MEPS HC-187:
2016 Full Year
Medical Organizations Survey File

May 2018

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

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

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

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

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

3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey.

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.

Acknowledgments

AHRQ would like to acknowledge Dr. John A. Fleishman for his work developing the Medical Organizations Survey (MOS). Dr. Fleishman developed the initial study design and funding proposal that was ultimately granted through the Robert Wood Johnson Foundation. Additionally, the AHRQ Center for Finance, Access and Cost Trends (CFACT) would like to sincerely thank Dr. Fleishman for his critical efforts in designing the MOS, and his decades of service to the MEPS and AHRQ.

B. Background

1.0 Household Component

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS Household Component (HC) also provides estimates of respondents' health status, demographic and socio-economic characteristics, employment, access to care, and satisfaction with health care. Estimates can be produced for individuals, families, and selected population subgroups. The panel design of the survey, which includes 5 Rounds of interviews covering 2 full calendar years, provides data for examining person level changes in selected variables such as expenditures, health insurance coverage, and health status. Using computer assisted personal interviewing (CAPI) technology, information about each household member is collected, and the survey builds on this information from interview to interview. All data for a sampled household are reported most often by a single household respondent but in a number of cases there may be multiple respondents.

The MEPS-HC was initiated in 1996. Each year a new panel of sample households is selected. Because the data collected are comparable to those from earlier medical expenditure surveys conducted in 1977 and 1987, it is possible to analyze long-term trends. Each annual MEPS-HC sample size is about 15,000 households. Data can be analyzed at either the person or event level. Data must be weighted to produce national estimates.

The set of households selected for each panel of the MEPS HC is a subsample of households participating in the previous year's National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics. The NHIS sampling frame provides a nationally representative sample of the U.S. civilian noninstitutionalized population and reflects an oversample of Blacks and Hispanics. In 2006, the NHIS implemented a new sample design, which included Asian persons in addition to households with Black and Hispanic persons in the oversampling of minority populations. The linkage of the MEPS to the previous year's NHIS provides additional data for longitudinal analytic purposes.

2.0 Medical Provider Component

Upon completion of the household CAPI interview and obtaining permission from the household survey respondents, a sample of medical providers are contacted by telephone to obtain information that household respondents cannot accurately provide. This part of the MEPS is called the Medical Provider Component (MPC) and information is collected on dates of visits, diagnosis and procedure codes, charges and payments. The Pharmacy Component (PC), a subcomponent of the MPC, does not collect charges or diagnosis and procedure codes but does collect drug detail information, including National Drug Code (NDC) and medicine name, as well as date filled and sources and amounts of payment. The MPC is not designed to yield national estimates. It is primarily used as an imputation source to supplement/replace household reported expenditure information.

3.0 Medical Organizations Survey

The MEPS Medical Organizations Survey (MOS) expands current MPC data collection activities to include information on the organization of the practices of office-based care providers identified as a usual source of care in the MEPS HC and seen by the HC respondent in 2016. Accordingly, additional data collection is only performed for a subset of office-based care providers already included in the MEPS MPC sample. The MEPS HC asks household respondents for the primary location of the individuals' office-based usual sources of care. The MEPS MPC contacted these places where medical care was provided to determine the appropriate respondent and administer a MEPS MOS. The design of the survey is multi-modal including phone, fax, mail, electronic transmission, and secure email. The data collection method chosen for a provider was the method that was expected to result in the most complete and accurate data with minimal burden to the respondent.

The MEPS MOS database is unique in providing a source of information both on individuals' characteristics and health care utilization and expenditures, and on the characteristics of the providers they use. The following areas were addressed in the MOS because they potentially affect individuals' access to, use of and affordability of health care services:

- Organizational characteristics, e.g., size, ownership, and type of practice
- Use of health information technology
- Case management and use of clinical quality data
- Financial arrangements, e.g., reimbursement methods, number and types of insurance contracts, and compensation arrangements within the practice

This project was funded in part by a grant from the Robert Wood Johnson Foundation.

4.0 Survey Management and Data Collection

MEPS HC, MPC, and MOS data are collected under the authority of the Public Health Service Act. Data are collected under contract with Westat, Inc. (MEPS HC) and Research Triangle Institute (MEPS MPC and MOS). Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of the Public Health Service Act and the Privacy Act. The National Center for Health Statistics (NCHS) provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, micro data files, and tables via the MEPS Web site: meps.ahrq.gov. Selected data can be analyzed through MEPSnet, an on-line interactive tool designed to give data users the capability to statistically analyze MEPS data in a menu-driven environment.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, 5600 Fishers Lane Rockville, MD 20857 (301-427-1406).

C. Technical and Programming Information

1.0 General Information

This documentation describes the data file from the Medical Organizations Survey (MOS), a supplement to the 2016 full-year Medical Expenditure Panel Survey (MEPS). Released as an ASCII file (with related SAS, SPSS, and Stata programming statements and data user information) and a SAS transport dataset, this public use file provides information on characteristics of office-based usual source of care (USC) providers seen by MEPS sample persons in 2016. The file contains 27 variables.

The following documentation offers a brief overview of the types and levels of data provided, content and structure of the files, and programming information. It contains the following sections:

- Data File Information
- Survey Sample Information
- Variable-Source Crosswalk

Both weighted and unweighted frequencies of most variables included in the 2016 full-year MOS data file are provided in the accompanying codebook file. The exceptions to this are the weight variable and variance estimation variables.

A database of all MEPS products released to date and a variable locator indicating the major MEPS data items on public use files that have been released to date can be found at the following link on the MEPS Web site: meps.ahrq.gov.

2.0 Data File Information

This public use dataset contains data on usual source of care provider characteristics for 9,137 sample persons whose providers were respondents to the 2016 MEPS MOS. These data can be linked to MEPS sample respondents in the 2016 Full Year Population Characteristics File (HC-184) or the 2016 Full Year Consolidated File (to be released August of 2018) to enable analyses at the person-level using characteristics of provider practices. The analytic weight provided in this file (MOSWT16F) needs to be applied to these linked data in order to produce nationally representative estimates (see section 3.0 Survey Sample Information below for more details).

2.1 Codebook Structure

The codebook and data file sequence lists variables in the following order:

- Unique person identifiers and survey administration variables
- Medical organizations survey variables
- Survey sample information

2.2 Reserved Codes

The following reserved code values are used:

Value		Definition
-1	INAPPLICABLE	Question was not asked due to skip pattern
-7	REFUSED	Question was asked and respondent refused to answer question
-8	DK	Question was asked and respondent did not know answer
-9	NOT ASCERTAINED	Respondent did not record the data

2.3 Codebook Format

This codebook describes an ASCII data set and provides the following programming identifiers for each variable:

Identifier	Description
Name	Variable name (maximum of 8 characters)
Description	Variable descriptor (maximum 40 characters)
Format	Number of bytes
Type	Type of data: numeric (indicated by NUM) or character (indicated by CHAR)
Start	Beginning column position of variable in record
End	Ending column position of variable in record

2.4 Variable Naming

In general, variable names reflect the content of the variable, with an eight-character limitation. Edited variables end in an X and are so noted in the variable label.

Variables contained in this delivery were obtained from the questionnaire. The source of each variable is identified in the section of the documentation entitled “Section D. Variable-Source Crosswalk.” Sources for each variable are indicated in one of two ways: (1) variables that are collected by one or more specific questions in the instrument have those question numbers listed in the Source column; and (2) variables constructed are labeled “Constructed.”

2.5 File Contents

2.5.1 2016 Medical Organizations Survey

The 2016 Medical Organizations Survey was fielded in 2017 during MPC data collection for the 2016 Medical Expenditure Panel Survey. Data are for persons who had a visit to their usual source of care provider in 2016. Questions about usual sources of care were asked in Panel 20 Round 4 and Panel 21 Round 2. Only persons who saw their office-based usual source of care provider during 2016 were included in the MOS sample frame.

The survey was designed to collect data on the organizational and financial characteristics of the office-based usual source of care providers seen by MEPS responding sample persons in 2016. The initial sample comprised the usual source of care providers for approximately 12,470 persons with signed permission forms for the 2016 MPC (see section 3.1 for more details).

2.5.2 Survey Administration

The sample person identifier is DUPERSID, the same as in the MEPS full-year file.

2.5.3 Organizational Characteristics

MULTLOC -- Does the medical practice have more than one location.

MULTLOC2 -- For practices with multiple locations, is informant describing the practice as a whole or just one location.

NUMDOC -- Approximately how many physicians work either part or full-time at the practice. For purposes of confidentiality, this variable was top- coded at 400 physicians.

NUMPCP -- Of the physicians working at the practice, how many are primary care physicians. For purposes of confidentiality, this variable was top-coded at 120 primary care physicians.

NUMNPA -- Approximately how many nurse practitioners and physician assistants work at the practice. For purposes of confidentiality, this variable was top-coded at 60 nurse practitioners and physician assistants.

MULTSPEC -- Is this a multi-specialty group practice.

POWNER -- Is the medical practice owned by physicians in the practice.

PRACTYPX -- For practices not owned by physicians in the practice, type of practice. Editing included the recoding of several “other specify” text items into existing categorical values

ROLEX -- What is respondent’s role in the practice. Editing included the recoding of several “other specify” text items into existing categorical values,

For NUMDOC, NUMPCP and NUMNPA, top coding was applied to all responses in the 99th percentile to preserve the confidentiality of medical organizations responding to the MOS. Data users should note that top coding can affect results for certain types of analyses. For example, users trying to compute the mix of primary care physicians versus specialists could be impacted by not having access to top coded values for these variables in the tails of the distribution. Apparent inconsistencies between the reported number of full and part-time physicians and the number of full or part-time primary care physicians working at the practice were not edited to

ensure alignment.

Please note that analysts can access non top coded variables through the AHRQ Data Center. To access information on the AHRQ Data Center including an application, please go to the following Web address: meps.ahrq.gov/data_stats/onsite_datacenter.jsp.

2.5.4 Health Information Technology

EHREMR -- Does the practice use an electronic health record (EHR) or electronic medical record (EMR) system. Editing of this variable focused on checking whether the skip patterns were consistent. When answered "NO", EHRRMIND, and SECMSGS were skipped.

EHRRMIND -- If the practice uses an electronic records system, does it routinely provide reminders for either guideline-based interventions or screening tests.

SECMSGS -- If the practice uses an electronic records system, is it routinely used for exchanging secure messages with patients.

2.5.5 Case Management and Use of Clinical Quality Data

QUALCARE -- Does the practice regularly give reports to physicians on the clinical quality of care they individually provide.

SAMEDAY -- Does the practice routinely set time aside for same-day appointments.

PCREMIND -- Does the practice routinely send patients reminders for preventative care or follow-up care.

CASEMGR -- Does the practice use case managers whose primary job is to coordinate patient care.

HOSDCCHK -- When patients are discharged from the hospital, does someone from the practice usually contact the patient within 48 hours.

PRACXRAY -- Does the practice have the ability to x-ray both chest and extremities in the office.

2.5.6 Financial Arrangements

CAPITATD -- Does the practice have any capitated contracts (per person, per month) with managed care plans.

ACO -- Does the practice participate in an Accountable Care Organization (ACO) arrangement with either Medicare or private insurers. [Not all patients seen by a provider participating in an ACO are necessarily assigned the ACO for the purposes of calculating shared savings.]

MEDHOME -- Is the practice certified as a patient-centered medical home.

PERMCAID -- What percentage of the practice's patients are covered by Medicaid.

BASESAL -- Are physicians in the practice paid a base salary.

2.5.7 Analytic Weight and Variance Estimation

MOSWT16F -- MOS final person weight

VARSTR -- Variance estimation stratum

VARPSU -- Variance estimation primary sampling unit (PSU)

2.6 Linking to Other Files

Data from the current file can be used alone or in conjunction with other files.

2.6.1 Population Characteristics File

To expand the scope of potential estimates and analyses, records on this file can be linked to the 2016 Full Year Population Characteristics file by the sample person identifier (DUPERSID).

2.6.2 National Health Interview Survey

The set of households selected for MEPS is a subsample of those participating in the National Health Interview Survey (NHIS), thus, each MEPS panel can also be linked back to the previous year's NHIS public use data files. For information on obtaining MEPS/NHIS link files please see meps.ahrq.gov/data_stats/more_info_download_data_files.jsp.

3.0 Survey Sample Information

3.1 MOS Sample Design and Response Rates

The selection of providers for the MOS sample was designed as a subsample of the office-based medical providers selected for inclusion in the MEPS Medical Provider Component (Zodet et. al.). Although the MOS is a survey of physician practices, it is not an independent nationally representative sample of providers per se because it was drawn from providers seen by MEPS sample persons. Consequently, provider-level data collected in the survey are linked to MEPS sample respondents to enable analyses at the person-level using characteristics of provider practices.

The table below provides a summary of MOS sample sizes. The overall target population for the MOS is persons who had one or more visits in 2016 to an office-based practice that was identified as their usual source of care. Of the 14,363 MEPS sample persons who were part of this population, 12,470 granted permission to contact their provider. Of these, 11,926 person-provider pairs (labelled "pairs" because some persons have the same usual source of care

provider) were actually fielded for the study. For these 11,926 pairs the response rate was approximately 76 percent (i.e., response for 9,079 pairs). In addition to the 9,079 pairs, provider data was able to be matched to 58 pairs that were eligible for the study (i.e., granted permission) but were not fielded. Consequently, the final analytic sample size is 9,137 persons across 5,201 unique responding practices (average of 1.8 sample persons per practice). Data for the 5,201 respondent practices are only assigned to persons who gave permission to contact their practice.

Number of Sample Persons and MOS Practices by Survey Stage[1]

Survey Stage	Sample Persons (person-provider pairs)
Sample in target population	14,363
Eligible for fielding (i.e., permission provided)	12,470
Fielded	11,926
Responding sample size	9,079
Analytical sample size[2]	9,137

[1]After accounting for post-MOS sample selection survey attrition

[2]Includes 58 non-fielded matched pairs

3.2 MOS Weighting

An analytic weight was assigned to each MEPS sample person with a linked MOS response. The MEPS-HC full-year poverty-adjusted person weight served as the base weight in developing this analytic weight [see the 2016 Full Year Consolidated File (HC-192, to be released August 2018) documentation], followed by two stages of adjustment for non-permission and nonresponse respectively, and a raking adjustment to the control totals for the target population estimated from MEPS full-year data. At the first stage the base weight was adjusted for lack of permission to contact the provider, while at the second stage further adjustment was made for non-response to the MOS. Finally, a raking procedure was applied to the nonresponse adjusted weight to ensure the sums of weights were consistent with estimated totals for key demographic subgroups. The sum of the final MOS weights across sample persons in this file is 146,948,373, which represents the estimated number of persons in the U.S. civilian noninstitutionalized population who had one or more visits to their office-based usual source of care provider in 2016.

3.3 Variance Estimation

To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for MOS estimates, analysts need to take into account the complex sample design of MEPS, since the MOS sample is based on the MEPS sample. The identifiers for variance strata (VARSTR) and variance PSU (VARPSU) needed to calculate appropriate standard errors based on the Taylor-series linearization method are included on this file. Software packages that permit the use of the Taylor-series linearization method include SUDAAN, Stata, SAS (version 8.2 and higher), and SPSS (version 12.0 and higher). For complete information on the capabilities of each package, analysts should refer to the corresponding software user documentation.

For detailed information on the MOS sample design, see
Zodet, M., S. Chowdhury, S. Machlin, and J. Cohen. 2016. Linked designs of the MEPS Medical Provider and Organization Surveys. *In JSM Proceedings*, Survey Research Methods Section. Alexandria, VA: American Statistical Association. 1914-1921.

D. Variable-Source Crosswalk

MOS VARIABLES - PUBLIC USE

VARIABLE	DESCRIPTION	SOURCE
DUPERSID	PERSON ID (DUID + PID)	Assigned in Sampling
MULTSPEC	MULTISPECIALTY GROUP PRACTICE	MOS01
MULTLOC	DOES PRACT HAVE MORE THAN 1 LOCATION	MOS02
MULTLOC2	RESPONSES FOR ALL OR 1 LOC	MOS22
POWNER	PRACTICE OWNERSHIP	MOS01
PRACTYPX	PRACTICE DESCRIPTION	MOS03AX (edited)
NUMDOC	APPROX # FT + PT PHYSICIANS IN PRACTICE	MOS04
NUMPCP	APPROX # PRIM CARE PHYSICIANS IN PRACT	MOS05
NUMNPA	APPROX # NURSE PRACTNRS + PHYS ASSISTS	MOS06
PRACXRAY	PRACTICE XRAY CHEST & EXTREMITIES ONSITE	MOS07
SAMEDAY	PRACT SET TIME ASIDE FOR SAME-DAY APPTS	MOS08
PCREMIND	SEND PREVENTIVE CARE REMINDERS TO P	MOS09
QUALCARE	REPORTS TO PHYS ON CLINICAL QUAL CARE	MOS10
CASEMGR	CASE MANAGER COORDINATE PATIENT CARE	MOS11
HOSDCCHK	CHECK IN W/P 48 HRS AFTER HOSP DISCHARGE	MOS12
EHREMR	PRACTICE USES EHR OR EMR	MOS13

VARIABLE	DESCRIPTION	SOURCE
EHRRMIND	EHR/EMR REMINDERS FOR GUIDELINES/SCREEN	MOS14
SECMSGS	EHR/EMR EXCHANGE SECURE MESSAGES W/P	MOS15
PERMCAID	PERCENT COVERED BY MEDICAID	MOS16
CAPITATD	PRACTICE HAS CAPITATED CONTRACTS	MOS17
ACO	PARTICIPATE IN ACO W/MEDICRE OR PRIV	MOS18
MEDHOME	CERTIFIED PATIENT-CENTERED MEDICAL	MOS19
BASESAL	PHYSICIANS PAID BASE SALARY	MOS20
ROLEX	ROLE OF RESPONDENT IN PRACTICE	MOS21X (edited)
MOSWT16F	MOS FINAL PERSON WEIGHT - 2016	Constructed
VARSTR	VARIANCE ESTIMATION - 2016	Constructed
VARPSU	VARIANCE ESTIMATION PSU - 2016	Constructed