

**MEPS HC-048:  
MEPS Panel 3 Longitudinal Weight File**

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**Agency for Healthcare Research and Quality  
Center for Cost and Financing Studies**

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## **A. Data Use Agreement**

Individual identifiers have been removed from the micro-data contained in the files on this CD-ROM. 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 it was supplied; any effort to determine the identity of any reported cases, is prohibited by law.

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

1. No one is to use the data in this data set in any way except for statistical reporting and analysis; and
2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) The Director, Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity.
3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel survey or the National Health Interview Survey.

By using this 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 18 U.S.C. 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**

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS).

MEPS is a family of three surveys. The Household Component (HC) is the core survey and forms the basis for the Medical Provider Component (MPC) and part of the Insurance Component (IC). Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHRQ on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES) was conducted in 1977, and the National Medical Expenditure Survey (NMES) was conducted in 1987. Since 1996, MEPS has continued this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To advance these goals, MEPS includes linkage with the National Health Interview Survey (NHIS)—a survey conducted by NCHS from which the sample for the MEPS HC is drawn—and enhanced longitudinal data collection for core survey components. The MEPS HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

### **1.0 Household Component**

The MEPS HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for 2 calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS HC is drawn from respondents to NHIS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

## **2.0 Medical Provider Component**

The MEPS MPC supplements and/or replaces information on medical care events reported in the MEPS HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all home health agencies and pharmacies reported by HC respondents. Office-based physicians, hospitals, and hospital physicians are also included in the MPC but may be subsampled at various rates, depending on burden and resources, in certain years.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents. The MPC is conducted through telephone interviews and record abstraction.

## **3.0 Insurance Component**

The MEPS IC collects data on health insurance plans obtained through private and public-sector employers. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, and employer characteristics.

Establishments participating in the MEPS IC are selected through three sampling frames:

- C A list of employers or other insurance providers identified by MEPS HC respondents who report having private health insurance at the Round 1 interview.
- C A Bureau of the Census list frame of private-sector business establishments.
- C The Census of Governments from the Bureau of the Census.

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and other insurance providers identified by MEPS HC respondents) are linked back to data provided by those respondents. Data collected from the two Census Bureau sampling frames are used to produce annual national and State estimates of the supply and cost of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance. National estimates of employer contributions to group health insurance from the MEPS IC are used in the computation of Gross Domestic Product (GDP) by the Bureau of Economic Analysis.

The MEPS IC is an annual panel survey. Data are collected from the selected organizations through a pre-screening telephone interview, a mailed questionnaire, and a telephone followup for nonrespondents.

## 4.0 Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, microdata files, and compendiums of tables. Data are also released through MEPSnet, an online interactive tool developed to give users the ability to statistically analyze MEPS data in real time. Summary reports and compendiums of tables are released as printed documents and electronic files. Microdata files are released on CD-ROM and/or as electronic files.

Printed documents and selected public use file data on CD-ROMs are available through the AHRQ Publications Clearinghouse. Write or call:

AHRQ Publications Clearinghouse  
Attn: (publication number)  
P.O. Box 8547  
Silver Spring, MD 20907  
800-358-9295  
410-381-3150 (callers outside the United States only)  
888-586-6340 (toll-free TDD service; hearing  
impaired only)

Be sure to specify the AHRQ number of the document or CD-ROM you are requesting. Selected electronic files are available through the Internet on the MEPS Web site:

<http://www.meps.ahrq.gov/>

## C. Technical Information

### 1.0 Data File Contents

This documentation describes a two-year Longitudinal File derived from the respondents to the Medical Expenditure Panel Survey (MEPS) Panel 3 1998 sample. The MEPS, a nationally representative survey of the U.S. civilian non-institutionalized population, uses a panel design in which data were collected through a preliminary contact followed by a series of five rounds of interviews to collect data for a 2 year period. The persons on the dataset represent those who were in this population for all or part of the 1998-1999 period. To obtain analytic variables, the records on this file need to be linked to the 1998 and 1999 MEPS public use data sets by the sample person identifier (DUPERSID).

This file contains a total of 10,122 persons, of whom 9,813 are available for longitudinal analysis over a 2-year period. There are 143 people who provided data only in 1998 (P3,Y1). These are people who participated in the survey in 1998 and died or became ineligible for another reason, such as they entered the military or left the country. There are 166 people who provided data only in 1999 (P3,Y2). These are newborns or those who came into a selected household for the first time in 1999, such as persons moving into a sample household from a nursing home or other institution. The sample existing for only 1 of the 2 years is provided to facilitate analyses that cover the experience of the U.S. civilian non-institutionalized population over 1998 or 1999.

A weight variable (LONGWTP3) when applied to persons who participated in both 1998 and 1999, enables the user to make national estimates of person-level changes in selected variables (e.g. health insurance, health status, utilization and expenditures). LONGWTP3 can also be used to develop cross-sectional type estimates for the civilian noninstitutionalized population in one year based only on the Panel 3 sample. These estimates are robust and similar to those constructed using the standard 1998 and 1999 weights (WTDPER98 and PERWTD99F) included on the MEPS public use files. **NOTE: If the purpose of your analysis is to produce estimates for one year only, it is preferable to use the existing Public Use Files (HC-028 for the 1998 Full-Year Consolidated File and HC-038 for the 1999 Full-Year Consolidated File).** These files have larger sample sizes and will produce estimates with smaller variances.

The estimate of total health care expenditures for 1999 using the longitudinal weight is \$586.9 billion. Using the 1999 Public Use File (HC038), the estimate of total health care expenditures is \$596.1 billion. While these estimates are not statistically significantly different, an overall adjustment could be made to improve the alignment across these estimates. To adjust mean or total expenditure estimates derived from the longitudinal file to replicate the overall estimates derived from the 1999 HC038 file within population subgroups (c) or for the overall population, it will be necessary to develop adjustment factors,  $A(c)$ , which are defined as the ratio of the weighted estimate of health care expenditures derived from HC038 over the weighted health care expenditure estimate obtained from this file for subgroup c. For example, to derive a mean expenditure estimate  $\bar{Y}_c$  that is adjusted in this manner for subgroup c (e.g. for age group 65+), use the following method:

$$A(c) = (\sum_{iec} W_{2i} Y_i) / (\sum_{iec} W_{1i} Y_i), \text{ and}$$

$$\bar{Y}_c = (\sum_{iec} A(c) W_{1i} Y_i) / (\sum_{iec} W_{1i})$$

where

$Y_i$  is the expenditure variable of interest for individual  $i$ ,  
 $W_{1i}$  is the longitudinal weight for individual  $i$ ,  
 $W_{2i}$  is the person weight from HC038 for individual  $i$ , and  
the sum is across all sample participants in group  $c$ .

The following table contains a summary of cases to include, sample sizes, and population estimates (i.e., sum of LONGWTP3) for the 3 different time periods.

Population of Interest	Cases to Include	Sample Size	Population Estimate
1998-1999	YRINDP3=1	9,813	271,806,075
1998 Only	YRINDP3=1 or 2	9,956	275,276,754
1999 Only	YRINDP3=1 or 3	9,979	276,410,767

## 2.0 Variance Estimation

To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for estimates based on MEPS survey data, one needs to take into account the complex sample design of MEPS. The variables needed to implement a Taylor series estimation approach are included on the Longitudinal File. They are VARSTRP3 and VARPSUP3. These variables can be used for producing 1998 or 1999 estimates.