OVERVIEW OF

THE HCUP NATIONWIDE INPATIENT SAMPLE (NIS)

2000

These pages provide only an introductory overview of the NIS package.

Full documentation is provided on the NIS Documentation CD-ROM

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HCUP NATIONWIDE INPATIENT SAMPLE (NIS)
SUMMARY OF DATA USE LIMITATIONS

***** REMINDER *****

**All users of the NIS must take the on-line HCUP Data Use Agreement (DUA) training
course, and read and sign a Data Use Agreement.**[†]

Authorized users of HCUP data agree to the following restrictions:[‡]

- Will not use the data for any purpose other than research or aggregate statistical reporting.

- Will not re-release any data to unauthorized users.

- Will not redistribute HCUP data by posting on any Web site or publicly-accessible online repository.

- Will not identify or attempt to identify any individual, including by the use of vulnerability analysis or penetration testing. Methods that could be used to identify individuals directly or indirectly shall not be disclosed or published.

- Will not publish information that could identify individual establishments (e.g., hospitals) and will not contact establishments.

- Will not use the data concerning individual establishments for commercial or competitive purposes involving those establishments and will not use the data to determine rights, benefits, or privileges of individual establishments.

- Will not use data elements from the proprietary severity adjustment software packages (3M APR-DRGs, HSS APS-DRGs, and Truven Health Analytics Disease Staging) for any commercial purpose or to disassemble, decompile, or otherwise reverse engineer the proprietary software.

- Will acknowledge in reports that data from the "Healthcare Cost and Utilization Project (HCUP)," were used, including names of the specific databases used for analysis.

- Will acknowledge that risk of individual identification of persons is increased when observations (i.e., individual discharge records) in any given cell of tabulated data is less than or equal to 10.

Any violation of the limitations in the Data Use Agreement is punishable under Federal law by a fine of up to $10,000 and up to 5 years in prison. Violations may also be subject to penalties under State statutes.

[†] The on-line Data Use Agreement training session and the Data Use Agreement are available on the HCUP User Support (HCUP-US) Website at http://www.hcup-us.ahrq.gov.
[‡] Specific provisions are detailed in the Data Use Agreement for Nationwide Databases.

HCUP CONTACT INFORMATION

All HCUP data users, including data purchasers and collaborators, must complete the online HCUP Data Use Agreement (DUA) Training Tool, and read and sign the HCUP Data Use Agreement. Proof of training completion and signed Data Use Agreements must be submitted to the HCUP Central Distributor as described below.

The on-line DUA training course is available at: http://www.hcup-us.ahrq.gov/tech_assist/dua.jsp

The HCUP Nationwide Data Use Agreement is available on the AHRQ-sponsored HCUP User Support (HCUP-US) Web site at: http://www.hcup-us.ahrq.gov

HCUP Central Distributor

Data purchasers will be required to provide their DUA training completion code and will execute their DUAs electronically as a part of the online ordering process. The DUAs and training certificates for collaborators and others with access to HCUP data should be submitted directly to the HCUP Central Distributor using the contact information below.

The HCUP Central Distributor can also help with questions concerning HCUP database purchases, your current order, training certificate codes, or invoices, if your questions are not covered in the Purchasing FAQs on the HCUP Central Distributor Web site.

Purchasing FAQs:
https://www.distributor.hcup-us.ahrq.gov/Purchasing-Frequently-Asked-Questions.aspx

Phone: (866) 290-HCUP (4287)
Email: HCUPDistributor@AHRQ.gov
Fax: 866-792-5313 (toll free in the United States)

Mailing address:
HCUP Central Distributor
Social & Scientific Systems, Inc.
8757 Georgia Ave, 12th Floor
Silver Spring, MD 20910

HCUP User Support:

Information about the content of the HCUP databases is available on the HCUP User Support (HCUP-US) Web site (http://www.hcup-us.ahrq.gov). If you have questions about using the HCUP databases, software tools, supplemental files, and other HCUP products, please review the HCUP Frequently Asked Questions or contact HCUP User Support:

HCUP FAQs: http://www.hcup-us.ahrq.gov/tech_assist/faq.jsp

Phone: 866-290-HCUP (4287) (toll free)
Email: hcup@ahrq.gov

WHAT IS NEW IN THE 2000

NATIONWIDE INPATIENT SAMPLE (NIS)?

- Four States have joined the NIS in 2000: Kentucky, North Carolina, Texas, West Virginia

- There are two data elements that contain the discharge-level weights needed to calculate national estimates:
    - o "DISCWT" should be used for all analyses except those that involve total charges
    - o "DISCWTcharge" should be used to weight total charges

- The 2000 NIS is available for purchase through the HCUP Central Distributor sponsored by the Agency for Healthcare Research and Quality (AHRQ):

    HCUP Central Distributor
    Social and Scientific Systems, Inc.
    Phone: (866) 556-4287 (toll-free)
    FAX: (301) 628-3201
    E-mail: hcup@s-3.com

    The 2000 NIS will not be available through the National Technical Information Service (NTIS).

**The Agency for Healthcare Research and Quality and
the staff of the Healthcare Cost and Utilization Project (HCUP) thank you for
purchasing the HCUP Nationwide Inpatient Sample (NIS).**

HCUP Nationwide Inpatient Sample (NIS)

ABSTRACT

The Nationwide Inpatient Sample (NIS) is part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ), formerly the Agency for Health Care Policy and Research.

The NIS is a database of hospital inpatient stays. Researchers and policymakers use the NIS to identify, track, and analyze national trends in health care utilization, access, charges, quality, and outcomes.

The NIS is the largest all-payer inpatient care database that is publicly available in the United States, containing data from 5 to 8 million hospital stays from about 1000 hospitals sampled to approximate a 20-percent stratified sample of U.S. community hospitals. The NIS is available for a 13-year time period, from 1988 to 2000, allowing analysis of trends over time.

The NIS is the only national hospital database with charge information on all patients, regardless of payer, including persons covered by Medicare, Medicaid, private insurance, and the uninsured. The NIS's large sample size enables analyses of rare conditions, such as congenital anomalies; uncommon treatments, such as organ transplantation; and special patient populations, such as children.

Inpatient stay records in the NIS include clinical and resource use information typically available from discharge abstracts. Hospital and discharge weights are provided for producing national estimates. The NIS can be linked to hospital-level data from the American Hospital Association's Annual Survey of Hospitals and county-level data from the Bureau of Health Professions' Area Resource File, except in those states that do not allow the release of hospital identifiers.

Beginning in 1998, the NIS differs from previous NIS releases: some data elements were dropped, some were added, for some data elements the coding was changed, and the sampling and weighting strategy was revised to improve the representativeness of the data.

Access to the NIS is open to users who sign data use agreements. Uses are limited to research and aggregate statistical reporting.

For more information on the NIS, visit the HCUP Web site at http://www.ahrq.gov/data/hcup/.

INTRODUCTION TO THE HCUP NATIONWIDE INPATIENT SAMPLE (NIS)

OVERVIEW OF NIS DATA

The Nationwide Inpatient Sample contains all-payer data on hospital inpatient stays from States participating in the Healthcare Cost and Utilization Project (HCUP). Each year of the NIS provides information on approximately 5 million to 8 million inpatient stays from about 1,000 hospitals. All discharges from sampled hospitals are included in the NIS database.

The NIS contains patient-level clinical and resource use information included in a typical discharge abstract. The NIS can be linked directly to hospital-level data from the American Hospital Association (AHA) Annual Survey of Hospitals and to county-level data from the Health Resources and Services Administration Bureau of Health Professions' Area Resource File (ARF), except in those states that do not allow the release of hospital identifiers.

The NIS is designed to approximate a 20-percent sample of U.S. community hospitals, defined by the AHA to be "all nonfederal, short-term, general, and other specialty hospitals, excluding hospital units of institutions." Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, short-term rehabilitation, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers. Excluded are short-term rehabilitation hospitals (beginning with 1998 data), long-term hospitals, psychiatric hospitals, and alcoholism/chemical dependency treatment facilities.

This universe of U.S. community hospitals is divided into strata using five hospital characteristics: ownership/control, bed size, teaching status, urban/rural location, and U.S. region.

The NIS is a stratified probability sample of hospitals in the frame, with sampling probabilities proportional to the number of U.S. community hospitals in each stratum. The frame is limited by the availability of inpatient data from the data sources.

In order to improve the representativeness of the NIS, the sampling and weighting strategy was modified beginning with the 1998 data. The full descriptions of this process can be found in the special report on *Changes in NIS Sampling and Weighting Strategy for 1998.* This report is available on the 2000 NIS Documentation CD-ROM and on the HCUP Web site at http://www.ahrq.gov/data/hcup/. To facilitate the production of national estimates, both hospital and discharge weights are provided, along with information necessary to calculate the variance of estimates. Detailed information on the design of the NIS is available in the year-specific special reports on *Design of the Nationwide Inpatient Sample* found on the NIS Documentation CD-ROM.

NIS data sets are currently available for multiple years, as shown in Table 1. Each release of the NIS includes:
  Χ   Data in ASCII format on CD-ROM.
  Χ   Patient-level hospital discharge abstract data for 100 percent of discharges from a sample of hospitals in participating States.
  Χ   5 million to 8 million inpatient records per year.
  Χ   800-1,000 hospitals per year.
  Χ   Two 10% subsamples of discharges from all NIS hospitals.
  Χ   Discharge-level weights to calculate national estimates for discharges.
  Χ   Hospital Weights File to produce national estimates for hospitals and to link the NIS to data from the American Hospital Association Annual Survey of Hospitals.
  Χ   NIS Documentation and tools, also on CD-ROM – including file specifications, programming source code for loading ASCII data into SAS and SPSS, and value labels.

Table 1. Summary of NIS Releases

Data from	Media/format options	Structure of Releases
▪ 1988-1992 ▪ 8 States in 1988 ▪ 11 States in 1989-1992	On CD-ROM, in ASCII format	5 years of NIS data in a 26-CD set 4 CDs per year (one quarter per disk) Two 10% Subsamples of discharges for each year
	On magnetic tape, in EBCDIC or SAS transport format	Each year sold separately
▪ 1993 ▪ 17 states ▪ 1994 ▪ 17 states ▪ 1995 ▪ 19 states ▪ 1996 ▪ 19 states ▪ 1997 ▪ 22 states	On CD-ROM, in ASCII format	1 year of data in a 6-CD set, structured for use on microcomputers Two 10% Subsamples of discharges
▪ 1998 ▪ 22 states ▪ 1999 ▪ 24 states ▪ 2000 ▪ 28 states	On CD-ROM, in ASCII format	1 year of data in a 2-CD set, compressed files Two 10% Subsamples of discharges

NIS Data Sources, Hospitals, and Inpatient Stays

Table 2 summarizes the data sources, number of hospitals, and number of inpatient stays in NIS data.

Table 2. Summary of NIS Data Sources, Hospitals and Inpatient Stays, 1988-2000

Calendar year	Data sources	Number of hospitals	Number of inpatient stays
1988	CA CO FL IL IA MA NJ WA	759	5,265,756
1989	AZ CA CO FL IL IA MA NJ PA WA WI *(Added AZ, PA, WI)*	882	6,110,064
1990	AZ CA CO FL IL IA MA NJ PA WA WI *(No change)*	871	6,268,515
1991	AZ CA CO FL IL IA MA NJ PA WA WI *(No change)*	859	6,156,188
1992	AZ CA CO FL IL IA MA NJ PA WA WI *(No change)*	856	6,195,744
1993	AZ CA CO CT FL IL IA KS MD MA NJ NY OR PA SC WA WI *(Added CT, KS, MD, NY, OR, SC)*	913	6,538,976
1994	AZ CA CO CT FL IL IA KS MD MA NJ NY OR PA SC WA WI *(No change)*	904	6,385,011
1995	AZ CA CO CT FL IL IA KS MD MA MO NJ NY OR PA SC TN WA WI *(Added MO, TN)*	938	6,714,935
1996	AZ CA CO CT FL IL IA KS MD MA MO NJ NY OR PA SC TN WA WI *(No change)*	906	6,542,069
1997	AZ CA CO CT FL GA HI IL IA KS MD MA MO NJ NY OR PA SC TN UT WA WI *(Added GA, HI, UT)*	1,012	7,148,420
1998	AZ CA CO CT FL GA HI IL IA KS MD MA MO NJ NY OR PA SC TN UT WA WI *(No change)*	984	6,827,350
1999	AZ CA CO CT FL GA HI IL IA KS MD MA ME MO NJ NY OR PA SC TN UT VA WA WI *(Added ME, VA)*	984	7,198,929
2000	AZ CA CO CT FL GA HI IL IA KS KY MD MA ME MO NC NJ NY OR PA SC TN TX UT VA WA WI WV *(Added KY, NC, TX, WV)*	994	7,450,992

State-Specific Restrictions

Some data sources that contributed data to the NIS imposed restrictions on the release of certain data elements or on the number and types of hospitals that could be included in the database. Detailed information on these state-specific restrictions is available in the report on *Sources of NIS Data and State-specific Restrictions* on the NIS Documentation CD-ROM.

Contents of CD-ROM Set

There are two types of files included in the NIS: 1) data files and 2) documentation and tools files.

1) Data Files - three types of ASCII formatted data files are included in the NIS:

   Inpatient Core File: This inpatient discharge-level file contains data for 100% of the discharges from a sample of hospitals in participating states. See Table 3 for a list of data elements in the Inpatient Core File.

   Subsample Inpatient Core Files: Each of these discharge-level files contain all data elements from the Core File, for a 10% subsample of discharges from the NIS; these can be combined to create a 20% NIS subsample. These files can be useful for testing programs or validating models. See Table 3 for a list of data elements in the Inpatient Core Files.

   Hospital Weights File: This hospital-level file contains one observation for each hospital included in the NIS and contains weights and variance estimation data elements, as well as linkage data elements. The unit of observation is the *hospital*. The HCUP hospital identifier (HOSPID) provides the linkage between the NIS Inpatient Core files and the Hospital Weights file. See Table 4 for a list of data elements in the Hospital Weights File.

2) Documentation and Tools Files

   Documentation: Complete file documentation, variable notes, and summary statistics are provided in a series of Portable Document Format (*.pdf) files. These files are detailed in Table 6.

   SAS source code: Code is included for the format library for the variables and for loading ASCII data into SAS format.

   SPSS source code: Code is included for the variable library and for loading ASCII data into SPSS format.

   Labels: Labels for the Clinical Classifications Software (CCS), formerly called the Clinical Classifications for Health Policy Research (CCHPR), and for the Diagnosis-Related Groups (multiple versions).

   File Specifications: Record layouts for all data files.

NIS Data Elements

All releases of the NIS contain two types of data: inpatient stay records and hospital information with weights. Table 3 and Table 4 identify the data elements that can be found in the inpatient stay and hospital weights files, respectively. Not all data elements in the NIS are uniformly coded or available across all States. This is not complete documentation for the data; please refer to the NIS Documentation CD-ROM for full documentation on all data elements, for summary statistics, and for the record layout.

Table 3. Data Elements in the NIS Inpatient Core Files, Starting in 1998
Note: Beginning in 1998, the NIS differs from previous NIS releases; some data elements were dropped, some added, and for some data elements the values were changed.

Data Element	Description (numbers in brackets indicate variable coding)
AGE	Age in years at admission
AGEDAY	Age in days (coded only when the age in years is less than 1) at admission
AMONTH	Admission month
ASOURCE	Admission source: (1) ER, (2) another hospital, (3) another facility including long-term care, (4) court/law enforcement, (5) routine/birth/other
ASOURCE_X	Admission source, as received from data source*
ATYPE	Admission type: (1) emergency, (2) urgent, (3) elective, (4) newborn, (6) other
AWEEKEND	Admission on weekend: (0) admission on Monday-Friday, (1) admission on Saturday-Sunday
DIED	Indicates in-hospital death: (0) did not die during hospitalization, (1) died during hospitalization
DISCWT	Discharge weight on Core file and Hospital Weights file. Prior to 2000, this weight is used to create national estimates for all analyses. Beginning in 2000, this weight is used to create national estimates for all analyses excluding those that involve total charges.
DISCWT10	Discharge weight on 10% subsample file. Prior to 2000, this weight is used to create national estimates for all analyses. Beginning in 2000, this weight is used to create national estimates for all analyses excluding those that involve total charges.
DISCWTcharge	Discharge weight for national estimates of total charges on Core file and Hospital Weights file. Only available in 2000.
DISCWTcharge10	Discharge weight for national estimates of total charges on 10% subsample file. Only available in 2000.
DISPUB92	Disposition of patient (discharge status), UB92 coding: (1) routine, (2) short term hospital, (3) skilled nursing facility, (4) intermediate care, (5) another type of facility, (6) home health care, (7) against medical advice, (8) home IV provider, (20) died in hospital, (40) died at home, (41) died in a medical facility, (42) died, place unknown, (50) Hospice, home, (51) Hospice, medical facility

Table 3. Data Elements in the NIS Inpatient Core Files, Starting in 1998 (Continued)

Data Element	Description (numbers in brackets indicate variable coding)
DISPUniform	Disposition of patient (discharge status), uniform coding: (1) routine, (2) transfer to short term hospital, (5) other transfers, including skilled nursing facility, intermediate care, and another type of facility, (6) home health care, (7) against medical advice, (20) died in hospital
DQTR	Discharge quarter
DRG	Diagnosis Related Group (DRG) in use on discharge date
DRG10	DRG Version 10 (effective October 1992 - September 1993). Discontinued in 2000.
DRG18	DRG Version 18 (effective October 2000 - September 2001)
DRGVER	Grouper version in use on discharge date
DSHOSPID	Hospital number as received from the data source
DX1-DX15	Principal and secondary diagnoses
DXCCS1-DXCCS15	Clinical Classifications Software (CCS) category for all diagnoses
FEMALE	Gender of patient: (0) male, (1) female
HOSPID	HCUP hospital number (links to Hospital Weights file)
HOSPST	State postal code for hospital (e.g., AZ for Arizona)
HOSPSTCO	Modified Federal Information Processing Standards (FIPS) State/county code for hospital, links to Area Resource File (available from the Bureau of Health Professions, Health Resources and Services Administration)
KEY	Unique record number
LOS	Length of stay, edited
LOS_X	Length of stay, as received from data source
MDC	Major Diagnosis Category (MDC) in use on discharge date
MDC10	MDC Version 10 (effective October 1992 - September 1993). Discontinued in 2000.
MDC18	MDC Version 18 (effective October 2000 - September 2001)
MDID_S	Synthetic attending physician number
NDX	Number of diagnoses coded on the original record
NEOMAT	Neonatal/maternal flag: (0) not maternal or neonatal, (1) maternal diagnosis or procedure, (2) neonatal diagnosis, (3) maternal and neonatal on same record
NIS_STRATUM	Stratum used to sample hospitals, based on geographic region, control, location/teaching status, and bed size

Table 3. Data Elements in the NIS Inpatient Core Files, Starting in 1998 (Continued)

Data Element	Description (numbers in brackets indicate variable coding)
NPR	Number of procedures coded on the original record
PAY1	Expected primary payer, uniform: (1) Medicare, (2) Medicaid, (3) private including HMO, (4) self-pay, (5) no charge, (6) other
PAY1_X	Expected primary payer, as received from the data source*
PAY2	Expected secondary payer, uniform: (1) Medicare, (2) Medicaid, (3) private including HMO, (4) self-pay, (5) no charge, (6) other
PAY2_X	Expected secondary payer, as received from the data source*
PR1-PR15	Principal and secondary procedures
PRCCS1-PRCCS15	Clinical Classifications Software (CCS) for all procedures
PRDAY1-PRDAY15	For each procedure, the number of days from admission
RACE	Race includes (1) white, (2) black, (3) Hispanic, (4) Asian or Pacific Islander, (5) Native American, (6) other
SURGID_S	Synthetic primary surgeon number
TOTCHG	Total charges, edited
TOTCHG_X	Total charges, as received from data source
YEAR	Calendar year
ZIPINC	Median household income for patient's ZIP Code: (1) $1-$24,999, (2) $25,000-$34,999, (3) $35,000-$44,999, (4) $45,000 and above

*For categorical data elements with _X suffix, see Description of Data Elements (on the NIS Documentation CD-ROM) for state-specific coding.

Table 4. Data Elements in the NIS Hospital Weights File, Starting in 1998

Note: Beginning in 1998, the NIS differs from previous NIS releases; some data elements were dropped, some added, and for some data elements the values were changed.

Data Element	Description (numbers in brackets indicate variable coding)
AHAID	AHA hospital identifier that matches AHA Annual Survey of Hospitals (not available for all states)
DISCWT	Discharge weight on Core file and Hospital Weights file. Prior to 2000, this weight is used to create national estimates for all analyses. Beginning in 2000, this weight is used to create national estimates for all analyses excluding those that involve total charges.
DISCWTcharge	Discharge weight for national estimates of total charges on Core file and Hospital Weights file. Only available in 2000.
HOSPADDR	Hospital address from AHA Survey (not available for all states)
HOSPCITY	Hospital city from AHA Survey (not available for all states)
HOSPID	HCUP hospital number (links to inpatient Core files)
HOSPNAME	Hospital name from AHA Survey (not available for all states)
HOSPST	Hospital state postal code for hospital (e.g., AZ for Arizona)
HOSPWT	Weight to hospitals in AHA universe
HOSPZIP	Hospital zip code from AHA Survey (not available for all states)
HOSP_BEDSIZE	Bed size of hospital: (1) small, (2) medium, (3) large
HOSP_CONTROL	Control/ownership of hospital: (0) government or private, collapsed category, (1) government, nonfederal, public, (2) private, non-profit, voluntary, (3) private, invest-own, (4) private, collapsed category
HOSP_LOCATION	Location: (0) rural, (1) urban
HOSP_LOCTEACH	Location/teaching status of hospital: (1) rural, (2) urban non-teaching, (3) urban teaching
HOSP_REGION	Region of hospital: (1) Northeast, (2) Midwest, (3) South, (4) West
HOSP_TEACH	Teaching status of hospital: (0) non-teaching, (1) teaching
IDNUMBER	AHA hospital identifier without the leading 6 (not available for all states)
NIS_STRATUM	Stratum used to sample hospitals; includes geographic region, control, location/teaching status, and bed size
N_DISC_U	Number of AHA universe discharges in NIS_STRATUM
N_HOSP_U	Number of AHA universe hospitals in NIS_STRATUM
S_DISC_U	Number of sample discharges in NIS_STRATUM
S_HOSP_U	Number of sample hospitals in NIS_STRATUM
TOTAL_DISC	Total number of discharges from this hospital in the NIS
YEAR	Calendar year

SAMPLING OF HOSPITALS INCLUDED IN THE NIS

The hospital universe is defined by all hospitals that were open during any part of each calendar year and were designated as community hospitals in the AHA Annual Survey of Hospitals.

For more information on how hospitals in the data were mapped to hospitals as defined by the AHA, refer to the special report: *HCUP Hospital Identifiers*. For a list of all data sources, refer to: *Sources of NIS Data and State-Specific Restrictions*. For more detailed descriptions of the sampling design, refer to the year-specific special reports *Design of the HCUP Nationwide Inpatient Sample*. All reports can be found on the NIS Documentation CD-ROM.

Stratification Variables

To help ensure generalizability, five hospital sampling strata were defined based on hospital characteristics contained in the AHA Annual Survey of Hospitals. The stratification variables are:

1) *Geographic Region – Northeast, Midwest, West, or South*. This is based on the U.S. Census regions.

2) *Location – urban or rural*. A metropolitan statistical area is considered urban.

3) *Teaching Status – teaching or non-teaching*. A hospital is considered to be a teaching hospital if it has an AMA-approved residency program, is a member of the Council of Teaching Hospitals (COTH) or has a ratio of full-time equivalent interns and residents to beds of .25 or higher.

4) *Control – government nonfederal (public), private not-for-profit (voluntary) or private investor-owned (proprietary).* When there were enough hospitals of each type to allow it (southern rural, southern urban non-teaching, and western urban non-teaching), hospitals were stratified as public, voluntary, and proprietary. For smaller strata (north central rural and western rural hospitals) a collapsed stratification of public versus private was used, with the voluntary and proprietary hospitals combined to form a single 'private' category. For all other combinations of region, location and teaching status, no stratification based on control was advisable given the number of hospitals in these cells.

5) *Bed size – small, medium, or large.* Bed size categories are based on hospital beds, and are specific to the hospital's location and teaching status, as shown in Table 5. Bed size cutpoints were chosen so that approximately one-third of the hospitals in a given region and location/teaching combination would be in each bed size category (small, medium, or large).

Rural hospitals were not split according to teaching status, because rural teaching hospitals were rare.

To further ensure geographic representativeness, implicit stratification variables included state and three-digit zip code (the first three digits of the hospital's five digit zip code). The hospitals were sorted according to these variables prior to systematic random sampling.

Table 5. Bed Size Categories, by Region

Location and Teaching Status	Hospital Bed size		
	Small	**Medium**	**Large**
NORTHEAST			
Rural	1-49	50-99	100+
Urban, non-teaching	1-124	125-199	200+
Urban, teaching	1-249	250-424	425+
MIDWEST			
Rural	1-29	30-49	50+
Urban, non-teaching	1-74	75-174	175+
Urban, teaching	1-249	250-374	375+
SOUTH			
Rural	1-39	40-74	75+
Urban, non-teaching	1-99	100-199	200+
Urban, teaching	1-249	250-449	450+
WEST			
Rural	1-24	25-44	45+
Urban, non-teaching	1-99	100-174	175+
Urban, teaching	1-199	200-324	325+

GETTING STARTED

NIS information is provided on two CD-ROMs. The NIS data files are on CD-ROM #1 and the NIS documentation and tools are on CD-ROM #2.

NIS Data Files

In order to load NIS data onto your PC, you will need less than 4½ gigabytes of space available. Because of the size of the files, the data are distributed as self-extracting PKZIP compressed files. To decompress the data, you should follow these steps:

1.   Create a directory for the NIS on your hard drive.
2.   Copy the self-extracting data files from the NIS Data Files CD-ROM into the new directory.
3.   Unzip each file by running the corresponding *.exe file.
   - Type the file name within DOS or click on the name within Windows Explorer.
   - Edit the name of the "Unzip To Folder" in the WinZip Self-Extractor dialog to select the desired destination directory for the extracted file.
   - Click on the "Unzip" button.

The ASCII data files will then be uncompressed into this directory. After the files are uncompressed, the *.exe files can be deleted.

NIS Documentation

NIS documentation files on the Documentation CD-ROM provide important resources for the user. Refer to these resources to understand the structure and content of the NIS and to aid in using the NIS. Many of the documentation files are provided in portable document format (*.pdf) files. Files with the *.pdf extension can be viewed, searched, and printed using the Adobe Acrobat Reader®.

You must have the Adobe Acrobat Reader software on your computer to access the NIS documentation. If you do not have Adobe Acrobat Reader software on your computer, see the DOCUMENTATION.README.TXT file on NIS Documentation CD-ROM for instructions on installing or obtaining the software.

The Acrobat Reader provided on the NIS Documentation CD-ROM is for IBM-compatible microcomputers running Microsoft Windows 95 or higher. More information and Acrobat Reader software for other platforms (DOS, Windows 3.1, Macintosh, Sun Systems, etc.) may be obtained free of charge from the Adobe Home Page at http://www.adobe.com/. For further assistance in installing and running the Adobe Acrobat Reader on your computer platform, please consult your local support personnel.

Table 6 describes the documentation and tools files that can be found on the NIS Documentation CD-ROM and illustrates the structure of the directories and subdirectories on the CD. All NIS documentation is also available on the HCUP Web site at http://www.ahrq.gov/data/hcup/.

Table 6. NIS Documentation CD-ROM

Directory	Description
Root	Includes: • DOCUMENTATION.README.TXT file with introductory information on accessing the NIS documentation
/General Information	Includes: • Overview of the NIS (PDF file) • Sources of NIS Data and State-Specific Restrictions (PDF file) • Data Use Agreement for the Nationwide Inpatient Sample (PDF file)
/Special Reports	Includes: • Design of the Nationwide Inpatient Sample (PDF file) • Changes in NIS Sampling and Weighting Strategy for 1998 (PDF file) • NIS Comparison Report, 1999 (PDF file) • Calculating Variances using Data from the HCUP Nationwide Inpatient Sample, 2000 (PDF file) • HCUP Coding Practices (PDF file) • HCUP Quality Control Procedures (PDF file) • HCUP Hospital Identifiers (PDF file)
/File Specifications	Includes data set name, number of records, record length, and record layout. One file per data file: Core, Core Subsample #1, Core Subsample #2, and Hospital Weights. (Text files)
/Description of Data Elements	Includes information on all NIS variables such as uniform coding and state-specific information. One file per data type: Core and Hospital Weights. (PDF files)
/Summary Statistics	Includes summary statistics (means and frequencies) on NIS data. One file per data file: Core, Core Subsample #1, Core Subsample #2, and Hospital Weights. (PDF files)
/SAS Load Programs	SAS programming code to convert ASCII data files into SAS. One file per data file: Core, Core Subsample #1, Core Subsample #2, and Hospital Weights. (Text files)
/SPSS Load Programs	SPSS programming code to convert ASCII data files into SPSS. One file per data file: Core, Core Subsample #1, Core Subsample #2, and Hospital Weights. (Text files)
/HCUP Tools_Labels	Includes: • Label file for the Clinical Classifications Software (CCS), a categorization scheme that groups ICD-9-CM diagnosis and procedure codes into mutually exclusive categories. (Text file) • Label file for Diagnosis Related Groups (DRGs), multiple versions provided (Text file) • SAS code to create format library of variable labels (Text file)
/Adobe Acrobat Reader	Adobe Acrobat Reader files for IBM compatible for Microsoft Windows 95 or higher. (One text, one HTML, and one application file)

OTHER HCUP PRODUCTS

The AHRQ Home Page on the World Wide Web is a source of information about HCUP databases and aggregate statistics from HCUP.

The address is: http://www.ahrq.gov/data/hcup/.

Data

Nationwide Inpatient Sample (NIS) releases are currently available from two sources.

	National Technical Information Service (NTIS) • Phone: (800) 553-6847 or (703) 605-6000. All NIS releases are available on CD-ROM; NIS Release 1 may also be purchased on magnetic tape. Order by PB number.	HCUP Central Distributor Social and Scientific Systems, Inc. • Phone: (866) 556-4287 (toll-free) • FAX: (301) 628-3201 • E-mail: hcup@s-3.com • An online ordering option is available on the HCUP section of the AHRQ Website at http://www.ahrq.gov/data/hcup/.
NIS, Release 1, 1988-1992	PB95-503710	Available late 2002
NIS, Release 2, 1993	PB96-501325	Available late 2002
NIS, Release 3, 1994	PB97-500433	Available late 2002
NIS, Release 4, 1995	PB98-500440	Available late 2002
NIS, Release 5, 1996	PB99-500480	Available late 2002
NIS, Release 6, 1997	PB2000-500006	Available late 2002
NIS, 1998	PB2001-500092	Available late Summer 2002
NIS, 1999	PB2002-500020	Available late Summer 2002
NIS, 2000	Not available	Available on CD-ROM

State Inpatient Databases (SID) are hospital databases from Data Organizations participating in HCUP. The SID contain the universe of the inpatient discharge abstracts in the participating HCUP States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 80 percent of all U.S. community hospital discharges. For more information, visit: http://www.ahrq.gov/data/hcup/hcupsid.htm or contact the HCUP Central Distributor (see below).

State Ambulatory Surgery Databases (SASD) are databases from Data Organizations in participating HCUP States, which capture surgeries performed on the same day in which patients are admitted and released. The SASD contain the ambulatory surgery encounter abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. All of the databases include abstracts from hospital-affiliated ambulatory surgery sites. Some contain the universe of ambulatory surgery encounter abstracts for that State, including records from both hospital-affiliated and freestanding surgery centers. Composition and completeness of data files may vary from State to State. For more information, visit:

http://www.ahrq.gov/data/hcup/hcupsasd.htm or contact the HCUP Central Distributor (see below).

Kids' Inpatient Database (KID) is a unique database of hospital inpatient stays for children 18 years of age and younger. The KID was specifically designed to permit researchers to study a broad range of conditions and procedures related to child health issues. KID files for 1997 data are available through the AHRQ-sponsored HCUP Central Distributor (contact information below). For more information, visit: http://www.ahrq.gov/data/hcup/hcupkid.htm or contact the HCUP Central Distributor (see below).

HCUP Central Distributor. HCUP databases are available for purchase through the AHRQ-sponsored HCUP Central Distributor. Many of the HCUP State Partners allow the public release of the State Inpatient Databases (SID) and State Ambulatory Surgery Databases (SASD) through the AHRQ-sponsored HCUP Central Distributor. In addition, the NIS and the KID are released through the HCUP Central Distributor. Information on how to obtain uniformly-formatted HCUP files from States not participating in the HCUP Central Distributor is also available from the HCUP Central Distributor:

> HCUP Central Distributor
> Social and Scientific Systems, Inc.
> Phone: (866) 556-4287 (toll-free)
> FAX: (301) 628-3201
> E-mail: hcup@s-3.com

HCUPnet

HCUPnet is a Web-based query tool for identifying, tracking, analyzing, and comparing statistics on hospitals at the national, regional, and state level. With HCUPnet you have easy access to national statistics and trends and selected state statistics about hospital stays. HCUPnet guides you step-by-step to obtain the statistics you need. HCUPnet generates statistics using the Nationwide Inpatient Sample (NIS), the Kids' Inpatient Database (KID), and the State Inpatient Databases (SID) for those states that have agreed to participate. HCUPnet can be found at: http://www.ahrq.gov/data/hcup/hcupnet.htm.

Tools

AHRQ Quality Indicators (QIs) are clinical performance measures for use with readily available inpatient data. Methods and software for the AHRQ Quality Indicators can be downloaded from http://www.ahrq.gov/data/hcup/qinext.htm.

Clinical Classifications Software (CCS), formerly known as the Clinical Classifications for Health Policy Research (CCHPRs), are classification systems that group ICD-9-CM diagnoses and procedures into a limited number of clinically meaningful categories. Methods and software can be downloaded from http://www.ahrq.gov/data/hcup/ccs.htm.

Comorbidity Software assigns variables that identify comorbidities in hospital discharge records using ICD-9-CM diagnosis codes (International Classification of Diseases, Ninth Revision, Clinical Modification). Methods and software can be downloaded from http://www.ahrq.gov/data/hcup/comorbid.htm.

Publications

HCUP Research Notes report aggregate statistics and detailed analyses using HCUP data. To request copies, contact the AHRQ Publications Clearinghouse at (800) 358-9295 or send a postcard to: AHRQ Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907 or visit the AHRQ Home Page.

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For information on HCUP products:
Email: hcup@ahrq.gov
Phone: (301) 594-3075
Fax: (301) 594-2166

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DATA USE AGREEMENT FOR THE NATIONWIDE INPATIENT SAMPLE

This agreement must be signed by anyone seeking to use data in the Nationwide Inpatient Sample (NIS) maintained by the Center for Organization and Delivery Studies (CODS), Agency for Healthcare Research and Quality (AHRQ) before access to such data can be granted. All data maintained by CODS/ AHRQ is confidential or proprietary except data specified for restricted access public release, or data authorized by AHRQ and the original data source for re-release.

Under section 924(c) of the Public Health Service Act (42 U.S.C. 299c-3(c)), data that identifies individuals or establishments collected by the Agency for Healthcare Research and Quality (AHRQ) may be used only for the purpose for which they were collected. Data supplied to AHRQ under the auspices of HCUP were provided by the data sources only for research, analysis, and aggregate statistical reporting.

No identification of persons--Any effort to determine the identity of any person contained in the databases (including but not limited to patients, physicians, and other health care providers) or to use the information for any purpose other than for research, analysis, and aggregate statistical reporting would violate the conditions of this data use agreement and therefore the above-referenced AHRQ confidentiality statute. Furthermore, under the statute, no identifying information may be published or released in any way without the consent of the person who supplied the information or who can be identified by the information. AHRQ omits from the data set all direct personal identifiers, as well as characteristics that might lead to identification of persons. It may be possible in rare instances, through complex analysis and with outside information, to ascertain from the data sets the identity of particular persons. Considerable harm could ensue if this were done. By virtue of this agreement, the undersigned agrees that such attempts will be prohibited and that information which could identify individuals directly or by inference will not be released or published. Because of these restrictions, users of the data must agree that they will not attempt to contact individuals for the purpose of verifying information supplied in the HCUP databases. Any questions about the data must be referred to AHRQ only.

Use of Establishment identifiers--Section 924(c) of the Public Health Service Act (42 U.S.C. 299c-3(c)) also restricts the use of any information that allows the identification of establishments to the purpose for which the information was collected. Permission was obtained from the data sources (state data organizations, hospital associations, and data consortia) to use the identification of hospitals (when such identification appears in the data sets) for the purpose of conducting research only. Such research purpose includes linking institutional information from outside data sets for analysis and aggregate statistical reporting. Such purpose does *not* include the use of information in the data sets concerning individual establishments for commercial or competitive purposes involving those individual establishments, or to determine the rights, benefits, or privileges of establishments. Users of the data must not identify establishments directly or by inference in disseminated material. In addition, users of the data must not contact establishments for the purpose of verifying information supplied in the HCUP databases. Any questions about the data must be referred to AHRQ only.

The undersigned gives the following assurances with respect to the AHRQ data sets.

Χ I will not use nor permit others to use the data in these sets in any way except for research, analysis, and aggregate statistical reporting;

Χ I will require others in the organization (specified below) who use the data to sign this agreement (specifically acknowledging their agreement to abide by its terms) and will submit those signed agreements to AHRQ;

Χ I will ensure that the data are kept in a secured environment and that only authorized users have access to the data;

Χ I will not release nor permit others to release any information that identifies persons, directly or indirectly; I will not release information where the number of observations (i.e., discharge records) in any given cell of tabulated data is less than or equal to 10;

Χ I will not release nor permit others to release the data sets or any part of them to any person who is not a member of the organization (specified below), except with the approval of AHRQ;

Χ I will not attempt to link nor permit others to attempt to link the hospital stay records of persons in this data set with personally identifiable records from any other source;

(Revised 5/14/02)

X I will not attempt to use nor permit others to use the datasets to learn the identity of any person included in any set;

X I will not use nor permit others to use the data concerning individual establishments (1) for commercial or competitive purposes involving those individual establishments, (2) to determine the rights, benefits, or privileges of individual establishments nor (3) to report, through any medium, data that could identify, directly or by inference, individual establishments;

X When the identities of establishments are not provided on the data sets, I will not attempt to use nor permit others to use the data sets to learn the identity of any establishment in the data sets;

X I will not contact nor permit others to contact establishments or persons in the data sets to question, verify, or discuss data in the HCUP databases;

X I will indemnify, defend, and hold harmless the data sources and AHRQ from any or all claims and losses accruing to any person, organization, or other legal entity as a result of violation of this agreement. This provision applies only to the extent permitted by federal law and regulation (i.e., to the extent permitted by 31 United States Code Section 1341 (Subtitle II, Chapter 13, Subchapter III, "Limitations on Expending and Obligating Amounts."));

X I will make no statement nor permit others to make statements indicating or suggesting that interpretations drawn are those of data sources or AHRQ;

X I will acknowledge in all reports based on these data that the source of the data is the "Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality".

I understand that these assurances are collected for the United States Agency for Healthcare Research and Quality to require compliance with its statutory confidentiality requirement. My signature indicates my agreement to comply with the above-stated requirements with the knowledge that any violation of this statute is subject to a civil penalty of up to $10,000 under 42 U.S.C. 299c-3(d), and that deliberately making a false statement about this or any matter within the jurisdiction of any department or agency of the Federal Government violates 18 U.S.C. 1001 and is punishable by a fine of up to $10,000 or up to five years in prison. Violators of this agreement may also be subject to penalties under state confidentiality statutes that apply to these data for particular states.

Signed:_____ Date:_____

Print or Type Name:_____

Title:_____

Organization:_____

Address:_____

City: _____ State:_____ Zip code:_____

Phone Number:_____ Fax:_____ E-mail:_____

Note to Purchaser: Shipment of the data product will only be made to the person who signs this data use agreement.

(Revised 5/14/02)