



The Healthcare Cost and Utilization Project (HCUP)

- Tools and Products to Support Health Services Research and Policy Analysis
- Agency for Healthcare Research and Quality



AHRQ—Agency within DHHS

- AHRQ is a federal agency under the Department of Health and Human Services.



Webinar Overview

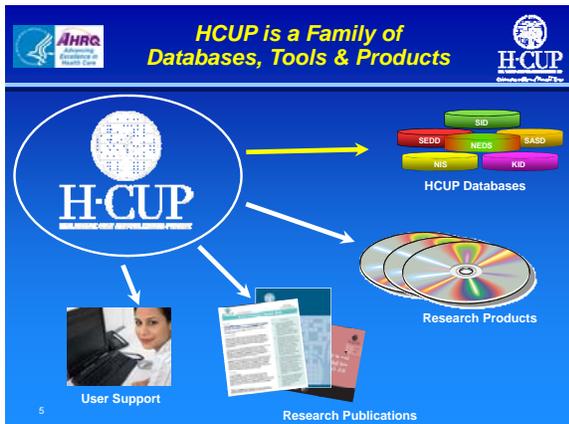
- Brief Database Review
- Software Tools

- Supplemental Files
- Online Tools & HCUPnet Demo
- Publications and Publication Search
- How to Access HCUP Resources



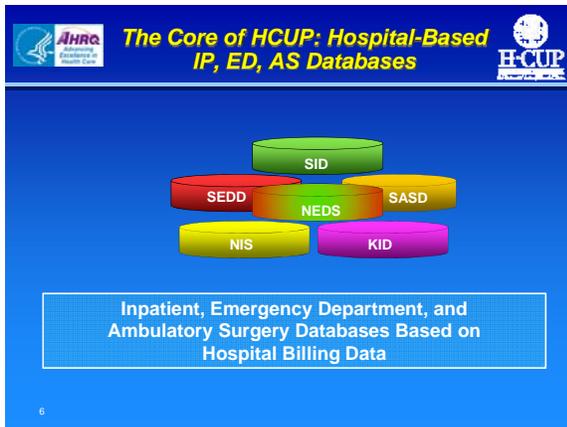
Healthcare Cost and Utilization Project (HCUP)

- HCUP is the largest collection of multi-year, all-payer, encounter level inpatient, emergency department, and ambulatory surgery data. It is hospital-based administrative data.



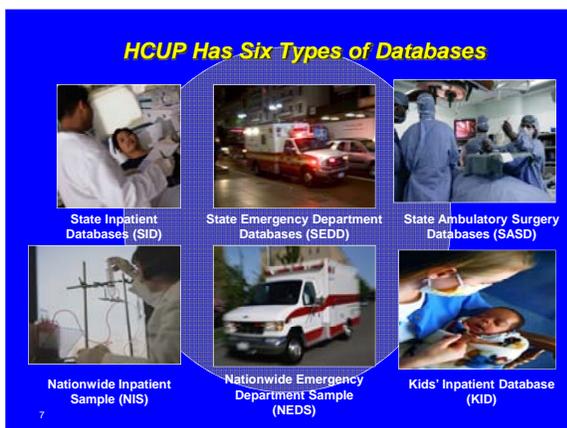
HCUP is a Family of Databases, Tools, and Products

- HCUP is a family of related databases, software tools, research products and user support services.



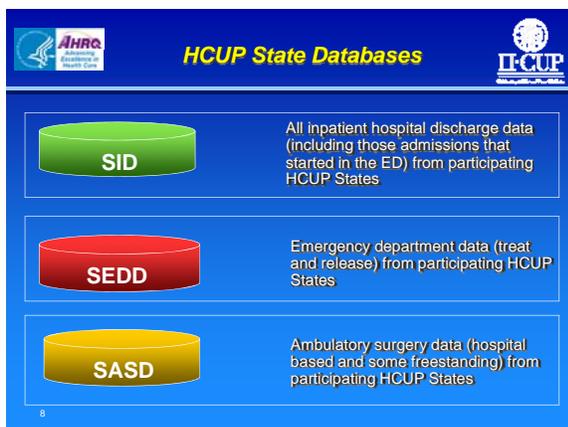
The Core of HCUP: Hospital-Based IP, ED, AS Databases

- The core of HCUP is a set of inpatient, emergency department, and ambulatory surgery databases that are based on hospital billing data.



HCUP Has Six Types of Databases

- Three state-level databases:
 1. The State Inpatient Databases, or SID
 2. The State Emergency Department Databases, or SEDD
 3. And the State Ambulatory Surgery Databases, or SASD
- And three national databases:
 1. The Nationwide Inpatient Sample, or NIS
 2. The Nationwide Emergency Department Sample, or NEDS
 3. And, the Kids' Inpatient Database, or KID

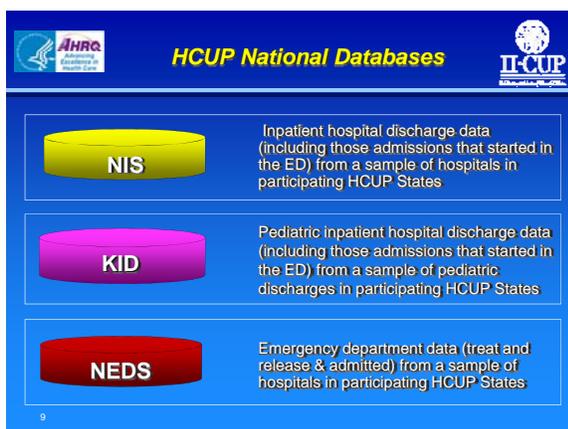


The slide is titled "HCUP State Databases" and features the AHRQ and HCUP logos. It lists three databases:

- SID** (green cylinder): All inpatient hospital discharge data (including those admissions that started in the ED) from participating HCUP States.
- SEDD** (red cylinder): Emergency department data (treat and release) from participating HCUP States.
- SASD** (yellow cylinder): Ambulatory surgery data (hospital based and some freestanding) from participating HCUP States.

HCUP State Databases

- The SID contains all inpatient hospital discharge data, including those admissions that started in the ED, from participating HCUP States.
- The SEDD contains treat-and-release emergency department data from participating HCUP States.
- And the SASD contains hospital based and some freestanding ambulatory surgery data from participating HCUP States.

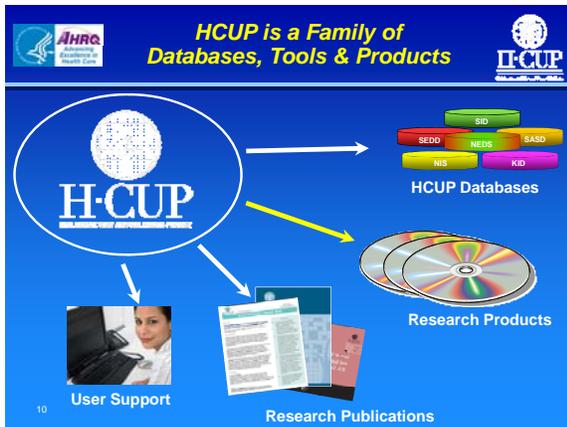


The slide is titled "HCUP National Databases" and features the AHRQ and HCUP logos. It lists three databases:

- NIS** (yellow cylinder): Inpatient hospital discharge data (including those admissions that started in the ED) from a sample of hospitals in participating HCUP States.
- KID** (pink cylinder): Pediatric inpatient hospital discharge data (including those admissions that started in the ED) from a sample of pediatric discharges in participating HCUP States.
- NEDS** (red cylinder): Emergency department data (treat and release & admitted) from a sample of hospitals in participating HCUP States.

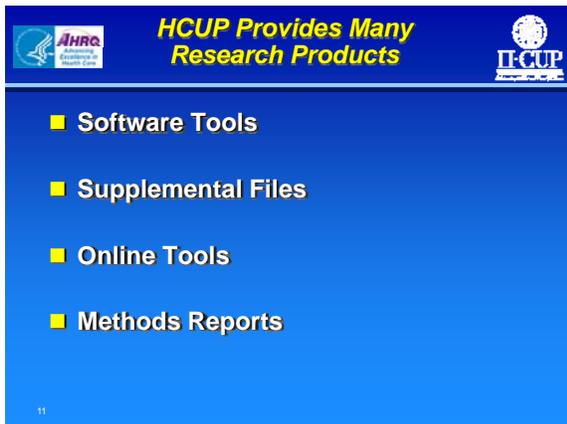
HCUP National Databases

- The NIS contains inpatient hospital discharge data from a sample of hospitals in participating HCUP States. It contains data on all types of inpatient admissions—including those which started in the emergency department.
- The KID contains pediatric inpatient hospital discharge data from a sample of pediatric discharges in participating HCUP States. It also contains data on all types of inpatient admissions—including those which started in the emergency department.
- The NEDS contains emergency department data from a sample of hospitals in participating HCUP States. It includes data on emergency department treat and release visits and on emergency department visits which resulted in an inpatient admission.



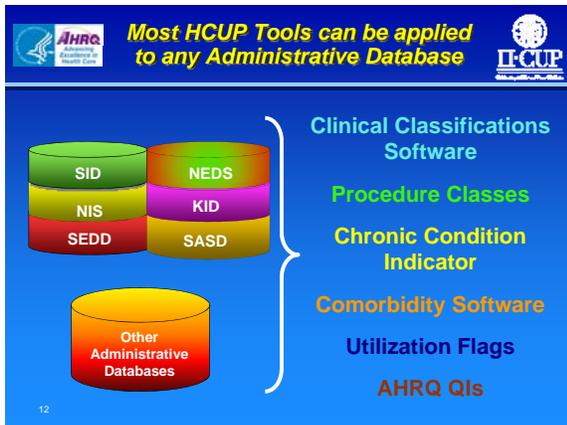
HCUP is a Family of Databases, Tools & Products

- AHRQ produces research products to help researchers make the most of HCUP data and other administrative databases.



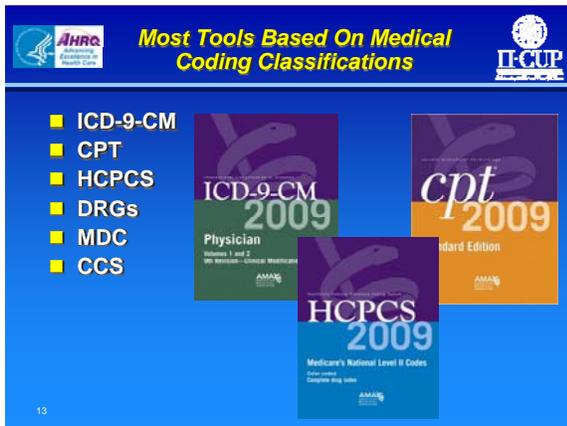
HCUP Provides Many Research Products

- HCUP provides myriad research products, including:
 - Software tools
 - Supplemental files
 - Online tools
 - Methods reports



Most HCUP Databases can be applied to any Administrative Databases

- The AHRQ HCUP tools can be applied to the HCUP databases and any healthcare administrative database. These tools include:
 - Clinical Classifications Software
 - Procedure Classes
 - Chronic Condition Indicator
 - Comorbidity software
 - Utilization Flags
 - AHRQ quality indicators



Most Tools Based on Medical Coding Classifications

- Most of the tools are based on medical coding classifications, examples include:
 - ICD-9-CM
 - CPT
 - HCPCS
 - DRGs
 - MDC
 - CCS

Multiple Coding Systems

- ICD-9-CM
- CPT
- HCPCS

Individual Codes

- DRGs
- MDC
- CCS

Groupers

Which coding system is appropriate for your analysis?

14

Multiple Coding Systems

- What coding system is appropriate for your analysis?
- Individual codes:
 - ICD-9-CM, CPT, and HCPCS codes
- Grouped conditions and procedures:
 - DRGs, MDCs, and CCS

ICD-9-CM

- ICD-9-CM Procedure Codes
- ICD-9-CM Diagnosis Codes
- Included in both inpatient and outpatient databases

ICD-9-CM
2009
Physician
Volume 1 and 2
9th Revision—Clinical Modification
AMAR

15

ICD-9-CM

- ICD-9-CM stands for the “International Classification of Diseases – 9th revision – Clinical Modification.” All diagnoses or conditions and all procedures that patients receive in the hospital are assigned an ICD-9-CM code.
- There are two main types of ICD-9-CM codes:
 - ICD-9-CM Procedure Codes
 - ICD-9-CM Diagnosis Codes
- ICD-9-CM codes are included in both inpatient and outpatient databases.

Common Procedural Coding System – CPT & HCPCS

- CPT
- HCPCS
- Local Codes
- Included in outpatient (ED and SASD) databases

16

Common Procedural Coding System- CPT & HCPCS

- The Healthcare Common Procedure Coding System (HCPCS) is a set of health care procedure codes. There are three levels to the HCPCS:
 1. Current Procedural Terminology (CPT codes)
 2. National HCPCS codes
 3. Local Codes.
- The HCPCS is included in HCUP outpatient (ED and SASD) databases.

Diagnosis Related Groups (DRG)

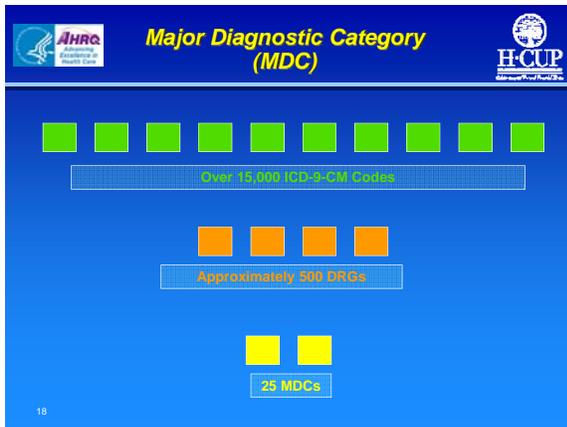
Groups ICD-9-CM Codes into Clinical/Resource Categories using principal diagnosis, secondary diagnoses, surgical procedures, age, gender, and discharge status of the patients treated

DRG Grouper Software → Hospital Administrative Database (NIS, KID, SID) → Input Variables (ICD-9-CM Procedures, ICD-9-CM Diagnoses, Age, Gender, Discharge Status) → DRG Codes (DRG x, DRG x, DRG x, DRG x)

17

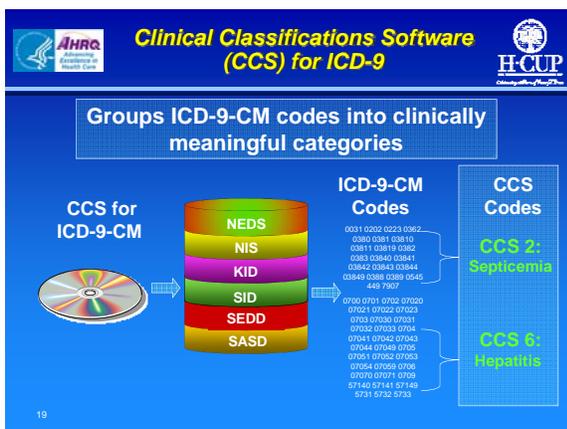
Diagnosis Related Groups (DRG)

- Diagnosis Related Groups (DRGs) groups ICD-9-CM Codes into Clinical/Resource Categories using principal diagnosis, secondary diagnosis, surgical procedures, age, gender, and discharge status of the patients treated.
- DRG grouper software uses hospital administrative data to determine "ICD-9-CM procedures, ICD-9-CM diagnoses, age, sex and discharge status of the patients treated" to assign inpatient records to a specific DRG code. DRG information is attached to each inpatient record in the HCUP databases.



Major Diagnostic Category (MDC)

- Major Diagnostic (MDCs) are broad groups of DRGs that relate to an organ or a system (digestive system, for example) and not to an etiology.
- There are currently over 15,000 ICD-9-CM Codes, approximately 500 DRGs, and 25 MDCs.



Clinical Classifications Software (CCS) for ICD-9

- The Clinical Classifications Software (CCS) is a tool developed by AHRQ for clustering patient diagnoses and procedures into a manageable number of clinically meaningful categories. Examples include:
 - CCS 2: Septicemia
 - CCS 6: Hepatitis
- The CCS for ICD-9 collapses the multitude of ICD-9-CM codes into a smaller number of clinically meaningful categories. CCS information is attached to each record in the HCUP databases.

What Codes Are Used in HCUP Data Files

DETAILED CODES
 ICD-9-CM
 - Diagnosis Codes
 - Procedure Codes
 CPT
 HCPCS

GROUPED CODES
 DRG
 MDC
 CCS

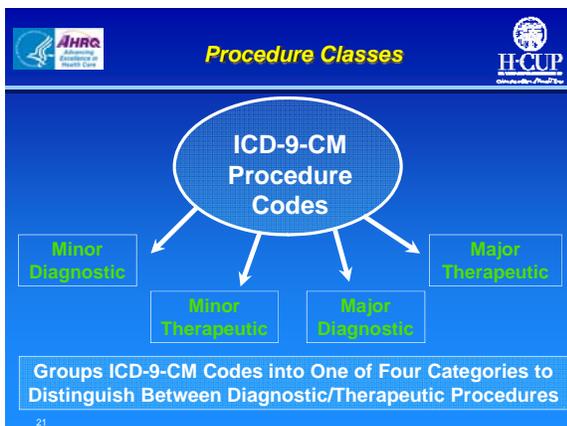
Inpatient Databases
 ICD-9-CM
 DRG
 MDC
 CCS

Outpatient Databases
 ICD-9-CM
 CPT
 HCPCS
 CCS

Diagram labels: SID, NIS, KID, NEDS, SASD, SEDD

What Codes Are Used in HCUP Data Files

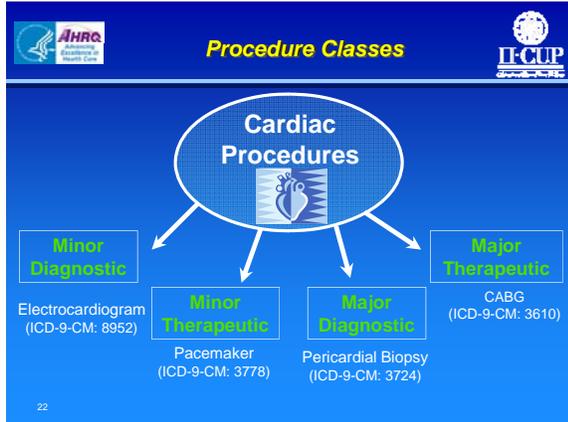
- HCUP files include the following Detailed Codes:
 - ICD-9-CM codes
 - Diagnosis Codes
 - Procedure Codes
 - CPT
 - HCPCS
- HCUP files include the following Grouped Codes:
 - DRG
 - MDC
 - CCS
- HCUP’s inpatient databases include: ICD-9-CM codes, DRG codes, MDC codes, and CCS codes.
- HCUP’s outpatient databases include: ICD-9-CM codes, CPT codes, HCPCS, and CCS codes.



Procedure Classes

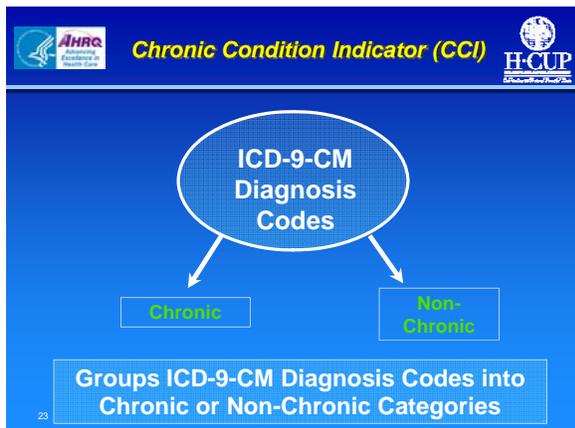
- The Procedure Classes assign all ICD-9-CM procedure codes to one of four categories to distinguish between diagnostic and therapeutic procedures:
 1. Minor Diagnostic
 2. Minor Therapeutic
 3. Major Diagnostic

4. Major Therapeutic



Procedure Classes

- Examples of cardiac procedures that can be classified into one of four procedure classes:
 - An Electrocardiogram (ICD-9-CM: 8952) would be classified as Minor Diagnostic.
 - A Pacemaker (ICD-9-CM: 3778) is categorized as Minor Therapeutic.
 - Pericardial biopsy (ICD-9-CM: 3724) would be classified as Major Diagnostic.
 - CABG (ICD-9-CM: 3610) is categorized as a Major Therapeutic procedure.



Chronic Condition Indicator (CCI)

- The Chronic Condition Indicator codes ICD-9-CM Diagnosis Codes into chronic or non-chronic categories.

Comorbidity Software

ICD-9-CM Codes, DRGs on Administrative Data → Comorbidity Software → 29 Comorbidity Classifications

The Comorbidity Software is based on the ICD-9-CM coding scheme. This software creates 29 variables that identify major comorbidities

24

Comorbidity Software

- The Comorbidity Software is based on the ICD-9-CM and DRGs on Administrative Data coding scheme.
- This software creates 29 variables that identify major comorbidities in hospital discharge records.

Appends Indicator Flags for Each Comorbidity

- Congestive heart failure → CM_CHF = 0 or 1
- Valvular disease → CM_VALVE = 0 or 1
- Pulmonary circulation disorders
- Peripheral vascular disorders
- Hypertension (uncomplicated and complicated)
- Paralysis
- Other neurological disorders
- Chronic pulmonary disease
- Diabetes without chronic complications
- Diabetes with chronic complications
- Hypothyroidism
- Renal failure
- Liver disease
- Chronic peptic ulcer disease

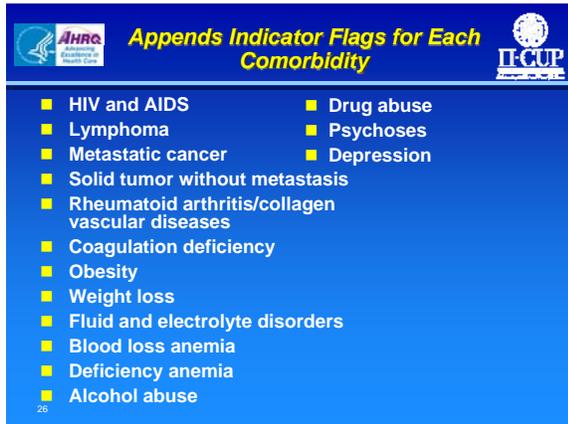
29 flags created and appended to each record

25

Appends Indicator Flags of Each Comorbidity

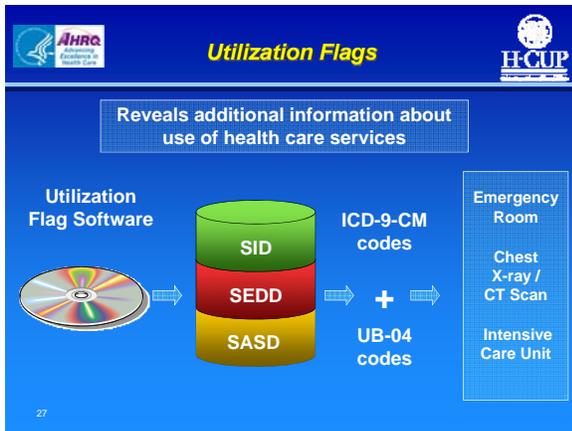
- The comorbidity software creates and appends indicator flags for each of the 29 comorbidities to each record. These include:
 - Congestive heart failure
 - Valvular disease
 - Pulmonary circulation disorders
 - Peripheral vascular disorders
 - Hypertension (uncomplicated and complicated)
 - Paralysis
 - Other neurological disorders
 - Chronic pulmonary disease
 - Diabetes without chronic complications
 - Diabetes with chronic complications
 - Hypothyroidism
 - Renal failure
 - Liver disease

- Chronic peptic ulcer disease



Appendix Indicator Flags for Each Comorbidity

- The comorbidity software creates and appends indicator flags for each of the 29 comorbidities to each record. These include:
 - HIV and AIDS
 - Lymphoma
 - Metastatic cancer
 - Solid tumor without metastasis
 - Rheumatoid arthritis/collagen vascular diseases
 - Coagulation deficiency
 - Obesity
 - Weight loss
 - Fluid and electrolyte disorders
 - Blood loss anemia
 - Deficiency anemia
 - Alcohol abuse
 - Drug Abuse
 - Psychoses
 - Depression



Utilization Flags

- The Utilization Flags, create 30 data elements, from the SID, SEDD, and SASD, that reveal additional information about use of health care services.
- By combining information from ICD-9-CM procedure codes and Uniform Billing revenue codes (UB-04 codes), the Utilization Flags create a completed picture of utilization of services like Chest X- Rays, CT Scans, and services in the Emergency Room and Intensive Care Units.

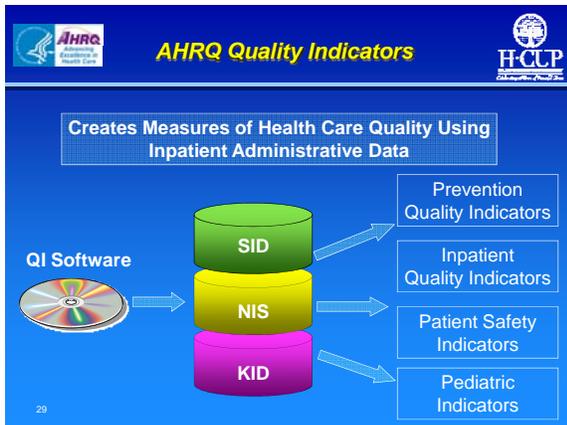
30 Utilization Flags

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

There are not ICD-9-CM codes for all services. Concern exists that some diagnostic procedures may be under-reported

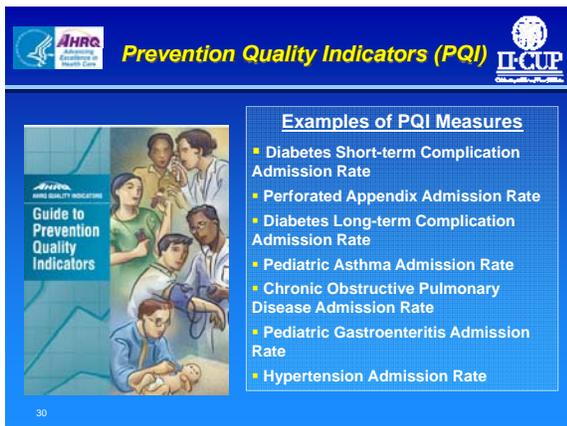
30 Utilization Flags

- There are not ICD-9-CM codes for all services. Concern exists that some diagnostic procedures may be under-reported.



AHRQ Quality Indicators

- The AHRQ Quality Indicators creates measures of health care quality using inpatient administrative data.
- From the SID, NIS, and the KID, AHRQ has developed four separate Quality Indicators:
 - Prevention Quality Indicators
 - Inpatient Quality Indicators
 - Patient Safety Indicators
 - Pediatric Indicators



Prevention Quality Indicators (PQI)

- The PQIs identify hospital admissions that evidence suggests could have been avoided, at least in part, through high-quality outpatient care.
- Examples of PQI measures include:
 - Diabetes Short-term Complication Admission Rate
 - Perforated Appendix Admission Rate
 - Diabetes long-term Complication Admission Rate
 - Pediatric Asthma Admission Rate
 - Chronic Obstructive Pulmonary Admission Rate
 - Pediatric Gastroenteritis Admission Rate
 - Hypertension Admission Rate
- Shown is the AHRQ Guide to Prevention Quality Indicators

Inpatient Quality Indicators (IQI)

Examples of IQI Measures

- Esophageal Resection Volume
- Pancreatic Resection Volume
- Pediatric Heart Surgery Volume
- Abdominal Aortic Aneurysm Repair Volume
- Coronary Artery Bypass Graft Volume
- Percutaneous Transluminal Coronary Angioplasty Volume
- Carotid Endarterectomy Volume
- Esophageal Resection Mortality Rate

31

Inpatient Quality Indicators (IQI)

- The IQIs reflect quality of care inside hospitals including inpatient mortality for medical conditions and surgical procedures.
- Examples of IQI Measures include:
 - Esophageal Resection Volume
 - Pancreatic Resection Volume
 - Pediatric Heart Surgery Volume
 - Abdominal Aortic Aneurysm Repair Volume
 - Coronary Artery Bypass Graft Volume
 - Percutaneous Transluminal Coronary Angioplasty Volume
 - Carotid Endarterectomy Volume
 - Esophageal Resection Mortality Rate
- Shown is the AHRQ Guide to Inpatient Quality Indicators.

Patient Safety Indicators (PSI)

Examples of PSI Measures

- Complications of Anesthesia
- Death in Low-Mortality DRGs
- Decubitus Ulcer
- Failure to Rescue
- Foreign Body Left During Procedure
- Iatrogenic Pneumothorax
- Selected Infections Due to Medical Care
- Postoperative Hip Fracture
- Postoperative Hemorrhage or Hematoma
- Postoperative Physiologic and Metabolic Derangements

32

Patient Safety Indicators (PSI)

- The PSIs also reflect quality of care inside hospitals, but they focus on potentially avoidable complications and adverse events.
- Examples of PSI Measures include:
 - Complications of Anesthesia
 - Death in Low-Mortality DRGs
 - Decubitus Ulcer
 - Failure to Rescue

- Foreign Body Left During Procedure
- Iatrogenic Pneumothorax
- Selected Infections Due to Medical Care
- Postoperative Hip Fracture
- Postoperative Hemorrhage or Hematoma
- Postoperative Physiologic and Metabolic Derangements
- Shown is the AHRQ Guide to Patient Safety Indicators.

The slide is titled "Pediatric Quality Indicators (PDI)" and is presented by AHRQ (Agency for Healthcare Research and Quality) and H-CUP (Hospital Care in the United States Project). It lists the following examples of PDI measures:

- Accidental Puncture or Laceration
- Decubitus Ulcer
- Foreign Body Left During Procedure
- Pediatric Heart Surgery Mortality
- Postoperative Hemorrhage or Hematoma
- Postoperative Sepsis

The slide also includes two small photographs of children: one of a young child with their hand near their mouth, and another of a baby's face.

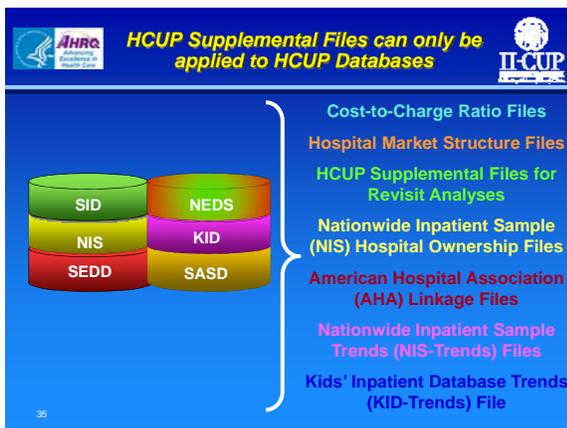
Pediatric Quality Indicators (PDI)

- The PDIs are specific to quality of care inside hospitals for children, and include things like pediatric heart surgery mortality and postoperative sepsis.
- Examples of PDI Measures include:
 - Accidental Puncture or Laceration
 - Decubitus Ulcer
 - Foreign Body Left During Procedure
 - Pediatric Heart Surgery Mortality
 - Postoperative Hemorrhage or Hematoma
 - Postoperative Sepsis
- Shown is the AHRQ Guide to Pediatric Quality Indicators.



AHRQ Quality Indicator Website

- To learn more about the AHRQ Quality Indicators, you can visit the AHRQ QI Website: <http://www.qualityindicators.ahrq.gov/>.



HCUP Supplemental Files can only be applied to HCUP Databases

- AHRQ also produces several HCUP supplemental files:
 - The Cost-to-Charge Ratio Files
 - The Hospital Market Structure Files
 - HCUP Supplemental Files for Revisit Analyses
 - The Nationwide Inpatient Sample (NIS) Hospital Ownership Files
 - American Hospital Association (AHA) Linkage Files
 - The Nationwide Inpatient Sample (NIS-Trends)
 - Kids' Inpatient Database Trends (KID) Files

Cost-to-Charge Ratio Files

Hospital-Level NIS/SID Data → Apply Ratios → Convert Charges to Costs

	A	B	C
1	HOSPID	APICC	GAPICC
2	XXXX	XXXX	XXXX
3	XXXX	XXXX	XXXX
4	XXXX	XXXX	XXXX
5	XXXX	XXXX	XXXX
6	XXXX	XXXX	XXXX
7	XXXX	XXXX	XXXX

The Cost-to-Charge Ratio Files enable conversion of charge data to cost data on the NIS, KID, and SID

36

Cost-to-Charge Ratio Files

- The Cost-to-Charge ratio files enable conversion of charge data on the NIS, KID, and SID.
- AHRQ receives hospital level NIS, SID, and KID data, applies the Cost-to-Charge Ratio to the cost data and converts this data into estimated costs.

Hospital Market Structure (HMS) Files

The HMS Files contain various measures of hospital market competition. They are available free-of-charge from the HCUP Central Distributor

37

Hospital Market Structure (HMS) Files

- The Hospital Market Structure File contains various measures of hospital market competition. These files are free-of-charge from the HCUP Central Distributor.

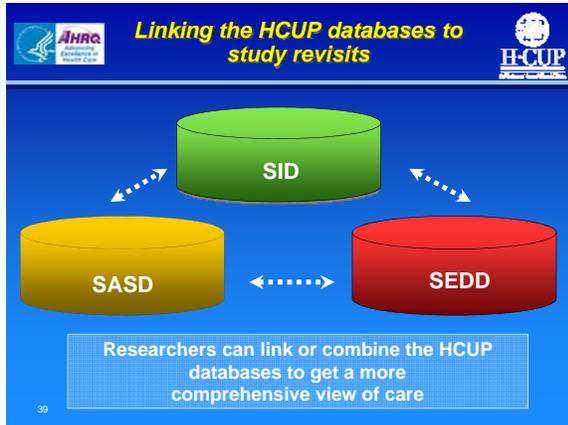
HCUP Supplemental Files for Revisit Analyses

The HCUP Supplemental Files for Revisit Analyses are discharge-level files designed to facilitate analyses that need to track patients across time and hospital settings in the SID, SASD, and SEDD

38

HCUP Supplemental Files for Revisit Analyses

- The HCUP Supplemental Files for Revisit Analyses are discharge-level files that need to track patients across time and hospital settings in the HCUP State Inpatient Databases (SID), State Ambulatory Surgery Databases (SASD), and State Emergency Department Databases (SEDD).



Linking the HCUP databases to study revisits

- The three HCUP state databases, the State Inpatient Databases (SID), State Ambulatory Surgery Databases (SASD), and State Emergency Department Databases (SEDD) can be combined using the revisit files to provide a more comprehensive view of care.



The SASD and the SID can provide a more complete picture of care

- The SASD can be used in combination with the SID for selected states to get a full picture of same day versus inpatient surgeries.

The SEDD and SID can provide a more complete picture of care

The SID and the SEDD can be combined to get a full picture of care that began in the ED

SEDD + SID

41

The SEDD and the SID can provide a more complete picture of care

- The SID and SEDD can be combined to obtain a more comprehensive picture of patient care.

Adding Readmissions / Revisit Data to HCUP State

AHRQ conducting analyses to add revisit data to HCUP state-level files

JAMA
The Journal of the American Medical Association

Acute Care Utilization and Rehospitalizations for Sickle Cell Disease. Brousseau DC, Owens PL, Mosso AL, Panepinto JA, Steiner CA. JAMA. 2010;303(13):1288-1294.

42

Adding Readmissions/Revisit Data to HCUP State

- AHRQ is conducting analyses to add revisit data to HCUP state-level files.
- One very recent example of work with readmissions examined sickle cell disease–related emergency department visits and hospitalizations from select states in the 2005 and 2006 HCUP State Inpatient Databases and State Emergency Department Databases. The results indicated that among patients with sickle cell disease, acute care encounters and rehospitalizations were frequent, particularly for 18- to 30-year-olds.
- Citation for the Journal Article:
Acute Care Utilization and Rehospitalizations for Sickle Cell Disease David C. Brousseau, MD, MS; Pamela L. Owens, PhD; Andrew L. Mosso, MS; Julie A. Panepinto, MD, MSPH; Claudia A. Steiner, MD, MPH JAMA. 2010;303(13):1288-1294.



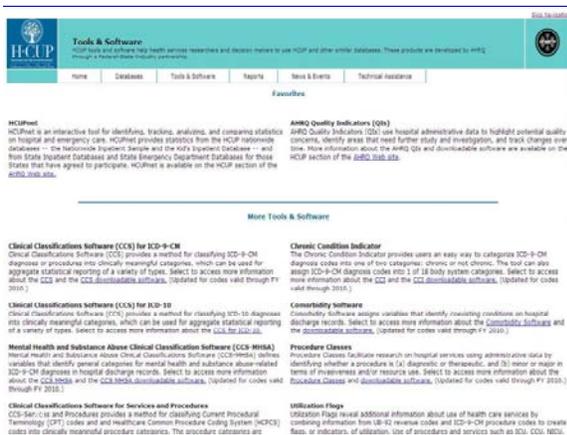
Additional HCUP Supplemental Files

- Trends Files (NIS & KID)**
 - Discharge-level files that provide the data user with both the trend weights and data elements that are consistently defined across data years
- NIS Hospital Ownership File**
 - Hospital-level files designed to facilitate analysis of the NIS by hospital ownership categories
- AHA Linkage Files**
 - Enable researchers to link hospital identifiers in some State databases to the AHA Annual Survey Databases

43

Additional HCUP Supplemental Files

- The NIS and KID Trends Files are discharge-level files that provide the data user with both the trend weights and data elements that are consistently defined across data years.
- The NIS Hospital Ownership Files are hospital-level files designed to facilitate analysis of the NIS by hospital ownership categories.
- The AHA Linkage Files enable researchers to link hospital identifiers in some State Databases to the AHA Annual Survey Databases.



The screenshot shows the 'Tools & Software' section of the HCUP website. It features a navigation menu with links for Home, Databases, Tools & Software, Reports, News & Events, and Technical Assistance. Below the menu, there are several tool descriptions:

- HCUPnet**: An interactive tool for identifying, tracking, analyzing, and comparing statistics on hospital and emergency care.
- AHRQ Quality Indicators (QIs)**: Use hospital administrative data to highlight potential quality concerns.
- Clinical Classifications Software (CCS) for ICD-9-CM**: Provides a method for classifying ICD-9-CM diagnoses or procedures into clinically meaningful categories.
- Chronic Condition Indicator**: Provides an easy way to categorize ICD-9-CM diagnosis codes into one of two categories: chronic or not chronic.
- Comorbidity Software**: Assigns variables that identify coexisting conditions on hospital discharge records.
- Clinical Classifications Software (CCS) for ICD-10**: Provides a method for classifying ICD-10 diagnoses into clinically meaningful categories.
- Mental Health and Substance Abuse Clinical Classification Software (CCS-MHSA)**: Identifies general categories for mental health and substance abuse-related ICD-9-CM diagnoses in hospital discharge records.
- Procedure Classes**: Facilitate research on hospital services using administrative data by identifying whether a procedure is (A) diagnostic, or therapeutic, and (B) minor or major in terms of treatment and/or resource use.
- Utilization Flags**: Reveal additional information about use of health care services by combining information from ICD-9-CM procedure codes to create flags or indicators of utilization.

Additional information about the tools and supplemental files is available on the HCUP-US website under the Tools and Software link at <http://hcup-us.ahrq.gov/>.

Online Tools

MONAHRQ

- A web-based software tool that enables organizations to input their own hospital administrative data and generate a data-driven website

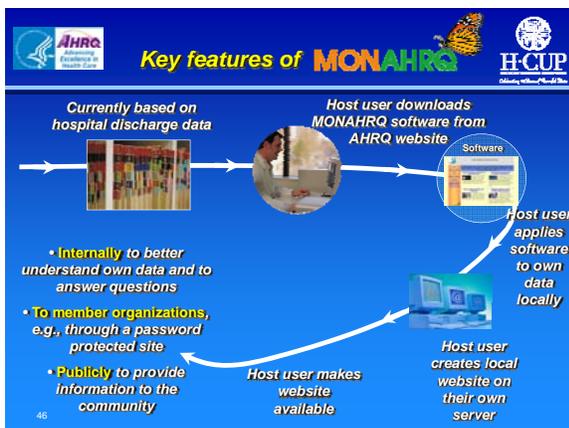
HCUPnet

- Free, interactive online query system
- <http://hcup.ahrq.gov/hcupnet>

45

Online Tools

- MONAHRQ - My Own Network – is a web-based software tool that enables organizations to input their own hospital administrative data and generate a data-driven website.
- HCUPnet is a free, interactive online query system.
- Additional information about HCUPnet can be found at <http://hcup.ahrq.gov/hcupnet>.



Key Features of MONAHRQ

- MONAHRQ is based on hospital discharge data.
- Host users can download MONAHRQ software from the AHRQ website and apply it to their own data.
- The host user applies the software to their own data locally.
- The host user then creates their own local website on their own server.
- The host user has the option of choosing how to make the website available and at what level:
 - Internally to better understand their own data and to answer questions
 - To member organizations through a password protected site
 - Publicly to provide information to the community



MONAHRQ

MONAHRQ – My Own Network, powered by AHRQ
 Transforming your health care data into information about health, costs, and quality of care.



MONAHRQ
 Input your data. Output your website.

47

MONAHRQ

- MONAHRQ (My Own Network, powered by AHRQ) transforms your health care data into information about health, costs, and quality of care.
- E-mail MONAHRQ@ahrq.gov for more information.



HCUPnet: Quick, free access to HCUP Data

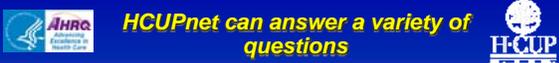
- Free, interactive online query system
- Users generate tables of outcomes by diagnoses and procedures
- Data can be cross-classified by patient and hospital characteristics

<http://hcup.ahrq.gov/hcupnet>

48

HCUPnet: Quick, free access to HCUP Data

- HCUPnet is a free, interactive online query system.
- HCUPnet users generate tables of outcomes by diagnoses and procedures.
- HCUPnet data can be cross-classified by patient and hospital characteristics.
- For more information on HCUPnet visit: <http://hcup.ahrq.gov/hcupnet>.



HCUPnet can answer a variety of questions

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

49

HCUPnet can answer a variety of questions

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



AHRQ HCUPnet

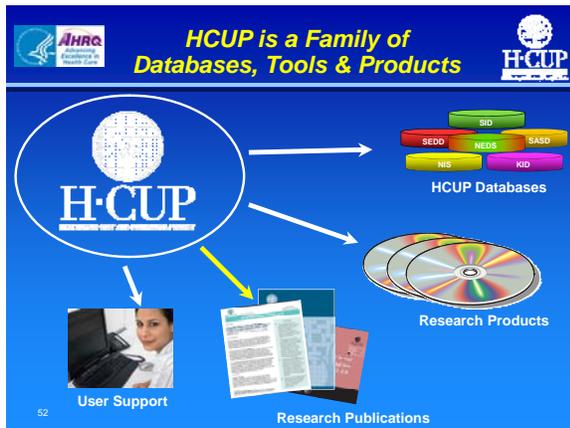
- This is HCUPnets landing page.
- More information on HCUPnet can be found at: <http://hcupnet.ahrq.gov>.

HCUPnet Capabilities	
CAN PRODUCE...	CANNOT PRODUCE...
Simple statistics	More complicated queries
Sample size calculations	Multivariate analyses
Trends information	Statistics involving certain variables
Rank ordering of diagnoses and procedures	Statistics that may violate confidentiality (patient-, provider-, hospital-level data)
Significance testing	

HCUPnet Capabilities

- HCUPnet can produce:
 - Simple Statistics
 - Sample size calculations
 - Trends information
 - Rank ordering of diagnoses and procedures
 - Significance testing
- HCUPnet cannot produce:
 - More complicated queries
 - Multivariate Analysis

- Statistics involving certain variables
- Statistics that may violate confidentiality (patient-provider, hospital-level data)



HCUP is a Family of Databases, Tools, and Products

- Now we will review research publications and other publication resources.

HCUP Publications

- HCUP Creates several types of publications, including
- Statistical Briefs
- Fact Books
- Annual Reports
- Methods Reports

AHRQ **Statistical Brief Topics** **H-CUP**

- More than 85 briefs posted – a new brief posted every two weeks:
 - Ambulatory Surgeries
 - Rural Hospitalizations
 - Motor Vehicle Accidents
 - Childbirth
 - Brain Cancer



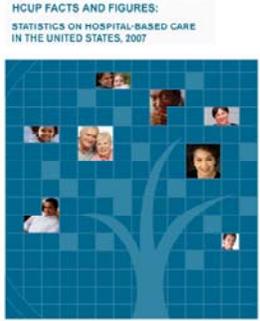
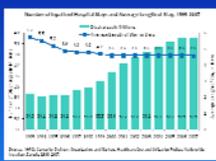
54

Statistical Brief Topics

- More than 85 briefs posted- a new brief is posted every two weeks:
- Statistical Briefs topics include:
 - Ambulatory Surgeries
 - Rural Hospitalizations
 - Motor Vehicle Accidents
 - Childbirth
 - Brain Cancer

AHRQ **HCUP Facts and Figures** **H-CUP**

HCUP FACTS AND FIGURES:
STATISTICS ON HOSPITAL-BASED CARE IN THE UNITED STATES, 2007

HCUP Facts and Figures highlights:

- Discharge Volume: 17.5 million
- Discharge Rate: 17.5 per 1,000 population
- HCUP Data Sources:
 - HCUP Nationwide
 - HCUP State
 - HCUP Regional
 - HCUP Local
 - HCUP National
 - HCUP International

HCUP Facts and Figures

- The third annual edition of HCUP Facts and Figures highlights the rich potential of HCUP data.

Methodological information on the HCUP databases and software tools

Report Number	Title
Report #2008-01	Enhancing Clinical Information in Database, Hospital Administrative Data, Project Summary and Lessons Learned (PDF No. 208-01)
Report #2008-02	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-02)
Report #2008-03	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-03)
Report #2008-04	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-04)
Report #2008-05	2005 HCUP Nationwide Inpatient Sample (NIS) Comparison Report (PDF No. 208-05)
Report #2008-06	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-06)
Report #2008-07	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-07)
Report #2008-08	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-08)
Report #2008-09	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-09)
Report #2008-10	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-10)

HCUP Methods Reports

- The HCUP Methods Reports feature a broad array of methodological information on the HCUP databases and software tools.

Reports

Report Number	Title
Report #2008-01	Enhancing Clinical Information in Database, Hospital Administrative Data, Project Summary and Lessons Learned (PDF No. 208-01)
Report #2008-02	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-02)
Report #2008-03	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-03)
Report #2008-04	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-04)
Report #2008-05	2005 HCUP Nationwide Inpatient Sample (NIS) Comparison Report (PDF No. 208-05)
Report #2008-06	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-06)
Report #2008-07	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-07)
Report #2008-08	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-08)
Report #2008-09	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-09)
Report #2008-10	Using Multiple-Value Database Software to Create a Data Warehouse (PDF No. 208-10)

AHRQ Reports

- These and other reports can be found the Reports link on the HCUP-US Website: <http://hcup-us.ahrq.gov/>.

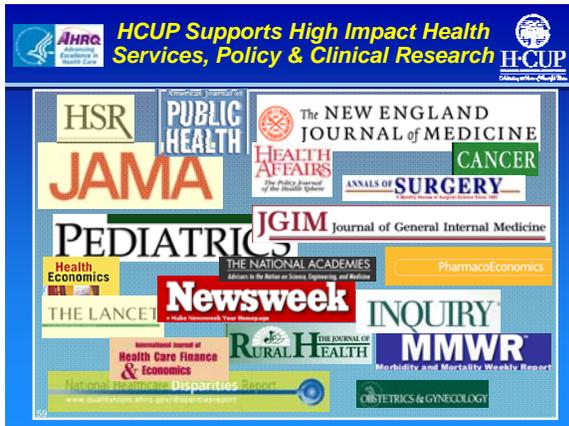
New: Publications Search Page on HCUP-US

- Simple or advanced search options
 - Data Year
 - Database, Tool, & Product
 - Key Word
 - Publication Type
 - Author
 - Title
 - State

New: Publications Search Page on HCUP-US

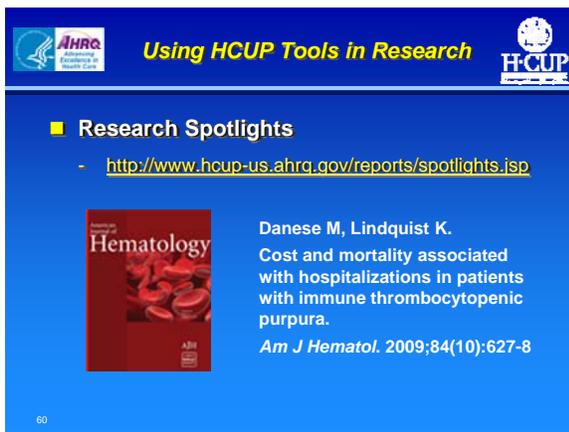
- In addition, the HCUP-US Website now also features a page where users can search for publications that involve HCUP databases or products based on:

- Data year,
- Database, tools, and products
- Key Word
- Publication Type
- Author
- Title
- State



HCUP Supports High Impact Health Services, Policy, and Clinical Research

- More than 1,100 peer-reviewed journal publications feature data, software products, and tools from HCUP.
- Examples of these publications include:
 - Newsweek
 - JAMA
 - The New England Journal of Medicine
 - Inquiry
 - Pediatrics

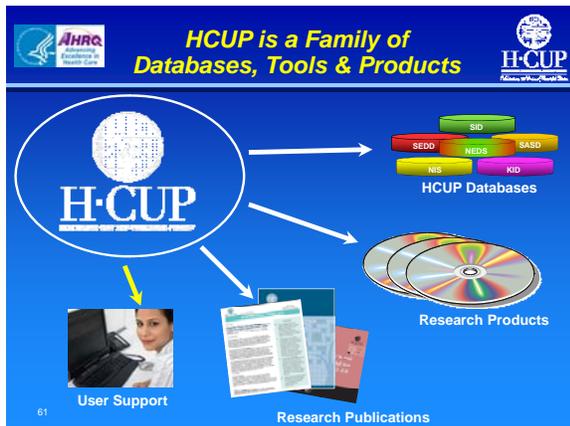


Using HCUP Tools in Research

- The Research Spotlights page on the HCUP-US Website highlights several articles that have used HCUP databases and tools in a meaningful way.
- One recent example of an article that used HCUP in its analysis:

Danese M, Lindquist K. Cost and mortality associated with hospitalizations in patients with immune thrombocytopenic purpura. *American Journal of Hematology*. 2009;84(10):627-8.

- The Research Spotlights can be found at:
<http://www.hcup-us.ahrq.gov/reports/spotlights.jsp>.



HCUP is a Family of Databases, Tools and Products

- In addition to the databases, software tools, and research products, HCUP provides a wealth of resources and support.

This slide highlights the 'HCUP User Support Website'. It lists four key features: finding detailed information on HCUP databases, tools, and products; accessing HCUPnet; finding a comprehensive listing of HCUP-related publications, database reports, and fact books; and accessing technical assistance. A screenshot of the website interface is shown to the right of the text. The URL <http://www.hcup-us.ahrq.gov> is provided. The slide also features the AHRQ logo and the number '62' in the bottom left corner.

HCUP User Support Website

- The HCUP User Support Website enables users to:
- Find detailed information on HCUP databases, software tools, and products
- Access HCUPnet
- Find a comprehensive listing of HCUP-related publications and reports; and
- Access technical assistance
- More information on the HCUP User Support Website can be found at:
<http://www.hcup-us.ahrq.gov>



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

63

HCUP Technical Assistance

- HCUP provides active technical assistance.
- The HCUP Technical Assistance staff:
 - Responds to inquiries about HCUP data, tools, or products
 - Collects user feedback and suggestions for improvement
- E-mail hcup@ahrq.gov if you need technical assistance regarding your research.



Interactive On-line HCUP Overview Course Available




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

64

Interactive On-line HCUP Overview Course Available

- HCUP has an interactive overview course
- Information about the Overview Course can be found at: <http://www.hcup-us.ahrq.gov/overviewcourse.jsp>

Additional HCUP Online Courses: Methods Focus

- **Now available:**
 - HCUP Sample Design Tutorial
- **Coming soon:**
 - Loading and Checking HCUP Data Files
 - Producing National Estimates with HCUP Data
 - And more...



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

Additional HCUP Online Courses: Methods Focus

- The first technical course in the series, the HCUP Sample Design Tutorial, is now available.
- The following modules will be released in 2010:
 - Loading and checking HCUP data
 - Producing national and regional estimates with HCUP data
- The HCUP Online Tutorial Series is available on the HCUP-US Website: http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp

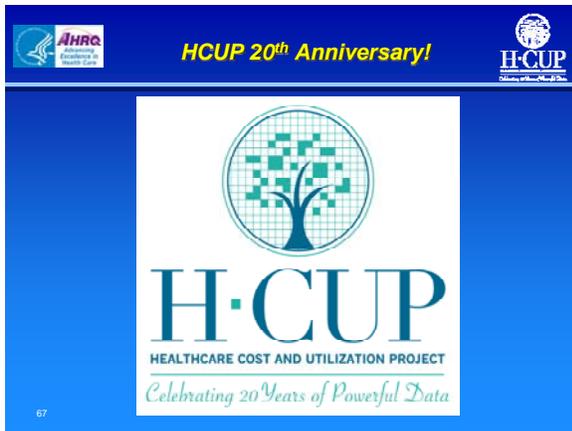
Join the HCUP Email List



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

Join the HCUP Email List

Members of the HCUP Mailing List will receive information about the HCUP Newsletter, New Data Releases, and New Reports. This can be done through a link on the HCUP-US Website: <http://www.ahrq.gov/data/hcup/hcuplist.htm>



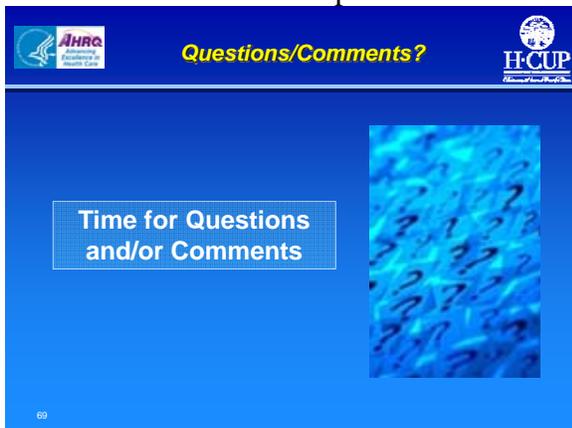
HCUP 20th Anniversary!

- 2010 marks the release of HCUP's 20th year of data.



Healthcare Cost and Utilization Project (HCUP)

- Conclusion of the presentation



Questions/Comments?

- Time for questions and comments