



U.S. Department of Health and Human Services

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Agency for Healthcare Research and Quality

Advancing Excellence in Health Care • [www.ahrq.gov](http://www.ahrq.gov)

# The Healthcare Cost and Utilization Project (HCUP)

## Overview of the HCUP Databases

Agency for Healthcare Research and Quality  
Webinar ♦ August 31, 2016

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

## Costs of care

The five most expensive conditions—septicemia; osteoarthritis; newborn infants; complications of device, implant or graft; and acute myocardial infarction—accounted for approximately one-fifth of the total aggregate costs for hospitalizations. (2011 NIS, Stat Brief #160)

## Access to care

Adult Americans in low-income areas visit EDs at rates 90 percent higher compared to those in the highest income areas. (2008 NEDS, Stat Brief #100)

## Quality of care

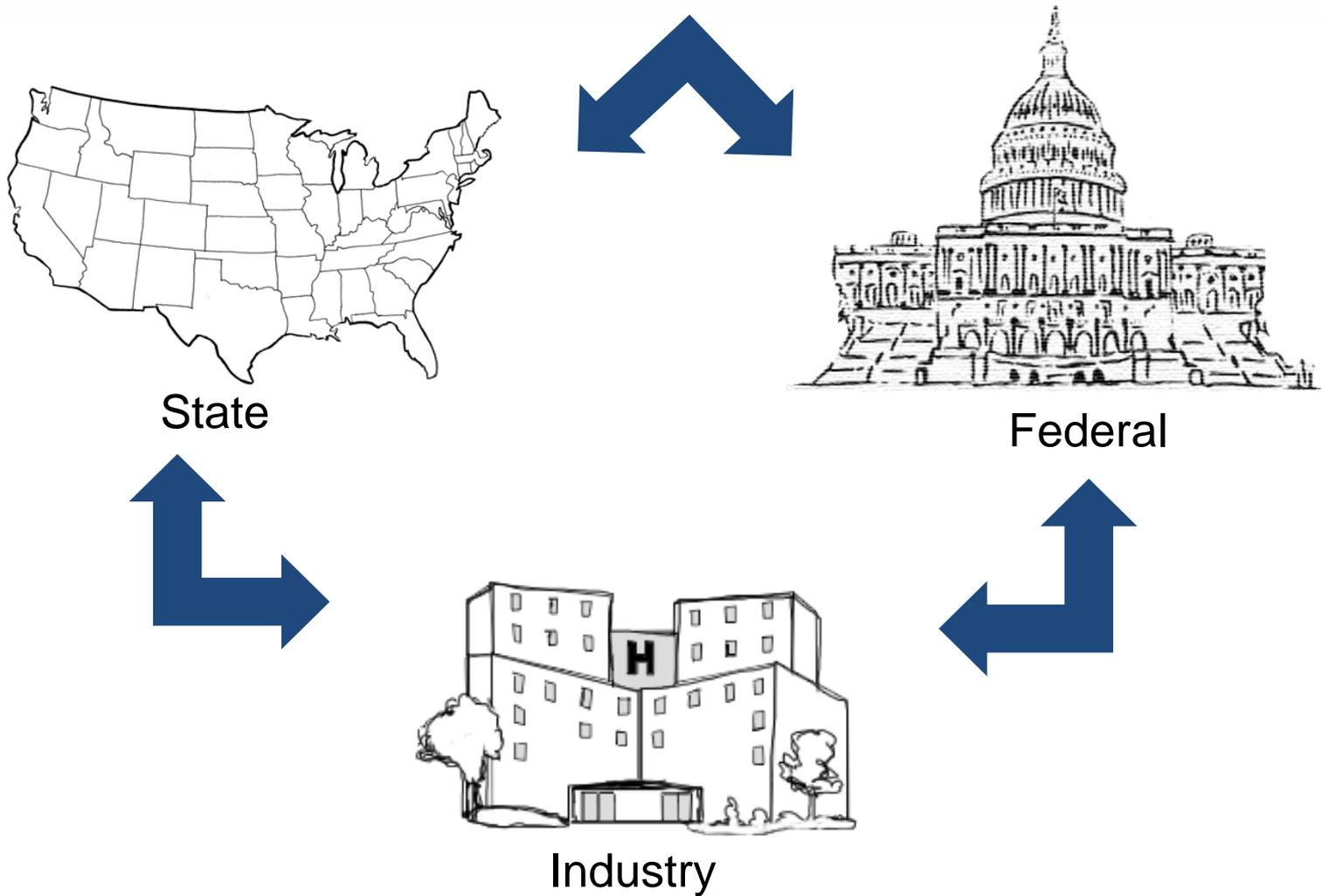
Observed inpatient mortality rates among adults declined between 2002 and 2012 for four high-volume conditions: 45 percent decrease for pneumonia, 41 percent decrease for acute myocardial infarction (AMI), 29 percent decrease for congestive heart failure (CHF), and 27 percent decrease for stroke. (NIS/SID)

## Readmissions

Readmissions among all patients covered by Medicare declined from 18.1 per 100 admissions in 2011 to 17.3 per 100 in 2013, after being essentially unchanged from 2009 to 2011. In contrast, the readmission rate among patients who were covered by private insurance or Medicaid did not change appreciably from 2011 to 2013. (NRD/SID)

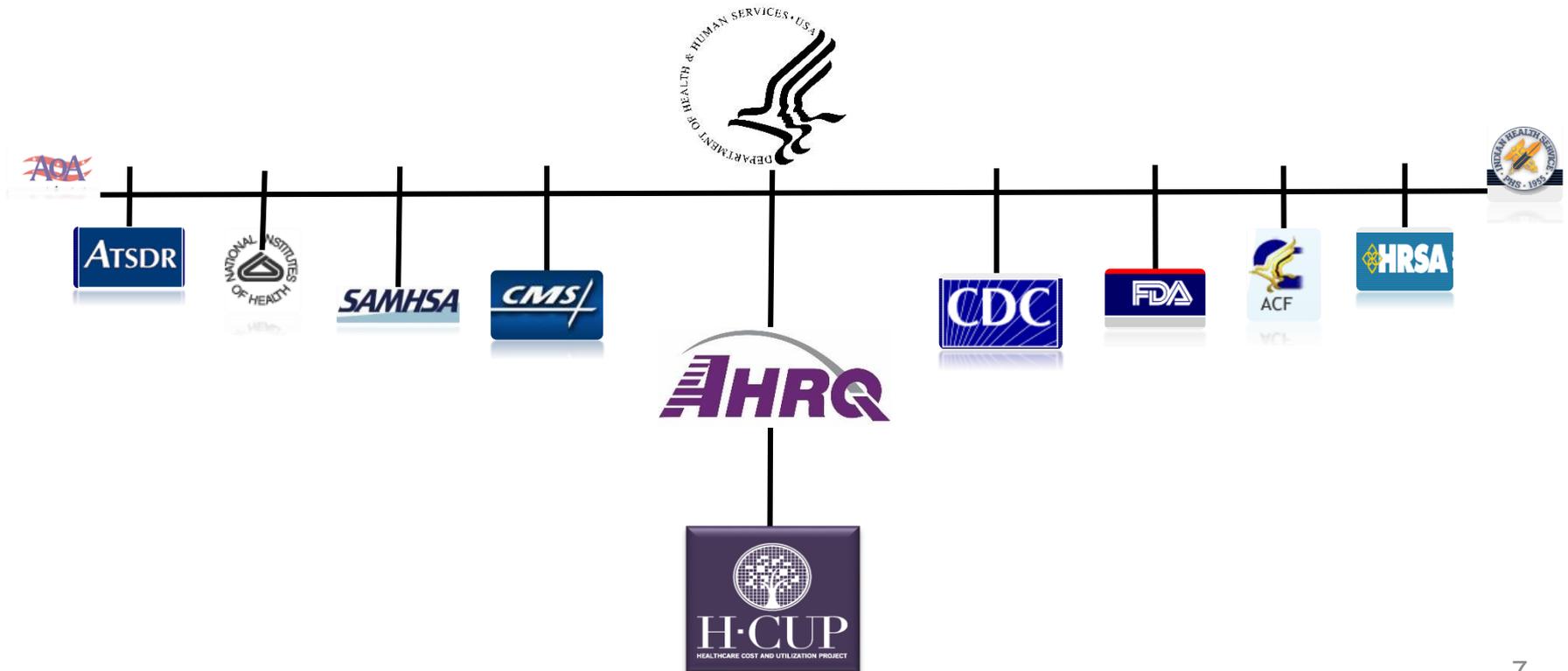
<b>Patient Safety</b>	In 2011, the four most frequent causes of adverse drug events (ADEs) originating in the hospital were steroids, antibiotics, opiates and narcotics, and anticoagulants (SID)
<b>Geographic variation</b>	ED visits were higher in counties with fewer primary care MDs per capita. (2008 SEDD, Variation in emergency department admission rates across the United States. <i>Med Care Res Rev.</i> 2013 Apr;70(2):218-31.)
<b>Trends in practice</b>	From 2005 to 2013, the rate of bilateral outpatient mastectomies increased more than fivefold and the inpatient rate more than doubled. By 2013, nearly half of all mastectomies were performed outpatient. (SID/SASD)
<b>Preventable Stays</b>	The rate of potentially preventable adult inpatient (IP) stays decreased 19 percent between 2005 and 2012, from 1,941 to 1,582 stays per 100,000 population—more than twice the decrease in rate of all adult IP stays. (NIS/SID/NEDS)

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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.





# Current HCUP Data Partners



**Alaska** State Hospital and Nursing Home Association

**Arizona** Department of Health Services

**Arkansas** Department of Health

**California** Office of Statewide Health Planning & Development

**Colorado** Hospital Association

**Connecticut** Hospital Association

**District of Columbia** Hospital Association

**Florida** Agency for Health Care Administration

**Georgia** Hospital Association

**Hawaii** Health Information Corporation

**Illinois** Department of Public Health

**Indiana** Hospital Association

**Iowa** Hospital Association



# Current HCUP Data Partners



**Kansas** Hospital Association

**Kentucky** Cabinet for Health and Family Services

**Louisiana** Department of Health and Hospitals

**Maine** Health Data Organization

**Maryland** Health Services Cost Review Commission

**Massachusetts** Center for Health Information and Analysis

**Michigan** Health & Hospital Association

**Minnesota** Hospital Association

**Mississippi** Department of Health

**Missouri** Hospital Industry Data Institute

**Montana** MHA – An Association of Montana Health Care Providers

**Nebraska** Hospital Association



# Current HCUP Data Partners



- 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** Minnesota Hospital Association
- Ohio** Hospital Association
- Oklahoma** State Department of Health
- Oregon** Association of Hospitals and Health Systems,
- Oregon** Office of Health Analytics
- Pennsylvania** Health Care Cost Containment Council



# Current HCUP Data Partners



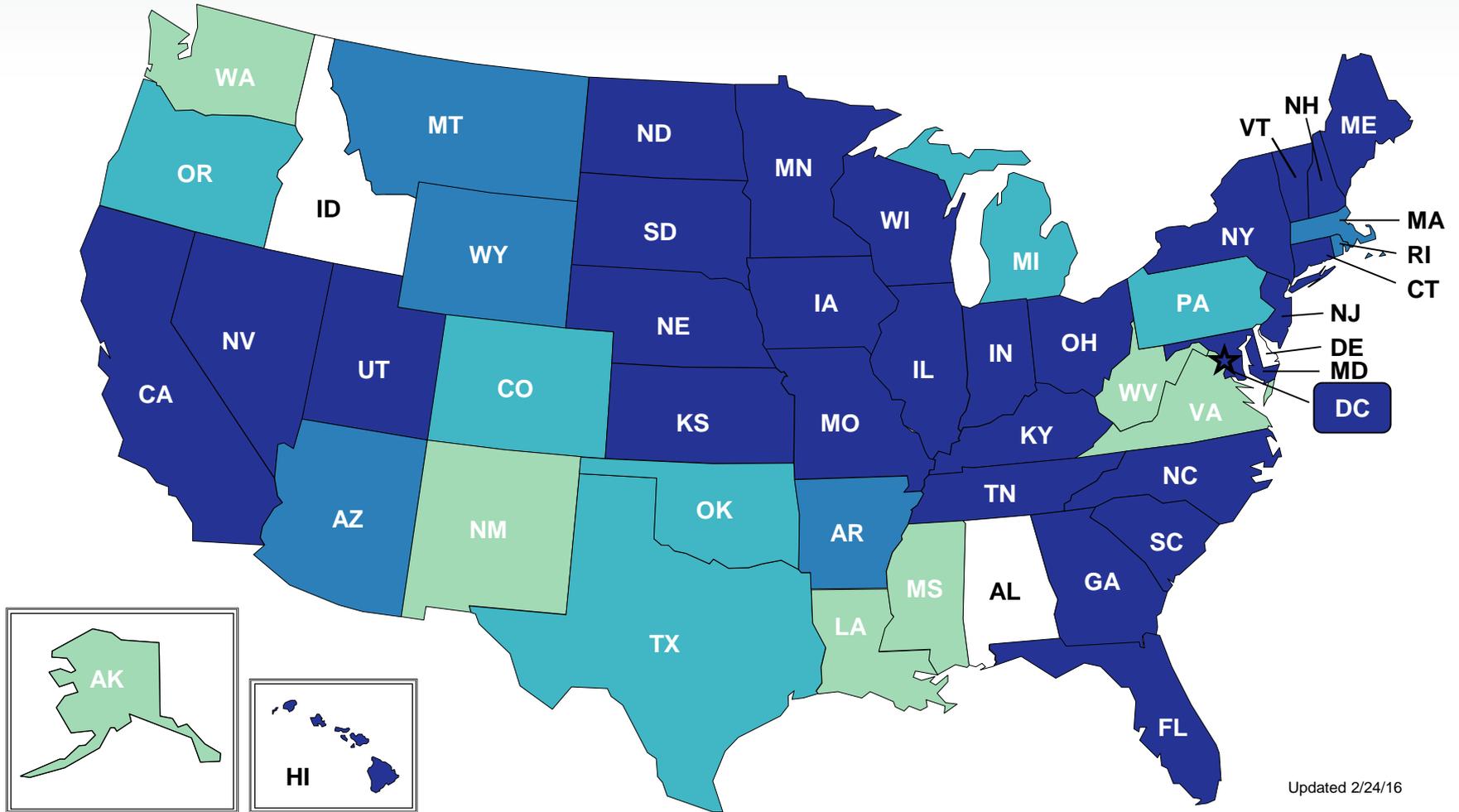
- Rhode Island** Department of Health
- South Carolina** Revenue and Fiscals Affairs Office
- South Dakota** Association of Health Care Organizations
- Tennessee** Hospital Association
- Texas** Department of State Health Services
- Utah** Department of Health
- Vermont** Association of Hospitals and Health Systems
- Virginia** Health Information
- Washington** State Department of Health
- West Virginia** Health Care Authority
- Wisconsin** Department of Health Services
- Wyoming** Hospital Association







# HCUP Participation by Data Type



Updated 2/24/16

Partners Providing:	Inpatient Data	Inpatient and Ambulatory Surgery & Services Data	Inpatient and Emergency Department Data	Inpatient, Ambulatory Surgery & Services, and Emergency Department Data	Non-participating

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# The Foundation of HCUP Data is Hospital Billing Data



H-CUP  
HEALTHCARE COST AND UTILIZATION PROJECT

UB-04  
CMS 1500

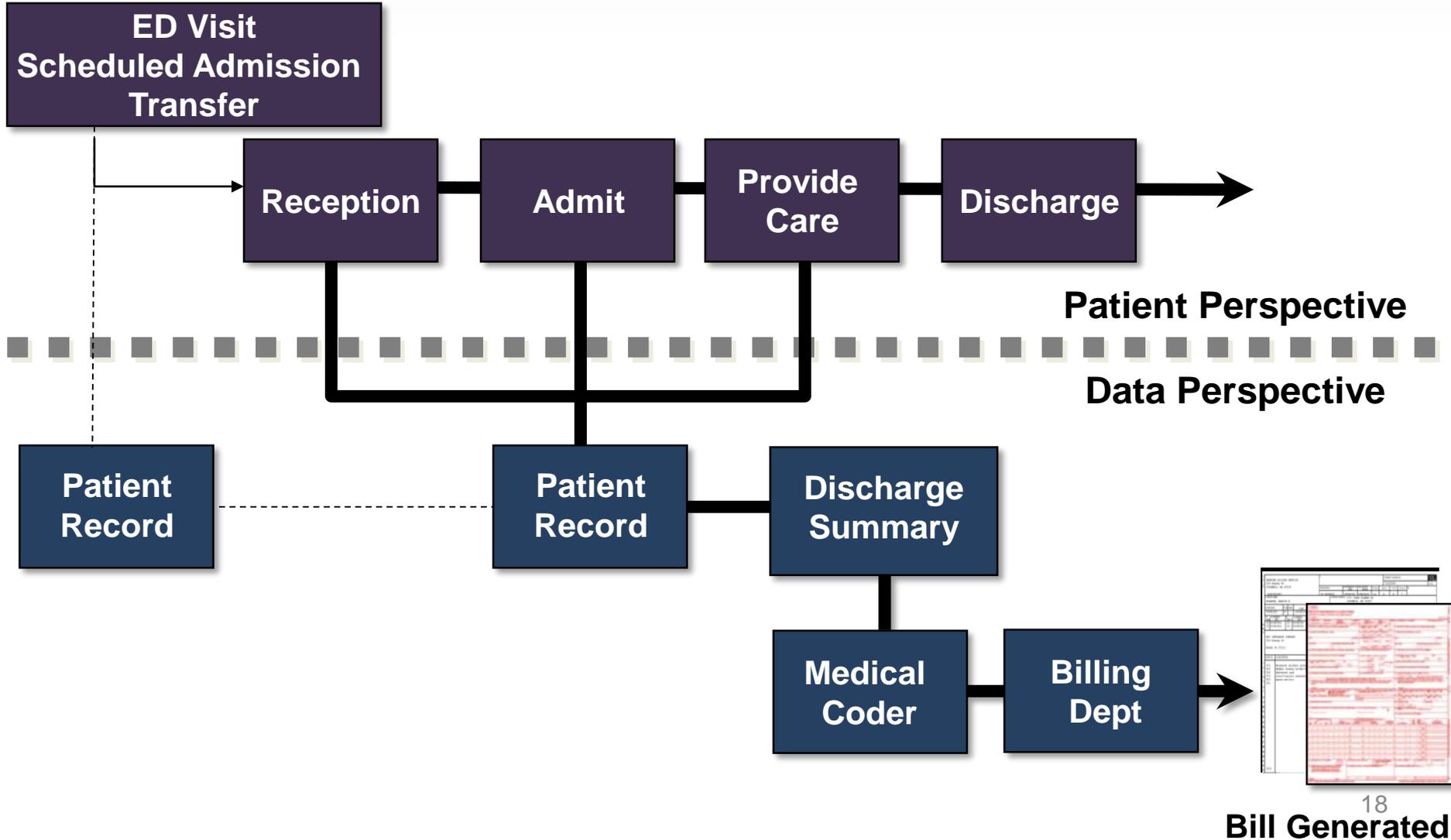
Demographic Data

Diagnoses  
Procedures  
Charges

1500  
HEALTH INSURANCE CLAIM FORM  
APPROVED BY NATIONAL UNIFORM CLAIM COMMITTEE 08/08

1. MEDICARE MEDICAID TRICARE CHAMPVA GROUP HEALTH PLAN  
2. PATIENT'S NAME (Last Name, First Name, Middle Initial) Smith, Bob A.  
3. PATIENT'S BIRTH DATE 12 18 36 M  
4. PATIENT'S ADDRESS (Incl. Street) 123 Paradise Road  
5. CITY Seattle WA  
6. PATIENT RELATIONSHIP TO PATIENT  
7. EMPLOYER'S NAME OR SCHOOL NAME  
8. INSURANCE PLAN NAME OR PROGRAM NAME  
9. OTHER INSURED'S NAME (Last Name, First Name, Middle Initial)  
10. PATIENT'S CONDITION  
11. NAME OF REFERRING PROVIDER OR OTHER SOURCE T. Jones  
12. DATE OF CURRENT REFERENCE (Unless other system or pregnancy/LMP)  
13. PATIENT HAS HAD SAME OR GIVE FIRST DATE  
14. NAME OF REFERRING PROVIDER OR OTHER SOURCE T. Jones  
15. NPI 123456789  
16. DIAGNOSIS OR NATURE OF ILLNESS OR INJURY (Include ICD-9-CM 4 to 6 to form 24E by Line)  
17. V68 61  
18. DATES OF SERVICE FROM TO  
19. PROCEDURES, SERVICES, OR SUPPLIES (Include ICD-9-CM 8 to 10 to form 24E by Line)  
20. TOTAL CHARGE 115 00  
21. AMOUNT PAID 115 00  
22. BALANCE DUE 00 00  
23. BILLING PROVIDER INFO & PAYEE (555) 555-5555  
Office Name 123 Main St, Seattle, WA 12345-2345  
Provider Name P.O. Box 12345, Seattle, WA 12345-2345  
APPROVED OMB-0938-0999 FORM CMS-1500 (08/05)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PATIENT NAME										PATIENT ADDRESS										ESTABLISHMENT CONTACT PERIOD										TOTALS																																																																					
40 REV. CD.										41 DESCRIPTION										42 HCPCS / ICD-9 / ICD-10 CODE										43 SER. DATE										44 SER. UNITS										45 TOTAL CHARGES										46 NON-COVERED CHARGES																																							
60 PATIENT NAME										61 PATIENT ADDRESS										62 ESTABLISHMENT CONTACT PERIOD										63 TOTALS																																																																					
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84 REV. CD.										85 DESCRIPTION										86 HCPCS / ICD-9 / ICD-10 CODE										87 SER. DATE										88 SER. UNITS										89 TOTAL CHARGES										90 NON-COVERED CHARGES																																							





# The Making of HCUP Data



Patient enters hospital



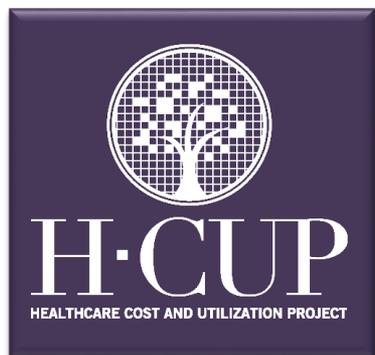
Billing record created



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

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	726	3	46	211	4	970
748	81	533	6	98	83	8	40
749	51	418	4	69	496	1	613
750	16	574	2	77	571	1	905
751	2	326	4	44	638	2	958
752	63	521	4	18	217	8	721
753	38	867	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	63	386	1	94	838	5	613
759	17	766	6	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

States store data in varying formats

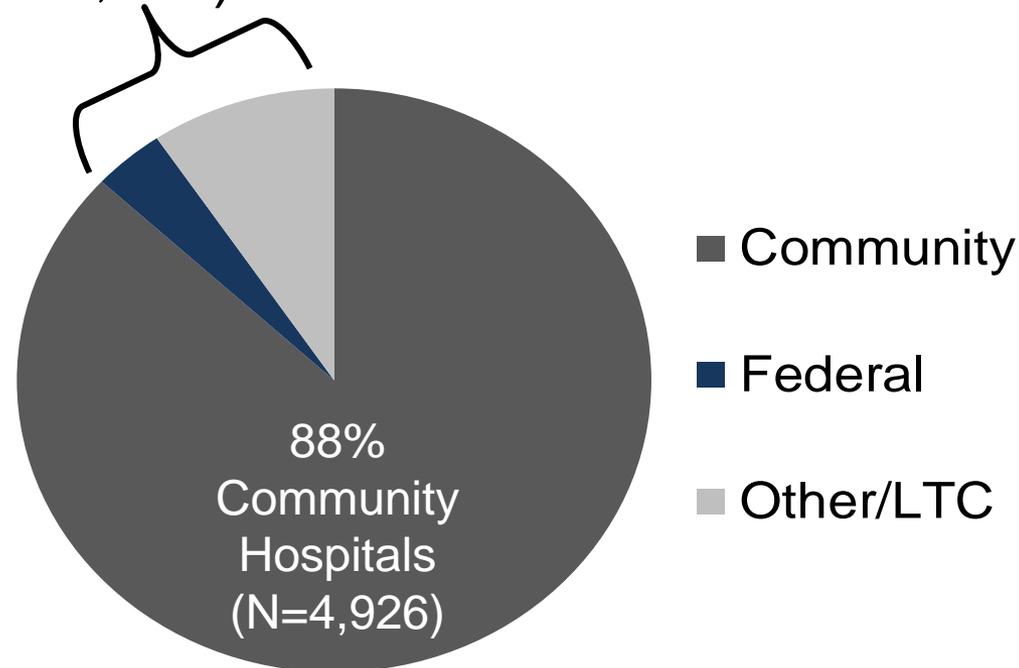


AHRQ standardizes data to create uniform HCUP databases

- State data is mapped to a standardized HCUP format which allows for consistent data elements and values for comparison across States
- Additional data elements are added:
  - ▶ Value-added variables – injury indicators, chronic condition indicators, procedure class
  - ▶ Hospital characteristics – teaching status, ownership/control, bed size
  - ▶ Diagnostic related groups and severity measures –
    - AHRQ’s Clinical Classifications Software (CCS)
    - 3M’s All Patient Refined DRGs (APR-DRGs)
- Quality checks are performed

- 88% of hospitals in the U.S. are community hospitals

12% Non-community hospitals (Federal (DOD/VA/IHS), psychiatric, non-federal long term care, etc.)



Source: American Hospital Association (AHA) Annual Survey, 2014

<http://www.aha.org/research/rc/stat-studies/fast-facts.shtml>

# What Are Community Hospitals?

## American Hospital Association Definition:

Non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of other institutions (e.g., prisons)

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

# What Are Community Hospitals?

- HCUP generally does not receive data from non-community hospitals.
- However, if a patient is treated in a community hospital, their information is included.

Most Frequent Principal Diagnosis	Number of Discharges (thousands)
1. Newborn	3,765
2. Septicemia	1,297
3. Osteoarthritis	1,023
4. Pneumonia	961
5. Congestive Heart Failure	882
6. Mood disorders	836
7. Cardiac dysrhythmias	710

# HCUP has Seven Types of Databases

- Three State-Specific Databases



State Inpatient Databases  
**(SID)**

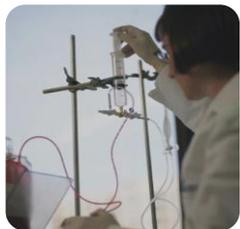


State Ambulatory Surgery & Services Databases  
**(SASD)**



State Emergency Department Databases  
**(SEDD)**

- Four National (Nationwide) Databases



National Inpatient Sample  
**(NIS)**



Nationwide Emergency Department Sample  
**(NEDS)**



Kids' Inpatient Database  
**(KID)**



Nationwide Readmissions Database  
**(NRD)**

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State Inpatient  
Databases  
(SID)

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

State Ambulatory  
Surgery & Services Databases  
(SASD)

Ambulatory surgery data (hospital based and some freestanding) 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 (age, sex)
- Diagnoses & procedures
- Expected payer
- Length of stay
- Patient disposition
- Admission type
- Point of origin
- Admission month
- Weekend admission



# Some Data Elements Vary by State

- Race/Ethnicity
- Patient county
- Patient ZIP Code
- Severity of illness
- Birthweight
- Procedure date (days from admission)
- Health plan details
- Additional expected payers
- Detailed charges
- Patient identifiers encrypted
- 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 State Files vs. HCUP State Files

- HCUP State Files vs. Data Files received directly from the State Partners

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



# States Releasing Databases through HCUP Central Distributor



HEALTHCARE COST AND UTILIZATION PROJECT

- Arizona
- Arkansas
- California
- Colorado
- District of Columbia
- Florida
- Georgia
- Hawaii
- Iowa
- Kentucky
- Maine
- Maryland
- Massachusetts
- Michigan
- 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**

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# HCUP Nationwide Databases



National (Nationwide)  
Inpatient Sample

(NIS)

Inpatient discharge data for a **sample of discharges from all hospitals** in SID

Kids' Inpatient  
Database

(KID)

Pediatric inpatient hospital discharge data from a **sample of pediatric discharges** in SID

Nationwide Emergency  
Department Sample

(NEDS)

Emergency department data (treat and release & admitted) from a **sample of hospitals** in SID and SEDD

Nationwide  
Readmissions Database

(NRD)

Inpatient discharge data from **all hospitals for SID with verified patient linkage numbers**



# NIS is a Stratified Sample of Discharges from the SID



H·CUP  
HEALTHCARE COST AND UTILIZATION PROJECT

## State Inpatient Databases (SID)

~ 4,400 hospitals  
~ 33 M records

### Strata

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

## 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)

N = ~ 4,400 hospitals  
~ 7 M records



# KID is a Stratified Sample of Discharges from the SID

## State Inpatient Databases (SID)

~ 4,380 hospitals  
~ 34.3M 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)

N = ~ 4K hospitals  
~ 3M records

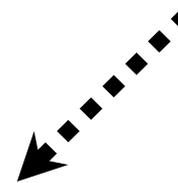
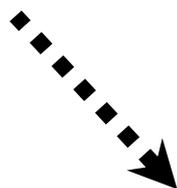




Treat-and-Release ED Visits



Admitted ED Visits



~ 84% of ED visits  
are treat-and-  
release

~ 16% of ED visits  
result in a  
hospital stay



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



**H-CUP**  
HEALTHCARE COST AND UTILIZATION PROJECT

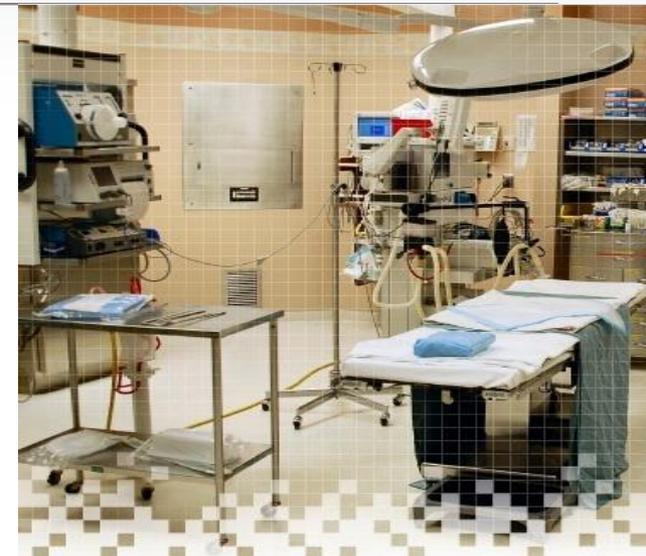
**State  
Inpatient  
Databases  
(SID)**  
**State Emergency  
Department  
Databases  
(SEDD)**

## Strata

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

## Stratified Sample of Hospitals

\*State not included in the stratum



## Nationwide Emergency Department Sample

**(NEDS)**

N = ~ 1K hospitals  
~ 31M records

## 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)

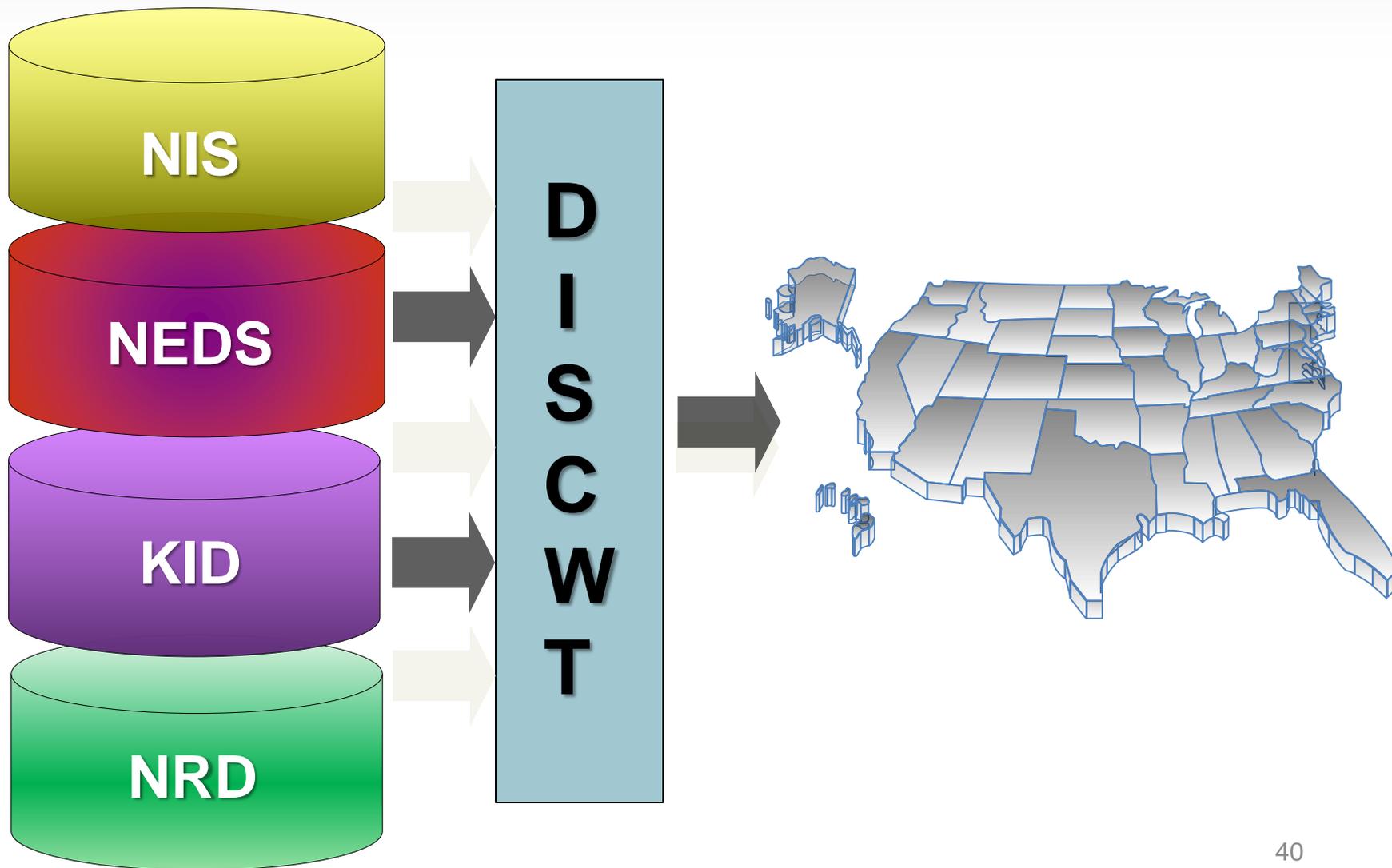
**All Discharges  
(after exclusions)**



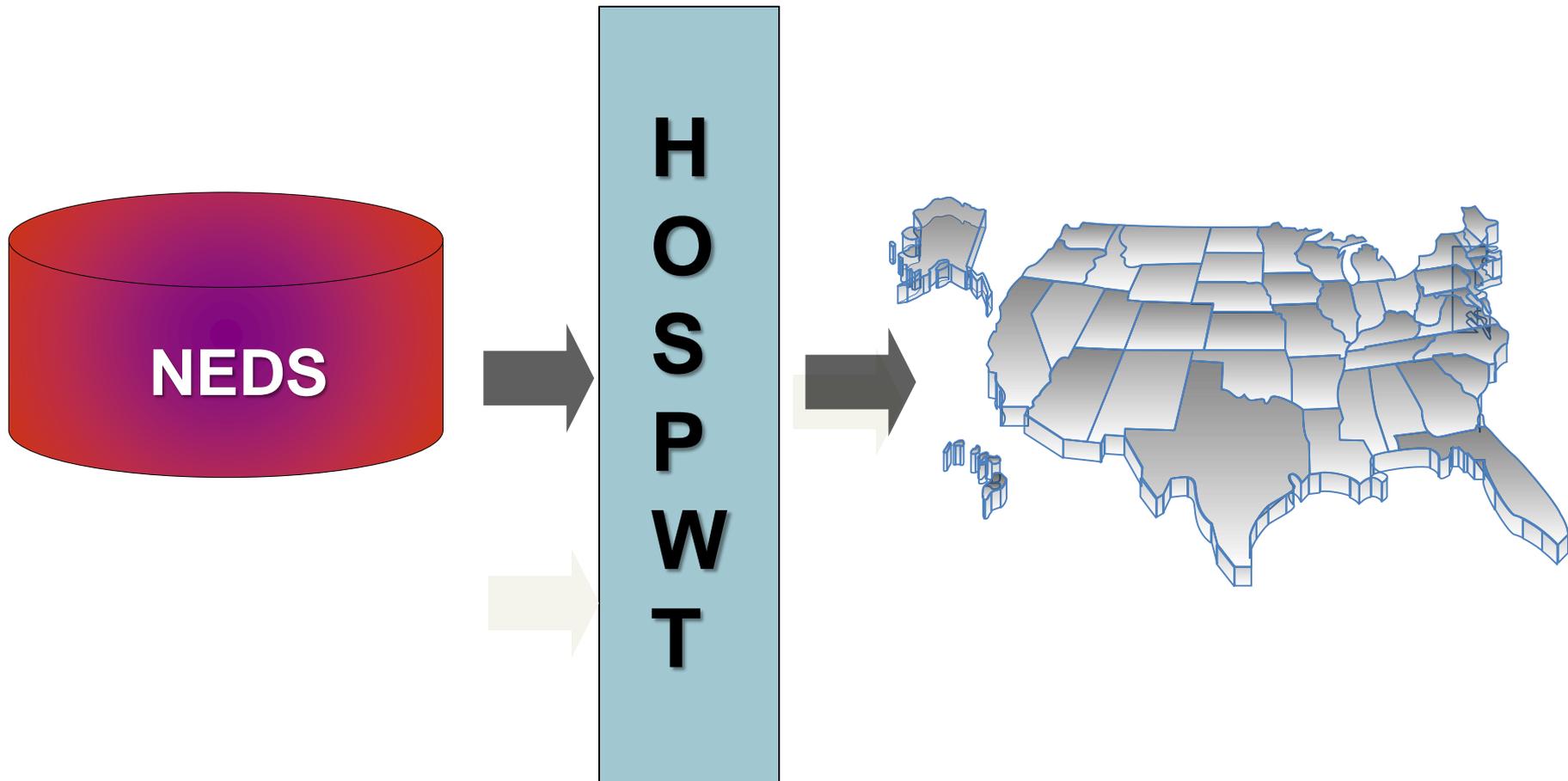
**Nationwide  
Readmissions  
Database  
Sample  
(NRD)**

N = ~ 2K hospitals  
~ 14M records<sup>39</sup>

# NIS, NEDS, KID, NRD: Must be Weighted to Produce National and Regional Estimates



## Must be Weighted to Produce National and Regional Estimates



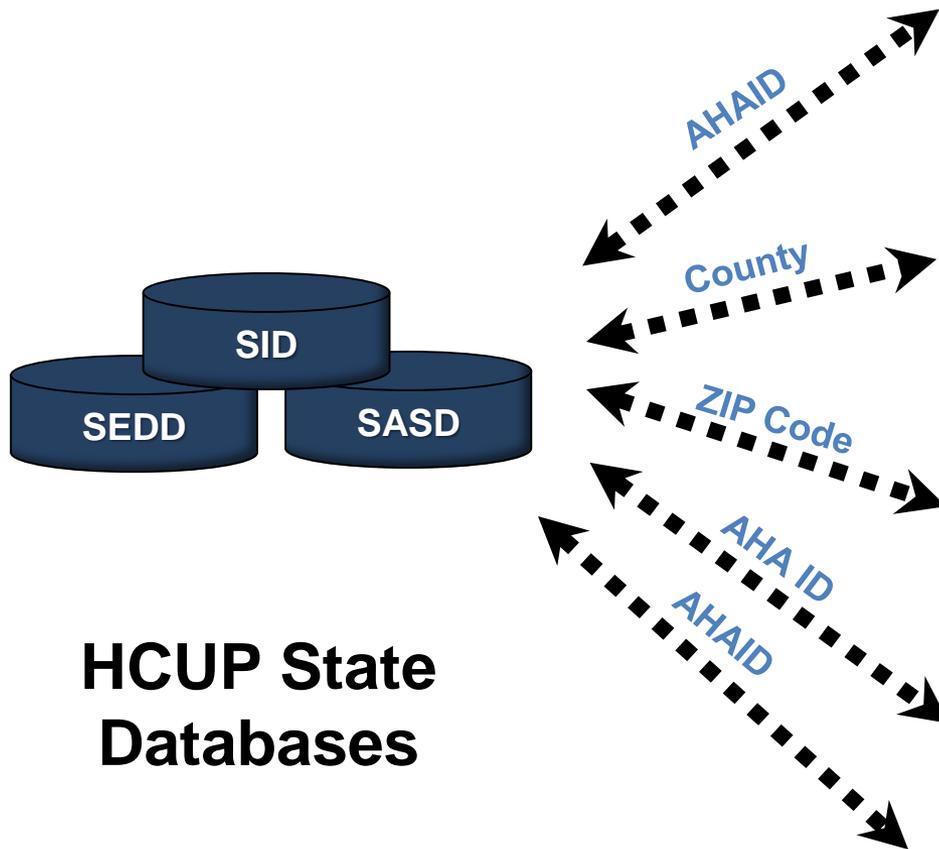
# What Types of Care Are and Are Not Captured by HCUP?

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)

Not Included in HCUP
Physician office visits
Pharmacy
Labs/Radiology



# Some Limitations 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)

## HCUP is...

Discharge database for health care encounters

All payer, including the uninsured

Hospital, ambulatory surgery, emergency department data

All hospital discharges

Accessible multiple ways: raw data, regular reports, online

## HCUP is NOT...

A survey

Specific to a single payer, e.g. Medicare

Office visits, pharmacy, laboratory, radiology

Hospital Claims

Just another database

# Hospital Billing Data Have Benefits and Limitations

## Benefits

Large number of visit records

Uniformity in coding

Regular, routine collection

Ease of access

All payers, including the uninsured

Available at local, State, regional, and national level

Supplemental files available to facilitate research

## Limitations

Limited clinical details

Lacks revenue information

Doesn't include all hospital types (e.g., VA and DOD)

Doesn't show complete episode of care

No data on individuals outside of the hospital system

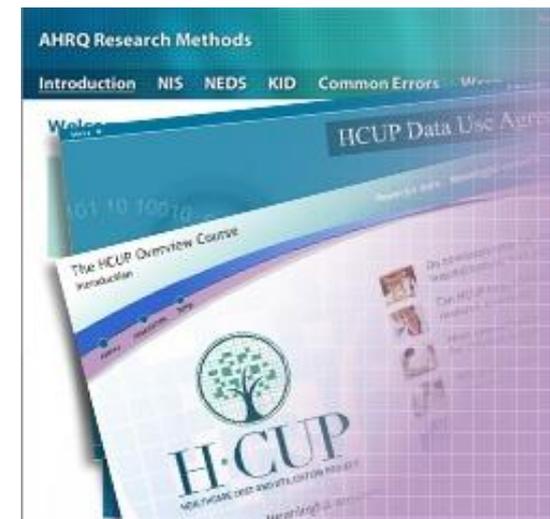
Can't link national databases to external sources

Differences in coding across hospitals

- Seven types of HCUP databases
- Databases are based on administrative hospital data: inpatient, ED, and ambulatory surgery and services
- Available for multiple years
  - ▶ National
    - NIS (1988-2013)
    - NEDS (2006-2013)
    - KID (1997, 2000, 2003, 2006, 2009, 2012)
    - NRD (2013)
  - ▶ State
    - SID (1990-2014)
    - SASD (1997-2014)
    - SEDD (1999-2014)
- Can look at breadth of health care issues
- Can be linked to external files

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- Processed data sent to HCUP Partners
- State databases may become available to public through:
  - ▶ HCUP Partner Organization
  - OR*
  - ▶ HCUP Central Distributor



# Two Methods to Purchase HCUP Data



**Method 1**  
**HCUP Central Distributor**  
[www.hcup-us.ahrq.gov/tech\\_assist/centdist.jsp](http://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp)

**Method 2**  
**HCUP Partner Organizations**  
[www.hcup-us.ahrq.gov/partners.jsp](http://www.hcup-us.ahrq.gov/partners.jsp)

\*To purchase HCUP data, visit the HCUP Central Distributor. 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  
[http://www.hcup-us.ahrq.gov/tech\\_assist/dua.jsp](http://www.hcup-us.ahrq.gov/tech_assist/dua.jsp)

**Step 2:** Login or register for an account  
[http://www.hcup-us.ahrq.gov/tech\\_assist/centdist.js](http://www.hcup-us.ahrq.gov/tech_assist/centdist.js)

**Step 3:** Create your profile under “My Account”

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

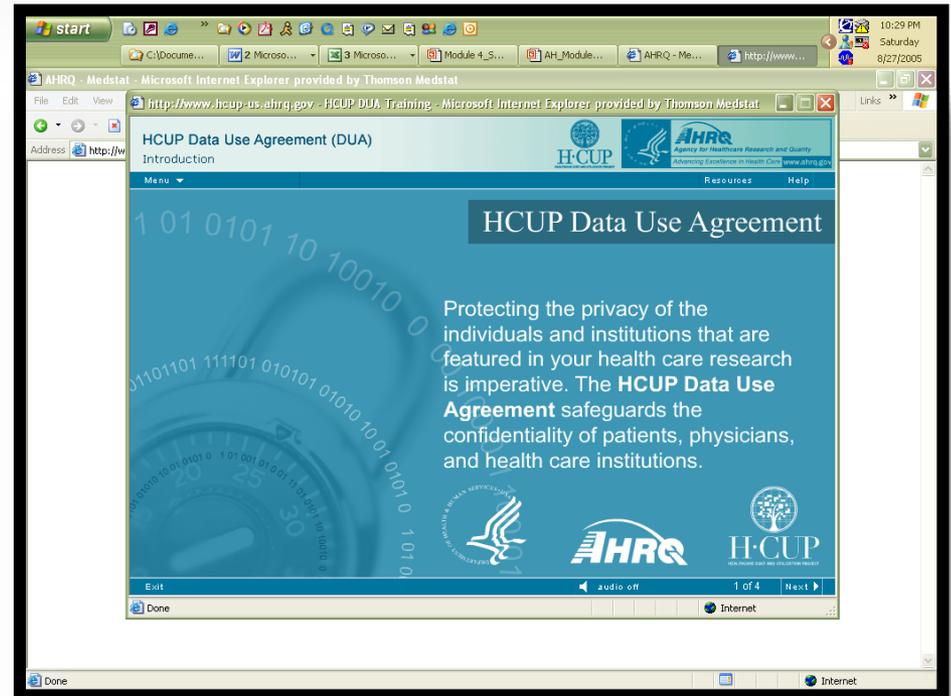
**Step 5:** Download Nationwide databases online or receive delivery of State databases through the mail.

For assistance, contact the HCUP Central Distributor:

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

**NEW!**  
Download of  
Nationwide  
Databases

- **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**

**[http://www.hcup-us.ahrq.gov/DUA/dua\\_interactive\\_2014/index.htm](http://www.hcup-us.ahrq.gov/DUA/dua_interactive_2014/index.htm)**

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

- ▶ **NIS**: \$350 (2007-2013; 2013 student price \$100)  
\$160-200 (earlier years; student price \$20-50)
- ▶ **KID**: \$350 (2009 and 2012; student price \$50)  
\$200 (earlier years; student price \$20)
- ▶ **NEDS**: \$500 (2013 student price \$150)  
(earlier years; student price \$75)
- ▶ **NRD**: \$500 (student price \$150)

## State Databases (SID, SASD, SEDD)

- ▶ Varies by state, database, year, and type of applicant
- ▶ \$35 - \$3,185

A yellow starburst callout box with a black outline, containing text about funds for state data sales.

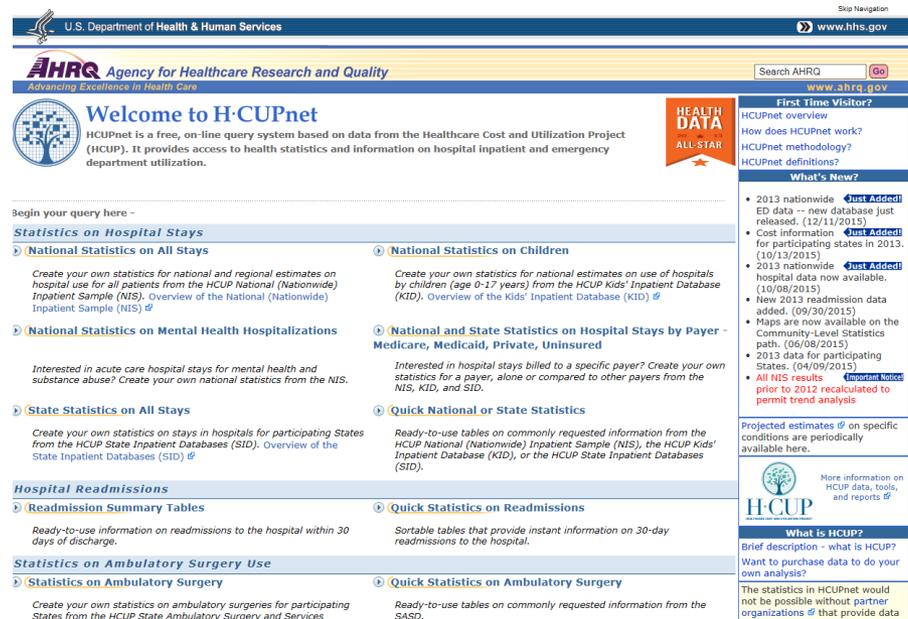
Funds for  
State data  
sales returned  
to State  
Partners

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

**MS Excel and Access are NOT GOOD Options!**

# HCUPnet: Quick, Free Access to HCUP Data

- Free online query system
- Users generate tables of outcomes by diagnoses and procedures
- Data can be cross-classified by patient and hospital characteristics



The screenshot shows the HCUPnet website homepage. At the top, it features the U.S. Department of Health & Human Services logo and the AHRQ logo. The main heading is "Welcome to H-CUPnet". Below this, there is a navigation menu with categories like "National Statistics on All Stays", "National Statistics on Children", "National Statistics on Mental Health Hospitalizations", "State Statistics on All Stays", "Hospital Readmissions", "Quick Statistics on Readmissions", "Statistics on Ambulatory Surgery Use", and "Quick Statistics on Ambulatory Surgery". A sidebar on the right contains a "What's New?" section with updates on 2013 nationwide ED data, 2013 nationwide hospital data, and 2013 nationwide readmission data. There is also a "First Time Visitor?" section with links to overview, methodology, and definitions.



# HCUP User Support Web Site



H·CUP  
HEALTHCARE COST AND UTILIZATION PROJECT

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

<http://www.hcup-us.ahrq.gov>

**HCUP User Support (HCUP-US)**  
The HCUP (Optimized HCUP) 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).

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](#)
- [On-line 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 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 Fast Stats](#) provides easy access to the latest HCUP-based statistics for health information topics.

#### 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 On-line Tutorial Series](#) provides free tutorials on HCUP data and tools, including training on technical methods for conducting research with HCUP data
- [HCUP Data Use Agreement Training Tool](#) is a required tutorial for all purchasers and users of HCUP data that defines how the data can be used

#### Join the HCUP Mailing List

Join the [HCUP Mailing List](#) to receive information on new HCUP data, tools, and products.

#### What's New

- [New HCUP eNews \(3/11/16\)](#)
  - ▶ Read the latest issue of the [HCUP eNews](#)
- [HCUP Spring Webinar Series: Registration Opens March 30 \(3/9/16\)](#)
  - ▶ [Registration will open soon for the April 9 and April 13 topics.](#)
- **\*NEW\***
  - ▶ As of March 1, 2016, HCUP Nationwide Databases are now delivered via secure digital download. Nationwide and State Databases may be requested through the [HCUP Central Distributor](#)
- [New Studies added to the Research Spotlights \(2/26/16\)](#)
  - ▶ [View the latest publications](#)
- [HCUP's 2015 Article of the Year Award \(2/19/16\)](#)
  - ▶ [Apply Now!](#) Applications will be accepted through March 18.
- [HCUP Statistical Brief #200 and #201 \(2/22/16\)](#)
  - ▶ [Procedures to Treat Benign Uterine Fibroids in Hospital Inpatient and Hospital-Based Ambulatory Surgery Settings, 2013](#)
  - ▶ [Trends in Bilateral and Unilateral Mastectomies in Hospital Inpatient and Ambulatory Settings, 2009-2013](#)



# Visit HCUP's Virtual Exhibit Booth



- The HCUP Virtual Exhibit Booth provides materials typically offered at the HCUP conference exhibit booths
- Includes brochures, participation maps, an overview presentation of HCUP, and additional information that provides general project information

**HCUP Virtual Exhibit Booth**  
The HCUP Virtual Exhibit Booth provides materials typically offered at HCUP conference exhibit booths. HCUP databases and products are developed by AHRQ through a Federal-State-Industry partnership.

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

**HCUP Virtual Exhibit Booth**

The HCUP Virtual Exhibit Booth provides materials typically offered at the HCUP informational booths that conference attendees can visit. A complete listing of HCUP events and activities, including workshops, podium and poster presentations, and exhibit booths, is available on the [Events](#) page.

**General Project Information**

- New to HCUP? Get to know us and stay connected. ([PDF file](#), 159 KB; [HTML](#))
- What is HCUP? HCUP Fact Sheet ([PDF file](#), 62 KB; [HTML](#))

**HCUP Brochures**

**Nationwide Databases**

- National (Nationwide) Inpatient Sample (NIS) ([PDF file](#), 262 KB; [HTML](#))
- Kids' Inpatient Database (KID) ([PDF file](#), 90 KB; [HTML](#))
- Nationwide Emergency Department Sample (NEDS) ([PDF file](#), 220 KB; [HTML](#))

**State Databases**

- State Inpatient Databases (SID) ([PDF file](#), 267 KB; [HTML](#))
- State Ambulatory Surgery and Services Databases (SASD) ([PDF file](#), 272 KB; [HTML](#))
- State Emergency Department Databases (SEDD) ([PDF file](#), 273 KB; [HTML](#))

**HCUPnet**

- Want immediate access to statistics from HCUP data? Learn about HCUPnet ([PDF file](#), 309 KB; [HTML](#))

**AHRQ Quality Indicators**

Individual brochures available on Quality Indicator pages below.

- [Inpatient Quality Indicators \(IOI\)](#)
- [Prevention Quality Indicators \(PQI\)](#)
- [Patient Safety Indicators \(PSI\)](#)
- [Pediatric Quality Indicators \(PDI\)](#)

**State Participation in HCUP**

HCUP includes inpatient data provided by [35 HCUP Partners](#). In addition, 34 Partners provided ambulatory surgery and services data, and 32 provided emergency department data. The nationwide databases are sampled from the State-level data.

- HCUP Participation Maps ([PDF file](#), 80 KB; [HTML](#))

**HCUP Databases Available for Purchase**

All of the nationwide HCUP databases and many of the State databases are available for purchase through the [HCUP Central Distributor](#).

- State Databases Available for Purchase through the HCUP Central Distributor ([PDF file](#), 23 KB; [HTML](#))

Note that database availability varies by year. This map represents State participation in the HCUP Central Distributor regardless of year.

A [summary table](#) shows the availability of State-level data by database and year. Complete database availability and pricing information is provided in the Database Catalog, which is found by navigating to the online [HCUP Central Distributor](#).

**HCUP Overview Presentation**

The overview presentation provides an introduction to HCUP's databases, tools, and software. The slide deck is adapted for audiences at individual conferences throughout the year. This version was presented at the 2014 AcademyHealth Annual Research Meeting.

# Interactive Online HCUP Tutorials & Training Courses

- HCUP Overview Course
- Nationwide Readmissions Database (NRD)
- HCUP Sample Design
- Producing National HCUP Estimates
- Calculate Standard Errors
- Multi-Year Analysis
- Load and Check HCUP Data



The HCUP Overview Course interface features a navigation bar with 'menu', 'resources', and 'help' options. The main content area is titled 'The HCUP Overview Course' and includes a sub-header 'Overview of HCUP Data'. Below this, there are sections for 'Inpatient' and 'State Inpatient Databases (SID)'. A navigation menu lists 'Introduction', 'NIS', 'NEDS', 'KID', 'Common Errors', and 'Wrap-Up'. The interface also displays images of a hospital building, an ambulance, and a newborn baby.



The HCUP National Estimates interface includes a navigation bar with 'Introduction', 'NIS', 'NEDS', 'KID', and 'Wrap-Up'. A 'Key Points' section states: 'Weighting is a key concept when working with the HCUP national databases. Click each option to learn more.' Below this, there are buttons for 'What to do' and 'What NOT to do'. The interface also features a diagram showing 'National Sample' branching into 'DISCWT' (National Estimate of Discharges) and 'HOSPWT' (National Estimate of Hospitals). A 'back 38/39 next' navigation bar is visible at the bottom.



The HCUP Calculating Standard Errors interface has a navigation bar with 'Introduction', 'Standard Errors', 'Standard Errors for Subsets', 'Significance Testing', and 'Wrap-Up'. The main content area is titled 'Introduction' and includes a text box: 'This course presents solutions that may be necessary when conducting analyses that span multiple years.' Below this, there are images of a person at a computer and a diagram showing 'NIS Nationwide Inpatient Sample' and 'KID Kids' Inpatient Database'. A text box states: 'Errors in study results may occur when two or more years of data are combined. This course focuses on the NIS and KID, but the information can be applied to other HCUP databases.'

## Active Technical Assistance

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

E-mail: [hcup@ahrq.gov](mailto:hcup@ahrq.gov)





# Join the HCUP Email List



- HCUP Newsletter, published quarterly
  - ▶ User Tech Tips
  - ▶ Upcoming Events
- New Data Releases
- New Reports

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Agency for Healthcare Research and Quality  
Advancing Excellence in Health Care

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To sign up for updates or to access your subscriber preferences, please enter your E-mail address.

\*Email Address

<http://www.ahrq.gov/data/hcup/hcuplist.htm>

# Healthcare Cost and Utilization Project (HCUP)



# H·CUP

HEALTHCARE COST AND UTILIZATION PROJECT



**Time for Questions  
and/or Comments.**

**E-mail:**

**[hcup@ahrq.gov](mailto:hcup@ahrq.gov)**

