



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



Medical Expenditure Panel Survey (MEPS) OVERVIEW

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MEPS OVERVIEW: Outline



- ☐ **MEPS Basics**
 - ☐ MEPS Components
 - ☐ Purpose and use
 - ☐ MEPS Commonly Used Terms
 - ☐ Data Collection Process
- ☐ **MEPS Interview Content**
 - ☐ Core questionnaires
 - ☐ Self-administered questionnaires
 - ☐ Recent Changes
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 - ☐ Restricted/Confidential
- ☐ **MEPS Files**
 - ☐ Data Files
 - ☐ Associated Documents

MEPS BASICS

Components

Purpose and Use

MEPS Commonly Used Terms

Data Collection Process

MEPS Components

Medical Expenditure Panel Survey (MEPS)

Household
Component
(HC)

Medical Provider
Component
(MPC)

Insurance
Component
(IC)

MEPS 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 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 & Use



- ❑ **MEPS-HC is an annual survey of about 15,000 households fielded since 1996**
- ❑ **The sample is representative of the civilian noninstitutionalized population of the United States**
- ❑ **Collects data from a sample of families and individuals across the United States**
- ❑ **Provides nationally representative estimates of healthcare use, expenditures, sources of payment, access to care, and health insurance coverage**
- ❑ **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 Commonly Used Terms



- ☐ **Panel** - Since 1996, every year a new panel of sample households has been selected. Each Panel participates in MEPS for two years, e.g., 1/1/2023 – 12/31/2024
- ☐ **Round** - There are five interview rounds to collect two years of healthcare usage data
- ☐ **CAPI** - Computer assisted personal interviewing - information about each household member is collected using CAPI
- ☐ **Respondent** – All data for a sampled household are reported by a single household respondent

MEPS-HC Data Collection Process



- ❑ There are five interview rounds to collect two years of healthcare usage data, and the survey builds on this information from interview to interview
- ❑ MEPS has two cycles of data collection each year; the first in the Spring from January through June for odd numbered rounds and the second in the Fall, from July through December for even numbered rounds
- ❑ In the first six months of each year, data collection is in progress for three panels: the panel beginning its first year, the panel beginning its second year, and the panel completing its final interview
- ❑ With this design, MEPS produces a continuing series of annual data files on health care use and expenditures
- ❑ Each annual data file contains data from two panels, and each panel is represented in two annual files

MEPS Interview Content

Core Questionnaires

Self-administered Questionnaires

Recent Changes

MEPS-HC Interview Content

- ❑ MEPS Interview Content has two types of collections:
 - ❑ Questionnaires using CAPI
 - ❑ Every Round
 - ❑ Every Round except last
 - ❑ Once a year
 - ❑ Only in the Last round
 - ❑ Self-Administered Questionnaires

MEPS-HC: Questionnaires using CAPI

- ❑ Following is the list of sections that are asked using CAPI in all rounds:
 - ❑ Demographics
 - ❑ Utilization and Expenditures
 - ❑ Charges and Payments
 - ❑ Employment
 - ❑ Health Insurance

MEPS-HC: Core Questionnaires



☐ 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: Core Questionnaires



- ☐ **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 for individuals

MEPS-HC: Core Questionnaires



☐ Health Status (HE)

- ☐ Asks questions about IADL (Instrumental Activities of Daily Living) and ADL (Activities of Daily Living) limitations, Functional and activity limitations, Hearing, vision problems and Disability status etc.

☐ Priority Conditions Enumeration (PE)

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

MEPS-HC: Core Questionnaires



- ☐ **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: Core Questionnaires

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)**
- ☐ **The Preventive Care Self-Administered Questionnaire (PSAQ)**
- ☐ **Social Determinants of Health Survey (SDOH)**
- ☐ **Veteran Self-Administered Questionnaire (VSAQ)**
- ☐ **Cancer Self-Administered Questionnaire (CSAQ)**

Diabetes Care Survey (DCS)

- ☐ Administered once a year in rounds 3 and 5 to each adult identified as having diabetes
- ☐ Question include the following:
 - ☐ Problems with kidneys
 - ☐ Problems with eyes
 - ☐ Eye exam in which pupils were dilated
 - ☐ Health professional check feet
 - ☐ How the diabetes is being treated

Adult Self-Administered Questionnaire (SAQ)

- ❑ Administered every other year in rounds 2 and 4 to all adults
- ❑ 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 Preventive Care Self-Administered Questionnaire (PSAQ)



- ❑ Administered every other year in rounds 2 and 4 to all adults
- ❑ There are separate versions of the survey for males and females
- ❑ Questions are asked about preventive care
- ❑ Contains questions on mental health counseling and treatment about alcohol and drug use

Social Determinants of Health Survey (SDOH)



- ❑ Administered to all adults ages 18 and older
- ❑ First MEPS instrument to be administered both as a paper-and-pencil and web questionnaire
- ❑ SDOH data is included in 2021 consolidated data file
- ❑ Questions asked are about the following topics:
 - ❑ General Life Satisfaction
 - ❑ Housing Quality
 - ❑ Financial Well-being
 - ❑ Food security
 - ❑ Social support discrimination
 - ❑ Physical and sexual violence

Veteran Self-Administered Questionnaire (VSAQ)



- ☐ The VSAQ was administered to eligible veterans
- ☐ 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
 - ☐ Medical Services
 - ☐ Individual and group mental health care
 - ☐ Perception of care received in and outside the VA
 - ☐ Caregiver support
 - ☐ Receipt of care from primary and specialist healthcare providers

Cancer Self- Administered Questionnaire (CSAQ)



- ☐ **Fielded originally in 2011 to current cancer patients and cancer survivors**
- ☐ **Revised version was fielded in 2016 and 2017**
- ☐ **The version used in 2011 had 93 questions and the version administered in 2016 and 2017 had 62 questions**
- ☐ **Asks about impact of cancer on the survivors and their families, and includes the topics:**
 - ☐ **Burden of cancer**
 - ☐ **Long-lasting effects of the disease**
 - ☐ **Financial impacts**
 - ☐ **Employment outcomes for cancer survivors and their families**

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, e.g., health plan, diagnoses etc.**
- ❑ **Survey changes impact research**

MEPS Recent Changes

MEPS 2018 Changes
Changes due to COVID 19

Reasons For 2018 Changes



- ☐ Improve healthcare use reporting
- ☐ Reduce the cognitive burden of responding
- ☐ Use methods that can increase responses and comprehensiveness of reporting
- ☐ Simplify the response task — enumerate first, then collect details (e.g., provider information)
- ☐ Focus on items that support key policy and research needs
- ☐ Simplify interview administration tasks


Changes: Summary

- ☐ Omitted sections
- ☐ Added sections
- ☐ Modified sections
- ☐ SAQs
- ☐ Changes to use and expenditure collection
- ☐ Research implications



- ☐ Condition Enumeration (CE)
- ☐ Disability Days (DD)
- ☐ Preventive Care (AP)
- ☐ Provider Directory (PD)

Changes: Summary (cont.)

- ☐ Omitted sections
- ☐ Added sections 
- ☐ Modified sections
- ☐ SAQs
- ☐ Changes to use and expenditure collection
- ☐ Research implications

- ☐ Additional Healthcare Questions (AH)
- ☐ Start/Restart (ST)
- ☐ Event Follow-up (EF)
- ☐ Respondent Forms

Changes: Summary (cont.)

☐ Omitted sections

☐ Added sections

☐ Modified sections

☐ SAQs




☐ SAQ

☐ Preventive Care
SAQ (PSAQ)

☐ Changes to use and
expenditure collection

☐ Research implications

Changes: Summary (cont.)

- ☐ Omitted sections
- ☐ Added sections
- ☐ Modified sections 
- ☐ SAQs
- ☐ Changes to use and expenditure collection
- ☐ Research implications

- ☐ Health Status (HE)
- ☐ Priority Conditions Enumeration (PE)
- ☐ Access to Care (AC)
- ☐ Quality Supplement (QS)
- ☐ Child Health Supplement (CS)
- ☐ Health Insurance
- ☐ Income (IN)/Assets (AS)
- ☐ Calendar (CA)
- ☐ Provider Probes (PP)

Changes: Summary (cont.)

☐ Omitted sections

☐ Added sections

☐ Modified sections

☐ SAQs

☐ Changes to use and expenditure collection 

☐ Research implications

☐ Date Picker

☐ Provider Search Tool

☐ Switch Feature

☐ Off-Path Feature

☐ Event Driver (ED)

☐ Event Detail

Changes: Summary (cont.)

- ☐ Omitted sections
- ☐ Added sections
- ☐ Modified sections
- ☐ SAQs
- ☐ Changes to use and expenditure collection
- ☐ Research implications



- ☐ Variable changes
- ☐ Variables renamed
- ☐ Other implications

MEPS Changes Due to COVID-19

Timeline of COVID-19 related Changes

- ▶ **No interruption in data collection throughout pandemic**
- ▶ **Spring 2020: Shift to telephone interview**
 - Inclusion of telehealth: informal prompting of telemedicine events
- ▶ **Fall 2020:**
 - COVID added to Condition Roster (3 entries)
 - COVID-19 in-person mitigation protocols
 - Generalized CAPI instrument to accommodate 9 data collection rounds
- ▶ **Spring 2021:**
 - Telehealth questions added to provider probes
 - Inclusion of Telehealth event type
 - Added items related to 'Delays in care due to COVID'

Timeline of COVID-19 related Changes

► Fall 2021:

- Added COVID-19 vaccine item
- Gradual shift to Face-to-face interviewing

► Spring 2022:

- Face-to-face interviewing – as much as possible (varied geographically dependent on COVID-19 activity)
- Added COVID-19 vaccine booster item
- Roll out of Computerized Assisted Video Interview CAVI
- MEPS data collection is now multi-mode (in-person, CAVI and phone)

► Spring 2023:

- Addition of COVID-19 questions to measure LONG COVID

Temporary Changes in Sample Design

- **Data collection from Panels 23 and 24**
 - ▶ Extended to nine rounds
 - ▶ This translates into a respondent participating in MEPS for four years
- **Panel 25 onwards**
 - ▶ Data collection went back to five rounds

Changes: Research Implications

- ❑ All design changes will impact trend analysis and longitudinal research projects
- ❑ Many variables have been eliminated, added, or modified.
- ❑ Some variable labels have been changed, even though variable names are the same. Some answer categories changed or collapsed
- ❑ The value -9 NOT ASCERTAINED was removed as an allowable value and replaced with -15 CANNOT BE COMPUTED
- ❑ Due to COVID-19, temporary changes in the sample design and data collection
- ❑ **Please read the Documentation carefully before starting your analysis!**

MEPS Data Access

Public Data

Non-Public Data

MEPS-HC Data Access



☐ Public Data

- ☐ Available on MEPS Website
 - ☐ Data Files
 - ☐ Data Tools

☐ Non-Public Data

- ☐ Has confidential information
- ☐ Only available from Data Centers

Public Data Access

- ❑ **MEPS Website**

- ❑ <https://meps.ahrq.gov/mepsweb>

- ❑ **Materials on MEPS Website**

- ❑ **Data Files**

- ❑ **Data Tools**

- ❑ **Questionnaires**

- ❑ **Publications**

- ❑ **Workshops and events—workshops, webinars, and seminars**

- ❑ **Mailing list**

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

Data Files: 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 by demographic characteristics, health insurance coverage, accessibility and quality of care, treated medical conditions, and prescribed medicine purchases
- ❑ Customize by number of people, total expenditures, prescription medicines or dental visits, source of payment (e.g., Medicare, Medicaid, Out of Pocket)
- ❑ MEPS-HC Variable Explorer Tool : Quick and easy way to find variables and files for research purposes.

Non-Public Data Access

- ☐ **Non-public MEPS data can be accessed through many data centers around the country**
 - ☐ **AHRQ Data Center (ADC)**
 - ☐ **Federal Statistical Research Data Centers (FSRDC)**
 - ☐ **University Data Centers**

- ☐ **Type of data that can be accessed:**
 - ☐ *State and County FIPS Codes*
 - ☐ *Fully Specified ICD-9/10 Codes*
 - ☐ *Date of cancer diagnosis, etc.*

AHRQ Data Center



☐ Location

- ☐ 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**
- ☐ **Institutional review board (IRB) review from users' institute**
- ☐ **Sign the data use agreement**
- ☐ **Fee - \$300 one-time to cover technical assistance**
- ☐ **Researcher may bring data in, but not out**
- ☐ **Given access only to data needed for approved project**
- ☐ **Analysis must be run onsite (offsite - rarely)**
- ☐ **Tabular data reviewed for confidentiality before release**
- ☐ **ADC will store data files and outputs needed for future replication**
- ☐ **If using other data centers, users need to follow rules and pay fees as required by that data center in addition to ADC**

MEPS Contact Information



For any MEPS questions:

mepsprojectdirector@ahrq.hhs.gov

For AHRQ Data Center:

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For MEPS workshops or webinars:

WorkshopInfo@ahrq.hhs.gov

Thank you!



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