



U.S. Department of Health and Human Services



Agency for Healthcare Research and Quality

Advancing Excellence in Health Care • www.ahrq.gov

The Healthcare Cost and Utilization Project (HCUP)

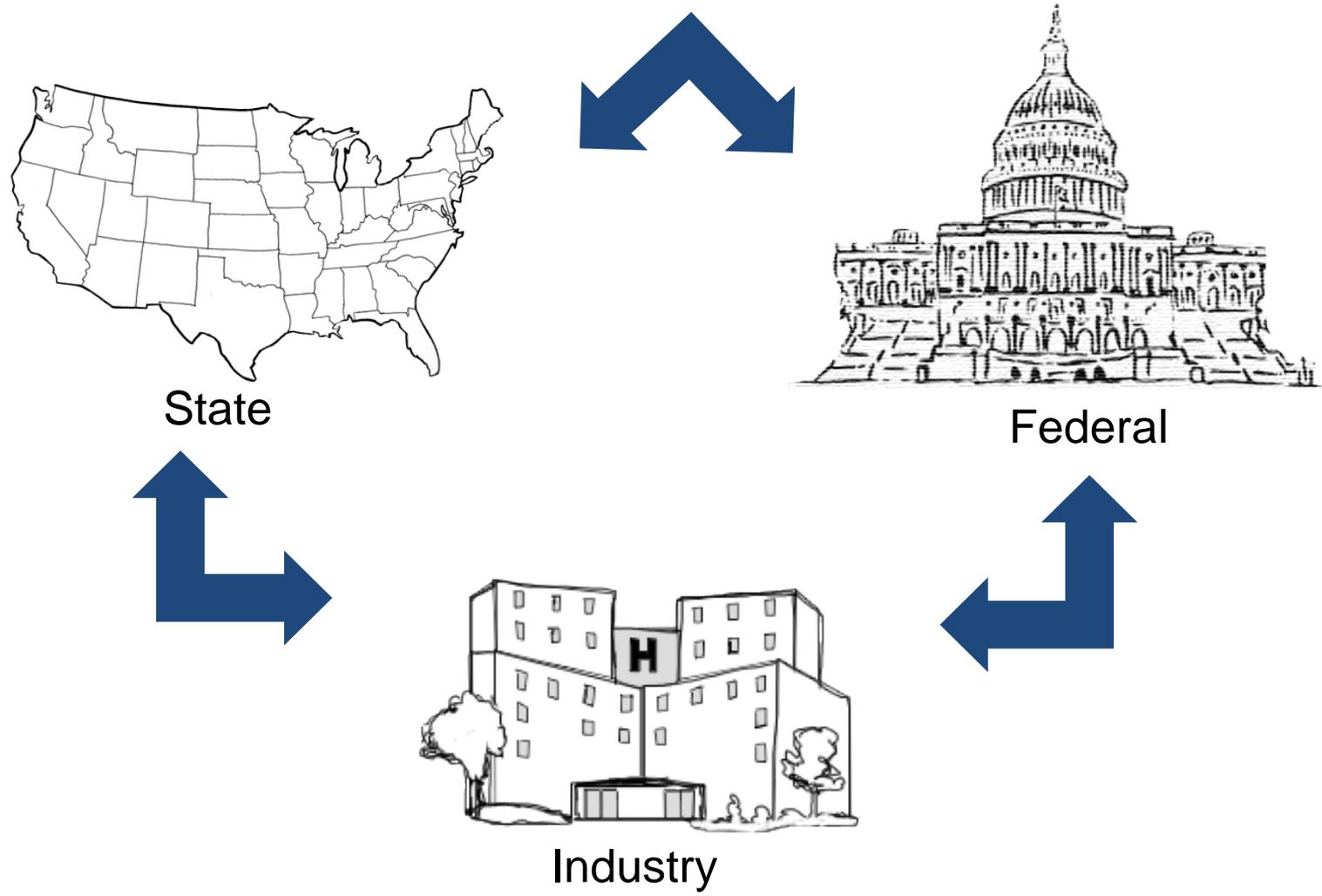
Overview of the HCUP Databases

Agency for Healthcare Research and Quality
Webinar ♦ April 15, 2015

- **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 | Septicemia was the most expensive reason for hospitalization in 2012—totaling over \$20 billion in aggregate hospital costs (NIS) |
| Access to care | Americans in low-income areas visit EDs at rates 90 percent higher compared to those in the highest income areas (NEDS) |
| Quality of care | Among women who delivered by cesarean section and were covered by Medicaid, 94.6 percent of discharges included a complicating condition (NIS) |
| Readmissions | For CHF, schizophrenia, and renal failure, at least 1 in 5 patients were readmitted within 30 days (SID with readmissions link) |
| 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 (SEDD) |

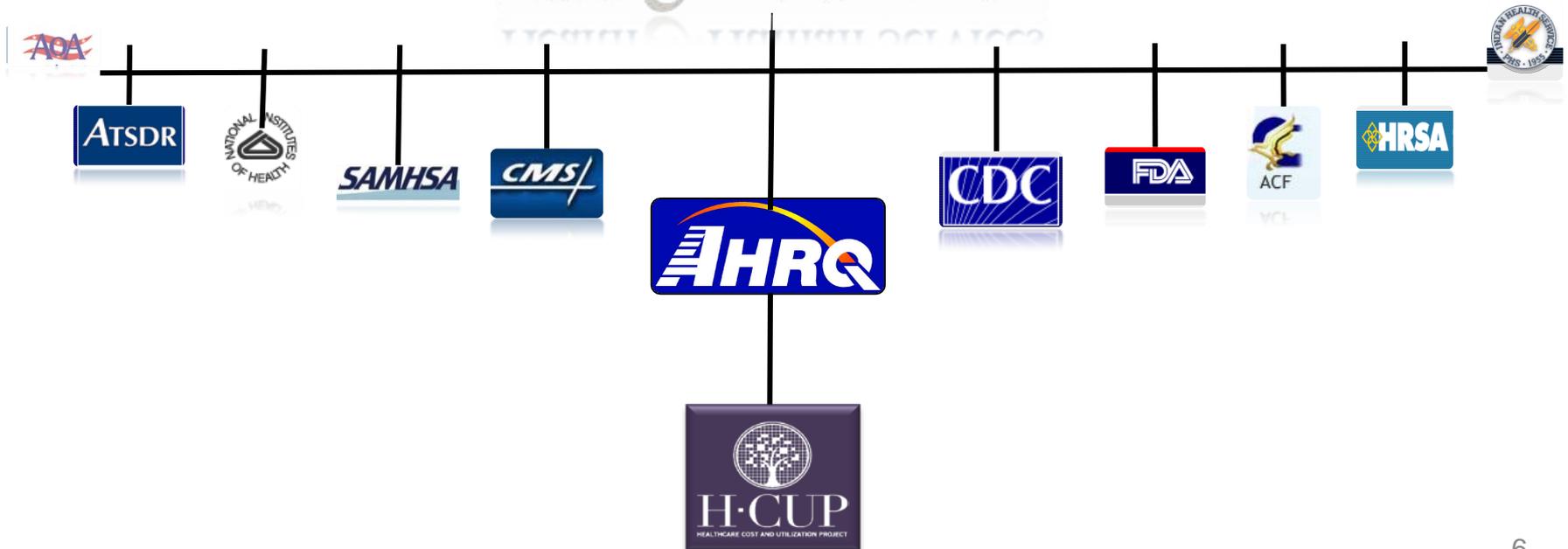
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What is the Agency for Healthcare Research and Quality (AHRQ)?

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

United States Department of
Health & Human Services





Participating Organizations



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

Florida Agency for Health Care Administration

Georgia Hospital Association

Hawaii Health Information Corporation

Illinois Department of Public Health

Indiana Hospital Association

Iowa Hospital Association



Participating Organizations



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



Participating Organizations



- 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 Health Authority
- Pennsylvania** Health Care Cost Containment Council



Participating Organizations



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 and Family Services

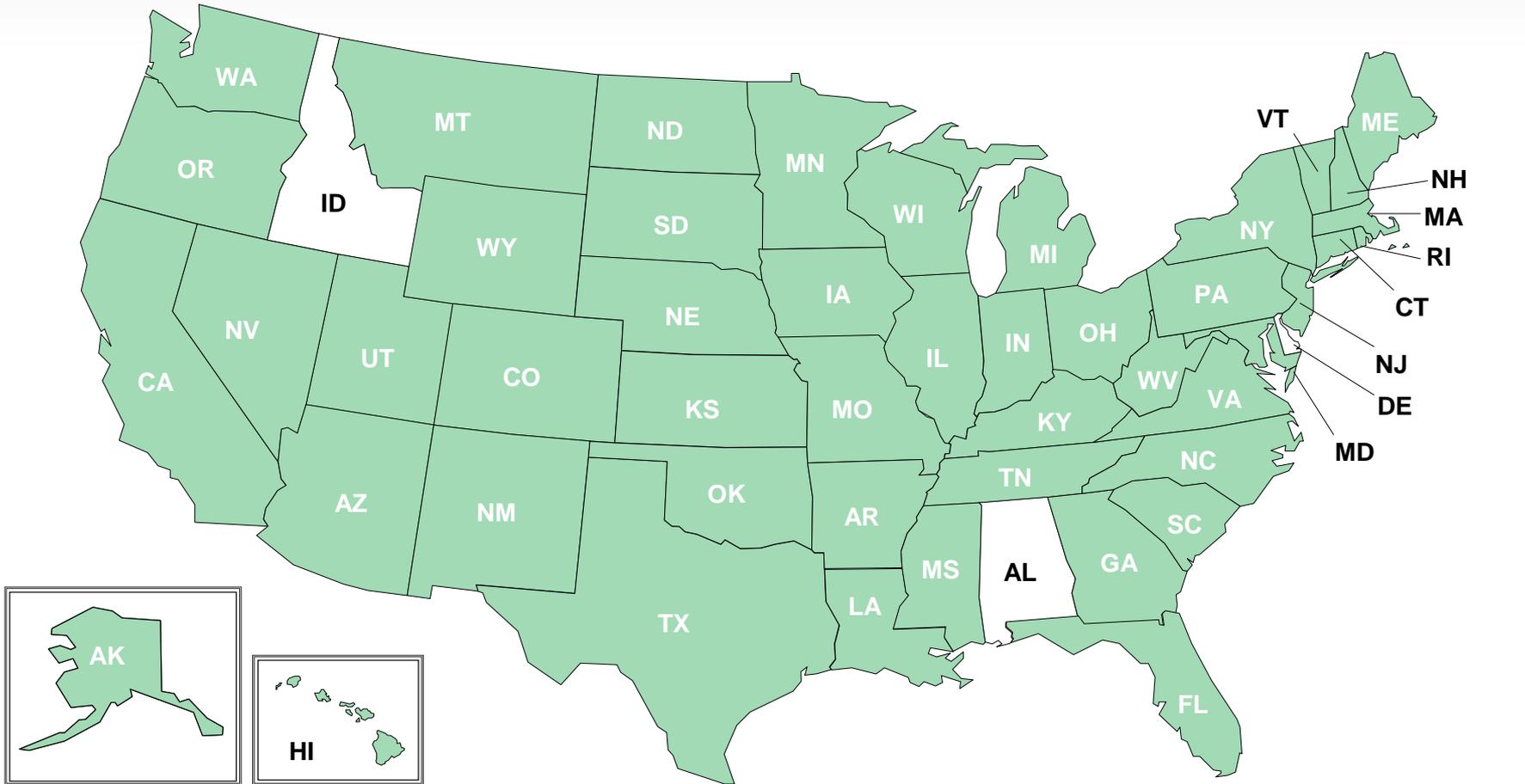
Wyoming Hospital Association



HCUP Partners Providing Inpatient Data

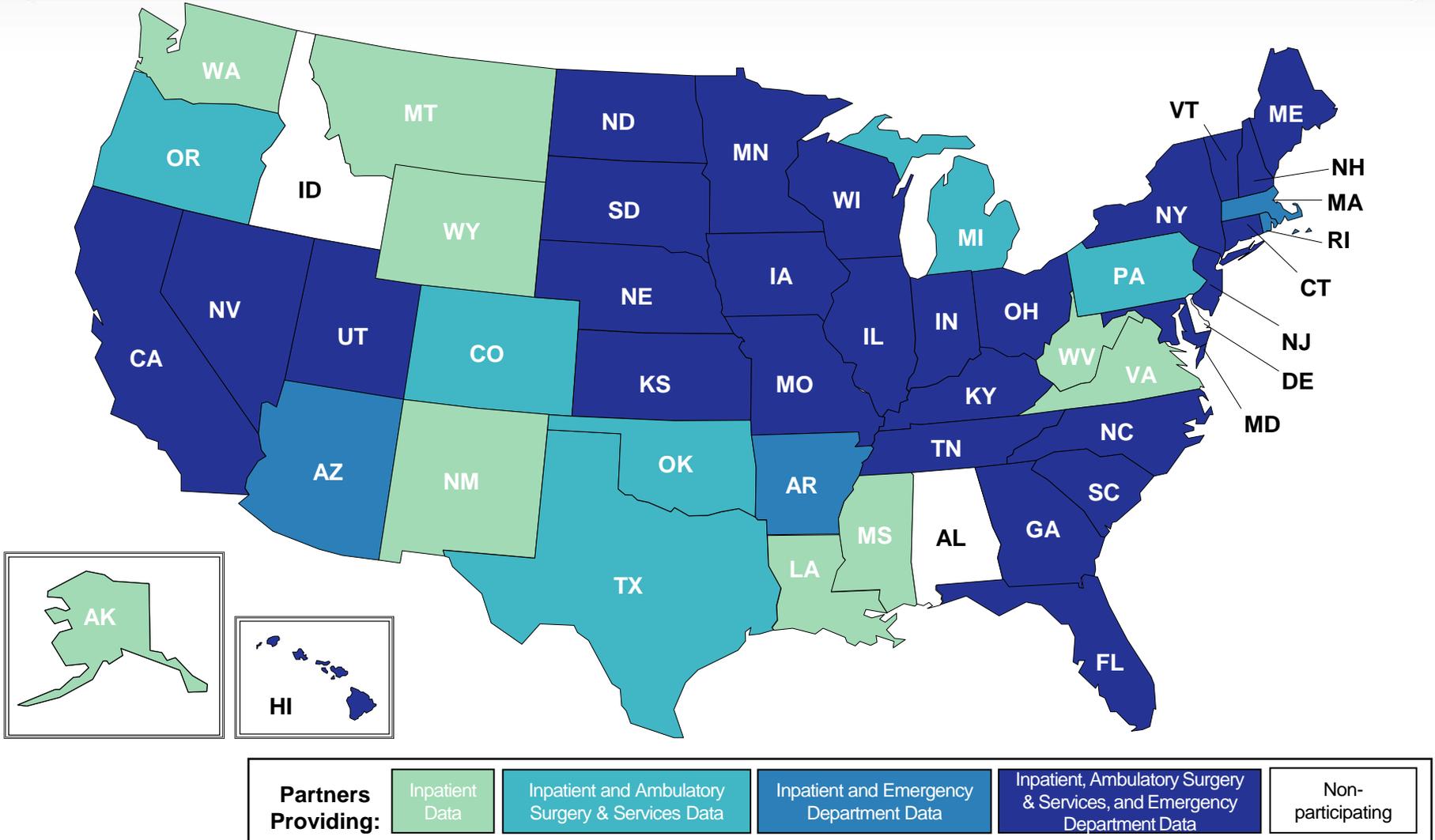


H·CUP
HEALTHCARE COST AND UTILIZATION PROJECT



| | | |
|----------------------------|----------------|-------------------|
| Partners Providing: | Inpatient Data | Non-participating |
|----------------------------|----------------|-------------------|

Partnership: HCUP Database Participation By State



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The Foundation of HCUP Data is Hospital Billing Data



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UB-04
CMS 1500

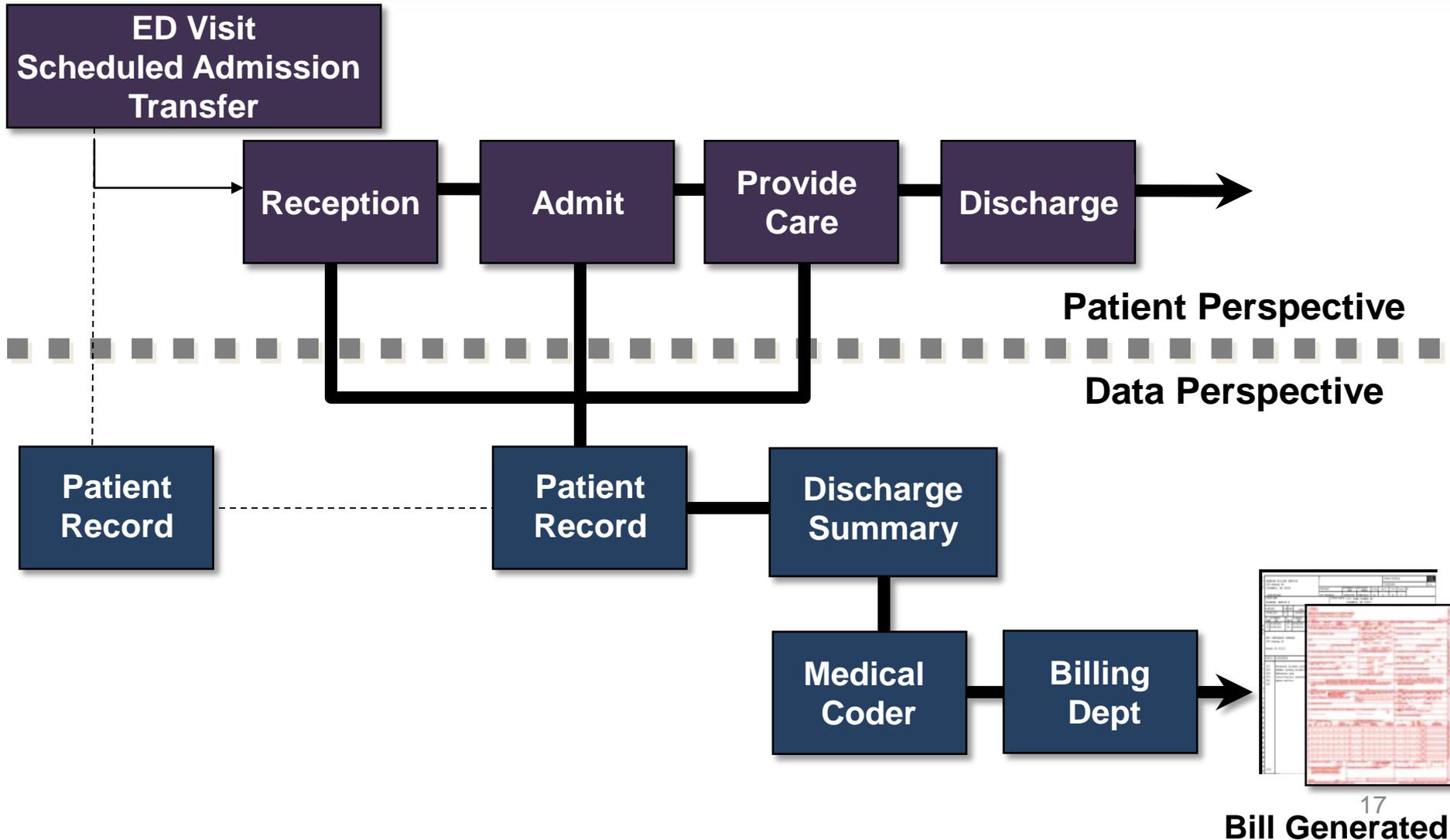
Demographic
Data

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 (No. Street) 123 Paradise Road
5 CITY Seattle WA
6 PATIENT STATUS Single
7 ZIP CODE 98105 TELEPHONE (Include Area Code) (555) 555-1234
8 OTHER INSURED'S NAME (Last Name, First Name, Middle Initial)
9 EMPLOYMENT (Current or Former) Full-Time
10 PATIENT'S CONDITION
11 NAME OF REFERRING PROVIDER OR OTHER SOURCE K. Brown, MD
12 PATIENT'S OR AUTHORIZED PERSON'S SIGNATURE
13 SIGNATURE on File DATE 02/14/06
14 DATE OF CURRENT ILLNESS (First symptoms or pregnancy start date) MM DD YY 02 05 06
15 PATIENT HAS HAD SAME OR SIMILAR ILLNESS (Specify) YES
16 NAME OF REFERRING PROVIDER OR OTHER SOURCE T. Jones
17 RESERVED FOR LOCAL USE
18 DIAGNOSIS OR NATURE OF ILLNESS OR INJURY (State terms 1, 2, 3 or 4 to Item 24E by Line) I250.00
19 ICD-9-CM CODE I250.00
20 ICD-9-CM CODE V88.61
21 PATIENT'S ACCOUNT NO. 123456789
22 ACCEPT ASSIGNMENT YES
23 TOTAL CHARGE 115.00
24 AMOUNT PAID 115.00
25 BALANCE DUE 0.00
26 SIGNATURE OF PHYSICIAN OR SUPPLIER (Including degrees or credentials) T. Jones
27 OFFICE FACILITY LOCATION INFORMATION Office Name 123 Main St. Seattle, WA 98105-2345
28 PROVIDER NAME Provider Name P.O. Box 12345 Seattle, WA 98105-2345
29 DATE 02/14/06
30 BILLING FACILITY LOCATION INFORMATION A1111222233 B

| 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 | | | | | | | | | | CONDITION CODES | | | | | | | | | | OCCURRENCE DATE | | | | | | | | | | VALUE CODES AMOUNT | | | | | | | | | | DESCRIPTION | | | | | | | | | | HICPCS / RATE / HPS CODE | | | | | | | | | | SERV DATE | | | | | | | | | | SERV UNITS | | | | | | | | | | TOTAL CHARGES | | | | | | | | | | NON-COVERED CHARGES | | | | | | | | | |





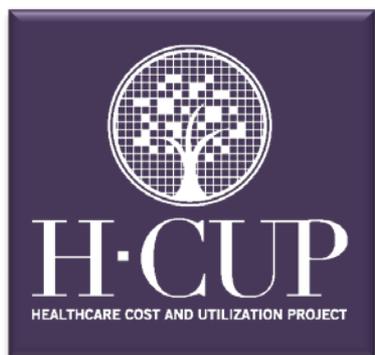
Patient enters hospital



Billing record created



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

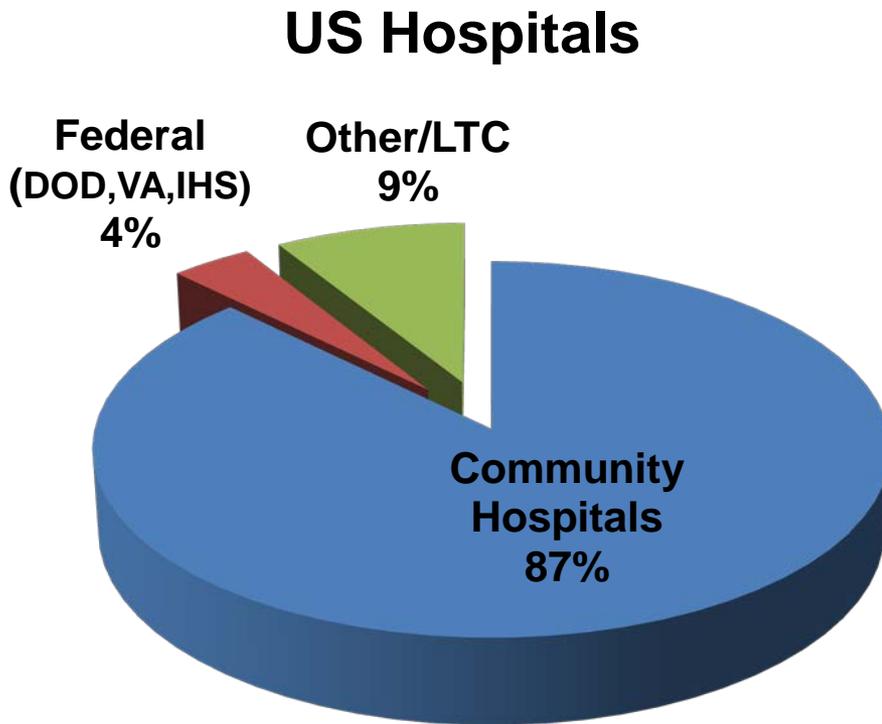


AHRQ standardizes data to create uniform HCUP databases

| | | | | | | | |
|-----|----|-----|---|----|-----|---|-----|
| 744 | 08 | 749 | 2 | 79 | 257 | 5 | 290 |
| 745 | 25 | 614 | 4 | 81 | 541 | 4 | 549 |
| 746 | 08 | 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 | 374 | 2 | 77 | 571 | 1 | 905 |
| 751 | 2 | 326 | 4 | 44 | 638 | 2 | 958 |
| 752 | 63 | 521 | 4 | 18 | 217 | 8 | 721 |
| 753 | 28 | 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 | 03 | 386 | 1 | 94 | 638 | 5 | 613 |
| 759 | 17 | 766 | 8 | 92 | 799 | 5 | 612 |
| 760 | 54 | 735 | 3 | 29 | 556 | 6 | 503 |
| 761 | 5 | 263 | 4 | 78 | 125 | 8 | 997 |
| 762 | 48 | 100 | 3 | 94 | 484 | 8 | 206 |
| 763 | 23 | 916 | 6 | 15 | 556 | 9 | 327 |
| 764 | 11 | 251 | 4 | 17 | 125 | 6 | 192 |
| 765 | 30 | 976 | 1 | 9 | 561 | 6 | 39 |

States store data in varying formats

- 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



- HCUP data are mostly from community hospitals
- **AHA defines community hospitals as:** all nonfederal, short-term general, and other specialty hospitals.
- Other specialty includes: obstetrics and gynecology; eye, ear, nose, and throat; rehabilitation; orthopedic; academic medical centers or other teaching hospitals.



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. Newborns | 3,795 |
| 2. Septicemia | 1,133 |
| 3. Pneumonia | 1,007 |
| 4. Osteoarthritis | 968 |
| 5. Congestive Heart Failure | 876 |
| Mood disorders | 847 |
| 7. Cardiac dysrhythmias | 749 |

HCUP Has 6 Types of Databases

- Three state-level databases



State Inpatient Databases
(SID)



State Ambulatory Surgery & Services Databases
(SASD)



State Emergency Department Databases
(SEDD)

- Three nationwide databases



National (Nationwide) Inpatient Sample
(NIS)



Nationwide Emergency Department Sample
(NEDS)



Kids' Inpatient Database
(KID)

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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 source & type
- 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 | Medi-Cal |
| 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 |



Partner State Files vs. HCUP State Files



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

| HCUP State Files | Partner State 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



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- Arizona
- Arkansas
- California
- Colorado
- Florida
- 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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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

- The redesigned NIS (beginning with data year 2012) contains *a sample of 7-8 million discharges from all HCUP-reporting hospitals*, which totaled more than 4,300 in 2012.
- The National Inpatient Sample replaces the original NIS (the Nationwide Inpatient Sample), which was *a sample of about 1,000 hospitals that retained all discharges from each hospital*.

2012 NIS is a Stratified Sample of Discharges from the SID

2012 State Inpatient Databases (SID)

~ 4,380 hospitals
~ 34.3M 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

2012 National Inpatient Sample (NIS)

N = ~ 4,380 hospitals
~ 7.3M records



KID is a Stratified Sample of Discharges from the SID

2012 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

2012 Kids' Inpatient Database (KID)

N = ~ 4K hospitals
~ 3M records

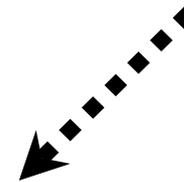
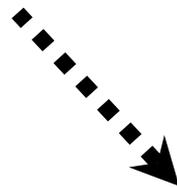




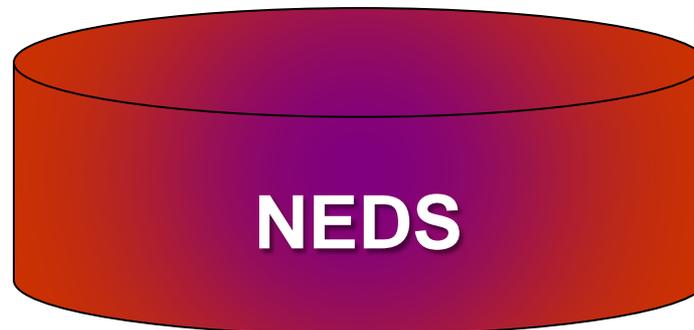
Treat-and-Release ED Visits



Admitted ED Visits



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



About 16% of ED visits result in a hospital stay



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



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**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 Discharges**

*State not included in the stratum



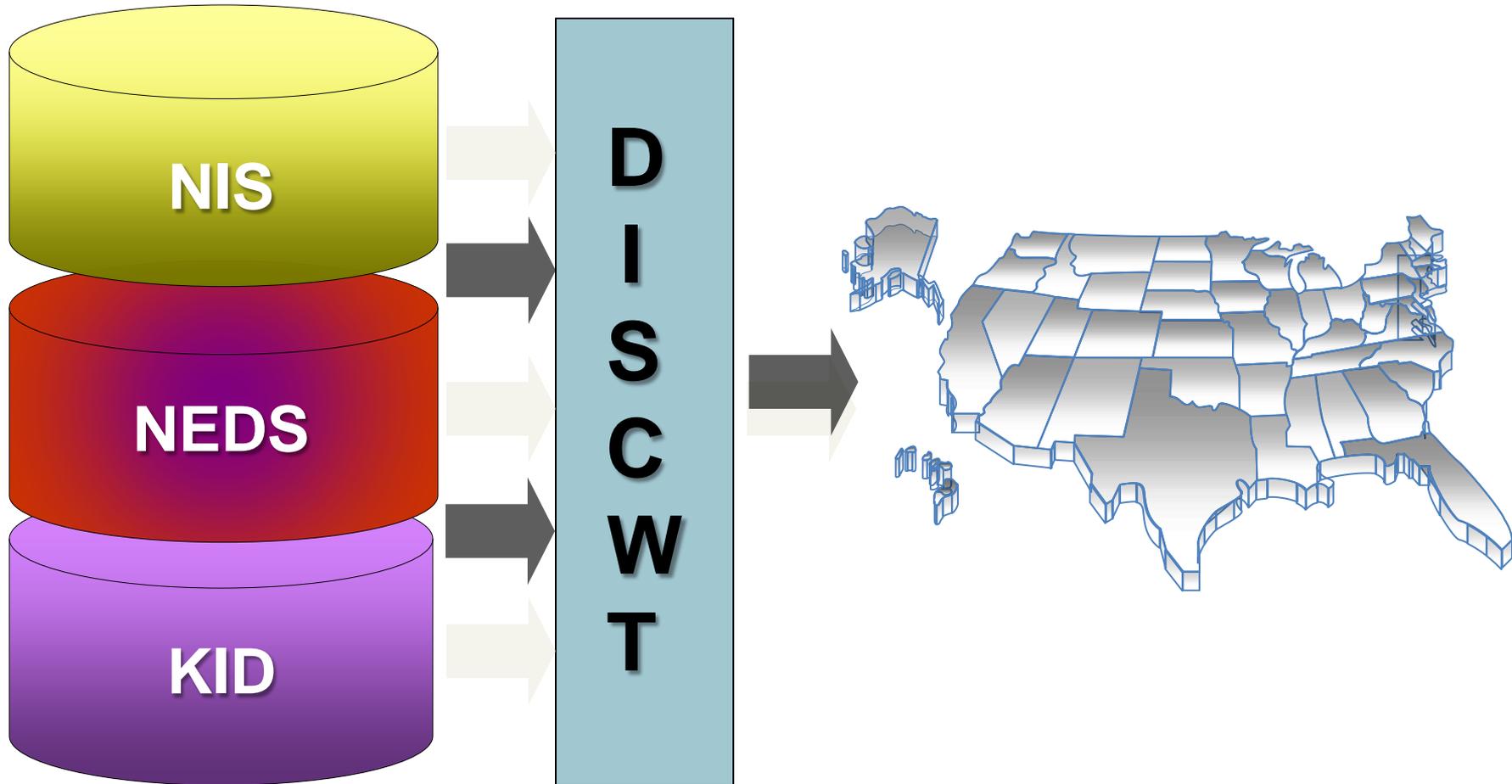
**Nationwide
Emergency
Department
Database**

(NEDS)

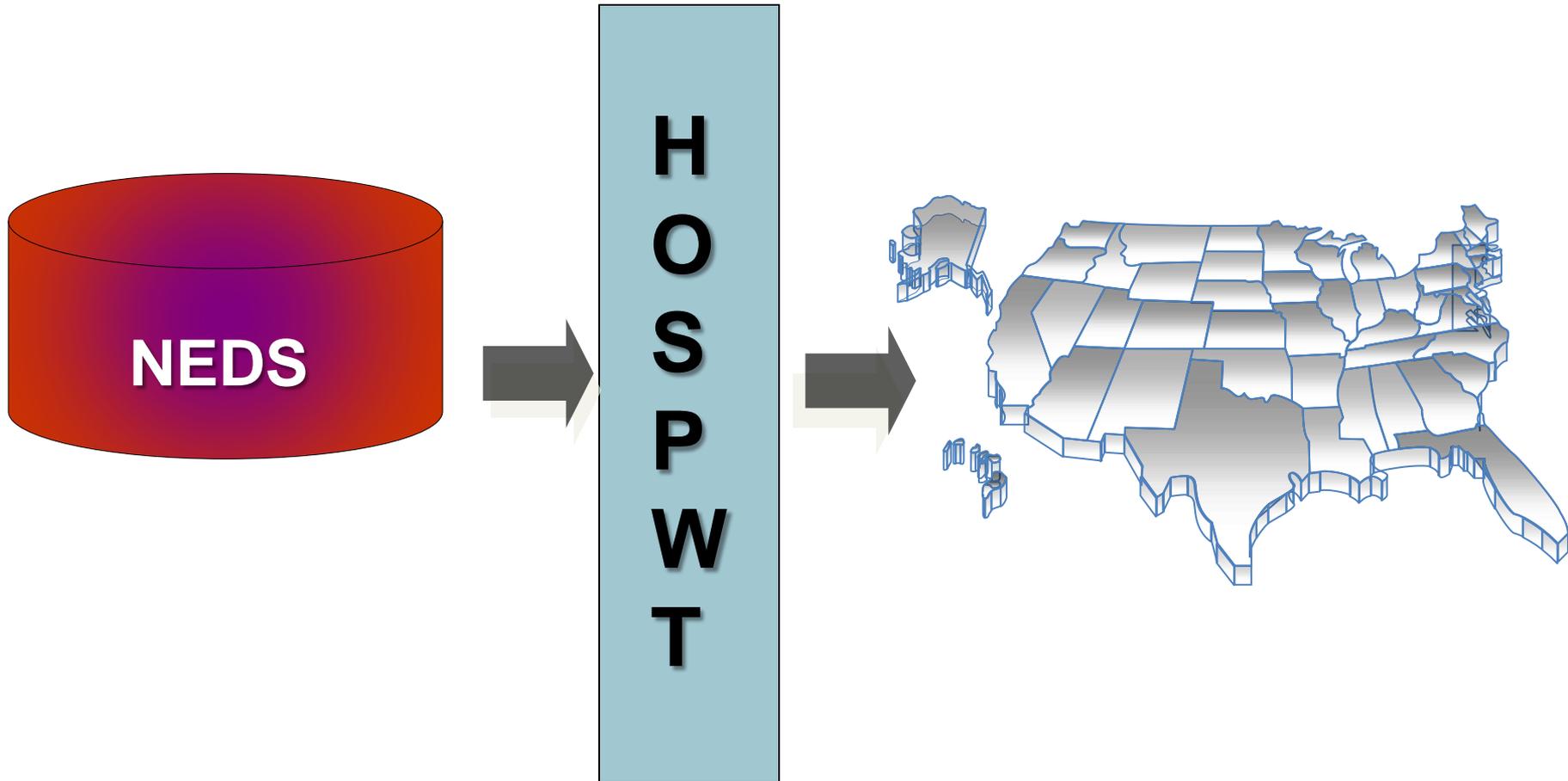
N = ~ 1K hospitals
~ 31M records

- Type of ED event: treated and released, admitted to the same hospital, transferred, died (**EDEVENT**)
- Disposition of patient from ED (**DISP_ED**)
- Died in the ED: died in the ED, died in the hospital, did not die (**DIED_VISIT**)
- Diagnosis reported on record indicates self harm (**INTENT_SELF_HARM**)
- Trauma center level I, II, or III (**HOSP_TRAUMA**)
- HCUP ED hospital identifier (**HOSP_ED**)

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



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



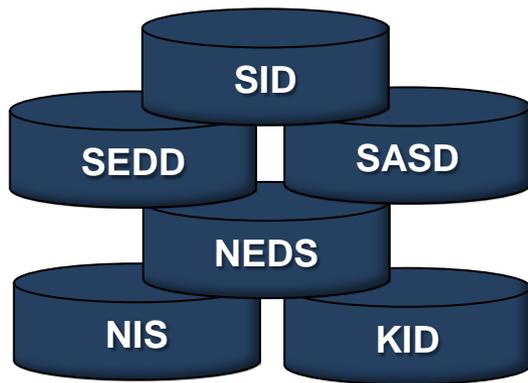
What Types of Care Are and Are Not Captured by HCUP?

| Included in HCUP | |
|-------------------------------|---|
| Inpatient Care | State Inpatient Databases (SID) National (Nationwide) Inpatient Sample (NIS) Kids' Inpatient Database (KID) |
| Emergency Department | State Emergency Department Databases (SEDD) Nationwide Emergency Department Sample (NEDS) |
| Ambulatory Surgery & Services | State Ambulatory Surgery & Services Databases (SASD) |

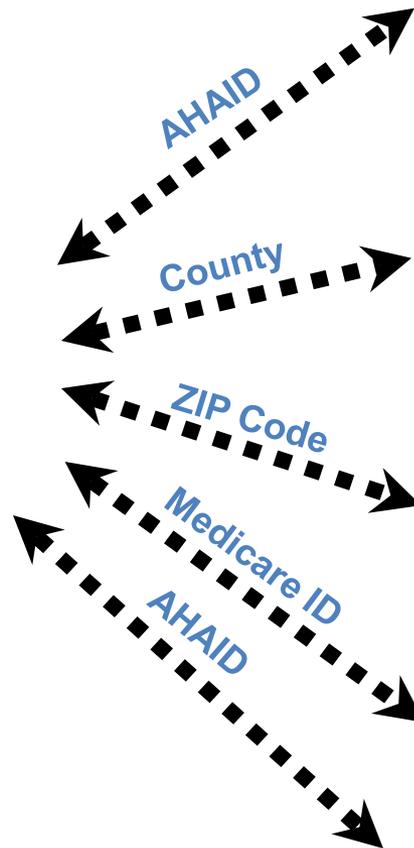
| Not Included in HCUP |
|-------------------------|
| Physician office visits |
| Pharmacy |
| Labs/Radiology |



Some Limitations Can be Addressed by Linking to Other Databases



**HCUP
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)



What is HCUP and What Is It Not?



What 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

What HCUP is NOT...

A survey

Specific to a single payer, e.g. Medicare

Office visits, pharmacy, laboratory, radiology

Only a sample

Just another database



Hospital Billing Data Have Benefits and Limitations



Benefits

Large number of visit records

Uniformity of coding

Routine, regular collection

Ease of access

All-payer

Available at local, state, regional and national level

Supplemental files available to facilitate research

Limitations

Differences in coding across hospitals

Limited clinical details

Lack revenue information

May not include all hospitals

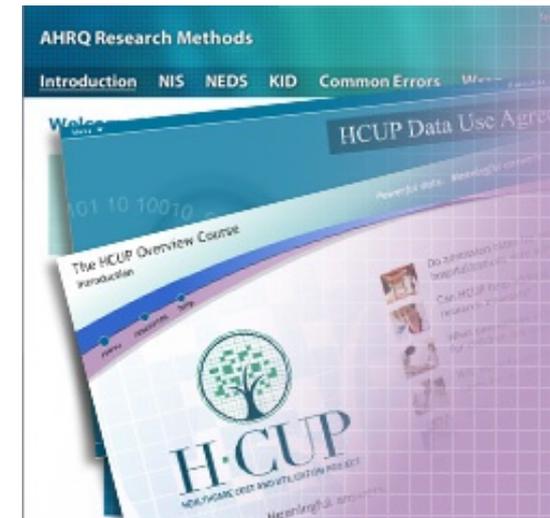
May not show complete experience of care

No data on individuals outside of hospital system

- Six types of HCUP databases
- Databases are based on administrative hospital data: inpatient, ED, and ambulatory surgery and services
- Available for multiple years
 - ▶ Nationwide
 - NIS (1988-2012)
 - NEDS (2006-2012)
 - KID (1997, 2000, 2003, 2006, 2009, 2012)
 - ▶ State
 - SID (1990-2013)
 - SASD (1997-2013)
 - SEDD (1999-2013)
- 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:
 - ▶ State Data Organization
 - OR*
 - ▶ HCUP Central Distributor



To Purchase HCUP Data Two Methods



Method 1
HCUP Central Distributor
www.hcup-us.ahrq.gov/tech_assist/centdist.jsp

Method 2
HCUP Partner States
www.hcup-us.ahrq.gov/partners.jsp



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”

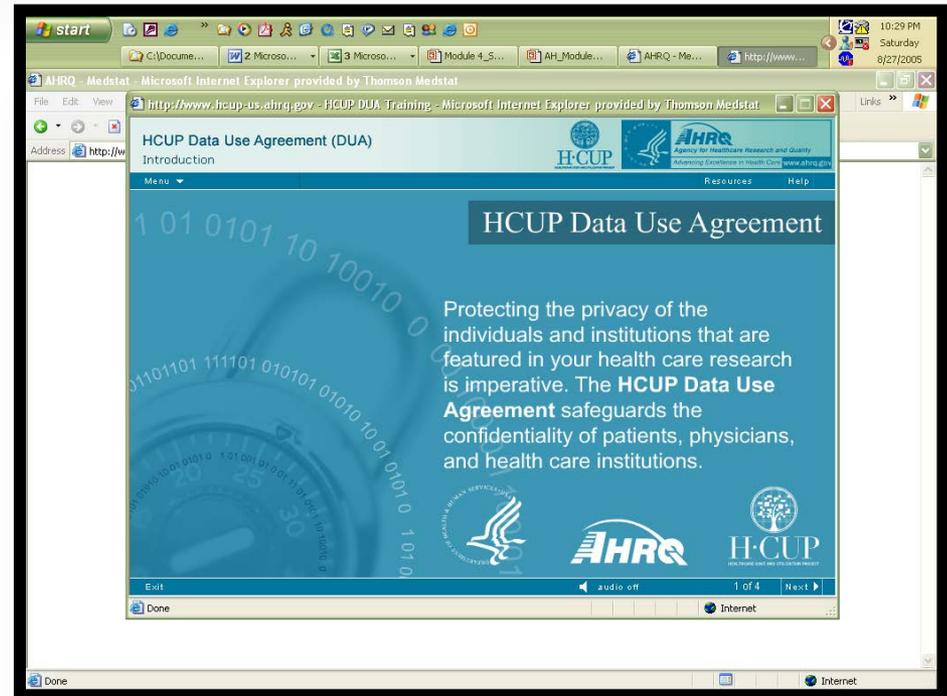
Step 4: Submit online order and complete further instructions listed on the “Thank You” page

For assistance, contact the HCUP Central Distributor:

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

- **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

Nationwide Databases (NIS, KID, NEDS)

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



State Databases (SID, SASD, SEDD)

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



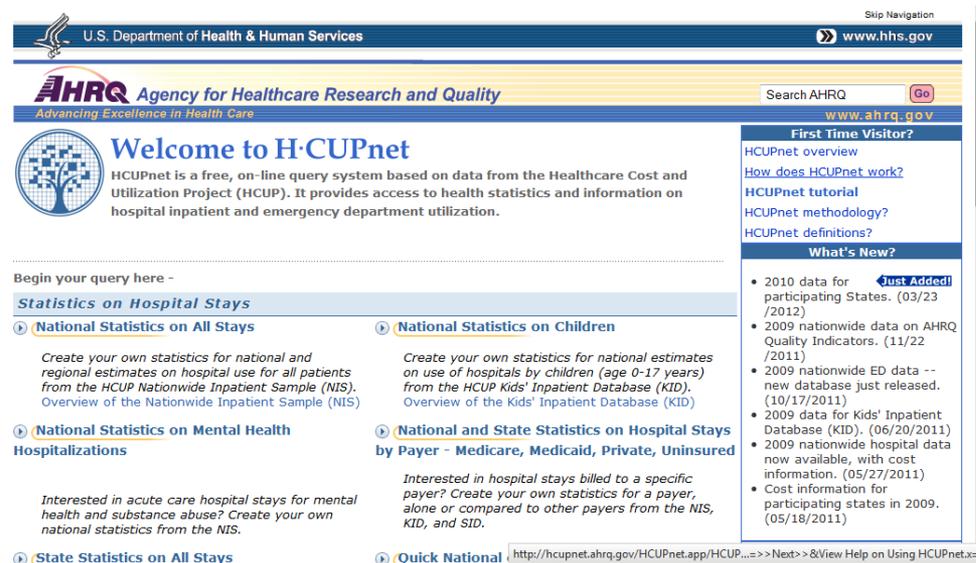
Software Requirements of Working with the Full HCUP Files

| Software Package | Load Programs | Format Programs | Example Statistical Coding | HCUP Tools Programs |
|--|---------------|-----------------|----------------------------|---------------------|
|  | 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 interface. At the top, there is a navigation bar with the U.S. Department of Health & Human Services logo and the URL www.hhs.gov. Below this is the AHRQ logo and the text 'Agency for Healthcare Research and Quality' with the tagline 'Advancing Excellence in Health Care'. A search bar is located on the right side of the header. The main content area features a 'Welcome to H-CUPnet' message, explaining that it 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. Below the welcome message, there are several links for users to begin their query, including 'National Statistics on All Stays', 'National Statistics on Children', 'National Statistics on Mental Health Hospitalizations', and 'National and State Statistics on Hospital Stays by Payer - Medicare, Medicaid, Private, Uninsured'. A 'What's New?' section on the right lists recent updates, such as '2010 data for participating States' and '2009 nationwide data on AHRQ Quality Indicators'. The footer of the page includes a URL: http://hcupnet.ahrq.gov/Hcupnet.app/Hcupnet...

- Find detailed information on HCUP databases, tools, and products
- Access HCUPnet
- Find comprehensive list of HCUP-related publications, database reports, and fact books
- Access technical assistance

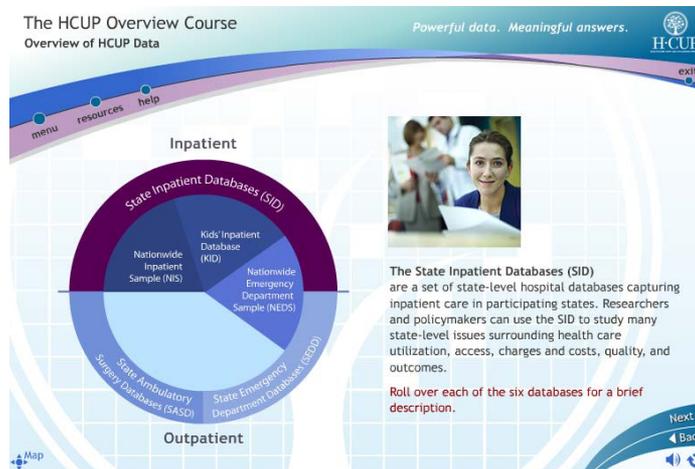


The screenshot shows the homepage of the HCUP User Support website. The header includes the H-CUP logo and the title "Healthcare Cost and Utilization Project (HCUP)". Below the header is a navigation menu with links for Home, Databases, Tools & Software, Reports, News & Events, and Technical Assistance. The main content area is titled "Welcome to the HCUP User Support (HCUP-US) Web site" and provides a brief overview of the site's purpose. It lists several key features and resources, including an overview of HCUP, an on-line HCUP Overview Course, and a list of HCUP products. The right sidebar contains a "What's New" section with updates on AHRQ Hands-On Workshops, HCUP Webinars, and new data releases.

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

Interactive Online HCUP Overview Course Available

- Provides information about HCUP data, software tools, and products
- Length 90 min



The HCUP Overview Course
Overview of HCUP Data

Powerful data. Meaningful answers.

Inpatient

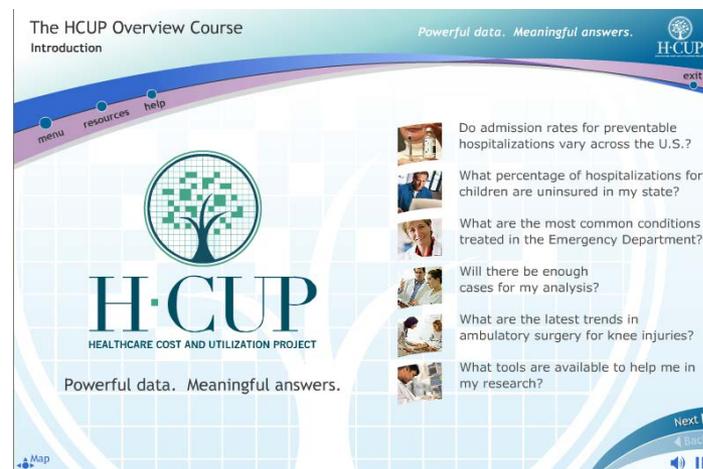
- State Inpatient Databases (SID)
- Nationwide Inpatient Sample (NIS)
- Kids/Inpatient Database (KID)
- Nationwide Emergency Department Sample (NEDS)

Outpatient

- State Ambulatory Surgery Databases (SASD)
- State Emergency Department Databases (SEDD)

The State Inpatient Databases (SID) are a set of state-level hospital databases capturing inpatient care in participating states. Researchers and policymakers can use the SID to study many state-level issues surrounding health care utilization, access, charges and costs, quality, and outcomes.

Roll over each of the six databases for a brief description.



The HCUP Overview Course
Introduction

Powerful data. Meaningful answers.

H-CUP
HEALTHCARE COST AND UTILIZATION PROJECT

Powerful data. Meaningful answers.

- Do admission rates for preventable hospitalizations vary across the U.S.?
- What percentage of hospitalizations for children are uninsured in my state?
- What are the most common conditions treated in the Emergency Department?
- Will there be enough cases for my analysis?
- What are the latest trends in ambulatory surgery for knee injuries?
- What tools are available to help me in my research?

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

- Tutorial explains the sampling strategy of the three nationwide databases – the NIS, KID, and NEDS
- Length 30 min

HCUP Sample Design: National Databases

Introduction NIS NEDS KID Common Errors Wrap-Up



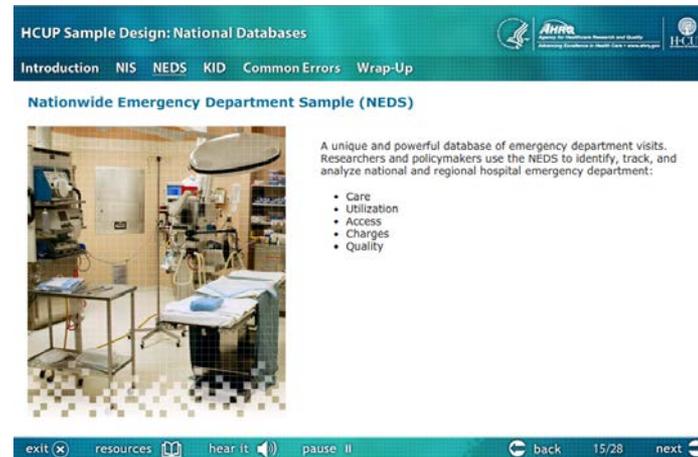
Healthcare Cost and Utilization Project

Sample Design: National Databases

HCUP Sample Design: National Databases

Introduction NIS NEDS KID Common Errors Wrap-Up

Nationwide Emergency Department Sample (NEDS)



A unique and powerful database of emergency department visits. Researchers and policymakers use the NEDS to identify, track, and analyze national and regional hospital emergency department:

- Care
- Utilization
- Access
- Charges
- Quality

http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

- Provides instructions on how to unzip HCUP data, save it on your computer, and load data into a statistical software package
- Length 20 min

Load and Check HCUP Data

Introduction Load Check Wrap-Up



Healthcare Cost and Utilization Project

Load and Check

exit resources hear it play back 1/16 next

Load and Check HCUP Data

Introduction Load Check Wrap-Up

Running Check Programs

My NIS Data Means and Frequencies:

| AGE (Age) | Frequency | Percent of Total |
|-----------|-----------|------------------|
| 0 | | |
| 1 | | |

LOS (Length of Stay)

| LOS | Frequency | Percent of Total |
|-------|-----------|------------------|
| 0-day | | |
| 1-day | | |

PA1 (Expected Primary Payer)

| PA1 | Frequency | Percent of Total |
|-------------|-----------|------------------|
| 1: Medicare | | |
| 2: Medicaid | | |

HCUP-US Summary Statistics Means and Frequencies:

| AGE (Age) | Frequency | Percent of Total |
|-----------|-----------|------------------|
| 0 | | |
| 1 | | |

LOS (Length of Stay)

| LOS | Frequency | Percent of Total |
|-------|-----------|------------------|
| 0-day | | |
| 1-day | | |

PA1 (Expected Primary Payer)

| PA1 | Frequency | Percent of Total |
|-------------|-----------|------------------|
| 1: Medicare | | |
| 2: Medicaid | | |

Create tables of means and of frequency distributions from the data on your computer.

Compare those statistics to the summary statistics available on HCUP-US.

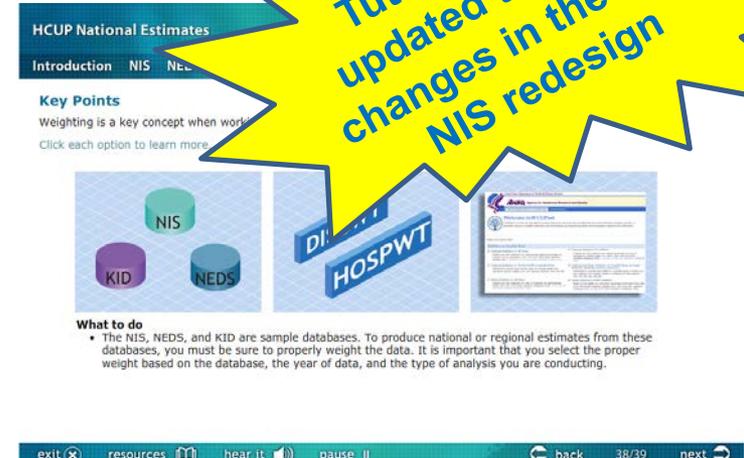
exit resources hear it pause back 13/16 next

http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

Producing National HCUP Estimates

- Explains how to produce national estimates from the three nationwide databases (NIS, NEDS, KID)
- Length 45 min

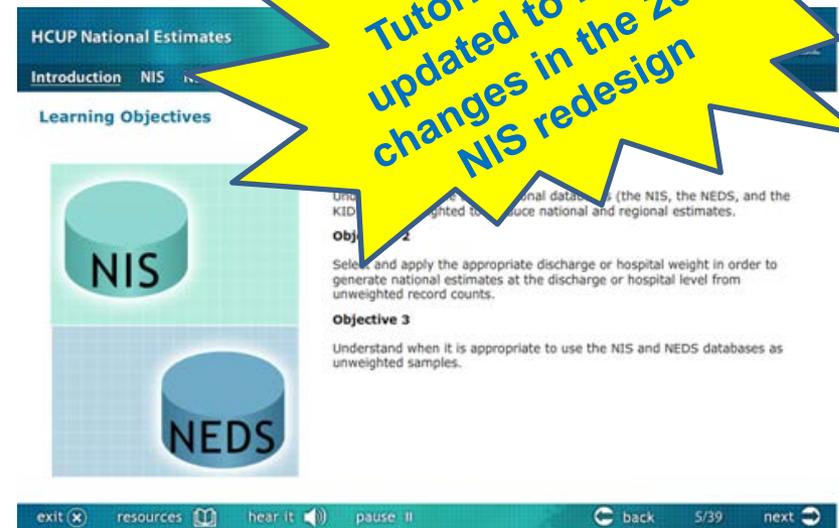
Tutorial will be updated to reflect changes in the 2012 NIS redesign



http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

- Explains how to accurately determine the precision of the estimates produced from the HCUP nationwide databases
- Length 30 min

Tutorial will be updated to reflect changes in the 2012 NIS redesign

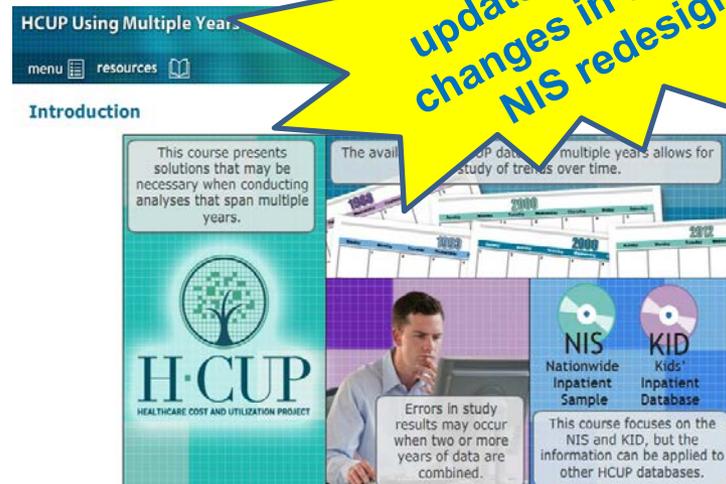


http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

- Describe problems that may arise when using multiple years of HCUP data and provides solutions for addressing these issues
- Length 30 min



Healthcare Cost and Utilization Project
Trend Analysis



HCUP Using Multiple Years

menu resources

Introduction

This course presents solutions that may be necessary when conducting analyses that span multiple years.

The available HCUP data for multiple years allows for study of trends over time.



H·CUP
HEALTHCARE COST AND UTILIZATION PROJECT

NIS
Nationwide Inpatient Sample

KID
Kids' Inpatient Database

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.

Tutorial will be updated to reflect changes in the 2012 NIS redesign

http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

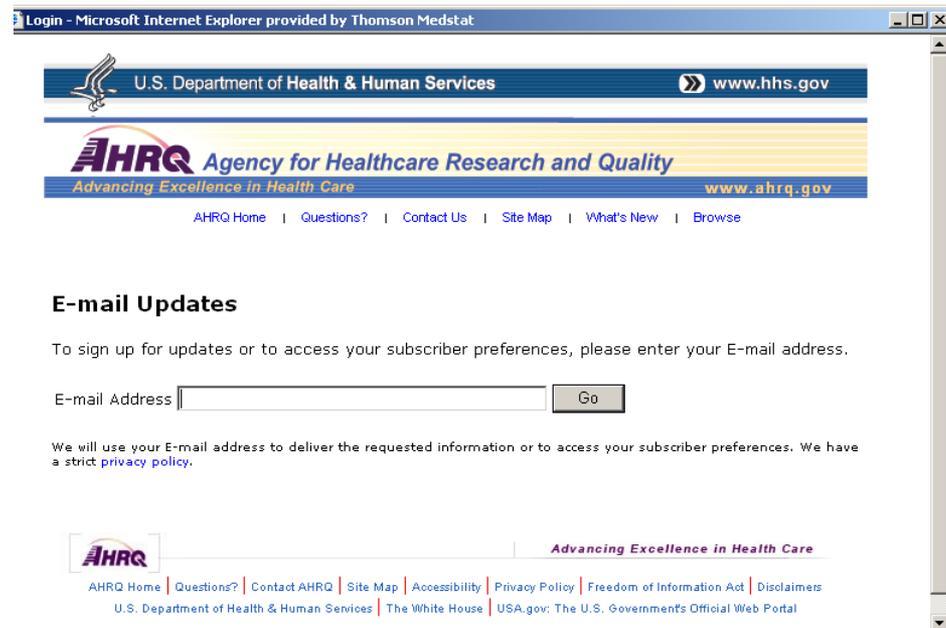
Active Technical Assistance

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

E-mail: hcup@ahrq.gov



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

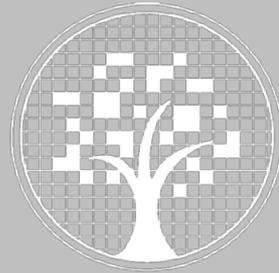


The screenshot shows a web browser window with the following content:

- Browser title: Login - Microsoft Internet Explorer provided by Thomson Medstat
- Header: U.S. Department of Health & Human Services | www.hhs.gov
- Logo: AHRQ Agency for Healthcare Research and Quality | Advancing Excellence in Health Care | www.ahrq.gov
- Navigation: AHRQ Home | Questions? | Contact Us | Site Map | What's New | Browse
- Section: E-mail Updates
- Text: To sign up for updates or to access your subscriber preferences, please enter your E-mail address.
- Form: E-mail Address Go
- Text: We will use your E-mail address to deliver the requested information or to access your subscriber preferences. We have a strict [privacy policy](#).
- Footer: AHRQ | Advancing Excellence in Health Care | AHRQ Home | Questions? | Contact AHRQ | Site Map | Accessibility | Privacy Policy | Freedom of Information Act | Disclaimers | U.S. Department of Health & Human Services | The White House | USA.gov: The U.S. Government's Official Web Portal

https://subscriptions.ahrq.gov/accounts/USAHRQ/subscriber/new?topic_id=USAHRQ_65

HealthCare Cost and Utilization Project (HCUP)



H·CUP

HEALTHCARE COST AND UTILIZATION PROJECT



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

