The Healthcare Cost and Utilization Project (HCUP)

Overview of the HCUP Databases and Resources

Agency for Healthcare Research and Quality
Updated October 2016

Presentation Overview

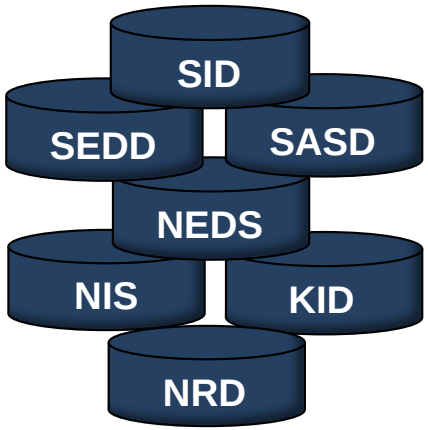
- Project Overview
- HCUP Partners
- The Making of HCUP Data
- HCUP State Databases
- HCUP Nationwide Databases
- How to Obtain HCUP Databases & Access HCUP Resources

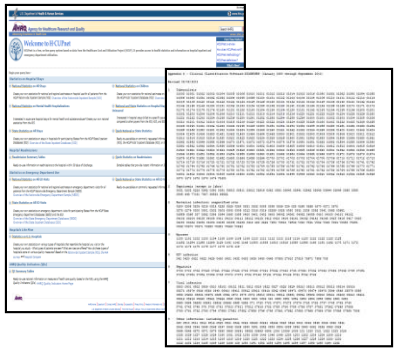
What is HCUP?

HCUP is a comprehensive set of publicly available all-payer health care data

Includes multiyear inpatient and outpatient data based on hospital billing records

- HCUP Databases
- Research Tools
- Research Publications
- User Support





Types of Topics HCUP Can Address

- Use and cost of hospital-based care
- Readmissions and revisits
- Expected payer
- Medical treatment variations
- Hospital characteristics
- Cost and burden of illness
- Uncommon conditions
- Quality of care
- Patient safety
- Access to care
- Special populations and minorities
- Care of pediatric patients
- Epidemiology of diseases and treatments
- Injury surveillance

Research Using HCUP Data

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)

Research Using HCUP Data

Patient Safety	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)
Geographic variation	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. *Med Care Res Rev*. 2013 Apr;70(2):218-31.)
Trends in practice	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)
Preventable Stays	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)

The HCUP Partnership

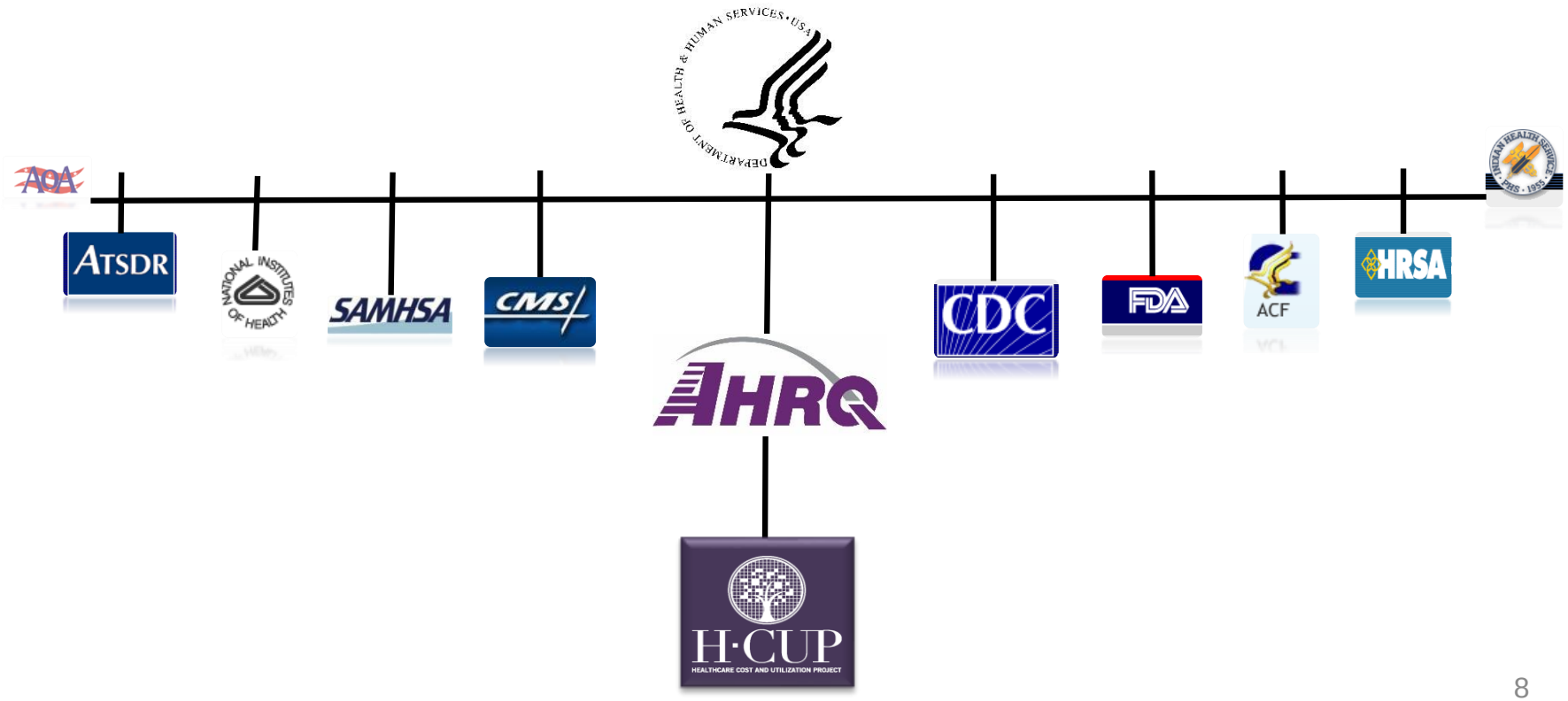
State

Federal

Industry

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: New Mission

- To produce evidence to make health care
  - safer
  - higher quality
  - more accessible
  - equitable
  - affordable for all Americans
- To work with HHS and other partners to make sure that the evidence is understood and used

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

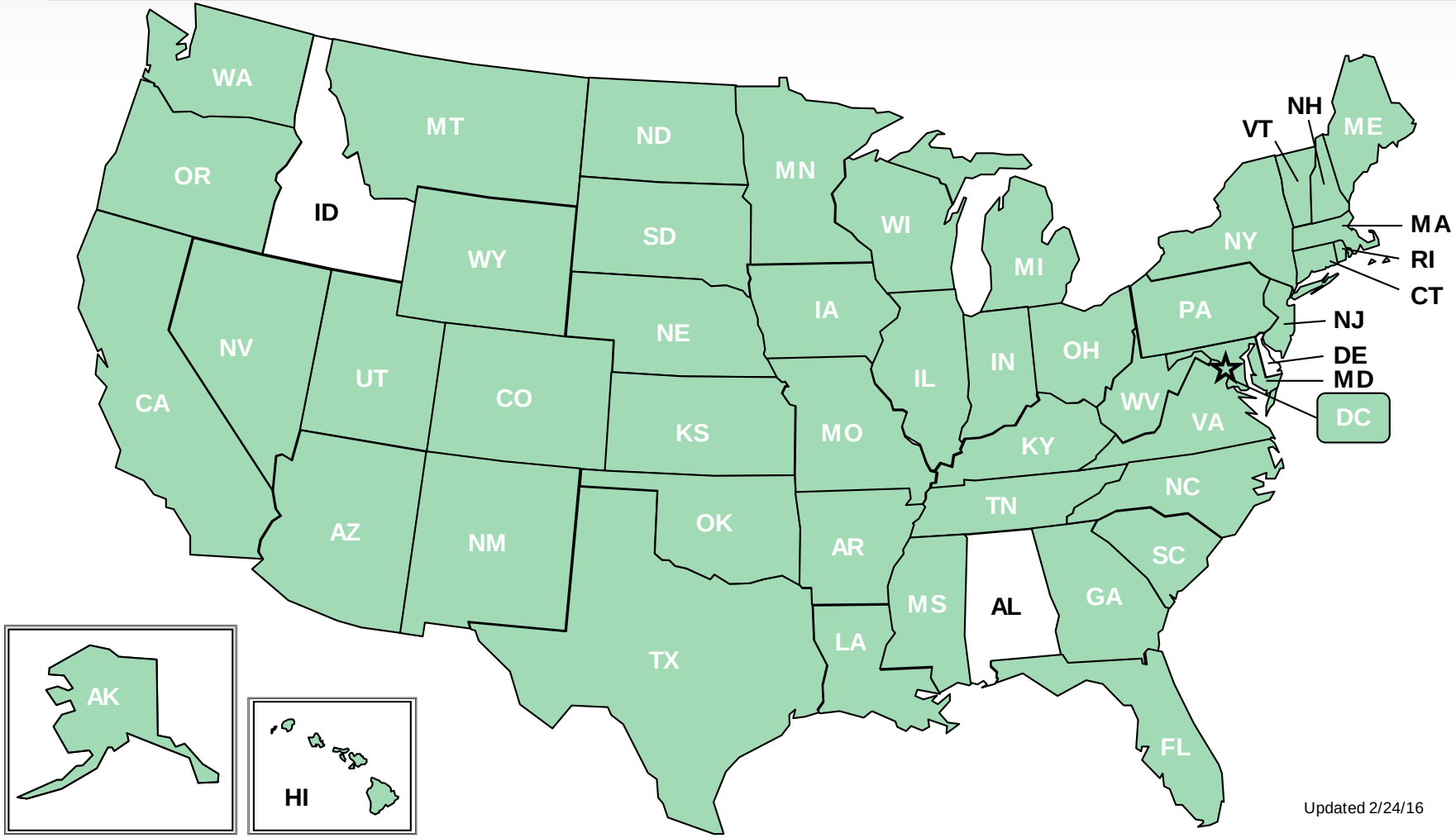
Current HCUP Data Partners

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

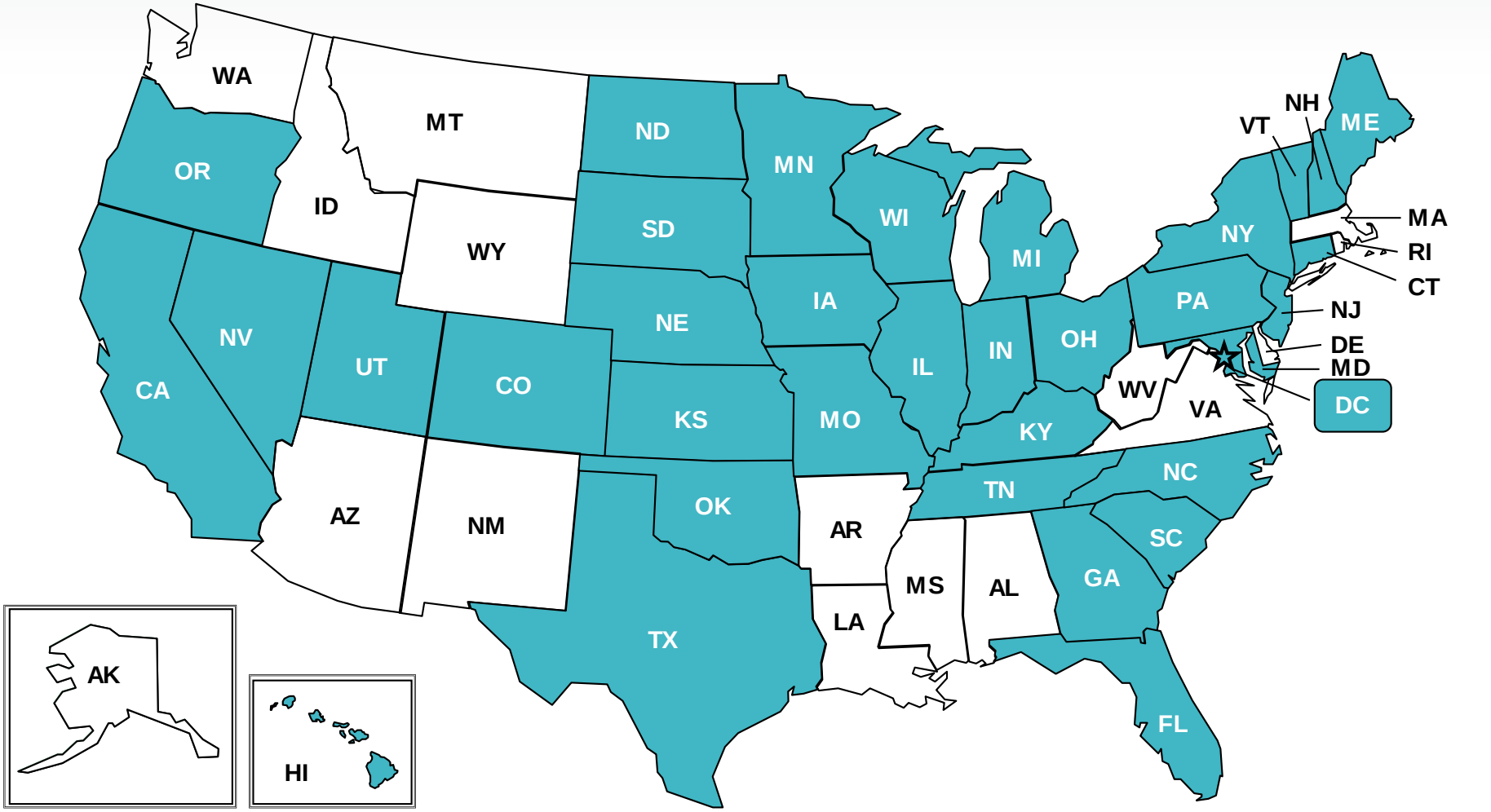
Current HCUP Data Partners

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

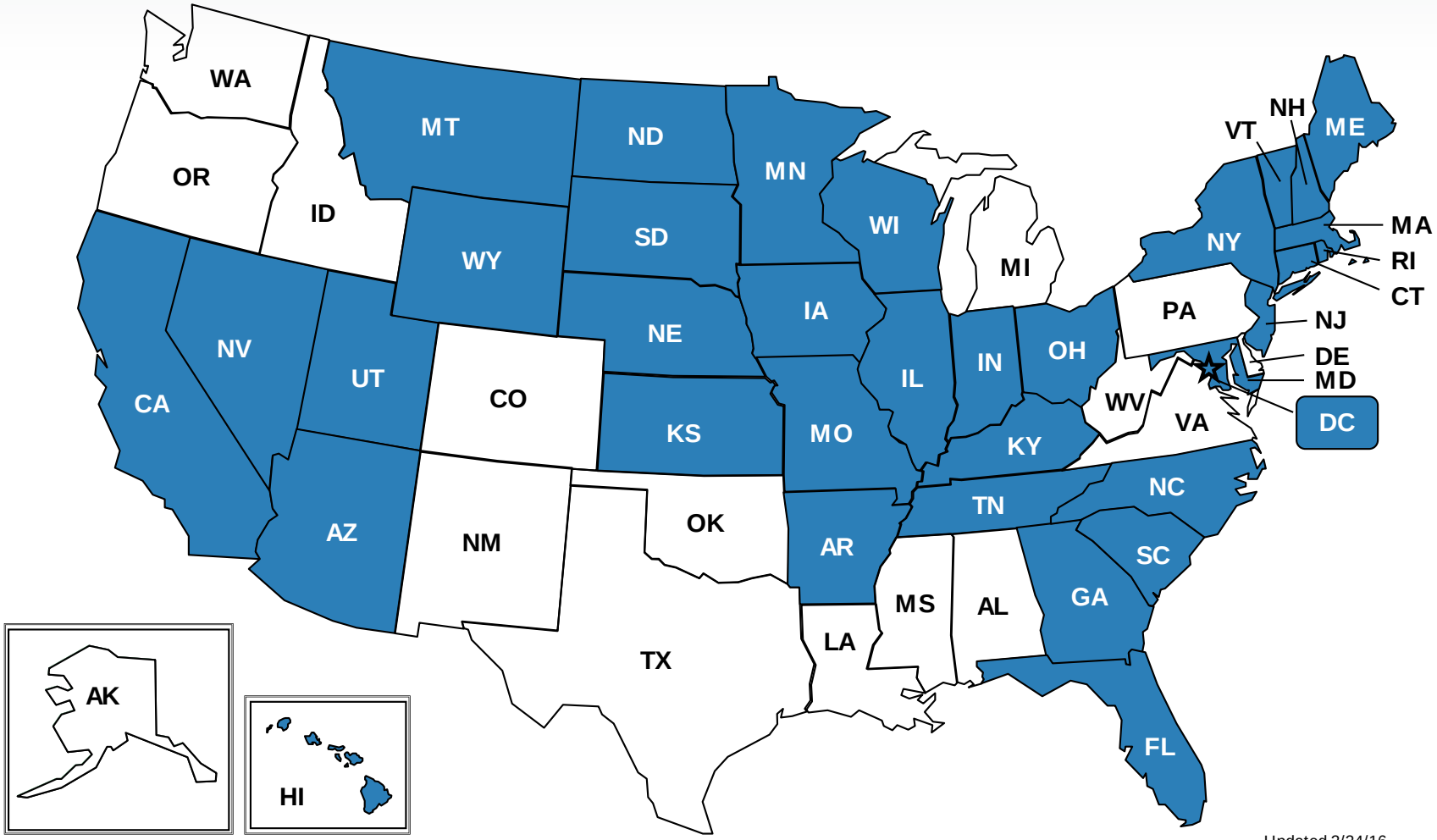
HCUP Partners Providing Inpatient Data



HCUP Partners Providing Ambulatory Surgery & Services Data



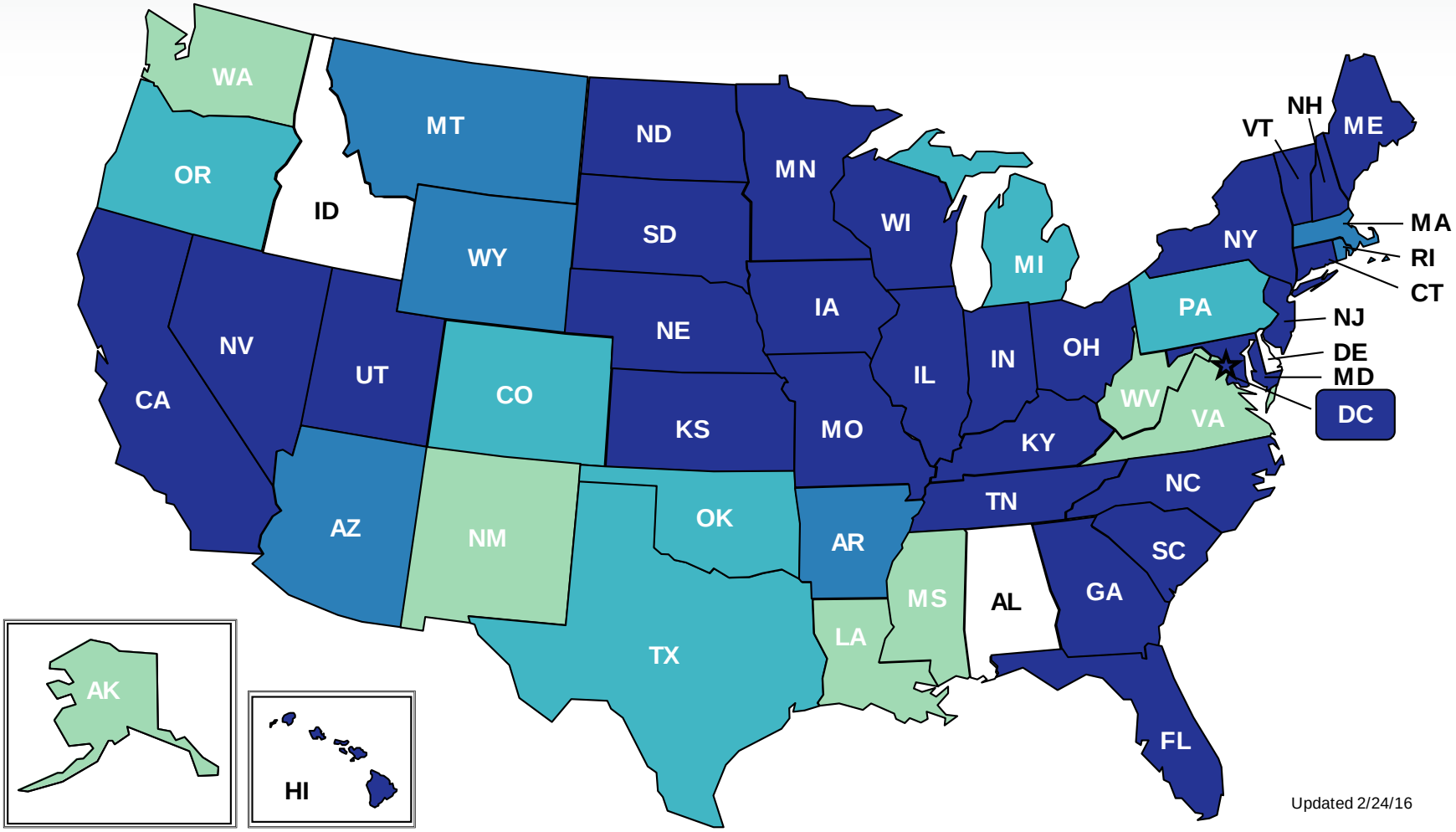
HCUP Partners Providing Emergency Department Data



Updated 2/24/16

Partners Providing:	Emergency Department Data	Non-participating

HCUP Participation by Data Type



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The Foundation of HCUP Data is Hospital Billing Data

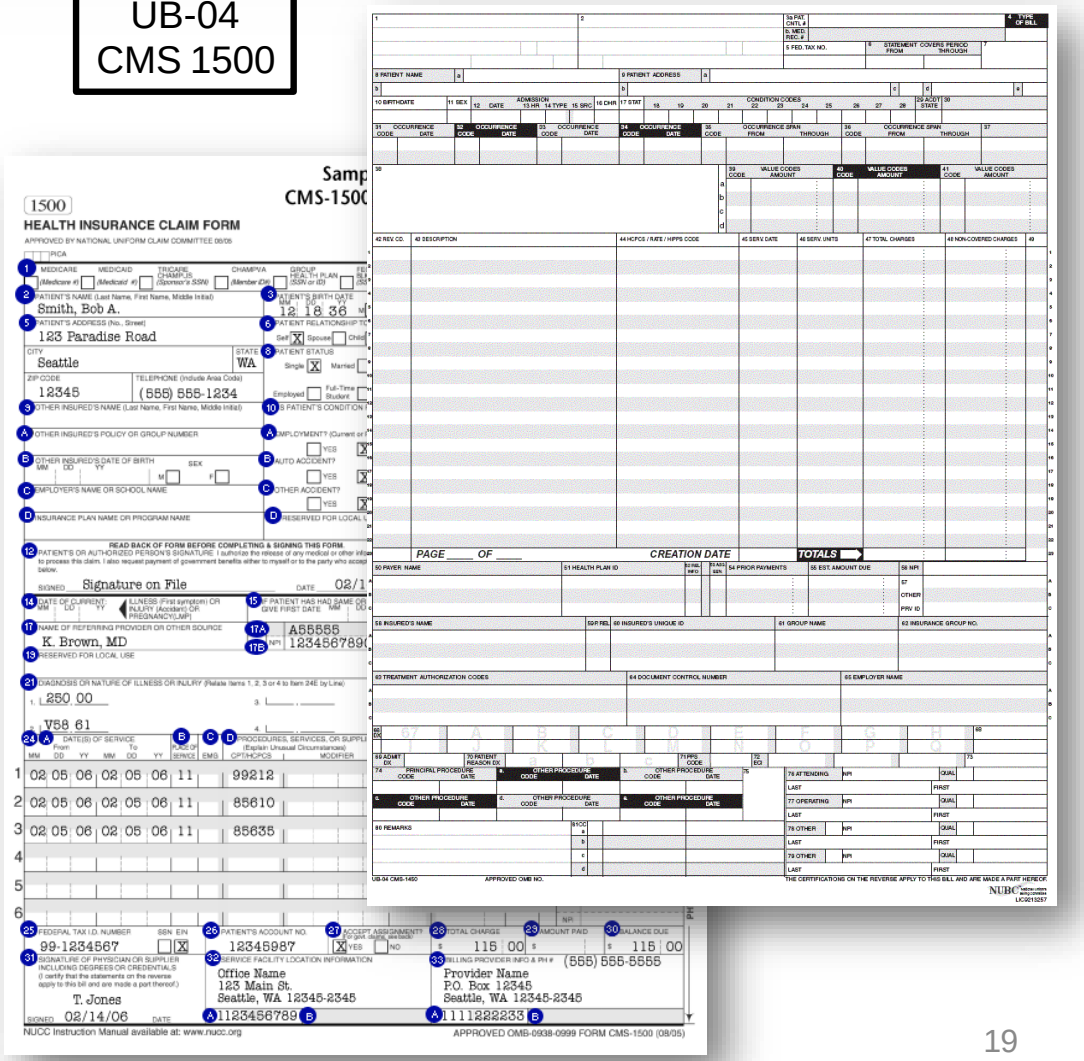
UB-04
CMS 1500

Demographic Data

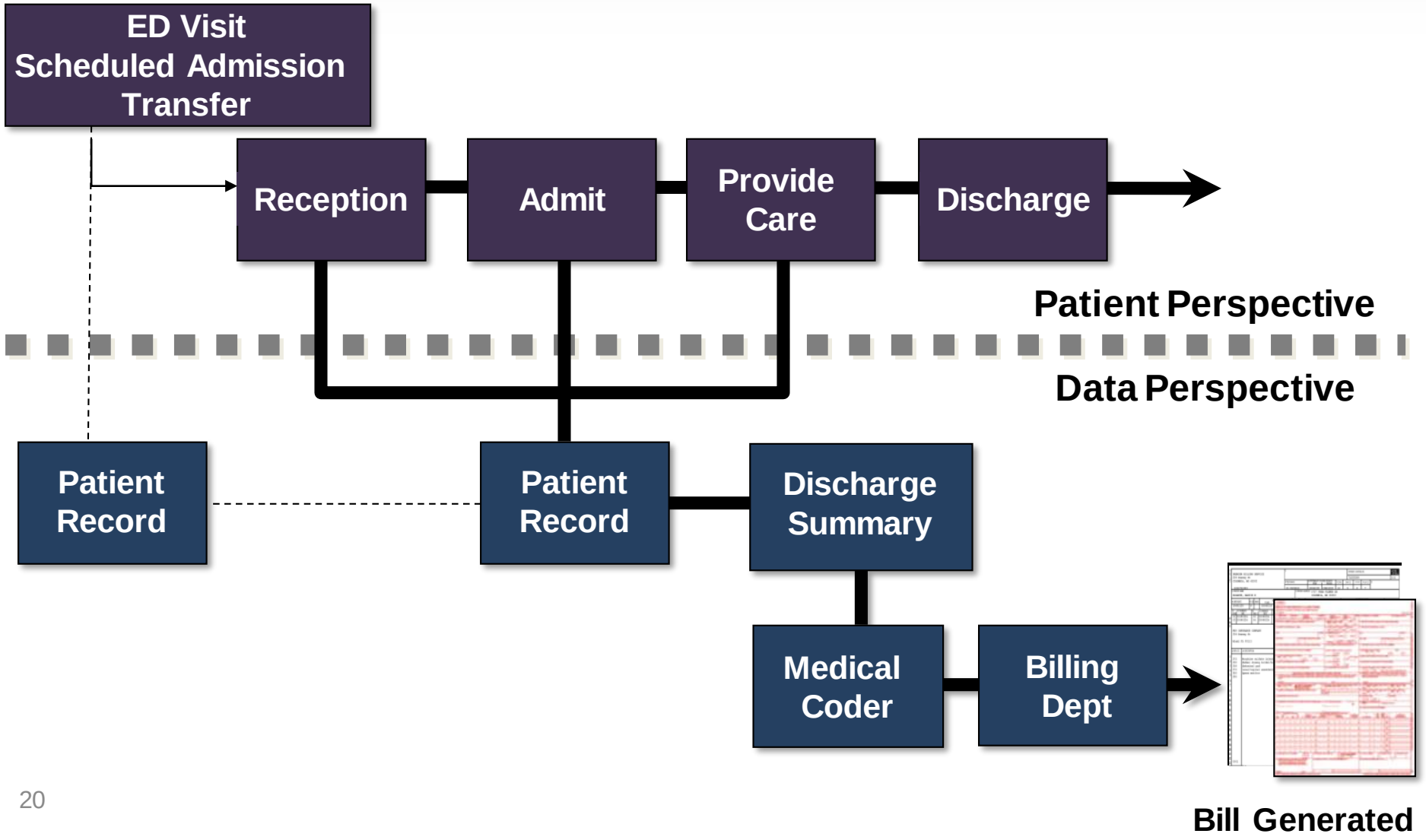
Diagnoses

Procedures

Charges



From Patient Hospital Visit to HCUP Record

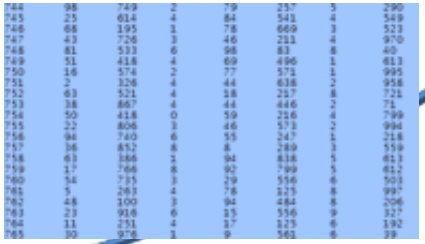


The Making of HCUP Data

Patient enters hospital

Billing record created

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



States store data in varying formats

AHRQ standardizes data to create uniform HCUP databases

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 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

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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)**

HCUP State Databases

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

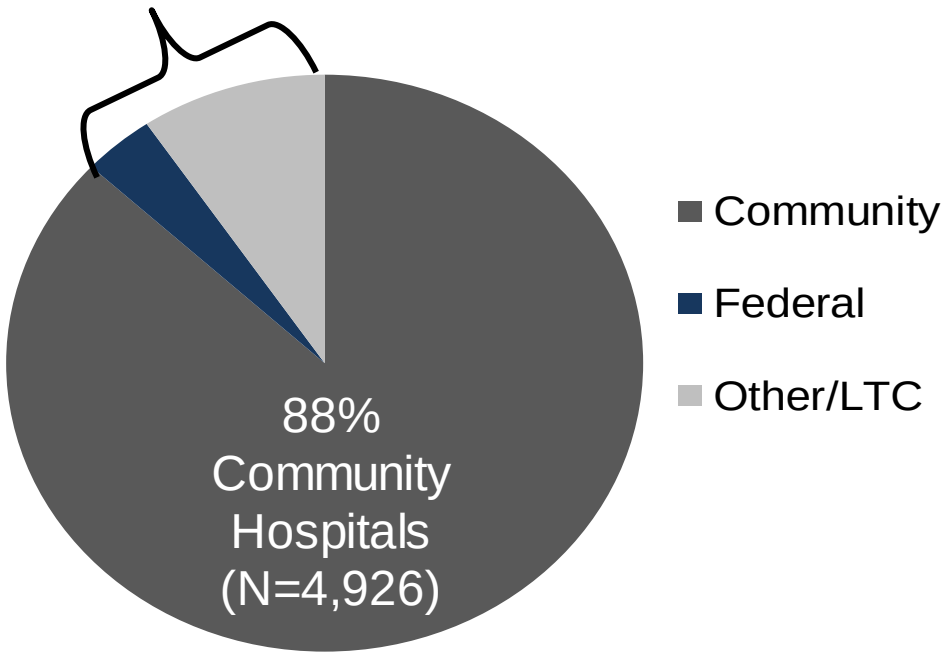
Many Potential Applications of HCUP State Databases

- Investigate questions unique to one State
- Compare utilization or outcomes in two or more States
- Conduct market area research or small area variation analyses
- Identify State-specific trends in hospital care, utilization, access, charges, and outcomes

Hospitals in the U.S.

- 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 Information is Collected in 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

Source: National Inpatient Sample, 2013

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		
10	Native American	5	Native American
11	Mixed or Other	6	Other

HCUP Files vs. Partner Files

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

HCUP State Files	Partner Files
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

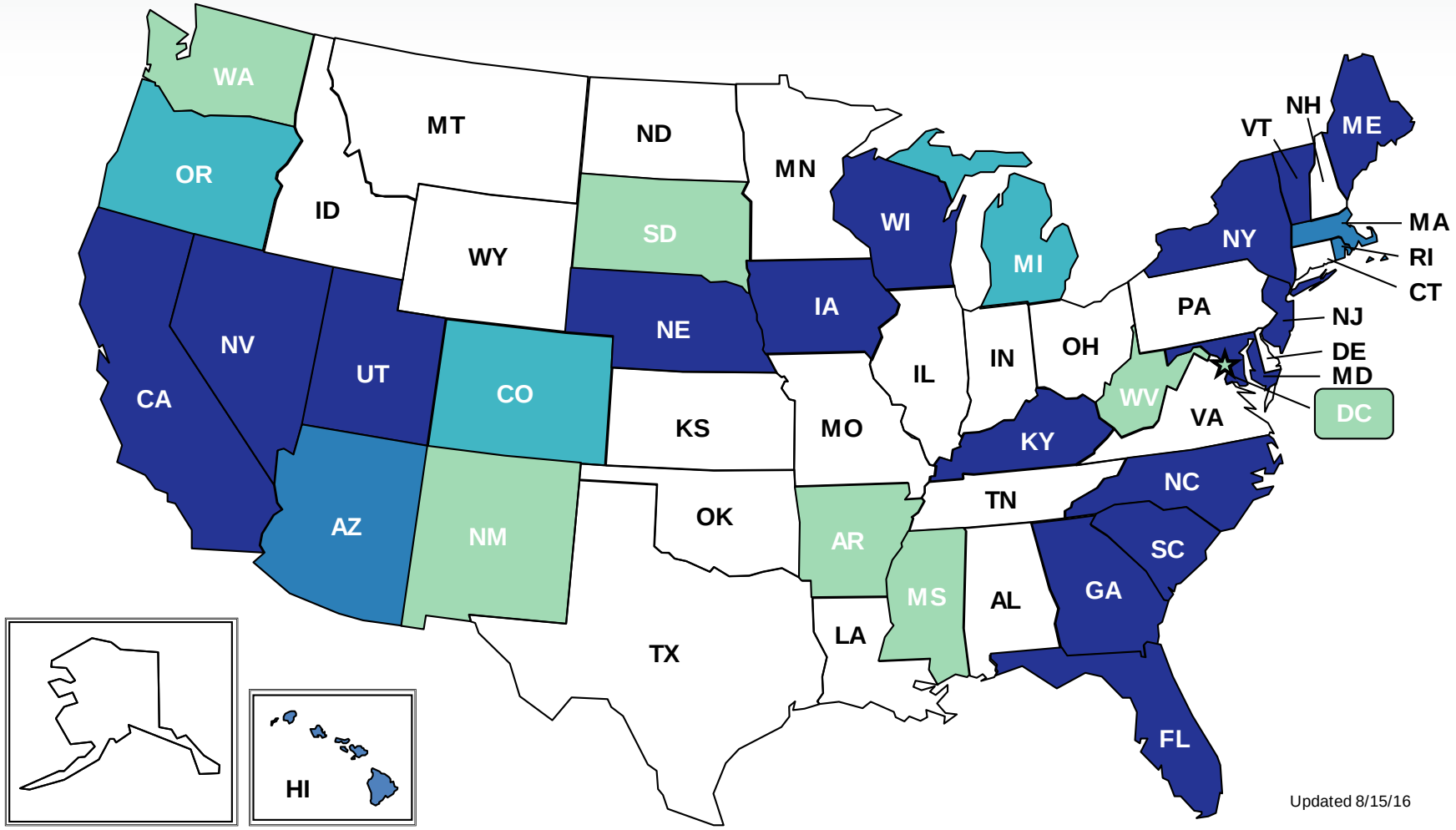
States Releasing Databases through HCUP Central Distributor

- 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

States Releasing Databases through HCUP Central Distributor



Database Availability (varies by year):	State Inpatient Database (SID)	SID and State Ambulatory Surgery & Services Database (SASD)	SID and State Emergency Department Database (SEDD)	SID, SASD, and SEDD	Non-participating

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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**

Many Potential Applications of HCUP National Databases

- National and regional estimates
- Utilization, charges, and outcomes
- Utilization of health services by priority populations
- Hospital care for rare conditions
- Quality of care and patient safety
- Impact of health policy changes
- Access to care

State and Nationwide Database Size – Inpatient Data

	Inpatient Data			
HCUP Database	**SID (2013)**	**NIS (2013)**	**KID (2012)**	**NRD (2013)**
Hospitals	4,400	4,400	4,200	2,000
Records	33 million	7 million	3 million	14 million
Derived From	–	SID	SID	SID with verified patient linking numbers
Includes	All discharges for a given State, including ED admissions	Sample of inpatient discharges (all ages) starting in 2012; sample of hospitals prior to 2012	Sample of pediatric inpatient discharges	All Discharges (after hospital and discharge exclusions)

State and Nationwide Database Size – Outpatient Data

	Emergency Department Data		Ambulatory Surgery and Services Data
HCUP Database	**SEDD (2013)**	**NEDS (2013)**	**SASD (2013)**
Hospitals	2,700	1,000	3,500
Records	73 million	30 million	8 million
Derived From	–	SID & SEDD	–
Includes	All ED visits that do not result in a hospital admission	Sample of hospital-based EDs with ED admissions and ED outpatient visits	Encounter-level data for ambulatory surgeries and may also include various types of outpatient services

NIS is a Stratified Sample of Discharges from the SID

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

Comparing SID with NIS

	SID	NIS
Linkage to AHA Annual Survey Data	Yes, for some States	Only 2011 and prior years
Revisit analyses	Yes, for some States	Not applicable
Uniformity of coding	State-specific data elements and detailed coding	Common data elements and HCUP uniform coding
Level of analysis available	State, local market area, and community statistics	Generate national and regional estimates

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

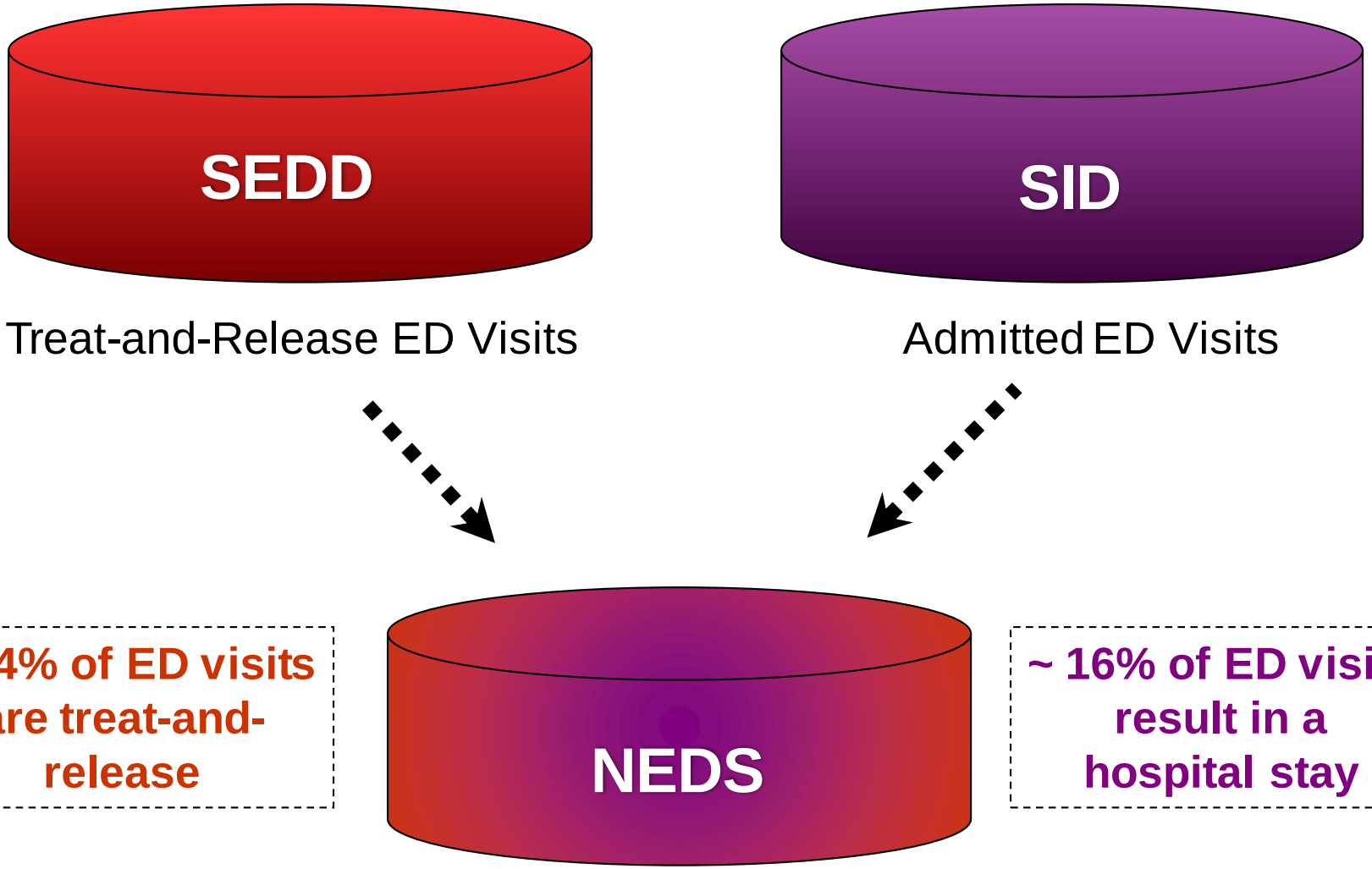
*State not included in the stratum

- 10% uncomplicated births
- 80% pediatric discharges

Kids' Inpatient Database (KID)

N = ~ 4K hospitals
~ 3M records

HCUP NEDS Data



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

Nationwide Emergency Department Sample

(NEDS)

N = ~ 1K hospitals

~ 31M records

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

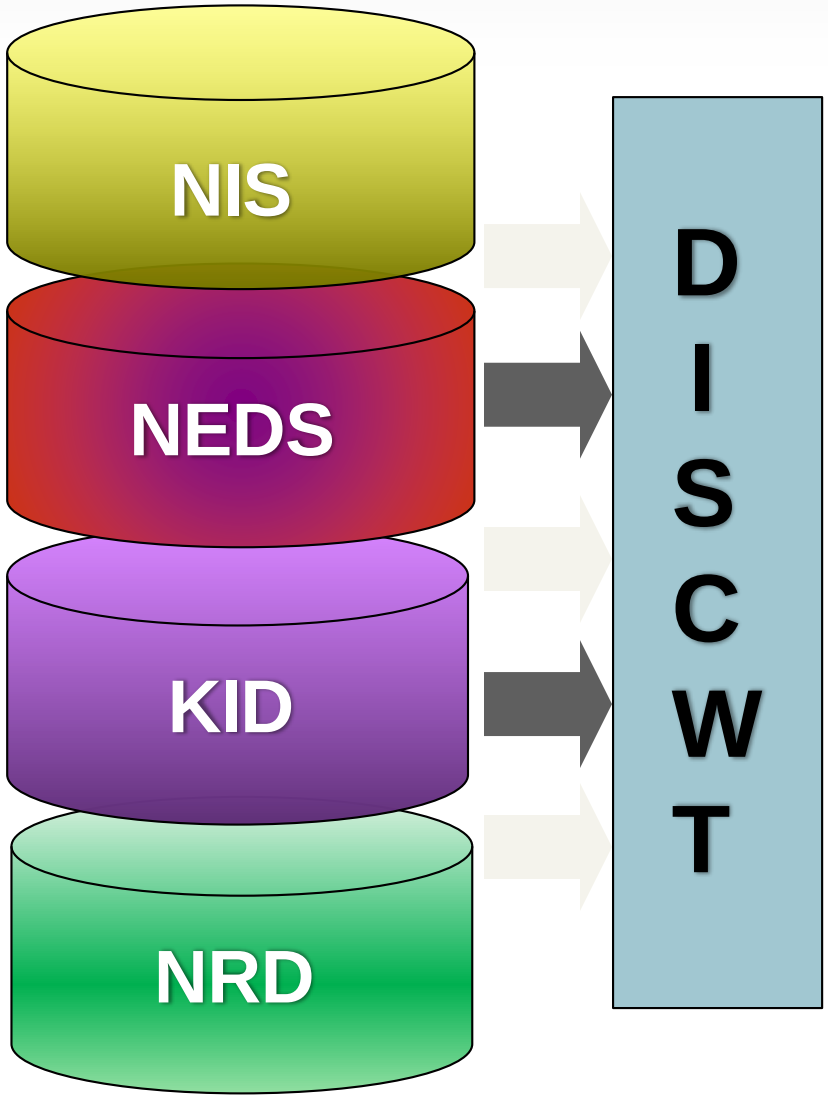
Sample

(NRD)

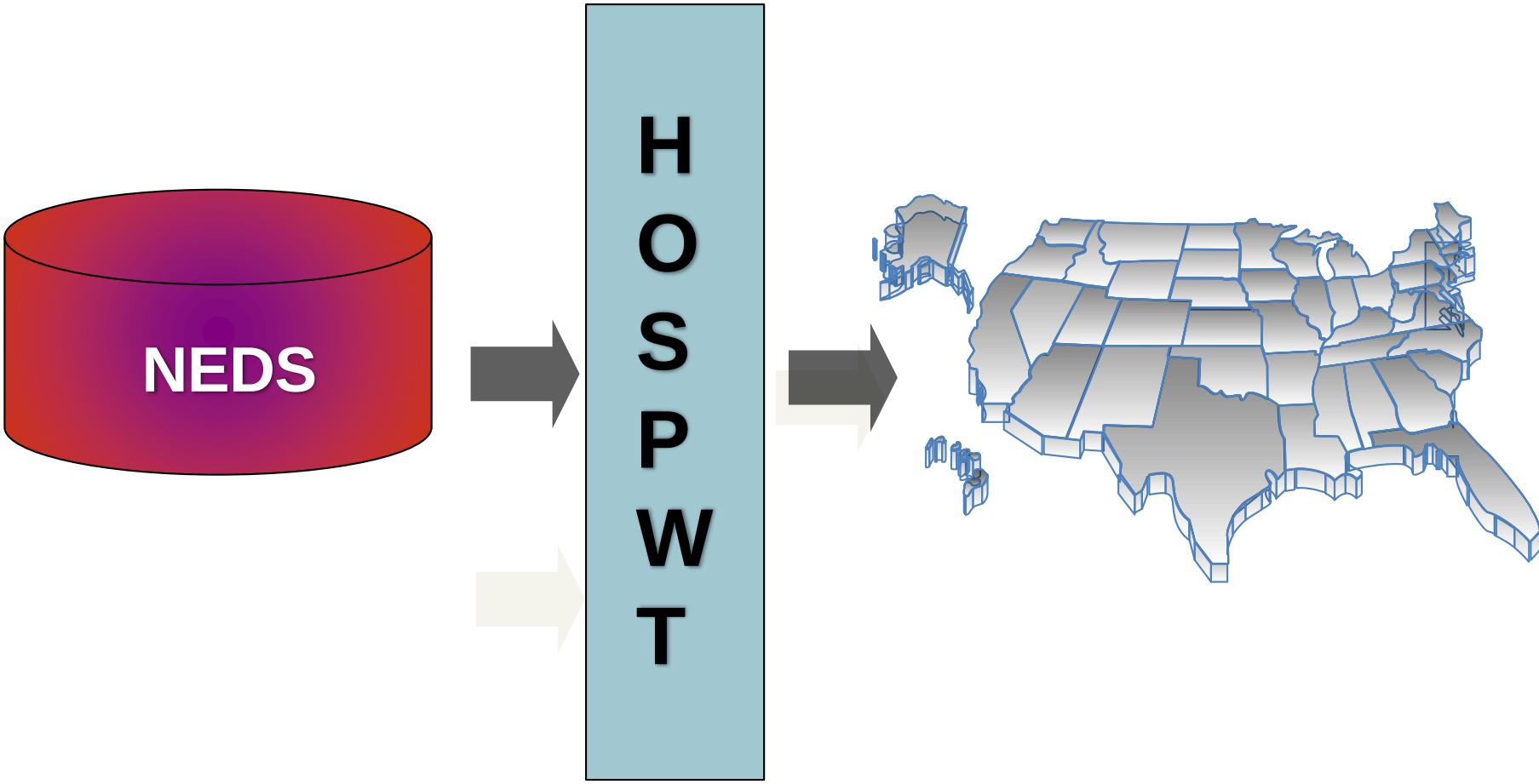
N = ~ 2K hospitals

~ 14M records

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



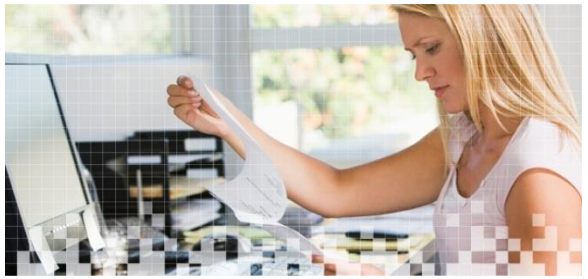
NEDS: Must be Weighted to Produce National and Regional Estimates



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



Hospital Billing Data Have Benefits and Limitations

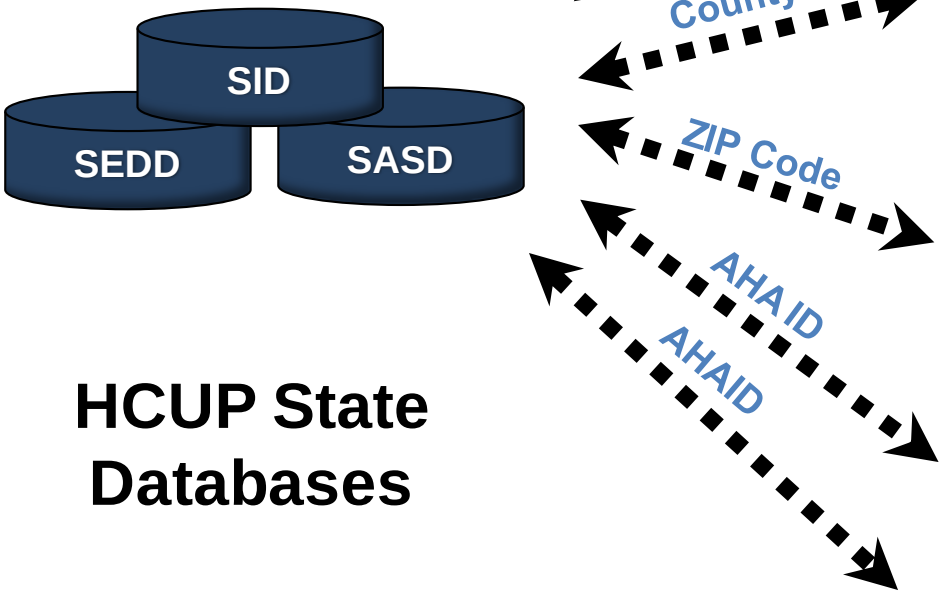
Benefits
Large number of visit records
Uniformity in coding
Regular, routine collection
Ease of access
All payers, including the uninsured
Available at local, State, regional, and national level
Supplemental files available to facilitate research

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

Key HCUP Design Features

HCUP is…	HCUP is NOT…
Discharge database for health care encounters	A survey
All payer, including the uninsured	Specific to a single payer, e.g. Medicare
Hospital, ambulatory surgery, emergency department data	Office visits, pharmacy, laboratory, radiology
All hospital discharges	Hospital claims
Accessible multiple ways: raw data, regular reports, online	Just another database

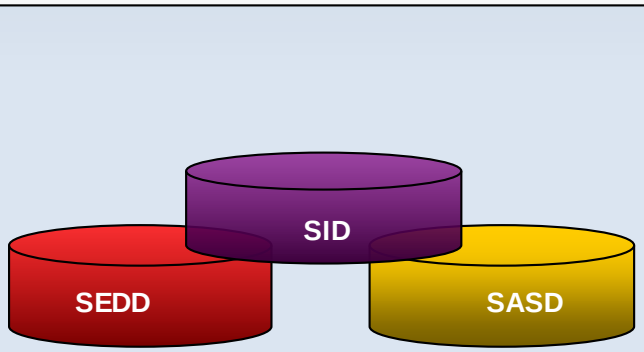
Some Limitations Can be Addressed by Linking to Other Databases



HCUP State 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)

AHA Linkage Variable



AHAID

HCUP Data Can Be Linked to the AHA Annual Survey via the AHAID Variable

The AHA Linkage File includes:
AHA hospital identifier (AHAID)
State hospital identifier (DSHOSPID)
HCUP hospital identifier (HOSPID)
Hospital FIPS State/county code
Hospital State
Year

Summary

- 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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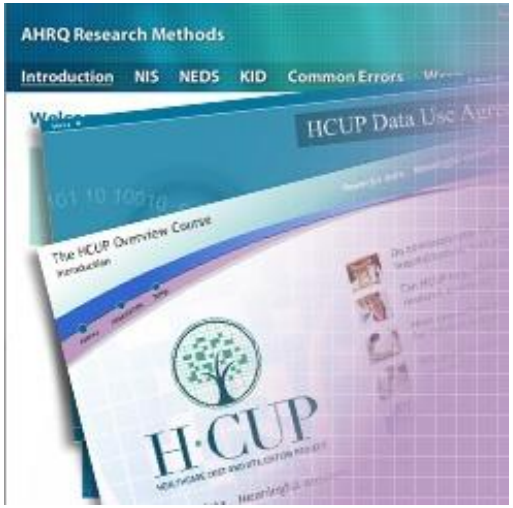
The HCUP Database Process

- Processed data sent to HCUP Partners
- Nationwide Databases are made available to the public through:
  - HCUP Central Distributor

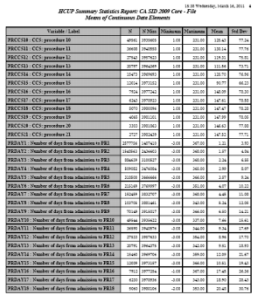
- State Databases may become available to public through:
  - HCUP Central Distributor



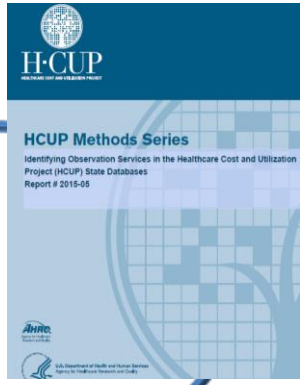
How to Obtain HCUP Data?

Visit HCUP-US Web Site

Review HCUP Database Documentation and Summary Statistics



Review Methods Reports and Online Tutorials



Request Administrative Data:
SID, SASD, SEDD,
NIS, KID, NEDS, NRD

Complete Mandatory Online Data Use Agreement (DUA) Training

HCUP Data Purchase Process

HCUP Central Distributor

www.hcup-us.ahrq.gov/tech_assist/centdist.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 State, and not all Partner Organizations make their data available through the Central Distributor.

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

Step 2: Login or register for an account
http://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

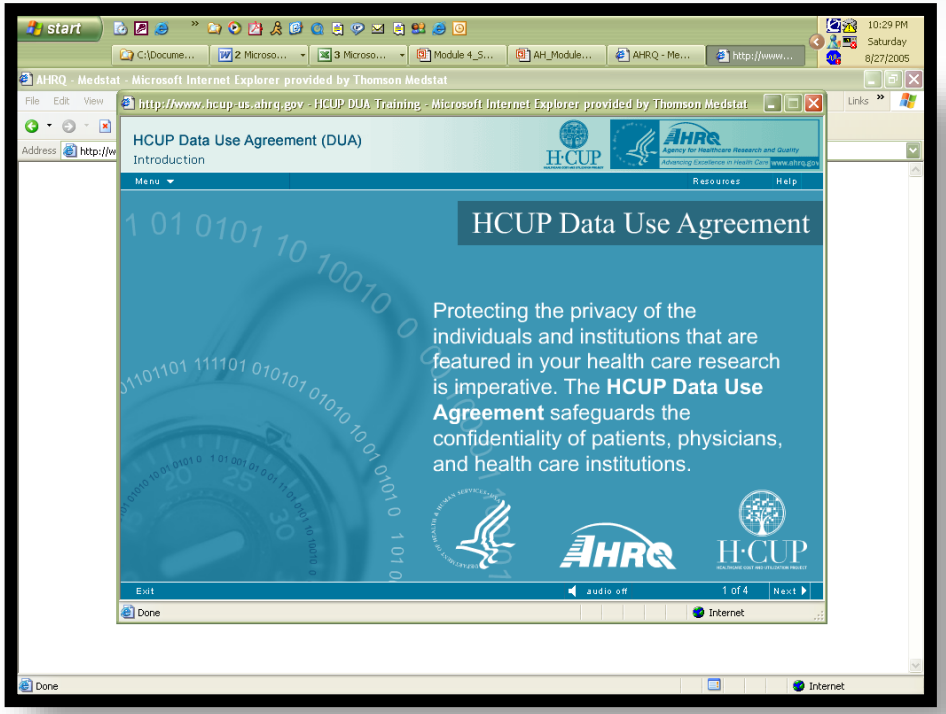
Step 5: Download Nationwide databases online or receive delivery of State databases through the mail.

For assistance, contact the HCUP Central Distributor:

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

About the HCUP Data Use Agreement (DUA) Training 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

http://www.hcup-us.ahrq.gov/DUA/dua/index.htm

Pricing Information Per Data Year

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; 2013 student price $50)
  $200 (earlier years; student price $20)
- **NEDS**: $500 (2013 student price $75)
  (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

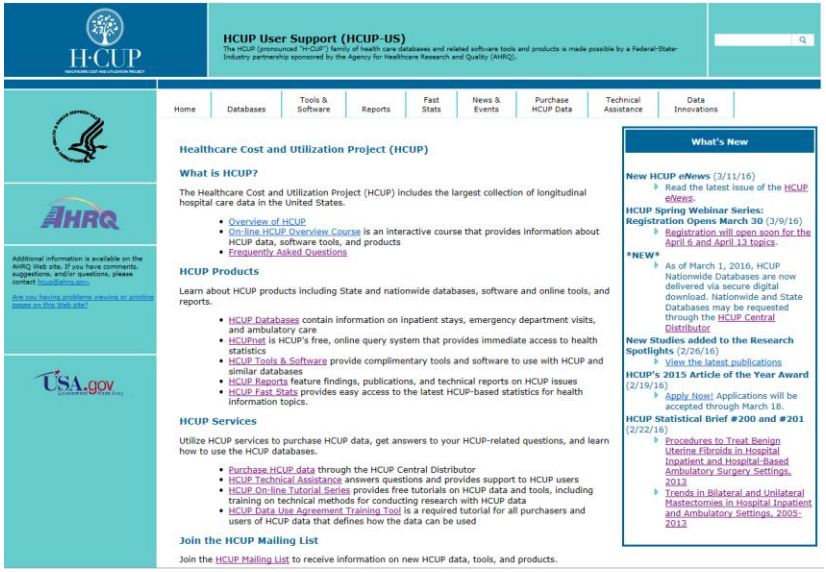
Software Requirements of Working with the Full HCUP Files

Software Package	Load Programs	Format Programs	Example Statistical Coding	HCUP Tools Programs
SAS	X	X	X	X
STATA	X		X	X
SPSS	X			X
SUDAAN			X	

MS Excel and Access are NOT GOOD Options!

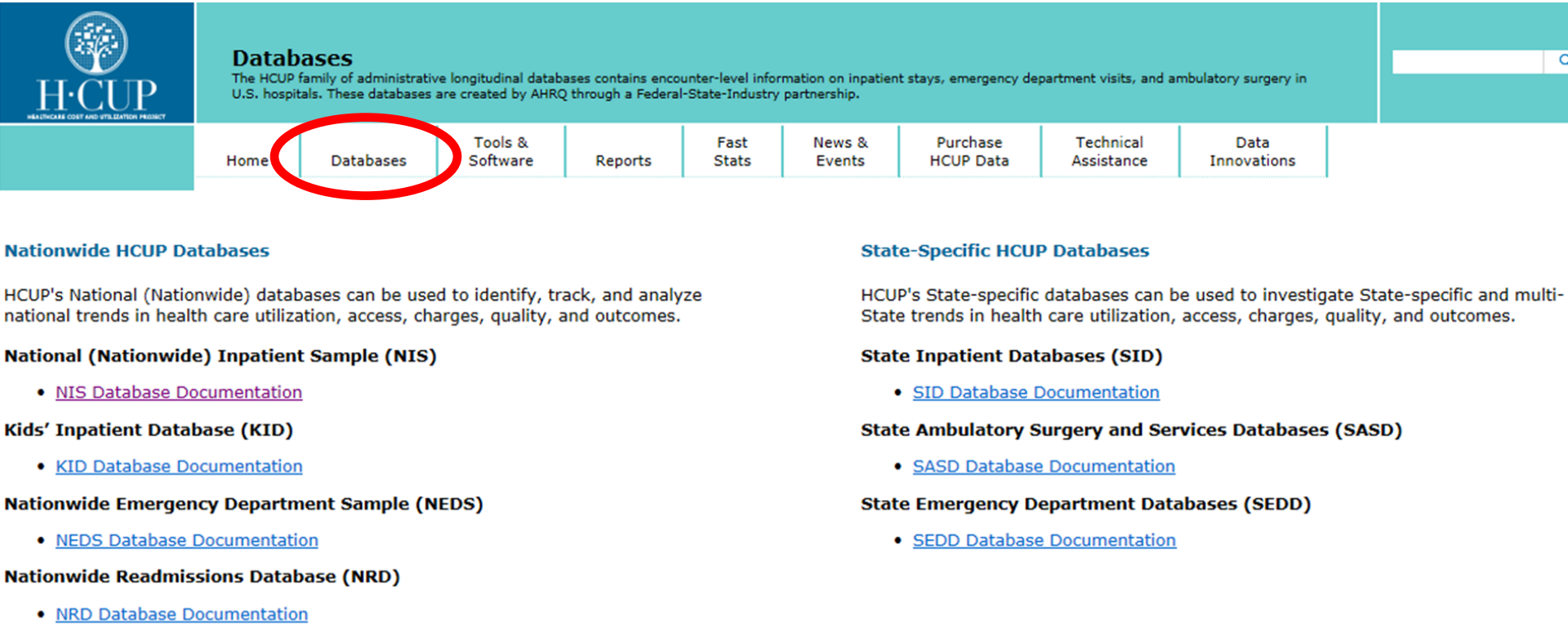
HCUP-US User Support Web Site

- 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 and database reports
- Access technical assistance



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

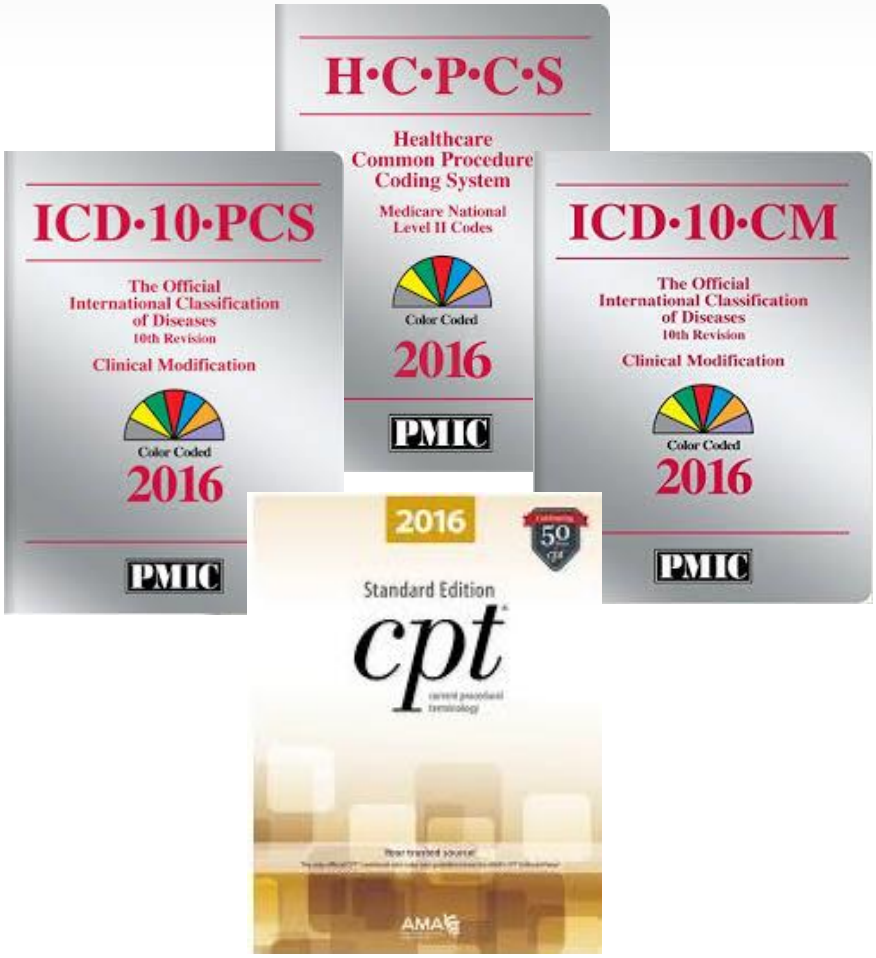
HCUP-US for Database Documentation



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

Value-Added Clinical and Quality Measurement Tools

- Clinical Classifications Software*
- Procedure Classes*
- Chronic Condition Indicator*
- Comorbidity Software*
- Utilization Flags*
- Surgery Flags*
- AHRQ Quality Indicators
  - Prevention Quality Indicators
  - Inpatient Quality Indicators
  - Patient Safety Indicators
  - Pediatric Quality Indicators



* Already available on most HCUP databases

Clinical Classifications Software (CCS)

- Clusters diagnosis and procedure codes into categories
  - >14,000 diagnoses codes → 285 categories
  - > 4,000 procedure codes → 231 categories
- Useful for presenting descriptive statistics, understanding patterns

CCS for ICD-9

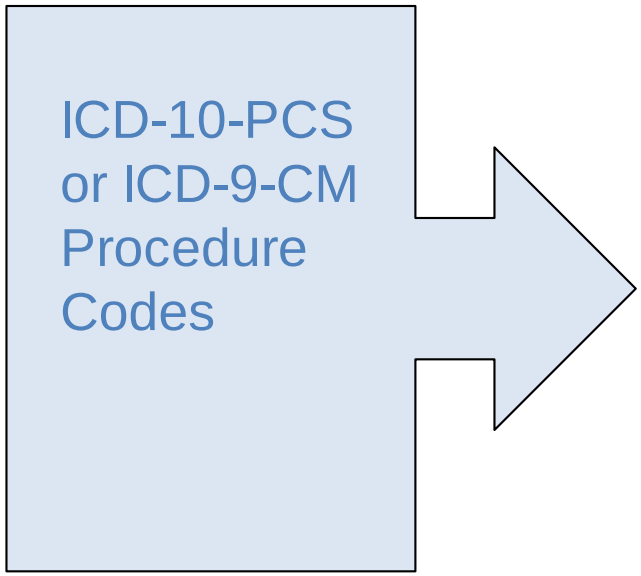
ICD-9-CM Codes	CCS Categories
0031 0202 0223 0362 0380 0381 03810 03811 03819 0382 0383 03840 03841 03842 03843	CCS 2: Septicemia
03844 03849 0388 0389 0545 449 7907	CCS 6: Hepatitis
0700 0701 0702 07020 07021 07022 07023 0703 07030 07031 07032 07033 0704 07041 07042 07043 07044 07049	

Clinical Classifications Software (CCS)

- ICD-9-CM diagnoses and procedures
  - Single-level
  - Multi-level
- ICD-10-CM diagnoses and ICD-10-PCS procedures
  - Single-level
- ICD-10 for mortality
- Services and Procedures
  - Common Procedural Terminology (AMA)

Procedure Classes

- Groups procedure codes into one of four categories
  - ICD-10-PCS
  - ICD-9-CM procedure codes
- Major procedures defined as OR procedures (DRGs)

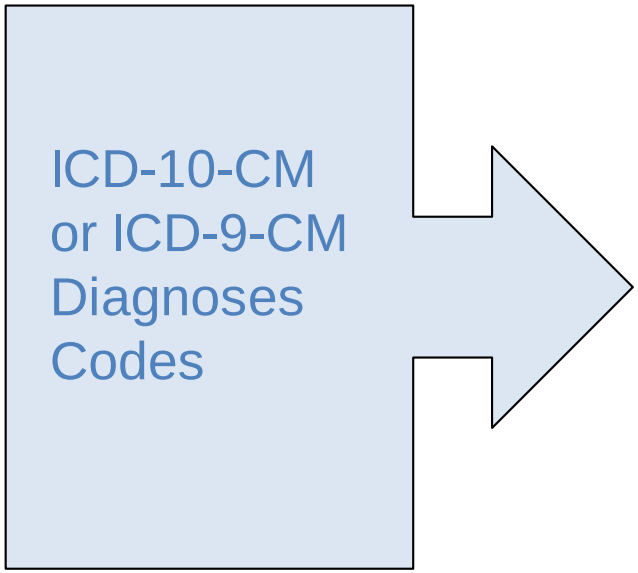


1. **Minor Diagnostic**
   Ex: Electrocardiogram
2. **Minor Therapeutic**
   Ex: Pacemaker
3. **Major Diagnostic**
   Ex: Pericardial Biopsy
4. **Major Therapeutic**
   Ex: CABG

Chronic Condition Indicator (CCI)

Groups diagnosis codes into Chronic or Non-Chronic Categories

- ICD-10-CM diagnoses codes
- ICD-9-CM diagnoses codes



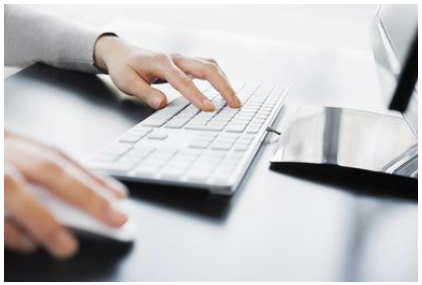
1. **Chronic**
   Ex: Diabetes
2. **Non-Chronic**
   Ex: Food Poisoning

Comorbidity Software

- Creates and appends indicator flags to each record for 29 major comorbidities
  - ICD-10-CM diagnoses codes
  - ICD-9-CM diagnoses codes

ICD-10-CM
or ICD-9-CM Codes,
DRGs on Administrative
Data

Comorbidity Software



29 Comorbidity Groups

Valvular disease
Pulm circ disorders
Peripheral vascular dx
Hypertension
Paralysis
Other neuro disorders
Chronic pulmonary dx
DM w/o complications
DM w/ complications
Hypothyroidism
Renal failure
Liver disease …

Utilization Flags

- Reveals additional information about the use of health care services
- Primarily uses UB-04 revenue codes, augmented with ICD-9-CM procedure codes

Utilization Flag Software

UB-04 codes

+

ICD-9-CM codes

- Emergency Room
- Observation Services/ CT Scan
- Intensive Care Unit

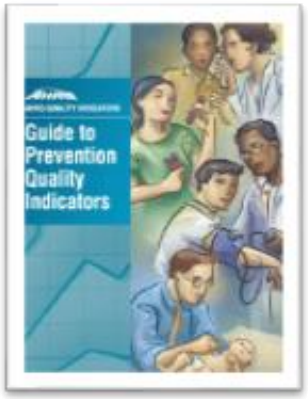
30 Utilization Flags

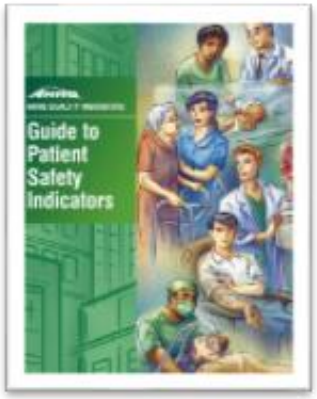
Utilization Flags	
Accommodation	
Intensive Care Unit (ICU)	Coronary Care Unit (CCU)
Newborn Level II	Newborn Level III
Newborn Level IV	
Cardiac Services	
Cardiac Catheterization Lab	Cardiac Stress Test
Echocardiogram	Electrocardiogram (EKG)
Imaging and Diagnostic Tests	
Computed Tomography (CT) Scan	Chest X-Ray
Electroencephalogram (EEG)	Ultrasound
Magnetic Resonance Technology (MRT)	Nuclear Medicine
Devices	
Pacemaker	Other Implants
Therapeutic Services	
Lithotripsy	Occupational Therapy
Physical Therapy	Respiratory Therapy
Therapeutic Radiology and Chemotherapy	Renal Dialysis
Speech-Language Pathology	Erythropoietin (EPO)
Mental Health and Substance Abuse	Blood

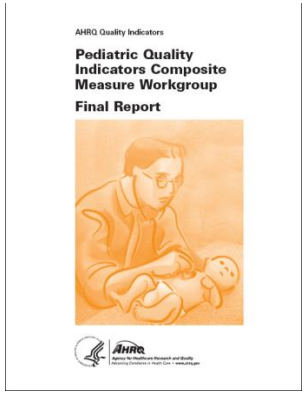
There are not ICD-9-CM codes for all services. Some diagnostic procedures may be under-reported

AHRQ Quality Indicators

- Creates measures of health care quality using inpatient administrative data
  - **4 Quality Indicators**
    1. Prevention Quality Indicators
    2. Inpatient Quality Indicators
    3. Patient Safety Indicators
    4. Pediatric Indicators







HCUP Supplemental Files

- Cost-to-Charge Ratio Files
- Hospital Market Structure Files
- Supplemental Variables for Readmission Analyses
- AHA Linkage Files
- NIS Hospital Ownership File
- Trend Weights Files (NIS & KID)

Charges vs. Costs

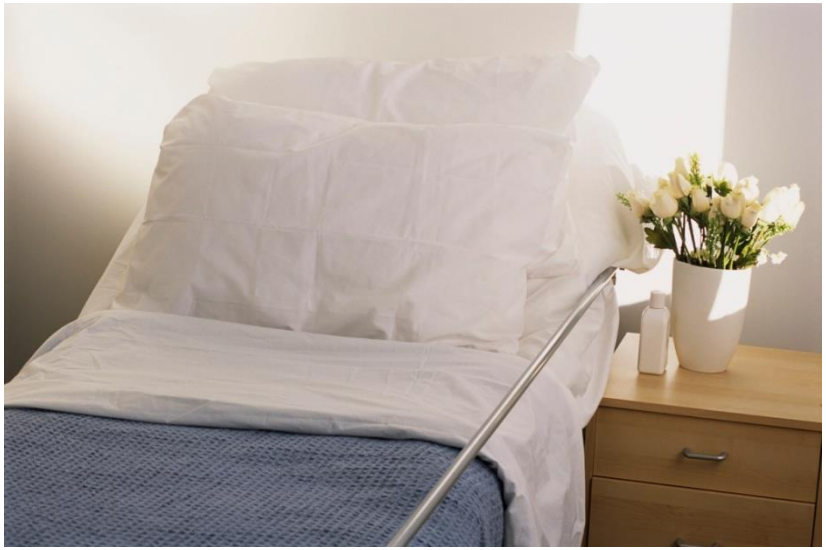
- **Charges:** What the hospital charged for care (includes charge BEFORE discount)

- **Costs:** What it cost the hospital to provide the care

HCUP Databases include **CHARGE** information. **COST** information can be estimated by applying the cost-to-charge supplemental file to the data to select databases

HCUP Supplemental Variables for Revisit Analyses

- Allow linkage across settings and time
  - Hospital readmissions
  - ED visits following hospital discharge
  - Inpatient hospitalizations following ambulatory surgery visits
- Adhere to strict privacy guidelines



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

http://hcupnet.ahrq.gov

HCUPnet Can Answer a Variety of Questions

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

HCUPnet Provides …

Step-by-step queries on:	Specialized queries:	Ready-to-use:
Hospital inpatient (NIS, KID, SID)	Mental health related stays	National benchmarks for healthcare quality indicators based on the AHRQ Quality Indicators
ED visits (NEDS, SEDD)	Stays by expected payer	"Quick national or State statistics"
Ambulatory surgeries	Hospital-level statistics	Readmissions
National and regional statistics		Community-level statistics

How does HCUPnet Work?

- Step 1: Select the focus of your query.
- Step 2: Select the type of query you want.
- Step 3: Select the Outcomes and Measures.
- Step 4: Select patient and hospital characteristics.
- Step 5: Results.

Welcome to H·CUPnet

HCUPnet is a free, on-line query system based on data from the Healthcare Cost and Utilization Project (HCUP). It provides access to health statistics and information on hospital inpatient and emergency department utilization.

http://hcupnet.ahrq.gov

HEALTH DATA ALL-STAR

Begin your query here -

Statistics on Hospital Stays

National Statistics on All Stays

Create your own statistics for national and regional estimates on hospital use for all patients from the HCUP National (Nationwide) Inpatient Sample (NIS). Overview of the National (Nationwide) Inpatient Sample (NIS)

National Statistics on Children

Create your own statistics for national estimates on use of hospitals by children (age 0-17 years) from the HCUP Kids' Inpatient Database (KID). Overview of the Kids' Inpatient Database (KID)

National Statistics on Mental Health Hospitalizations

Interested in acute care hospital stays for mental health and substance abuse? Create your own national statistics from the NIS.

National and State Statistics on Hospital Stays by Payer - Medicare, Medicaid, Private, Uninsured

Interested in hospital stays billed to a specific payer? Create your own statistics for a payer, alone or compared to other payers from the NIS, KID, and SID.

State Statistics on All Stays

Create your own statistics on stays in hospitals for participating States from the HCUP State Inpatient Databases (SID). Overview of the State Inpatient Databases (SID)

Quick National or State Statistics

Ready-to-use tables on commonly requested information from the HCUP National (Nationwide) Inpatient Sample (NIS), the HCUP Kids' Inpatient Database (KID), or the HCUP State Inpatient Databases (SID).

Hospital Readmissions

Readmission Summary Tables

Ready-to-use information on readmissions to the hospital within 30 days of discharge.

Quick Statistics on Readmissions

Sortable tables that provide instant information on 30-day readmissions to the hospital.

Statistics on Ambulatory Surgery Use

Statistics on Ambulatory Surgery

Create your own statistics on ambulatory surgeries for participating States from the HCUP State Ambulatory Surgery and Services Databases (SASD). Compare to statistics on inpatient surgeries for participating States from the HCUP State Inpatient Databases (SID).
Overview of the State Ambulatory Surgery and Services Databases (SASD) Overview of the State Inpatient Databases (SID)

Quick Statistics on Ambulatory Surgery

Ready-to-use tables on commonly requested information from the SASD.

Statistics on Emergency Department Use

National Statistics on All ED Visits

Create your own statistics for national and regional estimates on emergency department visits for all patients from the HCUP Nationwide Emergency Department Sample (NEDS).
Overview of the Nationwide Emergency Department Sample (NEDS)

Quick National or State Statistics on All ED Visits

Ready-to-use tables on commonly requested information from the NEDS, SEDD, and SID.

State Statistics on All ED Visits

Create your own statistics on emergency department visits for participating States from the HCUP State Emergency Department Databases (SEDD) and the SID.
Overview of the State Emergency Department Databases (SEDD)
Overview of the State Inpatient Databases (SID)

First Time Visitor?

- HCUPnet overview
- How does HCUPnet work?
- HCUPnet methodology?
- HCUPnet definitions?

What's New?

- 2013 nationwide Just Add ED data -- new database jus released. (12/11/2015)
- Cost information Just Add for participating states in 20 (10/13/2015)
- 2013 nationwide Just Add hospital data now available. (10/08/2015)
- New 2013 readmission data added. (09/30/2015)
- Maps are now available on t Community-Level Statistics path. (06/08/2015)
- 2013 data for participating States. (04/09/2015)
- All NIS results Important No prior to 2012 recalculated to permit trend analysis

Projected estimates on speci conditions are periodically available here.

H·CUP

More information HCUP data, too and reports

What is HCUP?

Brief description - what is HCUP

Want to purchase data to do yo own analysis?

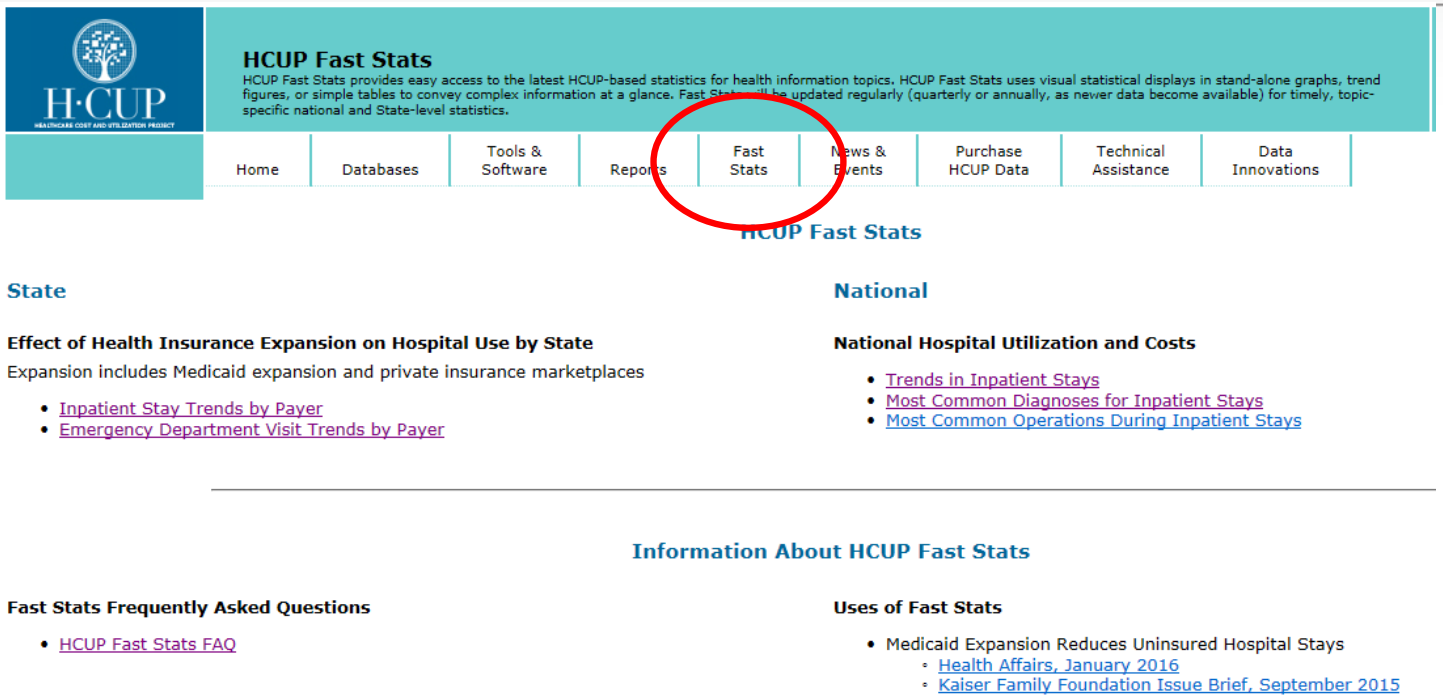
The statistics in HCUPnet would not be possible without partner organizations that provide da to HCUP.

HCUPnet is based on aggregate statistics t to speed up data transfer and protect indiv records, so not all possible queries can be addressed. If a query is not possible, HCU will not allow you to choose certain param If there is a query you'd like to see that HCUPnet does not support, please write u hcup@ahrq.hhs.gov. Internet Citation: HCUPnet, Healthcare Cost and Utilization Project. Agency for Healthcare Research a Quality, Rockville, MD. http://hcupnet.ahrq.gov/

HCUPnet Capabilities

HCUPnet...	
CAN PRODUCE...	**CANNOT PRODUCE…**
Simple statistics	More complicated queries
Sample size calculations	Multivariate analyses
Trends information	Statistics involving certain variables (ex. Indication that the diagnosis was present on admission)
Rank ordering of diagnoses and procedures	Statistics that may violate confidentiality (patient-, provider-, hospital-level data)
Significance testing	

HCUP Fast Stats



- HCUP Fast Stats provides easy access to the latest HCUP-based statistics for health 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).

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

HCUP Fast Stats – *Effect of Health Insurance Expansion on Hospital Use*

HCUP Fast Stats - Effect of Health Insurance Expansion on Inpatient Stays

HCUP Fast Stats provides easy access to the latest HCUP-based statistics for health information topics. This section provides State-level trends in hospital inpatient stays by expected payer.

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

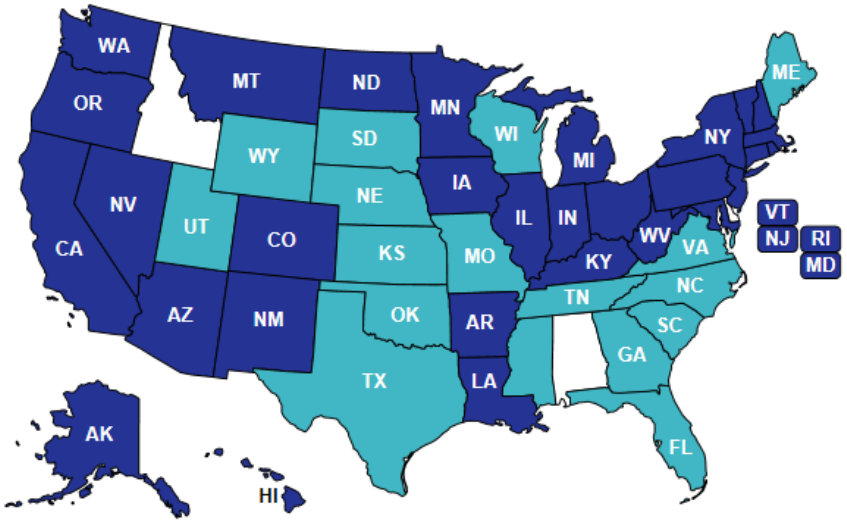
Effect of Health Insurance Expansion on Inpatient Stays

Click map to select one of the identified States, or select from list and click Select: Alaska* Select *Medicaid expansion State

Information is available for labeled States.

A tutorial for Effect of Health Insurance Expansion on Inpatient Stays is available.

Fast Stats Data Updated regularly!



Medicaid expansion States in HCUP | Medicaid nonexpansion States in HCUP | Non-HCUP States

HCUP Fast Stats – *Effect of Health Insurance Expansion on Emergency Department Visits*

HCUP Fast Stats - Effect of Health Insurance Expansion on Emergency Department Visits

HCUP Fast Stats provides easy access to the latest HCUP-based statistics for health information topics. This section provides State-level trends in hospital emergency department visits by expected payer.

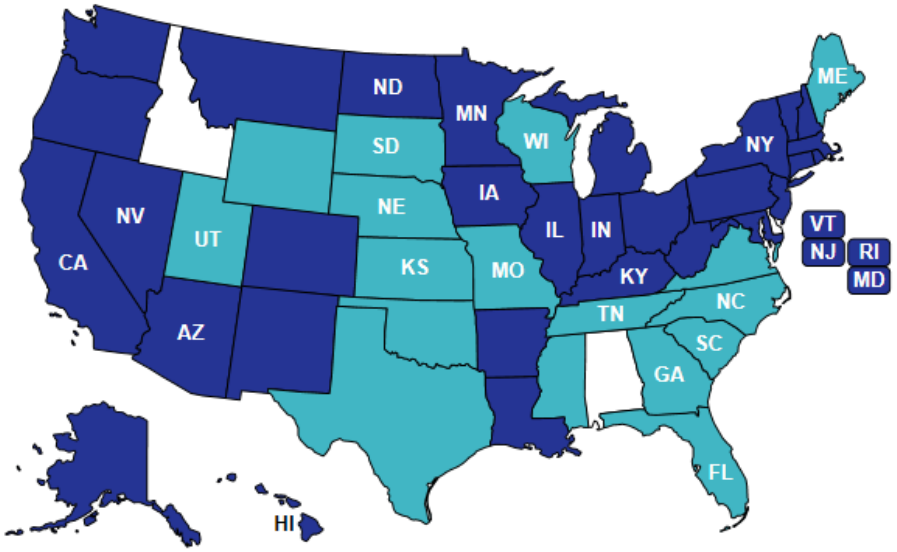
Home | Databases | Tools & Software | Reports | Fast Stats | News & Events | Purchase HCUP Data | Technical Assistance | Data Innovations

Effect of Health Insurance Expansion on Emergency Department Visits

Click map to select one of the identified States, or select from list and click Select: Arizona* Select *Medicaid expansion State

Information is available for labeled States.

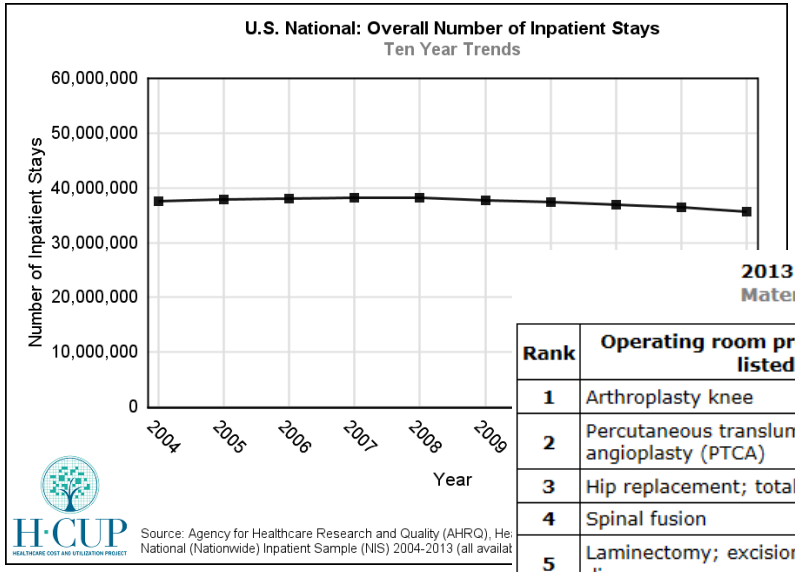
New



Medicaid expansion States in HCUP | Medicaid nonexpansion States in HCUP | Non-HCUP States

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.



2013 U.S. National Inpatient Stays
Maternal/Neonatal Stays Included

Rank	Principal diagnosis	Total number of stays	Rate of stays per 100,000
1	Liveborn	3,764,533	1,196
2	Septicemia (except in labor)	1,297,045	412
3	Osteoarthritis	1,023,070	325
4	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	960,594	305
	ertensive	882,179	280
		835,623	265
		709,560	225
	sease	644,744	205
	r graft	631,960	201
	rperium	625,390	199

ity (AHRQ), Healthcare Cost and Utilization Project

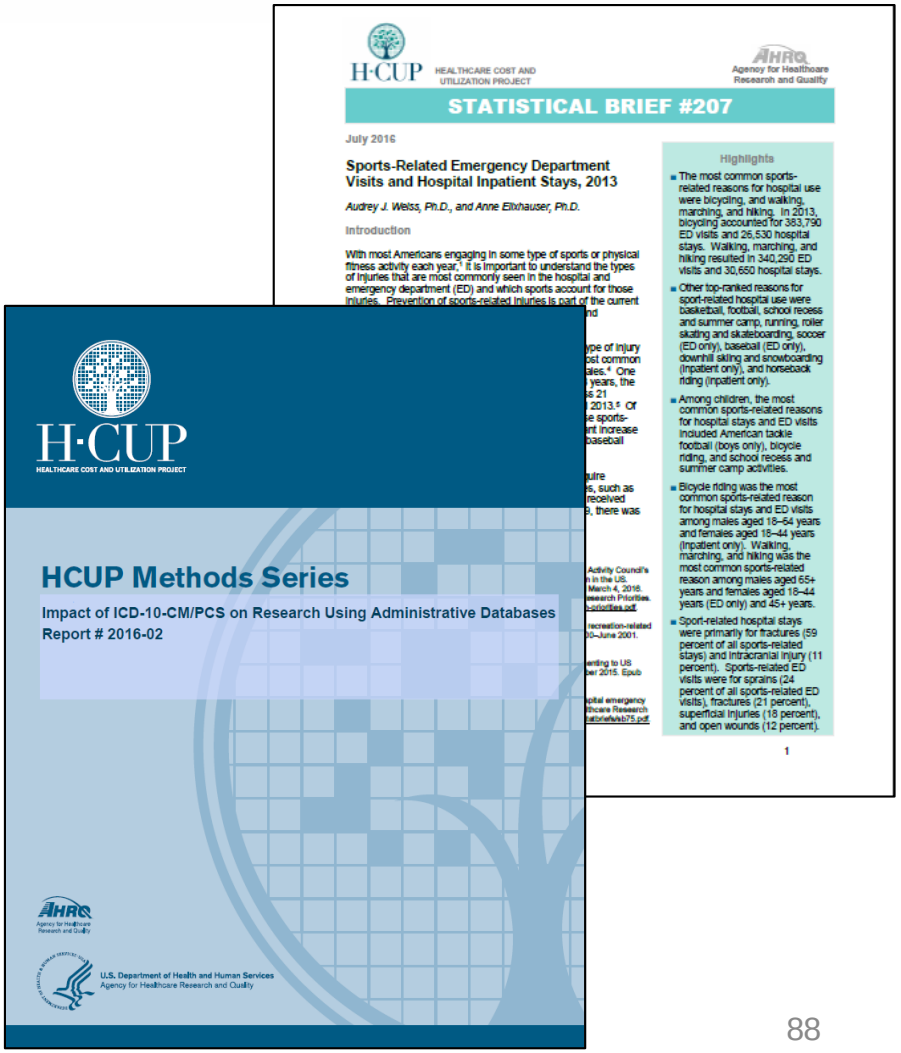
2013 U.S. National Inpatient Stays
Maternal/Neonatal Stays Excluded

Rank	Operating room procedures (all-listed)	Total number of stays	Rate of stays per 100,000
1	Arthroplasty knee	732,550	233
2	Percutaneous transluminal coronary angioplasty (PTCA)	498,975	158
3	Hip replacement; total and partial	493,675	157
4	Spinal fusion	454,550	144
5	Laminectomy; excision intervertebral disc	452,115	144
6	Other OR procedures on vessels other than head and neck	421,995	134
7	Cholecystectomy and common duct exploration	387,980	123
8	Partial excision bone	344,915	110
9	Colorectal resection	302,485	96
10	Excision; lysis peritoneal adhesions	295,020	94

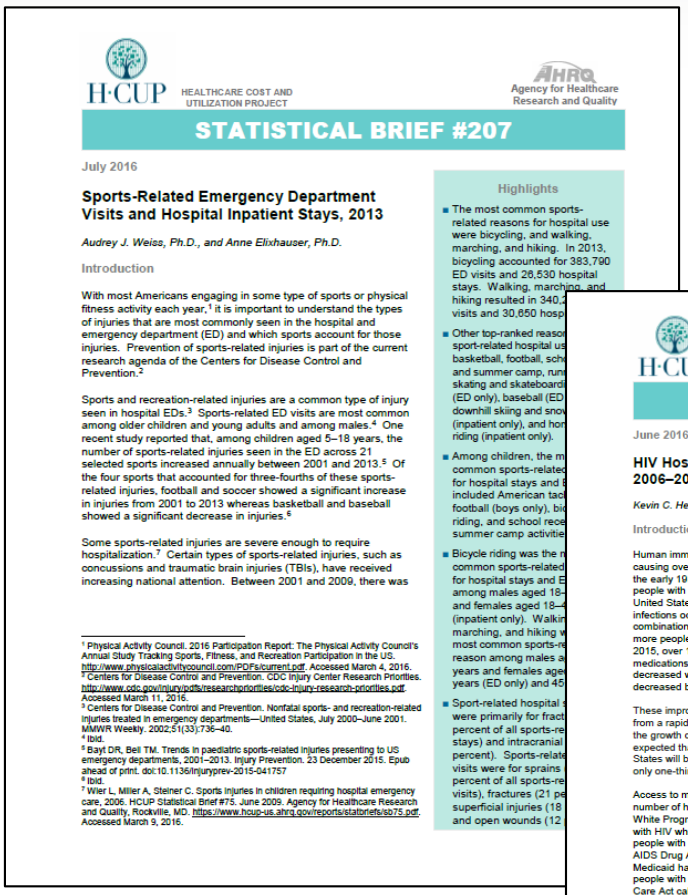
Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2013

HCUP Publications

- **Statistical Briefs**
- **Methods Series Reports**



HCUP-US: Statistical Briefs



H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #207

July 2016

Sports-Related Emergency Department Visits and Hospital Inpatient Stays, 2013

Audrey J. Weiss, Ph.D., and Anne Elixhauser, Ph.D.

Introduction

With most Americans engaging in some type of sports or physical fitness activity each year,[1] it is important to understand the types of injuries that are most commonly seen in the hospital and emergency department (ED) and which sports account for those injuries. Prevention of sports-related injuries is part of the current research agenda of the Centers for Disease Control and Prevention.[2]

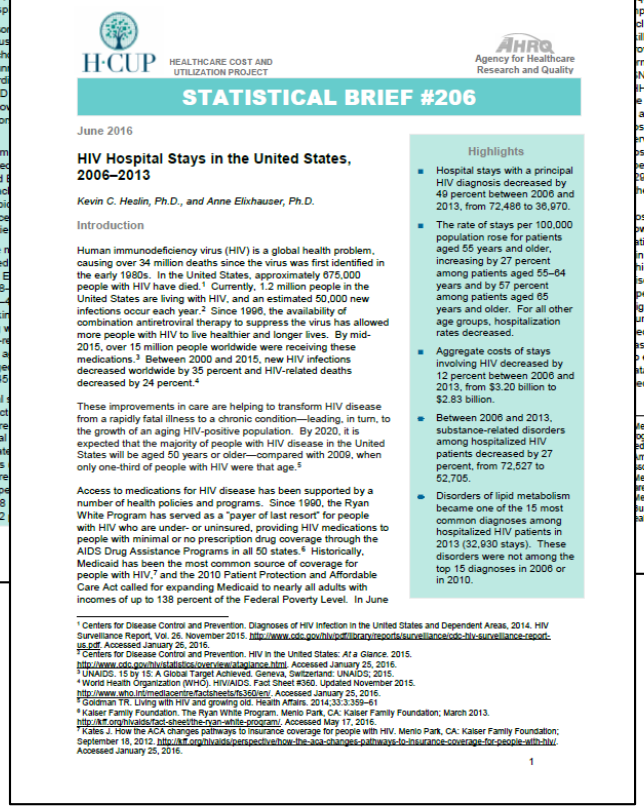
Sports and recreation-related injuries are a common type of injury seen in hospital EDs.[3] Sports-related ED visits are most common among older children and young adults and among males.[4] One recent study reported that, among children aged 5–18 years, the number of sports-related injuries seen in the ED across 21 selected sports increased annually between 2001 and 2013.[5] Of the four sports that accounted for three-fourths of these sports-related injuries, football and soccer showed a significant increase in injuries from 2001 to 2013 whereas basketball and baseball showed a significant decrease in injuries.[5]

Some sports-related injuries are severe enough to require hospitalization.[7] Certain types of sports-related injuries, such as concussions and traumatic brain injuries (TBIs), have received increasing national attention. Between 2001 and 2009, there was

Highlights

- The most common sports-related reasons for hospital use were bicycling, and walking, marching, and hiking. In 2013, bicycling accounted for 383,790 ED visits and 26,530 hospital stays. Walking, marching, and hiking resulted in 340,2 visits and 30,650 hosp
- Other top-ranked reasor sport-related hospital us basketball, football, sch and summer camp, run skating and skateboardi (ED only), baseball (ED downhill skiing and sno (inpatient only), and hor riding (inpatient only).
- Among children, the m common sports-related for hospital stays and E included American tac football (boys only), bi riding, and school rece summer camp activitie
- Bicycle riding was the m common sports-related for hospital stays and E among males aged 18– and females aged 18–4 (inpatient only). Walkin marching, and hiking w most common sports-re reason among males a years and females age years (ED only) and 45
- Sport-related hospital s were primarily for fract percent of all sports-re stays) and intracranial percent). Sports-relate visits were for sprains percent of all sports-re visits), fractures (21 pe superficial injuries (18 and open wounds (12

[1] Physical Activity Council. 2016 Participation Report: The Physical Activity Council's Annual Study Tracking Sports, Fitness, and Recreation Participation in the US. http://www.physicalactivitycouncil.com/PDFs/current.pdf. Accessed March 4, 2016.
[2] Centers for Disease Control and Prevention. CDC Injury Center Research Priorities. http://www.cdc.gov/injury/pdfs/researchpriorities/cdc-injury-research-priorities.pdf. Accessed March 11, 2016.
[3] Centers for Disease Control and Prevention. Nonfatal sports- and recreation-related injuries treated in emergency departments—United States, July 2000–June 2001. MMWR Weekly. 2002;51(33):736–40.
[4] Ibid.
[5] Bayt DR, Bell TM. Trends in paediatric sports-related injuries presenting to US emergency departments, 2001–2013. Injury Prevention. 23 December 2015. Epub ahead of print. doi:10.1136/injuryprev-2015-041757
[6] Ibid.
[7] Wier L, Miller A, Steiner C. Sports injuries in children requiring hospital emergency care, 2006. HCUP Statistical Brief #75. June 2009. Agency for Healthcare Research and Quality, Rockville, MD. https://www.hcup-us.ahrq.gov/reports/statbriefs/sb75.pdf. Accessed March 9, 2016.



H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #206

June 2016

HIV Hospital Stays in the United States, 2006–2013

Kevin C. Heslin, Ph.D., and Anne Elixhauser, Ph.D.

Introduction

Human immunodeficiency virus (HIV) is a global health problem, causing over 34 million deaths since the virus was first identified in the early 1980s. In the United States, approximately 675,000 people with HIV have died.[1] Currently, 1.2 million people in the United States are living with HIV, and an estimated 50,000 new infections occur each year.[2] Since 1996, the availability of combination antiretroviral therapy to suppress the virus has allowed more people with HIV to live healthier and longer lives. By mid-2015, over 15 million people worldwide were receiving these medications.[3] Between 2000 and 2015, new HIV infections decreased worldwide by 35 percent and HIV-related deaths decreased by 24 percent.[4]

These improvements in care are helping to transform HIV disease from a rapidly fatal illness to a chronic condition—leading, in turn, to the growth of an aging HIV-positive population. By 2020, it is expected that the majority of people with HIV disease in the United States will be aged 50 years or older—compared with 2009, when only one-third of people with HIV were that age.[5]

Access to medications for HIV disease has been supported by a number of health policies and programs. Since 1990, the Ryan White Program has served as a "payer of last resort" for people with HIV who are under- or uninsured, providing HIV medications to people with minimal or no prescription drug coverage through the AIDS Drug Assistance Programs in all 50 states.[6] Historically, Medicaid has been the most common source of coverage for people with HIV,[7] and the 2010 Patient Protection and Affordable Care Act called for expanding Medicaid to nearly all adults with incomes of up to 138 percent of the Federal Poverty Level. In June

Highlights

- Hospital stays with a principal HIV diagnosis decreased by 49 percent between 2006 and 2013, from 72,488 to 36,970.
- The rate of stays per 100,000 population rose for patients aged 55 years and older, increasing by 27 percent among patients aged 55–64 years and by 57 percent among patients aged 65 years and older. For all other age groups, hospitalization rates decreased.
- Aggregate costs of stays involving HIV decreased by 12 percent between 2006 and 2013, from $3.20 billion to $2.83 billion.
- Between 2006 and 2013, substance-related disorders among hospitalized HIV patients decreased by 27 percent, from 72,527 to 52,705.
- Disorders of lipid metabolism became one of the 15 most common diagnoses among hospitalized HIV patients in 2013 (32,930 stays). These disorders were not among the top 15 diagnoses in 2006 or in 2010.

[1] Centers for Disease Control and Prevention. Diagnoses of HIV Infection in the United States and Dependent Areas, 2014. HIV Surveillance Report, Vol. 26. November 2015. http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-us.pdf. Accessed January 26, 2016.
[2] Centers for Disease Control and Prevention. HIV in the United States: *At a Glance*. 2015. http://www.cdc.gov/hiv/statistics/overview/ataglance.html. Accessed January 25, 2016.
[3] UNAIDS. 15 by 15: A Global Target Achieved. Geneva, Switzerland: UNAIDS; 2015.
[4] World Health Organization (WHO). HIV/AIDS. Fact Sheet #360. Updated November 2015. http://www.who.int/mediacentre/factsheets/fs360/en/. Accessed January 25, 2016.
[5] Goldman TR. Living with HIV and growing old. Health Affairs. 2014;33:3:359–61
[6] Kaiser Family Foundation. The Ryan White Program. Menlo Park, CA: Kaiser Family Foundation; March 2013. http://kff.org/hivaids/fact-sheet/the-ryan-white-program/. Accessed May 17, 2016.
[7] Kates J. How the ACA changes pathways to insurance coverage for people with HIV. Menlo Park, CA: Kaiser Family Foundation; September 18, 2012. http://kff.org/hivaids/perspective/how-the-aca-changes-pathways-to-insurance-coverage-for-people-with-hiv/. Accessed January 25, 2016.

H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #205

May 2016

An All-Payer View of Hospital Discharge to Postacute Care, 2013

Wen Tian, Ph.D., M.D.

Introduction

Following hospitalizations for injury or illness, many patients require continued postacute care (PAC) to support recovery, improve functional status, or manage chronic illness. PAC includes a range of medical services such as rehabilitation care, skilled nursing care, and palliative care. In 2014, PAC was provided in 1,177 inpatient rehabilitation facilities (IRFs), 422 long-term care hospitals (LTCHs),15,173 skilled nursing facilities (SNFs), and at home through 12,461 home health agencies (HHAs).[1] The four types of PAC settings overlap considerably in the conditions treated. However, each type of setting specializes in a specific array of care and therapies with different staffing, costs, and outcomes.[2] About 42 percent of Medicare fee-for-service (FFS) patients were discharged to a PAC setting after hospitalization in 2013.[3] Between 2001 and 2013, Medicare spending on PAC, both facility-based and in-home, doubled from $29 billion to $59 billion per year and has grown faster than most other major Medicare spending categories.[4]

Hospital discharge planning plays a key role in shaping downstream PAC use in terms of the numbers and types of patients discharged to different PAC settings. However, no clear clinical guidance exists to determine the type of PAC setting to which a patient with a specific condition should be discharged. Discharges to PAC often are driven by the availability of specific types of settings and by financial incentives that are not always aligned with clinical needs and may not be cost-effective.[5] Current studies on discharges to PAC are based on either Medicare FFS patients using Medicare claims data or small clinic-based cohorts using primary data collection. To date, there are no estimates of discharges to PAC based on a national all-payer dataset that can offer a complete picture including not only Medicare FFS but also other payers.

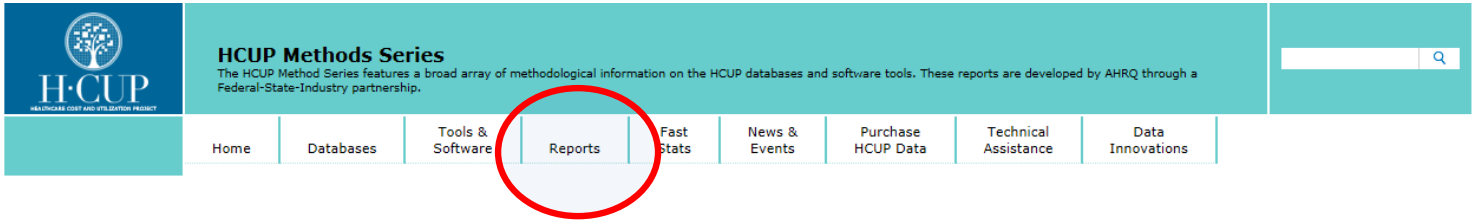
Highlights

- Approximately 7.96 million inpatient stays were discharged to postacute care (PAC) settings, accounting for 22.3 percent of all hospital discharges in 2013.
- The rates of discharge to PAC were 41.7 percent for Medicare, 11.7 percent for private insurance, 8.1 percent for Medicaid, and only 4.8 percent for uninsured stays.
- Home health agencies accounted for 50 percent of discharges to PAC. More than 40 percent of discharges to PAC went to skilled nursing facilities (SNFs).
- Stays discharged to PAC were much longer and more costly than those with routine discharges (7.0 days vs. 3.6 days; $16,900 vs. $8,300 on average).
- Total hip/knee joint replacement accounted for nearly 10 percent of all discharges to PAC, among which 54.1 percent went to home health agencies, 37.3 percent went to SNFs, and 8.4 percent went to inpatient rehabilitation facilities.
- Among the nine census divisions, the New England area had the highest rate of discharge to PAC, 32.8 percent. The Mountain and Pacific areas had the lowest rate of discharge to PAC, about 17.8 percent.

Medicare Payment Advisory Commission. Health Care Spending and the Medicare Program. MedPAC Annual Data Book. Section 8: Post-Acute Care. Washington, DC: Medicare Payment Advisory Commission; June 2015.
American Hospital Association. TrendWatch: Maximizing the Value of Post-Acute Care. Washington, DC: American Hospital Association; November 2010.
Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy. Chapter 7: Medicare's Post-Acute Care: Trends and Ways to Rationalize Payments. Washington, DC: Medicare Payment Advisory Commission; March 2015.
Medicare Payment Advisory Commission. Health Care Spending and the Medicare Program. Op. cit.
Buntin MB, Garten AD, Paddock S, Saliba D, Totten M, Escarce JJ. How much is post-acute care use affected by its availability? Health Services Research. 2005;40(2):413–34.

HCUP Methods Reports

Methodological information on the HCUP databases and software tools



HCUP Methods Series

The HCUP Methods Series features a broad array of methodological information on the HCUP databases and software tools. Reports in the series are listed below by category. Reports are also listed by year in chronological order.

Methodology
- Calculating Costs
- Diagnosis Present-on-Admission Indicators
- Estimating Trends (NIS and KID)
- Expected Payer
- Observation Services
- Population Denominator Data for Use with HCUP Databases
- Readmission and Revisit Analyses
- Statistical Methods

HCUP Methods for NHQR and NHDR
- NHDR
- NHQR

Comparison Reports
- NIS
- KID

Evaluations of Data
- Emergency Department Data
- State Ambulatory Surgery and Services Databases
- Other (Patient Safety Variation, E Codes, Observation Stays)

Enhancing Administrative Data
- Clinical Information
- Synthetic Person Numbers (for linking across settings and over time)

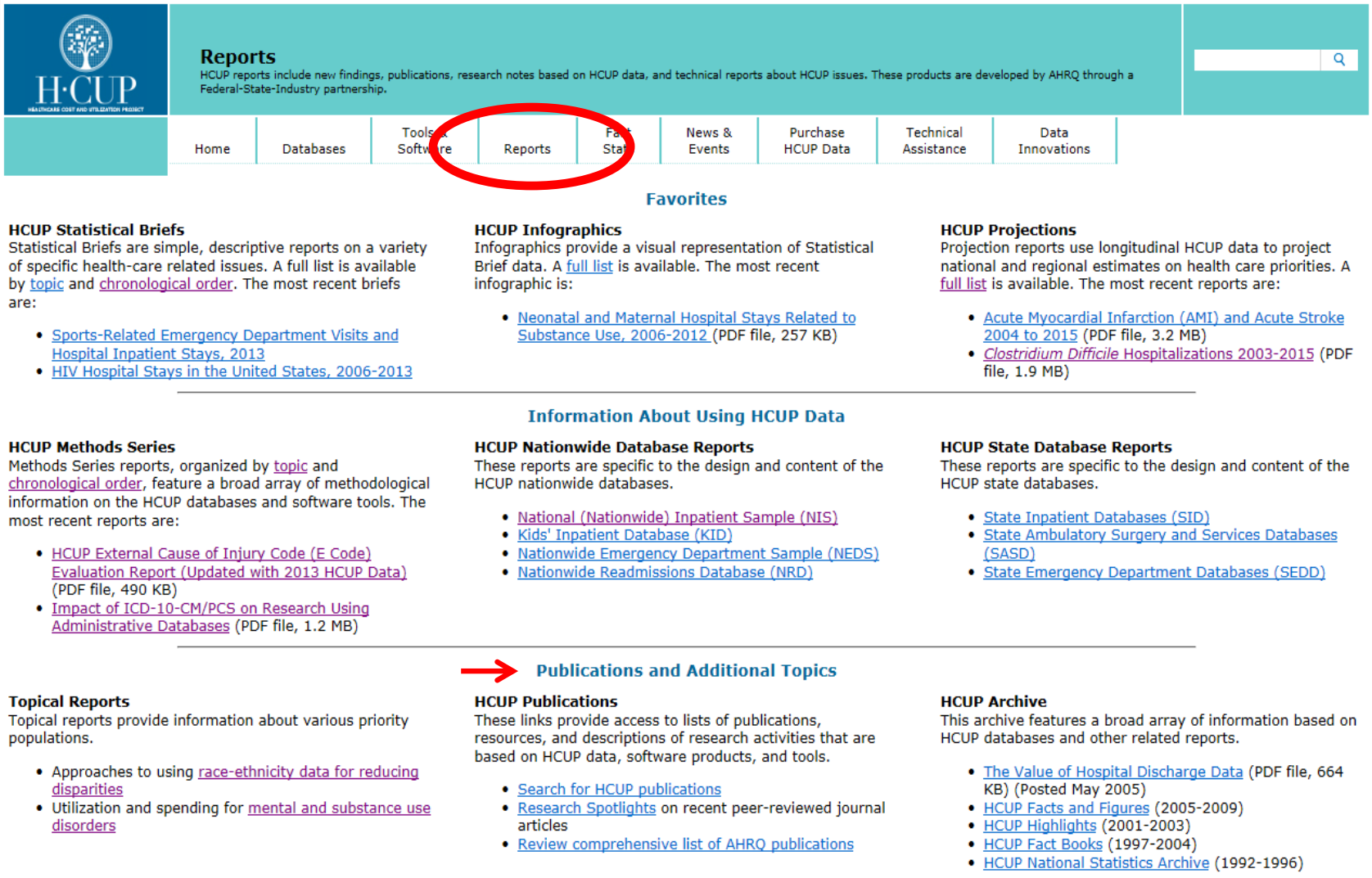
HCUP Tool Development
- Clinical Classifications Software
- Comorbidity Software
- Utilization Flags

Calculating Costs

Report #2011-04	Tools for More Accurate Inpatient Cost Estimates with HCUP Databases, 2009 (PDF file, 837 KB)
Report #2008-04	Calculate Cost Adjustment Factors by APR-DRG and CCS Using Selected States with Detailed Charge (PDF file, 122 KB)
Report #2008-03	The Cost of Ambulatory Surgery Visits, 2005 (PDF file, 187 KB)
Report #2007-05	The Cost of "Treat and Release" to Hospital Emergency Departments, 2003 (PDF file, 166 KB)

Return to top

HCUP-US for HCUP Reports and Publications Search



Reports

HCUP reports include new findings, publications, research notes based on HCUP data, and technical reports about HCUP issues. These products are developed by AHRQ through a Federal-State-Industry partnership.

Home | Databases | Tools & Software | Reports | Fact Sheets | News & Events | Purchase HCUP Data | Technical Assistance | Data Innovations

Favorites

HCUP Statistical Briefs
Statistical Briefs are simple, descriptive reports on a variety of specific health-care related issues. A full list is available by topic and chronological order. The most recent briefs are:

- Sports-Related Emergency Department Visits and Hospital Inpatient Stays, 2013
- HIV Hospital Stays in the United States, 2006-2013

HCUP Infographics
Infographics provide a visual representation of Statistical Brief data. A full list is available. The most recent infographic is:

- Neonatal and Maternal Hospital Stays Related to Substance Use, 2006-2012 (PDF file, 257 KB)

HCUP Projections
Projection reports use longitudinal HCUP data to project national and regional estimates on health care priorities. A full list is available. The most recent reports are:

- Acute Myocardial Infarction (AMI) and Acute Stroke 2004 to 2015 (PDF file, 3.2 MB)
- *Clostridium Difficile* Hospitalizations 2003-2015 (PDF file, 1.9 MB)

Information About Using HCUP Data

HCUP Methods Series
Methods Series reports, organized by topic and chronological order, feature a broad array of methodological information on the HCUP databases and software tools. The most recent reports are:

- HCUP External Cause of Injury Code (E Code) Evaluation Report (Updated with 2013 HCUP Data) (PDF file, 490 KB)
- Impact of ICD-10-CM/PCS on Research Using Administrative Databases (PDF file, 1.2 MB)

HCUP Nationwide Database Reports
These reports are specific to the design and content of the HCUP nationwide databases.

- National (Nationwide) Inpatient Sample (NIS)
- Kids' Inpatient Database (KID)
- Nationwide Emergency Department Sample (NEDS)
- Nationwide Readmissions Database (NRD)

HCUP State Database Reports
These reports are specific to the design and content of the HCUP state databases.

- State Inpatient Databases (SID)
- State Ambulatory Surgery and Services Databases (SASD)
- State Emergency Department Databases (SEDD)

Publications and Additional Topics

Topical Reports
Topical reports provide information about various priority populations.

- Approaches to using race-ethnicity data for reducing disparities
- Utilization and spending for mental and substance use disorders

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

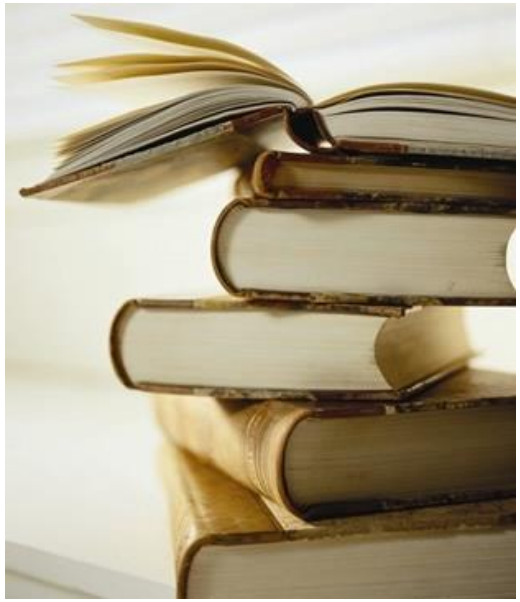
HCUP Archive
This archive features a broad array of information based on HCUP databases and other related reports.

- The Value of Hospital Discharge Data (PDF file, 664 KB) (Posted May 2005)
- HCUP Facts and Figures (2005-2009)
- HCUP Highlights (2001-2003)
- HCUP Fact Books (1997-2004)
- HCUP National Statistics Archive (1992-1996)

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

Publications Search Page on the HCUP-US Web Site

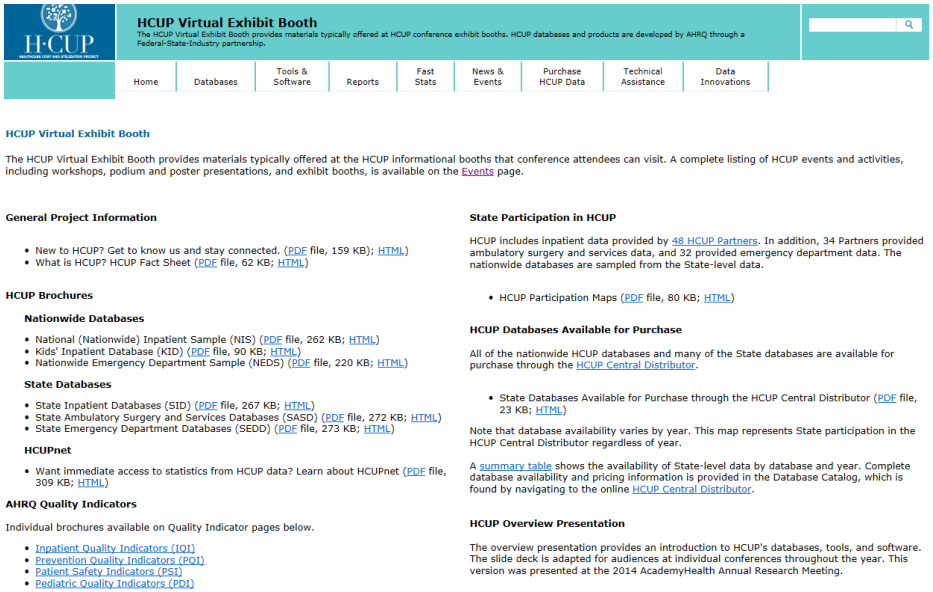
- **Simple or advanced search options**
  - Data Year
  - Database, Tool, and Product
  - Author
  - Title
  - State



More than 4,000 publications using HCUP data

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 (IQI)
- Prevention Quality Indicators (PQI)
- Patient Safety Indicators (PSI)
- Pediatric Quality Indicators (PDI)

State Participation in HCUP

HCUP includes inpatient data provided by 48 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.

http://www.hcup-us.ahrq.gov/news/exhibit_booth.jsp

Interactive Online HCUP Tutorials &Training Courses

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

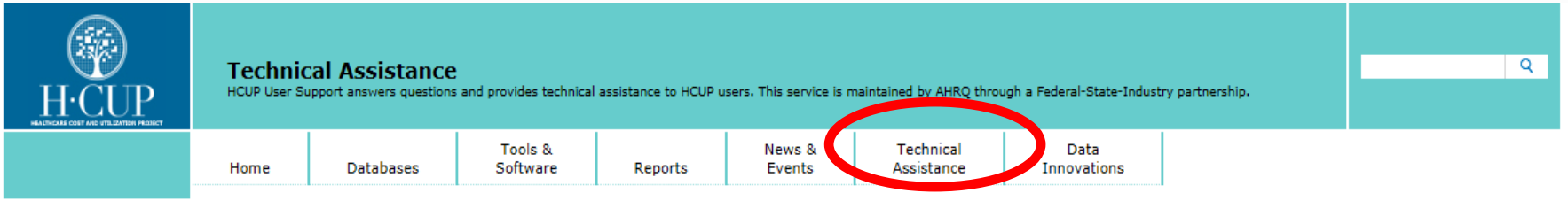
Using HCUP Technical Assistance

Active Technical Assistance

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

E-mail: hcup@ahrq.gov

HCUP-US for Technical Assistance



Need Help?

HCUP FAQs
The HCUP FAQs provide answers to commonly asked questions about HCUP databases, software tools, supplemental files, and other products.

HCUP Databases
The HCUP Databases page provides detailed database overviews, information on obtaining the databases, and additional resources and documentation to assist you in using the databases. Visit the HCUP Central Distributor page for additional information on obtaining HCUP databases.

HCUP Publishing Requirements
For information on publishing with HCUP data, please review the HCUP publishing requirements.

HCUP Index
To search for an HCUP topic, please review the Index.

HCUP Training & Tutorials

HCUP Overview Course
To learn more about HCUP, take the *interactive, modular* HCUP Overview Course (approximately 90 minutes) that provides information about HCUP data, software tools, and products. The course covers the features, capabilities, and potential uses of HCUP resources.

HCUP Data Use Agreement Training Tool
All purchasers and users of HCUP data must complete the HCUP Data Use Agreement (DUA) Training Course (approximately 15 minutes) and sign an HCUP DUA before using the data. The DUA is a legally binding agreement with AHRQ that defines how you can use HCUP data.

HCUP On-line Tutorial Series
To learn more about concepts essential to conducting effective research with HCUP, refer to the *interactive, modular* HCUP On-line Tutorial Series. The courses are designed to answer technical questions you may have related to HCUP data and products.

Contact Information

For Technical Support
If you have questions about HCUP databases, software tools, supplemental files, or other products, please contact HCUP User Support:

- E-mail: hcup@ahrq.gov
- Phone: 866-290-HCUP (4287) (toll free)
- International users, please contact HCUP User Support by e-mail

Staff reviews messages daily and responds to inquiries within 3 business days.

For Data Orders
If you have questions concerning the purchase of HCUP databases or your current order, please contact the HCUP Central Distributor:

- E-mail: HCUPDistributor@ahrq.gov
- Phone: 866-556-HCUP (4287) (toll free)
- FAX: 866-792-5313

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

Join the HCUP Email List

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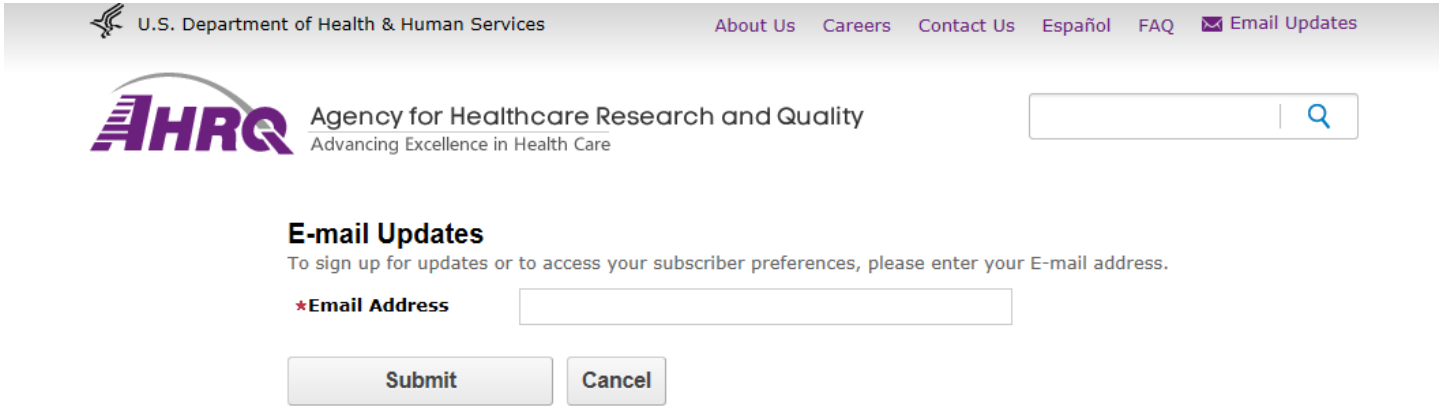

http://www.ahrq.gov/data/hcup/hcuplist.htm

Healthcare Cost and Utilization Project (HCUP)

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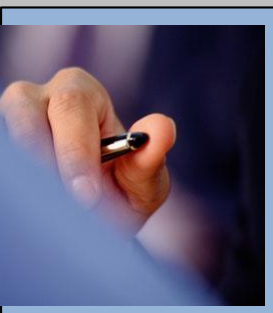
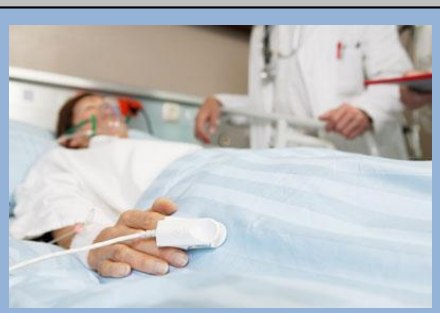
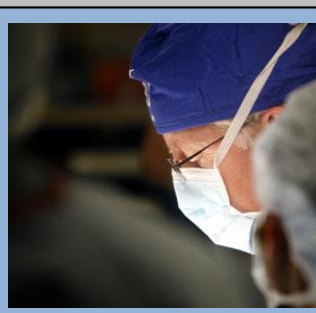
HEALTHCARE COST AND UTILIZATION PROJECT







Questions/Comments?

E-mail:

hcup@ahrq.gov