



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



The Healthcare Cost and Utilization Project (HCUP)

Overview of the HCUP Databases and Resources

Agency for Healthcare Research and Quality
Updated April 2020

Presentation Objectives Part I



- **Project Overview**
- **AHRQ and HCUP Partners**
- **The Making of HCUP Data**
- **HCUP State Databases**
- **HCUP Nationwide Databases**
- **How to Obtain HCUP Data & Access HCUP Resources**

What is HCUP?

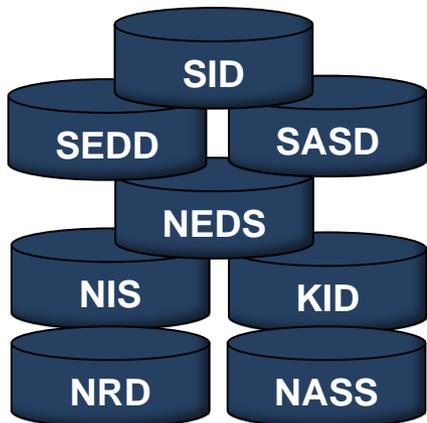
Federal-State-Private Partnership

HCUP is a comprehensive set of **publicly available all-payer** healthcare data (including self-pay and those billed as 'no charge')



Includes **multi-year** inpatient and outpatient data based on **hospital billing** records

HCUP Databases



Online Tools



Analytics



User Support



HCUP Answers Questions



Uniquely addresses variation in acute care

Use of inpatient, emergency department (ED), and ambulatory surgery and other outpatient services

Expected payer of services (Medicare, Medicaid, private insurance, self-pay, or those billed as 'no charge')

Clinical detail

Cost of care

Age, race and area of residence of patients

Care for a patient across time* (revisits/readmissions)

Geographical estimates (county, region, State, national)

Access, quality, patient safety

↑ ↑ ↑ Trends over time in all of the above ↑ ↑ ↑

***Availability varies by State**

Research Using HCUP Data



Costs of care

In 2016, there were 35.7 million hospital stays in the United States, with a rate of 104.2 stays per 1,000 population. The cost of these stays totaled over \$417 billion with a mean cost per stay of \$11,700. (2016 NIS, Stat Brief #246)

Access to care

Rates of influenza-related stays and ED visits were highest for patients from low-income areas. This disparity was greatest for young children: for children aged 0–4 years, the rate of influenza-related ED visits in 2015–2016 was 220 percent higher in the lowest than in the highest income areas. (2006-2016 NIS & NEDS, Stat Brief #253)

Quality of care

From 2010 to 2014, the rate of stays involving an adverse drug event (ADE) increased the most for ADEs caused by smooth muscle and respiratory drugs (up 24 percent) and decreased the most for ADEs caused by cardiovascular drugs (down 18 percent). (2010 and 2014 SID, Stat Brief #234)

Readmissions

In 2016, the highest readmission rates were among Medicare patients aged 21–64 years and nonmaternal Medicaid patients aged 45-64 years (21.2 and 20.4 per 100 index admissions, respectively). (2010-2016 NRD, Stat Brief #248)

Research Using HCUP Data Continued



Patient safety

Hospital improvements in patient safety and adverse events were noted from 2011 to 2014 in 34 States—there was a decrease in the percentage of hospitals classified as worse than average (from 9.5 to 6.7 percent) and an increase in the percentage of hospitals classified as better than average (from 3.4 to 5.5 percent). (2011 & 2014 SID, Stat Brief #237)

Geographic variation

From 2013-2015, alcohol-related stays in Rhode Island and Massachusetts (80 and 71 percent of counties in the top quintile) cost an average of \$98 and \$95 per resident annually, respectively. (2013-2015 SID, Stat Brief #245)

Trends in practice

In 2016, Medicare was the primary expected payer for the vast majority of cardiac pacemaker or cardioverter/defibrillator procedures (75.1 percent); lens and cataract procedures (68.5 percent); and vascular stents and OR procedures, other than head or neck (67.2 percent). (2016 NASS, Stat Brief #252)

Opioid-related stays

In 2016, most opioid-related stays among women aged 15–44 years involved abuse/dependence (86 percent). Nearly half of opioid stays among women aged 65 years and older were due to adverse events. (2016 NIS, Stat Brief #247)

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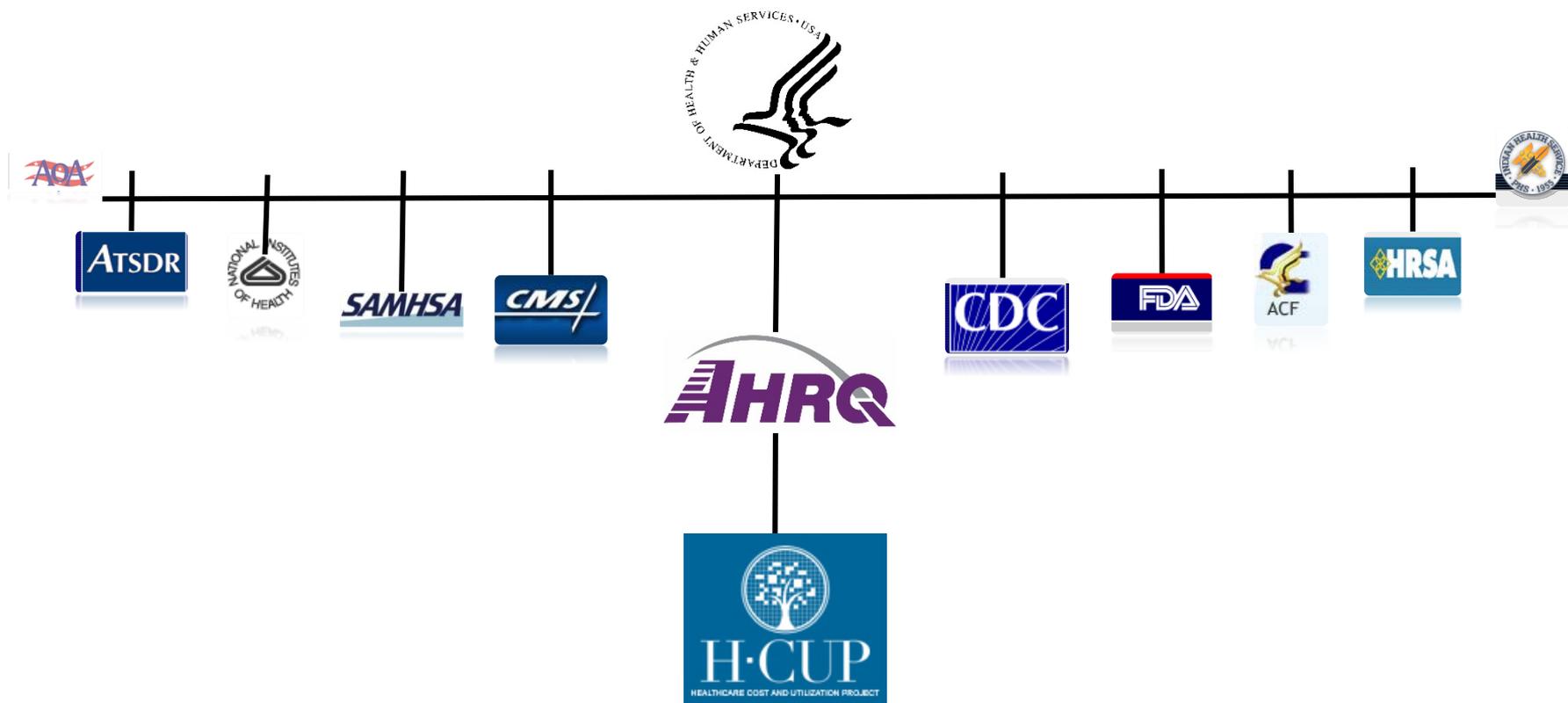


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What is the Agency for Healthcare Research and Quality (AHRQ)?



The Agency for Healthcare Research and Quality (AHRQ) is a federal agency under the Department of Health and Human Services.

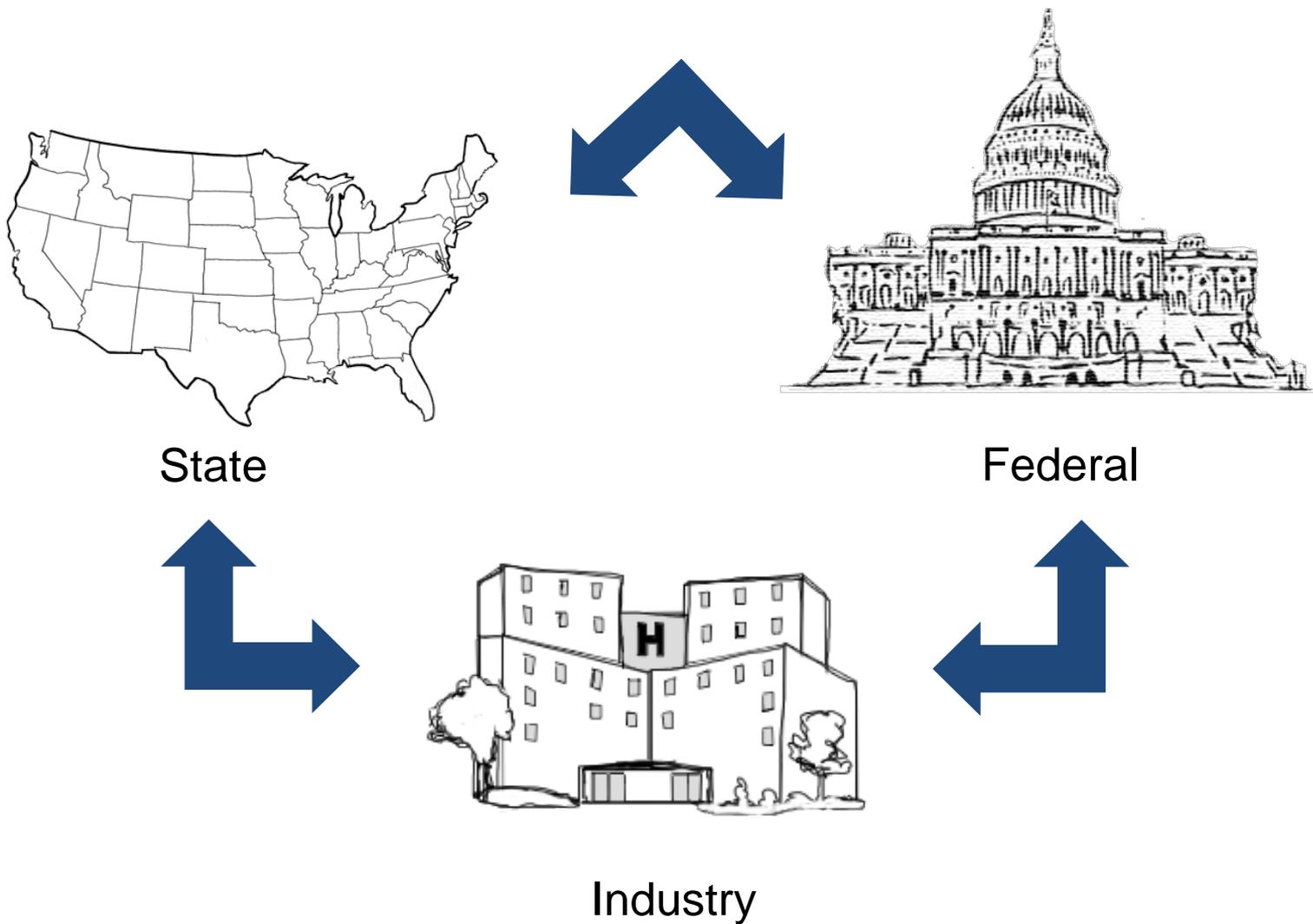


AHRQ's Mission



- To produce evidence to make healthcare
 - ▶ Safer
 - ▶ Higher quality
 - ▶ More accessible
 - ▶ Equitable
 - ▶ Affordable
- To work with HHS and other partners to make sure that the evidence is understood and used

The HCUP Partnership



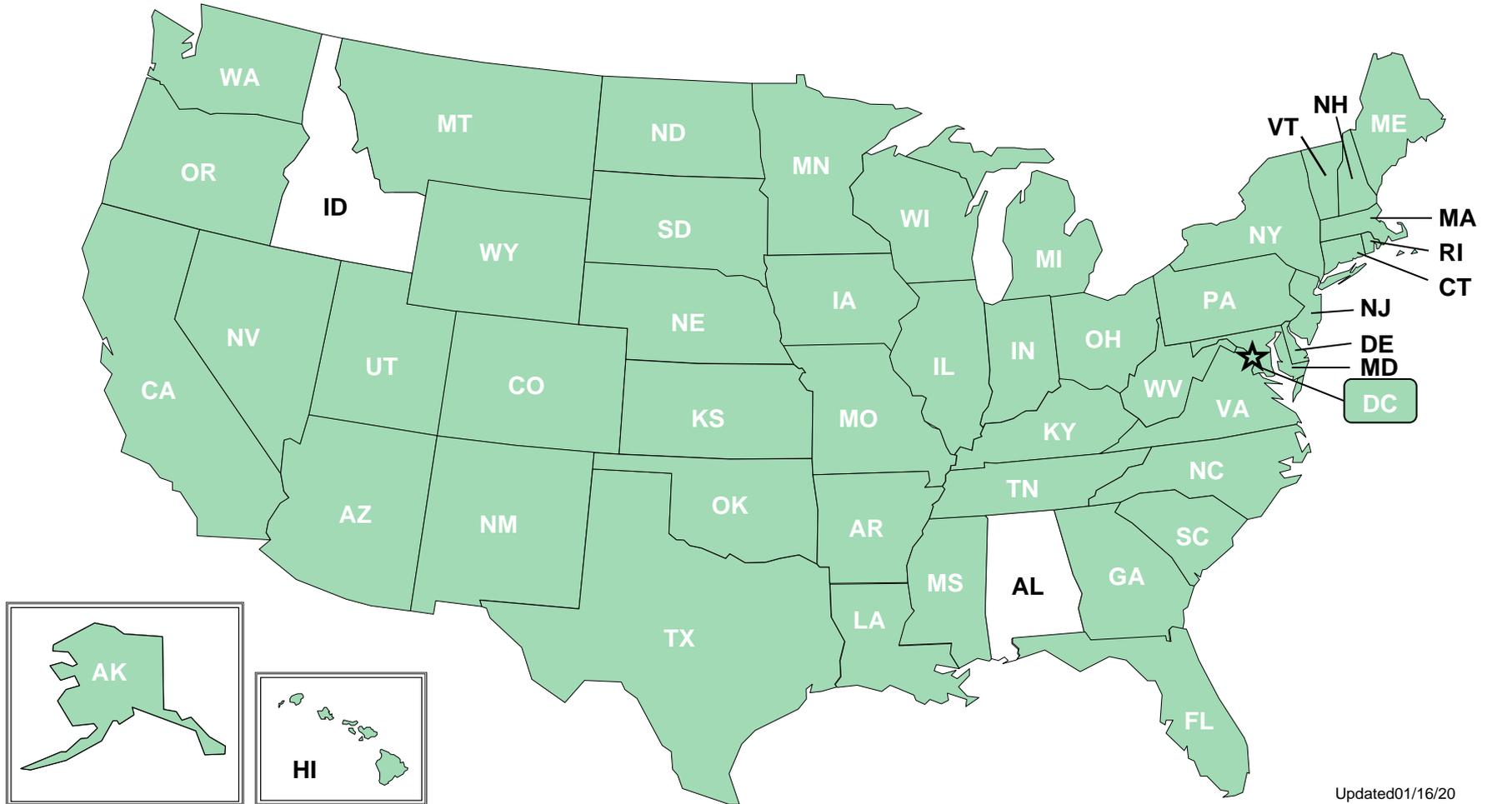
HCUP Data Partners



Alaska Department of Health and Social Services
Alaska State Hospital and Nursing Home Association
Arizona Department of Health Services
Arkansas Department of Health
California Office of Statewide Health Planning and Development
Colorado Hospital Association
Connecticut Hospital Association
Delaware Health Statistics Center & Office of Vital Statistics
District of Columbia Hospital Association
Florida Agency for Health Care Administration
Georgia Hospital Association
Hawaii Laulima Data Alliance
Illinois Department of Public Health
Indiana Hospital Association
Iowa Hospital Association
Kansas Hospital Association
Kentucky Cabinet for Health and Family Services
Louisiana Department of Health
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Center for Health Information and Analysis
Michigan Health & Hospital Association
Minnesota Hospital Association (provides data for Minnesota and North Dakota)
Mississippi State Department of Health
Missouri Hospital Industry Data Institute

Montana Hospital Association
Nebraska Hospital Association
Nevada Department of Health and Human Services
New Hampshire Department of Health & Human Services
New Jersey Department of Health
New Mexico Department of Health
New York State Department of Health
North Carolina Department of Health and Human Services
North Dakota (data provided by the Minnesota Hospital Association)
Ohio Hospital Association
Oklahoma State Department of Health
Oregon Healthy Authority
Oregon Association of Hospitals and Health Systems
Pennsylvania Health Care Cost Containment Council
Rhode Island Department of Health
South Carolina Revenue and Fiscal Affairs Office
South Dakota Association of Healthcare Organizations
Tennessee Hospital Association
Texas Department of State Health Services
Utah Department of Health
Vermont Association of Hospitals and Health Systems
Virginia Health Information
Washington State Department of Health
West Virginia Health Care Authority
Wisconsin Department of Health Services
Wyoming Hospital Association

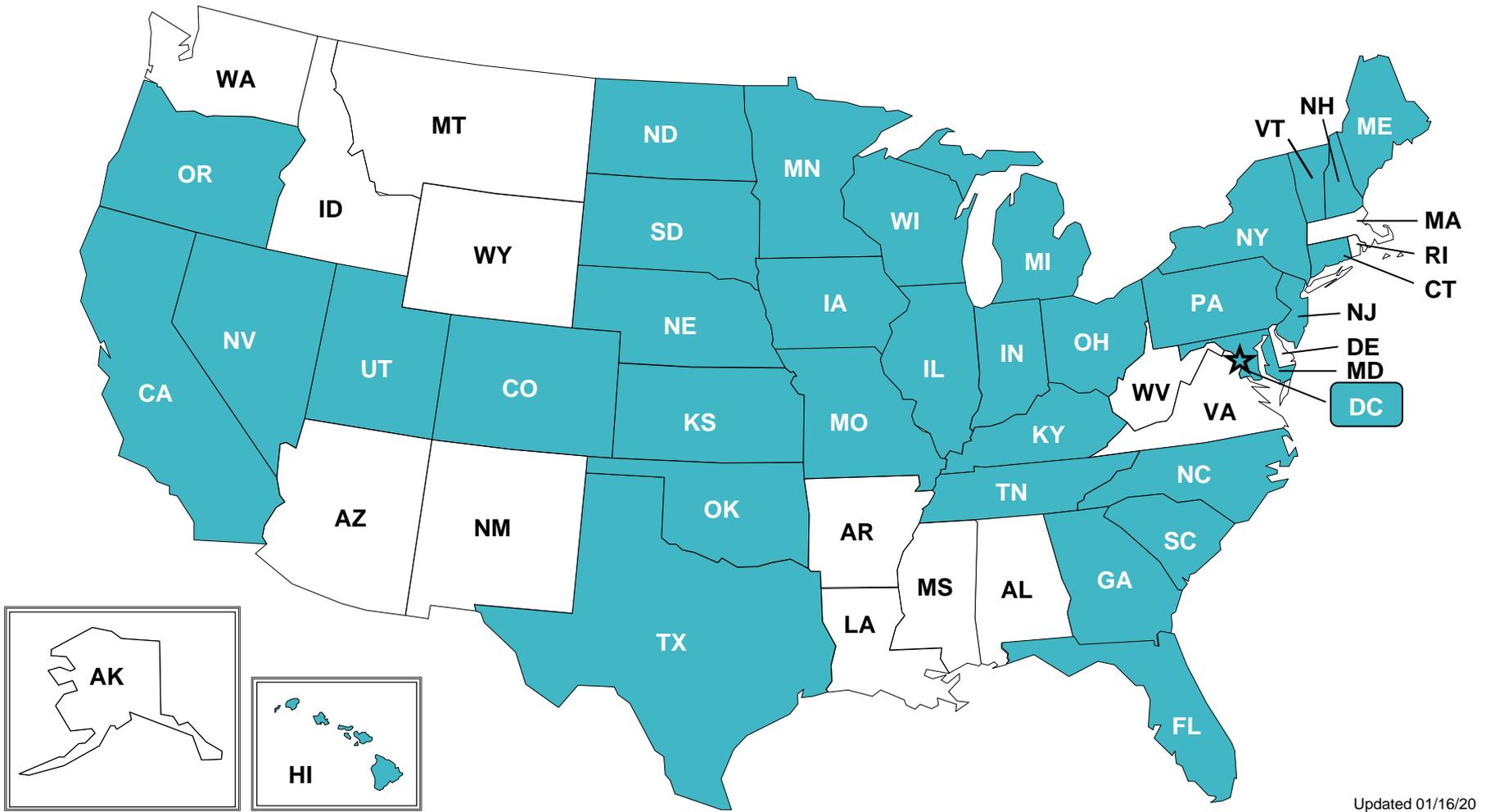
HCUP Partners Providing Inpatient Data



Updated 01/16/20

Partners Providing:	Inpatient Data	Non-participating
		

HCUP Partners Providing Ambulatory Surgery & Services Data



Updated 01/16/20

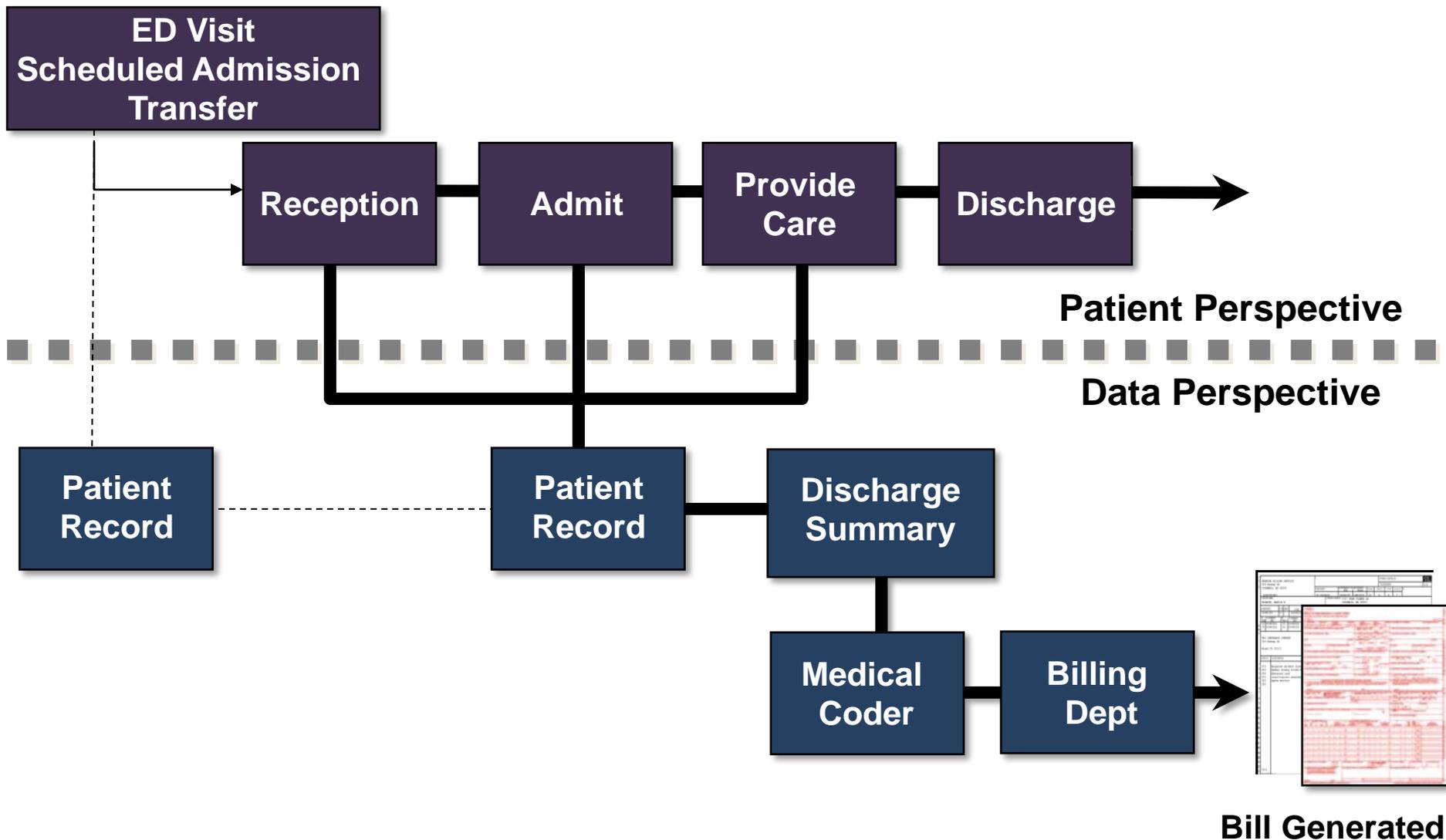
Partners Providing:	Ambulatory Surgery & Services Data	Non-participating
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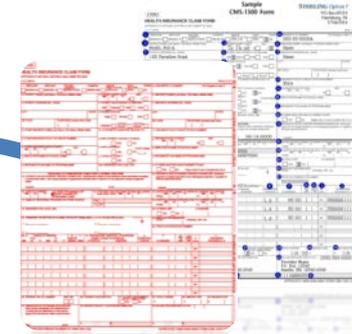
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From Patient Hospital Visit to Administrative Record



The Making of HCUP Data

Patient enters hospital



Billing record created



AHRQ standardizes data to create uniform HCUP databases

States store data in varying formats

744	98	749	2	79	257	5	290
745	25	614	4	84	541	4	549
746	68	195	1	78	669	3	523
747	43	725	3	46	211	4	970
748	81	533	6	98	83	8	40
749	51	418	4	69	496	1	613
750	16	374	2	77	371	1	993
751	2	328	4	44	638	2	958
752	63	521	4	18	217	8	721
753	38	807	4	44	446	2	71
754	50	418	0	59	216	4	799
755	22	806	3	46	573	2	994
756	94	740	6	55	247	1	218
757	36	852	8	8	289	3	559
758	03	386	1	94	638	1	613
759	17	766	8	92	799	5	612
760	54	735	3	29	556	6	503
761	5	263	4	78	125	8	997
762	48	100	3	94	484	8	206
763	23	916	6	15	556	9	327
764	11	251	4	17	125	6	192
765	30	976	1	9	561	6	39



Hospital sends billing data and any additional data elements to data organizations

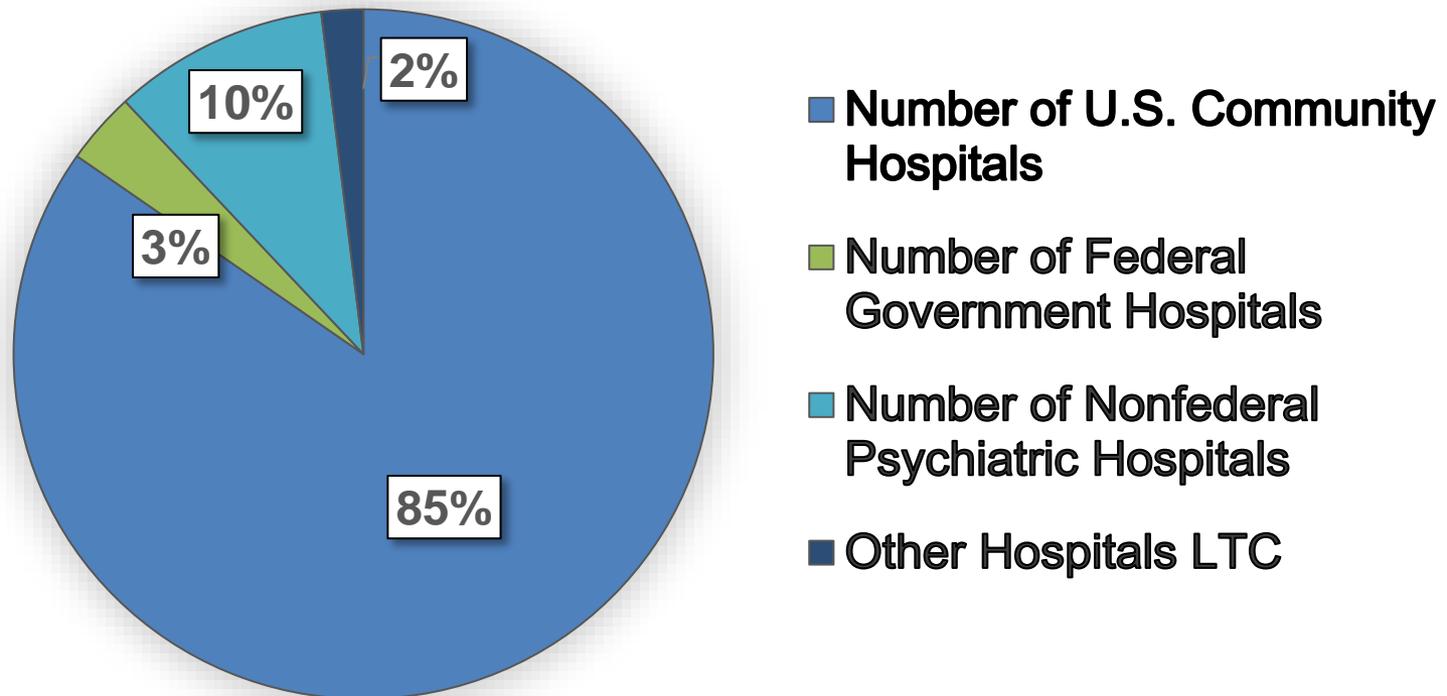
The HCUP Data Process



- State data are mapped to a standardized HCUP format which allows for consistent data elements and values for comparison across States
- Additional data elements are available:
 - ▶ Value-added variables (supplemental variables for revisit analyses, injury indicators, indicators for observation and ED services)
 - ▶ Hospital characteristics (teaching status, ownership/control, bed size)
 - ▶ Diagnostic related groups and severity measures
 - 3M's All Patient Refined DRGs (APR-DRGs)
- Quality checks are performed

Hospitals in the U.S.

- 85 percent of hospitals in the U.S. are Community Hospitals
- 15 percent Noncommunity Hospitals (Federal (DoD/VA/IHS), Nonfederal Psychiatric, Nonfederal Long-term Care, etc.)



Source: American Hospital Association (AHA) Annual Survey (FY 2018)
www.aha.org/statistics/fast-facts-us-hospitals

What Are Community Hospitals?



American Hospital Association Definition:

Nonfederal, short-term general, and other special hospitals, excluding hospitals not accessible by the general public (e.g., prison hospitals or college infirmaries)

Included	Excluded
Multi-specialty general hospitals	Long-term care
OB-GYN	Psychiatric
ENT	Alcoholism/Chemical dependency
Orthopedic	Long term care Rehabilitation
Pediatric	DoD / VA / IHS
Public	College infirmaries
Academic medical centers	

What Are Community Hospitals?



- HCUP generally does not receive data from non-community hospitals, such as Psychiatric facilities.
- However, if a patient is treated for a mental health condition in a community hospital, their information is included.

Mental, Behavioral and Neurodevelopmental Disorders, Top 5 Principal Diagnoses	Total Number of Discharges
1. Depressive disorders	536,580
2. Schizophrenia spectrum and other psychotic disorders	398,840
3. Alcohol-related disorders	308,030
4. Bipolar and related disorders	271,610
5. Suicidal ideation/attempt/intentional self-harm	125,135

Source: Weighted national estimates from the 2017 National Inpatient Sample (NIS), Clinical Classifications Software Refined (CCSR) default for principal diagnosis assignment

HCUP State-Specific Databases

Inpatient State-Specific Databases



State Inpatient
Databases **(SID)**

Outpatient State-Specific Databases



State Ambulatory Surgery &
Services Databases
(SASD)



State Emergency
Department Databases
(SEDD)

HCUP Nationwide Databases

Inpatient Nationwide Databases



National Inpatient
Sample **(NIS)**



Kids' Inpatient
Database **(KID)**



Nationwide
Readmissions
Database **(NRD)**

Outpatient Nationwide Databases



Nationwide Emergency
Department Sample
(NEDS)



Nationwide Ambulatory
Surgery Sample
(NASS)



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HCUP State Databases

State Inpatient
Databases
(SID)

Inpatient discharge data (including those admissions that started in the ED) from participating HCUP States

State Ambulatory
Surgery & Services
Databases
(SASD)

Ambulatory surgery data (hospital-owned and some nonhospital-owned facilities) and other outpatient services from participating HCUP States

State Emergency
Department
Databases
(SEDD)

Emergency department data (treat-and-release) from participating HCUP States

What Data Elements Are Included in the HCUP Databases?

Data Elements:

- Patient demographics
(e.g., age, sex, and, for some States, race)
- Diagnoses & procedures
- Expected payment source (including self-pay and those billed as ‘no charge’)
- Length of stay
- Admission and discharge status
- Point of origin
- Total charges
- Value-added variables
(e.g., supplemental variables for revisit analyses)



Some Data Elements Vary by State

- Race/Ethnicity
- Patient county
- Patient ZIP Code
- Severity of illness
- Birthweight
- Procedure date (days from admission to procedure)
- Health plan details
- Additional and/or more detailed expected payer information
- Detailed charges
- Patient identifiers (encrypted); supplemental variables for revisit analyses
- Physician identifiers (encrypted)
- Physician specialty
- Hospital identifier (unencrypted)



Example: Payer Detail Varies by State

PAY1_X		PAY1 (Standardized)	
Value	Description	Value	Description
010	Medicare	1	Medicare
011	Medicare (HMO)		
012	Medicare (Managed care - Other)		
013	Medicare (fee for service)		
020	Medi-Cal	2	Medicaid
021	Medi-Cal (HMO)		
022	Medi-Cal (Managed care - Other)		
023	Medi-Cal (fee for service)		
030	Private Coverage	3	Private insurance
031	Private Coverage (HMO)		
032	Private Coverage (Managed care - Other)		
033	Private Coverage (fee for service)		
08n, where n=0-3	Self-pay	4	Self-pay
--		5	No charge

Example: Race Detail Varies by State



RACE_X		RACE (Standardized)	
Value	Description	Value	Description
1	White	1	White
2	Black	2	Black
3	Hispanic	3	Hispanic
4	Hawaiian	4	Asian or Pacific Islander
5	Chinese		
6	Filipino		
7	Japanese		
8	Other Asian		
9	Other Pacific Islander	5	Native American
10	Native American		
11	Mixed or Other	6	Other

Partner Files vs. HCUP Files

Partner-Provided Files	HCUP Files
All data elements	Subset of data elements
May not have same value-added elements available	Value-added data elements available
Not uniformly coded across States	Uniformly coded across the States
Variability in quality checks by State	Standard data quality checks
More timely	Lag time

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HCUP Nationwide Databases



National Inpatient Sample (NIS)



Generate national and regional estimates of inpatient utilization, access, quality, patient safety, etc.

Kids' Inpatient Database (KID)



Generate national and regional estimates of pediatric inpatient utilization, access, quality, etc.

Nationwide Readmissions Database (NRD)



Generate national estimates of all-cause and condition-specific readmissions.

Nationwide Emergency Department Sample (NEDS)



Generate national and regional estimates of emergency department utilization, access, quality, etc.

Nationwide Ambulatory Surgery Sample (NASS)



Generate national and regional estimates of major ambulatory surgery encounters in hospital-owned facilities.

All Nationwide Databases Are Derived from HCUP State Databases



State Inpatient Databases (SID)

NIS: Sample inpatient discharges of all ages from all SID and community hospitals*

KID: Sample inpatient discharges aged ≤ 20 years old from all SID and community hospitals*

NRD: All inpatient discharges for all ages and community hospitals* from SID with verified patient linkage numbers, with some exclusions

State Emergency Department Databases (SEDD)

NEDS: Sample of hospital-owned EDs* from all SEDD and includes all ED admissions from the SID for the sampled EDs

State Ambulatory Surgery and Services Databases (SASD)

NASS: All major ambulatory surgery encounters for all ages and hospital-owned facilities* from the SASD, with some exclusions

**NIS, NRD, and NASS exclude community hospitals that are rehabilitation or long-term, acute-care facilities; KID and NEDS exclude community hospitals that are rehabilitation facilities.*

NIS is a Stratified Sample of Discharges from the SID



State Inpatient Databases (SID)

~ 4,600 hospitals
~ 35 M records

Strata

- Ownership/Control
- Bed Size
- Teaching Status
- Urban/Rural Location
- U.S. Census Division

Stratified Sample of Discharges

*State not included in the stratum

Within strata sort by hospital, DRG, and admission month and select 1 in 5 records

National Inpatient Sample (NIS)

~ 4,600 hospitals
~ 7 M records

Statistics listed from 2017 data year



KID is a Stratified Sample of Discharges from the SID



State Inpatient Databases (SID)

~ 4,600 hospitals
~ 35 M records

Strata

- Uncomplicated Births
- Complicated Births
- Pediatric Non-Births

Stratified Sample of Discharges

*State not included in the stratum

• 10% uncomplicated births

• 80% pediatric discharges

Kids' Inpatient Database (KID)

~ 4,200 hospitals
~ 3M records



Statistics listed from 2016 data year

NEDS is a Stratified Sample of Hospitals from the SEDD and SID



**State
Inpatient
Databases
(SID)**
**State Emergency
Department
Databases
(SEDD)**

Strata

- U.S. Region
- Urban/Rural Location
- Teaching Status
- Ownership/Control
- Trauma center

Stratified Sample of Hospitals

*State not included in the stratum

Statistics listed from 2017 data year



**Nationwide
Emergency
Department
Sample
(NEDS)**

~ 980 EDs
~ 34M ED visits

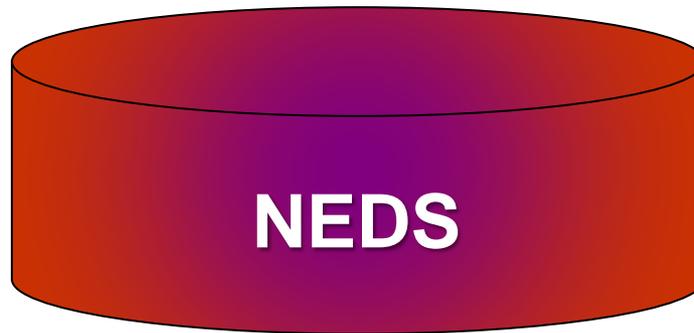
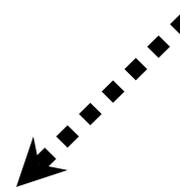
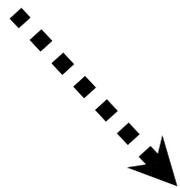
HCUP NEDS Data



Treat-and-Release ED Visits



Admitted ED Visits



~ 87% of ED visits are treat-and-release

~ 13% of ED visits result in a hospital stay

Statistics listed from 2017 data year

Additional Variables Are Included in the NEDS



These additional variables are relevant for research on emergency department utilization

Examples include:

- ▶ Type of ED event-treated and released, admitted to the same hospital, transferred, died
- ▶ Disposition of patient from ED
- ▶ Died during the visit: in the ED, in the hospital, or did not die
- ▶ Diagnosis reported on record indicates self harm
- ▶ Trauma center level I, II, or III
- ▶ HCUP ED hospital identifier

NRD is Constructed from SID with Verified Patient Linkage Numbers



State Inpatient Databases (SID)

Hospital and Patient Exclusions

Strata

- U.S. Region
- Urban/Rural Location
- Teaching Status
- Size
- Ownership/Control
- Patient Characteristics (age and sex)

All Discharges (after exclusions)



Nationwide Readmissions Database (NRD)

~ 2K hospitals
~ 18M records

Statistics listed from 2017 data year

NRD Discharge-Level Exclusions

Discharge-level exclusions

Discharges from patients with an age of 0

Discharges with missing or unverified patient linkage numbers

Questionable patient linkage numbers: same patient linkage number on 20 or more discharges

Questionable patient linkage numbers: patient is hospitalized after discharged dead

Questionable patient linkage numbers: overlapping stays

Discharges from hospitals with more than 50 percent of their total discharges excluded for any of the above causes

NASS is Constructed from Major Ambulatory Surgery Encounters in the SASD



State Ambulatory Surgery and Services Databases (SASD)

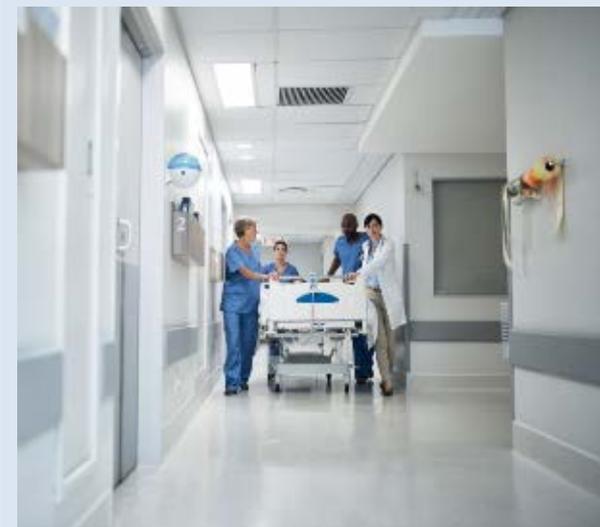
Strata

- U.S. Region
- Bed Size
- Urban/Rural Location and Teaching Status
- Ownership/Control

All Major AS Encounters from Hospital-Owned Facilities*

(after exclusions)

*State not included in the stratum



Nationwide Ambulatory Surgery Sample (NASS)

~ 7.5 M ambulatory surgery encounters
~ 2,700 hospital-owned facilities

Statistics listed from 2017 data year

NASS Exclusions/Limitations



Facility-level exclusions

Hospitals with gross irregularities in quarterly reporting volume

Hospitals that do not submit data in all 4 quarters

Hospitals with an unusually low volume of encounters involving an in-scope major ambulatory surgery

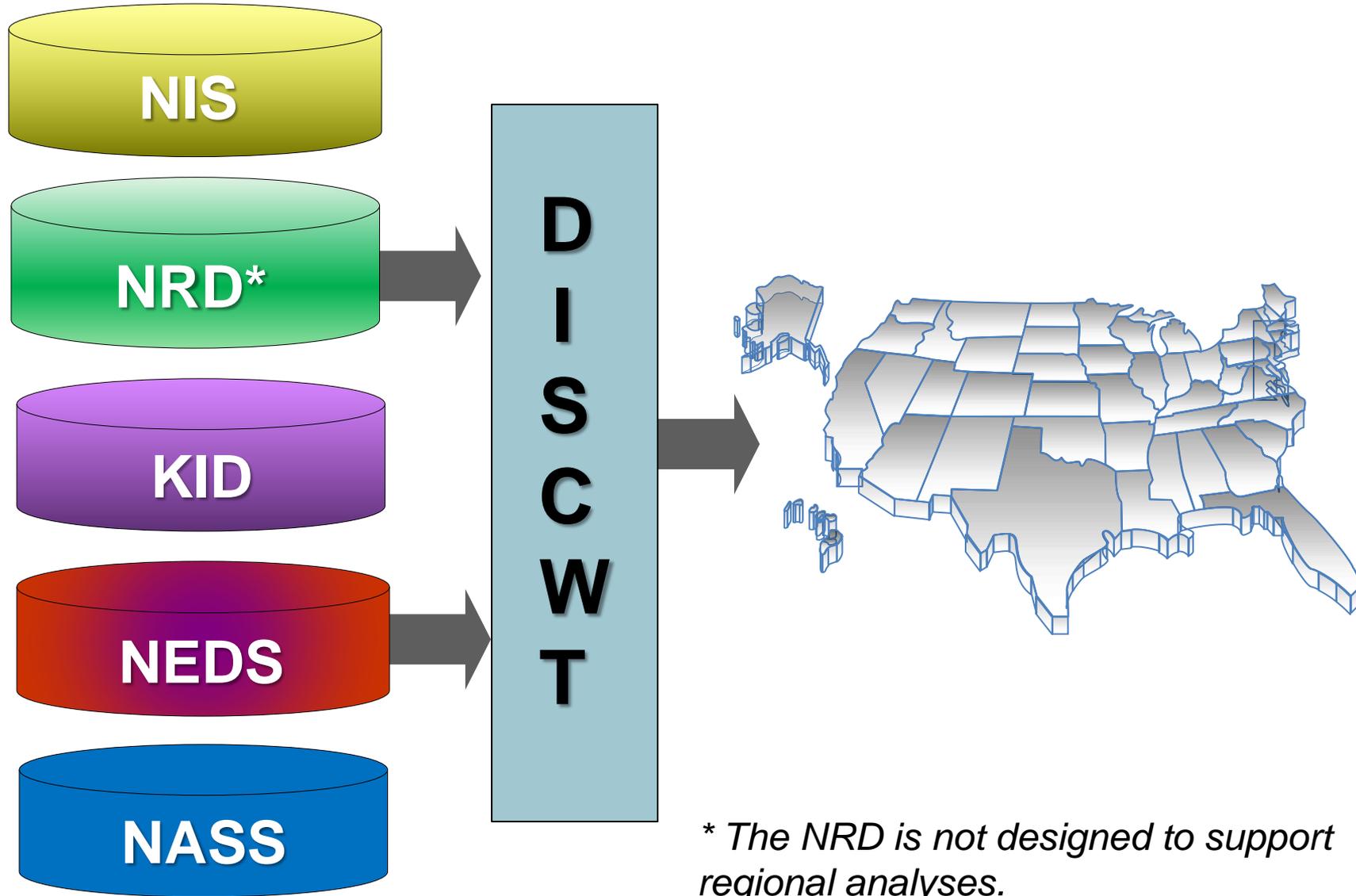
Encounter-level limitations

Limited to encounters involving at least one in-scope major ambulatory surgery.

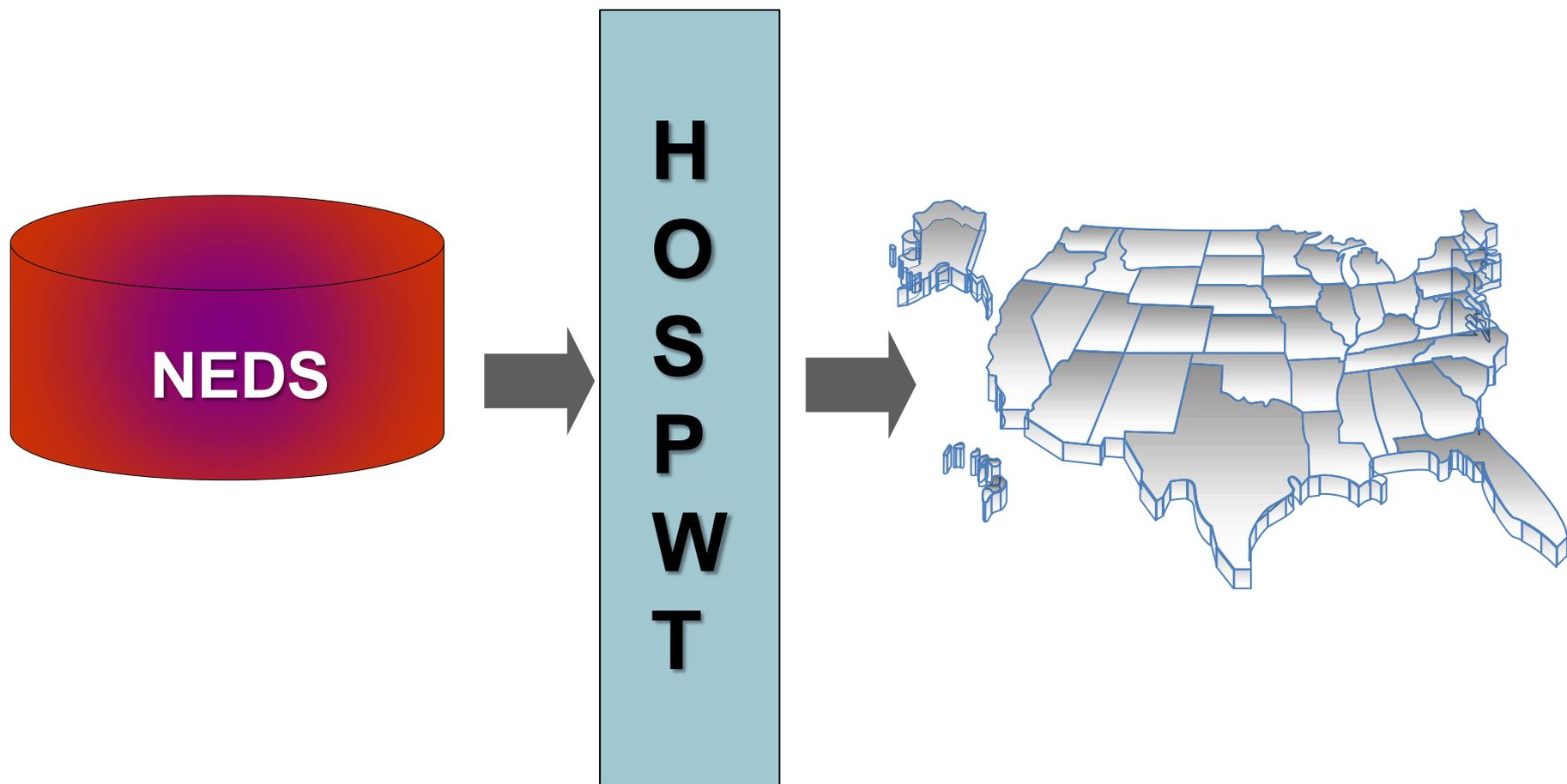
Major ambulatory surgeries: selected invasive, therapeutic surgical CPT-coded procedures that typically require the use of an operating room and regional anesthesia, general anesthesia, or sedation.

In-scope surgeries include CCS for Services and Procedures categories with (1) relatively high major ambulatory surgery volume, (2) a substantial share of major ambulatory surgeries performed in hospital-owned facilities, and (3) evidence of reliable reporting from SASD hospitals.

NIS, NRD, KID, NEDS, & NASS: Must be Weighted to Produce National and Regional Discharge Estimates



NEDS: Must be Weighted to Produce National and Regional Hospital Estimates



Comparison of the HCUP Inpatient Databases



HCUP Inpatient Databases				
HCUP Database	SID (2017)	NIS (2017)	KID (2016)	NRD (2017)
States	48 States + DC	47 States + D.C.	46 States + DC	28 States
Hospitals	4,584	4,584	4,200	2,454
Inpatient Discharges	35 million	7 million	3 million	18 million
Derived From	--	SID	SID	SID
Uses	Examine State and local market area statistics on healthcare utilization, access, quality, patient safety, etc. Readmission analyses possible in some States.	Generate national and regional estimates of healthcare utilization, access, quality, patient safety, etc.	Generate national and regional <u>pediatric</u> estimates of healthcare statistics.	Generate national estimates of all-cause and condition-specific readmissions .

Comparison of the HCUP Outpatient Databases



HCUP Database	Emergency Department Data		Ambulatory Surgery and Services Data	
	SEDD (2017)	NEDS (2017)	SASD (2017)	NASS (2017)
States	40 States + DC	36 States + DC	34 States + DC	32 States + DC
Hospitals	3,896	984	3,100	2,700
Outpatient Records	99 million ED visits	34 million ED visits	16 million ambulatory surgeries	10 million major ambulatory surgeries
Derived From	–	SID & SEDD	–	SASD
Uses	Examine ED visits at hospital-affiliated EDs that do not result in an admission for a given State.	Generate national and regional estimates for hospital-owned ED visits.	Study encounter-level data for ambulatory surgeries and other outpatient services from hospital-owned facilities.	Generate national and regional estimates of major ambulatory surgery encounters performed in hospital-owned facilities.

What Types of Care Are and Are Not Captured by HCUP?

Included in HCUP

Inpatient Care	State Inpatient Databases (SID) National (Nationwide) Inpatient Sample (NIS) Kids' Inpatient Database (KID) Nationwide Readmissions Database (NRD)
Emergency Department	State Emergency Department Databases (SEDD) Nationwide Emergency Department Sample (NEDS)
Ambulatory Surgery & Services	State Ambulatory Surgery & Services Databases (SASD) Nationwide Ambulatory Surgery Sample (NASS)
Other Non-Emergent Outpatient Services	State Ambulatory Surgery & Services Databases (SASD)

Not Included in HCUP

Physician office visits

Pharmacy

Labs/Radiology



Benefits and Limitations of HCUP Databases

Benefits

Large number of records

Uniformity in coding

Regular, routine collection

Ease of access

All payers, including self-pay, or those billed as 'no charge'

Available at local, State, regional, and national level

Supplemental variables available to facilitate research

Limitations

Limited clinical details

Lack reimbursed claims information

Does not include all hospital types (e.g., VA and DoD)

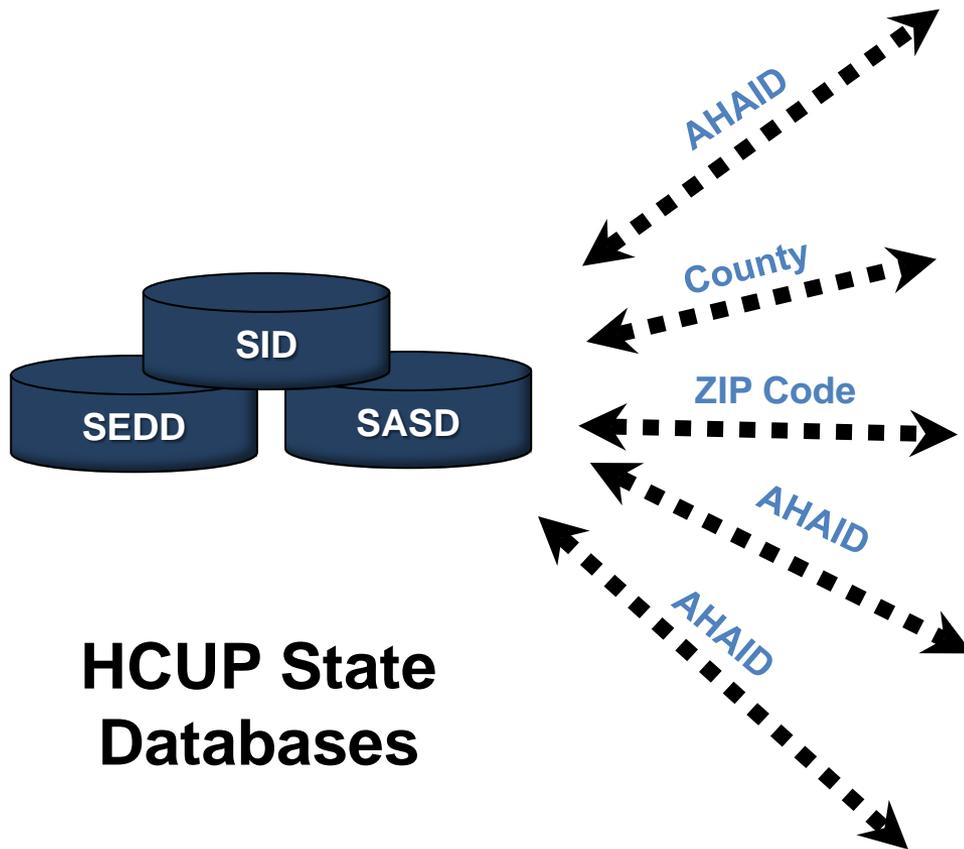
Does not show complete episode of care

State databases lack hospital characteristic information

Cannot link nationwide databases to external sources

Differences in coding across hospitals

Some Limitations of HCUP State Databases Can be Addressed by Linking to Other Databases



American Hospital Association (AHA) Annual Survey

Health Resources and Services Administration's (HRSA) Area Health Resource File (AHRF)

Zip Code Files from Census or Vendor

Medicare Cost Reports

Trauma Information Exchange Program (TIEP)

Summary

- Eight types of HCUP databases
- Databases are based on administrative hospital data: inpatient, emergency department, and ambulatory surgery and services
- Available for multiple years
 - ▶ Nationwide
 - NIS (1988-2017)
 - KID (1997, 2000, 2003, 2006, 2009, 2012, 2016)
 - NRD (2010-2017)
 - NEDS (2006-2017)
 - NASS (2016-2017)
 - ▶ State
 - SID (1990-2017)
 - SASD (1997-2017)
 - SEDD (1999-2017)
- Can look at breadth of healthcare issues

Find out more on
HCUP-US!

www.hcup-us.ahrq.gov/

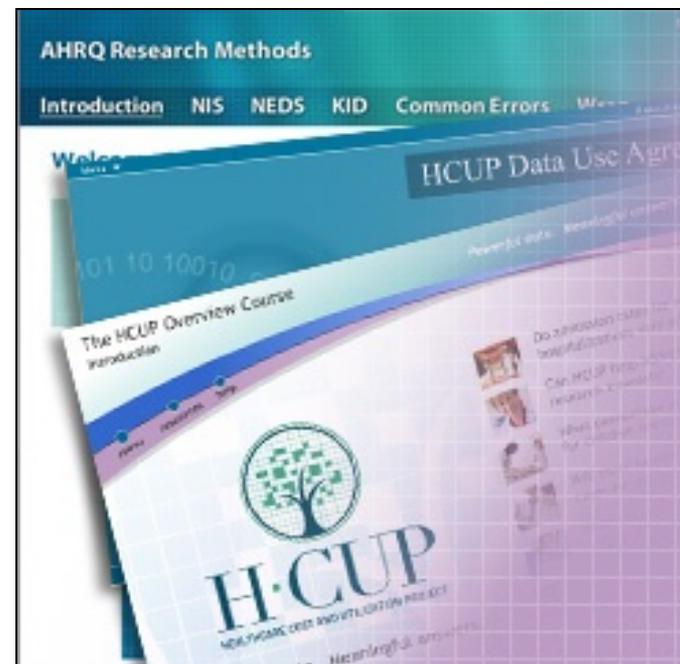
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The HCUP Database Process

- Processed data sent to HCUP Partners
- State Databases become available to the public through the HCUP Central Distributor
- Nationwide Databases become available for download through the HCUP Central Distributor



How to Purchase HCUP Data



HCUP Central Distributor website

www.hcup-us.ahrq.gov/tech_assist/centdist.jsp

- ▶ Visit the HCUP Central Distributor website.
- ▶ The Central Distributor provides one stop shopping for purchasing many of the State Databases, as well as the Nationwide Databases.
- ▶ Not all data elements are available from every Partner Organization, and not all Partner Organizations make their data available through the Central Distributor.
- ▶ Some Partner Organizations may place additional restrictions on the sale of their data.

Purchase Data Online Through the HCUP Central Distributor



Step 1: Take Data Use Agreement (DUA) online training:

www.hcup-us.ahrq.gov/tech_assist/dua.jsp

Step 2: Login or register for an account:

www.hcup-us.ahrq.gov/tech_assist/centdist.jsp

Step 3: Create your profile under “My Account”

Step 4: Submit online order and complete further instructions listed on the “Thank You” page

Step 5: Download Nationwide Databases online or receive delivery of State Databases through the mail

For assistance, contact the HCUP Central Distributor:

- ▶ Phone: 866-556-HCUP (4287) toll free
- ▶ Email: HCUPDistributor@ahrq.gov

Additional Requirement: Electronic Data Use Agreement (DUA) Course



- **Purpose of the Course:**
 - ▶ **Emphasize the importance of data protection**
 - ▶ **Reduce the risk of inadvertent violations**
 - ▶ **Describe your individual responsibility when using HCUP data**



Takes 15 minutes to Complete

www.hcup-us.ahrq.gov/tech_assist/dua.jsp

Pricing Information Per Data Year



Nationwide Databases (NIS, KID, NRD, NEDS, NASS)

- ▶ **NIS**: \$750 beginning 2017, student price \$150
- ▶ **KID**: \$500 beginning 2016, student price \$100
- ▶ **NRD**: \$1,000 beginning 2015, student price \$200
- ▶ **NEDS**: \$1,000 beginning 2016, student price \$200
- ▶ **NASS**: \$1,000 beginning 2016, student price \$200

State Databases (SID, SASD, SEDD)

- ▶ Varies by state, database, year, and type of applicant
- ▶ \$50 - \$3,200

**Funds for State
data sales
returned to HCUP
Partners**

A yellow starburst callout box with a black outline is positioned in the bottom right area of the slide. It contains the text 'Funds for State data sales returned to HCUP Partners' in a bold, black, sans-serif font.

Partners Releasing Databases through HCUP Central Distributor



- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Iowa
- Kansas
- Kentucky
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Nebraska
- Nevada
- New Jersey
- New Mexico
- New York
- North Carolina
- Oregon
- Rhode Island
- South Carolina
- South Dakota
- Utah
- Vermont
- Washington
- West Virginia
- Wisconsin

Remember:

**Not all States
participate in all
years and for all
databases**

Software Requirements for Working with the Full HCUP Files

Software Package	Load Programs	Format Programs	Example Statistical Coding	HCUP Tools Programs
	X	X	X	X
	X		X	X
	X			X
			X	
			X	

MS Excel and Access are NOT GOOD Options!

HCUP User Support Website



- Find detailed information on HCUP databases, tools, and products
- Access HCUPnet, HCUP Fast Stats, the Central Distributor, Online Tutorials, and more
- Find comprehensive list of HCUP-related publications and database reports
- Access technical assistance

Visit us at

www.hcup-us.ahrq.gov

HCUP User Support (HCUP-US)
The HCUP (pronounced "He-CUP") family of health care databases and related software tools and products is made possible by a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality (AHRQ).

Search HCUP-US

HCUP Home Databases Tools & Software Reports Fast Stats News & Events Purchase HCUP Data Technical Assistance Data Innovations

Healthcare Cost and Utilization Project (HCUP)

What is HCUP?

The Healthcare Cost and Utilization Project (HCUP) includes the largest collection of longitudinal hospital care data in the United States.

- [Overview of HCUP](#)
- [Online HCUP Overview Course](#) is an interactive course that provides information about HCUP data, software tools, and products.
- [Frequently Asked Questions](#)

HCUP Products

Learn about HCUP products including State and nationwide databases, software and online tools, and reports.

- [HCUP Databases](#) contain information on inpatient stays, emergency department visits, and ambulatory care
- [HCUPnet](#) is HCUP's free, online query system that provides immediate access to health statistics
- [HCUP Fast Stats](#) provides easy access to the latest HCUP-based visual statistical displays and tables for health care information topics
- [HCUP Tools & Software](#) provide complimentary tools and software to use with HCUP and similar databases
- [HCUP Reports](#) feature findings, publications, and technical reports on HCUP issues

HCUP Services

Utilize HCUP services to purchase HCUP data, get answers to your HCUP-related questions, and learn how to use the HCUP databases.

- [Purchase HCUP data](#) through the HCUP Central Distributor
- [HCUP Technical Assistance](#) answers questions and provides support to HCUP users
- [HCUP Online Tutorial Series](#) provides free tutorials on HCUP data and tools, including training on technical methods for conducting research with HCUP data

What's New

Read the latest edition of the [HCUP e-News](#) (3/28/19)

- [Spring 2019 e-News](#) is now available

New Studies added to Research Spotlights (3/20/19)

- [View the latest publications](#)

HCUP Fast Stats Data Update (3/13/19)

- [HCUP Fast Stats](#) has updated the [Trends in Inpatient Stays](#) section of the [National Hospital Utilization and Costs](#) topic to include 2016 national statistics.

Updated HCUP Tutorials (1/4/19)

- Recent project updates have been incorporated into the [HCUP Sample Design](#) and the [Producing National HCUP Estimates](#) tutorials providing helpful information to users working with the NIS, NEDS, and KID databases.

HCUP Method Series Report (11/28/18)

- [User Guide: An Examination of Expected Payer Coding in HCUP Databases](#) (Updated for 2016 HCUP Data).

Additional information is available on the AHRQ Web site. If you have comments, suggestions, and/or questions, please contact hcup@ahrq.gov.

Are you having problems viewing or clicking pages on this Web site?

Presentation Objectives Part II



- **HCUPnet Overview**
- **HCUP Fast Stats**
- **Add Value to Your Databases with HCUP Tools & Software**
- **Publications and Publication Search**
- **How to Access HCUP Resources**

HCUPnet: Quick, Free Access to HCUP Statistics



- Free online query system
- Users generate tables and figures of outcomes by diagnoses and procedures
- Statistics can be cross-classified by patient and hospital characteristics
- Can produce county-level statistical maps

A screenshot of the HCUPnet website homepage. The page has a blue background with a grid pattern. At the top, there is a navigation bar with links for 'About Us', 'Careers', 'Contact Us', 'Español', 'FAQ', and 'Email Updates'. Below this is the AHRQ logo and the text 'Agency for Healthcare Research and Quality, Advancing Excellence in Health Care'. The main heading is 'HCUPnet Healthcare Cost and Utilization Project'. Below that, it says 'Free Health Care Statistics' and provides a brief description of the system. There are two main buttons: 'Create a New Analysis' and 'Get Quick Statistics Tables'. At the bottom, there is a note about the website redesign.

www.hcupnet.ahrq.gov/

HCUPnet Can Answer a Variety of Questions



- What percentage of hospitalizations for children report Medicaid as expected payer, by State?
- What are the most expensive conditions treated in U.S. hospitals?
- What is the trend in hospitalizations for depression?
- Will there be a sufficient number of cases to do my analysis?
- How do my estimates and calculations compare with HCUPnet (validation)?

Examples of What HCUPnet Provides ...



Step-by-step queries from:	Specialized queries by:	Ready-to-use statistics on:
Hospital inpatient setting (SID, NIS, KID, NRD)	<ul style="list-style-type: none"> • Overall inpatient stays • Select conditions or procedures 	<ul style="list-style-type: none"> • Trends in inpatient stays • Related conditions and procedures • Readmissions (NRD)
Emergency department (ED) setting (SID, SEDD, NEDS)	<ul style="list-style-type: none"> • Overall ED visits • Select conditions or procedures 	<ul style="list-style-type: none"> • Trends in ED visits • Percent of patients admitted versus discharged from the ED (i.e., treat-and-release)
Ambulatory surgery (AS) setting (SASD)	<ul style="list-style-type: none"> • Overall AS encounters • Select conditions or procedures 	<ul style="list-style-type: none"> • Percent of cases treated in the inpatient versus AS settings
Community-level statistics	<ul style="list-style-type: none"> • County-level, regional, or U.S.-Mexico border State statistics 	<ul style="list-style-type: none"> • Inpatient stays for alcohol and other drugs

How Does HCUPnet Work?



- Step 1: What kind of statistics are you looking for?
- Step 2: Choose how you would like to analyze the data
- Step 3: Create your analysis
- Step 4: View and update your results in real time
- Step 5: View your results in detailed graphs and maps
- Step 6: Export your results for future use

How Does HCUPnet Work? Analysis Setup (Steps 1 and 2)



U.S. Department of Health & Human Services

[About Us](#) [Careers](#) [Contact Us](#) [Español](#) [FAQ](#) [Email Updates](#)



HCUPnet Healthcare Cost and Utilization Project

HCUPnet is a f
Utilization Pro

The system pr
emergency de
care data on c

The HCUPne
simplified proces

Analysis Setup

Inpatient Emergency Department Ambulatory Surgery Community

Choose how you would like to analyze data.

Descriptive Statistics Trends **Rank Order**

Choose a year.

2016

Choose how you want to classify diagnoses or procedures.

Please Note: ICD-10 Procedure Codes, Medicare-Severity Diagnosis Related Groups (MS-DRG) and Diagnosis Related Groups (DRG) for Trends Will Be Added Soon

Diagnoses--ICD-10-CM Codes (ICD10)

Create Analysis

tutorial

How Does HCUPnet Work?

Modifying Results



- MY ANALYSIS
- Focus on Subgroups of Interest
- GET MORE DETAILS
- Outcomes and Measures: Rank Order By
- Patient Characteristics
- Hospital/Facility Char.
- CHANGE
- Years
- Geographic setting
 - National
 - State
- Setting of Care
- SELECT DIAGNOSIS/PROCEDURE
- Diagnosis/Procedure
- Submit Request



Manage Analysis **Analysis Type:** Rank **Setting of Care:** Hospital Inpatient **Geographic Settings:** National **Years:** 2016 **Categorization Type:** Diagnoses--ICD-10-CM Codes (ICD10)
Outcome and Measures: Number | Rate

Hide Standard Errors Excel CSV Print Facebook Twitter Email

HCUPnet - Hospital Inpatient National Statistics

Results Per Table: 10

2016 National Diagnoses--ICD-10-CM Codes (ICD10), Principal Rank order of ICD-10-CM Codes (ICD10) Diagnoses by Number

Rank	ICD-10-CM Principal diagnosis code	Total number of discharges: N
1	Z38.00 Single liveborn infant, delivered vaginally	2,497,092
2	A41.9 Sepsis, unspecified organism	1,446,559
3	Z38.01 Single liveborn infant, delivered by cesarean	1,153,764
4	J18.9 Pneumonia, unspecified organism	603,379
5	J44.1 Chronic obstructive pulmonary disease with (acute) exacerbation	501,849
6	N17.9 Acute kidney failure, unspecified	478,175
7	I21.4 Non-ST elevation (NSTEMI) myocardial infarction	470,935
8	O34.21 Maternal care for scar from previous cesarean delivery	366,610
9	O48.0 Post-term pregnancy	348,165

How Does HCUPnet Work?

Options for Result Output



Manage Analysis ? Analysis Type: Rank Setting of Care: Hospital Inpatient Geographic Settings: National Years: 2016 Categorization Type: Diagnoses--ICD-10-CM Codes (ICD10) Principal or All-Listed: Principal Outcome and Measures: Number | Rate

Hide Standard Errors ? Excel ? CSV Print Facebook Twitter Email

HCUPnet - Hospital Inpatient National Statistics

Results Per Table: 10

2016 National
Diagnoses--ICD-10-CM Codes (ICD10), Principal
Rank order of ICD-10-CM Codes (ICD10) Diagnoses by Number

? Graph Table

Rank	ICD-10-CM Principal diagnosis code	Total number of discharges: N	Total number of discharges: SE(N)
1	Z38.00 Single liveborn infant, delivered vaginally	2,497,092	43,361
2	A41.9 Sepsis, unspecified organism	1,446,559	18,010
3	Z38.01 Single liveborn infant, delivered by cesarean	1,153,764	21,486
4	J18.9 Pneumonia, unspecified organism	603,379	5,871
5	J44.1 Chronic obstructive pulmonary disease with (acute) exacerbation	501,849	5,868
6	N17.9 Acute kidney failure, unspecified	478,175	5,319
7	I21.4 Non-ST elevation (NSTEMI) myocardial infarction	470,935	7,131
8	O34.21 Maternal care for scar from previous cesarean delivery	366,610	6,904
9	O48.0 Post-term pregnancy	348,165	8,171

Additional Examples of Output from HCUPnet



U.S. Department of Health & Human Services | About Us | Careers | Contact Us | Español | FAQ | Email Updates

AHRQ Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

Search Term

Home | Glossary | Methodology | Our Partners

HCUPnet
Healthcare Cost and Utilization Project

MY ANALYSIS

GET MORE DETAILS

Outcomes and Measures ?

CHANGE

Years

Patient Location

SELECT DIAGNOSIS/PROCEDURE

Diagnosis/Procedure

For all stays

For diagnosis/procedure

For quality indicator

Classification Type

Stays Related to Mental ar

Submit Request

Manage Analysis ?

Analysis Type: Community | Setting of Care: Hospital Inpatient | Geographic Settings: State | Years: 2016

Categorization Type: Stays Related to Mental and/or Substance Use Disorders | Outcome and Measures: Number

State: California | Community Level: County

Hide Standard Errors | Excel ? | CSV | Print | Facebook | Twitter | Email

Statistics for community hospital stays 2016 California, by county or county equivalent

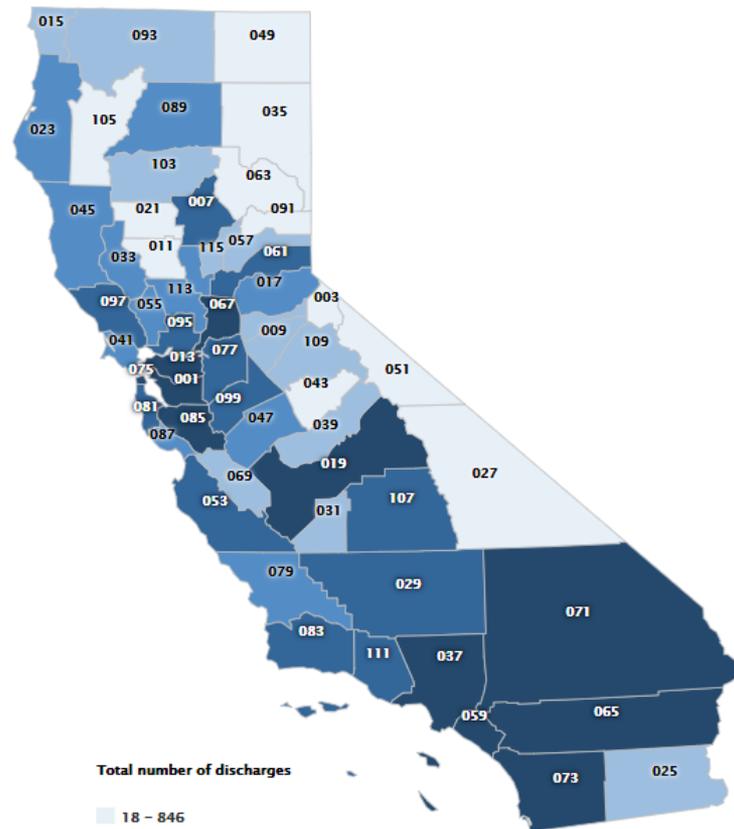
2016 California Stays Related to Mental and/or Substance Use Disorders

Show Details | Show Map

	FIPS state county code	Total number of discharges	Rate of discharges per 100,000 population	Age/sex adjusted rate of discharges per 100,000 population
<input type="checkbox"/> US Total		9,955,578	3,087.7	3,087.7
<input type="checkbox"/> State Total	06	899,536	2,285.6	2,285.8
<input type="checkbox"/> Alameda, California	06001	32,529	1,973.6	1,929.7
<input type="checkbox"/> Alpine, California	06003	18	1,800.0	1,817.3
<input type="checkbox"/> Amador, California	06005	1,202	3,284.4	2,789.7
<input type="checkbox"/> Butte, California	06007	11,834	5,213.6	5,043.5
<input type="checkbox"/> Calaveras, California	06009	1,290	2,888.0	2,462.5
<input type="checkbox"/> Colusa, California	06011	404	1,875.0	1,933.3
<input type="checkbox"/> Contra Costa, California	06013	25,341	2,252.2	2,149.2
<input type="checkbox"/> Del Norte, California	06015	891	2,344.6	2,001.6

Stays Related to Mental and/or Substance Use Disorders, California 2016

Total number of discharges



Total number of discharges

- 18 - 846
- 881 - 2,730
- 2,803 - 7,333
- 7,440 - 19,291
- 23,780 - 237,174

HCUPnet Versus Full HCUP Databases

Capability	HCUPnet Can Produce...	HCUP Databases Can Produce...
Simple statistics	✓	✓
More complicated queries	X	✓
Sample size calculations	✓	✓
Trends analyses	✓	✓
Multivariate analyses	X	✓
Rank order of diagnoses and procedures	✓	✓
Z-test calculator for significance testing	✓	X
Validation of results obtained from the HCUP databases	✓	X

Presentation Objectives Part II



- **HCUPnet Overview**
- **HCUP Fast Stats**
- **Add Value to Your Databases with HCUP Tools & Software**
- **Publications and Publication Search**
- **How to Access HCUP Resources**

HCUP Fast Stats



The screenshot shows the HCUP Fast Stats website interface. At the top left is the HCUP logo (Healthcare Cost and Utilization Project). To its right is a teal header with the text 'HCUP Fast Stats' and a description: 'HCUP Fast Stats provides easy access to the latest HCUP-based statistics for healthcare information topics. HCUP Fast Stats uses visual statistical displays in stand-alone graphs, trend figures, or simple tables to convey complex information at a glance. Fast Stats will be updated regularly (quarterly or annually, as newer data become available) for timely, topic-specific national and State-level statistics.' A search bar is located to the right of the header. Below the header is a navigation menu with the following items: 'HCUP Home', 'Databases', 'Tools & Software', 'Reports', 'Fast Stats' (circled in red), 'News & Events', 'Purchase HCUP Data', 'Technical Assistance', and 'Data Innovations'. The main content area is titled 'HCUP Fast Stats' and contains four sections of links: 'State Trends in Hospital Use by Payer' (with links for 'Inpatient Stay Trends by Payer' and 'Emergency Department Visit Trends by Payer'), 'National Hospital Utilization and Costs' (with links for 'Trends in Inpatient Stays', 'Most Common Diagnoses for Inpatient Stays', and 'Most Common Operations During Inpatient Stays'), 'Opioids & Neonatal Abstinence Syndrome' (with links for 'Opioid-Related Hospital Use, National and State' and 'Neonatal Abstinence Syndrome (NAS), National and State'), and 'Other Topics' (with a link for 'Hurricane Impact on Hospital Use').

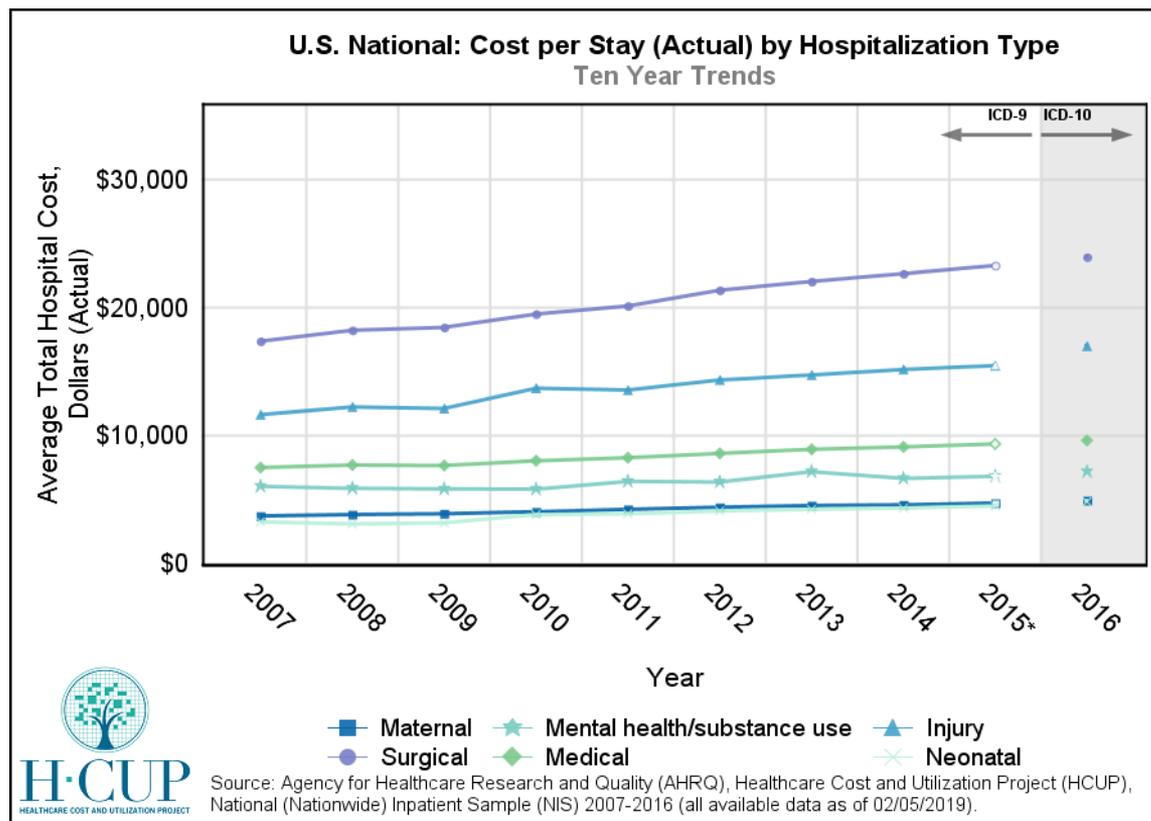
- HCUP Fast Stats provides easy access to the latest HCUP-based statistics for healthcare information topics.
- Uses visual statistical displays in stand-alone graphs, trend figures, or simple tables to convey complex information at a glance.
- Information will be updated regularly (quarterly or annually, as newer data become available).

www.hcup-us.ahrq.gov/faststats/landing.jsp

HCUP Fast Stats – National Hospital Utilization and Costs



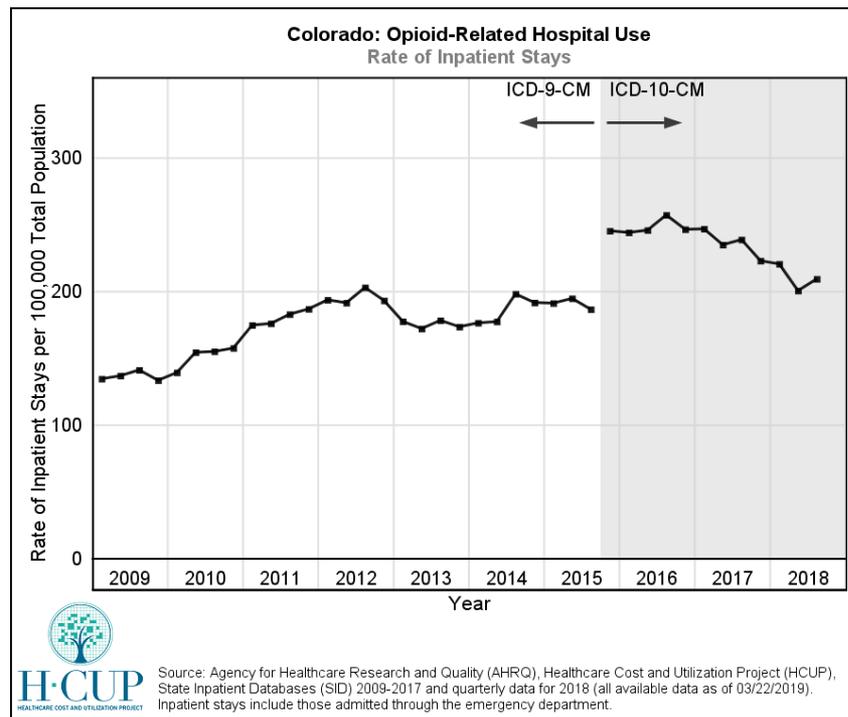
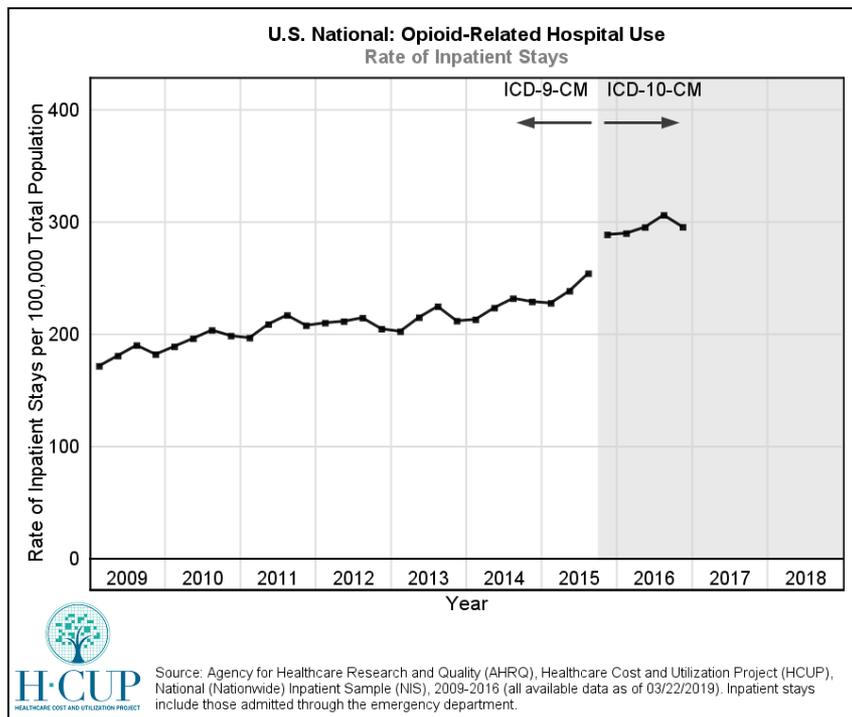
- Includes information on trends in inpatient stays, the most common diagnoses for inpatient stays, and the most common operations during inpatient stays.



HCUP Fast Stats – *Opioid-Related Hospital Use*



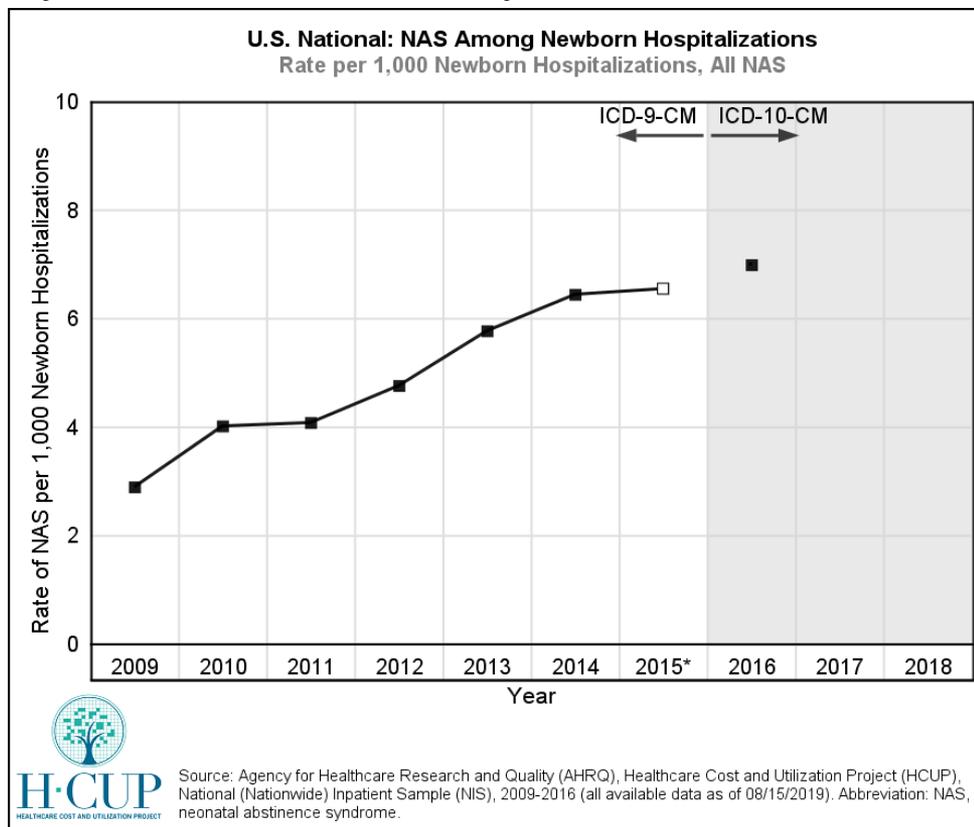
- Provides information on opioid-related inpatient stays and ED visits overall and by age group, sex, community-level income, patient location, and expected payer. Trends are presented graphically as population-based rates for the U.S. and by State.



HCUP Fast Stats – Neonatal Abstinence Syndrome Among Newborn Hospitalizations



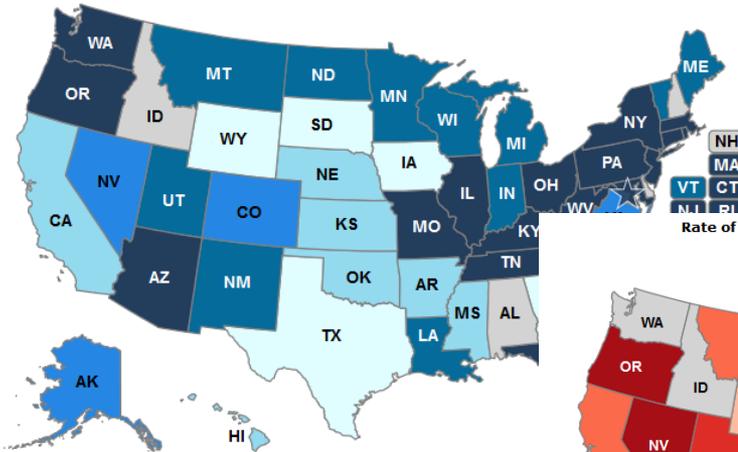
- Provides trends in neonatal abstinence syndrome-related newborn hospitalizations overall and by sex, expected payer, community-level income, and patient location. Trends are presented graphically as rates per 1,000 newborn hospitalizations, median costs, and median length of stay for the U.S. and by State.



HCUP Fast Stats – Interactive Maps

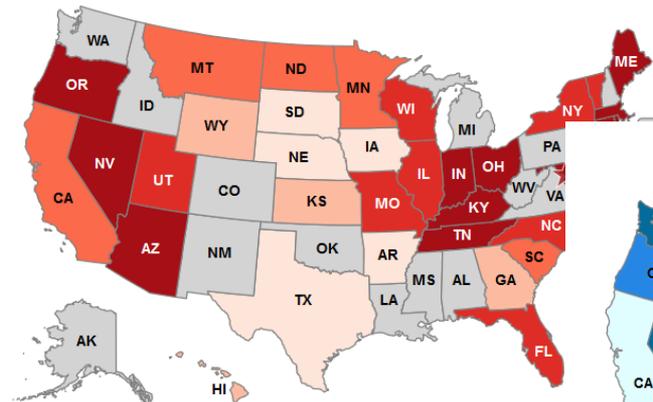
Rate of Opioid-Related Inpatient Stays per 100,000 Population

2016 National rate: 296.9



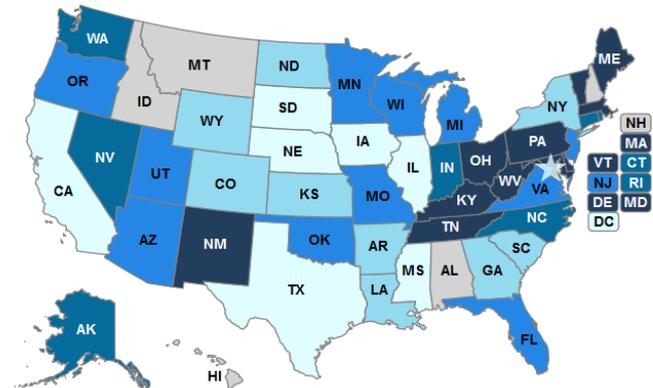
Rate of Opioid-Related ED Visits per 100,000 Population

2016 National rate: 243.5



Rate of NAS per 1,000 Newborn Hospitalizations

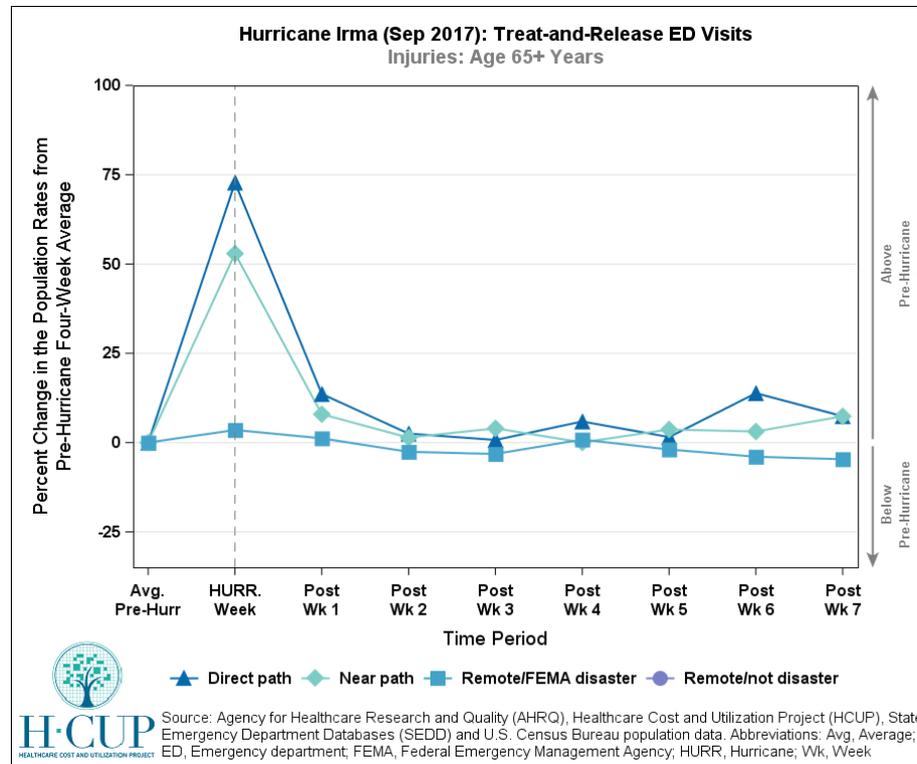
2016 National rate: 7.0



HCUP Fast Stats – *Hurricane Impact on Hospital Use*



- Presents change in population-based inpatient and emergency department utilization rates pre- versus post-hurricane for 11 U.S. hurricanes between 2005-2017. Hospital utilization statistics are provided for all conditions and for injuries only, and for select age groups, based on county proximity to the hurricane.



Presentation Objectives Part II



- **HCUPnet Overview**
- **HCUP Fast Stats**
- **Add Value to Your Databases with HCUP Tools & Software**
- **Publications and Publication Search**
- **How to Access HCUP Resources**

What are HCUP Software Tools?



- Can be applied to HCUP databases, to systematically create new data elements from existing data, thereby enhancing a researcher's ability to conduct analyses
- While designed to be used with HCUP databases, the analytic tools may be applied to other administrative databases

Multiple Coding Systems

Consider which coding system is appropriate for your analysis

Diagnosis-Related

ICD-10-CM
DRGs*
MDCs*
ICD-9-CM

Procedure-Related

ICD-10-PCS
CPT
HCPCS
ICD-9-CM

*Grouped conditions/procedures on inpatient stays

ICD-10-CM Diagnosis-Related HCUP Software Tools

Clinical Classifications Software Refined (CCSR) for ICD-10-CM Diagnoses



- The CCSR replaces the beta version of the CCS for ICD-10-CM diagnoses and applies to all ICD-10-CM diagnosis codes through fiscal year (FY) 2020.
- Aggregates over 70,000 ICD-10-CM diagnosis codes into a manageable number of clinically meaningful categories.
 - ▶ Categories are organized across 21 body systems, which generally follow the structure of the ICD-10-CM diagnosis chapters.



Key Differences Between CCSR for ICD-10-CM and CCS for ICD-10-CM (Beta Version)



Difference	CCSR for ICD-10-CM Diagnoses	CCS for ICD-10-CM (Beta Version)
Number of categories	Over 530 categories	283 categories
Mutually exclusive category assignment	Some codes cross-classified to more than one CCSR diagnosis category	Each diagnosis code maps to one and only one CCS category
Category naming convention	Categories start with three-character body system abbreviation followed by three digits	Categories are numeric
Multi-level system	No multi-system developed	Multi-level system with additional diagnostic information up to two levels
Output from SAS software	Flexibility to choose between file output versions	Array of CCS data elements with the CCS category as the value

Example: CCSR Category Naming Convention and Assignment

Diagnosis Code I13.0

Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease

CCSR CIR008

Hypertension with complications and secondary hypertension

CCSR CIR019

Heart failure

CCSR GEN003

Chronic kidney disease

CCSR for ICD-10-CM Diagnoses

Default Categorization Scheme



- Added to v2020.2, released in February 2020
- Purpose of default CCSR categorization:
 - ▶ Allow users to rank hospital encounters into mutually exclusive groups
 - Principal (or first-listed) diagnosis code is assigned to a single default CCSR category
 - Each hospital encounter can be counted just once
- The default categorizations are based on a specific set of 12 guidelines

CCSR for ICD-10-CM Diagnoses Resources



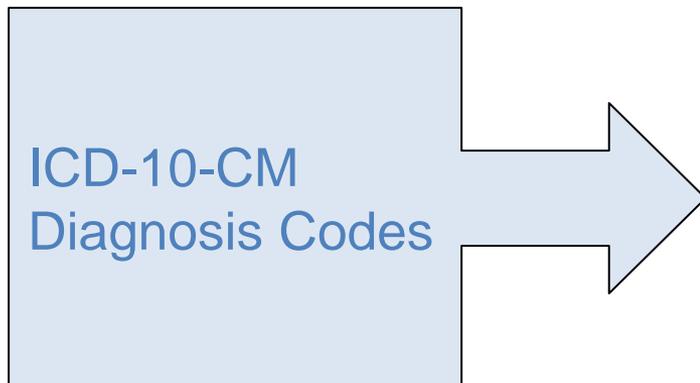
- User Guide for ICD-10-CM Diagnoses (PDF)
 - ▶ Detailed description of the guidelines used to assign CCSR categories and default for principal diagnosis
 - ▶ How-to guide for using the SAS program and CSV mapping file with your administrative data
- Diagnosis CCSR reference file (Excel)
 - ▶ Searchable list of CCSR categories
 - ▶ Searchable list of ICD-10-CM codes, CCSR assignment, and default CCSR for the principal diagnosis
- Comparison of the CCSR with the beta version of the CCS for ICD-10-CM Diagnoses (both PDF and Excel)
- Log of changes across versions (Excel)

www.hcup-us.ahrq.gov/toolssoftware/ccsr/ccs_refined.jsp

Chronic Condition Indicator (CCI) for ICD-10-CM (Beta Version)



- Currently a beta version; a fully refined version of the CCI for ICD-10-CM is expected to be released in late 2020
- Group diagnosis codes into Chronic or Non-Chronic Categories
 - ▶ CCI for ICD-10-CM diagnoses codes (beta version)
 - ▶ by FY for years 2016-2020



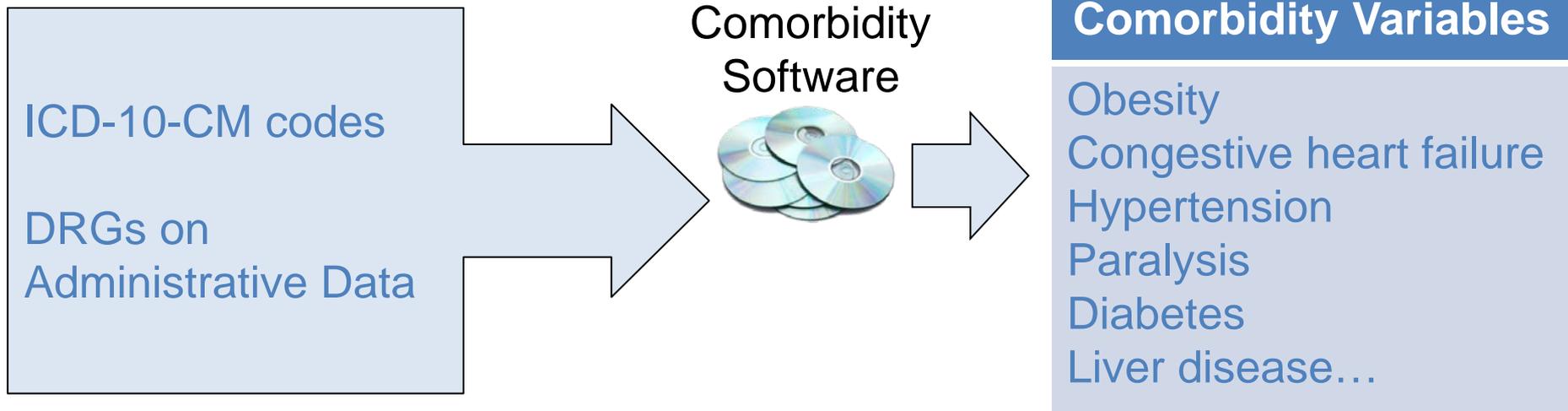
Condition Categories

1. **Chronic**, e.g., Diabetes
2. **Non-Chronic**, e.g., Food Poisoning

Elixhauser Comorbidity Software for ICD-10-CM (Beta Version)



- Currently a beta version; a fully refined version of the Elixhauser Comorbidity for ICD-10-CM is expected to be released in late 2020
- Creates indicator flags for 29 major comorbidities
 - ▶ Elixhauser Comorbidity Software for ICD-10-CM (beta version) available by FY for years 2016-2020



ICD-10-PCS Procedure- Related HCUP Software Tools

Clinical Classifications Software (CCS) for ICD-10-PCS (Beta Version)

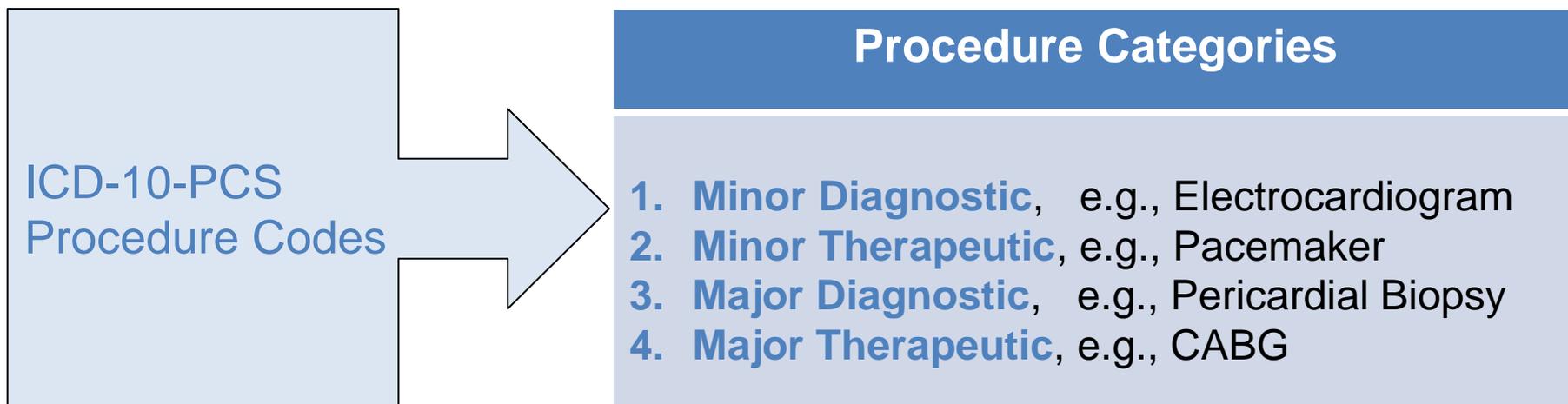


- Currently a beta version; a fully refined version of the CCS for ICD-10-PCS is expected to be released in late 2020
- Clusters procedure codes into clinically meaningful categories
 - ▶ >77,000 ICD-10-PCS procedure codes → 231 categories
- Useful for presenting descriptive statistics and understanding patterns
- The CCS can be used to identify populations for procedure-specific studies
- It can be a useful way to categorize procedures when exploring data and can serve as a tool for reporting statistical information on hospitalizations

Procedure Classes for ICD-10-PCS (Beta Version)

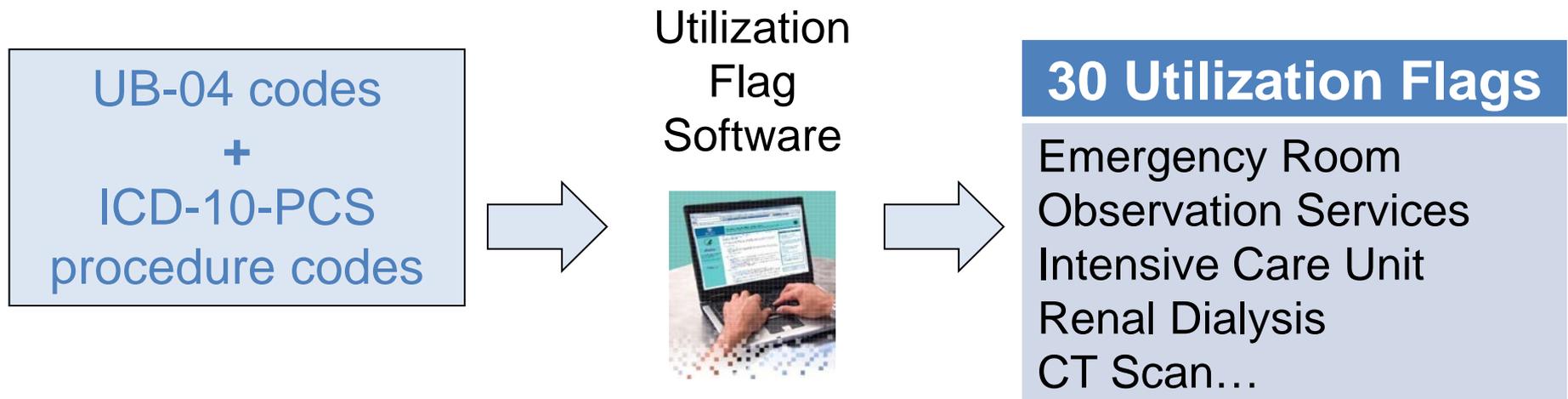


- Currently a beta version; a fully refined version of the Procedure Classes for ICD-10-PCS is expected to be released in late 2020
- Groups procedure codes into one of four categories
 - ▶ Versions available by FY for years 2016-2020



Utilization Flags for ICD-10-PCS (Beta Version)

- Currently a beta version; a fully refined version of the Utilization Flags is expected to be released in 2021
- Reveals additional information about the use of healthcare services
- Primarily uses UB-04 revenue codes, augmented with ICD-10-PCS procedure codes
 - ▶ Versions available by FY for years 2017-2020



2016-2018 State and 2016-2017 Nationwide Databases: Revised Structure



- 2016-2018 State and 2016-2017 Nationwide databases include full calendar years of data with diagnosis and procedure codes reported using the ICD-10-CM/PCS coding system
- Data elements derived from HCUP software tools are not provided in these HCUP databases
- For users interested in applying the HCUP software tools to the ICD-10-CM/PCS data in the 2016-2018 State and 2016-2017 Nationwide databases:
 - ▶ CCSR for ICD-10-CM diagnoses is available for download [HCUP Tools & Software section](#) of the HCUP-US Website.
 - ▶ Beta versions of other HCUP software tools are also available for download
 - ▶ The HCUP Tools Loading tutorial is available to assist users interested in applying the HCUP software tools to the data at www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp.

CPT/HCPCS Procedure- Related HCUP Software Tools

Clinical Classifications Software (CCS) for Services and Procedures



- Clusters HCPCS Level I (or CPT procedure codes) and HCPCS Level II codes into clinically meaningful procedure categories
- Procedure categories are identical to the CCS beta version for ICD-10-PCS and CCS for ICD-9-CM, with the addition of specific categories unique to professional service codes in CPT/HCPCS
- Users must agree to a license to use the CCS-Services and Procedures before accessing the software
- Updated to include procedure codes effective January 2019

Surgery Flags for Services and Procedures

- Provides a method for identifying surgical procedures and encounters using CPT-based data
- Surgery Flags for Services and Procedures
 - ▶ Updated to include CPT codes released through January 2019

1. Narrow

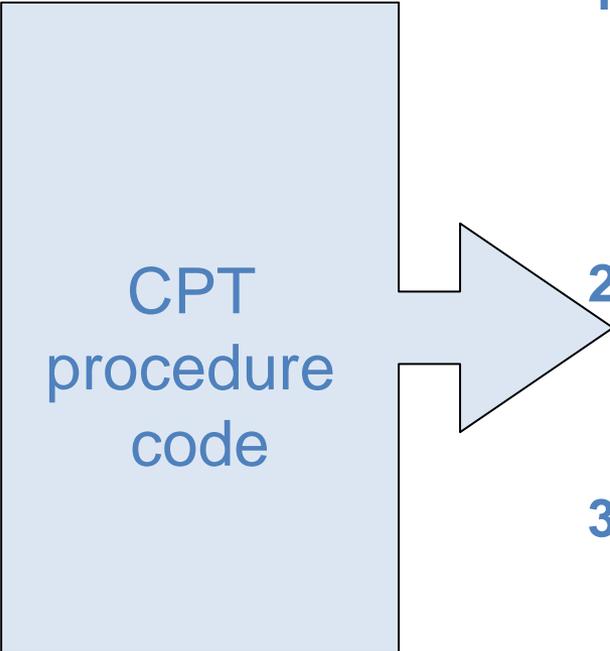
- Invasive therapeutic surgical procedure
- Typically requires use of an operating room
- Requires regional/general anesthesia, or sedation to control pain

2. Broad

- Includes all narrowly defined surgical procedures as well as a broader group of diagnostic and less invasive therapeutic surgeries

3. Neither Broad nor Narrow

- Ex: Use of endoscopies for diagnostic purposes only and for which nothing was removed



CPT
procedure
code

ICD-9-CM Related HCUP Software Tools

HCUP Software Tools for ICD-9-CM



- Clinical Classifications Software (CCS) for ICD-9-CM Diagnosis and Procedures
- Chronic Condition Indicator for ICD-9-CM
- Elixhauser Comorbidity Software for ICD-9-CM
- Procedure Classes for ICD-9-CM
- Utilization Flags for ICD-9-CM
- Surgery Flags for ICD-9-CM

https://www.hcup-us.ahrq.gov/tools_software.jsp

AHRQ Quality Indicators

AHRQ Quality Indicators

- Create measures of healthcare quality using inpatient administrative data
- Four Quality Indicator modules:
 1. Prevention Quality Indicators (PQIs)
 2. Inpatient Quality Indicators (IQIs)
 3. Patient Safety Indicators (PSIs)
 4. Pediatric Indicators (PDIs)



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HCUP Software Tool	ICD-9-CM	ICD-10-CM/PCS (Beta)	ICD-10-CM Diagnoses	CPT® Procedure Codes
Clinical Classifications Software (CCS)	X*	X <i>(ICD-10-PCS only)</i>		X*
Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses NEW			X <i>(ICD-10-CM only)</i>	
Procedure Classes	X*	X		
Chronic Condition Indicator	X*	X		
Elixhauser Comorbidity Software	X*	X		
Utilization Flags	X*	X		
Surgery Flags	X*			X*
AHRQ Quality Indicators				
Prevention Quality Indicators	X	X		
Inpatient Quality Indicators	X	X		
Patient Safety Indicators	X	X		
Pediatric Quality Indicators	X	X		

**Included on the HCUP databases*

HCUP Supplemental Files

HCUP Supplemental Files Can Only be Applied to HCUP Databases

- Cost-to-Charge Ratio (CCR) Files
- Hospital Market Structure (HMS) Files
- Trend Weights Files (NIS & KID)
- NIS Hospital Ownership File



Cost-to-Charge Ratio (CCR) Files

- Enable conversion of charge data to cost data on the SID, NIS, KID, and NRD



Hospital-Level
Data



	A	B	C
1	HOSPID	APICC	GAPICC
2	XXXX	XXXX	XXXX
3	XXXX	XXXX	XXXX
4	XXXX	XXXX	XXXX
5	XXXX	XXXX	XXXX
6	XXXX	XXXX	XXXX
7	XXXX	XXXX	XXXX

Apply Ratios



Convert Total
Charges to Costs

Hospital Market Structure (HMS) Files

- Contain various measures of hospital market competition
- Allow users to broadly characterize the intensity of competition that hospitals face
 - ▶ Using various definitions of market area



Additional HCUP Supplemental Files



- Trend Weights Files (NIS & KID)
 - ▶ Provide trend weights and data elements that are consistently defined across data years to address the NIS sample redesign in 2012 and the KID sample redesign in 2000
- AHA Linkage Files
 - ▶ Enable researchers to link hospital identifiers in some State databases to the AHA Annual Survey Databases

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Tools & Software

HCUP tools and software help health services researchers and decision makers to use HCUP and other

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Favorites

AHRQ Quality Indicators (QIs)

[AHRQ Quality Indicators \(QIs\)](#) are standardized, evidence-based measures of healthcare quality that can be used with readily available hospital inpatient administrative data to measure and track clinical performance and outcomes.

MONAHRQ

[MONAHRQ](#) is a software product that enables organizations - such as state and local data organizations, hospital systems, and health plans - to input either publicly available or their own data and quality metrics for hospitals, nursing homes, and physicians, and then generate a data-driven website that can be used by consumers or healthcare professionals to compare care providers.

***Note* Effective September 27, 2017, technical support and software updates are no longer available for the MONAHRQ tool. Existing software and supporting materials will remain available on the MONAHRQ website, as well as the open source project.**

HCUP Tools & Software

The HCUP Tools and Software can be applied to HCUP databases, to systematically create new data elements from existing data, thereby enhancing a researcher's ability to conduct analyses. While designed to be used with HCUP databases, the analytic tools may be applied to other administrative databases. We welcome comments. If you have questions or suggestions for changes, please contact hcpup@ahrq.gov.

Note: The U.S. transitioned to the International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) coding scheme on October 1, 2015. The HCUP tools for International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) should only be used with data for discharges before 10/1/15.

The HCUP tools were translated to ICD-10-CM/PCS prior to the availability of ICD-10-CM/PCS-coded data. The translated tools are considered in beta version, until a refined version of the tool can be developed. Preliminary findings suggest some unexpected discontinuities between the tools based on ICD-9-CM and the beta version of tools based on ICD-10-CM/PCS. See the [ICD-10-CM/PCS Resources](#) page for details. The tools will continue to undergo refinements over the next several years. You are advised to visit this page regularly to download and apply the most recent version of the HCUP tools for your data throughout your research process.

Tools for ICD-10-CM/PCS

NEW! Clinical Classifications Software Refined (CCSR) for ICD-10-CM Diagnoses

[Clinical Classifications Software Refined \(CCSR\)](#) for ICD-10-CM diagnoses aggregates over 72,000 ICD-10-CM diagnosis codes into a manageable number of clinically meaningful categories organized across 21 body systems, which generally follow the structure of the ICD-10-CM diagnosis chapters. The CCSR replaces the beta version of the CCS for ICD-10-CM diagnoses. It provides a means by which to identify specific clinical conditions using ICD-10-CM diagnosis codes. The CCSR capitalizes on the specificity built into ICD-10-CM coding by creating new clinical categories that did not exist in previous versions of the CCS tool and allowing ICD-10-CM codes to be classified in more than one category. The CCSR is intended to be used analytically to examine patterns of healthcare in terms of cost, utilization, and outcomes; rank utilization by diagnoses; and risk adjust by clinical condition. (Codes valid through FY 2020.)

Beta Versions of HCUP Tools for ICD-10-CM/PCS

Clinical Classifications Software (CCS) for ICD-10-PCS (beta version)

[Clinical Classifications Software \(CCS\) for ICD-10-PCS](#) (beta version) provides a method for classifying ICD-10-PCS procedures into clinically meaningful categories, which can be used for aggregate statistical reporting of a variety of types. (Updated for codes valid through FY 2020.) A fully refined version of the CCS for ICD-10-PCS is expected to be released in 2020.

Chronic Condition Indicator for ICD-10-CM (beta version)

[Chronic Condition Indicator for ICD-10-CM](#) (beta version) provides a method for categorizing ICD-10-CM diagnosis codes into one of two categories: chronic or not chronic. The tool can also assign ICD-10-CM diagnosis codes into 1 of 18 body system categories. (Updated for codes valid through FY 2020.) A fully refined version of the Chronic Condition Indicator for ICD-10-CM is expected to be released in 2019.

Elixhauser Comorbidity Software for ICD-10-CM (beta version)

Tools for ICD-9-CM

Clinical Classifications Software (CCS) for ICD-9-CM

[Clinical Classifications Software \(CCS\) for ICD-9-CM](#) provides a method for classifying ICD-9-CM diagnoses or procedures into clinically meaningful categories, which can be used for aggregate statistical reporting of a variety of types. (Updated for codes valid through FY 2015.)

Chronic Condition Indicator for ICD-9-CM

[Chronic Condition Indicator \(CCI\) for ICD-9-CM](#) provides users an easy way to categorize ICD-9-CM diagnosis codes into one of two categories: chronic or not chronic. The tool can also assign ICD-9-CM diagnosis codes into 1 of 18 body system categories. (Codes valid through FY 2015.)

Elixhauser Comorbidity Software for ICD-9-CM

[Elixhauser Comorbidity Software for ICD-9-CM](#) assigns variables that identify coexisting conditions on hospital discharge records. (Codes valid through FY 2015.) The software computes an index for in-hospital mortality and an index for readmissions.

Procedure Classes for ICD-9-CM

[Procedure Classes for ICD-9-CM](#) identifies whether a procedure is (a) diagnostic or therapeutic, and (b) minor or major in terms of invasiveness and/or resource use. (Updated for codes valid through FY 2015.)

Utilization Flags for ICD-9-CM

[Utilization Flags for ICD-9-CM](#) combines information from UB-04 revenue codes and ICD-9-CM procedure codes to create flags, or indicators, of utilization. Use of procedures and services such as ICU, CCU, NICU, and specific diagnostic tests and therapies can be assessed with these Utilization Flags. (Updated for codes valid through FY 2015.)

Surgery Flags for ICD-9-CM

[Surgery Flags for ICD-9-CM](#) provides a method for identifying surgical procedures and encounters using

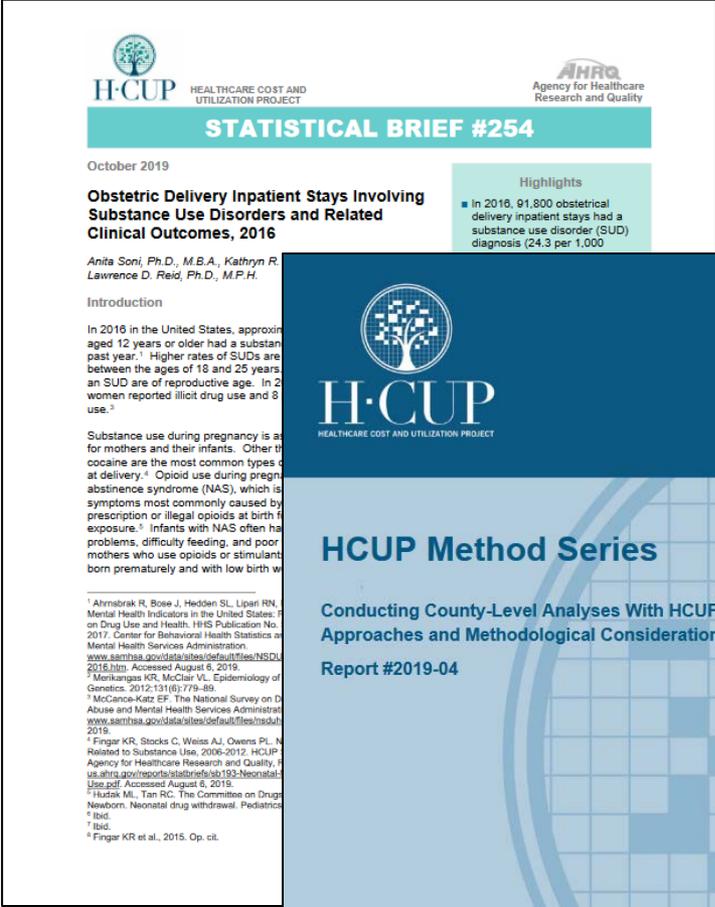
Presentation Objectives Part II



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HCUP Publications

- Statistical Briefs
- Methods Series Reports



 HEALTHCARE COST AND UTILIZATION PROJECT

 Agency for Healthcare Research and Quality

STATISTICAL BRIEF #254

October 2019

Obstetric Delivery Inpatient Stays Involving Substance Use Disorders and Related Clinical Outcomes, 2016

Anita Soni, Ph.D., M.B.A., Kathryn R. Lawrence D. Reid, Ph.D., M.P.H.

Introduction

In 2016 in the United States, approximately 12 years or older had a substance use disorder (SUD) in the past year.¹ Higher rates of SUDs are between the ages of 18 and 25 years an SUD are of reproductive age. In 2016, 2.3 million women reported illicit drug use and 8.5 million women reported SUD use.²

Substance use during pregnancy is a leading cause of adverse outcomes for mothers and their infants. Other than alcohol and tobacco, cocaine and heroin are the most common types of drugs used during pregnancy.³ Opioid use during pregnancy is associated with neonatal abstinence syndrome (NAS), which is symptoms most commonly caused by prescription or illegal opioids at birth. Infants with NAS often have irritability, tremors, and other symptoms. Infants with NAS often have feeding problems, difficulty feeding, and poor growth. Infants with NAS are often born prematurely and with low birth weight.⁴

¹ Ahmstrak R, Bose J, Hedden SL, Lipari RN. Mental Health Indicators in the United States: Focus on Drug Use and Health. HHS Publication No. 2017. Center for Behavioral Health Statistics and Services, U.S. Department of Health and Human Services Administration. www.samhsa.gov/data/sites/default/files/NSDUH2016.htm. Accessed August 6, 2019.

² Monksias KR, McClair VL. Epidemiology of Substance Use Disorders. *Journal of Clinical Pharmacy and Therapeutics*. 2012;37(6):779-89.

³ McCance-Katz EF. The National Survey on Drug Abuse and Mental Health Services Administration. www.samhsa.gov/data/sites/default/files/ncsub2016. Accessed August 6, 2019.

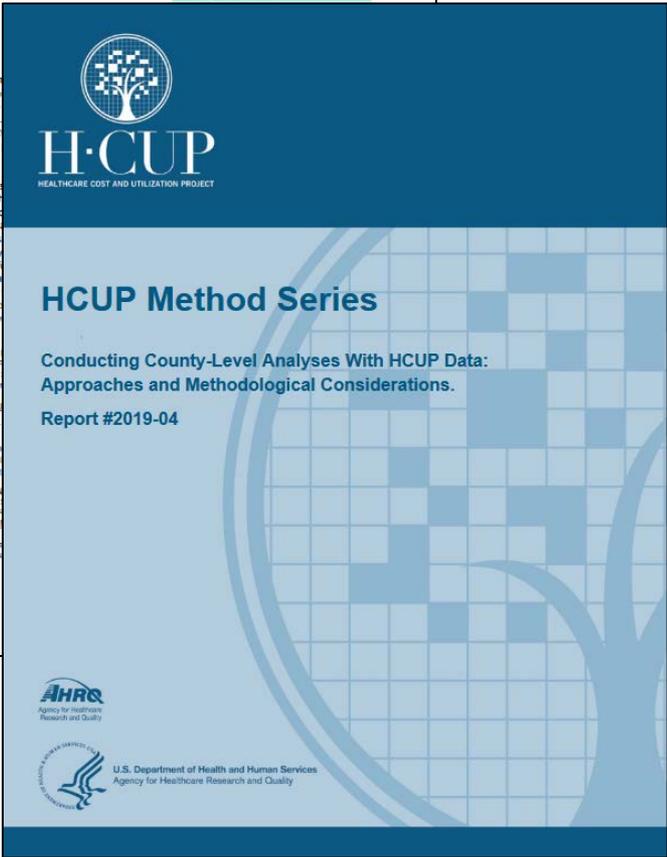
⁴ Fingar KR, Stocks C, Weiss AJ, Owens PL. Neonatal Abstinence Syndrome, 2006-2012. HCUP Agency for Healthcare Research and Quality. www.ahrq.gov/reports/statbriefs/sb193-Neonatal-Abstinence-Syndrome.pdf. Accessed August 6, 2019.

⁵ Hudak ML, Tan RC. The Committee on Drug Abuse. Neonatal drug withdrawal. *Pediatrics*. 2010;125(5):e1400-1405.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ Fingar KR et al. 2015. Op. cit.



 HEALTHCARE COST AND UTILIZATION PROJECT

HCUP Method Series

Conducting County-Level Analyses With HCUP Data: Approaches and Methodological Considerations.

Report #2019-04

 Agency for Healthcare Research and Quality

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Statistical Brief Topics



STATISTICAL BRIEF #252

September 2019

High-Volume Invasive, Therapeutic Ambulatory Surgeries Performed in Hospital-Owned Facilities, 2016

Zeynal Karaca, Ph.D., and Kimberly W. McDermott, Ph.D.

Introduction

A growing proportion of all surgeries at U.S. community hospitals are performed in the ambulatory setting,¹ with the aggregate share of hospital outpatient services revenue increasing from 30 percent in 1995 to 48 percent in 2016.² The shift to the outpatient setting has been particularly pronounced for certain surgeries, including cataract surgery³ and gynecologic procedures such as hysterectomies.⁴

Ambulatory surgery is more commonly performed in the eye of certain body systems. In 2014, for example, the majority of eye; ear, nose, mouth, and throat; male genital; endocrine; and skin surgeries were conducted in the outpatient setting.⁵ Patient characteristics, such as type of insurance coverage, may also play an important role in determining whether a procedure will be performed in the outpatient setting.⁶

This Healthcare Cost and Utilization Project (HCUP) Statistical Brief presents statistics on the 20 most common major ambulatory surgeries performed in hospital-owned facilities using the 2016 Nationwide Ambulatory Surgery Sample (NASS). The distribution of these surgeries by select patient and hospital characteristics is presented. Differences greater than 10 percent between estimates are noted in the text.

¹ American Hospital Association. Utilization and Volume. In: *Trend Watch Chartbook 2018, Trends Affecting Hospitals and Health Systems*; Chapter 3. www.aha.org/system/files/2018-07/2018-aha-chartbook.pdf. Accessed July 11, 2019.

² American Hospital Association. Utilization and Volume. In: *Trend Watch Chartbook 2018, Trends Affecting Hospitals and Health Systems*; Chapter 4. www.aha.org/system/files/2018-07/2018-aha-chartbook.pdf. Accessed July 24, 2019.

³ Stagg BC, Talwar N, Mattox C, Lee PP, Stein JD. Trends in use of ambulatory surgery centers for cataract surgery in the United States, 2001–2014. *JAMA Ophthalmology*. 2018;136(1):53–60.

⁴ Doff KM, Duszyszyn SB, Robinson W. Trends in inpatient and outpatient hysterectomy and oophorectomy rates among commercially insured women in the United States, 2000–2014. *JAMA Surgery*. 2016;151(9):876–7.

⁵ Steiner CA, Karaca Z, Moore BJ, Imshaug MC, Plickens G. Surgeries in Hospital-Based Ambulatory Surgery and Hospital Inpatient Settings, 2014. HCUP Statistical Brief #222 Research and Quality, Rockville, MD. <https://hcup-us.ahrq.gov/reports/statbriefs/sb222-Amb>. Accessed July 11, 2019.

⁶ Case C, Johantgen M, Steiner C. Outpatient mastectomy: clinical, payer, and geographic in 2001:36(5):869–84.



STATISTICAL BRIEF #254

October 2019

Obstetric Delivery Inpatient Stays Involving Substance Use Disorders and Related Clinical Outcomes, 2016

Anita Soni, Ph.D., M.B.A., Kathryn R. Fingar, Ph.D., M.P.H., and Lawrence D. Reid, Ph.D., M.P.H.

Introduction

In 2016 in the United States, approximately 20.1 million people aged 12 years or older had a substance use disorder (SUD) in the past year.¹ Higher rates of SUDs are reported by individuals between the ages of 18 and 25 years.² Thus, many women with an SUD are of reproductive age. In 2016, 6 percent of pregnant women reported illicit drug use and 8 percent reported alcohol use.³

Substance use during pregnancy is associated with specific risks for mothers and their infants. Other than cannabis, opioids and cocaine are the most common types of substance use diagnosed at delivery.⁴ Opioid use during pregnancy may lead to neonatal abstinence syndrome (NAS), which is a constellation of signs and symptoms most commonly caused by abrupt cessation of prescription or illegal opioids at birth following repeated prenatal exposure.⁵ Infants with NAS often have fussiness, breathing problems, difficulty feeding, and poor weight gain.⁶ Babies born to mothers who use opioids or stimulants during pregnancy are often born prematurely and with low birth weights.^{7,8} The long-term

¹ Ahrensbrak R, Bose J, Hedden SL, Lipari RN, Park-Lee E. Key Substance Use and Mental Health Indicators in the United States: Results From the 2016 National Survey on Drug Use and Health. *HHS Publication No. SMA 17-5044, NSDUH Series H-52-2017*. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2016-NSDUH-FRR1-2018.html. Accessed August 6, 2019.

² Merikangas KR, McClair VL. Epidemiology of substance use disorders. *Human Genetics*. 2012;131(6):775–88.

³ McCance-Katz EF. The National Survey on Drug Use and Health: 2017. Substance Abuse and Mental Health Services Administration. www.samhsa.gov/data/sites/default/files/nduh-ppt-09-2018.pdf. Accessed August 6, 2019.

⁴ Fingar KR, Stocks C, Weiss AJ, Owens PL. Neonatal and Maternal Hospital Stays Related to Substance Use, 2006–2012. HCUP Statistical Brief #193. July 2015. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/reports/statbriefs/sb193-Neonatal-Maternal-Hospitalizations-Substance-Use.pdf. Accessed August 6, 2019.

⁵ Hudak ML, Tan RC. The Committee on Drugs and the Committee on Fetus and Newborn. Neonatal drug withdrawal. *Pediatrics*. 2012;129:e640.

⁶ Ibid.

⁷ Ibid.

⁸ Fingar KR et al., 2015. Op. cit.

Highlights

- In 2016, 91,800 obstetrical delivery inpatient stays had a substance use disorder (SUD) diagnosis (24.3 per 1,000 deliveries).
- SUD-related deliveries involving opioids (7.5 per 1,000 deliveries) were more common than those involving cocaine (1.5) and other stimulants (2.8).
- Compared with opioid-related deliveries, deliveries with a diagnosis of cocaine use or other stimulants use had higher rates of: preterm delivery (34.3 and 295.9 vs. 229.1 per 1,000 delivery stays), severe pre-eclampsia/eclampsia (53.7 and 80.1 vs. 38.4), placental abruption (69.3 and 60.2 vs. 36.8), and obstetric hemorrhage/placenta accreta (52.4 and 53.6 vs. 42.4). These rates all were higher than those for deliveries with no SUD diagnosis.
- The rate of SUD-related deliveries was higher for patients from rural than from urban areas (35.7 vs. 22.5 per 1,000 stays).
- Among SUD-related deliveries, some adverse clinical outcomes were more common for patients residing in urban areas. For instance, among SUD-related deliveries, severe pre-eclampsia/eclampsia was more common for urban compared with rural residents (44.3 vs. 31.8 per 1,000 delivery stays).
- In contrast, rates of placental abruption were higher for rural compared with urban residents, and the difference was greatest among opioid-related delivery stays (41.6 vs. 35.7).



STATISTICAL BRIEF #253

October 2019

Hospital Stays and Emergency Visits Involving Influenza,2014–2016

John D. M.P.H., Lan Liang, Ph.D., and R.N.

Influenza, like the flu, is a contagious respiratory viral disease that can cause mild to severe symptoms and at times hospitalization. Influenza season generally peaks between January and March, but the timing and severity of the flu and the number of regions and populations may vary from year to year. Each year influenza contributes to tens of thousands of hospital stays and emergency department (ED) visits, some of which may be prevented by vaccination.¹

The Centers for Disease Control and Prevention (CDC) estimates that each year 6 months of age or older receive a flu shot, but the ideal target population should be administered the vaccine most flu seasons start.² Between the 2014–2017 flu seasons, vaccination rates rose from 59.0 percent among children aged 6 months to 4 years to 40.5 to 43.3 percent among adults aged 65 and older.³

Disparities in vaccination rates persist for different populations. In 2015, the percentage of individuals who received a flu shot in the past year was lower for younger adults (30.9 percent) than for those aged 45–64 (38.1 percent) and 65 years and older (69.1 percent); for males (39.2 vs. 48.8 percent),

¹ Centers for Disease Control and Prevention. The Flu Season. Page last reviewed July 1, 2019. <http://www.cdc.gov/flu/season/flu-season.htm>. Accessed July 1, 2019.

² Elixhauser A. Hospital Stays for Influenza, 2004. HCUP Statistical Brief #208. Agency for Healthcare Research and Quality, Rockville, MD. <https://statbriefs.ahrq.gov/statbriefs/sb16.pdf>. Accessed July 1, 2019.

³ Centers for Disease Control and Prevention. Emergency Department Visits and Hospital Inpatient Stays for Influenza, 2008–2009. HCUP Statistical Brief #197. Agency for Healthcare Research and Quality, Rockville, MD. <https://statbriefs.ahrq.gov/statbriefs/sb147.pdf>. Accessed July 1, 2019.

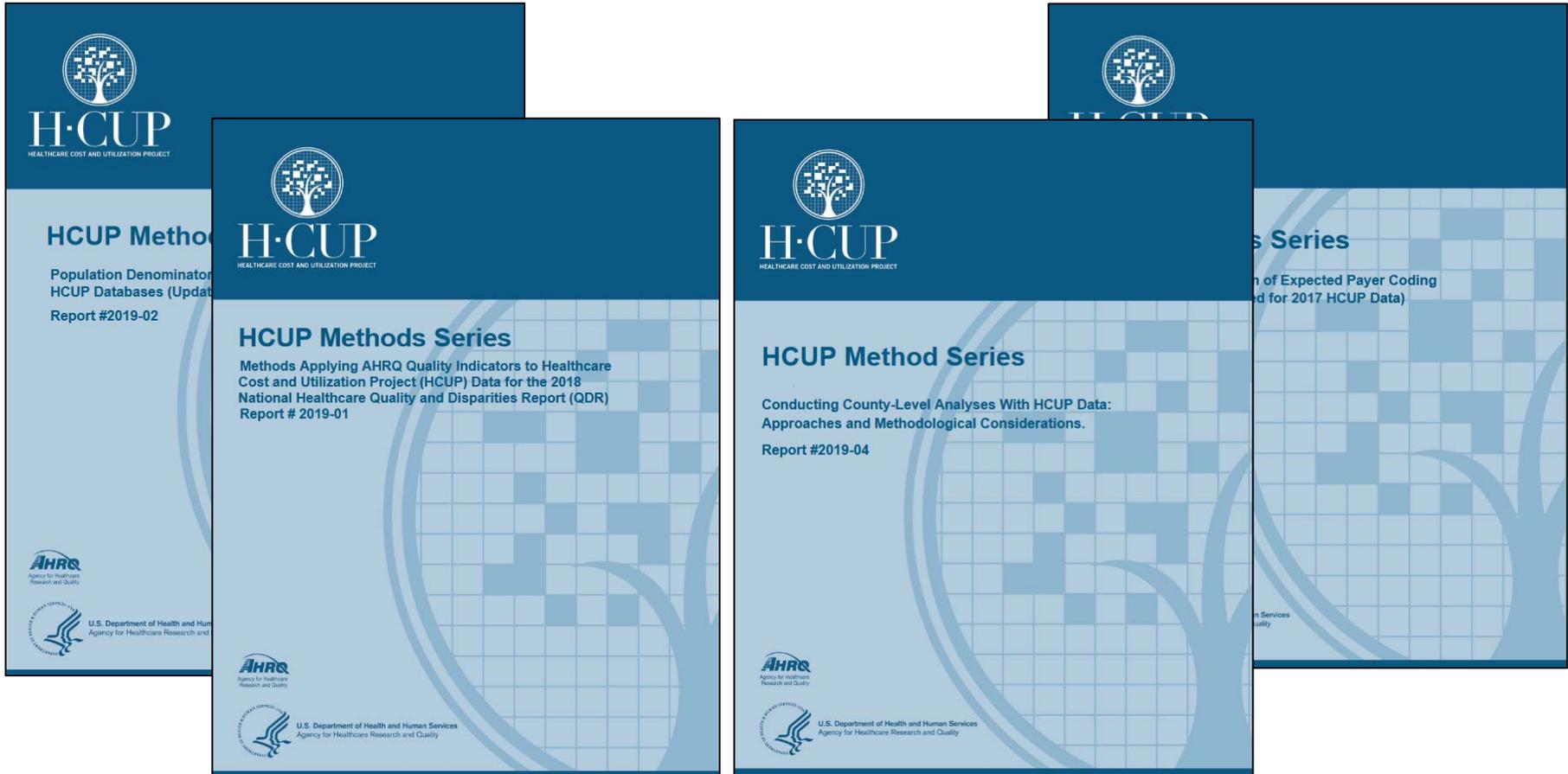
⁴ Centers for Disease Control and Prevention. Preventive Steps. Page last reviewed July 1, 2019. <http://www.cdc.gov/flu/prevent/prevention.htm>. Accessed July 1, 2019.

⁵ Centers for Disease Control and Prevention. Flu Vaccination Coverage, United States, 2008–2017. <https://www.cdc.gov/flu/coverage-161/estimates.htm#key-findings>. Accessed August 6, 2019.

Highlights

- Over a 10-year period, the 2014–2015 flu season appeared to be more severe than other flu seasons, resulting in the most inpatient stays (223,300) and deaths (3.4 percent of stays).
- The 2009–2010 and 2014–2015 flu seasons resulted in more treat-and-release emergency department (ED) visits than did other seasons (over 800,000).
- During four high-volume flu seasons examined in more detail, over 40 percent of influenza-related ED visits had Medicaid as the expected payer.
- Rates of influenza-related stays and ED visits were highest for patients from low-income areas. This disparity was greatest for young children: for children aged 0–4 years, the rate of influenza-related ED visits in 2015–2016 was 220 percent higher in the lowest than in the highest income areas.
- Females had higher rates of influenza-related stays and ED visits than did males. Yet, hospital stays for males were costlier and more likely to result in in-hospital death (2015–2016: mean cost, \$17,300 vs. \$19,400; in-hospital mortality, 3.9 vs. 3.2 percent).
- In 2015–2016, the in-hospital mortality rate for stays involving influenza was as high as 6.7 percent among patients with cancer and 6.4 percent among patients with heart or cerebrovascular disease. Patients with these conditions without influenza had in-hospital mortality rates of 5.3 percent and 4.0 percent, respectively.

HCUP Methods Reports



Methodological information on the HCUP databases and software tools

HCUP Findings-At-A-Glance



- Provide focused look at different topics across a broad range of health policy issues relate to hospital use and costs
- Examples of current report topics:
 - ▶ Wildfires in California: Emergency Department Visits, 2018
 - ▶ Suicidal Ideation, Suicide Attempt, or Self-Inflicted Harm: Pediatric Emergency Department Visits, 2010-2014 and 2016
 - ▶ Neonatal Abstinence Syndrome Births: Trends in the United States, 2008-2019



Reports

Healthcare Cost and Utilization Project (HCUP) reports include new findings, publications, research notes based on Healthcare Research and Quality (AHRQ) through a Federal-State-Industry partnership.

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Favorites

HCUP Statistical Briefs

Statistical Briefs are simple, descriptive reports on a variety of specific healthcare related issues.

- [Stat Briefs in chronological order](#)
- [Stat Briefs by topic](#)

HCUP Publications

These links provide access to lists of publications, resources, and descriptions of research activities that are based on HCUP data, software products, and tools.

- [Search for HCUP publications](#)
- [Research Spotlights](#) on recent peer-reviewed journal articles
- [Review comprehensive list of AHRQ publications](#)

HCUP Findings-At-A-Glance

NEW [HCUP Findings-At-A-Glance](#) provides snapshots covering a broad range of health policy issues related to hospital use and costs.

HCUP Infographics

[Infographics](#) provide a visual representation of Statistical Brief data.

Information About Using HCUP Data

HCUP Methods Series

Methods Series reports feature a broad array of methodological information on the HCUP databases and software tools.

- [Methods Series in chronological order](#)
- [Methods Series by topic](#)

ICD-10-CM/PCS Resources

[ICD-10-CM/PCS Resources](#) summarize key issues identified by researchers when analyzing health services outcomes using HCUP databases that include International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) coding.

- [General Information about ICD-10-CM/PCS](#)
- [HCUP Databases and ICD-10-CM/PCS Related Data Elements](#)
- [Doing Analysis with ICD-10-CM/PCS Data](#)

HCUP Database Reports

Each HCUP Database has a library of reports specific to the design and content of the HCUP database.

- [NIS Related Reports](#)
- [KID Related Reports](#)
- [NASS Related Reports](#)
- [NEDS Related Reports](#)
- [NRD Related Reports](#)
- [SID Related Reports](#)
- [SASD Related Reports](#)
- [SEDD Related Reports](#)

Additional Topics and Archives

Topical Reports

- [Features of Prescription Drug Monitoring Programs and Their Relationship to Opioid-Related Hospital Utilization: State Trends, 2005-2013](#) (PDF file, 340 KB)
- [Inpatient Stays Involving Malnutrition: National Estimates, 2016](#) (PDF file, 628 KB)
- [Clostridium Difficile Hospitalizations: National and Regional Trends, 2011-2015](#) (PDF file, 716 KB)
- [Clostridium Difficile Hospitalizations: National and Regional Trends, 2010-2014](#) (PDF file, 364 KB)

Topical Resources

- Approaches to using [race-ethnicity data for reducing disparities](#)
- Utilization and spending for [mental and substance use disorders](#)

Reports Archive

- [HCUP - Project Overview](#) (PDF file, 3.6 MB)
- [HCUP Projections](#) (2012-2016)
- [HCUP Facts and Figures](#) (2005-2009)
- [The Value of Hospital Discharge Data](#) (PDF file, 664 KB) (Posted May 2005)
- [HCUP Fact Books](#) (1997-2004)
- [HCUP Highlights](#) (2001-2003)
- [HCUP National Statistics Archive](#) (1992-1996)

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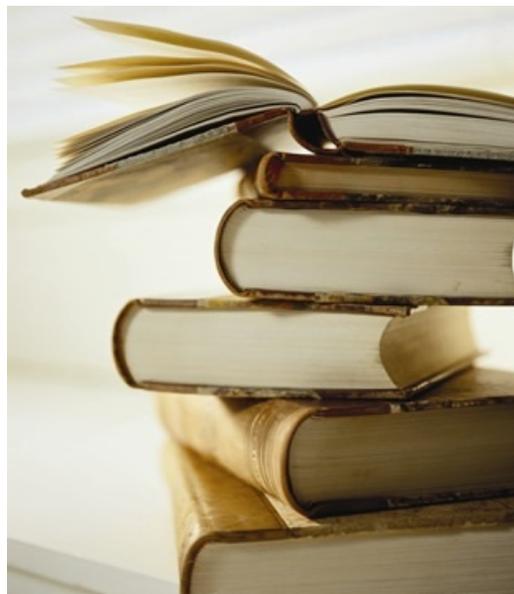
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A Monthly Review of Surgical Science Since 1885

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MMWR
Morbidity and Mortality Weekly Report

National Healthcare Disparities Report
www.qualitytools.ahrq.gov/disparitiesreport

Presentation Objectives Part II



- **HCUPnet Overview**
- **HCUP Fast Stats**
- **Add Value to Your Databases with HCUP Tools & Software**
- **Publications and Publication Search**
- **How to Access HCUP Resources**

HCUP User Support Website



- Find detailed information on HCUP databases, tools, and products
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- Find comprehensive list of HCUP-related publications, database reports, and fact books
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Technical Assistance Team

- Responds to inquiries about HCUP data, products, and tools
- Collects user feedback and suggestions for improvement

E-mail: hcup@ahrq.gov



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Questions/Comments?

Time for Questions and/or
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