



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]

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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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- ☐ **Household Component Full-Year files** ⓘ  
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, 2013

Person / Event IDs		Date		Payment/Charge		Person Weight
dupersid	evntidx	obdateyr	obdatemm	obxp13x	obtc13x	perwt13f
20004101	200041010011	2013	8	300	300	6594.802
20004101	200041010021	2013	8	127.6	154	6594.802
20015102	200151020051	2013	2	124.23	208.12	2140.442

- **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
- ▶ OR – other private
- ▶ OU – other public

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

# Event File Expenditure Variables



## OB, DN, HH, and OM

- 12 expenditure by source of payment variables
- A total expenditure variable
  - ▶ sum of 12 source of payment variables
- A total charge variable
  - ▶ provider's charge before adjustment or discount

# Event File Expenditure Variables

## OB Event File, 2013

<b>Event ID</b>	<b>OOP (SF)</b>	<b>Medicare (MR)</b>		<b>Private (PV)</b>	<b>Total Pmt. (XP)</b>	<b>Total Charge (TC)</b>
evntidx	obsf13x	obmr13x	...	obpv13x	obxp13x	obtc13x
200041010011	300	0	...	0	300	300
200041010021	50	0	...	77.6	127.6	154
200151020051	25	0	...	99.23	124.23	208.12

# Event File Expenditure Variables

## Hospital: IP, OP and ER

- **Facility Expenditure Variables**
  - ▶ 12 expenditure by source of payment variables
  - ▶ A total facility expenditure variable
  - ▶ A total facility charge variable
- **Separately Billing Doctor (SBD) Expenditure Variables**
  - ▶ 12 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, 2013

Event ID	Facility payments (f)				Total facility pmt.	Facility charge
evntidx	erfsf13x	erfmr13x	...	erfpv13x	erfxp13x	erftc13x
200121010011	0	94.46	...	0	94.46	353
200161020101	208.54	0	...	334.16	542.7	1464

SBD payments (d)				Total SBD pmt.	SBD charge
erdsf13x	erdmr13x	...	erdpv13x	erdxp13x	erdtc13x
0	176.36	...	0	176.36	700
0	0	...	304.71	304.71	388

Total payment (facility + SBD)	Total charge (facility + SBD)
erxp13x	ertc13x
270.82	1053
847.41	1852

# Event File Expenditure Variables



## **RX ('PMED')**

- **Multiple RX scripts can be linked to single visit**
- **Not all RX are linked to a medical visit**
- **12 expenditure by source of payment variables**
- **A total expenditure variable**
  - ▶ **sum of 12 source of payment variables**
- ~~**A total charge variable**~~

# Event File Expenditure Variables

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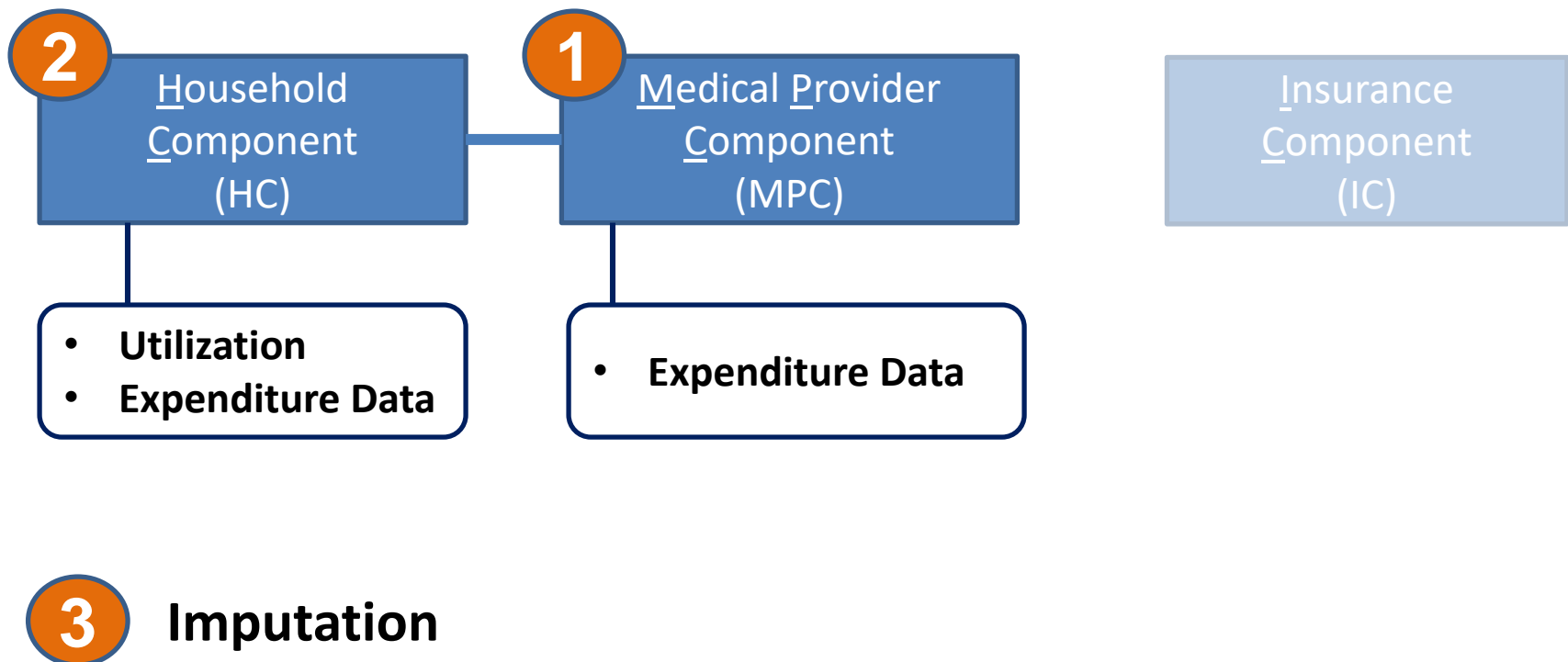
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**RX Link Files**



# 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	obxp13x	obtc13x
20004101	200041010011	1	300	300
20004101	200041010021	3	127.6	154
20015102	200151020051	4	124.23	208.12

## 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**

## **Missing data codes**

- 1 Inapplicable
- 7 Refused
- 8 Don't know
- 9 Not ascertained

## **'-1' and other missing codes**

- OB, OP – phone calls (SEETLKPV = 2)
- HH – informal care (MPCELIG = 3)

# 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 1 of documentation for naming conventions

# Annual Person-Level File



## OB Event File, 2013

dupersid	evntidx	obdateyr	obdatemm	obxp13x	obtc13x	perwt13f
<b>20004101</b>	200041010011	2013	8	<b>300</b>	<b>300</b>	6594.802
<b>20004101</b>	200041010021	2013	8	<b>127.6</b>	<b>154</b>	6594.802
<b>20015102</b>	200151020051	2013	2	<b>124.23</b>	<b>208.12</b>	2140.442

## Full Year Consolidated File, 2013

dupersid	obtotv13	obvexp13	obvtch13	perwt13f
<b>20004101</b>	<b>2</b>	<b>428</b>	<b>454</b>	6594.802
20004102	0	0	0	7144.183
20004103	0	0	0	5616.279
<b>20015102</b>	<b>1</b>	<b>124</b>	<b>208</b>	2140.442

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**Event Files**

# Thank you!



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