

Quick Start Guide

The 2017 National Inpatient Sample (NIS)

The 2017 NIS Contains ICD-10-CM/PCS Codes

Similar to data year 2016, the 2017 NIS contains a full calendar year of International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) data. Data elements derived from AHRQ software tools are not included. For users interested in applying the AHRQ software tools to the ICD-10-CM/PCS coded data, the AHRQ software tools are available for download on the [HCUP Tools & Software section](#) of the HCUP User Support (HCUP-US) website. The *Tools Loading* tutorial is available to users interested in applying the AHRQ software tools at www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp.

Trends based on diagnoses or procedures will be affected for analyses that span the October 1, 2015 implementation date for ICD-10-CM/PCS. For more information, please see the [Introduction to the National Inpatient Sample \(NIS\) 2017](#) and the [ICD-10-CM/PCS Resources](#) page on the HCUP User Support (HCUP-US) website, which summarizes key issues for researchers using HCUP and other administrative databases that include ICD-9-CM and ICD-10-CM/PCS coding. The web page provides general guidance and forewarning to users analyzing outcomes that may be affected by the transition. See the [NIS Changes Beginning Data Year 2016](#) document for more information.

The NIS Files

The HCUP National Inpatient Sample (NIS) Database is distributed as fixed-width ASCII-formatted data files delivered via secure digital download from the [Online HCUP Central Distributor](#). The files are compressed and encrypted with SecureZIP® from PKWARE. **Users will need the password provided by the HCUP Central Distributor.**

The NIS product is downloaded in a single zipped file for each year which contains several data-related files and accompanying documentation. For 2017, the three data-related files include:

- 1) Core File (NIS_2017_Core.zip)
- 2) Hospital File (NIS_2017_Hospital.zip)
- 3) Severity Measures File (NIS_2017_Severity.zip).

To load and analyze the NIS data on a computer, you will need the following:

- A hard drive with at least 15 gigabytes of space available
- A third-party zip utility such as ZIP Reader, SecureZIP®, WinZip®, or Stuffit Expander®
- SAS®, SPSS®, Stata® or similar analysis software.

Decompressing the NIS Files

To extract the data files from the compressed download file, follow these steps:

- 1) Create a directory for the NIS on your hard drive.
- 2) Unzip the compressed NIS product file into the new directory using a third-party zip utility. This will create four compressed, encrypted data-related files in the new directory. You will be prompted to enter the encryption password (sent separately by email) to decrypt the file.

Please note that attempts to unzip encrypted files using the built-in zip utility in Windows® (Windows Explorer) or Macintosh® (Archive Utility) will produce an error message warning of incorrect password and/or file or folder errors. The solution is to use a third-party zip utility.

Third-party zip utilities are available from the following reputable vendors on their official websites.

- ZIP Reader (Windows) (free download offered by the PKWARE corporation)
- SecureZIP® for Mac or Windows (free evaluation and licensed/fee software offered by the PKWARE corporation)
- WinZip (Windows) (evaluation and fee versions offered by the WinZip corporation)
- Stuffit Expander® (Mac) (free evaluation and licensed/fee software offered by Smith Micro corporation)

- 3) Unzip each of the compressed, encrypted data-related files using the same password and third-party zip utility method. This will place the data-related ASCII files in this same directory by default.

Downloading and Running the Load Programs

Programs to load the data into SAS, SPSS, or Stata, are available on the HCUP-US website. The SAS and SPSS programs are available beginning with 1997. The Stata programs begin with 2004. To download and run the load programs, follow these steps:

- 1) Go to the NIS Database Documentation page on HCUP-US at www.hcup-us.ahrq.gov/db/nation/nis/nisdbdocumentation.jsp.
- 2) Go to the “File Specifications and Load Programs” section on this page.
- 3) Click on “Nationwide SAS Load Programs”, “Nationwide SPSS Load Programs”, or “Nationwide Stata Load Programs” to go to the corresponding Load Programs page.
- 4) Select the data year and the database (“NIS”) from the drop-down lists on this page. Or you may select “NIS Load All Years” to obtain a zipped file with all load programs for multiple years at once.
- 5) Select and save the load programs you need. The **load programs are specific to the data year and data-related file**. For example, the load program for the 2017 NIS Core file is found under the link “SAS NIS 2017 Core File” in the list generated by selecting “2017” and “NIS.” Save the load programs into the same directory as the NIS ASCII files on your computer.
- 6) Edit and run the load programs as appropriate for your computing environment to create the analysis files. For example, modify the directory paths to point to the location of your input and output files.

NIS Documentation

Comprehensive documentation for the NIS files is available on the HCUP-US website (www.hcup-us.ahrq.gov/db/nation/nis/nisdbdocumentation.jsp). Refer to these resources to understand the structure and content of the NIS and to aid in using the database. For example, the Introduction to the NIS includes information on how to use the NIS data and discharge weights for analysis. The HCUP Methods Series Report [Using the HCUP National Inpatient Sample to Estimate Trends](#) includes details regarding revised weights that account for design changes and other recommendations for trends analysis.

HCUP Online Tutorials

For additional assistance, AHRQ has created the HCUP Online Tutorial Series, a series of free, interactive courses that provide information on using HCUP data and tools and training on technical methods for conducting research with HCUP data. Topics include an [HCUP Overview Course](#) and these tutorials:

- The [Load and Check HCUP Data](#) tutorial provides instructions on how to unzip (decompress) HCUP data, save it on your computer, and load the data into a standard statistical software package. This tutorial also describes how to verify that the data have loaded correctly.
- The [HCUP Sampling Design](#) tutorial is designed to help users learn how to account for sample design in their work with HCUP nationwide databases.
- The [Producing National HCUP Estimates](#) tutorial is designed to help users understand how three of the nationwide databases – the NIS, NEDS, and KID – can be used to produce national and regional estimates.
- The [Calculating Standard Errors](#) tutorial shows how to accurately determine the precision of the estimates produced from the HCUP nationwide databases. Users will learn two methods for calculating standard errors for estimates produced from the HCUP nationwide databases.
- The [Multi-year Analysis](#) tutorial presents solutions that may be necessary when conducting analyses that span multiple years of HCUP data.
- [The HCUP Tools Loading Tutorial](#) provides instructions on how to unzip (decompress) the HCUP Software Tools for ICD-10-CM/PCS, save it on the computer, and load the Tool into a standard statistical software package for application to HCUP or other administrative databases. Users will also learn how to verify that the Tool has loaded correctly. Information about the transition to ICD-10-CM/PCS is also included in this tutorial. While the instructions are specific to the Clinical Classifications Software (CCS) for ICD-10-CM/PCS, the steps are broadly applicable to other HCUP Tools.

New tutorials are added periodically. The Online Tutorial Series is located on the HCUP-US website at www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp.

Technical Assistance

For issues related to unzipping, loading, and reading the files, including questions about passwords, contact the [HCUP Central Distributor](#):

- E-mail: HCUPDistributor@ahrq.gov
- Phone: 866-556-HCUP (4287) (toll free)

Information about the content of the HCUP databases and [Requirements for Publishing with HCUP Data](#) is available on the HCUP-US website (www.hcup-us.ahrq.gov). For questions about using the HCUP databases, software tools, supplemental files, and other HCUP products, or about data use restrictions and publishing with the data, please review the [HCUP Frequently Asked Questions](#) or contact HCUP User Support:

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

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