



**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 beginning with data year 2016.

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.

Beginning in data year 2016, the NRD includes diagnosis and procedure codes reported using only the International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS). The names of diagnosis- and procedure-related data elements under the ICD-10-CM/PCS coding system begin with the prefix “I10\_” to identify the coding scheme. For information on changes to the NRD in data year 2015, refer to the separate document, [2015 Healthcare Cost and Utilization Project \(HCUP\) Nationwide Readmissions Database: Change in Structure and Data Elements Caused by Transition to ICD-10-CM/PCS](#).

## REVISED FILE STRUCTURE OF THE NRD, BEGINNING WITH DATA YEAR 2016

Similar to the file structure of the NRD in data year 2014 and prior years, the NRD beginning with data year 2016 is an annual, calendar year file. There are three 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, discharge status, ICD-10-CM/PCS codes, total charges).
- **Severity File** is a single file containing additional data elements to aid in identifying the severity of the condition for a specific discharge.
- **Diagnosis and Procedure Groups File** is a single file containing additional information on the ICD-10-CM diagnoses and ICD-10-PCS procedures created by the HCUP software tools.
  - For data years 2016–2017, this file was not available in the NRD. Data elements derived from the ICD-10-CM/PCS HCUP software tools are not included in the NRD because they were still in development and testing.
  - Beginning with data year 2018, this file is available in the NRD and includes data elements derived from the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses.
  - Beginning with data year 2019, data elements derived from the Elixhauser Comorbidity Software Refined for ICD-10-CM, the CCSR for ICD-10-PCS procedures, and Procedure Classes Refined for ICD-10-CM are also available in this file.

## Hospital-level file

- **Hospital File** is a single file containing information on hospital characteristics.

Users interested in applying HCUP software tools to the NRD for data years including ICD-10-CM/PCS-coded data to produce data elements currently unavailable in the database files may do so by downloading the respective tool(s) from the [Research Tools](#) section of the HCUP User Support (HCUP-US) website. Additionally, users may wish to review the [HCUP Software Tools Tutorial](#), which provides instructions on how to apply the HCUP software tools to HCUP or other administrative databases.

A complete list of data element changes 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 an [ICD-10-CM/PCS Resources](#) web page 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:

- [Brief Introduction to ICD-10-CM/PCS Codes](#)
- HCUP Methods Series Report #2016-02: [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 International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM/PCS coding, please refer to the following important resource:

- [Healthcare Cost and Utilization Project \(HCUP\) 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 to reporting trends that span the October 1, 2015, transition date (before and after the introduction of ICD-10-CM/PCS).

The HCUP [ICD-10-CM/PCS Resources](#) web page also includes short reports on specific topics related to the ICD-10-CM/PCS transition.

## APPENDIX A: COMPLETE LIST OF DATA ELEMENT CHANGES BEGINNING WITH THE 2016 NRD

This appendix includes a complete list of data element changes beginning with the 2016 Nationwide Readmissions Database (NRD). Table A1 lists discontinued data elements, and Table A2 lists newly added data elements.

**Table A1. Discontinued Data Elements**

Data Element Name	Description	NRD File	Year Discontinued
DXVER	Diagnosis codes ICD version indicator	Core	2018
I10_ECAUSE <sup>a</sup>	ICD-10-CM 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
PRVER	Procedure codes ICD version indicator	Core	2018

Abbreviations: HCUP, Healthcare Cost and Utilization Project; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; NRD, Nationwide Readmissions Database.

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

**Table A2. Newly Added Data Elements**

Data Element Name	Description	NRD File	Year Added
CMR_aaa <sup>b</sup>	Comorbidity measures (aaa) identified by the AHRQ Elixhauser Comorbidity Software Refined for ICD-10-CM diagnosis codes	Diagnosis and Procedure Groups	2019
CMR_VERSION	Version of the Elixhauser Comorbidity Measure Refined for ICD-10-CM	Diagnosis and Procedure Groups	2019
DXCCSR_aaannn <sup>c</sup>	Indication that at least one ICD-10-CM diagnosis on the record is included in CCSR aaannn	Diagnosis and Procedure Groups	2018
DXCCSR_DEFAULT_DX1	Default CCSR for principal diagnosis	Diagnosis and Procedure Groups	2018
DXCCSR_VERSION	Version of CCSR for ICD-10-CM diagnoses	Diagnosis and Procedure Groups	2018
I10_BIRTH	ICD-10-CM birth indicator	Core	2019
I10_DELIVERY	ICD-10-CM delivery indicator	Core	2019
I10_INJURY	Injury ICD-10-CM diagnosis reported on record	Core	2019
I10_MULTINJURY	Multiple ICD-10-CM injuries reported on record	Core	2019
I10_SERVICELINE	ICD-10-CM/PCS hospital service line indicator	Core	2019
PCLASS <sup>n</sup> <sup>d</sup>	Procedure Classes Refined for ICD-10-PCS procedures	Diagnosis and Procedure Groups	2019
PCLASS_ORPROC	ICD-10-PCS major operating room procedure indicator	Core	2019
PCLASS_VERSION	Version of the Procedure Classes Refined for ICD-10-PCS procedures	Diagnosis and Procedure Groups	2019

<b>Data Element Name</b>	<b>Description</b>	<b>NRD File</b>	<b>Year Added</b>
PRCCSR_aaannn <sup>e</sup>	Indication that at least one ICD-10-PCS procedure code on the record is included in CCSR aaannn	Diagnosis and Procedure Groups	2019
PRCCSR_VERSION	Version of the CCSR for ICD-10-PCS procedures	Diagnosis and Procedure Groups	2019

Abbreviations: AHRQ, Agency for Healthcare Research and Quality; CCSR, Clinical Classifications Software Refined; 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; NRD, Nationwide Readmissions Database.

<sup>b</sup> Where aaa denotes the specific comorbidity measure.

<sup>c</sup> Where aaa denotes the body system and nnn denotes the CCSR number within the body system.

<sup>d</sup> PCLASSn was also available on the NRD through quarter 3 of data year 2015 and was specific to the coding of ICD-9-CM procedures.

<sup>e</sup> Where aaa denotes the clinical domain and nnn denotes the CCSR number within the clinical domain.