
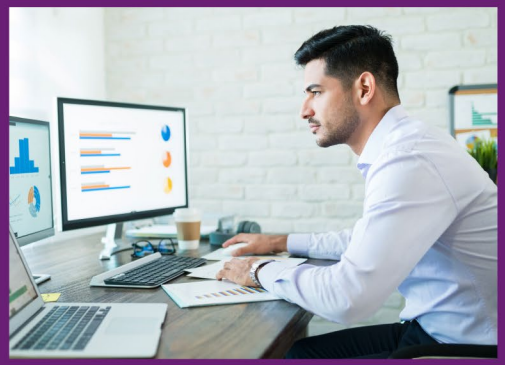


AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

35TH AHRQ ANNIVERSARY
Today's Research, Tomorrow's Healthcare

MEPS-HC
Medical Conditions Data

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Medical Conditions Data

Priority Conditions

- A set of 15 pre-determined conditions that are asked about for all eligible sample members.
- Person-level variables on the **Full-Year Consolidated (FYC) Public Use File (PUF).**

Current Conditions

- Open-ended reporting of current conditions associated with medical events.
- Condition-level data on the **Medical Conditions PUF.**

Priority Conditions

Condition	Age Group	Reference Period	Diagnosis Variable(s)
High Blood Pressure	18+	Lifetime	HIBPDX, BPMLDX
Coronary Heart Disease	18+	Lifetime	CHDDX
Angina	18+	Lifetime	ANGIDX
Heart Attack	18+	Lifetime	MIDX
Other Heart Disease	18+	Lifetime	OHRTDX
Stroke	18+	Lifetime	STRKDX
Emphysema	18+	Lifetime	EMPHDX
High Cholesterol	18+	Lifetime	CHOLDX
Cancer	18+	Lifetime	CANCERDX
Diabetes	All	Lifetime	DIABDX_M18
Arthritis	18+	Lifetime	ARTHDX
Asthma	All	Lifetime	ASTHDX
ADHD	5-17	Lifetime	ADHDADDX
Chronic Bronchitis	18+	Past 12 months	CHBRON31
Joint Pain	18+	Past 12 months	JTPAIN31_M18

Priority Conditions

COVID-19 and Long COVID questions were added to Priority Conditions in spring 2023 and are available in the 2022 PUFs.

Variable	Description
COVIDEVER53	Has the sample member ever had COVID -19.
LCEVER53	Sample member had symptoms lasting 3 months or longer that they didn't have prior to having COVID-19.
COVSYMNOW53	Whether the sample member has symptoms of COVID-19 now.
COREDABIL53	COVID-19 symptoms reduced ability to carry out day-to-day activities.
COVID12MO53	Sample member had COVID-19 within the past 12 months.
COVMNTHX53	Month sample member last had COVID-19 within the past 12 months.
COVYRDX53	Year sample member last had COVID-19 within the past 12 months.

Current (Treated) Conditions

Open-ended reporting of conditions at different points in the MEPS-HC interview, including:

Medical Events	**Starting in 2018, only source of current condition data**
Condition Enumeration	**1996–2017 (discontinued in Panel 21 Round 5 and Panel 22 Round 3)**
Disability Days	**1996–2012 (discontinued in 2013)**

Medical Event Condition Questions

"What conditions were discovered or led (PERSON) to make this visit?"	• Hospital inpatient stays • Hospital outpatient visits • Emergency room visits • Office-based medical provider visits • Home health visits
"What health problem is (MEDICINE) prescribed for?"	• Prescribed medicines

Recording and Coding Conditions

Lookup Tool

- Implemented in 2020.
- A pre-programmed, searchable list of commonly reported conditions.
- Automatically assigns an ICD-10 code to entries.

Verbatim Text

- Used when a reported condition is not in condition lookup tool.
- Professional coders manually review text strings and assign ICD-10 codes.

Medical Conditions PUF

- **Each record is a unique combination of a sample member and a current condition.**
  - Not everyone on the FYC file will have a condition record (i.e., did not report a current medical condition).
  - MEPS sample members with multiple conditions will have multiple condition records.

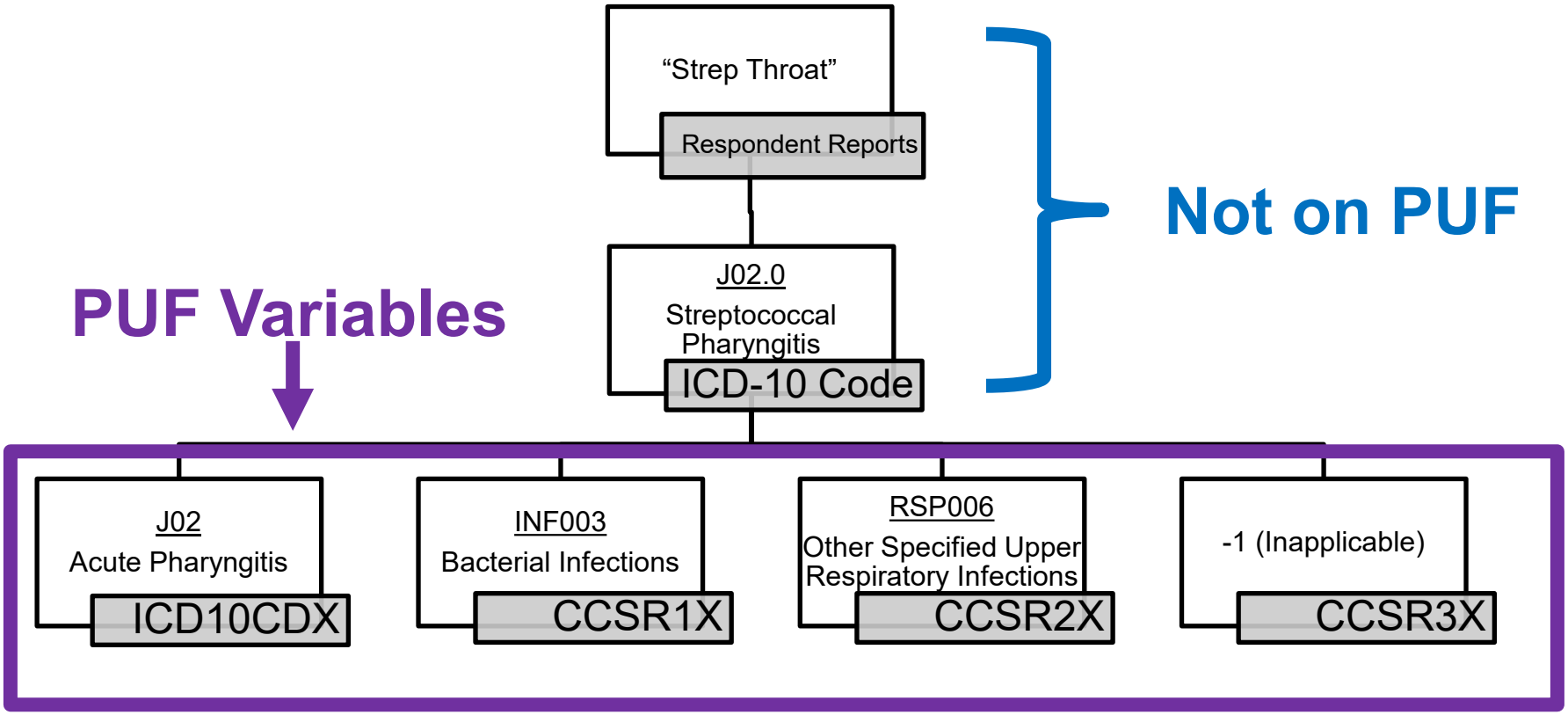
- **The Medical Conditions PUF can be linked to:**
  - Medical event files using the conditions-event link (CLNK) file.
  - FYC (person-level) file using DUPERSID.

- **To protect respondent confidentiality:**
  - ICD-10 codes are truncated to the first 3 digits.
  - Some conditions are masked (i.e., recoded to -15) or recoded to broader condition categories .

Medical Conditions PUF: Contents

Variable	Description
CONDIDX	Uniquely identifies each condition for a sample member.
DUPERSID	Uniquely identifies each sample member.
ICD10CDX	A 3-digit ICD-10 code (ICD-9 before 2016).
CCSR1X, CCSR2X, and CCSR3X	CCSR codes (CCS code before 2016).
OBCOND, OPCOND, HHCOND, IPCOND, ERCOND, and RXCOND	Indicates whether the condition links to an event type (e.g., ERCOND for ER visits).
CRND[#]	Indicates the round(s) the condition was reported.
PERWT[##]F, VARSTR, and VARPSU	Person-level analysis weight and design variables.

Example: ICD-10 and CCSRs



Conditions-Event Link (CLNK) File

- **This file is a crosswalk between condition IDs (CONDIDX) and event IDs (EVNTIDX) used to link medical conditions to medical events (and vice versa).**
  - For example, to obtain expenditures by payer for healthcare associated with a specific condition.

- **EVENTYPE on the CLNK indicates the type of medical event.**

- **Many-to-many matching is possible:**
  - One condition can link to multiple events.
  - One event can link to multiple conditions.
  - Some events don't link to any conditions.
  - Beginning in 2018 all conditions link to events.

Data Files

https://meps.ahrq.gov/mepsweb/data_stats/download_data_files.jsp

- [ ] Full-Year Consolidated Data files — **FYC PUF (Person-level)**
- [ ] Full-Year Population Characteristics files
- [ ] Full-Year Medical Organizations Survey files
- [ ] Medical Conditions files — **Medical Conditions PUF**
- [ ] Risk Adjustment Scores files
- [ ] Employment Variables file
- [ ] Jobs files
- [ ] Food Security file
- [ ] Person Round Plan files
- [ ] Longitudinal Data files
- [ ] Preventive Care Self-Administered Questionnaire file (2014)
- [ ] Supplemental Variables files (1996-2000)
- [ ] Health Insurance Plan Abstraction file (1996)
- [ ] Long Term Care file (1998)
- [ ] Household Component Event files

Data for the calendar year on unique household-reported medical events.

- [ ] Prescribed Medicines files
- [ ] Dental Visits files
- [ ] Other Medical Expenses files
- [ ] Hospital Inpatient Stays files
- [ ] Emergency Room Visits files
- [ ] Outpatient Visits files
- [ ] Office-Based Medical Provider Visits files
- [ ] Home Health files
- [ ] Appendix to MEPS Event files — **CLNK PUF**

Including the condition-event linkage file (CLNK) and PMED-event linkage file (RXLK).

Linking Conditions to Events

Files Needed	• Medical Conditions • CLNK • Events (e.g., OB File)
Key Variables	• CONDIDX → uniquely identifies each condition for a sample member • EVNTIDX → uniquely identifies each event for a sample member
Link Medical Conditions to the CLNK	• Use CONDIDX to link the two files. • Now, an EVNTIDX is associated with each unique condition record.
Link to an Event File	• Use EVNTIDX to link the above to an event file. • Now, the condition and corresponding event record(s) are linked.

Example: Linking Conditions to Events

Conditions File

DUPERSID	CONDIDX	ICD10CDX	HHCOND	IPCOND	OPCOND	OBCOND	ERCOND	RXCOND
2510001101	2510001101001	J00	2	2	2	2	2	1
2510001101	2510001101002	M76	2	2	2	1	2	2
2510001101	2510001101003	H52	2	2	2	1	2	2

CLNK File

DUPERSID	CONDIDX	EVNTIDX	EVENTYPE
2510001101	2510001101001	2510001101001103	8
2510001101	2510001101002	2510001101200101	1
2510001101	2510001101003	2510001101200201	1
2510001101	2510001101003	2510001101200301	1
2510001101	2510001101003	2510001101200401	1
2510001101	2510001101003	2510001101200501	1

OB File

DUPERSID	EVNTIDX
2510001101	2510001101200101
2510001101	2510001101200201
2510001101	2510001101200301
2510001101	2510001101200401
2510001101	2510001101200501

Caveats and Limitations

- **MEPS can be used to produce "treated prevalence" estimates for conditions, NOT overall disease prevalence estimates.**

- **Potential underreporting of conditions:**
  - Open-ended reporting doesn't prompt for specific conditions.
    - Recall error, especially if condition not salient.
  - One respondent per household.
  - Sensitive conditions underreported in surveys.
  - No medical care received.

- **All conditions are household-reported.**
  - MEPS does **NOT** use information from the Medical Provider Component (MPC) questionnaires to create new condition records or to edit household-reported conditions.

- **Some reported text strings cannot be easily coded.**
  - For example, reports of "pain" or "injury" without additional detail.

Practical Tips

- **Exercise caution if pooling or trending across the ICD-9 to ICD-10 transition.**
  - ► Changes may be due to changes in the underlying coding scheme and not changes in the population.

- **There can be 'duplicate' condition records with unique CONDIDXs for a given person.**
  - ► This usually happens when the fully specified ICD-10 codes are different but collapse to the same 3-digits and map to the same CCSR pattern.
  - ► Look out for these cases when programming.

PUF Variables

Respondent Reported	Full ICD10	ICD10 CDX	CCSR1X	CCSR2X	CCSR3X	CONDIDX
"High cholesterol"	E78.5	E78	END010	-1	-1	2510001101**004**
"High triglycerides"	E78.1	E78	END010	-1	-1	2510001101**005**

Practical Tips

- [XX]COND **variables (e.g., ERCOND) on conditions files began in 2021.**
  - ► [XX]NUM variables through 2020. Do **NOT** use [XX]NUM variables to estimate utilization for a condition.

- **MEPS is not useful for distinguishing between Type 1 and Type 2 diabetes.**

- **The MEPS medical conditions PUFs are not useful for studying rare conditions.**
  - ► Access the restricted data and pool multiple years.

Practical Tips

- **For comparability before and after 2018, subset pre-2018 medical conditions files to only those conditions linked to a medical event.**

- **Priority conditions are NOT included on the medical conditions file unless the condition is also reported as current.**
  - ► From 2018 onward, this means the condition must be associated with a medical event in the data year.

- **If analyzing priority conditions, limit analyses to 2008 and later.**
  - ► Starting in 2007, the priority conditions questions were significantly changed.

Resources

- Public use file documentation
- MEPS-HC online data tools
- MEPS GitHub (includes example code in R, SAS, and Stata)
- The Impacts of the COVID-19 Pandemic on the Medical Expenditure Panel Survey
- Analyzing Medical Conditions in MEPS: User Guide and Detailed Reference

Thank you!

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