CEDAR Data Inventory

Healthcare Cost and Utilization and Project (HCUP)

The below descriptions are reprinted with permission from HCUP. Original content can be found at the links below.

All HCUP projects are subject to a data use agreement.

For information please submit a CEDAR SPARC request

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https://www.hcup-us.ahrq.gov/HCUP_Overview/HCUP_Overview/index.html

https://www.hcup-us.ahrq.gov/nisoverview.jsp

https://www.hcup-us.ahrq.gov/nedsoverview.jsp

National Sample Databases**

Year	National Inpatient Sample (NIS)*ǂ	National Emergency Department Sample (NEDS)
2016	X	
2015	X	X
2014	X	
2013	X	
2012	X	X
2011	X	
2010	X	
2009	X	
2008	X	
2007	X	
2006	X	
2005	X	
2004	X	
2003	X	
2002	X	
2001	X	
2000	X	

*earlier years available

** HCUP data sets contain indicators of patient race and span ages 0-89 years.

ǂCost to Charge ratios available from 2002 forward.

Overview of the National (Nationwide) Inpatient Sample (NIS)

The National (Nationwide) Inpatient Sample (NIS) is part of a family of databases and software tools developed for the Healthcare Cost and Utilization Project (HCUP). The NIS is the largest publicly available all-payer inpatient health care database in the United States, yielding national estimates of hospital inpatient stays. Unweighted, it contains data from more than 7 million hospital stays each year. Weighted, it estimates more than 35 million hospitalizations nationally. Developed through a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality (AHRQ), HCUP data inform decision making at the national, State, and community levels.

About the NIS

Beginning with the 2012 data year, the NIS approximates a 20-percent stratified sample of all discharges from U.S. community hospitals, excluding rehabilitation and long-term acute care hospitals. The NIS contains information on all patients, regardless of payer, including individuals covered by Medicare, Medicaid, or private insurance, uninsured. The NIS is sampled from the State Inpatient Databases (SID), which include all inpatient data that are currently contributed to HCUP.

Researchers and policymakers use the NIS to make national estimates of health care utilization, access, charges, quality, and outcomes. NIS data are available from 1988 through 2016, which allows analysis of trends over time.

NIS Data Elements

The NIS contains clinical and resource-use information that is included in a typical discharge abstract, with safeguards to protect the privacy of individual patients, physicians, and hospitals (as required by data sources). It contains clinical and nonclinical data elements for each hospital stay, including:

- International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis, procedure, and external cause of injury codes prior to October 1, 2015
- International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) diagnosis, procedures, and external cause of morbidity codes beginning October 1, 2015
- Patient demographic characteristics
- Hospital characteristics (e.g., ownership)
- Expected payment source
- Total charges
- Discharge status
- Length of stay
- Severity and comorbidity measures

Overview of the Nationwide Emergency Department Sample (NEDS)

The Nationwide Emergency Department Sample (NEDS) is part of a family of databases and software tools developed for the [Healthcare Cost and Utilization Project (HCUP)](). The NEDS is the largest all-payer emergency department (ED) database in the United States, yielding national estimates of hospital-based ED visits. Unweighted, it contains data from approximately 31 million ED visits each year. Weighted, it estimates roughly 143 million ED visits. Developed through a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality, HCUP data inform decision making at the national, State, and community levels.

About the NEDS

Sampled from the [State Inpatient Databases (SID)]() and [State Emergency Department Databases (SEDD)](), HCUP's NEDS can be used to create national and regional estimates of ED care. The SID contain information on patients initially seen in the ED and then admitted to the same hospital. The SEDD capture information on ED visits that do not result in an admission (i.e., treat-and-release visits and transfers to another hospital).

NEDS data are available from 2006 through 2016, which allows researchers to analyze trends over time.

NEDS Data Elements

The NEDS contains clinical and resource-use information that is included in a typical discharge abstract, with safeguards to protect the privacy of individual patients, physicians, and hospitals (as required by data sources). The NEDS is composed of more than 100 clinical and nonclinical variables for each hospital stay. These include:

- ICD-10-CM/PCS diagnosis, procedure, and external cause of morbidity codes (starting on October 1, 2015)
- ICD-9-CM diagnosis, procedures, and external cause of injury codes (prior to October 1, 2015)
- Current Procedural Terminology, Fourth Edition (CPT®-4) procedure codes on ED visits that do not results in an admission to the same hospital
- Identification of injury-related ED visits including mechanism, intent, and severity of injury, based on ICD-9-CM coded data only
- Admission and discharge status
- Patient demographics characteristics
- Expected payment source (e.g., Medicare, Medicaid, private insurance, uninsured, and other insurance type)
- Total ED charges (for ED visits) and total hospital charges (for inpatient stays for ED visits that result in admission)
- Hospital characteristics (e.g., region, trauma center indicator, urban-rural location, teaching status)

Overview of Cost to Charge Ratio (CCR) Files

The HCUP SID, NIS, KID, and NRD contain data on total charges for each hospital discharge in the databases. This charge information represents the amount that hospitals billed for services, but does not reflect how much hospital services actually cost or the specific amounts that hospitals received in payment. In some cases, users may be interested in seeing how hospital charges translate into actual costs.

The HCUP Cost-to-Charge Ratio Files enable this conversion. Each file contains hospital-specific cost-to-charge ratios based on all-payer inpatient cost for nearly every hospital in the corresponding SID, NIS, KID, and NRD. Cost information was obtained from the hospital accounting reports collected by the Centers for Medicare & Medicaid Services (CMS). Some imputations for missing values were necessary.

HCUP Cost-to-Charge Ratio Files are designed to be used exclusively with the HCUP NIS, KID, NRD, or SID. The CCR files are unique by year and database.

Cost-to-Charge Ratio Files. Healthcare Cost and Utilization Project (HCUP). September 2018. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp.

HCUP

The Healthcare Cost and Utilization Project (HCUP, pronounced "H-Cup") is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring 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 encounter-level health care data (HCUP Partners). HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. These databases enable research on a broad range of health policy issues, 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 market levels.

HCUP's objectives are to:

- Create and enhance a powerful source of national, state, and 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.

HCUP Overview. Healthcare Cost and Utilization Project (HCUP). April 2019. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/overview.jsp.