

# MEPS-HC Prescribed Medicines (PMED) File

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### **PMED File Structure**



- Each record represents a unique instance of prescribed medicine acquisition (fill or refill) and the characteristics of the drug.
- File includes medicines prescribed, obtained, and reported.
- The file incorporates data collected in the Household and Pharmacy Components (a subcomponent of the Medical Provider Component).

## Household Component (HC)



- Medicine name
- Number of times acquired in the round
- Associated condition(s)
- Date first used
- Pharmacy information

## Pharmacy Component (PC)



- Requires written permission from household members
- Involves telephone and mail contact with pharmacy
- Asks for "patient profile" to include:
  - Drug name
  - National Drug Code (NDC) number
  - Drug characteristics
  - Payers and amounts of payment

## **Editing HC and PC Data**



- Household Component: Number of fills
- Pharmacy Component
  - Missing NDC number
  - Missing third-party payer (based on HC)
  - Missing or unrealistically low or high prices
  - Missing payments

## **Combining HC and PC**



- No common identifier is shared by HC and PC.
- A code (Generic Product Identifier, or GPI) is assigned to each HC and PC drug to facilitate matching.
  - Machine (70%) and human coders (30%) for HC
  - NDC (95%) and human coders (5%) for PC
- Post-match editing is performed.
- Utilization is based on household data.
- Payments are based almost entirely on pharmacy data.

## **Drug Characteristics (PC)**



### Characteristics included for each acquisition:

- Medication name
- NDC number
- Quantity dispensed (10, 30, 50, . . .)
- Form (capsule, tablet, liquid, cream, . . .)
- Strength (10, 200, . . .)
- Unit of measurement for form (ounces . . .)
- Unit of measurement for strength (mg, mL, . . .)

### Other Variables



# Additional information included for each acquisition

- Round
- When the drug was first taken
- Pharmacy type(s)
- Condition(s) associated with the drug (by linking with the medical conditions file)
- Days supplied (since 2010)
- Sources and amounts of payment
- Total payment

## Record Identifier Variables



- RXRECIDX—Unique identifier for each record in the file
- LINKIDX—Drug-round-level ID that can be used to link a prescribed medicine event to the Medical Conditions Files
- DRUGIDX/RXNDC—Drug-level IDs

DUPERSID	DRUGIDX	PURCHRD	LINKIDX	RXRECIDX
2310001101	2310001101002	1	2310001101002103	2310001101002103001
2310001101	2310001101002	1	2310001101002103	2310001101002103002
2310001101	2310001101002	2	2310001101002203	2310001101002203001

# Linking PMED file with Medical Condition file



:: What's New	Household Component Full-Year files ①		
:: Mailing List	Expenditure and utilization data for the calendar year from several rounds of data		
	collection.		
:: Discussion Forum	Full-Year Consolidated Data files		
:: Participants' Corner	Full-Year Population Characteristics files		
	Medical Conditions files		
	Risk Adjustment Scores files		
	Employment Variables file		
	<u>Jobs files</u>		
	Person Round Plan files		
	Longitudinal Data files		
	Supplemental Variables files (1996-2000)		
	Health Insurance Plan Abstraction file (1996)		
	Long Term Care file (1998)		
	☐ <u>Household Component Event files</u> <b>⑥</b>		
	D <del>ata for the calendar year on uniq</del> ue household-reported medical events.		
	Prescribed Medicines files PMED 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 Condition-event link file		
	one redidi nes		
	Appendix to MEPS Event files (CLINK)		

# Linking PMED file to Medical Conditions file



#### **PMED File**

DUPERSID	DRUGIDX	PURCHRD	LINKIDX	RXRECIDX
2310001101	2310001101002	1	2310001101002103	2310001101002103001
2310001101	2310001101002	1	2310001101002103	2310001101002103002
2310001101	2310001101002	2	2310001101002203	2310001101002203001

#### **CLINK File**

DUPERSID	CONDIDX	EVNTIDX
2310001101	2310001101001	2310001101002103
2310001101	2310001101001	2310001101002203
2310001101	2310001101002	2310001101200501
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# **Medical Conditions File**

DUPERSID	CONDIDX	ICD10CDX
2310001101	2310001101001	E11
2310001101	2310001101002	l10

- In Condition link file, EVNTIDX are the same as LINKIDX for PMED events (EVENTYPE=8)
  - Merge the link file with PMED file using the LINKIDX variable, after renaming EVNTIDX as LINKIDX in the link file.

**EVENTYPE** 

8

1

Merge with the Medical Conditions file using the CONDIDX variable

### Multum Lexicon Variables



- Each record has three types of Multum Lexicon variables:
  - PREGCAT (pregnancy category)
  - TCn (therapeutic class: 1, 2, and 3)
    - TCnSn (therapeutic sub-class)
    - TCnSn\_n (therapeutic sub-sub-class)
  - RXDRGNAM (beginning in 2013)
- For 2013 and earlier, RXDRGNAM and corrected TC and PREGCAT variables can be found as an addendum file at the MEPS website (MEPS HC-068: Multum Lexicon Addendum Files to MEPS Prescribed Medicines Files 1996–2013).

### **PMED File Peculiarities**



- Different meanings of imputation flags
  - RXFLG
  - PCIMPFLG
  - IMPFLAG
  - INPCFLG
- No total charge variable
  - ▶ No rebate or discount information
- No date of service

## **Trend Analysis**



 Beginning in 1996, the PMED file has been released yearly.

- How to interpret year-to-year changes?
  - Policy change
  - Other changes (e.g., demographics)
  - Improvements in MEPS PMED data editing methodology (2007–2008, 2017, 2020)
  - MEPS instrument design change (since spring of 2018)
  - COVID-19

## Trend Analysis



- Be cautious with the types of comparisons you make before and after 2007/2008, before and after 2017/2018, before and after 2019/2020.
- Consider techniques to smooth or stabilize trends, such as pooling time periods.
- Read the documentation for each year of data you are using.
- Read the latest Methodology Report #37(https://meps.ahrq.gov/data\_files/publications/mr3/mr37.shtml).

# Statistical Reports and Applied Research



## AHRQ regularly produces and posts findings from the PMED data.

#### Statistical Briefs

Moriya AS, Fang Z. Any Use and "Frequent Use" of Opioids among Adults Aged 18-64 in 2020–2021, by Socioeconomic Characteristics. Statistical Brief #552. September 2023. Agency for Healthcare Research and Quality, Rockville, MD. <a href="https://meps.ahrq.gov/data\_files/publications/st552/stat552.shtml">https://meps.ahrq.gov/data\_files/publications/st552/stat552.shtml</a>

Carroll, W. A., Miller, G. E., and Hill, S. C. *Out-of-Pocket Spending for Retail Prescribed Drugs by Age and Type of Prescription Drug Coverage, 2009 to 2018.* Statistical Brief #532. December 2020. Agency for Healthcare Research and Quality, Rockville, MD. <a href="https://www.meps.ahrq.gov/data\_files/publications/st532/stat532.pdf">https://www.meps.ahrq.gov/data\_files/publications/st532/stat532.pdf</a>

#### Methodology Reports

Abdus S, Hill SC, Ahrnsbrak R. "Outpatient Prescription Drugs: Data Collection and Editing in the 2021 Medical Expenditure Panel Survey". Methodology Report #37. January 2024. Agency for Healthcare Research and Quality, Rockville, MD. <a href="https://meps.ahrq.gov/data">https://meps.ahrq.gov/data</a> files/publications/mr37/mr37.shtml

#### Research Findings

Ding, Y., Miller, G.E., and Hill, S. C.. *Pre-COVID-19 Retail Use and Expenditures for Drugs That Were Subsequently Used to Treat COVID-19.* Research Finding #49. July 2021. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data\_files/publications/rf49/rf49.pdf

## Thank you!



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