U.S. Department of Health and Human Services

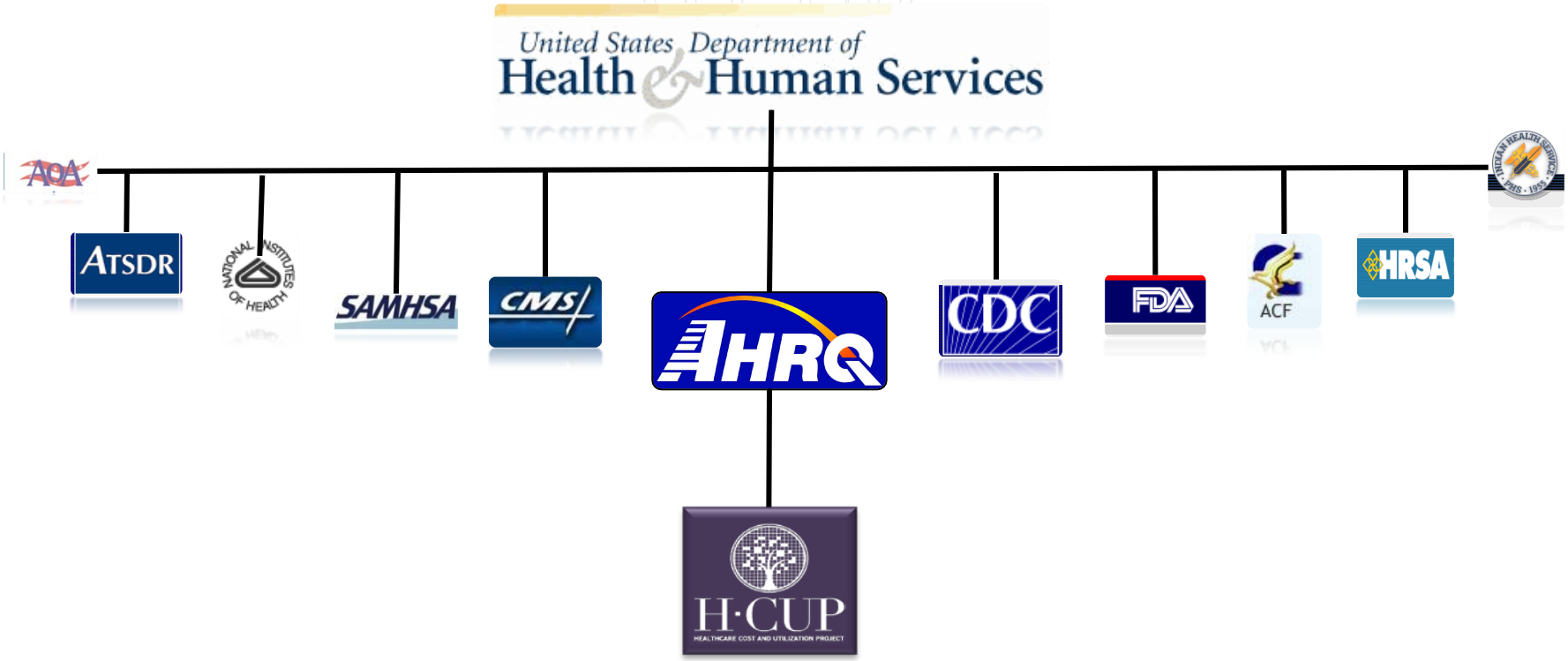
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

# Healthcare Cost and Utilization Project (HCUP) Administrative Data: Inpatient, Emergency Department, and Ambulatory Surgery Care

Updated 07/14

# What is AHRQ?

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



# 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

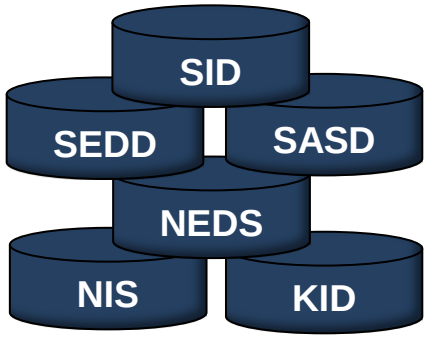
# What is HCUP?

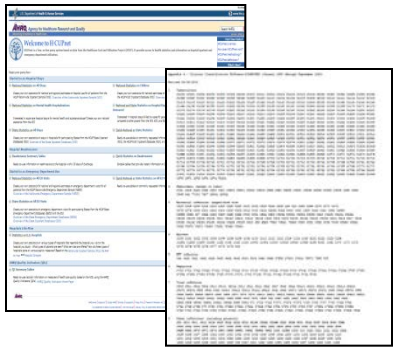
HCUP is a comprehensive set of publicly available all-payer health care data

H·CUP
HEALTHCARE COST AND UTILIZATION PROJECT

Includes multiyear inpatient and outpatient data based on hospital billing records

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



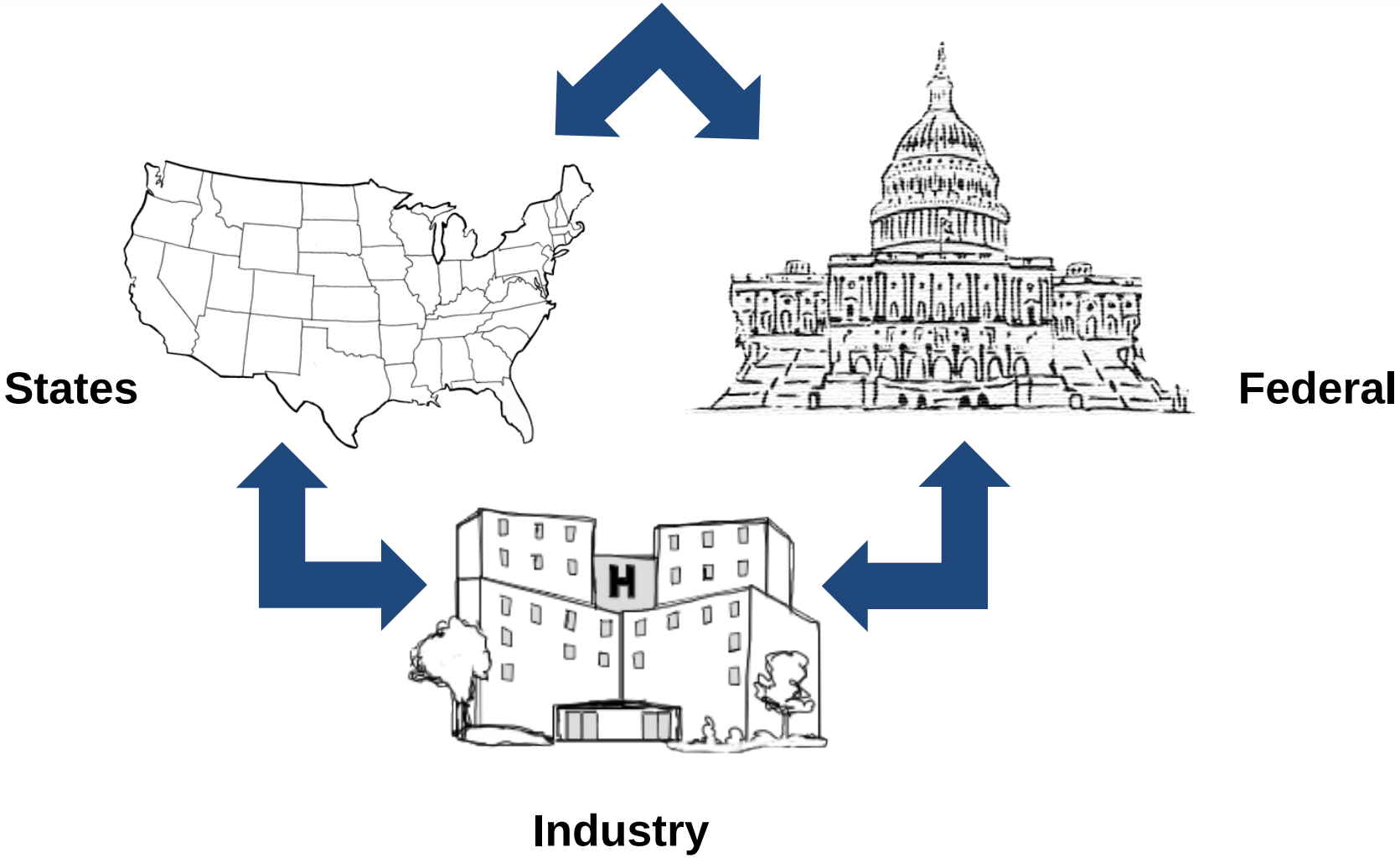
# Types of Topics HCUP Can Address

- 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** | Septicemia was the most expensive reason for hospitalization in 2011, totaling over $20 billion in aggregate hospital costs (NIS). |
| **Access to care** | Americans in low-income areas visit emergency departments (EDs) at rates 90 percent higher than do to those in high-income areas (NEDS). |
| **Quality of care** | From 2004 to 2009, the overall inpatient mortality rate for hospital admissions with heart attack decreased significantly overall, for both sexes, and for all expected payment sources (NIS). |
| **Readmissions** | For congestive heart failure, schizophrenia, and renal failure, at least one in five patients were readmitted within 30 days (SID with readmissions link). |
| **Patient Safety** | In 2009 in the United States, postoperative sepsis occurred in 15 of 1,000 elective-surgery admissions among patients 18 years and older who stayed in the hospital for at least 4 days (NIS and PSI). |
| **Geographic variation** | ED visits were higher in counties with fewer primary care doctors per capita (SEDD). |

# The HCUP Partnership



# Current HCUP State Partners

**Alaska** State Hospital and Nursing Home Association

**Arizona** Department of Health Services

**Arkansas** Department of Health

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

**Colorado** Hospital Association

**Connecticut** Hospital Association

**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 State 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 State 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** Health Authority

**Pennsylvania** Health Care Cost Containment Council

# Current HCUP State Partners

**Rhode Island** Department of Health

**South Carolina** Revenue and Fiscal 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

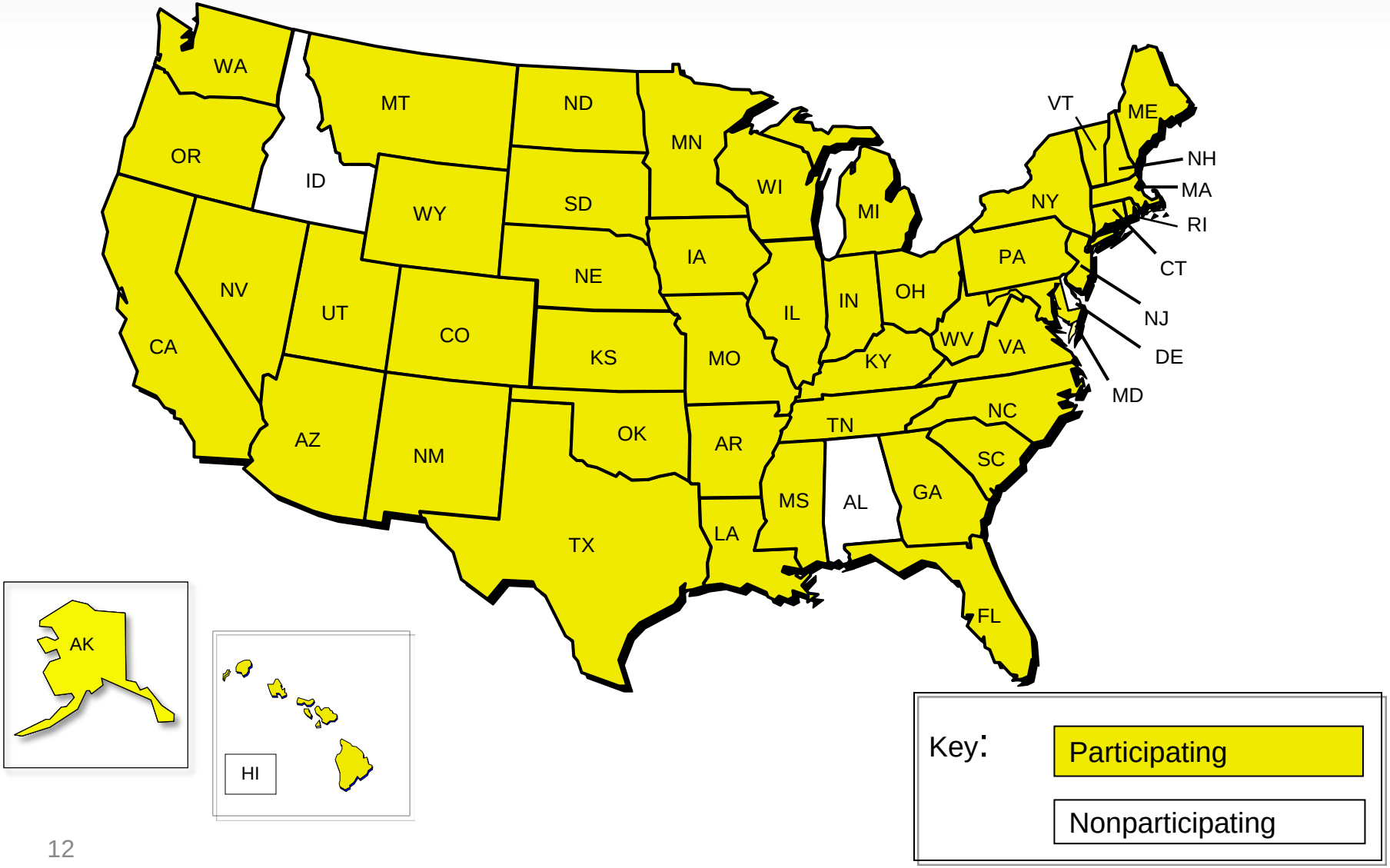
**Washington** State Department of Health

**West Virginia** Health Care Authority

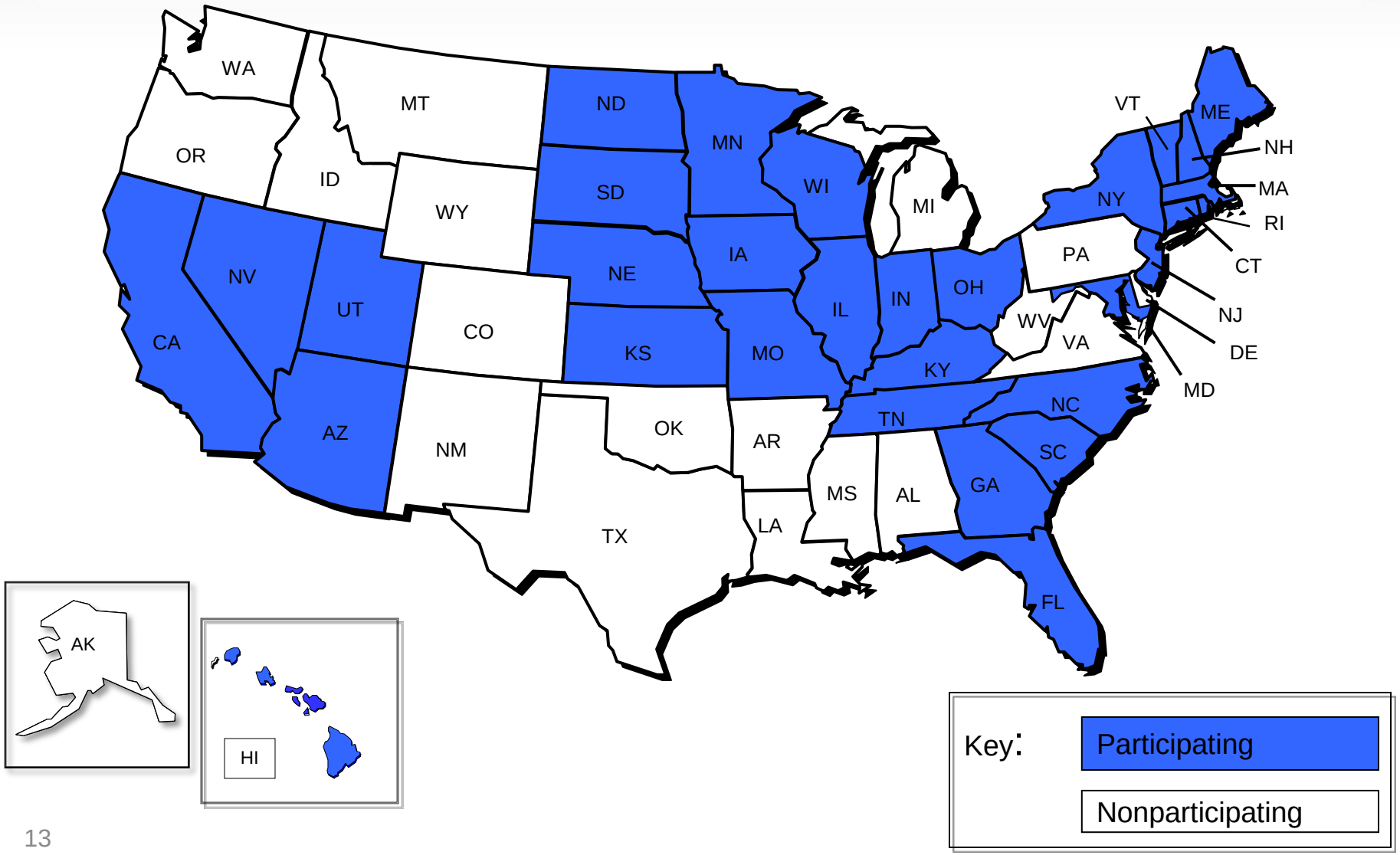
**Wisconsin** Department of Health and Family Services

**Wyoming** Hospital Association

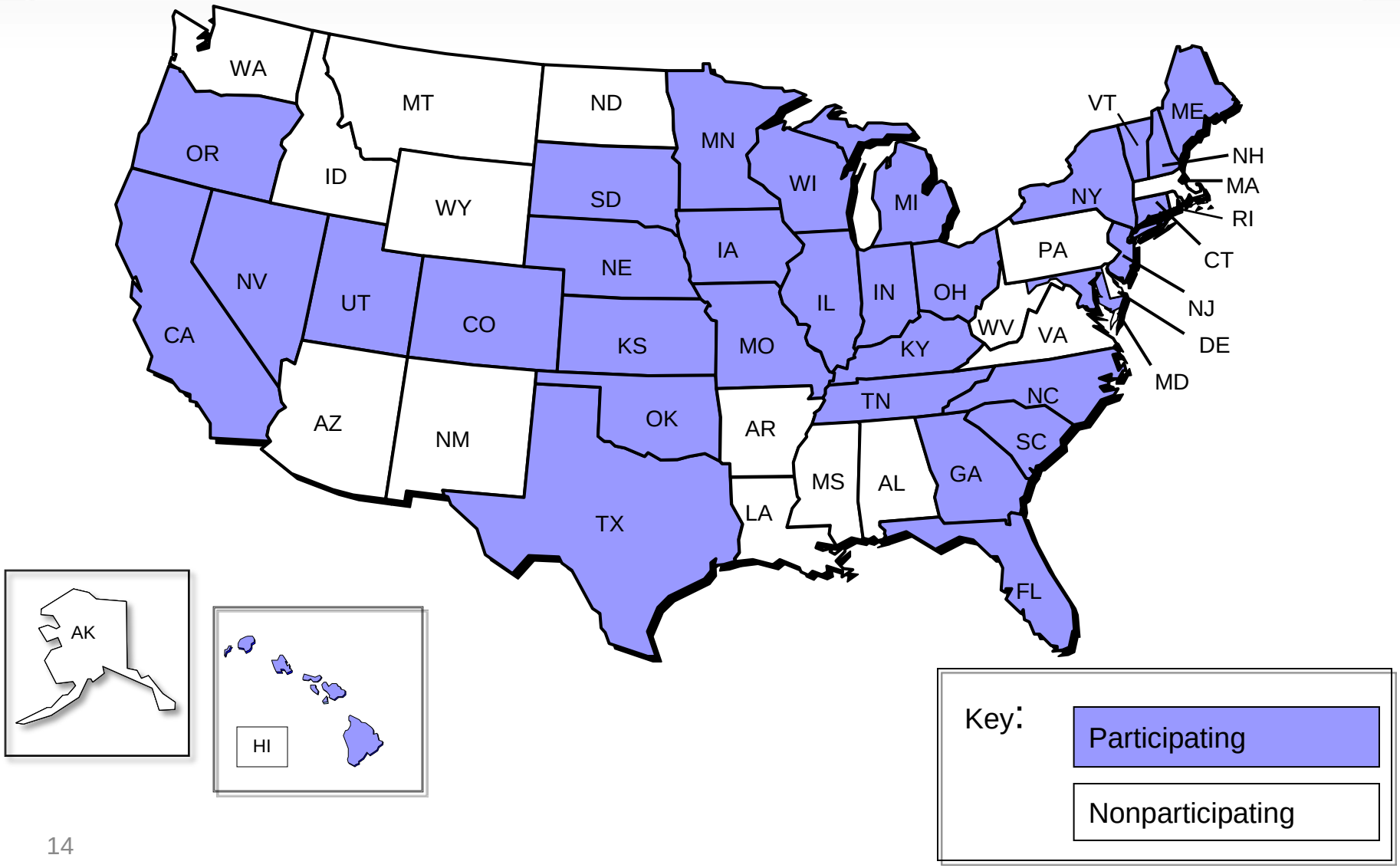
# HCUP Partners Providing 2012 Inpatient Data



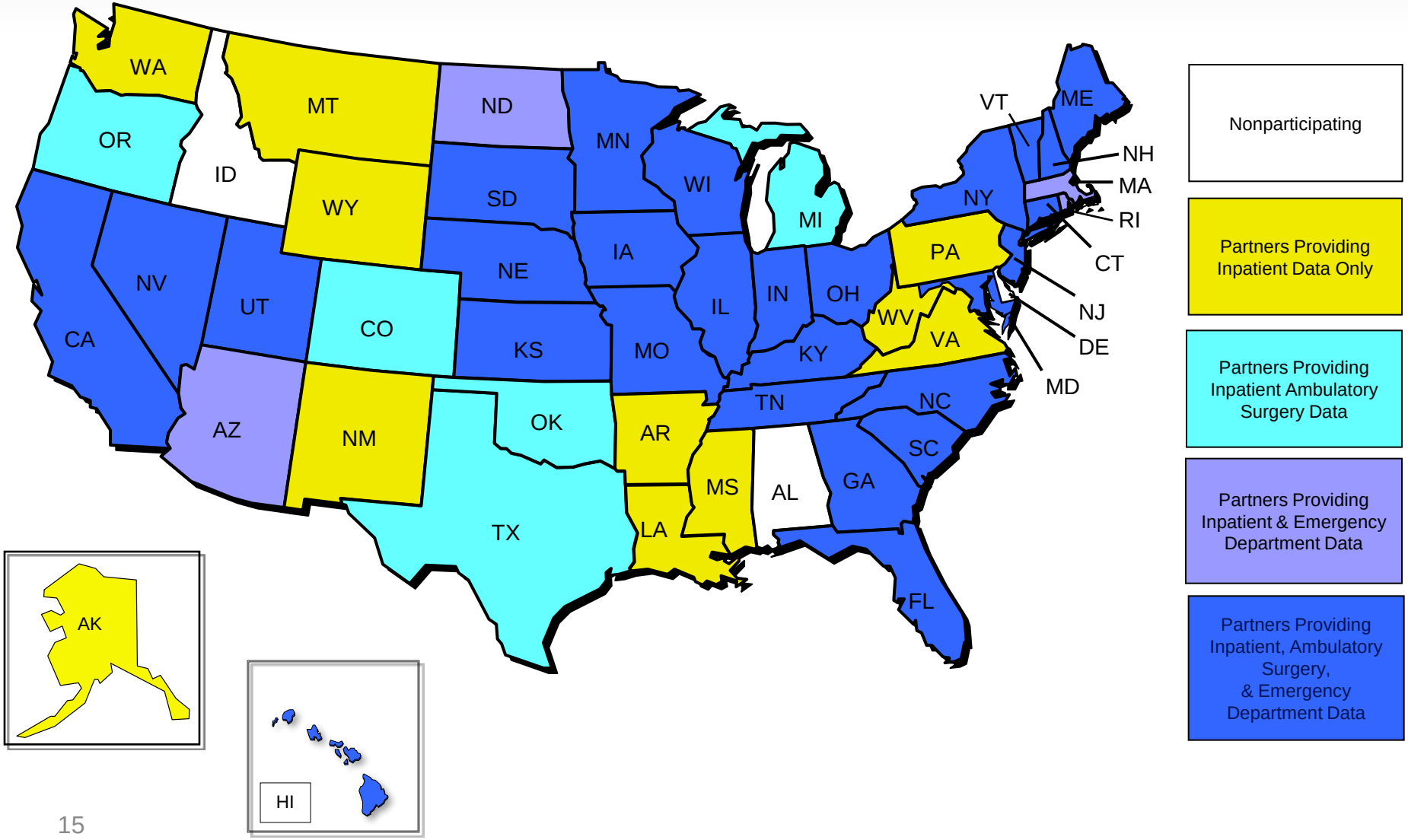
# HCUP Partners Providing 2012 Emergency Department Data



# HCUP Partners Providing 2012 Ambulatory Surgery & Services Data



# Partnership: HCUP Participation by State, 2012



# The Foundation of HCUP Data Is Hospital Billing Data

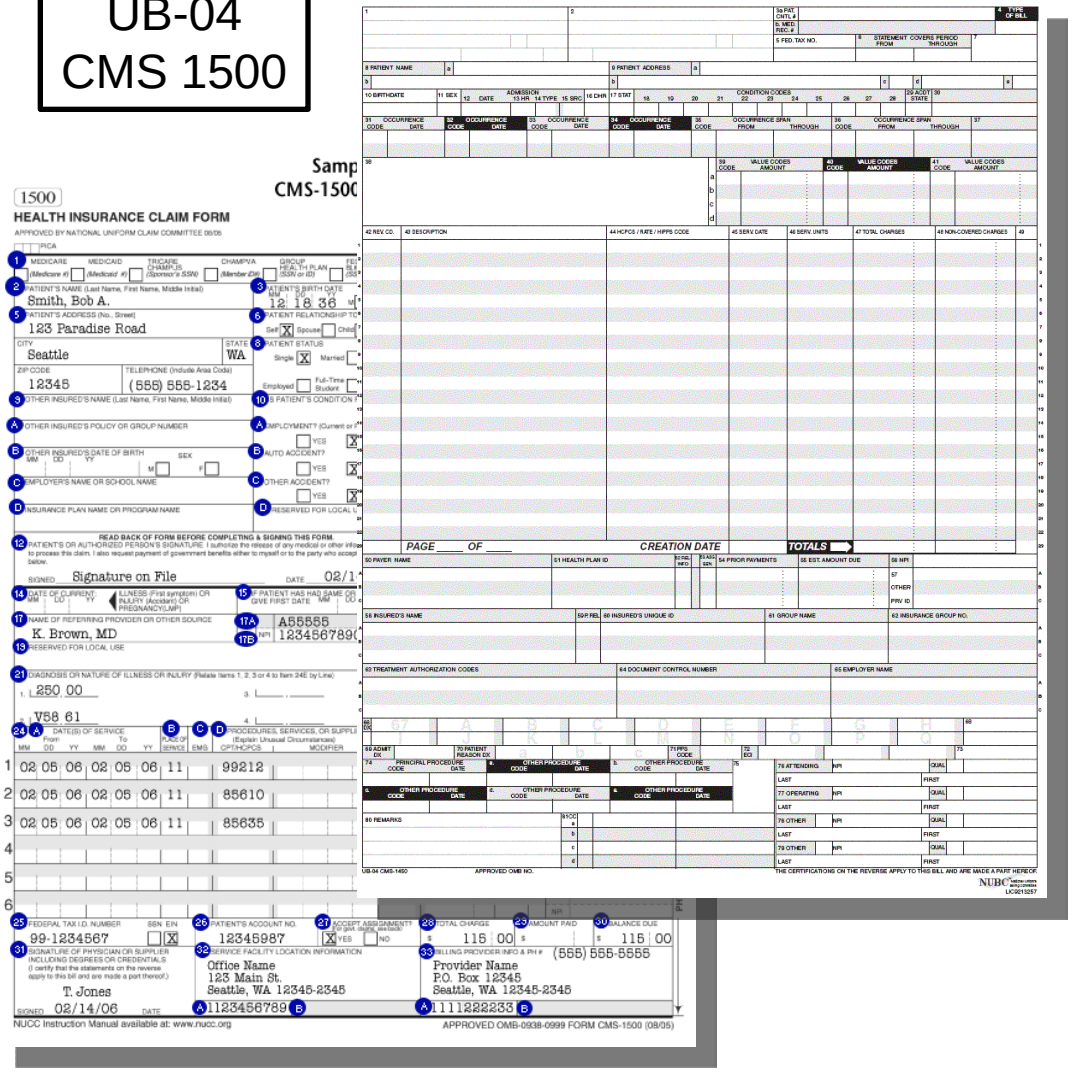
UB-04
CMS 1500

**Demographic Data**

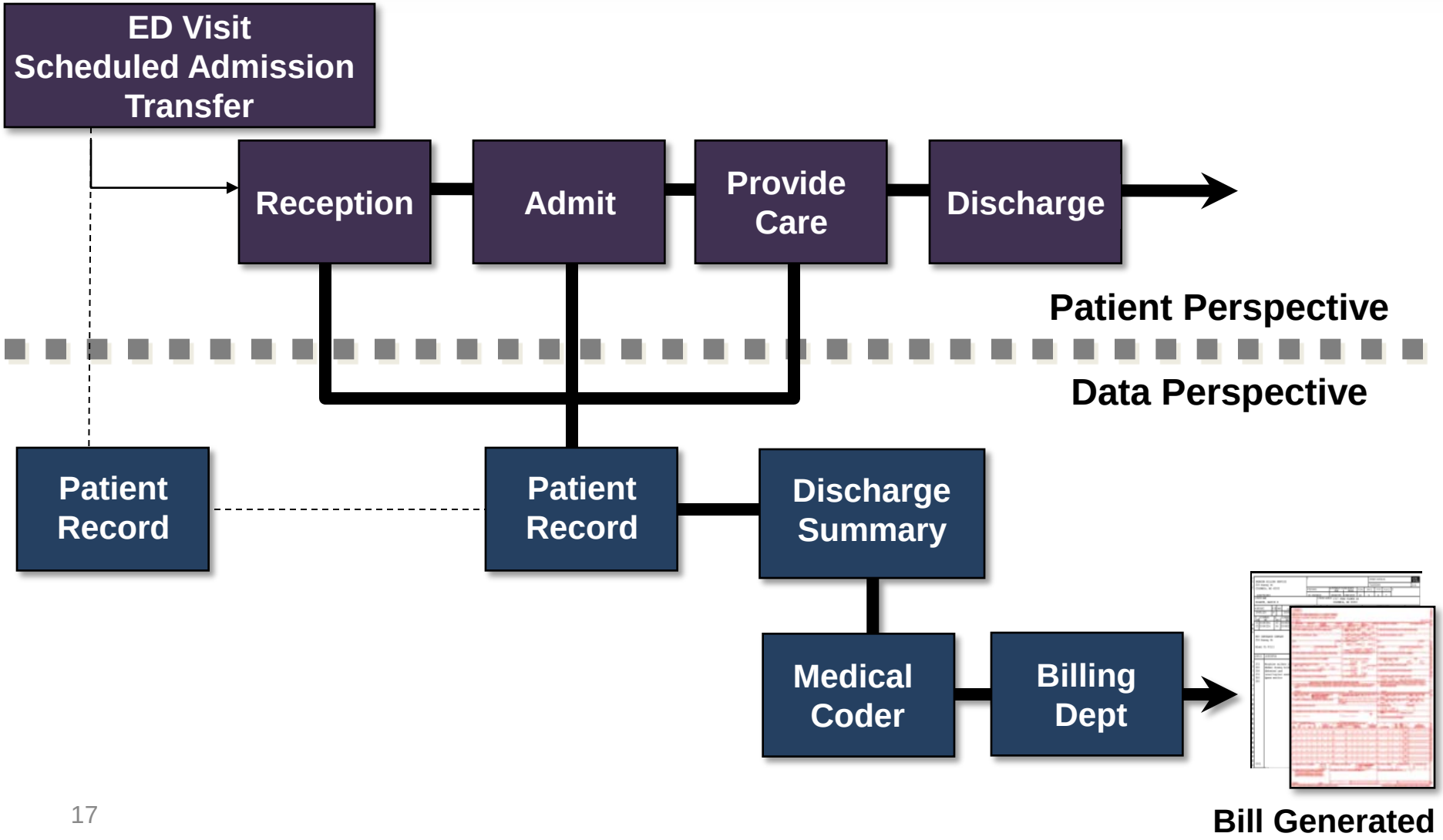
**Diagnoses**

**Procedures**

**Charges**



# From Patient Hospital Visit to HCUP Record



# 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 |

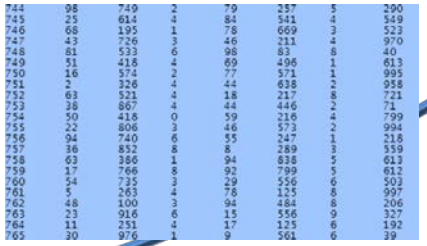
| Limitations |
| --- |
| Differences in coding across hospitals |
| Limited clinical details |
| Lack revenue information |
| Include most but not all hospitals |
| May not show complete experience of care |
| No data on individuals outside of hospital system |

# The Making of HCUP Data

Patient enters hospital

Billing record created

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



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 744 | 98 | 749 | 2 | 79 | 257 | 5 | 290 |
| 745 | 25 | 614 | 4 | 84 | 541 | 4 | 549 |
| 746 | 68 | 195 | 1 | 78 | 669 | 3 | 523 |
| 747 | 43 | 726 | 3 | 46 | 211 | 4 | 970 |
| 748 | 81 | 533 | 6 | 98 | 83 | 8 | 40 |
| 749 | 51 | 418 | 4 | 69 | 496 | 1 | 613 |
| 750 | 16 | 574 | 2 | 77 | 571 | 1 | 995 |
| 751 | 2 | 326 | 4 | 44 | 638 | 2 | 958 |
| 752 | 63 | 521 | 4 | 18 | 217 | 8 | 721 |
| 753 | 38 | 867 | 4 | 44 | 446 | 2 | 71 |
| 754 | 50 | 418 | 0 | 59 | 216 | 4 | 799 |
| 755 | 22 | 806 | 3 | 46 | 573 | 2 | 994 |
| 756 | 94 | 740 | 6 | 55 | 247 | 1 | 218 |
| 757 | 36 | 852 | 8 | 8 | 289 | 3 | 559 |
| 758 | 63 | 386 | 1 | 94 | 838 | 5 | 613 |
| 759 | 17 | 766 | 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

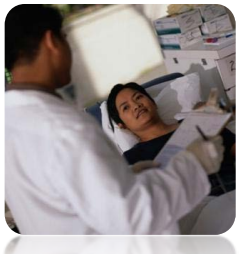
AHRQ standardizes data to create uniform HCUP databases

# The HCUP Process

- AHRQ standardizes data to create uniform HCUP databases
- Additional data elements are added:
  - Value-added variables – injury indicators, chronic condition indicators, procedure class
  - Hospital characteristics – teaching status, ownership or 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 Has Six Types of Databases

- Three State-level databases

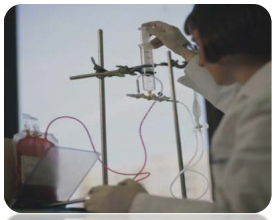


State Inpatient Databases (SID)

State Ambulatory Surgery and 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)

# HCUP State Databases

| | |
|---|---|
| State Inpatient Databases (SID) | Inpatient hospital discharge data (including admissions that started in the ED) from participating HCUP States |
| State Ambulatory Surgery & Services Databases (SASD) | Ambulatory surgery data (ambulatory surgery and other services from hospital-owned and sometimes nonhospital-owned facilities) 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

# What Are Community Hospitals?

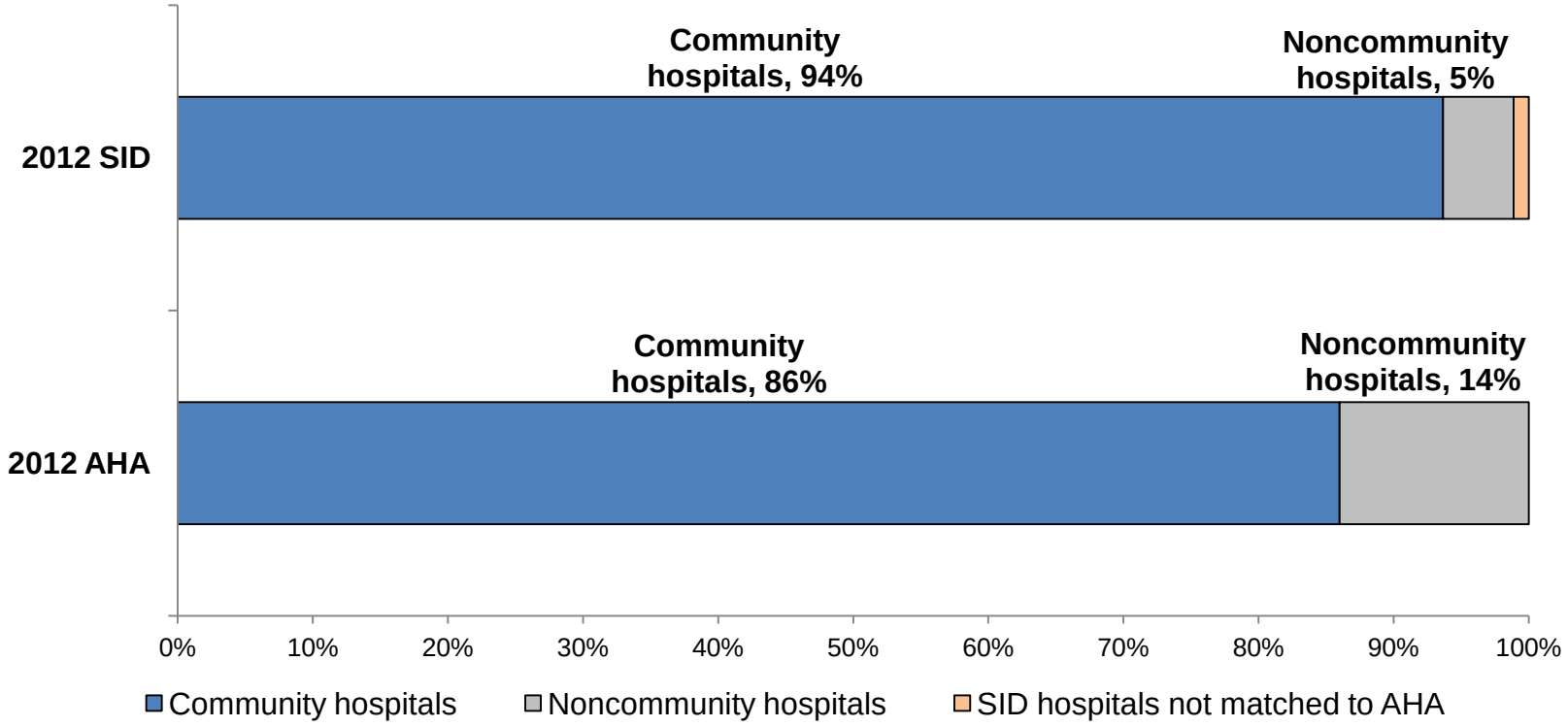
**American Hospital Association (AHA) Definition:**
Non-Federal, short-term, general, and other specialty hospitals

| Community Hospitals |
| --- |
| General multispecialty hospitals |
| Specialty hospitals (e.g., surgical, cancer, OB-GYN, heart, orthopedic) |
| Pediatric |
| Public |
| Academic medical centers |
| Short-stay rehabilitation |

| Noncommunity Hospitals |
| --- |
| DoD, VA, IHS |
| Psychiatric |
| Alcoholism and chemical dependency |
| Prison hospitals or college infirmaries |
| Long-stay rehabilitation and long-term care |

# Types of Hospitals in the SID

The SID contain mostly community hospitals, but also some noncommunity hospitals



# Types of Discharges in the SID

- HCUP generally does not receive data from psychiatric hospitals
- However, information for a patient who is treated for a mental health or substance abuse condition in a community hospital is included

| Most Frequent Principal Diagnosis | Number of Discharges (thousands) |
|---|---|
| 1. Newborns | 3,817 |
| 2. Pneumonia | 1,113 |
| 3. Septicemia | 1,093 |
| 4. Congestive heart failure | 970 |
| 5. Osteoarthritis | 964 |
| 6. Mood disorders | 895 |
| 7. Cardiac dysrhythmias | 795 |

Source: Nationwide Inpatient Sample, 2011

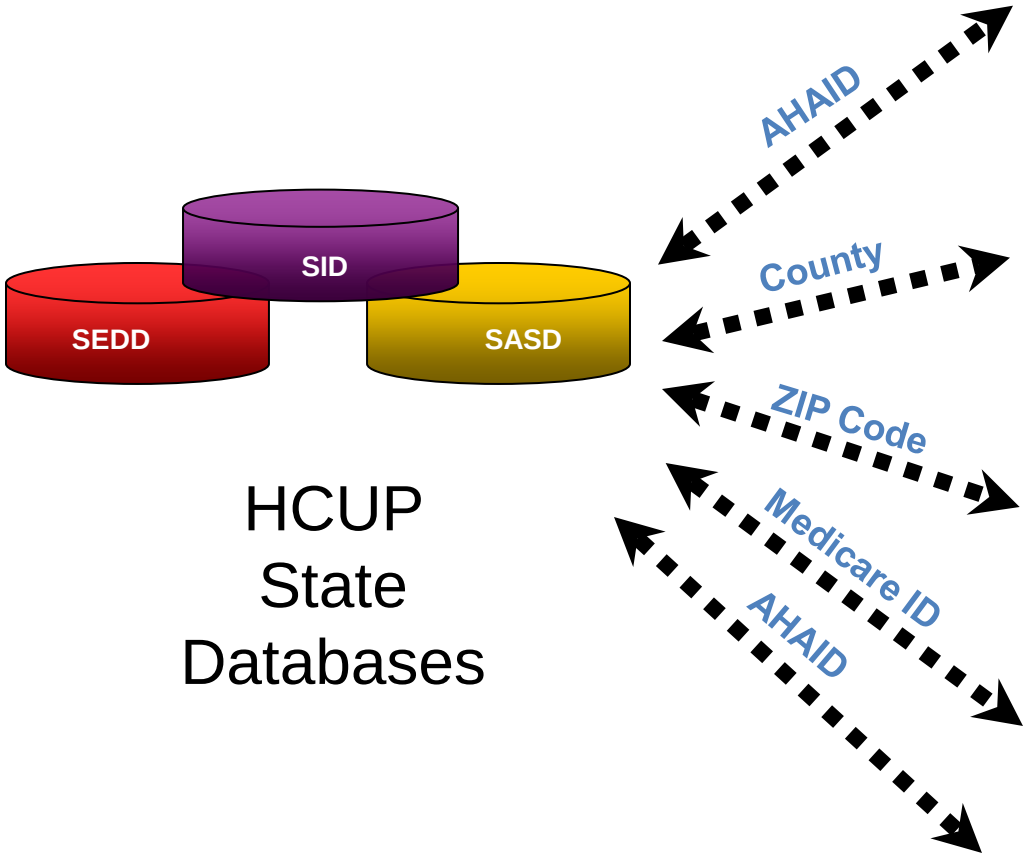
# Common Data Elements in the HCUP Databases

- 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
- 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

# Link to Other Databases for Additional Information




**American Hospital Association (AHA) Annual Survey**

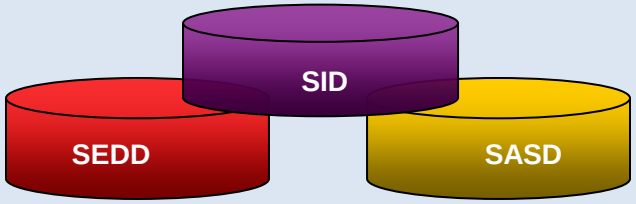
**The Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF)**

**Zip Code Files From U.S. 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

# HCUP Nationwide Databases

National (Nationwide) Inpatient Sample

(NIS)

Inpatient hospital discharge data sampled from the SID

NIS Redesign

Nationwide Emerg. Dept. Sample

(NEDS)

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

Kids' Inpatient Database

(KID)

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

# 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

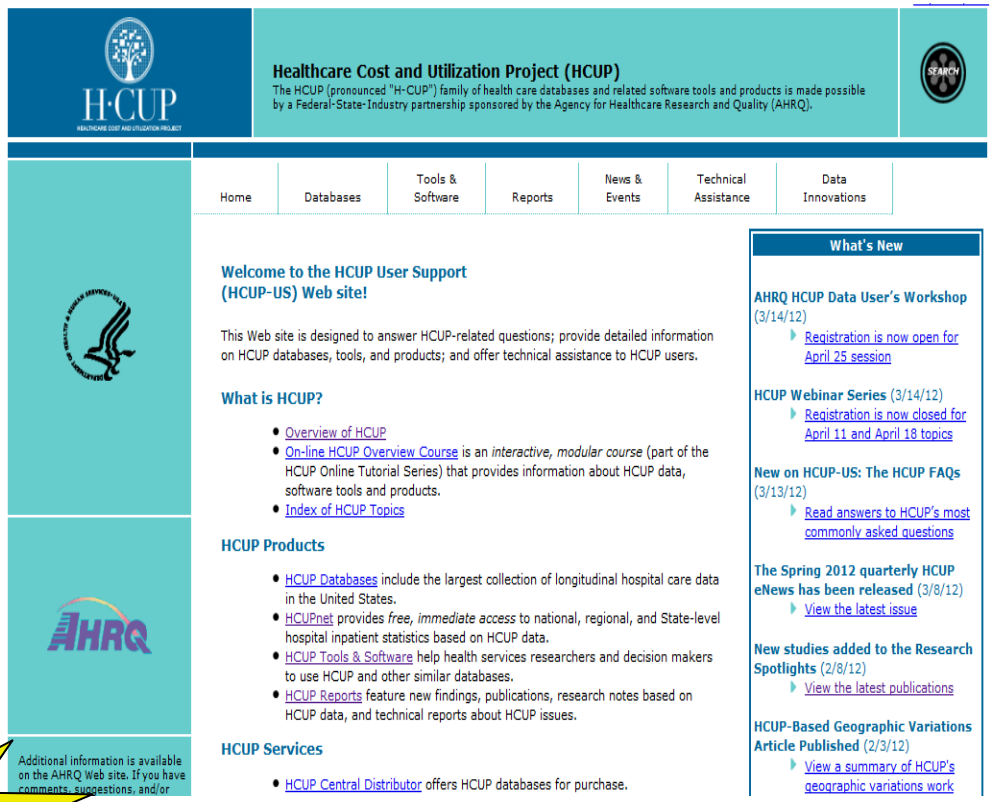
| | Inpatient Data | | | Emergency Department Data | |
|---|---|---|---|---|---|
| HCUP Database | SID (2012) | NIS (2012) | KID (2009) | SEDD (2012) | NEDS (2011) |
| Hospitals | 4,400 | 4,400 | 4,000 | 2,700 | 1,000 |
| Records | 35 million | 7 million | 3 million | 75 million | 29 million |
| Derived From | – | SID | SID | – | SID & SEDD |
| Includes | All discharges for a given State, including ED admissions | Sample of inpatient discharges (all ages) in 2012; sample of hospitals prior to 2012 | Sample of pediatric inpatient discharges | All ED visits that do not result in an admission to the same hospital | Sample of hospital-based EDs with ED admissions and ED outpatient visits |

# Summary

- Six types of HCUP databases
- Databases are based on administrative hospital data: inpatient, ED, and ambulatory surgery and services
- Available for multiple years
  - National
    - NIS (1988–2012)
    - NEDS (2006–2011)
    - KID (1997, 2000, 2003, 2006, 2009, 2012 available soon)
  - State
    - SID (1990–2012)
    - SASD (1997–2012)
    - SEDD (1999–2012)
- Can look at breadth and depth of health care issues

# HCUP User Support
# HCUP-US Web Site

- Easy access to information on
  - HCUP databases
  - Tools and software
  - HCUP-related reports and publications
  - News and upcoming events
  - Technical assistance




More than 1.3 M Web site visits annually

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

# HCUP-US for Database Documentation

## NIS Database Documentation

The NIS is a set of longitudinal hospital inpatient databases included in the HCUP family. These databases are created by AHRQ through a Federal-State-Industry partnership.

Home | Databases | Tools & Software | Reports | News & Events | Technical Assistance | Data Innovations

### The Nationwide Inpatient Sample (NIS)

The Nationwide Inpatient Sample (NIS) is the largest all-payer inpatient care database in the United States, containing data on more than eight million hospital stays from over 1,000 hospitals. Its large sample size is ideal for developing national and regional estimates and enables analyses of rare conditions, uncommon treatments, and special populations. The following links provide detailed documentation for the NIS.

**Description of NIS Files**

- Introduction to the NIS
  - 2011 (PDF file, 1.3 MB; HTML)
  - Prior Years
- HCUP Quality Control Procedures (PDF file, 288 KB; HTML)
- File Specifications

**Restrictions on the Use of the NIS**

- Data Use Agreement for the Nationwide Databases (PDF file, 50 KB; HTML)
- Requirements for Publishing with HCUP Data
- Sources of NIS Data and State-Specific Restrictions for Prior Years

**Load Programs**

- SAS Load Programs
- SPSS Load Programs
- Stata Load Programs

**NIS Data Elements**

- Description of Data Elements
  - Prior Years
- Availability of Data Elements by Year (PDF file, 215 KB)
- Availability of AHA Hospital Identifiers across States and Years

**Additional Resources for NIS Data Elements**

- Summary Statistics

**Known Data Issues**

- 2000
- 1998-1999
- 1994-1997
- 1993
- 1988-1992
- For NIS data 1997 and earlier, revised weights should be used to make estimates comparable to later data. Refer to the NIS Trends Weights Files.

**HCUP Tools: Labels and Formats**

- Clinical Classifications Software (CCS)
- Format Programs
  - DRG Formats Program (TXT file, 1.2 MB) *Creates SAS formats to label the values of each DRG and MDC category*
  - HCUP Formats Program (TXT file, 64 KB) *Creates SAS formats to label the values of selected categorical data elements in HCUP files*
  - HCUP Diagnosis and Procedure Groups Formats Program (TXT file, 45 KB) *Creates SAS formats to label the values of HCUP Diagnosis and Procedure Groups data elements, including Clinical Classifications Software (CCS) data elements*
  - ICD-9-CM Formats Program (TXT file, 909 KB) *Creates SAS formats to label the values of ICD-9-CM Diagnoses and Procedures*
  - Severity Formats Program (TXT file, 667 KB) *Creates SAS formats to label the values of data elements in HCUP Severity Files*

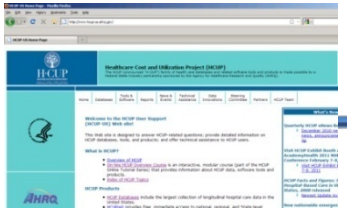
**NIS Related Reports and Supplemental Files**

- NIS Related Reports

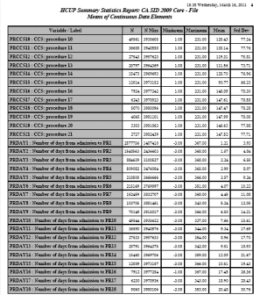
**https://www.hcup-us.ahrq.gov/databases.jsp**

# How to Obtain HCUP Data

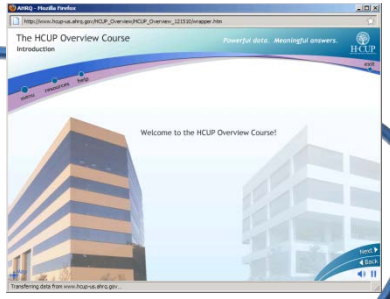
Visit HCUP-US Web Site



Review HCUP Database Documentation and Summary Statistics

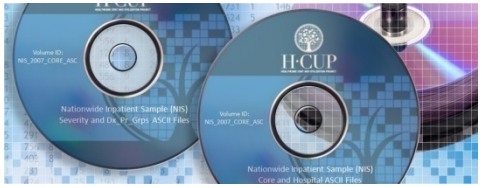


Review Methods Reports and Online Tutorials




Complete Data Use Agreement and Online Training and Sign Data Use Agreement

Secure Administrative Data: SID, SASD, SEDD, NIS, KID, NEDS



# Purchase Data Through the HCUP Central Distributor

- **Step 1:** Download and complete application kit:
  http://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp

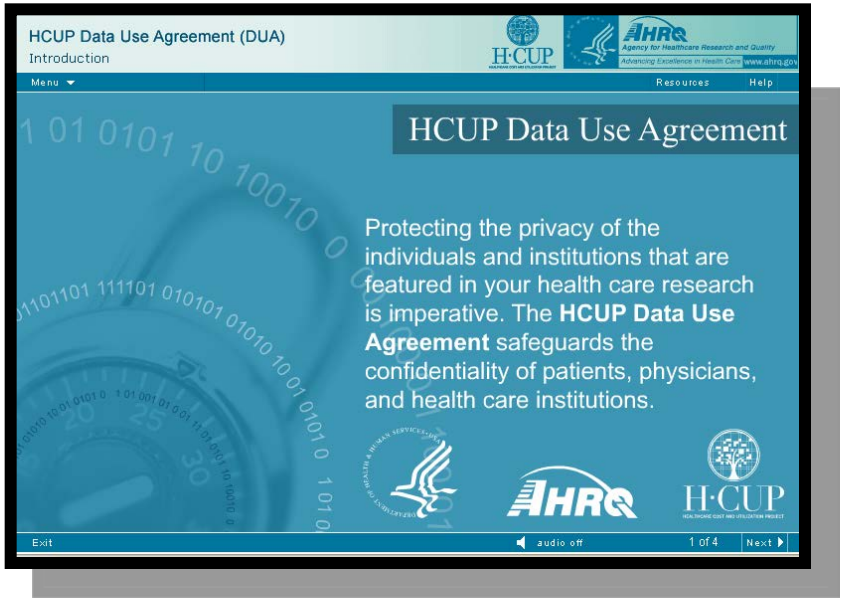
- **Step 2:** Obtain more information on ordering (if needed):
  Phone: 866-556-HCUP (4287) toll free
  Email: HCUPDistributor@ahrq.gov

- **Step 3:** Take Data Use Agreement (DUA) online training and sign DUA

- **Step 4:** Send order form, signed DUA, and payment to HCUP Central Distributor

# Requirement: Electronic Data Use Agreement (DUA) Course

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




~15 minutes to complete

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

# States Releasing Databases Through HCUP Central Distributor

- 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

# Pricing Information per Data Year

Nationwide Databases (NIS, KID, NEDS)

- NIS: $350 (CY 2010–2011; student price $50)
  $160–$200 (earlier years; student price $20)
- KID: $350 (CY 2009; student price $50)
  $200 (earlier years; student price $20)
- NEDS: $500 (student price $75)

National data free to Government agencies

State Databases (SID, SASD, SEDD) – must be purchased

- Owned by State-level data organizations
- Access and costs varies by State
- $35–$3,185

All funds for State data sales returned to State partners

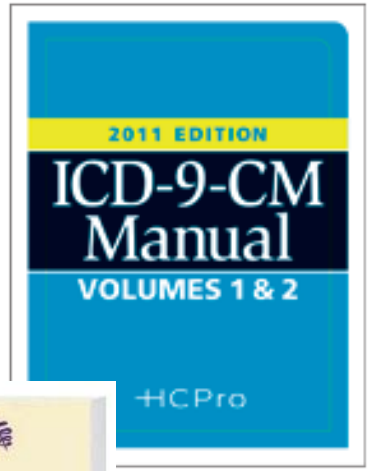
# Software Requirements for HCUP and Programs HCUP Provides

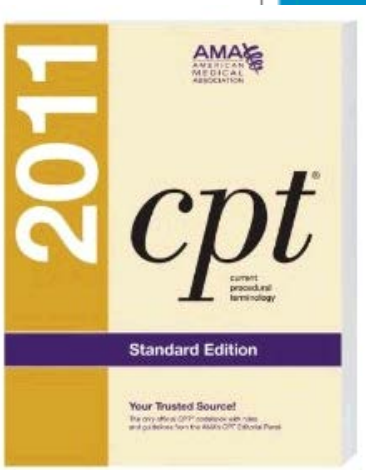
| Software Package | Load Programs | Format Programs | Example Statistical Coding | HCUP Tools Programs |
|---|---|---|---|---|
| SAS | X | X | X | X |
| STATA | X | | X | X |
| SPSS | X | | | X |
| SUDAAN | | | X | |

MS Excel and Access are NOT GOOD options!

# Value-Added Clinical and Quality Measurement Tools

- Clinical Classifications Software*
- Procedure Classes*
- Chronic Condition Indicator*
- Comorbidity Software*
- Utilization 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
  - >12,000 diagnosis codes → ~260 categories
  - > 4,000 procedure codes → ~230 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 03844 03849 0388 0389 0545 449 7907 | CCS 2: Septicemia |
| 0700 0701 0702 07020 07021 07022 07023 0703 07030 07031 07032 07033 0704 07041 07042 07043 07044 07049 | CCS 6: Hepatitis |

# Clinical Classifications Software (CCS)

- The Clinical Classifications Software (CCS) is a tool for clustering patient diagnoses and procedures into a manageable number of clinically meaningful categories.
- ICD-9-CM diagnoses and procedures
  - Single level
  - Multilevel
- ICD-10-CM diagnoses and ICD-10-PCS procedures (Beta)
  - Single level
- ICD-10 for mortality
- Services and Procedures
  - Current Procedural Terminology (AMA)

# Procedure Classes

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

ICD-10-PCS or ICD-9-CM Procedure Codes

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 Nonchronic Categories
  - ICD-10-CM diagnosis codes (Beta)
  - ICD-9-CM diagnosis codes

ICD-10-CM or ICD-9-CM Diagnosis Codes

1. Chronic
   Ex: Diabetes
2. Nonchronic
   Ex: Food Poisoning

# Comorbidity Software

- Creates and appends indicator flags to each record for 29 major comorbidity
  - ICD-10-CM diagnosis codes (Beta)
  - ICD-9-CM diagnosis codes

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

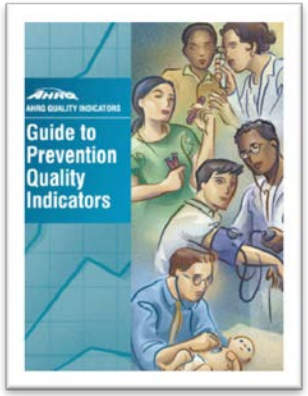
Comorbidity Software

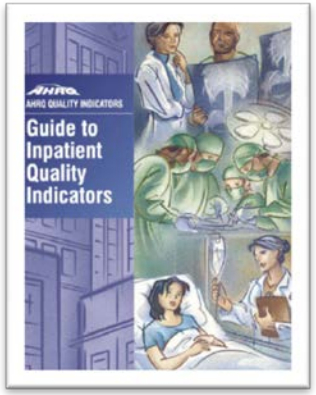
29 Comorbidity Groups

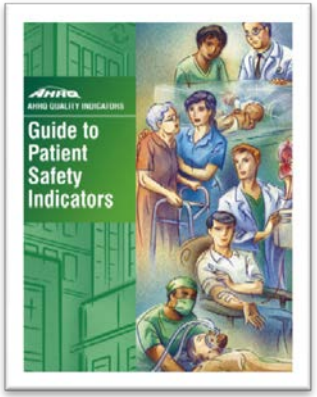
Valvular disease
Pulm circ disorders
Peripheral vascular dx
Hypertension
Paralysis
Other neuro disorders
Chronic pulmonary dx
DM w/o complications
DM w/ complications
Hypothyroidism
Renal failure
Liver disease …

# AHRQ Quality Indicators

- Uses inpatient administrative data to create measures of health care quality
  - Four modules:
    1. Prevention Quality Indicators (PQI)
    2. Inpatient Quality Indicators (IQI)
    3. Patient Safety Indicators (PSI)
    4. Pediatric Quality Indicators (PDI)



# HCUP Supplemental Files

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

# 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

# Charges vs. Costs vs. Price

- **Charges:** What the hospital charged for care (includes charge BEFORE discount)
- **Costs:** What it cost the hospital to provide the care
- **Price (Payment):** What the insurer/individual paid for the care (Methods to estimate prices being developed)

HCUP Databases include **CHARGE** information
**COST** information can be estimated using cost-to-charge ratios

# HCUP-US for Tools and Software

## Tools & Software

HCUP tools and software help health services researchers and decision makers to use HCUP and other similar databases. These products are developed by AHRQ through a Federal-State-Industry partnership.

Home | Databases | Tools & Software | Reports | News & Events | Technical Assistance | Data Innovations

### Favorites

**HCUPnet**
HCUPnet is an interactive tool for identifying, tracking, analyzing, and comparing statistics on hospital and emergency care. HCUPnet provides statistics from the HCUP nationwide databases (NIS, KID, and NEDS) and the State-level databases (SID, SASD, and SEDD) for those States that have agreed to participate.

**MONAHRQ**
MONAHRQ is a software product that enables organizations - such as state and local data organizations, Chartered Value Exchanges, hospital systems, and health plans - to input their own hospital administrative data and generate a data-driven Web site.

**AHRQ Quality Indicators (QIs)**
AHRQ Quality Indicators (QIs) use hospital administrative data to highlight potential quality concerns, identify areas that need further study and investigation, and track changes over time.

### HCUP Tools & Software

The HCUP Tools and Software are analytic methods that, when applied to HCUP databases, systematically create new data elements from existing data, thereby enhancing a researcher's ability to conduct analyses. While designed to be used with HCUP databases, they may be applied to other administrative databases as well.

***Note: The ICD-10-CM/PCS tools are now available in beta version for public evaluation. Please visit the following link to download the tools: ICD-10-CM/PCS Beta Test Tools Page. Official implementation of ICD-10-CM/PCS is scheduled for October 1, 2015.***

**Clinical Classifications Software (CCS) for ICD-9-CM**
Clinical Classifications Software (CCS) provides a method for classifying ICD-9-CM diagnoses or procedures into clinically meaningful categories, which can be used for aggregate statistical reporting of a variety of types. (Updated for codes valid through FY 2014.)

**Clinical Classifications Software for Services and Procedures**
CCS-Services and Procedures provides a method for classifying Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes into clinically meaningful procedure categories. The procedure categories are identical to the

**Chronic Condition Indicator**
The Chronic Condition Indicator (CCI) provides users an easy way to categorize ICD-9-CM diagnosis codes into one of two categories: chronic or not chronic. The tool can also assign ICD-9-CM diagnosis codes into 1 of 18 body system categories. (Updated for codes valid through FY 2014.)

**Comorbidity Software**
Comorbidity Software assigns variables that identify coexisting conditions on hospital discharge records. (Updated for codes valid through FY 2014.)

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

# HCUPnet

H·CUP
HEALTHCARE COST AND UTILIZATION PROJECT

370,000 Website Visits Annually

Skip Navigation

U.S. Department of Health & Human Services — www.hhs.gov

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

Search AHRQ Go

www.ahrq.gov

## 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.

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 Nationwide Inpatient Sample (NIS).* Overview of the 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 Nationwide Inpatient Sample (NIS), the HCUP Kids' Inpatient Database (KID), or the HCUP State Inpatient Databases (SID).*

### Hospital Readmissions

**First Time Visitor?**

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

**What's New?**

- 2012 data for participating States. (02/18/2014) Just Added!
- 2011 nationwide data on AHRQ Quality Indicators. (01/14/2014)
- 2011 nationwide ED data -- new database just released. (01/08/2014)
- Community-level Statistics for 2011, Beta Query Path. (12/13/2013)
- 2011 readmission data added. (06/19/2013)
- Cost information for participating states in 2011. (06/05/2013)
- Population-based rates and queries restricted to non-neonatal and non-maternal discharges. (06/03/2013)

Projected estimates on specific conditions are periodically available here.

**http://hcupnet.ahrq.gov**

# HCUPnet: Nationwide Inpatient Data

AHRQ Agency for Healthcare Research and Quality
Advancing Excellence in Health Care
Search AHRQ Go
www.ahrq.gov

H·CUPnet
National and regional estimates on hospital use for all patients from the HCUP Nationwide Inpatient Sample (NIS)

>> Help
>> Medical dictionary
>> What is HCUP ?
>> HCUPnet definitions
>> HCUP Home

HCUPnet Home | Lay or researcher | Select type of query | Select year | Select diagnoses or procedures | Principal or all-listed | Restrict tables | Select codes | Outcomes and measures | Patient and hospital characteristics | Results

## Results

- Display results in a printer-friendly version (*Try printing in landscape for best results*)
- Save results as an Excel spreadsheet
- Create a results page to bookmark or add to favorites (*Bookmarking the current page will not return you to these results*)
- Email a link to this page (*Your browser must be configured to send email*)
- Repeat this query on another database
- Run a new query

2011 National statistics - principal diagnosis only

**Outcomes for CCS principal diagnosis category 2 Septicemia (except in labor)**

| | | | | | Standard errors | | |
|---|---|---|---|---|---|---|---|
| | | Total number of discharges | Rate of discharges per 100,000 persons | Costs, $ (mean) | Total number of discharges | Rate of discharges per 100,000 persons | Costs, $ (mean) |
| All discharges | | 1,093,713 (100.00%) | 351.0 | 18,638 | 31,284 | 10.0 | 369 |
| Age group | <1 | 9,140 (0.84%) | 228.7 | 17,309 | 920 | 23.0 | 2,584 |
| | 1-17 | 8,551 (0.78%) | 12.2 | 28,425 | 967 | 1.4 | 3,899 |
| | 18-44 | 112,461 (10.28%) | 99.1 | 19,131 | 4,403 | 3.9 | 567 |
| | 45-64 | 301,842 (27.60%) | 364.6 | 22,199 | 9,416 | 11.4 | 476 |
| | 65-84 | 466,317 (42.64%) | 1,307.8 | 18,178 | 13,342 | 37.4 | 330 |
| | 85+ | 195,319 (17.86%) | 3,404.5 | 13,605 | 6,265 | 109.2 | 299 |
| | Missing | 81 (0.01%) | --- | 24,198 | 19 | --- | 7,118 |

Weighted national estimates from HCUP Nationwide Inpatient Sample (NIS), 2011, Agency for Healthcare Research and Quality (AHRQ), based on data collected by individual States and provided to AHRQ by the States. Total number of weighted discharges in the U.S. based on HCUP NIS = 38,590,733. Statistics based on estimates with a relative standard error (standard error / weighted estimate) greater than 0.30 or with standard error = 0 in the nationwide statistics (NIS, NEDS, and KID) are not reliable. These statistics are suppressed and are designated with an asterisk (*). The estimates of standard errors in HCUPnet were calculated using SUDAAN software. These estimates may differ slightly if other software packages are used to calculate variances.

See the ICD codes that comprise CCS categories.

# HCUPnet: Nationwide ED Data

AHRQ Agency for Healthcare Research and Quality
Advancing Excellence in Health Care
Search AHRQ Go
www.ahrq.gov

H·CUPnet
Information on ED visits from the HCUP Nationwide Emergency Department Sample (NEDS)

>> Help
>> Medical dictionary
>> What is HCUP ?
>> HCUPnet definitions
>> HCUP Home

| HCUPnet Home | Select types of visits | Select type of query | Select year | Select diagnoses or procedures | First-listed or all-listed | Select codes | Verify codes | Outcomes and measures | Patient and hospital characteristics | Results |
|---|---|---|---|---|---|---|---|---|---|---|

## Results

- Display results in a printer-friendly version *(Try printing in landscape for best results)*
- Save results as an Excel spreadsheet
- Create a results page to bookmark or add to favorites *(Bookmarking the current page will not return you to these results)*
- Email a link to this page *(Your browser must be configured to send email)*
- Repeat this query on another database
- Run a new query

2010 National statistics - first-listed diagnosis only

**CCS first-listed diagnosis category**
**100 Acute myocardial infarction**

| | | All ED visits (those that resulted in admission to the hospital and those that did not) | Only hospital visits that originated in the ED | Only ED visits that ended in discharge (no hospital admission) | Standard errors | | |
|---|---|---|---|---|---|---|---|
| | | | | | All ED Visits | Admitted to the hospital from the ED | Discharged from the ED |
| All visits | | 530,567 (100.00%) | 442,988 (83.49%) | 87,578 (16.51%) | 14,491 | 14,375 (0.64%) | 2,799 (0.64%) |
| Payer | Medicare | 299,109 (56.38%) | 258,192 (86.32%) | 40,917 (13.68%) | 8,668 | 8,491 (0.57%) | 1,473 (0.57%) |
| | Medicaid | 35,093 (6.61%) | 29,507 (84.08%) | 5,586 (15.92%) | 1,491 | 1,458 (0.95%) | 290 (0.95%) |
| | Private insurance | 138,428 (26.09%) | 110,926 (80.13%) | 27,502 (19.87%) | 4,333 | 4,324 (0.89%) | 999 (0.89%) |
| | Uninsured | 41,882 (7.89%) | 31,354 (74.86%) | 10,528 (25.14%) | 1,650 | 1,526 (1.43%) | 616 (1.43%) |
| | Other | 15,045 (2.84%) | 12,521 (83.23%) | 2,523 (16.77%) | 983 | 955 (1.39%) | 175 (1.39%) |
| | Missing | 1,010 (0.19%) | * | 521 (51.61%) | 226 | * | 117 (7.66%) |

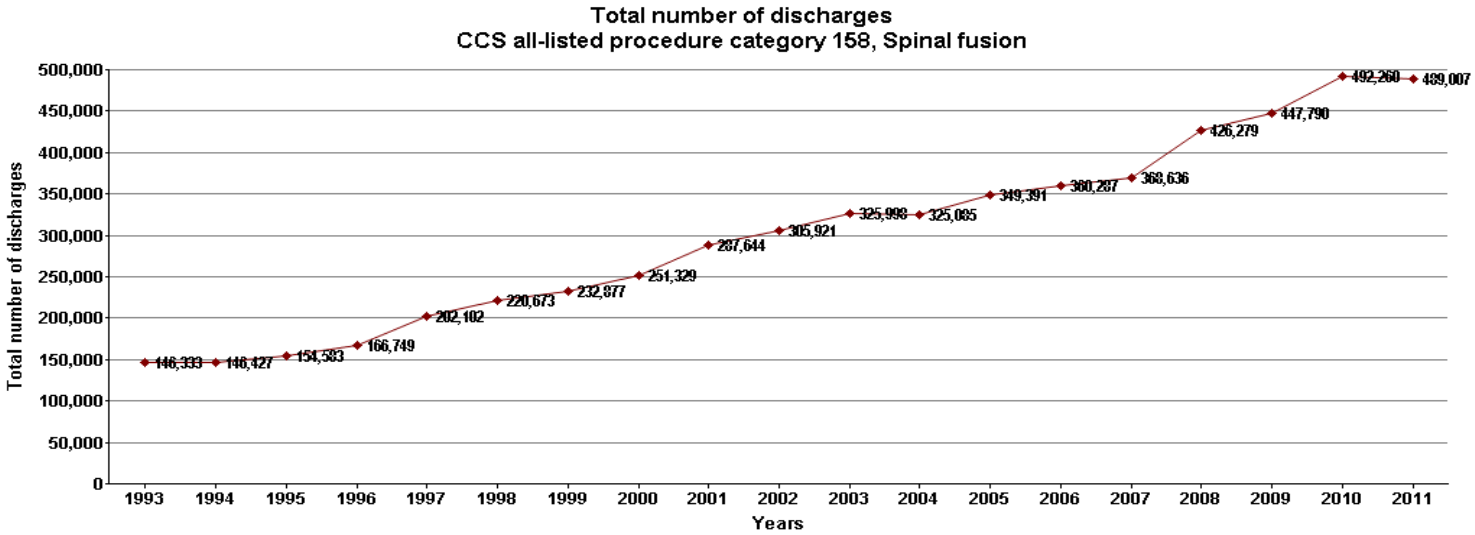
Weighted national estimates from HCUP Nationwide Emergency Department Sample (NEDS), 2010, Agency for Healthcare Research and Quality (AHRQ), based on data collected by individual States and provided to AHRQ by the States. Total number of weighted visits in the U.S. based on HCUP NEDS = 128,970,364. Statistics based on estimates with a relative standard error (standard error / weighted estimate) greater than 0.30 or with standard error = 0 in the nationwide statistics (NIS, NEDS, and KID) are not reliable. These statistics are suppressed and are designated with an asterisk (*). The estimates of standard errors in HCUPnet were calculated using SUDAAN software. These estimates may differ slightly if other software packages are used to calculate variances.

# HCUPnet: Trends

Results

- Display results in a printer-friendly version (Try printing in landscape for best results)
- Save results as an Excel spreadsheet
- Create a results page to bookmark or add to favorites (Bookmarking the current page will not return you to these results)
- Email a link to this page (Your browser must be configured to send email)
- Repeat this query on another database
- Do Not Show Graphs of Trend Data
- Run a new query

National statistics - all-listed




**Number of discharges**

| CCS all-listed procedure category and name | | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | Spinal fusion | 146,333 | 146,427 | 154,583 | 166,749 | 202,102 | 220,673 | 232,877 | 251,329 | 287,644 | 305,921 | 325,998 | 325,085 | 349,391 | 360,287 | 368,636 | 426,279 | 447,790 | 492,260 | 489,007 |

**Number of discharges - Standard Errors**

| CCS all-listed procedure category and name | | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | Spinal fusion | 8,291 | 8,617 | 9,171 | 9,572 | 11,305 | 11,829 | 12,557 | 11,913 | 14,686 | 15,195 | 17,292 | 15,849 | 18,995 | 19,445 | 18,762 | 23,643 | 23,989 | 23,976 | 25,527 |

# HCUPnet: Readmissions

All patient readmissions within 30 days
National statistics, 2011

**Index stay - 2 Septicemia (except in labor)**
**Index stay defined by the principal diagnosis, using Clinical Classification Software (CCS)**

| | | Index Stays | | Readmitted within 30 days | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Readmissions with the same CCS as a principal diagnosis | | | Readmissions with the same CCS in any diagnosis | | | Readmissions for any cause | | |
| | | Number of stays | Mean cost $ per stay | Number of stays | Percent readmitted | Mean cost $ per stay | Number of stays | Percent readmitted | Mean cost $ per stay | Number of stays | Percent readmitted | Mean cost $ per stay |
| Overall | | 794,760 | 20,544 | 38,016 | 4.8 | 21,830 | 54,066 | 6.8 | 24,040 | 164,379 | 20.7 | 16,386 |
| Age group | 1-17 | 8,516 | 29,816 | --- | --- | --- | --- | --- | --- | 1,434 | 16.8 | 20,184 |
| | 18-44 | 86,534 | 21,050 | 2,585 | 3.0 | 23,401 | 4,341 | 5.0 | 26,363 | 14,272 | 16.5 | 17,029 |
| | 45-64 | 229,943 | 24,309 | 10,671 | 4.6 | 25,653 | 16,194 | 7.0 | 27,370 | 49,337 | 21.5 | 18,237 |
| | 65+ | 469,768 | 18,438 | 24,640 | 5.2 | 19,990 | 33,289 | 7.1 | 21,959 | 99,336 | 21.1 | 15,319 |
| Sex | Male | 381,464 | 21,794 | 19,456 | 5.1 | 21,837 | 28,031 | 7.3 | 24,106 | 81,555 | 21.4 | 16,806 |
| | Female | 413,296 | 19,392 | 18,559 | 4.5 | 21,823 | 26,036 | 6.3 | 23,969 | 82,824 | 20.0 | 15,974 |
| Payer | Medicare | 541,234 | 19,286 | 28,904 | 5.3 | 20,704 | 40,064 | 7.4 | 22,739 | 118,957 | 22.0 | 15,837 |
| | Medicaid | 87,734 | 27,239 | 4,711 | 5.4 | 26,976 | 6,875 | 7.8 | 28,100 | 20,801 | 23.7 | 18,251 |
| | Private insurance | 117,066 | 21,600 | 3,285 | 2.8 | 24,232 | 5,367 | 4.6 | 28,537 | 18,405 | 15.7 | 18,336 |
| | Uninsured | 28,569 | 18,230 | 551 | 1.9 | 21,102 | 874 | 3.1 | 24,305 | 3,151 | 11.0 | 14,311 |
| Median income for zipcode | First quartile (lowest) | 246,310 | 19,572 | 12,160 | 4.9 | 20,072 | 17,372 | 7.1 | 22,384 | 52,740 | 21.4 | 15,077 |
| | Second quartile | 183,878 | 20,377 | 8,247 | 4.5 | 21,289 | 12,020 | 6.5 | 24,010 | 37,578 | 20.4 | 16,159 |
| | Third quartile | 194,600 | 20,882 | 9,630 | 4.9 | 23,744 | 13,467 | 6.9 | 24,773 | 39,765 | 20.4 | 17,225 |
| | Fourth quartile (highest) | 157,344 | 22,008 | 7,459 | 4.7 | 23,191 | 10,436 | 6.6 | 26,333 | 31,890 | 20.3 | 18,041 |
| Patient residence | Metropolitan | 640,679 | 21,076 | 32,028 | 5.0 | 22,933 | 45,266 | 7.1 | 24,875 | 135,098 | 21.1 | 16,924 |
| | Non-Metropolitan | 154,081 | 18,429 | 5,988 | 3.9 | 16,216 | 8,800 | 5.7 | 19,944 | 29,281 | 19.0 | 14,005 |

# HCUP-US: Statistical Briefs

H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

STATISTICAL BRI

March 2013

## Infectious Enteritis and Foodborne Illness in the United States, 2010

*Jennifer Lucado, M.P.H., Shamis Mohamoud, M.A., Lan Zhao, Ph.D., and Anne Elixhauser, Ph.D.*

Introduction

Foodborne illnesses are a common cause of morbidity and sometimes death in the United States, affecting 1 in 6 Americans and causing approximately 128,000 hospitalizations and 3,000 deaths each year.[1] The Centers for Disease Control and Prevention (CDC) categorizes foodborne illnesses into two groups: 1) illnesses caused by one of the 31 currently known major pathogens, i.e., bacteria, viruses, parasites, and chemicals, and 2) episodes of acute gastroenteritis caused by unknown agents or substances with unproven ability to cause illnesses.

While the known pathogens cause an estimated 9.4 million foodborne illness episodes each year,[2] it is estimated that the majority of cases—38.4 million—are caused by the unspecified agents.[3] The top pathogens include Norovirus, *Salmonella*, *Clostridium perfringens*, *Campylobacter*, and *Staphylococcus aureus*. Many episodes of foodborne illness are marked by acute gastroenteritis; however, not all cases of acute gastroenteritis are caused by organisms found in food, so gastrointestinal symptoms do not necessarily mean a person has a foodborne illness.[4]

Common symptoms of acute gastroenteritis are diarrhea and vomiting. In addition, more serious complications such as colitis, bloodstream infection, meningitis, joint infection, kidney failure, and other problems can develop.[5,6] In the United States, some groups of the population are at a higher risk for developing

[1] Centers for Disease Control and Prevention. April 11, 2011 CDC Estimates of Foodborne Illness in the United States. CDC 2011 Estimates: Findings. Available at http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html. (Accessed February 6, 2013).
[2] Scallan E, Hoekstra RM, Angulo FJ, Tauxe RV, et al. Foodborne illness acquired in the United States—Major pathogens. Emerging Infectious Diseases. 2011;17(1):7–15.
[3] Scallan E, Griffin PM, Angulo FJ, Tauxe RV, et al. Foodborne illness acquired in the United States—Unspecified agents. Emerging Infectious Diseases. 2011;17(
[4] Flint JS, Van Duynhoven YT, Angulo FJ, DeLong SM, et al. Estimating the burden of acute gastroenteritis, foodborne disease, and pathogens commonly transmitted by food: An international review. Clinical Infectious
[5] King CK, Glass R, Bresee JS, and Duggan C. Managing acute gastroenteritis among children: oral rehydration, maintenance, and nutritional therapy. Morbidity and Mortality Weekly Report (MMWR). 2003;52(RR16):
[6] Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Trends in Infections with Pathogens Transmitted Commonly Through Food—Foodnet, 10 U.S. Sites, 1996–2010. 2011; 60(22): 749–752. Available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6022a3.htm?s_cid=mm6022a3_w

H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

STATISTICAL BRIEF

March 2013

## Trends in Potentially Preventable Hospital Admissions among Adults and Children, 2005–2010

*Celeste M. Torio, Ph.D., M.P.H., Anne Elixhauser, Ph.D., and Roxanne M. Andrews, Ph.D.*

Introduction

Improving the quality of health care while simultaneously containing costs continues to be a major priority for the nation, particularly for policymakers and public and private payers. One area where higher quality and lower costs coincide is potentially preventable hospital admissions—inpatient stays that could be prevented with high-quality primary and preventive care. High rates of these potentially preventable hospital admissions identify areas where possible improvements in the health care delivery system could be made to enhance patient outcomes and decrease costs. Positive changes in these rates over time may signal an improvement in the quality of ambulatory care, in access to timely and effective treatment of certain conditions for specific populations, or in patients' adoption of healthy behaviors.

This Statistical Brief presents data from the Healthcare Cost and Utilization Project (HCUP) on changes in the rates of potentially preventable hospital admissions and their associated total hospital costs. It updates statistics previously reported for the 1997 through 2004 time period.[1] Admission rates for selected chronic and acute conditions in adults and children for 2005 through 2010 were developed using the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQIs). The conditions examined for adults aged 18 years and older were related to diabetes, circulatory diseases, chronic respiratory diseases, and select acute conditions (bacterial pneumonia, dehydration, and urinary tract infection). The conditions examined for children younger than 18 years were diabetes, asthma, gastroenteritis, and urinary tract infection. All differences between estimates noted in the text are significant at the 0.05 level or better.

Findings

For the conditions examined here, the number of potentially preventabl
decreased 6.2 percent from 4.1 million stays in 2005 to 3.9 million stay
related to these potentially preventable admissions for adults decrease
in 2005 to $31.9 billion in 2010.

[1] Russo CA, Jiang HJ, Barrett M. Trends in Potentially Preventable Hospitalizations amo

H·CUP HEALTHCARE COST AND UTILIZATION PROJECT

AHRQ Agency for Healthcare Research and Quality

STATISTICAL BRIEF #152

March 2013

## Characteristics of Homeless and Non-Homeless Individuals Using Inpatient and Emergency Department Services, 2008

*Zeynal Karaca, Ph.D., Herbert S. Wong, Ph.D., and Ryan L. Mutter, Ph.D.*

Introduction

Addressing the multidimensional health problems of homeless people is a challenge for public policymakers and health care providers. According to the National Coalition for the Homeless, approximately 3.5 million individuals in the United States are likely to experience homelessness in a given year.[1] Based on the 2009 Homeless Annual Assessment Report to Congress,[2] about 1.56 million people used an emergency shelter or a transitional housing program between October 1, 2008, and September 30, 2009.

Prior studies have shown that homeless people have poorer health status; higher rates of physical illness, mental illness, and substance abuse; and earlier mortality when compared to the general public.[3,4] The prevalence of these health problems among homeless people varies across age cohorts (i.e., infectious disease, substance use, and mental illness are observed more frequently among younger homeless people).[3] The fact that

[1] How many people experience homelessness? NCH Fact Sheet No. 2. National Coalition for the Homeless Web site. February 2012. Available at http://www.nationalhomeless.org/factsheets/How_Many.pdf. (Accessed March 6, 2013).
[2] The 2009 Annual Homeless Assessment Report to Congress. U.S. Department of Housing and Urban Development, Office of Community Planning and Development. 2009.
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[4] Hwang SW, Lebow JM, Bierer MF, O'Connell JJ, Orav EJ, Brennan TA. Risk factors for death in homeless adults in Boston. Ann Intern Med. 1998 Jul 13;158(13):1454–60.
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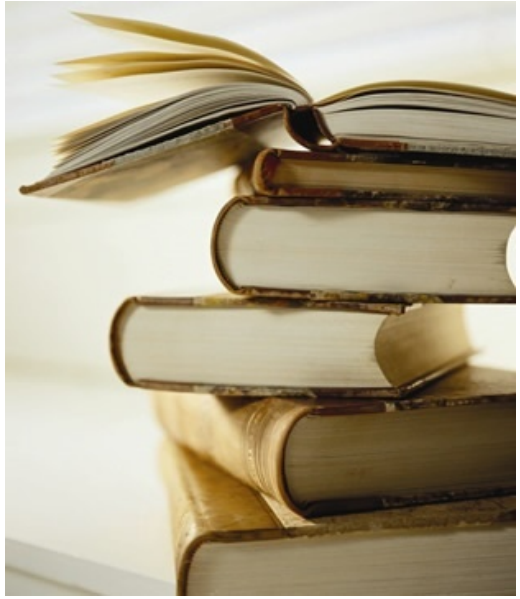
### Highlights

- Among homeless patients seen in emergency departments (EDs) and hospitals, mental disorders accounted for 22.4 percent of inpatient hospital stays and 49.0 percent of treat-and-release (T&R) ED visits.
- Among homeless patients diagnosed with mental disorders:
  - Schizophrenia and other psychotic disorders accounted for 33.8 percent of inpatient hospital stays.
  - Alcohol-related disorders accounted for 52.8 percent of T&R ED visits.
- Nearly one in three hospitalized homeless patients (28.1 percent) and more than two in five homeless patients visiting EDs (42.8 percent) were uninsured.
- Medicaid was the expected payer for nearly half of homeless patients in the hospital (48.2 percent) and more than one-third of homeless patients in the ED (34.7 percent).
- Nearly three out of four inpatient hospital stays by homeless individuals (73.7 percent) began in the ED.
- Females accounted for a third of inpatient hospital visits and a quarter of ED visits among homeless individuals.
- Among homeless patients admitted to the hospital, 16.1 percent were younger than 15 years old.
- Among homeless patients admitted to the hospital, 19.5 percent were White, 33.2 percent were Black, and 15.1 percent were Hispanic. Homelessness was noted in 2.8 percent of all inpatient stays for Black patients, compared to only 0.3 percent of White and 1.2 percent of Hispanic patients.
- Among homeless patients seen in the ED, 60.2 percent were White, 22.5 percent were Black, and 10.6 percent were Hispanic.

# Publications Search Page on the HCUP-US Web Site

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



- To access the Publications Search page, please visit:

  **http://hcup-us.ahrq.gov/reports/pubsearch/pubsearch.jsp**

# 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 | News & Events | Technical Assistance | Data Innovations

### Favorites

**HCUP Statistical Briefs**
present simple, descriptive statistics on a variety of specific, focused topics. Statistical Briefs are organized by topic and in chronological order. Most recent briefs include:

- Complicating Conditions Associated With Childbirth, by Delivery Method and Payer, 2011
- Conditions With the Largest Number of Adult Hospital Readmissions by Payer, 2011

**HCUP Infographics**
present a visual representation of data found in the HCUP Statistical Brief series. A full list is available here. The most recent infographic is:

- The Top Five Most Expensive Conditions Treated in U.S. Hospitals, 2011 (PDF file, 275 KB)

**HCUP Projections**
use longitudinal HCUP data to project national and regional estimates on health care priorities.

- *Clostridium Difficile* Hospitalizations 2001 to 2013 (PDF file, 1.9 MB)
- Cost of Inpatient Discharges 2012 to 2013 (PDF file, 6.2 MB)
- Mobility/Orthopedic Procedures 2011 to 2012 (PDF file, 5.1 MB)
- Cardiovascular/Cerebrovascular Conditions and Procedures 2011 to 2012 (PDF file, 7.6 MB; HTML)

### Information About Using HCUP Data

**HCUP Methods Series**
feature a broad array of methodological information on the HCUP databases and software tools. Reports in the HCUP Methods Series are organized by topic and in chronological order. Most recent reports include:

- HCUP External Cause of Injury (E Code) Evaluation Report (Updated with 2011 HCUP Data) (PDF file, 296 KB)
- Population Denominator Data for use with HCUP Databases (Updated with 2012 Population data) (PDF file, 338 KB)
  Appendix A Population Data Tables (in ZIP format for downloading)

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

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

**HCUP State Database 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)

### Additional Topics

**Topical Reports**
provide information on various priority populations.

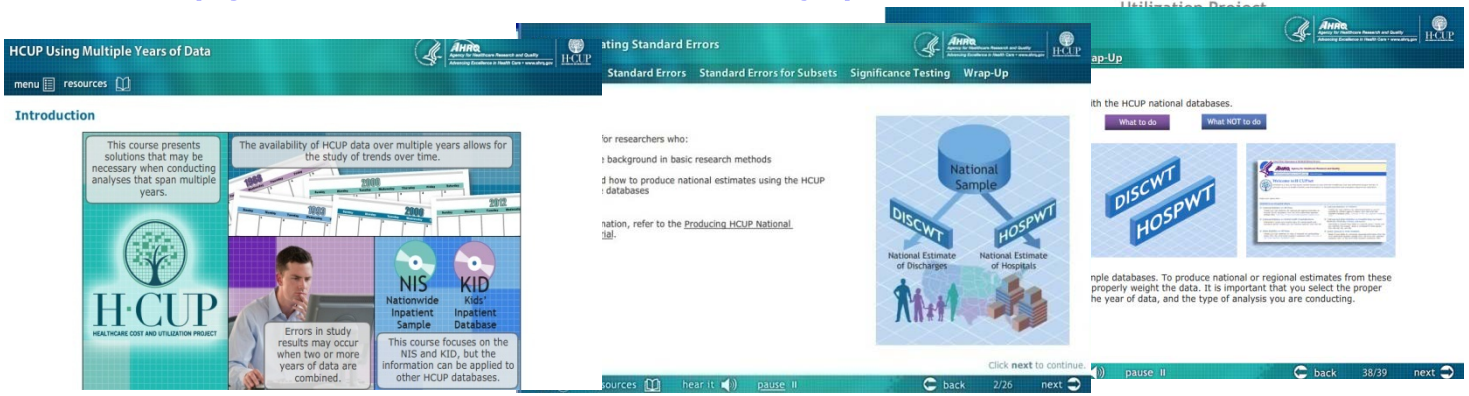
**HCUP Publications**
include a collection of publications based on HCUP data, software products, and tools.

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

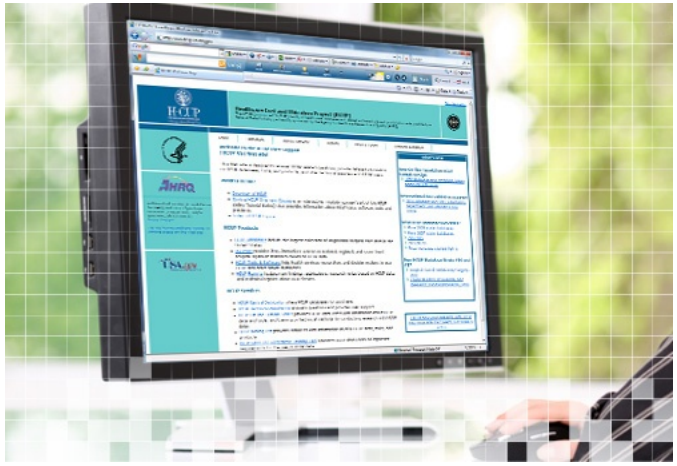
**https://www.hcup-us.ahrq.gov/reports.jsp**

# Interactive Online HCUP Training Courses

- HCUP Overview
- HCUP Sample Designs
- Load and Check HCUP Data
- Produce National HCUP Estimates
- Calculate Standard Errors
- Multi-Year Analysis
- To access online courses please visit: http://hcup-us.ahrq.gov/tech_assist/tutorials.jsp



# 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

## Technical Assistance

HCUP User Support answers questions and provides technical assistance to HCUP users. This service is maintained by AHRQ through a Federal-State-Industry partnership.

Home | Databases | Tools & Software | Reports | News & Events | Technical Assistance | Data Innovations

### 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

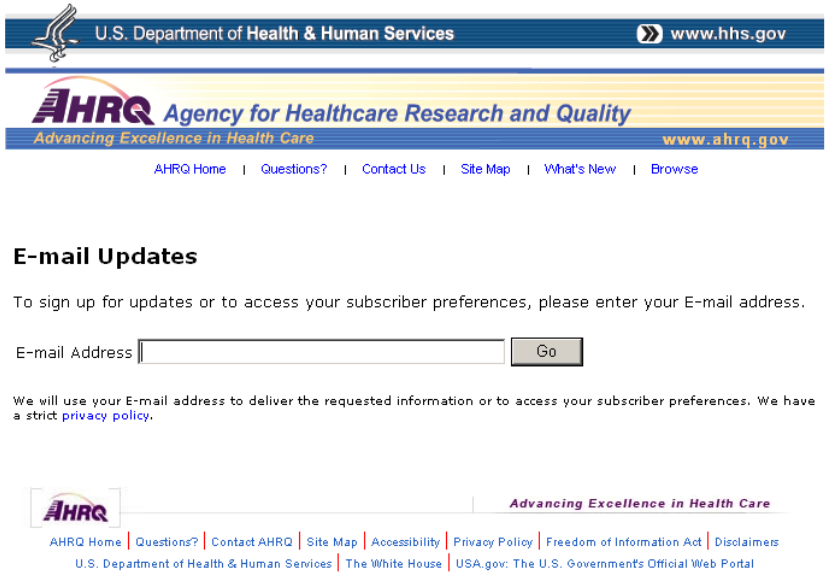
*Staff reviews messages daily and responds to inquiries within 3 business days.*

**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 Mailing List




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

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

# Healthcare Cost and Utilization Project (HCUP)

H·CUP

HEALTHCARE COST AND UTILIZATION PROJECT

# Questions/Comments?