The Healthcare Cost and Utilization Project (HCUP)

Overview of the HCUP Databases

Agency for Healthcare Research and Quality
Webinar ♦ September 6, 2017
Webinar Overview

• Project Overview
• AHRQ and HCUP Partners
• The Making of HCUP Data
• HCUP State Databases
• HCUP Nationwide Databases
• How to Obtain HCUP Data & Access HCUP Resources
### Costs of care

The five most expensive conditions—septicemia; osteoarthritis; liveborn (newborn) infants; complication of device, implant or graft; and acute myocardial infarction—accounted for approximately one-fifth of the total aggregate costs for hospitalizations. (2013 NIS, Stat Brief #204)

### Access to care

In 2012, patients residing in low income communities had a higher rate of hospitalization, a longer length of stay, and lower average hospital costs compared with patients in higher income communities. (2012 NIS, Stat Brief #180)

### Quality of care

Observed inpatient mortality rates among adults declined between 2002 and 2012 for four high-volume conditions: 45 percent decrease for pneumonia, 41 percent decrease for acute myocardial infarction (AMI), 29 percent decrease for congestive heart failure (CHF), and 27 percent decrease for stroke. (2012 NIS, Stat Brief #194)

### Readmissions

In 2013, the all-cause 30-day readmission rate for patients with malnutrition was 23.0 per 100, compared with 14.9 per 100 for patients without malnutrition. (NRD, Stat Brief #218)
### Patient safety
Half of patients with community-acquired MRSA in California had a diagnosis of cellulitis or skin ulcers. Among patients with hospital-acquired MRSA, the largest proportion (38 percent) were diagnosed with pneumonia. (SID, Stat Brief #212)

### Geographic variation
The mean rate of C-section among total and low-risk deliveries was higher for hospitals in the Northeast and South compared with those in the Midwest and West. (SID, Stat Brief #211)

### Trends in practice
From 2005 to 2013, the rate of bilateral outpatient mastectomies increased more than fivefold and the inpatient rate more than doubled. By 2013, nearly half of all mastectomies were performed outpatient (SID, SASD, Stat Brief #201)

### Preventable stays
The rate of potentially preventable adult inpatient (IP) stays decreased 19 percent between 2005 and 2012, from 1,941 to 1,582 stays per 100,000 population—more than twice the decrease in rate of all adult IP stays. (NIS, SID, NEDS, Stat Brief #195)
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The HCUP Partnership

State → Industry → Federal
What is the Agency for Healthcare Research and Quality (AHRQ)?

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

**Alaska** Department of Health and Social Services
**Alaska** State Hospital and Nursing Home Association
**Arizona** Department of Health Services
**Arkansas** Department of Health
**California** Office of Statewide Health Planning and Development
**Colorado** Hospital Association
**Connecticut** Hospital Association
**District of Columbia** Hospital Association
**Florida** Agency for Health Care Administration
**Georgia** Hospital Association
**Hawaii** Health Information Corporation
**Illinois** Department of Public Health
**Indiana** Hospital Association
Current HCUP Data Partners

Iowa Hospital Association
Kansas Hospital Association
Kentucky Cabinet for Health and Family Services
Louisiana Department of Health
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Center for Health Information and Analysis
Michigan Health & Hospital Association
Minnesota Hospital Association (provides data for Minnesota and North Dakota)
Mississippi Department of Health
Missouri Hospital Industry Data Institute
Montana Hospital Association
Nebraska Hospital Association
Current HCUP Data Partners

Nevada Department of Health and Human Services
New Hampshire Department of Health & Human Services
New Jersey Department of Health
New Mexico Department of Health
New York State Department of Health
North Carolina Department of Health and Human Services
North Dakota (data provided by the Minnesota Hospital Association)
Ohio Hospital Association
Oklahoma State Department of Health
Oregon Office of Health Analytics
Oregon Association of Hospitals and Health Systems
Pennsylvania Health Care Cost Containment Council
Current HCUP Data Partners

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

A list of HCUP Partners is on HCUP-US!
https://www.hcup-us.ahrq.gov/partners.jsp
HCUP Partners Providing Inpatient Data

Updated 2/24/16

Partners Providing: Inpatient Data

Non-participating
HCUP Partners Providing Emergency Department Data

Updated 2/24/16
HCUP Participation by Data Type

Partners Providing:
- Inpatient Data
- Inpatient and Ambulatory Surgery & Services Data
- Inpatient and Emergency Department Data
- Inpatient, Ambulatory Surgery & Services, and Emergency Department Data
- Non-participating
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The Foundation of HCUP
Data is Hospital Billing Data

Demographic Data

Diagnoses

Procedures

Charges

UB-04
CMS 1500
From Patient Hospital Visit to Administrative Record

ED Visit
Scheduled Admission
Transfer

Patient Record

Reception

Admit

Provide Care

Discharge

Patient Perspective

Data Perspective

Patient Record

Discharge Summary

Medical Coder

Billing Dept

Bill Generated
The Making of HCUP Data

Patient enters hospital

Billing record created

AHRRQ standardizes data to create uniform HCUP databases

States store data in varying formats

Hospital sends billing data and any additional data elements to data organizations
The HCUP Data Process

• State data are mapped to a standardized HCUP format which allows for consistent data elements and values for comparison across States

• Additional data elements are 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 –
    o AHRQ’s Clinical Classifications Software (CCS)
    o 3M’s All Patient Refined DRGs (APR-DRGs)

• Quality checks are performed
Hospitals in the U.S.

- 87% of hospitals in the U.S. are community hospitals

13% Non-community hospitals (Federal (DoD/VA/IHS), psychiatric, non-Federal long term care, etc.)

Source: American Hospital Association (AHA) Annual Survey, 2015
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)

<table>
<thead>
<tr>
<th>Included</th>
<th>Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-specialty general hospitals</td>
<td>Long-term care</td>
</tr>
<tr>
<td>OB-GYN</td>
<td>Psychiatric</td>
</tr>
<tr>
<td>ENT</td>
<td>Alcoholism/Chemical dependency</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>Rehabilitation</td>
</tr>
<tr>
<td>Pediatric</td>
<td>DoD / VA / IHS</td>
</tr>
<tr>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>Academic medical centers</td>
<td></td>
</tr>
</tbody>
</table>
What Are Community Hospitals?

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

### Most Frequent Principal Diagnosis

<table>
<thead>
<tr>
<th>Most Frequent Principal Diagnosis</th>
<th>Number of Discharges (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Liveborn</td>
<td>3,814</td>
</tr>
<tr>
<td>2. Septicemia</td>
<td>1,514</td>
</tr>
<tr>
<td>3. Osteoarthritis</td>
<td>1,070</td>
</tr>
<tr>
<td>4. Congestive Heart Failure</td>
<td>901</td>
</tr>
<tr>
<td>5. Pneumonia</td>
<td>882</td>
</tr>
<tr>
<td>6. Mood disorders</td>
<td>851</td>
</tr>
<tr>
<td>7. Cardiac dysrhythmias</td>
<td>665</td>
</tr>
</tbody>
</table>

Source: National Inpatient Sample, 2014
HCUP has Seven Types of Databases

- Three State-Specific Databases
  - State Inpatient Databases (SID)
  - State Ambulatory Surgery & Services Databases (SASD)
  - State Emergency Department Databases (SEDD)

- Four Nationwide Databases
  - National Inpatient Sample (NIS)
  - Nationwide Emergency Department Sample (NEDS)
  - Kids’ Inpatient Database (KID)
  - Nationwide Readmissions Database (NRD)
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• Project Overview
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• HCUP State Databases
• HCUP Nationwide Databases
• How to Obtain HCUP Data & Access HCUP Resources
## HCUP State Databases

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Inpatient Databases (SID)</strong></td>
<td>All inpatient hospital discharge data (including those admissions that started in the ED) from participating HCUP States</td>
</tr>
<tr>
<td><strong>State Ambulatory Surgery &amp; Services Databases (SASD)</strong></td>
<td>Ambulatory surgery data (hospital-owned and some nonhospital-owned facilities) and other outpatient services from participating HCUP States</td>
</tr>
<tr>
<td><strong>State Emergency Department Databases (SEDD)</strong></td>
<td>Emergency department data (treat-and-release) from participating HCUP States</td>
</tr>
</tbody>
</table>
What Data Elements are Included in the HCUP Databases?

Data Elements:

- Patient demographics (age, sex)
- Diagnoses & procedures
- Expected payer
- Length of stay
- Patient disposition
- Admission type
- Point of origin
- Admission month
- Weekend admission
Some Data Elements Vary by State

- Race/Ethnicity
- Patient county
- Patient ZIP Code
- Severity of illness
- Birthweight
- Procedure date (days from admission to procedure)
- 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

<table>
<thead>
<tr>
<th>PAY1_X</th>
<th>Description</th>
<th>PAY1 (Standardized)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>010</td>
<td>Medicare</td>
<td></td>
</tr>
<tr>
<td>011</td>
<td>Medicare (HMO)</td>
<td></td>
</tr>
<tr>
<td>012</td>
<td>Medicare (Managed care - Other)</td>
<td></td>
</tr>
<tr>
<td>013</td>
<td>Medicare (fee for service)</td>
<td></td>
</tr>
<tr>
<td>020</td>
<td>Medi-Cal</td>
<td></td>
</tr>
<tr>
<td>021</td>
<td>Medi-Cal (HMO)</td>
<td></td>
</tr>
<tr>
<td>022</td>
<td>Medi-Cal (Managed care - Other)</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>Medi-Cal (fee for service)</td>
<td></td>
</tr>
<tr>
<td>030</td>
<td>Private Coverage</td>
<td></td>
</tr>
<tr>
<td>031</td>
<td>Private Coverage (HMO)</td>
<td></td>
</tr>
<tr>
<td>032</td>
<td>Private Coverage (Managed care - Other)</td>
<td></td>
</tr>
<tr>
<td>033</td>
<td>Private Coverage (fee for service)</td>
<td></td>
</tr>
<tr>
<td>08n, where n=0-3</td>
<td>Self-pay</td>
<td></td>
</tr>
<tr>
<td>--</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>
## Example: Race Detail Varies by State

<table>
<thead>
<tr>
<th>Value</th>
<th>RACE_X</th>
<th>Description</th>
<th>Value</th>
<th>RACE (Standardized)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>White</td>
<td>1</td>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Black</td>
<td>2</td>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Hispanic</td>
<td>3</td>
<td>3</td>
<td>Hispanic</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Hawaiian</td>
<td>4</td>
<td>4</td>
<td>Asian or Pacific Islander</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Chinese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Filipino</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Japanese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Other Asian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>Other Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Native American</td>
<td>5</td>
<td>5</td>
<td>Native American</td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>Mixed or Other</td>
<td>6</td>
<td>6</td>
<td>Other</td>
</tr>
</tbody>
</table>
HCUP Files vs. Partner Files

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

<table>
<thead>
<tr>
<th>HCUP State Files</th>
<th>HCUP Partner-Provided Files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subset of data elements</td>
<td>All data elements</td>
</tr>
<tr>
<td>Value-added data elements</td>
<td>May not have same value-added elements</td>
</tr>
<tr>
<td>Uniformly coded across the States</td>
<td>Not uniformly coded across states</td>
</tr>
<tr>
<td>Standard data quality checks</td>
<td>Variability in quality checks by state</td>
</tr>
<tr>
<td>Lag time</td>
<td>More timely</td>
</tr>
</tbody>
</table>
2015 State and Nationwide Databases: Revised Structure

ICD-10-CM/PCS implementation

<table>
<thead>
<tr>
<th>Q1-Q3 2015</th>
<th>Q4 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 to Q3 contain ICD-9 codes</td>
<td>Q4 contain ICD-10 codes</td>
</tr>
</tbody>
</table>

- File structure changed in 2015 to separate Q1-Q3 and Q4 data
  - **State databases**: all file types have records split into Q1-Q3 and Q4 files
  - **Nationwide databases**: only file types containing DX/PR related variables are split into Q1-Q3 and Q4 files

- AHRQ created resources to help users with transition:
  - 2015 HCUP State Databases: Change in Structure and Data Elements Caused by Transition to ICD-10-CM/PCS (PDF)
  - Data Innovations – ICD-10-CM/PCS Resources page: www.hcup-us.ahrq.gov/datainnovations/icd10_resources.jsp
Partners Releasing Databases through HCUP Central Distributor

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

Remember:
Not all States participate in all years and for all databases
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HCUP Nationwide Databases

<table>
<thead>
<tr>
<th>Database Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>National (Nationwide) Inpatient Sample (NIS)</td>
<td>Inpatient discharge data for a sample of discharges from all hospitals in SID</td>
</tr>
<tr>
<td>Kids’ Inpatient Database (KID)</td>
<td>Pediatric inpatient hospital discharge data from a sample of pediatric discharges in SID</td>
</tr>
<tr>
<td>Nationwide Emergency Department Sample (NEDS)</td>
<td>Emergency department data (treat and release &amp; admitted) from a sample of hospitals in SID and SEDD</td>
</tr>
<tr>
<td>Nationwide Readmissions Database (NRD)</td>
<td>Inpatient discharge data from all hospitals for SID with verified patient linkage numbers</td>
</tr>
</tbody>
</table>
### State Inpatient Databases (SID)

- ~ 4,400 hospitals
- ~ 33 M records

**Strata**

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

### Stratified Sample of Discharges

*State not included in the stratum*

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

### National Inpatient Sample (NIS)

N = ~ 4,400 hospitals
- ~ 7 M records
KID is a Stratified Sample of Discharges from the SID

<table>
<thead>
<tr>
<th>State Inpatient Databases (SID)</th>
<th>Stratified Sample of Discharges</th>
<th>Kids' Inpatient Database (KID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ 4,380 hospitals</td>
<td>*State not included in the stratum</td>
<td>N = ~ 4K hospitals</td>
</tr>
<tr>
<td>~ 34.3M records</td>
<td></td>
<td>~ 3M records</td>
</tr>
</tbody>
</table>

**Strata**
- Uncomplicated Births
- Complicated Births
- Pediatric Non-Births

- 10% uncomplicated births
- 80% pediatric discharges
• Historically, the KID has been produced every three years beginning in 1997 and currently through 2012.

• Given that hospital discharge data for 2015 contains a mix of ICD-9-CM and ICD-10-CM/PCS data, the next KID will be available for 2016 and will be comprised of ICD-10-CM/PCS data only. This decision was made due to the complexities of analyzing a mixed coded data year.
HCUP NEDS Data

Treat-and-Release ED Visits

Admitted ED Visits

~ 86% of ED visits are treat-and-release

~ 14% of ED visits result in a hospital stay
NEDS is a Stratified Sample of Hospitals from the SEDD and SID

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

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

Stratified Sample of Hospitals
*State not included in the stratum

Nationwide Emergency Department Sample (NEDS)
N = ~ 950 hospitals
~ 31M records
NRD is Constructed from SID with Verified Patient Linkage Numbers

State Inpatient Databases (SID)

Hospital and Patient Exclusions

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

Nationwide Readmissions Database (NRD)

N = ~ 2K hospitals
~ 15M records
NIS, NEDS, KID, NRD: Must be Weighted to Produce National and Regional Estimates
NEDS: Must be Weighted to Produce National and Regional Estimates
### What Types of Care Are and Are Not Captured by HCUP?

<table>
<thead>
<tr>
<th>Included in HCUP</th>
<th>Not Included in HCUP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inpatient Care</strong></td>
<td><strong>Physician office visits</strong></td>
</tr>
<tr>
<td>State Inpatient Databases (SID)</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>National (Nationwide) Inpatient Sample (NIS)</td>
<td>Labs/Radiology</td>
</tr>
<tr>
<td>Kids’ Inpatient Database (KID)</td>
<td></td>
</tr>
<tr>
<td>Nationwide Readmissions Database (NRD)</td>
<td></td>
</tr>
<tr>
<td><strong>Emergency Department</strong></td>
<td></td>
</tr>
<tr>
<td>State Emergency Department Databases (SEDD)</td>
<td></td>
</tr>
<tr>
<td>Nationwide Emergency Department Sample (NEDS)</td>
<td></td>
</tr>
<tr>
<td><strong>Ambulatory Surgery &amp; Services</strong></td>
<td></td>
</tr>
<tr>
<td>State Ambulatory Surgery &amp; Services Databases</td>
<td></td>
</tr>
<tr>
<td>(SASD)</td>
<td></td>
</tr>
<tr>
<td><strong>Other Non-Emergent Outpatient Services</strong></td>
<td></td>
</tr>
<tr>
<td>State Ambulatory Surgery &amp; Services Databases</td>
<td></td>
</tr>
<tr>
<td>(SASD)</td>
<td></td>
</tr>
</tbody>
</table>
## Comparison of the HCUP Inpatient Databases

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>States</td>
<td>44 States + DC</td>
<td>44 States + DC</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Hospitals</td>
<td>4,400</td>
<td>4,400</td>
<td>4,200</td>
<td>2,000</td>
</tr>
<tr>
<td>Inpatient discharges</td>
<td>33 million</td>
<td>7 million</td>
<td>3 million</td>
<td>15 million</td>
</tr>
<tr>
<td>Derived From</td>
<td>--</td>
<td>SID</td>
<td>SID</td>
<td>SID</td>
</tr>
<tr>
<td>Uses</td>
<td>Examine <strong>State and local market area</strong> statistics on health care utilization, access, quality, patient safety, etc. Readmission analyses possible in some States.</td>
<td>Generate <strong>national and regional</strong> estimates of health care utilization, access, quality, patient safety, etc.</td>
<td>Generate <strong>national and regional pediatric</strong> estimates of health care statistics.</td>
<td>Generate national estimates of all-cause and condition-specific readmissions</td>
</tr>
</tbody>
</table>
Some Limitations Can be Addressed by Linking to Other Databases

HCUP State Databases

- SID
- SEDD
- SASD

AHAID
County
ZIP Code
AHAID
AHAID

- 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)
<table>
<thead>
<tr>
<th>HCUP is…</th>
<th>HCUP is NOT…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge database for health care encounters</td>
<td>A survey</td>
</tr>
<tr>
<td>All payer, including the uninsured</td>
<td>Specific to a single payer, e.g. Medicare</td>
</tr>
<tr>
<td>Hospital, ambulatory surgery and services, emergency department data</td>
<td>Office visits, pharmacy, laboratory, radiology</td>
</tr>
<tr>
<td>All hospital discharges</td>
<td>Hospital Claims</td>
</tr>
<tr>
<td>Accessible multiple ways: raw data, regular reports, online</td>
<td>Only a database – it includes additional tools and resources</td>
</tr>
</tbody>
</table>
### Hospital Billing Data Have Benefits and Limitations

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large number of records</td>
<td>Limited clinical details</td>
</tr>
<tr>
<td>Uniformity in coding</td>
<td>Lacks revenue information</td>
</tr>
<tr>
<td>Regular, routine collection</td>
<td>Does not include all hospital types (e.g., VA and DoD)</td>
</tr>
<tr>
<td>Ease of access</td>
<td>Does not show complete episode of care</td>
</tr>
<tr>
<td>All payers, including the uninsured</td>
<td>No data on individuals outside of the hospital system</td>
</tr>
<tr>
<td>Available at local, State, regional, and national level</td>
<td>Cannot link Nationwide Databases to external sources</td>
</tr>
<tr>
<td>Supplemental files available to facilitate research</td>
<td>Differences in coding across hospitals</td>
</tr>
</tbody>
</table>
Summary

- Seven types of HCUP databases
- Databases are based on administrative hospital data: inpatient, emergency department, and ambulatory surgery and services
- Available for multiple years
  - Nationwide
    - NIS (1988-2014)
    - NEDS (2006-2014)
    - NRD (2010-2014)
  - State
    - SID (1990-2015)
    - SASD (1997-2015)
    - SEDD (1999-2015)
- Can look at breadth of health care issues
- Can be linked to external files

Find out more on HCUP-US!
www.hcup-us.ahrq.gov/
Today’s Objectives

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

• State Databases become available to public through the HCUP Central Distributor

• Nationwide Databases become available for download through the HCUP Central Distributor
HCUP Central Distributor

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

➢ Visit the HCUP Central Distributor.
➢ The Central Distributor provides one stop shopping for purchasing many of the State Databases, as well as the Nationwide Databases.
➢ Not all data elements are available from every Partner Organization, and not all Partner Organizations make their data available through the Central Distributor.
➢ Some Partner Organizations may place additional restrictions on the sale of their data.
Step 1: Take Data Use Agreement (DUA) online training:
http://www.hcup-us.ahrq.gov/tech_assist/dua.jsp

Step 2: Login or register for an account:
http://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp

Step 3: Create your profile under “My Account”

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

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

For assistance, contact the HCUP Central Distributor:
- Phone: 866-556-HCUP (4287) toll free
- Email: HCUPDistributor@ahrq.gov
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

https://www.hcup-us.ahrq.gov/tech_assist/dua.jsp
Pricing Information
Per Data Year

Nationwide Databases (NIS, KID, NEDS, NRD)
► **NIS**: $500 beginning 2014, student price $100
► **KID**: $350 beginning 2009, student price $50
► **NEDS**: $750 beginning 2014, student price $150
► **NRD**: $750 beginning 2014, student price $150

State Databases (SID, SASD, SEDD)
► Varies by state, database, year, and type of applicant
► $50 - $3,200

Funds for State data sales returned to HCUP Partners
## Software Requirements of Working with the Full HCUP Files

<table>
<thead>
<tr>
<th>Software Package</th>
<th>Load Programs</th>
<th>Format Programs</th>
<th>Example Statistical Coding</th>
<th>HCUP Tools Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAS</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>STATA</strong></td>
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<td><strong>SPSS</strong></td>
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<tr>
<td><strong>SUDAAN</strong></td>
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</tr>
</tbody>
</table>

**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
- Can produce county-level statistical maps
- Recently redesigned

http://hcupnet.ahrq.gov
HCUP User Support Web Site

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

Visit us at http://www.hcup-us.ahrq.gov
Visit HCUP’s Virtual Exhibit Booth

• The HCUP Virtual Exhibit Booth provides materials typically offered at the HCUP conference exhibit booths

• Includes brochures, participation maps, an overview presentation of HCUP, and additional information that provides general project information

http://www.hcup-us.ahrq.gov/news/exhibit_booth.jsp
Interactive Online HCUP Tutorials & Training Courses

- HCUP Overview Course
- Nationwide Readmissions Database (NRD)
- HCUP Sample Design
- Producing National HCUP Estimates
- Calculate Standard Errors
- Multi-Year Analysis
- Load and Check HCUP Data
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
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- HCUP Newsletter, published quarterly
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  - Upcoming Events
- New Data Releases
- New Reports

https://subscriptions.ahrq.gov/accounts/USAHRQ/subscriber/new
Questions/Comments?

Time for Questions and/or Comments.

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hcup@ahrq.gov