



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



# **MEPS – HC**

## **Health Care Utilization and Expenditures**

**Jerrod Anderson, PhD**

# MEPS Components

## Medical Expenditure Panel Survey (MEPS)

Household  
Component  
(HC)

Medical Provider  
Component  
(MPC)

Insurance  
Component  
(IC)

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# MEPS Components

## Medical Expenditure Panel Survey (MEPS)

### Household Component (HC)

- Demographics
- Income
- Health Conditions
- Health Status
- Health Insurance
- **Utilization**
- **Expenditure Data**

### Medical Provider Component (MPC)

- Event Details
- Procedure Codes
- **Expenditure Data**

### Insurance Component (IC)

# Health Care Utilization

- MEPS household respondents asked to report all health care use for family members during reference period
- Utilization is called an 'event' in MEPS
- Event type categories:
  - ▶ Hospital inpatient stays (IP)
  - ▶ Office-based medical provider visits (OB)
  - ▶ Outpatient department visits (OP)
  - ▶ Emergency room visits (ER)
  - ▶ Dental visits (DN)

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  - ▶ Prescription medicine purchases (RX)
  - ▶ Home health care (HH)
  - ▶ Other medical expenses (OM)  
[e.g. glasses, hearing aids]

# Health Care Utilization

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    - ▶ Prescription medicine purchases (RX)
    - ▶ Home health care (HH)
    - ▶ Other medical expenses (OM)  
[e.g. glasses, hearing aids]
- ‘Event’ definition:
- stay
- visit
- original script or refill  
month of care  
purchase

# Event Files

[https://meps.ahrq.gov/mepsweb/data\\_stats/download\\_data\\_files.jsp](https://meps.ahrq.gov/mepsweb/data_stats/download_data_files.jsp)

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Expenditure and utilization data for the calendar year from several rounds of data collection.
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  - ☐ [Appendix to MEPS Event files](#)

## Event Files

# Event Files

## OB Event File, 2020

Person / Event IDs		Date		Payment/Charge		Person Weight
dupersid	evntidx	obdateyr	obdatemm	obxp20x	obt20x	perwt20f
2326049105	2326049105226101	2020	11	45	306	4,951
2326049105	2326049105226801	2020	11	44	179	4,951
2320006101	2320006101202401	2020	10	140	140	2,140

- Provider characteristics
- Services/procedures (e.g. surgery, lab tests)
- Health conditions
- Detailed expenditure variables



# Health Care Expenditures

- **Collected at the event level**
- **Represent payments to providers of the health care**
- **Payments are reported by source**
  - ▶ e.g. out-of-pocket, private insurance
- **Total expenditure is the sum of payments across all sources of payment**

# Sources of Payment

## Out of Pocket

- ▶ SF – self or family

## Public

- ▶ MR – Medicare
- ▶ MD – Medicaid
- ▶ VA – VA/CHAMPVA

## Private insurance

- ▶ PV – private Insurance
- ▶ TR – TRICARE

## Other

- ▶ OF – other federal government
- ▶ SL – state or local government
- ▶ WC – worker's comp
- ▶ OT – other insurance

**Total Expenditures (XP) =**  
Sum of payments from all  
10 sources

# Event File Expenditure Variables

## OB, DN, HH, and OM

- 10 expenditure by source of payment variables
- A total expenditure variable
  - ▶ sum of 10 source of payment variables
- A total charge variable
  - ▶ provider's charge before adjustment or discount

# Event File Expenditure Variables

## OB Event File, 2020

Event ID	OOP (SF)	Medicaid (MD)		Private (PV)	Total Pmt. (XP)	Total Charge (TC)
evntidx	obsf20x	obmd20x	...	obpv20x	obxp20x	obtc20x
2326049105226101	0	45	...	0	45	306
2326049105226801	0	44	...	0	44	179
2320006101202401	140	0	...	0	140	140

# Event File Expenditure Variables

## Hospital: IP, OP and ER

- **Facility Expenditure Variables**
    - ▶ 10 expenditure by source of payment variables
    - ▶ A total facility expenditure variable
    - ▶ A total facility charge variable
  - **Separately Billing Doctor (SBD) Expenditure Variables**
    - ▶ 10 SBD expenditure by source of payment variables
    - ▶ A total SBD expenditure variable
    - ▶ A total SBD charge variable
- Total expenditures for the event: facility + SBD expenditures
  - Total charges for the event: facility + SBD charges

# Event File Expenditure Variables

## ER Event File, 2019

Event ID	Facility payments (f)			Total facility pmt.	Facility charge
evntidx	erfsf20x	... erfmd20x	erfpv20x	erfxp20x	erftc20x
2320189102202301	10	... 0	0	10	649
2320500102200401	52	... 0	122	175	391

SBD payments (d)				Total SBD pmt.	SBD charge
erdsf20x	...	erfmd20x	erdpv20x	erdxp20x	erdtc20x
230	...	0	0	230	529
0	...	0	930	930	1,162

Total payment (facility + SBD)	Total charge (facility + SBD)
erxp20x	ertc20x
240	1,178
1105	1,553

# Event File Expenditure Variables

## RX ('PMED')

- Multiple RX scripts can be linked to single visit
- Not all RX are linked to a medical visit
- 10 expenditure by source of payment variables
- A total expenditure variable
  - ▶ sum of 10 source of payment variables
- ~~A total charge variable~~

# Event File Expenditure Variables

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**RX Link Files**



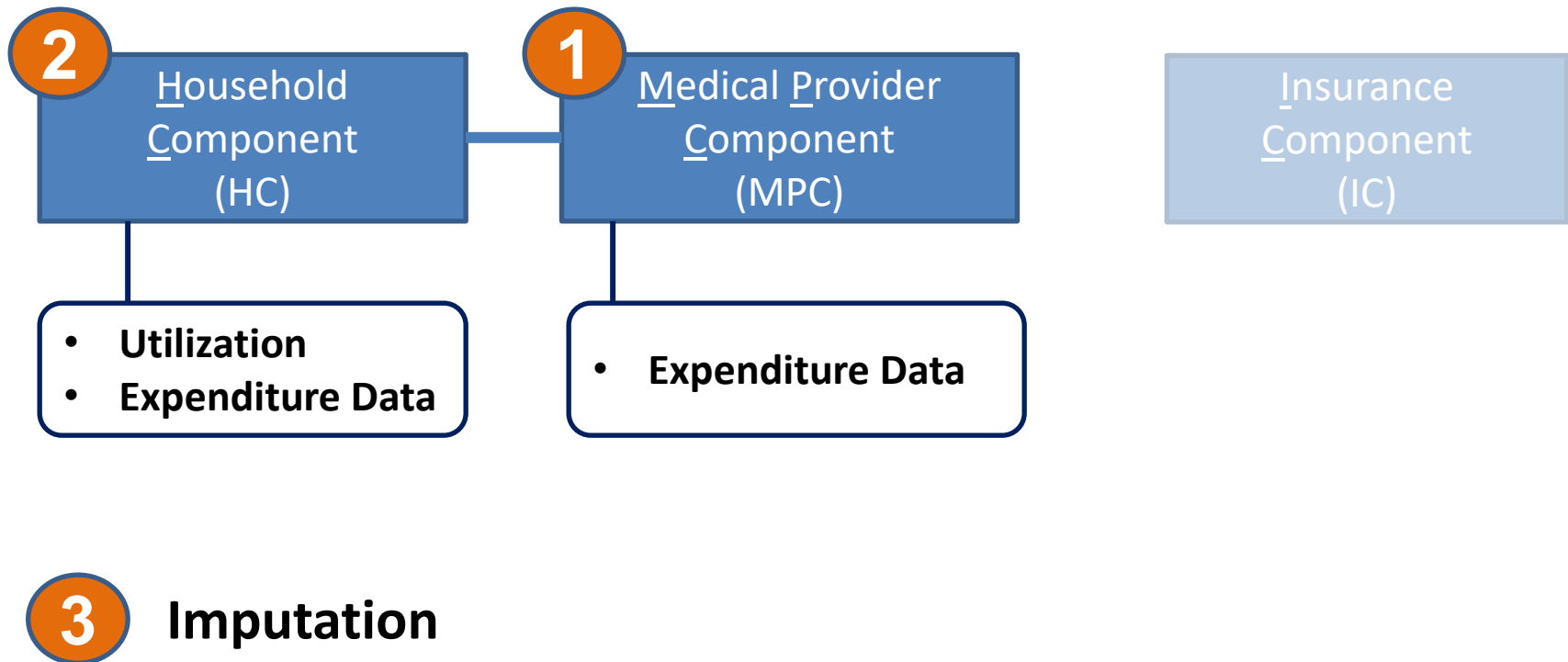
# Event File Expenditure Variables

## Telehealth visits:

- A telehealth module was fielded starting with P23 R7, P24 R5, P25 R3
- These were then reclassified as either OB or OP based on whether the respondent identified the provider or facility as owned and operated by a hospital or not.

# Sources of Expenditure Data

## Medical Expenditure Panel Survey (MEPS)



# Sources of Expenditure Data by Event Type

Event type	HC	MPC
Office-based: physician	✓	✓
Office-based: non-physician	✓	
Inpatient	✓	✓
Outpatient	✓	✓
ER	✓	✓
Dental	✓	
RX		✓
Home health: agency		✓
Home health: paid independent	✓	
Other medical	✓	

# Sources of Expenditure Data

dupersid	evntidx	impflag	obxp20x	obtc20x
2326049105	2326049105226101	2	45	306
2326049105	2326049105226801	3	44	179
2320006101	2320006101202401	1	140	140

## impflag\*

**0 Not eligible for  
imputation**

**1 Complete HC data**

**2 Complete MPC data**

**3 Fully imputed**

**4 Partially imputed**

**5 Capitation imputation**

\* Codes are different for RX file

# Medical Provider Component

## The MPC is NOT...

...designed to yield national estimates

...available to the public

## The MPC is...

...a supplement to household-reported expenditure data

...used for internal methodological studies

# Special Cases

**Flat fees**

**Zero-dollar events**

**Capitation**

**‘-1’ and other missing codes**

# Special Cases

## Flat fees

- Fixed dollar amount for a group of health care services
  - ▶ e.g. orthodontic, prenatal care
- Flat Fee ID: FFEEIDX
- Flat fee structure (FFOBTYPE)
  - ▶ **Stem** - initial medical visit - **expenditures**
  - ▶ **Leaf** - subsequent medical visits - **zero expenditures**

# Special Cases

## Flat fees

## Zero-dollar events

- Flat fee – leaf event
- Follow-up visit with no extra charge
- Free care
- Bad debt



# Special Cases

**Flat fees**

**Zero-dollar events**

**Capitation**

- **Imputed to fee-for-service equivalence**
- **IMPFLAG = 5**

# Special Cases

**Flat fees**

**Zero-dollar events**

**Capitation**

**‘-1’ and other missing codes**

- HH – informal care (MPCELIG = 3)

## Missing data codes

- 1 Inapplicable
- 7 Refused
- 8 Don't know
- 15 Value cannot be derived

# Annual Person-Level File

- **Event level files**
  - ▶ Separated by type of service
  - ▶ Unique record for each reported event
    - Some persons have no events
    - Some persons have multiple events
- **Person-level file (full year consolidated)**
  - ▶ Variables derived from event level
  - ▶ One record for each person in MEPS
  - ▶ No detail on expenditures or characteristics of individual events
  - ▶ Summary of all events and expenditures
    - See [Appendix 3](#) of documentation for naming conventions

# Annual Person-Level File



## OB Event File, 2020

dupersid	evntidx	obdateyr	obdatemm	obxp20x	obtc20x	perwt20f
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2320006101	2320006101202401	2020	10	140	140	2,140

## Full Year Consolidated File, 2020

dupersid	obtotv20	obvexp20	obvtch20	perwt20f
<b>2326049105</b>	<b>2</b>	<b>89</b>	<b>485</b>	4,951
<b>2320006101</b>	<b>1</b>	<b>140</b>	<b>179</b>	2,140

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**Event Files**

# Thank you!



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