Medical Expenditure Panel Survey (MEPS) OVERVIEW

Anita Soni, PhD, MBA
Agency for Healthcare Research and Quality (AHRQ)

MEPS OVERVIEW: Outline

- ❑ **What is MEPS?**
  - ❑ **Components**
  - ❑ **Purpose**
  - ❑ **Design and sample**
  - ❑ **Data Collection**
- ❑ **What MEPS collects?**
  - ❑ **Core content - computer-assisted personal interviewing (CAPI) sections**
  - ❑ **Self-administered questionnaires**
- ❑ **How are the data disseminated?**
  - ❑ **Website**
  - ❑ **Data files**
  - ❑ **Web tools**
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- ❑ **MEPS 2018 changes**
  - ❑ **Changes Summary**
  - ❑ **Research Implications**

What is MEPS?

Components

Purpose

Design and sample

Data Collection

MEPS Components

Medical Expenditure Panel Survey (MEPS)

| Household Component (HC) | Medical Provider Component (MPC) | Insurance Component (IC) |

MEPS Survey Components

- **MEPS-HC: Household Component**
    - Collects healthcare use data from a sample of families and individuals in selected communities across the United States
    - Annual survey of about 15,000 households since 1996
- **MEPS-MPC: Medical Provider Component**
    - Survey of medical providers linked to respondents to the HC
    - Collects data from a sample of providers who provided medical care to HC respondents
    - Data not designed to yield national estimates; used solely for editing and imputation purposes related to the Household Component data

- **MEPS-IC: Insurance Component**
    - Collects data from a sample of private- and public-sector employers on the health insurance plans they offer their employees
    - An independent survey of employers and unions NOT linked to HC

MEPS-Household Component Purpose & Uses

- MEPS-HC is an annual survey of about 15,000 households fielded since 1996
- Collects data from a sample of families and individuals in selected communities across the United States
- Provides data collected from individual households and their members, which is supplemented by data from their medical providers
- Provides nationally representative estimates of healthcare use, expenditures, sources of payment, access to care, and health insurance coverage for the U.S. civilian noninstitutionalized population
- Allows estimates to be produced for individuals, families, and selected population subgroups and socioeconomic characteristics
- Is used for policy-related and behavioral research on the determinants of healthcare use, spending, and insurance coverage

MEPS-HC Survey Design

- ❑ **Since 1996, every year a new panel of sample households has been selected.**

- ❑ **The sample is representative of the civilian noninstitutionalized population of the United States.**

- ❑ **The MEPS-HC sample is a subsample of previous year's National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics (NCHS).**

- ❑ **Data are collected for 2 years of healthcare usage from each panel.**

- ❑ **There are 5 interview rounds to collect this data.**

MEPS Panel Design: Data Reference Periods

	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Panel 21												
Round 3												
Round 4												
Round 5												
Panel 22												
Round 1												
Round 2												
Round 3												
Round 4												
Round 5												
Panel 23												
Round 1												
Round 2												
Round 3												
Round 4												
Round 5												
Panel 24												
Round 1												
Round 2												
Round 3												
Sample Size	N = 30,716				N = 29,415				N = 27,648			

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

MEPS-HC Sample Sizes

Year	Number of families	Number of persons
2019	11,924	27,648
2018	12,475	29,415
2017	12,756	30,716
2016	13,587	33,259
2015	13,800	33,893
2014	13,421	33,162
2013	13,936	35,068
2012	14,763	37,182
2011	13,449	33,622
2010	12,445	31,228
2009	13,875	34,920
2008	12,316	31,262
2007	11,615	29,370
2006	12,811	32,577
2005	12,810	32,320
2004	13,018	32,737
2003	12,860	32,681
2002	14,828	37,418
2001	12,852	32,122
2000	9,515	23,839
1999	9,345	23,565
1998	9,023	22,953
1997	13,087	32,636
1996	8,655	21,571

MEPS-HC Data Collection

❑ **Data is collected by in-person interviews using CAPI technology.**

❑ **All data is reported by a single household respondent.**

❑ **To collect 2 years of healthcare usage data, it can take up to 2½ years.**

❑ **Interviews can last anywhere from 1 to 4 hours.**

What MEPS collects?

Core content - CAPI sections
Self-administered questionnaires

MEPS-HC Interview Content

❑ **Following is the list of sections that are asked using CAPI in all rounds:**

    ❑ **Demographics**

    ❑ **Utilization and Expenditures**

    ❑ **Charges and Payments**

    ❑ **Employment**

    ❑ **Health Insurance**

❑ **Health Status (Rounds 1 – 4)**

❑ **Priority Conditions Enumeration (Rounds1 – 4)**

MEPS-HC: Interview Content

- ❑ **Demographics**
  - ❑ **Collects demographic characteristics of each person: age, sex, race and ethnicity, Language and English proficiency, marital status, foreign-born status, student status and educational attainment, military service and honorable discharge and poverty status.**

- ❑ **Utilization and Expenditures**
  - ❑ **Collects data in each round on use and expenditures for office- and hospital-based care, home healthcare, dental services, vision aids, and prescribed medicines. Data are collected for each sample person at the event level (e.g., doctor visit, hospital stay).**

MEPS-HC: Interview Content

- ❑ **Charges and Payments (CP)**
  - ❑ **Tracks total charges and sources of payment for medical events reported in earlier sections.**

- ❑ **Employment (EM)**
  - ❑ **Covers questions about each person's employment or self-employment status.**

- ❑ **Health Insurance (HX)**
  - ❑ **Collects information about health insurance including private and public health insurance programs.**

MEPS-HC: Interview Content

❑ **Following are asked in rounds 1-4 only**

❑ **Health Status (HE)**

    ❑ **Assesses physical and mental health status for both children and adults.**

❑ **Priority Conditions Enumeration (PE)**

    ❑ **Obtains a summary assessment of each person's physical and mental health and collects information about a select group of highly prevalent conditions, called priority conditions.**

MEPS-HC: Interview Content

- ❑ **Some sections are only asked once a year:**
  - ❑ **Access to Care (Rounds 2 and 4)**
  - ❑ **Child Health and Preventive Care (Rounds 2 and 4)**
  - ❑ **Income (Rounds 3 and 5)**
  - ❑ **Additional Health Questions (Rounds 3 and 5)**
  - ❑ **Assets (Round 5 ONLY)**

MEPS-HC: Interview Content Rounds 2 and 4

❑ **Access to Care (AC)**

 ❑ **Identifies whether each household member has a medical provider who serves as the usual source of care (USC), reasons why members without a USC do not have a USC, Questions about satisfaction with USC provide, and any problems experienced in obtaining needed healthcare.**

❑ **Child Preventive Health (CS)**

 ❑ **Collects information on general health status, special healthcare needs, potential behavioral problems, access to healthcare, preventive care, and height and weight of any child in the family.**

MEPS-HC: Supplemental Sections Rounds 3 and 5

- ❑ **Income (IN)**
    - ❑ Collects information about income and tax returns.

- ❑ **Additional Health Questions (AH)**
    - ❑ Questions assess the impact of physical illness, injury, or mental/emotional health on household members' attendance at work. The section also asks about smoking and engaging in vigorous exercise.

- ❑ **Assets (AS)**
    - ❑ Questions ask about household members' real estate, businesses, vehicles, investments, other assets, and debts to supplement the financial data collected in the Income section.

MEPS-HC: Self-Administered Questionnaires

- ❑ **Diabetes Care Survey (DCS)**
- ❑ **Adult Self-Administered Questionnaire (SAQ)**
- ❑ **Veteran Self-Administered Questionnaire (VSAQ)**
- ❑ **The Preventive Care Self-Administered Questionnaire (PSAQ)**
- ❑ **Cancer Self-Administered Questionnaire (CSAQ)**

Diabetes Care Survey (DCS)

- ❑ The DCS is given once a year in rounds 3 and 5 to each person identified as having diabetes.
- ❑ Short survey with 14 questions.
- ❑ Question include the following:
  - ❑ Diabetes caused problems with your kidneys?
  - ❑ Diabetes caused problems with your eyes?
  - ❑ When did you have an eye exam in which your pupils were dilated?
  - ❑ When did you have a health professional check your feet for any sores or irritations?
  - ❑ How is your diabetes being treated?

Adult Self-Administered Questionnaire (SAQ)

- The SAQ was administered once a year (rounds 2 and 4) with follow-up collection of outstanding forms in rounds 3 and 5.
- Questions include the following:
    - Satisfaction with healthcare—Consumer Assessment of Healthcare Providers and Systems (CAHPS)
    - Health status—Veterans RAND 12-Item Health Survey (VR-12)
    - Nonspecific psychological distress—Kessler Psychological Distress Scale (K6)
    - Patient Health Questionnaire-2 (PHQ-2)

- The SAQ has been administered every other year since 2018.

Veteran Self-Administered Questionnaire (VSAQ)

- ❑ **The VSAQ was administered to eligible veterans in rounds 3 and 5.**
- ❑ **VSAQ data is included in 2018 and 2019 consolidated data files.**
- ❑ **VSAQ has a total of 34 questions.**
- ❑ **Collected information related to the veteran's:**
  - ❑ **Health conditions**
  - ❑ **Any healthcare services used from the U.S. Department of Veterans Affairs (VA), outside of the VA, or neither**
  - ❑ **Veteran's choice of care, such as cost or location**
  - ❑ **Receipt of healthcare from specialists**

The Preventive Care Self-Administered Questionnaire (PSAQ)

- ❑ **The PSAQ was fielded for the first-time during Panel 18 Round 5 of the 2014 MEPS. The questionnaires were administered in early 2015.**
- ❑ **The PSAQ collects a variety of person-level preventive healthcare data for adults.**
- ❑ **There are separate versions of the survey for males and females.**
- ❑ **Since 2018, the PSAQ has been administered every other year in rounds 2 and 4.**

Cancer Self- Administered Questionnaire (CSAQ)

❑ **The 2011 CSAQ was developed and administered to the respondents identified as having cancer with questions about the burden of cancer, long-lasting effects of the disease, financial impacts, and employment outcomes for cancer survivors and their families (93 questions).**

❑ **The CSAQ was updated and administered for data year 2016 (62 questions).**

❑ **The 2016 version of the CSAQ was administered in 2017.**

MEPS 2018 Changes

Summary of Changes
Research Implications

MEPS 2018 Changes

❑ **Reasons:**

    ❑ **Improve healthcare use reporting.**

    ❑ **Reduce the cognitive burden of responding.**

❑ **Summary of Changes:**

    ❑ **Omitted sections**

    ❑ **Added sections**

    ❑ **Modified sections**

    ❑ **SAQ - every odd year starting in 2017.**

    ❑ **PSAQ - every even year starting in 2018.**

Changes: Research Implications

VARIABLE CHANGES

❑ **The full-year 2018 PUFs are the first year that all rounds of data were collected with the redesigned instrument, and no data were transformed to conform to the previous design.**

❑ **Due to design changes, many variables have been eliminated, added, or modified.**
  ❑ **DUPERSID now has two-digit panel number at the beginning.**
  ❑ **Variables ending in "_M18" indicate major changes to question or response values (see next slide).**

❑ **Some variable labels have been changed, even though variable names are the same.**

❑ **A few variables have the categories changed or collapsed.**

❑ **The value -9 NOT ASCERTAINED was removed as an allowable value and replaced with -15 CANNOT BE COMPUTED.**

❑ **Full list of added and deleted variables and all other variable changes is included in the documentation for the 2018 Consolidated data file.**

Changes: Research Implications

- **The 2018 design changes will impact trend analysis and longitudinal research projects.**
  - ▶ *For example, design changes to improve reporting likely will contribute to observed increases (and may dampen any actual decreases) in events and expenditures from 2016 to 2018, particularly from 2017 to 2018.*
- **Almost all data files are affected by redesign.**
  - ▶ *Full-Year Consolidated file, Event files . . .*

MEPS-HC: Caveats and Limitations

❑ **Sample size limitations preclude some analyses.**

❑ **Typically, one respondent provides data for the entire household.**

❑ **Household respondents may not be able to report certain types of information accurately:**

- **Type of health plan**
- **Detailed event information**
- **Diagnoses**

How are the data disseminated?

Website: Data files, Web tools, Publications

Data Centers: AHRQ, Census, Others

MEPS Website

☐ **URL: https://meps.ahrq.gov/mepsweb**

☐ **Materials on the MEPS website:**
- **Microdata files—public use files (PUFs)**
- **Questionnaires**
- **Publications**
- **Workshops and events—workshops, webinars, and seminars**
- **Mailing list**
- **MEPS data tools**

MEPS-HC: Data Files for Public Use (PUFs)

❑ **Full-Year Files—Contain expenditure and utilization data for the calendar year from several rounds of data collection**

❑ **Person Level—Detailed person information**
  - **Each record represents a person and has all the person's demographics, health, income, expenses, etc.**

❑ **Event Level—Detailed event information**
  - **Each record represents an event, such as a hospital visit, and has all details on conditions, expenditures, etc., for that visit.**

❑ **Condition Level—Detailed condition information**
  - **Each record represents a condition; all details on that condition are on that record.**

❑ **Job Level—Detailed job information**
  - **Each record represents a job and all details associated with it.**

MEPS-HC: Data Files for Public Use (PUFs): Supporting Documents

- ❑ **Documentation files**
    - ❑ **Contain general information about MEPS**
    - ❑ **List and discuss file variables including variable-source crosswalk to link back to questionnaire items**
    - ❑ **Include instructions on how to link files**
- ❑ **File codebooks**
    - ❑ **Contain names and location of all variables**
    - ❑ **Provide formatted frequencies for all variables in the file**
- ❑ **Programming statements**
    - ❑ **SAS, SPSS, STATA, R (2017 onwards)**
- ❑ **Data File in following formats**
    - ❑ **ASCII, SAS transport, Stata, SAS V9 and XLXS (2018 onwards)**
- ❑ **Industry and Occupation Codes**

MEPS-HC Data Tools

- ❑ **Explore trends and cross-sectional bar charts for nationally representative estimates of household medical utilization and expenditures.**

- ❑ **Customize tables by demographic characteristics, health insurance coverage, accessibility and quality of care, treated medical conditions, and prescribed medicine purchases.**

- ❑ **Customize tables by number of people, total expenditures, prescription medicines or dental visits, source of payment (such as Medicare, Medicaid, Out of Pocket).**

- ❑ **MEPS-HC Variable Explorer Tool : Quick and easy way to find variables and files for research purposes.**

Data Centers

- ❑ **Purpose - provide researchers access to non-public use MEPS data (except directly identifiable information)**
  - ▪ **Examples: *State and County FIPS Codes, Non-Public Use Data Elements: Fully Specified ICD-9/10 Codes; Date of cancer diagnosis, etc.***

- ❑ **Access: data can be accessed through many data centers around the country.**
  - ▪ **AHRQ Data Center (ADC)**
  - ▪ **Federal Statistical Research Data Centers (FSRDC)**
  - ▪ **University Data Centers**

AHRQ Data Center

- ❑ **Location and access**
  - ❑ **Located in Rockville, MD at AHRQ building**
  - ❑ **Secure room with no internet connectivity; terminal connected to secure LAN**
  - ❑ **Users escorted while in the building**
- ❑ **Statistical software**
  - ❑ **SAS, Stata, SUDAAN, R**
- ❑ **Programming Support**

AHRQ Data Center: Procedures

- ❑ **Proposal and review—two weeks for feasibility and data availability.**

- ❑ **Requirements—institutional review board (IRB) review from users' institute; signing the data use agreement; and $300 one-time fee to cover technical assistance.**

- ❑ **Other General Rules:**
- ❑ **Researcher may bring data in, but not out; given access only to data needed for approved project; run analysis—onsite or offsite (rarely).**
- ❑ **All tabular data is reviewed for confidentiality before release from ADC—only approved tables can leave ADC.**
- ❑ **ADC will store data files, foreign merge files, and all outputs needed for replication—may be accessed remotely in special circumstances.**
- ❑ **If MEPS data is accessed through any other data center, users are expected to follow rules and pay fees required by that data center in addition to ADC.**

MEPS Contact Information

For any MEPS questions:

mepsprojectdirector@ahrq.hhs.gov

For AHRQ Data Center:

CFACTDC@AHRQ.HHS.GOV

For MEPS workshops or webinars:

WorkshopInfo@ahrq.hhs.gov

Thank you!

Anita.Soni@ahrq.hhs.gov