HEALTHCARE COST AND UTILIZATION PROJECT — HCUP
A FEDERAL-STATE-INDUSTRY PARTNERSHIP IN HEALTH DATA
Sponsored by the Agency for Healthcare Research and Quality

OVERVIEW OF

THE HCUP NATIONWIDE INPATIENT SAMPLE (NIS) RELEASE 3, 1994

These pages provide only an introductory overview of the NIS package.
Full documentation is provided on the NIS Documentation CD-ROM.

- The NIS package has been updated for distribution through the HCUP Central Distributor.
- The NIS product is now stored on 2 instead of 6 CD-ROMs.
- Updated product information is available in the section labeled "NIS Product Update."
- Original product information is available in the section labeled "NIS 1994 Original Abstract and Introduction."

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NIS 1994 ORIGINAL ABSTRACT AND INTRODUCTION

Pages 1–7 of the original document are not included because the information was out of date. The NIS Product Update section includes the current information.

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

******* REMINDER *******

All users of the NIS must sign a data use agreement. The signed data use agreements must be kept on file by the organization that purchased the NIS data. †

Authorized users of HCUP data agree to the following limitations: ‡

- Cannot use the data for any purpose other than research or aggregate statistical reporting.
- Cannot re-release any data to unauthorized users.
- Cannot identify or attempt to identify any individual.
- Cannot link HCUP data to data from another source that identifies individuals.
- Cannot report information that could identify individual establishments.
- Cannot use the data concerning individual establishments for commercial or competitive purposes involving those establishments.
- Cannot use the data to determine rights, benefits, or privileges of individual establishments.
- Cannot identify or attempt to identify any establishment when its identity has been concealed on the database.
- Cannot contact establishments included in the data.
- Cannot attribute to data contributors any conclusions drawn from the data.
- Must acknowledge the "Healthcare Cost and Utilization Project, (HCUP)", as described in the Data Use Agreement, in reports.

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.

† A copy of the Data Use Agreement is included on the NIS Documentation CD-ROM and is included at the end of this section.

‡ Specific provisions are detailed in the Data Use Agreement for Nationwide Inpatient Sample.

HCUP CONTACT INFORMATION

Please submit signed data use agreements to HCUP at:

Agency for Healthcare Research and Quality
Healthcare Cost and Utilization Project (HCUP)
2101 E. Jefferson Street, Suite 605
Rockville, MD 20852

Phone: (301) 594-3075
Fax: (301) 594-2166

We would like to receive your feedback on the HCUP NIS data products.

Our E-mail address for user feedback and technical support is:

hcup@ahrq.gov

HCUP NATIONWIDE INPATIENT SAMPLE (NIS) PRODUCT UPDATE

This section includes the following information:

- Description of the updated NIS product structure,
- Correction to the 1993 Nationwide Inpatient Sample, Release 2,
- Correction to the 1988-1992 SPSS Load Programs,
- Warning about the SPSS Label Programs Provided with the 1988-1997 NIS, and
- Overview of the other HCUP products.

Updated NIS Product Structure

The Nationwide Inpatient Sample (NIS) product has been updated for distribution through the HCUP Central Distributor. The NIS product was originally distributed on many CD-ROMs. The information on the original CD-ROMs has been compressed and stored in self-extracting PKZIP files (*.exe) as described in the table below. An introduction to the NIS data files is provided in this binder in the section labeled "NIS 1994 Original Abstract and Introduction." Full documentation is provided on the NIS Documentation CD-ROM.

NIS Release	NIS Year	Internal CD_ROM Volume Label	CD #	Self-Extracting PKZIP Files
NIS, Release 1, 1988-1992 (Originally on 26 CDs, now stored on 6 CDs)	1988	NIS1988_DATA	1	NIS1988_QTR1.exe NIS1988_QTR2.exe NIS1988_QTR3.exe NIS1988_QTR4.exe NIS1988_SAMPLE.exe
	1989	NIS1989_DATA	2	NIS1989_QTR1.exe NIS1989_QTR2.exe NIS1989_QTR3.exe NIS1989_QTR4.exe NIS1989_SAMPLE.exe
	1990	NIS1990_DATA	3	NIS1990_QTR1.exe NIS1990_QTR2.exe NIS1990_QTR3.exe NIS1990_QTR4.exe NIS1990_SAMPLE.exe
	1991	NIS1991_DATA	4	NIS1991_QTR1.exe NIS1991_QTR2.exe NIS1991_QTR3.exe NIS1991_QTR4.exe NIS1991_SAMPLE.exe
	1992	NIS1992_DATA	5	NIS1992_QTR1.exe NIS1992_QTR2.exe NIS1992_QTR3.exe NIS1992_QTR4.exe NIS1992_SAMPLE.exe
	1988-92	NIS1988-1992_DOC	6	NIS1988-92_DOCS.exe

NIS Release	NIS Year	Internal CD_ROM Volume Label	CD #	Self-Extracting PKZIP Files
NIS, Release 2, 1993 (Originally on 6 CDs, now stored on 2 CDs)	1993	NIS1993_DATA	1	NIS1993_CD#1.exe NIS1993_CD#2.exe NIS1993_CD#3.exe NIS1993_CD#4.exe NIS1993_CD#5.exe
	1993	NIS1993_DOC	2	NIS1993_CD#6.exe
NIS, Release 3, 1994 (Originally on 6 CDs, now stored on 2 CDs)	1994	NIS1994_DATA	1	NIS1994_CD#1.exe NIS1994_CD#2.exe NIS1994_CD#3.exe NIS1994_CD#4.exe NIS1994_CD#5.exe
	1994	NIS1994_DOC	2	NIS1994_CD#6.exe
NIS, Release 4, 1995 (Originally on 6 CDs, now stored on 2 CDs)	1995	NIS1995_DATA	1	NIS1995_CD#1.exe NIS1995_CD#2.exe NIS1995_CD#3.exe NIS1995_CD#4.exe NIS1995_CD#5.exe
	1995	NIS1995_DOC	2	NIS1995_CD#6.exe
NIS, Release 5, 1996 (Originally on 6 CDs, now stored on 2 CDs)	1996	NIS1996_DATA	1	NIS1996_CD#1.exe NIS1996_CD#2.exe NIS1996_CD#3.exe NIS1996_CD#4.exe NIS1996_CD#5.exe
	1996	NIS1996_DOC	2	NIS1996_CD#6.exe
NIS, Release 6, 1997 (Originally on 6 CDs, now stored on 2 CDs)	1997	NIS1997_DATA	1	NIS1997_CD#1.exe NIS1997_CD#2.exe NIS1997_CD#3.exe NIS1997_CD#4.exe NIS1997_CD#5.exe
	1997	NIS1997_DOC	2	NIS1997_CD#6.exe

In order to load NIS data onto your PC, you will need at least 500 megabytes of space available for the compressed files and at least 3.1 gigabytes of space available for the decompressed files. To decompress the self-extracting PKZIP compressed files (*.exe), 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 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.

Correction to the 1993 Nationwide Inpatient Sample

A programming error caused a problem with some of the diagnosis codes for the discharge abstracts from New Jersey hospitals in the 1993 Nationwide Inpatient Sample (NIS), Release 2. Some of the hospitals' data have three- or four-digit diagnoses with trailing zeros that render otherwise valid codes invalid. A SAS program to fix the principal diagnosis on the NIS Core A file and the complete diagnosis vector on the diagnosis file (DX) is available on the AHRQ Web site http://www.ahrq.gov/data/hcup/njnisfix.htm.

Correction to the 1988-1992 SPSS Load Programs

Included on the Documentation CD for NIS, Release 1, 1988-1992, are programs to load the ASCII data files into SPSS. These programs have an error in the SPSS code and need the following corrections.

Three changes must be made to the 1988-1992 SPSS syntax files (LOADIP.ASC and LOADWT.ASC) in the SPSS Syntax Editor prior to loading them. Once changed, the two programs correctly load the 1988-1992 NIS data into SPSS.

1. Change the programs' extensions from LOADIP.ASC and LOADWT.ASC to LOADIP.SPS and LOADWT.SPS.

2. Perform a Find and Replace in the SPSS Syntax editor, change all occurrences of “$SYSMIS” to “SYSMIS”.

3. Replace the initial command line in each program from

```
DATA LIST FILE "** file name**" FIXED /
```

To

```
DATA LIST FILE='Drive:\Path\Directory\Filename.ASC' FIXED /
```

To save time, you may add the following command line to save the data file at the end of the load programs (right after the recodes.) Saving the data file by doing a (File, Save As) after creating the file doubles the time it takes to create the file.

```
SAVE OUTFILE='Drive:\Path\Directory\Filename.SAV' /COMPRESSED.
```

Beginning with the NIS, Release 2, 1993, the SPSS load programs provided on the Documentation CD are correct.

SPSS Label Programs Provided with the 1988-1997 NIS

Included on the Documentation CD for the 1988-1997 NIS is a program (VLABEL) to label the data elements. This program contains errors and should not be used. Value labels in SPSS can be entered into the data interactively via the data editor or entered and contained in pivot tables.

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 through 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

An online application is available on the HCUP section of the AHRQ Website at http://www.ahrq.gov/data/hcup/.

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.

For information on HCUP products:

Email: hcup@ahrq.gov

Phone: (301) 594-3075

Fax: (301) 594-2166

DATA USE AGREEMENT FOR THE NATIONWIDE INPATIENT SAMPLE

The most current Data Use Agreement for the Nationwide Inpatient Sample (NIS) is available on the HCUP User Support Website (www.hcup-us.ahrq.gov) under NIS Database Documentation.

The Agency for Health Care Policy and Research and the staff of the Healthcare Cost and Utilization Project (HCUP-3) thank you for purchasing the HCUP-3 Nationwide Inpatient Sample (NIS), Release 3, on CD-ROM.

HCUP-3 Nationwide Inpatient Sample (NIS), Release 3

ABSTRACT

The Nationwide Inpatient Sample (NIS), Release 3, is part of the Healthcare Cost and Utilization Project (HCUP-3), sponsored by the Agency for Health Care Policy and Research.

NIS, Release 3 approximates a 20 percent sample of U.S. community hospitals for 1994. It is based on a stratified probability sample of hospitals, with sampling probabilities proportional to the number of U.S. community hospitals in each stratum.

NIS, Release 3 is drawn from 17 states and contains information on all inpatient stays from over 900 hospitals, totaling about 6.4 million records in 1994. Inpatient stay records 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 for hospitals in Kansas and South Carolina).

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

INTRODUCTION TO THE HCUP-3 NATIONWIDE INPATIENT SAMPLE (NIS)

OVERVIEW OF NIS DATA

Three releases of NIS data are currently available.

Table 1. NIS Releases

	Data from	Media/format options	Structure of Releases
Release 1	• 1988-1992 • 11 states	On CD-ROM, in ASCII format	5 years of data in a 26-CD set 4 CDs per year (one quarter per disk) Two 10% Subsamples of discharges NIS Documentation and NIS Tools
		On magnetic tape, in EBCDIC or SAS transport format	Each year sold separately NIS Documentation and NIS Tools
Release 2	• 1993 • 17 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 NIS Documentation and NIS Tools
Release 3	• 1994 • 17 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 NIS Documentation and NIS Tools

Each release of NIS includes:

- 5-6 million inpatient records per year
- 800-900 hospitals per year
- Two 10% Subsamples of discharges from all NIS hospitals
- Hospital Weights files to produce national estimates and to link the NIS to data from the American Hospital Association Annual Survey of Hospitals

NIS, Release 3 includes:

- Data in ASCII format on CD-ROM
- NIS Documentation and Tools, also on CD-ROM
- Hospital-level Casemix Counts: These small data files are useful for generating estimates of discharges, length of stay, and charges, by diagnosis and procedure categories.

Table 2 summarizes the contents of each CD-ROM in NIS, Release 3.

Table 2. NIS, Release 3, 1994 on CD-ROM – 6-CD Set

CD #1.

1994, Inpatient Stay Core File A, includes most commonly used data elements:

- Patient age, sex, race
- Expected primary source of payment
- Discharge status
- Discharge quarter
- Length of stay (edited)
- Total charges (edited)
- Total number of diagnoses and procedures
- Discharge weight
- Linkages to other core files and to Hospital Weights file
- Principal diagnosis and procedure (with validity indicators)
- Classifications based on diagnoses and procedures (CCHPR, DRGs, MDC)

1994, Hospital Weights File, includes:

- Hospital name, location, and linkages to core files, AHA Survey, and Area Resource File
- Weights and other variables required to calculate weighted estimates and variances

CD #2.

1994, Inpatient Stay Core File B, includes less commonly used data elements:

- Admission source
- Admission type
- Neonatal/maternal indicator
- Physician identifiers (encrypted)
- Length of stay (unedited)
- Total charges (unedited)
- Day of principal procedure
- Linkages to other core files

CD #3.

1994, Inpatient Stay Core File C, includes less commonly used data elements:

- Admission day of week
- Admission month
- Data source identifiers (state and hospital)
- Expected sources of payment
- Linkages to other core files and Area Resource File

1994, Inpatient Stay Core File PR, normalized procedure file, includes:

- All procedures, validity indicators, and linkages to other core files

CD #4.

1994, Inpatient Stay Core File DX, normalized diagnosis file, includes:

- All diagnoses, validity indicators, and linkages to other core files

CD #5.

Two 10% Subsamples

- All data elements, including discharge weight, adjusted for subsampling

CD #6.

1994, Hospital Weights File (see CD #1)
1994, Hospital-level Casemix Counts by DRG10, DCCHPR1, PCCHPR1
NIS Documentation, covers data for 1988-1994
NIS Tools

NIS Contents

Table 3 summarizes the data sources, number of hospitals, and number of inpatient stays in NIS data.

Table 3. HCUP-3 NIS Contents

Calendar year	Data sources	Number of hospitals	Number of inpatient stays
NIS Release 1			
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	882	6,110,064
1990	AZ CA CO FL IL IA MA NJ PA WA WI	871	6,268,515
1991	AZ CA CO FL IL IA MA NJ PA WA WI	859	6,156,188
1992	AZ CA CO FL IL IA MA NJ PA WA WI	856	6,195,744
NIS Release 2			
1993	AZ CA CO CT FL IL IA KS MD MA NJ NY OR PA SC WA WI	913	6,538,976
NIS Release 3			
1994	AZ CA CO CT FL IL IA KS MD MA NJ NY OR PA SC WA WI	904	6,385,011

NIS Documentation

- in *.pdf (*portable document format*) files on CD-ROM. Files with the *.pdf extension can be viewed, searched, and printed using the *Adobe™ Acrobat™ Reader* (see *Getting Started*)
- in printed copy for magnetic tape users (Release 1 only)

NIS Tools, developed to assist SAS and SPSS users, are available in ASCII text files:

- on CD-ROM
- on diskette for magnetic tape users (Release 1 only)
- SAS and SPSS tools:
  - source code to load EBCDIC/ASCII data into SAS and SPSS formats
  - SAS and SPSS source code to create value labels
  - source code to reassemble DX and PR normalized files into original format
- Record layouts for:
  - Inpatient Stay files
  - Hospital Weights file
  - Casemix Counts files
- Labels for Clinical Classifications for Health Policy Research, version 2
- Labels for Diagnosis Related Groups, multiple versions

GETTING STARTED

DOCSUMM.pdf

DOCSUMM.pdf provides a detailed summary of the complete contents of NIS Documentation and NIS Tools. DOCSUMM.pdf is located on CD #6 and can be read or printed using the *Adobe™ Acrobat™ Reader* for your computer platform.

Adobe™ Acrobat™ Reader

NIS Documentation is distributed as portable document format (*.pdf) files along with the *Adobe™ Acrobat™ Reader* software, which must be installed on your computer to access NIS Documentation. For information on installing and running the *Adobe™ Acrobat™ Reader*, please read the ASCII text file, README, included on the Documentation CD #6.

Adobe™ Acrobat™ gives you electronic access to documents in their original form, independent of computer platform or application software. With the *Adobe™ Acrobat™ Reader* you can browse, view, navigate through, and print all or part of any *.pdf file. From this format, each user can create the printed copies that he or she needs, whenever needed, thereby reducing overall reproduction and distribution costs.

The Reader provided is for IBM-compatible microcomputers running Microsoft Windows. More information and Reader software for other platforms (DOS, Macintosh, and Sun Systems) may be obtained from the Adobe Home Page (http://www.adobe.com/) or the Adobe Bulletin Board (BBS=1-206-623-6984). For further assistance in installing and running the *Adobe™ Acrobat™ Reader* on your computer platform, please consult your local support personnel.