

**MEPS HC-086:
MEPS Panel 8 Longitudinal Weight File**

October 2006

**Center for Financing, Access and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850
301-427-1406**

Table of Contents

A.	Data Use Agreement	A-1
B.	Background	B-2
	1.0 Household Component	B-2
	2.0 Medical Provider Component	B-2
	3.0 Insurance Component	B-3
	4.0 Survey Management	B-4
C.	Technical Information	C-1
	1.0 Data File Contents	C-1
	2.0 Variance Estimation	C-2

A. Data Use Agreement

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

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

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

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 five 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 health insurance coverage for the U.S. civilian noninstitutionalized population. MEPS is co-sponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS), and has been conducted annually since 1996. The predecessor surveys to MEPS were the 1977 National Medical Care Expenditure Survey (NMCES, also known as NMES-1) and the 1987 National Medical Expenditure Survey (NMES-2).

MEPS is a family of three surveys. The Household Component (HC) is the core survey and also forms the basis for the Medical Provider Component (MPC). Together these two 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. The third survey, the Insurance Component (IC), is a survey of private and public sector employers that provides national- and state-level estimates of employer-sponsored health insurance coverage and cost.

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. Using computer-assisted personal interviewing (CAPI) technology, 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 is based on an overlapping panel design in which data covering a two year period are collected through a preliminary contact followed by a series of five rounds of interviews over a two and a half year period. Data on medical expenditures and use for two calendar years are collected from each household. This series of data collection rounds is launched each year on a new sample panel of households, and annual data are developed by combining data from the first year of the new panel with that from the second year of the previous panel.

Each year's sample for the MEPS-HC is drawn from respondents to the previous year's National Health Interview Survey (NHIS). The NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with an over-sampling of Hispanics and blacks that carries over to the MEPS sample. In addition, the MEPS sample design over-samples Asians and persons in low income families.

2.0 Medical Provider Component

The MEPS-MPC collects data from providers that are primarily used to supplement and/or replace information on medical care expenditures reported in the MEPS-HC. The survey contacts medical providers and pharmacies identified by household respondents and for which signed Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliant permission forms have been obtained from family members who received services from the medical providers and pharmacies.

The MPC sample includes all hospitals, emergency rooms, home health agencies, outpatient departments, and pharmacies reported by HC respondents as well as all physicians who provide services for patients in hospitals but bill separately from the hospital. Office-based medical providers where the provider is either a doctor of medicine (MD) or Osteopathy (DO) or practices under the direct supervision of an MD or DO are included in the MPC as well.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents. These data include dates of visit, diagnosis and procedure codes, charges, and payments. These data allow records to be matched with household events to facilitate expenditure imputation. The MPC was not designed as a stand-alone survey to generate national estimates. The MPC data are collected from sampled providers through an initial screening telephone contact to verify provider eligibility, a mailed or faxed questionnaire, and a phone call to collect the data. Many providers prefer to send electronic, fax, or hard copies of records from which the necessary information can be abstracted. To supplement abstraction, telephone calls are placed to providers to clarify items, obtain critical information that may be missing, and follow-up on nonresponse.

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, eligibility requirements, and employer characteristics.

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

- A U.S. Census Bureau list frame of private sector business establishments.
- The Census of Governments from the U.S. Census Bureau.

Data from these 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 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 survey. Data are collected from the selected organizations through a prescreening telephone interview, a mailed questionnaire, and a telephone follow-up for nonrespondents.

4.0 Survey Management

MEPS-HC data are collected under the authority of the Public Health Act. Data are collected under contract with Westat, Inc. Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of this Act and the Privacy Act. NCHS provides consultation and technical assistance.

MEPS-IC data are collected under the authority of the Public Health Service Act and under the authority provided in Title 13, United States Code (U.S.C.). The data are collected under an interagency agreement with the U.S. Census Bureau. Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of this Act, Title 13 U.S.C., and the Privacy Act.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, micro-data files, and tables via the MEPS Web site: www.meps.ahrq.gov. (MEPS-IC micro-data files are confidential and are only accessible for approved research projects at the Census Bureau's Research Data Centers.) Selected data can be analyzed through MEPSnet, an online interactive tool designed to give data users the capability to statistically analyze MEPS data in a menu-driven environment.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing Access and Cost Trends, Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850 (301)-427-1406.

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 8 2003 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 2003-2004 period. To obtain analytic variables, the records on this file must be linked to the 2003 and 2004 MEPS public use data sets by the sample person identifier (DUPERSID).

This file contains a total of 15,774 persons available for longitudinal analysis over a 2-year period. There are 198 respondents who provided data only in 2003 (Panel 8, year 1). These are respondents who participated in the survey in 2003 and died or became ineligible for another reason, such as they entered the military or left the country. There are 284 respondents who provided data only in 2004 (Panel 8, year 2). These are newborns or those who came into a selected household for the first time in 2004, 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 2003 or 2004.

A weight variable (LONGWTP8) when applied to persons who participated in both 2003 and 2004 enables the user to make national estimates of person-level changes in selected variables (e.g. health insurance, health status, utilization and expenditures). LONGWTP8 can also be used to develop cross-sectional type estimates for the civilian noninstitutionalized population in one year based only on the Panel 8 sample. These estimates are robust and similar to those constructed using the standard 2003 and 2004 weights (PERWT03F and PERWT04F) 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-079 for the 2003 Full Year Consolidated File and HC-089 for the 2004 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 persons who participated at any time in 2004 using the longitudinal weight is **\$889.3 billion, se. 42.2 billion**. Using the 2004 Full Year Consolidated File (HC-089), the estimate of total health care expenditures for those participating at any time in 2004 is **\$963.9 billion, se. 30.4 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 2004 HC-089 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 HC-089 over the weighted health care expenditure estimate obtained from this file for subgroup c. For example, to derive a mean expenditure estimate that is adjusted in this manner for subgroup c (e.g. for age group 65+), use the following method:

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

$$= (\sum_{i \in c} A(c) W_{1i} Y_i) / (\sum_{i \in c} W_{1i})$$

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 HC079 for individual i , and
 $\sum_{i \in c}$ is 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 LONGWTP8 for the 3 different time periods).

Population of Interest	Cases to Include	Sample Size	Population Estimate
In 2003 and 2004	YRINDP8=1	15,774	288,667,153
In 2003, Not in 2004	YRINDP8=2	198	3,728,781
In 2004, Not in 2003	YRINDP8=3	284	4,859, 850

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 VARSTRP8 and VARPSUP8. These variables can be used for producing 2003 or 2004 estimates.