MEPS HC 250:
2023 Person Round Plan Public Use File

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Agency for Healthcare Research and Quality
Center for Financing, Access, and Cost Trends
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A. Data Use Agreement

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

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

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

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

3. No one will attempt to link this 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 five rounds of interviews covering 2 full calendar years. 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 up to 15,000 households. Data can be analyzed at the person, the family, or the 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 sample members to contact their medical provider(s), a sample of these providers is contacted by telephone to obtain information that household respondents 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 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 public use data file contains data for each person with private health insurance reported in Rounds 3, 4, and 5 of Panel 27 and Rounds 1, 2, and 3 of Panel 28 (i.e., the rounds for the survey panels covering calendar year 2023) of the MEPS HC. The 2023 MEPS HC includes two panels of data. This public use file (PUF) was released as an ASCII file (with related R, SAS, SPSS, and Stata programming statements and data user information) and as a SAS dataset, a SAS transport file, a Stata dataset, and an Excel file. This PUF provides information collected on a nationally representative sample of the U.S. civilian noninstitutionalized population during the calendar year 2023. The HC 250 Person-Round-Plan Public Use File (hereafter referred to as the PRPL PUF) contains records for persons insured through private establishments providing hospital/physician, Medigap, dental, or prescription medication coverage and includes variables pertaining to HMOs and vision coverage.

Most records contained in this PUF are associated with persons in MEPS 2023 Full-Year Consolidated Public Use File (HC 251, hereafter referred to as the Consolidated PUF). However, the record of a policyholder not present in the Consolidated PUF will be retained in the PRPL PUF if it is associated with a covered dependent with a positive weight in the Consolidated PUF. This PUF contains 56 variables and has a logical record length of 230 with an additional 2-byte carriage return/line feed at the end of each record.

Analysts using the 2023 PRPL PUF should take note of the special considerations noted in the Survey Sample Information and the Using MEPS Data for Trend Analysis sections of the HC 251 documentation regarding modifications to sampling, collection, and trends in other federal samples due to the pandemic.

2.0 Data File Description

The PRPL PUF for 2023 is a complex file of privately insured persons and their private health insurance plans and links to any jobs providing insurance. The PRPL PUF is designed to facilitate research on the sometimes complex and dynamic relationships between consumers and their private insurance. It is not a person-level file, and linking the PRPL PUF to a person-level file (such as the Consolidated PUF [HC 251]) requires researchers to make analytic decisions based on understanding the complexity of the PRPL PUF.

Records contain the following types of information (see Figure 1):

- Covered person
  - Flags indicating if the person is the policyholder or a dependent
  - Whether enrolled at time of interview

  - Months enrolled during the reference period of the interview

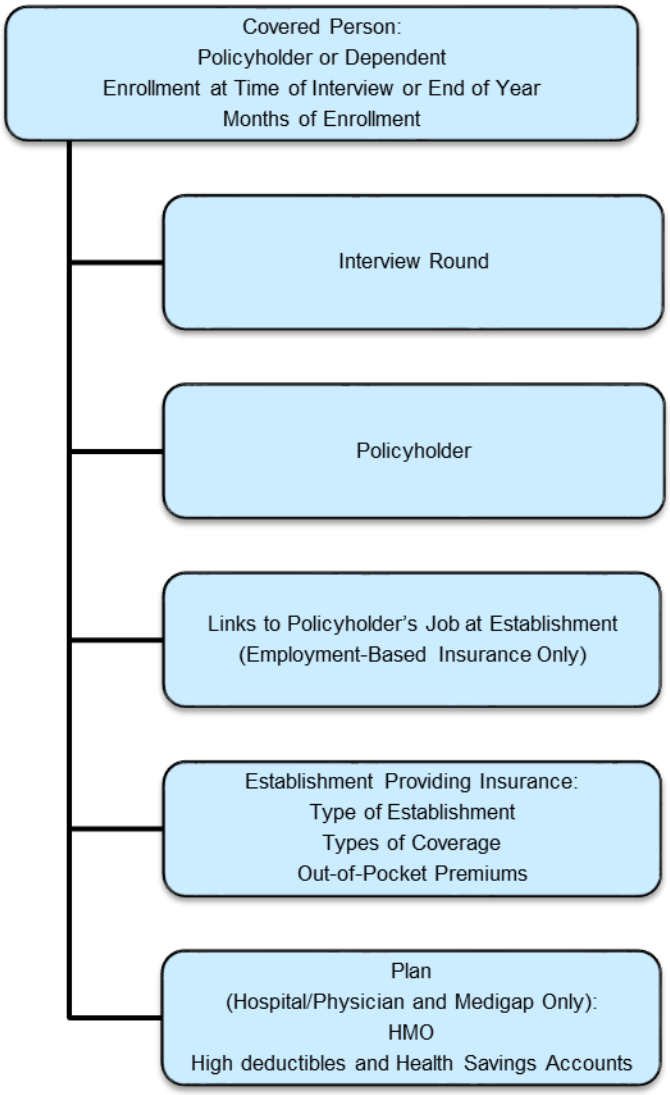
- Interview Round
- Policyholder
- Establishment providing insurance
  - Type of establishment (employer, union, insurance agent, etc.)
  - Types of coverage (hospital/physician, Medigap, dental, vision, prescription medication, Consolidated Omnibus Budget Reconciliation Act [COBRA], single or family)[1]
- Out-of-pocket premiums and employee contributions
- Links to the job providing insurance (for employment-based insurance only, 2023 HC 246/2022 HC 237 JOBS PUFs)
- Plan (for hospital/physician and Medicare supplemental insurance coverage only)
  - Household reports of health maintenance organizations (HMOs)
  - High deductibles and Health Savings Accounts (HSAs) for hospital/physician insurance coverage only

Beginning in data year 2024, the PRPL PUF will no longer be released for public use.

[1] No effort has been made to validate variables representing type of coverage with external sources.

Figure 1

Conceptual Overview of PRPL



For employer-sponsored health insurance coverage, on the records for dependents, variables link to the *policyholder's* job providing insurance, rather than the dependent's job.

"Establishment" refers to the organization through which the policyholder obtains private insurance. The establishment may be an employer, a union, an insurance company or agent/broker, a professional association, or another type of organization. Many questions in the MEPS HC instrument were asked in reference to the establishment providing insurance to the policyholder. For example, the MEPS HC asked about the types of health insurance or covered services, such as hospital/physician and dental coverage, the policyholder gets through the establishment.

For each establishment, a "plan" is the insurance company or HMO or self-insured company from which the policyholder receives hospital/physician, Medicare Supplemental (Medigap), dental, or prescription medication coverage. For some focused analyses, it may be important to recognize that information collected at the establishment level does not necessarily pertain to the plan level. For example, if a policyholder obtains from the establishment two separate plans, a hospital/physician plan and a dental plan, then the dental plan may not have the same HMO characteristics as the hospital/physician plan.

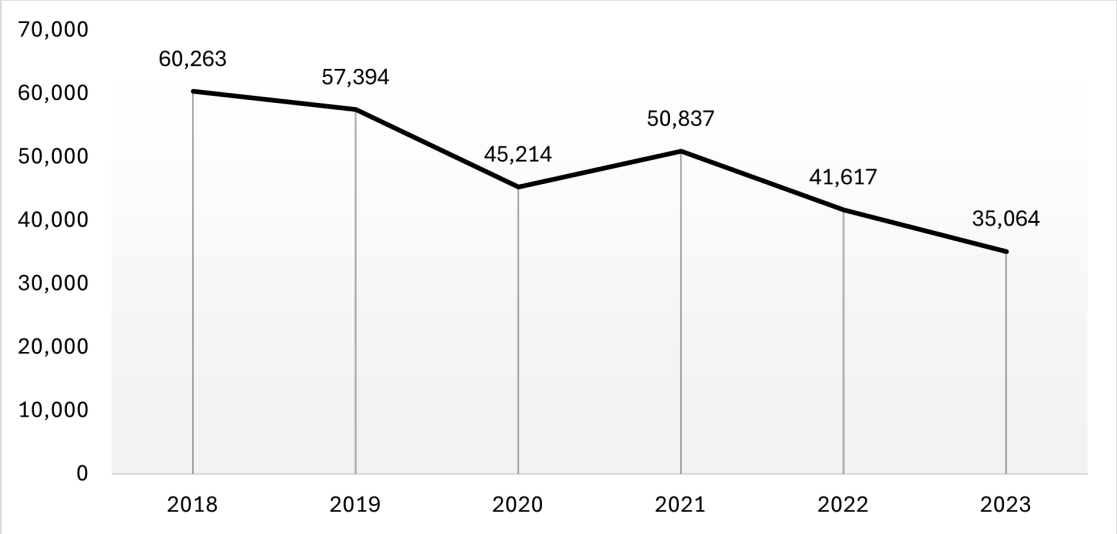
2.1 Complex File Structure with Examples

The PRPL PUF is designed to reflect the sometimes complex and dynamic relationships between people and their private insurance. It allows maximum flexibility for analysts, but it also requires that they make analytical decisions in their research.

The PRPL PUF is a person-round-policyholder-establishment-insurance plan level file with one record for each unique combination of establishment (source of private insurance), policyholder, interview round, 3-byte unique insurance plan identifier and covered person (policyholder or dependent). The 3-byte insurance plan number is helpful in differentiating between plans when more than one plan is reported through the same establishment-policyholder-interview round. Thus, the PRPL PUF contains at least one record for each person in each round with private health insurance, or 35,064 total records.

Figure 2

Record Count in Person-Round-Plan PUF (by year)



Analysts should note this is a 16% drop in records compared with the 2022 PRPL PUF because no panel was fielded for a third time in 2023. This is most evident on proportional changes to certain variables. Analysts wishing to conduct longitudinal research should refer to Section 5.0: Using MEPS Data for Trend Analysis for additional information.

The PRPL PUF contains records for persons insured through establishments providing hospital/physician, Medigap, dental, or prescription medication coverage. Beginning in 2022, the PRPL PUF also contains records for persons who purchase a separate dental plan. In most cases in this PUF, one person in the family has insurance from their employer, and this insurance covers everyone in the family. In this case, there is one record for each family member in each round, and each record flags the policyholder's current main job and links to one job record in the 2023 Jobs PUF (HC 246). However, other cases are more complex, and some hypothetical examples follow.

Multiple Establishments

- Juan and Maria are both employed parents, both have health insurance through their employers, and both parents choose family coverage. In this case, there are two PRPL records for each family member in each round.

- Fatema and Ali are both employed parents. Ali has single coverage from his employer. Fatema has family coverage from her employer covering the entire family. In this case, Fatema and the children each have one PRPL record for each round. Ali has two records for each round.

- Dexter has Medicare and Medicare supplemental insurance. In this case, Dexter has one PRPL record in each round for the Medicare supplemental insurance. There is no record for Medicare, because it is public insurance.

- Arlene is a child living with her mother. Both have Medicaid. Arlene's father, who does not live with them, has private insurance that covers Arlene. Arlene has one PRPL record in each round for the private insurance. There is no record for Medicaid, because it is public insurance.

No Private Insurance

- Jamie is uninsured. In this case, Jamie does not have any PRPL records.

- Cecilia has Medicaid instead of private coverage. In this case, Cecilia does not have any PRPL records.

Sources of Insurance: Employers and Other Establishments

- Rochelle is an employed parent with family coverage through her current main job. In this case, each family member's PRPL record flags Rochelle's current main job as the source of insurance, and each family member's PRPL record links to Rochelle's job record in PUF HC 246.

- Claire is employed, but she does not have insurance through her job. Instead, she buys a plan directly from an insurance company. In this case, Claire has one PRPL record that does not flag her current main job and does not link to any job records in PUF HC 246.

- Felix has hospital/physician insurance through his employer, and he buys dental insurance through an insurance agent. In this case, Felix has two PRPL records, and only the employment-based insurance flags his current main job and links to a job record in PUF HC 246.

Policyholders Not in the Household

- Edith is a widow and has retiree insurance from her deceased husband's former job. In this case, Edith's PRPL record does not link to any employment information in the MEPS. There is a PRPL record for Edith's deceased husband, where he is flagged as the policyholder and flagged as deceased, but this record does not link to any records on any other MEPS PUFs.

- Irina's parents are divorced. She lives with her father, but her insurance is through her mother's job. In this case, Irina's PRPL record does not link to any employment information in the MEPS. There is also a PRPL record for Irina's mother, where she is flagged as the policyholder and not residing in the Reporting Unit (RU), but this PRPL record does not link to any records on any other MEPS PUFs.

Changes in Insurance

- Isaac changes jobs between January 1st, 2023 and the date of his MEPS interview, and both jobs provide health insurance. In this case, Isaac has two PRPL records for the round, one for each source of coverage through a job. The variable EVALCOVR (Covered at interview or December 31st) shows whether one or both plans covered Isaac on the interview date.

- Julie reports that she worked at a job in Round 1 (Panel 28) but that she quit sometime before the interview. She began paying her previous employer to continue her health insurance while she looks for another job during Round 2. In this case, Julie's Round 1 PRPL record links to a job record in PUF HC 246. The Round 2 PRPL record has no job to link to in Round 2. Instead, the PRPL record is set to link with the Round 1 job. Even though she was actively employed at some point in Round 1, the PRPL record is not flagged as being through a current main job since she is not employed at the end of Round 1. The same is true for her Round 2 PRPL record.

Same Insurance Source Providing Multiple Plans

- Savannah reports working for a company that provides health insurance in which she enrolls. During the Round 2 interview, Savannah reports retiring from the job. Also in Round 2, her employer hires her back as a consultant. When reporting each job, Savannah indicates that she has insurance through both jobs. Therefore, in Round 2, Savannah has two unique PRPL records that are each linked to a separate job. Both 'plans' are through the same establishment-policyholder-round but each has its own unique insurance plan identifier.

2.2 Identifiers

Each record contains the following ID variables:

DUPERSID is the person identifier of the covered person (either a dependent or a policyholder).

RN is the round of the interview in which the enrollment data were collected.

PHLDRIDX is the person identifier of the policyholder.

ESTBIDX is an ID number for the establishment – employer, union, insurance company, or other – i.e., the source of insurance coverage on the record.

INSURPRIVIDEX is the concatenation of ESTBIDX and a 3-byte insurance plan number. It uniquely identifies establishment-insurance plans in a responding unit.

EPRSIDX is the concatenation of ESTBIDX, PHLDRIDX, RN, and 3-byte insurance plan number and it uniquely identifies the insurance plan that a policyholder obtains from an individual establishment in the round.

EPCPIDX is the concatenation of EPRSIDX and DUPERSID, and it uniquely identifies each record in the round.

JOBSIDX is the concatenation of the PHLDRIDX, a round identifier (RN), and a 3-byte job number and it uniquely identifies the policyholder's job at the establishment that provided insurance (for employment-based coverage) in the round.

For each person covered by a policyholder-establishment combination, the PHLDRIDX, ESTBIDX, EPRSIDX, and INSURPRIVIDEX appear on each plan record for that coverage.

A person (DUPERSID) can be listed more than once in this PUF if (1) they are covered (as a policyholder or a dependent) by insurance policies from more than one establishment, (2) they are covered by multiple insurance policies from the same establishment, or (3) they are covered in more than one round. Within each round, establishment-policyholder-insurance plan pairs (EPRSIDXs) can be listed more than once if the health plan a policyholder obtains from a given establishment also covers their dependents.

As noted above, there is a PRPL record for each unique combination of establishment (source of insurance), round, insurance plan, and covered person (policyholder or dependent). The following table presents a hypothetical example that illustrates the relationship between the ID variables in this PUF.

Table 1

Hypothetical Illustration of the Relationship between the PRPL PUF ID Variables

Row #	ESTBIDX	DUPERSID	PHLDRIDX	RN	Insurance #	EPRSIDX* PANEL #+ ESTBIDX+ PHLDRIDX+ RN+ Insurance #	EPCPIDX* PANEL#+ ESTBIDX+ PHLDRIDX+ RN+Insurance #+ DUPERSID	JOBSIDX* PANEL #+ PHLDRIDX+ RN+Job #
	A RU = 1							
1	101	104	104	1	101	281011041101	281011041101104	281041101
2	101	104	104	2	101	281011042101	281011042101104	281042101
3	101	104	104	3	101	281011043101	281011043101104	281043101
	B RU = 2							
4	201	206	206	1	202	282012061202	282012061202206	282061201
5	202	206	206	1	203	282022061203	282022061203206	-1
	C RU = 3							
6	301	301	301	3	302	283013013302	283013013302301	283013301
7	301	301	301	3	303	283013013303	283013013303301	283013301
8	301	302	301	3	303	283013013303	283013013303302	283013301
9	301	303	301	3	303	283013013303	283013013303303	283013301
	D RU = 4							
10	401	401	401	1	402	284014011402	284014011402401	284011401
11	401	402	401	1	402	284014011402	284014011402402	284011401
12	401	403	401	1	402	284014011402	284014011402403	284011401
	E RU = 5							
13	501	503	503	1	501	285015031501	285015031501503	285031502
14	501	503	503	2	501	285015032501	285015032501503	285031502

***NOTE: Panel number for the records are added as prefixes to each of these identifiers in the actual PRPL data.**

The first three rows of the table represent a situation where a person (DUPERSID=104) is listed three times in the PRPL PUF because she obtains insurance from the same establishment in all three rounds. Since the person is the policyholder, her DUPERSID is the same as the PHLDRIDX, which is repeated in the EPRSIDX, EPCPIDX, and JOBSIDX.

The fourth and fifth rows of the table represent a situation where a person (DUPERSID=206) is listed twice in the PRPL PUF because she obtains insurance from more than one establishment.

In this example, the second establishment is not an employer or union, so JOBSIDX is Inapplicable (-1).

The sixth, seventh, eighth, and ninth rows of the table represent a situation where a policyholder obtains coverage for themselves under one policy and obtains separate coverage for two dependents under another policy. Both policies are through the same ESTBIDX. The policyholder's PHLDRIDX appears in both EPRSIDX. These different plans are uniquely identified by the insurance plan number (EPRSIDX=283013013**302** and 283013013**303**). PRPL will create a policyholder record for situations where the policyholder is not covered under the plan.

The tenth, eleventh, and twelfth rows of the table represent a situation where a policyholder and two dependents obtain coverage through the policyholder's employer (a unique establishment-policyholder-insurance plan pair within each round, EPRSIDX=284014011402). The policyholder's PHLDRIDX appears in the EPRSIDX and the JOBSIDX for all three covered persons.

The last two rows of the table represent a situation where a person is retired and has retiree insurance through a job that ended prior to the current delivery year. In Round 1 of the first panel, the respondent reported the job from which the sample member retired, and MEPS does not ask about that job again.

However, in each round we ask about the health insurance. So in Round 2, the JOBSIDX contains round number 1, when the jobs data were last collected.

Finally, note that EPCPIDX uniquely identifies each record on the file.

In order to conduct person-level analyses, it is necessary to identify all policies that cover each individual either as a policyholder or as a dependent. Since each *person* in this PRPL PUF is uniquely identified by the variable DUPERSID, person-level analyses can be conducted by examining all PRPL records containing each DUPERSID.

2.3 Reserved Codes

This PRPL PUF contains several reserved code values.

Table 2

Reserved Code Values, Labels, and Definitions

Value	Label	Definition
-1	Inapplicable	Question was not asked due to skip pattern
-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
-15	Cannot be computed	Value cannot be derived from data

The value Cannot be Computed (-15) is assigned to 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.

2.4 Adding the Characteristics of Covered Persons

The DUPERSID allows analysts to merge person-level variables from other HC files such as age, sex, race, health status, or other data. However, the PRPL PUF contains multiple records per person. Therefore, estimates will not be nationally representative unless analysts use a single PRPL record per person or summarize PRPL records to the person level (and use weights).

2.5 Adding the Policyholder's Characteristics

The PHLDRIDX allows analysts to link characteristics of the policyholder onto the records of every person covered by the plan. For example, suppose you wanted to study persons whose private employment-based insurance is held by an employee working full time at a current main job as of the first interview of 2023 (Panel 28 Round 1 or Panel 27 Round 3). You would select PRPL records matching HC 251 (FYFLG=1) where the insurance is through a current main job (CMJINS=1) and ([PANEL=28 and RN=1] or [PANEL=27 and RN=3]). From HC 251, select the DUPERSID and HOUR31 variables and rename DUPERSID to PHLDRIDX. Merge HOUR31 onto the PRPL PUF by PHLDRIDX.

Some policyholders do not have records on HC 251. These include 1) deceased policyholders (with rare exceptions), 2) policyholders residing outside the RU, and 3) other policyholders not

in HC 251 who covered one or more dependents with a positive weight in HC 251. All of the covered person records for these establishment-policyholder-insurance plan pairs are flagged with DECPHLDR, OUTPHLDR, or NOPUFLG equal to 1, respectively. FYFLG may be equal to 0 for these policyholders, depending on when the policyholder left the RU. Deceased policyholders complicate the estimation of nationally representative statistics on active policies. With rare exception, for these establishment-policyholder-insurance plan pairs, analysts must choose a covered person with a positive weight. However, when creating nationally representative estimates of policies and policyholders, establishment-policyholder-insurance plan pairs where the policyholder resides outside the RU should not be included in estimates. This is because MEPS policyholders include policies covering dependents outside the RU, and including RU members covered by a policyholder outside the RU will result in double counting policies that span RUs. Alternatively, an analyst could create nationally representative estimates of covered persons, regardless of whether the policyholder was in the RU, using all the covered persons in the MEPS.

2.6 Choosing PRPL Records for Your Research Question

In order to produce estimates from the data in this PUF, analysts must use the person-level (PERWTyyF) or family-level (FAMWTyyF) weights released in the Consolidated PUF (HC 251). Analysts must consult the documentation for the Consolidated PUF for guidance on creating nationally representative estimates for different time periods.

Note that if there are multiple records per person (DUPERSID, person covered by plan) when you merge on weights, you will double count some people, and your estimates will not be nationally representative. There are two solutions: select only one record per person, or aggregate information across PRPL records.

Analysts will have additional considerations when linking the PRPL PUF to obtain the characteristics of jobs for Panel 27 respondents since a job may have ended on or before 2022 and therefore not exist in 2023 Jobs PUF (HC 246). Consequently, Panel 27 jobs that ended on or before 2022 may exist only in the 2022 Jobs PUF (HC 237).

How you develop your analytical file depends on your research question as well as considerations noted above. The PRPL PUF is designed to help answer a wide variety of research questions. AHRQ cannot anticipate all these questions, so this section provides examples of how to use the PRPL PUF for four research questions.

How many people were covered by two or more private hospital/physician insurance plans at the end of 2023?

Select the Panel 28 Round 3 and Panel 27 Round 5 records with PRIVATECAT_M23>0 and MSUPINS ne 1 and EVALCOVR=1. Count the number of records for each person (DUPERSID). Create one person-level record for each DUPERSID that has the number of plans (PRPL records). Merge the count variable onto PUF HC 251 and use weights, strata, and PSUs to create nationally representative estimates.

How many people reported private dental coverage from an employer at the end of 2023?

Select the Panel 28 Round 3 and Panel 27 Round 5 records with DENTLINX=1 and PRIVATECAT_M23 in (1, 4) and EVALCOVR=1. Among these records, select one record for each person (DUPERSID). Merge each record onto PUF HC 251 and use weights, strata, and PSUs to create nationally representative estimates.

At the time of the first interview of 2023, how many private insurance policies for hospital/physician were not employment-based?

Select the Panel 28 Round 1 and Panel 27 Round 3 records with PRIVATECAT_M23 in (2, 3, 5, 6) and MSUPINS ne 1 and EVALCOVR=1. Next, select one record for each policyholder-establishment-insurance plan pair (EPRSIDX). To have a positive weight for the final count, we recommend choosing the covered person record of the policyholder (PHOLDER=1), unless the policyholder is deceased (DECPHLDR=1) or does not reside in the RU (OUTPHLDR=1), in which case the analyst should choose a different covered person's record. Merge each record onto PUF HC 251 and use weights, strata, and PSUs to create nationally representative estimates.

At the time of the first interview of 2023, how many people had insurance from jobs from which they retired?

Select the PRPL records for policyholders of employment-related insurance at the time of the first interview ([Panel 28 Round 1 or Panel 27 Round 3] and PHOLDER=1 and PRIVATECAT_M23 =1 and EVALCOVR=1). From the 2023 Jobs PUF (HC 246), using JOBSIDX, select the records with jobs from which the person retired (SUBTYPE=6 or RETIRJOB=1 or YNOBUSN_M18=2). Persons in Panel 27 may have reported retiring from a job in 2022, so, from the 2022 Jobs PUF (HC 237), using JOBSIDX select the records with PANEL=27 and (SUBTYPE=6 or RETIRJOB=1 or YNOBUSN_M18=2). Combine the records from the two Jobs files, keeping only one record per JOBSIDX. Using the JOBSIDX, merge the selected JOBS records onto the selected PRPL records. Select the PRPL records with SUBTYPE=6 or RETIRJOB=1 or YNOBUSN_M18=2 or EMPLSTAT=2. Select one record for each DUPERSID. Merge each record onto PUF HC 251 and use weights, strata, and PSUs to create nationally representative estimates of the number of people with one of these PRPL records.

3.0 Data File Contents

3.1 ID Variables

In the MEPS HC, the definitions of Dwelling Units (DUs) and Group Quarters are generally consistent with the definitions employed for 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 (see below) after the case was sampled for MEPS. A 3-digit person number (PID) uniquely identifies each person within the DU. The variable DUPERSID uniquely identifies each person

represented in this PUF and is the combination of the variables DUID and PID. The MEPS HC 250 PRPL PUF can be linked to other PUFs, such as MEPS HC 251, by using the DUPERSID.

For detailed information on dwelling units and families, please refer to the documentation for the 2023 Consolidated PUF (HC 251).

Because all identifiers in this PUF begin with DUID, all identifiers begin with the panel number. In addition, the first byte of all CAPI-generated 3-byte identifiers represents the RU in numeric format (e.g. an A RU plan begins with '1' and a D RU plan begins with '4'). The last two bytes are generated from a counter *within* the RU.

PHLDRIDX is the person identifier (DUPERSID) of the policyholder of the private health insurance plan. Generally, the characteristics of the policyholder can be linked from person-level PUFs by using the PHLDRIDX to match the DUPERSID on the person-level files. However, when the policyholder is deceased or resides outside the RU, then there are no person-level variables on PUFs.

ESTBIDX is a combination of DUID, "0", and a three-byte establishment number. The three-byte establishment number consists of the RU number of the RU where the establishment was reported, followed by a two-digit counter. It is assigned to place of employment and to sources of insurance. The combination of these elements ensures uniqueness within the RU.

INSURPRIVIDEX uniquely identifies insurance policies from the same establishment and is made up of a combination of ESTBIDX and a 3-byte insurance plan number. The insurance plan number is a unique identifier within CAPI at the RU-level that identifies each insurance policy. INSURPRIVIDEX is particularly helpful when tracing the history of a plan where a policyholder leaves a household (PID changes to 902). These records will not link based on ESTBIDX-PHLDRIDX. INSURPRIVIDEX continues to be the most reliable way to identify all records across rounds.

EPRSIDX is a combination of ESTBIDX, PHLDRIDX, RN, and insurance plan number. In a few cases, more than one EPRSIDX may identify a policyholder-source of coverage pair. For example, when an RU splits through divorce or because a child goes to college, each new RU separately reports insurance information, and hence MEPS cannot determine with certainty whether members in both RUs have the same policy. Although both RUs may report coverage through the same policyholder, the RUs may have different EPRSIDXs and ESTBIDXs. (The RU number is embedded in the ESTBIDX and EPRSIDX.) For each RU (EPRSIDX), there is a PRPL record for the policyholder as a covered person, but for only one of the EPRSIDXs (the one in which the policyholder resides) is the policyholder coded as having coverage in the STAT## or EVALCOVR variables.

Where the policyholder dies or leaves a household at some point during the time periods covered by the interviews, the policyholder identifier in the EPRSIDX will change between rounds to either '901' or '902', respectively. In these cases, or for any other analytic purposes, INSURPRIVIDEX can be used to track the insurance across rounds. The INSURPRIVIDEX will identify all records, including the first reported through the plan so it can be used to track the change in policyholder. A more in-depth discussion of this can be found in Section 3.3.

JOBSIDX is a combination of the PHLDRIDX, a round identifier (RN), and a three-byte job number, and it uniquely identifies the policyholder's job at the establishment that provided insurance (for employment-based coverage) in the round. The job number is composed of the RU number of the RU where the job was reported, followed by a 2-digit counter. The combination of these three preclude re-use of the 2-digit counter. The round identifier embedded in JOBSIDX is the round in which the job was last reported, which is not necessarily the round in which the insurance was last reported (for example, when the job ended but the insurance continued). JOBSIDX can be used to merge characteristics of the policyholder's job providing insurance from the appropriate Jobs PUF. Refer to Section 3.6 for additional details on how to use JOBSIDX to link to Jobs PUFs.

Analysts should take special care when working with EPRSIDX and EPCPIDX in Excel. While these variables are formatted character values in the PRPL PUF, once outputted to Excel, Excel will interpret them as numeric since no character is part of the identifier. Excel uses the floating point standard, truncating after the 15th number. It rounds these identifiers (thus losing the complete identifier) and represents them in scientific notation. When importing into Excel, analysts should make sure to select a text data format within the import wizard for each identifier. Similarly, programmers should incorporate specific text formatting statements when importing and exporting in SAS, Stata, SPSS, and R. Lastly, if copying and pasting identifiers in Excel, a cell must be formatted as "Text" prior to pasting.

3.2 Person Variables

There are three person-level variables. Binary variables indicate whether the person is the policyholder (PHOLDER) or a dependent (DEPNDNT) on the coverage through the establishment. The variable FYFLG indicates whether the person has a record on HC 251.

There are 13 person-round-level time-period variables. EVALCOVR is a binary variable indicating whether the person was covered by insurance from the establishment at the time of interview (Rounds 3 and 4 of Panel 27 and Rounds 1 and 2 for Panel 28) or on December 31 (Round 5 of Panel 27 and Round 3 of Panel 28).

The STAT1-STAT12 variables indicate whether the respondent reported the person was covered by insurance from the establishment for at least one day during the month, January 2023 through December 2023. STAT1-STAT12 variables represent each month from January through December of 2023. These variables continue to represent coverage reported for the interview reference period. For example, if a person from Panel 28 was first interviewed (Round 1) in February and reported they were covered in January and February, and then in the second interview (Round 2) in August they reported they were covered from March through August, then the PRPL record for the first round will have STAT1 and STAT2 set to Yes (1) and the rest set to Inapplicable (-1), and the PRPL record for the second round will have STAT3 through STAT8 set to Yes (1) and the rest set to Inapplicable (-1).

3.3 Policyholder Variables

The values of three variables describing the policyholder do not vary across records of the persons covered by the plan, regardless of whether the covered person is the policyholder. The variable DECPHLDR indicates the policyholder is deceased where the person identifier of the policy holder is "901." The variable OUTPHLDR indicates the policyholder resides outside the RU where the person identifier of the policy holder is "902." In each case, there are no person-level records for the policyholder on any of the person-level PUF files, even though the PRPL file has a record for the policyholder as a covered person (that is, a record where PHOLDER=1). The variable NOPUFLG indicates there is another reason the policyholder does not have a record on a person-level PUF. The purpose of these flags is to explain any difficulty analysts may have linking policyholder information onto the PRPL PUF. These variables do not, however, measure mortality or policyholders' leaving the household, which should instead be obtained from the PSTATS variables on the person-level file. For example, policyholders who die between Round 1 (Panel 28) or Round 3 (Panel 27) and the end of 2023 will have records on HC 251, and FYFLG will be set to Yes (1).

3.4 Establishment Variables

The values of establishment-level variables do not vary across the records of the persons insured through the policyholder-establishment-insurance plan pair.

3.4.1 Employers, Exchanges/Marketplaces, and Other Establishments

The type of establishment providing coverage (TYPEFLAG_M23) is on the record. This variable is the source for types of establishments providing employer-based and non-employer-based, private coverage. TYPEFLAG_M23 replaces the previously delivered variable, TYPEFLAG. In this file, TYPEFLAG_M23 includes the answers to HX200, HX300, and HP40. Study designers analyzed the frequency of source type selections collected at these questions and determined infrequently used categories no longer provided meaningful distinctions. Therefore, selection options were collapsed into the following categories:

Table 3

Modified "Type of Establishment" Categories

TYPEFLAG		TYPEFLAG_M23	
1	EMPLOYER	1	EMPLOYER (THROUGH CURRENT OR PREVIOUS JOB)
2	UNION	2	UNION (THROUGH CURRENT OR PREVIOUS JOB)
8 10	PREVIOUS EMPLOYER SPOUSE PREVIOUS EMPLOYER	3	EMPLOYER/UNION COVERAGE NOT REPORTED IN EMPLOYMENT SECTION
21	STATE EXCHANGE NAME	4	STATE EXCHANGE OR FEDERAL MARKETPLACE

TYPEFLAG		TYPEFLAG_M23	
5	INSURANCE COMPANY - FROM AN AGENT	5	INSURANCE COMPANY OR FROM AGENT/BROKER
6	INSURANCE COMPANY		
7	HMO		
3	GROUP	6	GROUP OR ASSOCIATION
12	UNKNOWN TYPE - OUTSIDE RU	7	PLAN OF SOMEONE NOT LIVING HERE
11	SCHOOL	13	OTHER
13	UNKNOWN TYPE - COLLECTED AT OTHER		

TYPEFLAG_M23 reflects the type of establishment when the establishment was first reported, but it is not necessarily updated. For example, analysts must link to the Jobs file to obtain information on employees who left their job since the interview in which the employer was first reported (see Section 3.6). For employment-based coverage through both an employer and a union (such as insurance through a labor-management committee), analysts should note that as of Panel 23 Round 9, Panel 24 Round 7, Panel 25 Round 5, and Panel 26 Round 3, in cases where more than one source is reported for employer-based coverage, the Employment section of CAPI requires that a primary source be identified. That is, if the respondent indicates both the employer/business and the union provide insurance at EM710, they are now required to identify the ***primary*** source of health insurance: either the employer/business or the union, but not both. If analysts wish to identify the jobholders reporting coverage through both establishments, they can refer to the variable EMPLUNIONPROV in HC 246 Jobs PUF. Coverage where EMPLUNIONPROV is set to either 3 or 4 indicates that both union and employer are sources of health insurance. If EMPLUNIONPROV is 3, the respondent selected the employer as the primary source of coverage. If EMPLUNIONPROV is 4, the respondent selected the union as the primary source of coverage.

The MEPS HC also asks about State Exchanges (also known as Marketplaces), so the PRPL PUF has three variables and one TYPEFLAG_M23 (HX200, HX300, and HP40) value related to State Exchanges. These variables and value pertain to sources of health insurance coverage created as part of the 2010 Affordable Care Act. The exchanges were launched in 2014 to simplify shopping for private health insurance coverage. Note that the terms “marketplace” and “exchange” are interchangeable.

The questions about State Exchanges are asked of respondents in every state. The name of the exchange in the respondent’s state is used in the questions, but states are not identified on this file.

The variables are as follows:

Coverage through a State Exchange/Marketplace

STEXCH

In the CAPI instrument, HP50 and OE40 indicate whether insurance was obtained through an exchange/marketplace. HP50 provides this information for insurance obtained by a self-employed person with firm size = 1 reported through that job in the Employment section, as well

as all other insurance not reported in the Employment section of CAPI. OE40 is asked in Round 3 for Panel 27 and Panel 28, where coverage is reported as "Directly From An Insurance Company or Agent/Broker" at HX200, HX300, or HP40 and no State Exchange was reported through the establishment in the previous rounds. HP50 and OE40 are set to Inapplicable (-1) for insurance obtained through an employer or union not reported in the Employment section or an other (unknown) source. Applicable values exist only for insurance obtained directly through a group or association, an insurance company or agent/broker, State Exchanges, or other private sources. These variables are automatically set to Yes (1), indicating that the source of coverage was from a State Exchange when State Exchange was selected as the source of insurance at HX200, HX300, or HP40. Otherwise, these variables reflect responses to HP50 or OE40.

After the interview, HP50 and OE40 were edited to No (2), indicating that the source of coverage is not from a State Exchange, when either of the following was true:

1. The respondent reported Medigap coverage (MSUPINS = 1) was obtained through the State Exchange, or

2. For persons 65 years and older, the person had Medicare (reported elsewhere in the Health Insurance section of the survey).

Thus, these records are no longer included as State Exchange coverage.

Instead of delivering multiple State Exchange variables, the PRPL PUF creates one variable, STEXCH, to summarize whether coverage is through a State Exchange. STEXCH is set to Inapplicable (-1) for insurance obtained through a current or former employer, union, or unknown source. STEXCH is set to Yes, Exchange Coverage (1) if any of the three following conditions are met:

1. The respondent said a State Exchange is the source of insurance through a self-insured firm with firm size=1 (HP40).

2. The respondent said a State Exchange is the source of insurance not elsewhere reported (HX200/HX300).

3. The respondent said the insurance was through a group or association, insurance company or agent/broker, or other private source and the respondent said Yes, State Exchange Coverage (1) to "Is this coverage through STATE EXCHANGE NAME?" either in the interview the insurance was first reported (HP50) or in Panel 27 and Panel 28 Round 3 for insurance reported in an earlier round as non-Exchange coverage (OE40).

All others are set to No, Not Exchange Coverage (2).

Level of State Exchange Coverage

PLANMETL

There are five levels or "tiers" of coverage available through the Marketplace that identify how the policyholder and the insurance plan will split costs. To assist consumers in selecting a level of coverage, the tiers are named Catastrophic, Bronze, Silver, Gold, and Platinum, reflecting a graduated level of cost to the consumer for deductibles, copayments, coinsurance, and out-of-pocket maximums.

Persons are asked to identify the "metal" plan if 1) State Exchange coverage is indicated at HP40, HX200, HX300, HP50, or OE40; 2) the coverage provides hospitalization and physician benefits; and 3) the person is younger than 65.

During editing, PLANMETL is set to Don't Know (-8) if hospitalization/physician benefit coverage is Refused (-7) or Don't Know (-8).

Subsidized Premium through Marketplace

PREMSUBZ

PREMSUBZ (HX690 and OE200) indicates whether insurance was subsidized based on family income. PREMSUBZ is set to Inapplicable (-1) for insurance obtained through a current or former employer, union, or unknown source. Applicable values exist only for insurance obtained directly through a group or association; an insurance company or agent/broker; a State Exchange; or another private source. For these sources of insurance, respondents are asked each round whether the insurance is subsidized. PREMSUBZ is asked in Round 1 and rounds that cross two calendar years. Starting in 2022, PREMSUBZ is reset to Inapplicable (-1) in Round 3 since responses extend into the coverage year following the current PUF.

3.4.2 Types of Coverage through the Establishment

The establishments in the PRPL PUF provide private health insurance covering hospital/physician, Medicare supplemental insurance, dental, or prescription medication insurance. Beginning in 2022, establishment types collected at questions HX200, HX300, and HP40 have been consolidated based on commonly-selected values. Due to this change, the variable PRIVATECAT, which identifies the type of source for hospital and physician or Medicare supplemental insurance, has been renamed to PRIVATECAT_M23. While these changes will not be evident to analysts when reviewing the category of private coverage (PRIVATECAT_M23), analysts should note that there are different values for the variable that describes the type of insurance, TYPEFLAG_M23.

Two establishment-policyholder flags indicate if the policyholder has physician/hospital and Medigap coverage, respectively, through the establishment. Selected by respondents during the interview, HOSPINS and MSUPINS variables are copies of CAPI-collected data and are not edited. Consequently, as of 2023, these variables were renamed from HOSPINSX to HOSPINS and MSUPINSX to MSUPINS to reflect the fact that no editing occurs on these variables.

Both HOSPINS and MSUPINS are used in the construction of PRIVATECAT_M23. Even when PRIVATECAT_M23 indicates there is either hospital/physician or Medigap coverage, either or both HOSPINS and MSUPINS may have missing values of Refused (-7) or Don't Know (-8). Note also that both HOSPINS and MSUPINS may be coded Yes (1) on the same record. DENTLINS, VISIONIN, and PMEDINS flags indicate the establishment provides coverage for dental care, vision care, and prescription medications, respectively.

As of Panel 24 Round 9, Panel 26 Round 5, and Panel 27 Round 3, MEPS introduced new questions at HX625 and OE135 to determine if a person has a separate dental plan when the respondent indicates their coverage through the establishment does not cover dental benefits or does not know or refuses to specify the type of coverage provided. Therefore, in addition to DENTLINS (HX620), the PRPL PUF variable DENTLINX summarizes dental coverage reported at either HX620, HX625, OE130, or OE135. If a respondent indicated on a coverage record that they were also covered through a separate dental plan at HX625/OE135, these records were retained in the final PRPL PUF. This is true even if the type of coverage provided by the establishment does not include hospital/physician, Medicare supplemental insurance, dental, or prescription medication coverage. Analysts should note that no additional premium information is collected when reporting a separate dental plan. Premium information in the PRPL PUF is based on establishments providing either hospital/physician, Medigap, dental, or prescription medication coverage and does not reflect costs associated with separate dental plans. Below are examples of how to use these variables to identify types of insurance:

Table 4

Examples of How to Use Variables to Identify Types of Insurance

Identifying Types of Insurance	Variable and Values
Hospital and physician or Medicare supplemental insurance	PRIVATECAT_M23 in (1, 2, 3, 4, 5, 6, 99)
Medicare supplemental insurance	MSUPINS = 1
Hospital and physician insurance	PRIVATECAT_M23 in (1, 2, 3, 4, 5, 6, 99) & MSUPINS ne 1
Dental insurance	DENTLINS = 1
Dental insurance through insurance source but on a separate plan	DENTLINX = 1 and DENTLINS <> 1

The variable COBRA is a flag for whether the respondent reported that the coverage was obtained through the requirements of the COBRA of 1986. This act requires that employers of a certain size allow some former employees to continue their employment-based coverage by paying the employer the full premium amount (U.S. Department of Labor). This flag does not, however, indicate all the coverage through former employers, which can be determined using TYPEFLAG_M23 in conjunction with links to former jobs in the Jobs PUF.

In the PRPL PUF, COBRA is set based on responses to HP140, OE70, or OE90. Beginning in Panel 24 Round 7, Panel 26 Round 3, and Panel 27 Round 1, due to collapsing of insurance

source type categories, these questions are also now asked for insurance through employer-based or union coverage reported in the Insurance section (HX200/HX300). COBRA is set to Yes (1) when COBRA coverage is indicated at HP140. COBRA is set to No (2) when the insurance was not COBRA coverage. COBRA is set to Inapplicable (-1) when the coverage was not employment-based, and when the coverage was through a current job. COBRA is set to Cannot be Computed (-15) for insurance through retirement jobs reported (EM390) or selected (EM380) in the Employment section. In a few cases, self-employed persons with firm size = 1 reported buying coverage through a previous job, and these cases are coded as yes or no, while other insurance through self-employment with firm size = 1 is coded Inapplicable (-1).

The variable COVTYPIN flags whether coverage was single or family, based on the number of persons covered in the RU, whether the establishment's insurance covers someone outside the household, and whether the policyholder is outside the household. For Panel 28 Rounds 1 and 2 and Panel 27 Rounds 3 and 4, the number of covered persons was measured at the time of the interview (or end of the reference period). For Panel 28 Round 3 and Panel 27 Round 5, the number is as of December 31st. When coverage ceased before the end of the reference period for every co-residing family member, COVTYPIN is set based on the number of persons ever covered during the round.

The variable COVROUT_M18 indicates whether out-of-RU persons were covered by the plan. COVROUT_M18 is asked if there are no dependents living in the RU covered under that policy. It is not asked if there is only one member of an RU and that person is covered by a policyholder who is deceased, no longer in the household, or not listed in the dwelling unit.

3.4.3 Out-of-Pocket Premiums

In the MEPS, questions on out-of-pocket premiums were asked of all policyholders with private insurance coverage for all establishments. The variable OOPPREM provides the monthly out-of-pocket premium paid by the policyholder as reported in the interview for coverage through the establishment in Panel 28 (Round 1) and Panel 27 (Round 3).

The reference period for Round 3 of Panel 28 starts in 2023, however, data collection occurs in 2024. Therefore, OOPPREM, PREMLEVX, OOPX12, and OOPPREMX are reset to Inapplicable (-1) for Round 3 in the 2023 PRPL PUF. This practice began in the 2022 PRPL PUF.

OOPPREM is created using the out-of-pocket amount reported and the frequency of payments (HX670, HX680, and HX680OS):

HX670

How much {{do/does}/did} {you/{POLICYHOLDER}} pay for the {INSURANCE SOURCE NAME}coverage?

ENTER AMOUNT

HX680/HX680OS

{Is/Was} that per year, per month, per week, or what?

UNIT OF COVERAGE:

SPECIFY: UNIT OF COVERAGE

PREMLEVX shows whether the amount reflected in OOPPREM was the full premium or part of it. The PREMLEVL (HX660 or OE170) question is asked in all rounds for insurance obtained through other groups, insurance companies or agent/broker, State Exchanges, or other private sources, but not insurance obtained through a current or former employer, union, school, or unknown source. Note that the premium amount is not collected in rounds that fall within the calendar year, i.e., Rounds 2 and 4.

OOPX12X is provided as a convenience to analysts and contains the edited monthly out-of-pocket premium amount multiplied by 12, representing the annual amount.

OOPPREMX provides an edited version of OOPPREM and the variable OOPFLAG identifies which records were edited.

The edited variable OOPPREMX includes imputed values for records which contained missing values on OOPPREM as well as for a limited number of records with values that were implausibly low or high. OOPELIG flags these covered-person-policyholder-establishment triples. In most years, for policyholders in Round 3 of the second panel with missing out-of-pocket premiums, if coverage is through a continuation job which was originally reported in Round 1 of the first year of the panel and type of coverage (COVTYPIN) is the same as in Round 1, then OOPPREMX is set equal to OOPPREMX from Round 1 times the growth rate in out-of-pocket premiums from the first delivery year to the next. The growth rate is assigned by type of coverage and is based on private sector out-of-pocket premiums reported in the MEPS Insurance Component (IC) in the current and prior year.

Imputed values were typically assigned by one of two imputation methods - hot-deck imputation or MEAN substitution, both of which consider the following person/plan characteristics: source of insurance (private employer, state and local government, federal government, Medigap, other non-group policy, State Exchanges), age of policyholder, educational attainment of policyholder, number of persons covered by the policy, if there is a high family deductible, size of employer, region and MSA status, presence of supplemental benefits such as drug, dental and vision, whether the insurance was through a current or former job, and active or retired job. For employer-sponsored insurance where a link to a job is established between the Jobs PUF and the PRPL PUF, a select group of the edited variables in HC 237, or HC 246 is used to define imputation classes for hot-deck imputation of out-of-pocket premiums.

Starting in 2023, hot deck premium imputation methods were adjusted in order to reduce the impact of assigning premiums from “non-specific group plans” without a link to an employer to “non-federal employment-based plans” that are linked to an employer. Non-specific group premiums are no longer used as donors for recipients with employment-linked coverage where they had been previously. However, any employment-linked donor that was not used as a donor

during employer-linked imputation was made available when imputing non-employment linked recipients. This also reduced the amount of donors used multiple times and ensured recipients were given premium amounts from donors with similar backgrounds. Missing premium amounts on coverage purchased through a State Exchange continue to be hot-deck imputed in a separate process using type of coverage (family or single), age, income, whether the premium was subsidized, and region.

Both OOPPREM and OOPPREMX are coded as zero for group policyholders who reported paying none of their premium.

For the entire set of 6 variables (OOPPREM, OOPPREMX, OOPX12X, OOPELIG, OOPFLAG, PREMLEVX), the same values are copied to records of each dependent person covered through the policyholder's establishment, but the policyholder paid only once per establishment-policyholder.

3.5 Plan Variables

The values of plan-level variables do not vary across the records of the persons insured through the policyholder-establishment-insurance plan pair.

The variables ANNDEDCTP (HX700/HX702/HX704/OE210/OE212/OE214) and HSAACCT (HX710/OE220) capture the deductible level for a private health plan and whether that plan is associated with a Health Savings Account (HSA) or a similar special fund/account. Note that ANNDEDCTP replaces ANNDEDCT as of the 2022 PRPL PUF. The interview questions are asked during the first report and during the review of insurance in Rounds 1 and 3 for all private plans except for individuals covered by Medicare supplement/Medigap plans. Starting in the 2022 PRPL PUF, the annual deductible variable and HSAACCT are reset to Inapplicable (-1) in Round 3 of the first panel since responses extend into the year following the current PUF.

Once a respondent indicates whether the plan has a high deductible at HX700/OE210, starting in Panel 24 Round 7, Panel 26 Round 3, and Panel 27 Round 1, respondents were asked to provide a more detailed estimate of the deductible amount required by their health plan. If individual plans were estimated below $1,500 or family plans were estimated below $3,000, respondents were then asked at HX702/OE212 if the annual plan deductible was less than $750/$1,500 or between $750/$1,500 and $1,499/$2,999, inclusive. If individual plans were estimated above $1,500 or family plans were estimated above $3,000, respondents were then asked at HX704/OE214 if the annual plan deductible was between $1,500/$3,000 and $2,999/$5,999 or if it was greater than or equal to $3,000/$6,000. With this information, PRPL now includes an expanded annual deductible variable, ANNDEDCTP, that combines responses to questions HX700/HX702/HX704 for newly reported coverage or questions OE210/OE212/OE214 for continuing coverage.

Table 5

Combined Responses for Expanded Annual Deductible Variable, ANNDEDCTP

Value	Description
1	Less than $750/$1,500
2	$750/$1,500 to $1,499/$2,999
3	$1,500/$3,000 to $2,999/$5,999
4	$3,000/$6,000 or more
5	No annual deductible
6	Less Than $1,500/$3,000, range not specified
7	$1,500/$3,000 or more, range not specified
-1	Inapplicable
-7	Refused
-8	Don't know

Analysts should use the variable COVTYPIN, which indicates coverage was single or family, to determine which deductible amount in a range should be used in their research.

3.5.1 Household Reports of HMOs

The variable UPRHMO_M23 identifies records for HMO coverage when the household respondent reported the insurance company was an HMO. Note that starting in Panel 27 Round 3 and Panel 28 Round 1, plan source categories at HX200/HX300/HP40 were collapsed so respondents can no longer specify that the insurance was purchased directly through an HMO. Therefore, UPRHMO was renamed UPRHMO_M23 starting in the 2022 PRPL PUF. The HMO question is asked of all private coverage records. UPRHMO_M23 is set to Yes (1) if the respondent answered Yes (1) to the following question (MC10):

> {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.]

UPRHMO_M23 is set to No (2) when the plan was not an HMO. UPRHMO_M23 is set to Inapplicable (-1) when the plan was not hospital/physician or Medicare supplemental coverage. If respondents did not know or refused to indicate whether the plan includes hospital/physician and Medicare supplemental coverage, MC10 is not asked. In those cases, UPRHMO_M23 is set to Cannot be Computed (-15).

3.5.2 Change in Plan Name

The variable NAMECHNG indicates whether the name of the plan obtained through the establishment changed from the prior round. For all panels-rounds other than Round 1, NAMECHNG is set to Yes (1) if either:

a) someone in the RU had coverage through the establishment in the prior round and either still had coverage at the time of the interview or the coverage status was unknown or refused or

b) a new dependent was added to the coverage,

and the respondent answered Yes (1) to the following question (OE110):

{Last time we recorded that {you/{POLICYHOLDER}} (were/was) covered by {PRELOAD.INSURANCE.INSURER}.}

{Since (START DATE), has there been/Between {START DATE} and {END DATE}, was there} any change in the plan name of the health insurance {you/{POLICYHOLDER}} {{have/has}/had}through {PRELOAD.INSURANCE.HISRCNAME}?

If the respondent answered no, then NAMECHNG is coded No (2). If no one in the RU had coverage through the establishment in the prior round, no one had coverage at the time of the interview, or it is a Round 1 record, then NAMECHNG is set to Inapplicable (-1) .

When the respondent answered Yes (1), then MEPS HC asked about types of benefits (OE130), which are updated on the PRPL PUF.

There are two important caveats to this variable. First, changes in plan name do not necessarily imply the plan itself changed. For example, the plan may have merely changed its name for marketing purposes. Second, the variable NAMECHNG pertains only to changes in plan names at the same establishment; a policyholder may switch plans if they switch the establishment (including employer) through which they obtain insurance. Switches in EPRSIDs and ESTBIDs between rounds indicate those other types of changes.

3.6 Links to Jobs Providing Insurance

For employment-based insurance, there are two variables linking the insurance to details about the jobs through which the insurance was obtained, CMJINS and JOBSIDX.

Most people with employment-based insurance have it through current main jobs. The variable CMJINS indicates whether the insurance is through a current main job. When insurance is through a previous job or through self-employment where there is only one employee, then CMJINS is set to No (2). When the insurance is not employment-based, CMJINS is set to Inapplicable (-1). As of the 2023 PRPL PUF, when insurance is purchased through an employer but no link to a job record is established, either in CAPI or through the editing process, CMJINS

is set to Cannot be Computed (-15). If CMJINS = 1 and the policyholder has a PUF record (FYFLG = 1), then many current main jobs variables are available on the 2023 Consolidated PUF (HC 251). If a policyholder is non-responding in 2023 but continues to cover a responding dependent in 2023, refer to the 2022 Consolidated PUF (HC 243).

For these and other types of jobs (for example, former jobs) with employer-sponsored health insurance, the Jobs files (2022 Jobs PUF [HC-237] and 2023 Jobs PUF [HC-246]) contain variables describing the job. The variable JOBSFILE indicates which Jobs PUF contains the most current information about the source of coverage. In most cases, information about the job is in HC 246, but, for Panel 27, if the job ended before 2023, information about the job is contained in 2022 HC 237.

Links between reported jobs and sources of coverage may be obtained directly from the respondent or inferred within the PRPL process. The variable JOBSINFR indicates if a link between a job and insurance coverage was directly reported or inferred. It is set to -1 if no link to a job was established in PRPL processing. PRPL creates direct links using the link established in CAPI between a job and coverage reported in the Employment section. JOBSINFR is set to 0 where a direct link exists. JOBSINFR is set to 1 if PRPL creates an inferred link.

A link may be inferred when a person reports employment-based health insurance at the end of the Insurance section (HX200 or HX300). This type of coverage does not have a *direct link* to a job reported within CAPI. An inferred link is established where a policyholder is employed at a job where insurance was not reported through the job in the Employment section of CAPI. Most inferred links are assigned where the job and the insurance are linked to the same establishment. Other links may be established based solely on policyholder of employment-related coverage reported in the Insurance section having a job in the round.

The variable EMPLSTAT contains the answer to question HP120, which is asked only about the policyholders of employment-related insurance first mentioned at the end of the Insurance section of the interview (HX200/HX300), and HP120 is asked only in the interview round where the insurance was first reported. Thus, it is useful for the cases where links to jobs could not be inferred. EMPLSTAT does not contain updated information about the policyholder's employment at each interview. However, EMPLSTAT is set on reviewed coverage in the PRPL PUF to the value from the round where coverage was first reported.

4.0 Linking to Other Files

4.1 National Health Interview Survey

Each MEPS panel can be linked back to the previous year's NHIS public use files. This is because the set of households selected for MEPS is a subsample of those participating in the NHIS. For information on obtaining MEPS/NHIS link files please see the MEPS website.

4.2 Longitudinal Analysis

Panel-specific longitudinal files can be downloaded from the data section of the MEPS website. For both panels (Panel 27 and Panel 28), the longitudinal file comprises MEPS data obtained in 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 Consolidated PUFs from the years covered by that panel.

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

5.0 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 2022 data quality for reasons discussed in the Survey Sample Information section (Section 3.0) of the Consolidated PUF document (HC 251). 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 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 analyses 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, analysts should refer to Section 2.5.11: Utilization, Expenditures, and Sources of Payment Variables in the Consolidated PUF (HC 251) and, for more detail, to the documentation for the prescription drug file (HC 248A) 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, analysts should be aware of the impact of multiple comparisons on Type I error. Without making appropriate allowance for multiple comparisons, conducting 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 PUBLIC USE FILE HC 250: 2023 Person Round Plan

Survey Administration Variables

Variable	Description	Source
EPCPIDX	Unique record identifier (EPRSIDX + DUPERSID)	Constructed
DUPERSID	Person identifier of policyholder or dependent covered by policyholder (DUID+PID)	Constructed
PHLDRIDX	Person identifier of policyholder	Constructed
ESTBIDX	Insurance source identifier	Constructed
EPRSIDX	Uniquely identifies insurance policy from an insurance source in a round (ESTBIDX+PHLDRIDX+RN+3-byte INSURANCEID)	Constructed
INSURPRIVIDEX	Uniquely identifies insurance policy from an insurance source (ESTBIDX+ 3-byte INSURANCEID)	Constructed
PANEL	Panel number	Constructed
RN	Round number	Constructed

Health Insurance, Employment, & Insurance Premium Variables

Variable	Description	Source
JOBSIDX	Link to Jobs file that uniquely identifies policyholder's job by round at the establishment that provided insurance	Constructed
JOBSINFR	JOBSIDX inferred rather than reported	Constructed
JOBSFILE	Public use Jobs file number indicating source of jobs information	Constructed
FYFLG	Person covered by the plan is in full year public use file	Constructed

Variable	Description	Source
CMJINS	Current main job is the source of plan	Constructed PRIVATECAT_M23, RJ20, EM50, EM80
EMPLSTAT	Policyholder's employment status at employer insurance, coverage not reported in Employment section	HP120
PHOLDER	Policyholder record flag	HP70, 90
DEPNDNT	Dependent of policyholder record flag	PRIVATECAT_M23, PHOLDER
EVALCOVR	Covered at interview or on December 31st	HQ10_01,10_02
STAT1-STAT12	Insurance active in January through December	HQ10_01, 10_02, 10_03,10_04, 10_05
DECPHLDR	Deceased policyholder flag	Constructed
OUTPHLDR	Policyholder is not in RU	Constructed
NOPUFLG	Policyholder is not in full year file	Constructed
COVROUT_M18	For policies without dependents covered in RU, identifies whether policy covers person not in RU	Constructed HP170, 180; OE100
TYPEFLAG_M23	Type of insurance source	HP40; HX50_01, 60, 100_01, 120_01, 140, 170, 200, 225, 230, 270_01, 300_01, 320_01; EM50, 80, 100, 120, 180, 240, 340, 390, 720
STEXCH	Coverage obtained through State Exchange	HP50; HX200, 300; OE40
PRIVATECAT_M23	Category of private coverage	Constructed HP40, 50, 130; HX200, 300, 620; OE40; EM710
HOSPINS	Type of health insurance coverage received through plan: hospitalization & physician/HMO	HX620; OE130
MSUPINS	Type of health insurance coverage received through plan: Medigap	HX620; OE130
DENTLINS	Type of health insurance coverage received through plan: dental	HX620; OE130
DENTLINX	Dental coverage received through plan or as a separate plan (edited)	HX620, 625; OE130, 135

Variable	Description	Source
VISIONIN	Type of health insurance coverage received through plan: vision	HX620; OE130
PMEDINS	Type of health insurance coverage received through plan: prescription drug	HX620; OE130
COBRA	COBRA coverage	HP40,120, 140; HX200, 300; OE70, 90; EM50, 80, 100, 270, 390; RJ20; PRIVATECAT_M23
PLANMETL	Plan metal level	HX650, OE160
COVTYPIN	Coverage is single or family, based on number of persons within the RU ever covered in the round	HP160, 170, 180; OE100
OOPELIG	Flag indicates that the policyholder-insurance source has premium in the PRPL file	RN; TYPEFLAG_M23; HP40, 160; HX200, 300
OOPPREM	Monthly out-of-pocket premium amount paid by policyholder	HX660, 670; OE170, 180
OOPPREMX	Monthly out-of-pocket premium amount paid by policyholder (edited/imputed)	Constructed
OOPX12X	Annual out-of-pocket premium amount paid by policyholder (edited/imputed)	Constructed
OOPFLAG	Flag indicates if premium was edited/imputed	Constructed
PREMLEVX	Portion of premium paid by family (edited)	HX660, 670; OE170, 180
PREMSUBZ	Cost of premium is subsidized based on family income	HX690; OE200
ANNDEDCTP	Plan deductible range	HX700, 702, 704; OE210, 212, 214
HSAACCT	Plan is associated with Health Savings Account or similar special fund/account	HX710; OE220
UPRHMO_M23	Coverage identified as an HMO	MC10
NAMECHNG	Change in plan name from prior round	OE110