



**HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)  
NATIONWIDE READMISSIONS DATABASE: CHANGE IN STRUCTURE  
DUE TO ICD-10-CM/PCS BEGINNING WITH 2016 DATA**

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## INTRODUCTION

This document provides an overview of how the Healthcare Cost and Utilization Project (HCUP) Nationwide Readmissions Database (NRD) has changed in file structure (as compared with the 2015 NRD) and resumes a file structure that is similar to data years prior to 2015.

The NRD is a database of all-payer hospital inpatient stays that can be used to generate national estimates of readmissions. Outcomes of interest include national readmission rates, reasons for returning to the hospital for care, and the hospital costs for discharges with and without readmissions.

As a result of the introduction of ICD-10-CM/PCS<sup>1</sup> on October 1, 2015 (quarter 4 of 2015 and the start of fiscal year 2016), the United States transitioned from using ICD-9-CM to ICD-10-CM/PCS code sets for reporting clinical diagnoses and inpatient procedures. Beginning with the quarter 4 of 2015, the names of diagnosis- and procedure-related data elements in the NRD start with the prefix "I10\_" to identify the coding scheme. The coding change in 2015 also is signaled by a change in the NRD file structure:

- The 2015 NRD included nine months of data with ICD-9-CM coding and three months of data with ICD-10-CM/PCS coding because of the mid-year change in diagnosis and procedure coding. The 2015 NRD files had a very different structure than other years and were split into two parts based on the diagnosis and procedure coding system.
- Beginning with data year 2016, the NRD is an annual, calendar year file with diagnosis and procedure codes reported using only the ICD-10-CM/PCS coding system. Therefore, the file structure is similar to the file structure of the NRD in data years prior to 2015.

Data elements derived from AHRQ software tools which are based on ICD-10-CM/PCS diagnosis and/or procedure codes are *not available on the NRD starting in quarter 4 of 2015*. 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](http://www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp).

This document outlines the revised file structure of the HCUP NRD beginning with data year 2016 and provides resources to aid HCUP data users in using these files and data elements based on ICD-10-CM/PCS coding.

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<sup>1</sup> ICD-9-CM: International Classification of Diseases, Ninth Revision, Clinical Modification;  
ICD-10-CM/PCS: International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System

## REVISED FILE STRUCTURE OF THE NATIONWIDE READMISSIONS DATABASE, BEGINNING WITH DATA YEAR 2016

In contrast to the 2015 NRD, the NRD beginning with data year 2016 includes two discharge-level files and one-hospital level file:

- **Discharge-level Files**
  - **Core File** is a single file containing commonly used data elements (e.g. age, expected primary payer, ICD-10-CM/PCS codes, total charges).
    - Beginning with data year 2017, separate reporting of external cause codes is discontinued (formerly HCUP data element I10\_ECAUSEn). Instead, external cause codes have been added to the end of the ICD-10-CM diagnosis array (I10\_DXn). The size of the diagnosis array was increased from 35 to 40 codes. Also, the size of the ICD-10-PCS array (I10\_PRn) was increased from 15 to 25 codes.
  - **Severity File** is a single file containing additional data elements to aid in identifying the severity of the condition for a specific discharge.
  - Beginning with data year 2016, the NRD does not include a **Diagnosis and Procedure Groups File**.
- **Hospital-level File:** Contains information on hospital characteristics.

A complete list of the discontinued data elements in the NRD beginning with data year 2016 is available in Appendix A.

### RESOURCES FOR USING ADMINISTRATIVE DATA WITH ICD-10-CM/PCS DIAGNOSIS AND PROCEDURE CODES

The HCUP-US website has a section on [ICD-10-CM/PCS Resources](#) that summarizes key issues for researchers using HCUP and other administrative databases that include ICD-10-CM/PCS coding.

If you are unfamiliar with ICD-10-CM/PCS coding, please refer to the following two documents available on the web page:

- [A brief introduction to the ICD-10-CM/PCS coding system.](#)
- HCUP Methods Series Report on the [Impact of ICD-10-CM/PCS on Research Using Administrative Databases.](#)

If you are considering using the NRD to examine clinical conditions that will be defined using both ICD-9-CM and ICD-10-CM/PCS coding, please refer to the following important resource:

- [HCUP recommendations for reporting trends using ICD-9-CM and ICD-10-CM/PCS data.](#)

These recommendations apply to calendar year 2015 data (which includes both ICD-9-CM and ICD-10-CM/PCS codes), as well as reporting trends that span the October 1, 2015 transition date (before and after the introduction of ICD10-CM/PCS).

The HCUP [ICD-10-CM/PCS Resources](#) web page also includes the following short reports with new documents added periodically:

- Examination of trends between ICD-9-CM and ICD-10-CM/PCS for key data elements such as number of diagnoses/procedures and Clinical Classification Software categories.
- Examination of coding for opioid use under ICD-9-CM and ICD-10-CM/PCS.
- Other Federal and State web resources with information on ICD-10-CM/PCS.

For users interested in applying the AHRQ software tools to the NRD that include ICD-10-CM/PCS-coded data, the AHRQ software tools are available on the [Tools & Software](#) section of the HCUP-US website. Additionally, users may wish to review the [HCUP Tools Loading Tutorial](#), which provides instructions on how to unzip (decompress) the AHRQ 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.

**APPENDIX A: COMPLETE LIST OF DISCONTINUED DATA ELEMENTS BEGINNING WITH THE 2016 NRD**

Appendix A includes a complete list of discontinued data elements beginning with the 2016 NRD.

<b>Data Element Name</b>	<b>Description</b>	<b>NRD File</b>	<b>Year Discontinued</b>
I10_ECausen <sup>a</sup>	External cause of morbidity code n	Core	2017
I10_NECause <sup>a</sup>	Number of ICD-10-CM external cause of morbidity codes on this record	Core	2017

<sup>a</sup> Beginning with the 2017 NRD, separate reporting of external cause codes is discontinued (formerly HCUP data element I10\_ECAUSEn). External cause codes have been added to the end of the ICD-10-CM diagnosis array (I10\_DXn).

Note: Data elements derived from AHRQ software tools which are based on ICD-10-CM/PCS diagnosis and/or procedure codes are *not available on the NRD starting in quarter 4 of 2015*.