY PAYER VARIABLES - PUBLIC USE

Variable	Description	Source
PMEDUP31	Has Usual 3rd Party Payer for Pmeds - R3/1	Constructed
PMEDUP42	Has Usual 3rd Party Payer for Pmeds - R4/2	Constructed
PMEDUP53	Has Usual 3rd Party Payer for Pmeds - R5/3	Constructed
PMEDPY31	Usual 3rd Party Payer for Pmeds - R3/1	Constructed
PMEDPY42	Usual 3rd Party Payer for Pmeds - R4/2	Constructed
PMEDPY53	Usual 3rd Party Payer for Pmeds - R5/3	Constructed

PERSON-LEVEL UTILIZATION VARIABLES - PUBLIC USE

Variable	Description	Source
OBTOTV22	# Office-Based Provider Visits 2022	Constructed
OBDRV22	# Office-Based Physician Visits 2022	Constructed
OPTOTV22	# Outpatient Dept Provider Visits 2022	Constructed
OPDRV22	# Outpatient Dept Physician Visits 2022	Constructed
ERTOT22	# Emergency Room Visits 2022	Constructed
IPDIS22	# Hospital Discharges 2022	Constructed
IPNGTD22	# Nights in Hosp for Discharges 2022	Constructed
DVTOT22	# Dental Care Visits 2022	Constructed
HHTOTD22	# Home Health Provider Days 2022	Constructed
HHAGD22	# Agency Home Health Provider Days 2022	Constructed
HHINDD22	# Non-Agency Home Hlth Providr Days 2022	Constructed
HHINFD22	# Informal Home Hlth Provider Days 2022	Constructed
RXTOT22	# Prescribed Medicines including Refills 2022	Constructed

WEIGHTS VARIABLES - PUBLIC USE

Variable	Description	Source
PERWT22F	Final Person Weight, 2022	Constructed
FAMWT22F	Final Family Weight, 2022	Constructed
FAMWT22C	Pov Adj Family Weight-CPS Fam on 12/31/22	Constructed
SAQWT22F	Final SAQ Person Weight, 2022	Constructed
DIABW22F	Final Diabetes Care Supplement Weight, 2022	Constructed
VARSTR	Variance Estimation Stratum, 2022	Constructed
VARPSU	Variance Estimation PSU, 2022	Constructed

Appendix 1
CAPI Section Abbreviations

MEPS CAPI Section Abbreviations and their Meanings FY2022

Section Abbreviation	Full Section Name
AC	Access to Care
AH	Additional Healthcare Questions
AS	Assets
CA	Calendar
CL	Closing
CP	Charge/Payment
CS	Child Preventive Health
CV	COVID Delays
DN	Dental Visit
ED	Event Driver
EE	Event Enumeration
EF	Event Follow-Up
EMA	Employment
EMO	Employment
ER	Emergency Room
EV	Event Roster
EW	Employment Wages
FF	Flat Fee
FS	Food Security
HE	Health Status
HH	Home Health
HP	Health Insurance Detail
HQ	Time Period Covered Detail
HS	Hospital Stay
HX	Health Insurance

Section Abbreviation	Full Section Name
IC	Institutional Care Stay
IN	Income
MC	Managed Care
MV	Medical Visit
OE	Old Empl\Priv Related Ins
OF	Off Path Navigation
OM	Other Medical Expenses
OP	Outpatient Department
PE	Priority Condition Enumeration
PM	Prescribed Medicines
PP	Provider Probes
PR	Old Public Related Insurance
PV	Provider Roster
QS	Quality Supplement
REA	Reenumeration A
REB	Reenumeration B
RF	Respondent Forms
RJ	Review of Employment
SHE	Social and Health Experiences
ST	Start/Restart
TH	Telehealth

Appendix 2
MEPS Industry Codes Condensing Rules

MEPS Industry Codes Condensing Rules FY2010 and Subsequent Files

Condensed industry code	Census industry code range	Description
1	0170 - 0290	Natural Resources
2	0370 - 0490	Mining
3	0770	Construction
4	1070 - 3990	Manufacturing
5	4070 - 4590, 4670 - 5790	Wholesale and Retail Trade
6	0570 - 0690, 6070 - 6390	Transportation and Utilities
7	6470 - 6780	Information
8	6870 - 7190	Financial Activities
9	7270 - 7790	Professional and Business Services
10	7860 - 8470	Education, Health, and Social Services
11	8560 - 8690	Leisure and Hospitality
12	8770 - 9290	Other Services
13	9370 - 9590	Public Administration
14	9890	Military
15	9990	Unclassifiable Industry

MEPS uses the 4-digit Census occupation and industry coding systems developed for the Current Population Survey and the American Community Survey.

For industry coding, MEPS uses the 2007 4-digit Census industry codes. Descriptions of the 4-digit Census industry codes and their cross-walk to North American Industry Classification System (NAICS) can be found at the U.S. Census Bureau website.

See Census IO Index for more information on the Census coding systems used by MEPS.

Appendix 3
MEPS Occupation Codes Condensing Rules

MEPS Occupation Codes Condensing Rules FY2010 and Subsequent Files

Condensed occupation code	Census occupation code range	Description
1	0010 - 0950	Management, Business, and Financial Operations Occupations
2	1005 - 3540	Professional and Related Occupations
3	3600 - 4650	Service Occupations
4	4700 - 4965	Sales and Related Occupations
5	5000 - 5940	Office and Administrative Support Occupations
6	6005 - 6130	Farming, Fishing, and Forestry Occupations
7	6200 - 7630	Construction, Extraction, and Maintenance Occupations
8	7700 - 9750	Production, Transportation, and Material Moving Occupations
9	9840	Military Specific Occupations
10	9920	Not in Labor Force
11	9990	Unclassifiable Occupation

MEPS uses the 4-digit Census occupation and industry coding systems developed for the Current Population Survey and the American Community Survey.

For occupation coding, MEPS uses the 2010 4-digit Census occupation codes. Descriptions of the 4-digit Census occupation codes and their cross-walk to Standard Occupational Classification (SOC) system can be found at the U.S. Census Bureau website.

See the Census IO Index for more information on the Census coding systems used by MEPS.

Appendix 4
Summary of Utilization and Expenditure Variables by Health Service Category

Health Service Category	Utilization Variable(s)	Expenditure Variable(s)[1]
All Health Services	--	TOT***22
Total Office Based Visits (Physician + Non-physician + Unknown)	OBTOTV22	OBV***22
Office Based Visits to Physicians	OBDRV22	OBD***22
Total Outpatient Visits (Physician + Non-physician + Unknown)	OPTOTV22	--
Sum of Facility and SBD Expenses	--	OPT***22
Facility Expense	--	OPF***22
SBD Expense	--	OPD***22
Outpatient Visits to Physicians	OPDRV22	--
Facility Expense	--	OPV***22
SBD Expense	--	OPS***22
Total Emergency Room Visits	ERTOT22	--
Sum of Facility and SBD Expenses	--	ERT***22
Facility Expense	--	ERF***22
SBD Expense	--	ERD***22
Total Inpatient Stays	IPDIS22, IPNGTD22	--
Sum of Facility and SBD Expenses	--	IPT***22
Facility Expense	--	IPF***22
SBD Expense	--	IPD***22
Total Prescription Medicines	RXTOT22	RX***22
Total Dental Visits	DVTOT22	DVT***22
Total Home Health Care	HHTOTD22	--
Agency Sponsored	HHAGD22	HHA***22
Paid Independent Providers	HHINDD22	HHN***22

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

Health Service Category	Utilization Variable(s)	Expenditure Variable(s)[1]
Informal	HHINFD22	--
Vision Aids	--	VIS***22
Other Medical Supplies and Equipment	--	OTH***22

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 Unclassified Sources	OSR

Collapsed Source of Payment Category	***
Private and TRICARE	PTR
Other Federal, Other State and Local, and Other Unclassified Sources	OTH
Total charges[2]	TCH

2 No charge variables on file for prescription medicines.