

## **Department of Health and Human Services: Agency for Healthcare Research and Quality**

*The Healthcare Cost and Utilization Project (HCUP) is an important part of the research infrastructure for studies on the health care of older adults in the U.S. HCUP provides data and research software and tools that support a wide range of studies related to the health care of the elderly including cost and quality of health services, medical practice patterns, access to health care programs, and outcomes of treatments at the national, State, and local levels. HCUP is the only source of data on hospital care for the all elderly U.S. residents that can provide statistics at both the national and local levels.*

### **Lead Agency:**

Department of Health and Human Services, Agency for Healthcare Research and Quality

### **Agency Mission:**

The Agency for Healthcare Research and Quality (AHRQ) is the lead Federal agency charged with improving the quality, safety, efficiency, and effectiveness of health care for all Americans. As one of 12 agencies within the Department of Health and Human Services, AHRQ supports health services research that will improve the quality of health care and promote evidence-based decisionmaking.

### **Principal Investigator:**

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### **Partner Agencies:**

**Arizona** Department of Health Services  
**Arkansas** Department of Health & Human Services  
**California** Office of Statewide Health Planning & Development  
**Colorado** Hospital Association  
**Connecticut** Integrated Health Information (Chime, Inc.)  
**Florida** Agency for Health Care Administration  
**Georgia** Hospital Association  
**Hawaii** Health Information Corporation  
**Illinois** Health Care Cost Containment Council and Department of Public Health  
**Indiana** Hospital & Health Association  
**Iowa** Hospital Association  
**Kansas** Hospital Association  
**Kentucky** Cabinet for Health and Family Services  
**Maine** Health Data Organization

**Maryland** Health Services Cost Review Commission  
**Massachusetts** Division of Health Care Finance and Policy  
**Michigan** Health & Hospital Association  
**Minnesota** Hospital Association  
**Missouri** Hospital Industry Data Institute  
**Nebraska** Hospital Association  
**Nevada** Division of Health Care Financing and Policy, Department of Health and Human Services  
**New Hampshire** Department of Health & Human Services  
**New Jersey** Department of Health & Senior Services  
**New York** State Department of Health  
**North Carolina** Department of Health and Human Services  
**Ohio** Hospital Association  
**Oklahoma** Health Care Information Center for Health Statistics  
**Oregon** Association of Hospitals and Health Systems  
**Rhode Island** Department of Health  
**South Carolina** State Budget & Control Board  
**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 & Family Services

### **General Description:**

The Healthcare Cost and Utilization Project (HCUP) (<http://www.hcup-us.ahrq.gov>) is an important part of the research infrastructure for studies on the health care of older adults in the U.S. HCUP provides data and research software and tools that support a wide range of studies related to the health care of the elderly including cost and quality of health services, medical practice patterns, access to health care programs, and outcomes of treatments at the national, State, and local levels.

The Healthcare Cost and Utilization Project (HCUP) is a unique Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ) that brings together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of patient-level health care data. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988.

In support of AHRQ's mission, the goals of HCUP are to:

- Create and enhance a powerful source of national and state all-payer health care data.
- Produce a broad set of software tools and products to facilitate the use of HCUP and other administrative data.
- Enrich a collaborative partnership with statewide data organizations aimed at increasing the quality and use of health care data.
- Conduct and translate research to inform decision making and improve health care delivery.

The HCUP Databases contain encounter-level information for all payers compiled in a uniform format with privacy protections in place. HCUP databases contain a core set of clinical and nonclinical information found in a typical discharge abstract (or billing record) including all-listed diagnoses and surgeries, patient status at discharge, patient demographics, and billed charges. HCUP data also include information about the hospital to support aggregate research. HCUP include the following hospital inpatient and outpatient databases that are used for analyses of health care for older persons:

- **The Nationwide Inpatient Sample (NIS)** with inpatient data from a national sample of over 1,000 hospitals designed for making national estimates.
- **The State Inpatient Databases (SID)** contain the universe of inpatient discharge abstracts from participating states.
- **The State Ambulatory Surgery Databases (SASD)** contain data from ambulatory care encounters from hospital-affiliated and sometimes freestanding ambulatory surgery sites.
- **The State Emergency Department Databases (SEDD)** contain data from hospital-affiliated emergency departments for visits that do not result in hospitalizations.

The HCUP databases have been a powerful resource for the development of software and tools that can be applied to other similar databases by health services researchers and decision makers. These tools include an online query system (HCUPnet) for generating statistics in a table format using HCUP data (<http://hcupnet.ahrq.gov/>), software to measure quality of hospital care (AHRQ Quality Indicators) and software for classifying diagnoses or surgeries into clinically meaningful categories for ease of statistical reporting (Clinical Classification Software).

HCUP also produces reports that summarize important findings from the databases. The HCUP Statistical Briefs present simple, descriptive statistics on a variety of specific, focused topics. Most of these topics have relevance to the elderly. And one focused specifically on the elderly- (HCUP Statistical Brief #14 "Trends in Elderly Hospitalizations, 1997-2004).

**Excellence :** What makes this project exceptional?

**Significance:** How is this research relevant to older persons, populations and/or an aging society?

**Effectiveness :** What is the impact and/or application of this research to older persons?

**Innovativeness:** Why is this research exciting or newsworthy?

HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. Unlike the hospital files maintained by the Centers for Medicare and Medicaid, HCUP files include records for Medicare patients who are enrolled in managed care and it includes records for elderly who are not covered by Medicare (primarily foreign-born who were not part of the Social Security system). Because of the unique Federal, State, industry partnership in data, HCUP can support both national and local analyses of health care among the elderly. As a result, HCUP is the only source of data on hospital care for elderly residents that can provide statistics at both the national and local levels.

**HCUP databases capture the hospital inpatient experience of the 32.7 million people who are 65 years and older and who reside in the 39 HCUP Partner states (88% of all persons age 65 and older in the U.S.). In 2006, this represents approximately 11.3 million hospital inpatient records.**

HCUP not only provides access to data files for researchers, but it also has an online query system (HCUPnet) that is designed for both researchers and non-researchers. Using this online query system, the average person has easy access to statistics on the care of elderly almost instantaneously. Options are available for statistics on older patients for individual diagnoses or surgeries broken down by hospital characteristics. Available statistics include the average cost and length of hospital stays, the percentage admitted through the emergency room, discharged to nursing homes or those who died. The following is an example of information that can be generated from HCUPnet within seconds:

- Congestive heart failure was the single most common condition primarily responsible for the hospitalization of persons age 65 and older in 2006 (about 810,000 hospitalizations); pneumonia was the second most common reason for hospitalization (about 700,000 hospitalizations).

HCUP data are used to support many of the measures used for the Congressionally-mandated National Healthcare Quality Report and National Healthcare Disparity Report. HCUP supplies all quality and disparity statistics for these annual reports separately for the elderly population. Thus, HCUP statistics are being used to monitor quality of care for the older population. Below is an example table for the

National Healthcare Quality Report that shows the decline in hospital deaths for acute myocardial infarction (heart attack) since 2000.

**Deaths per 1,000 admissions with acute myocardial infarction (AMI)  
as principal diagnosis**

		<b>2005</b>	<b>2004</b>	<b>2000</b>
<b>Total</b>		77.5	83.0	105.8
<b>Age</b>	<b>18-44</b>	16.8	20.9	21.1
	<b>45-64</b>	35.1	35.3	45.5
	<b>65 and over</b>	107.9	115.5	144.9
<b>Age</b>	<b>65-69</b>	58.1	68.5	88.6
	<b>70-74</b>	81.1	83.6	113.2
	<b>75-79</b>	102.2	106.6	140.6
	<b>80-84</b>	124.5	132.7	161.2
	<b>85 and over</b>	150.7	165.9	207.5

**Source: HCUP Nationwide Inpatient Sample**

HCUP can support a wide-range of research and health policy topics that can improve the health of the elderly. In the last decade, over 600 peer-reviewed articles have been written based on HCUP data and related software tools, with 160 professional journal articles published in 2007 alone. In addition, there are many health care journalists who rely on HCUPnet for quick statistics to support their news stories. In 2007 there were nearly 400 non-journal publications (e-journals, magazines and newspapers) that featured HCUP. Most of these articles were on topics that focused on the elderly or on health care topics of relevance to the elderly.