



**HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)
NATIONWIDE EMERGENCY DEPARTMENT SAMPLE (NEDS):
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 Emergency Department Sample (NEDS) has changed in file structure beginning with data year 2016.

The NEDS was designed to produce national and regional estimates about emergency department (ED) visits across the country. Information includes geographic characteristics, hospital characteristics, patient characteristics, and the nature of visits (e.g., common diagnoses for ED visits). The NEDS was constructed using the HCUP State Emergency Department Databases (SEDD) and the State Inpatient Databases (SID). The SEDD capture discharge information on ED visits that do not result in an admission (i.e., treat-and-release visits and transfers to another hospital). The SID contain information on patients initially seen in the ED and then admitted to the same hospital.

Beginning in data year 2016, the NEDS 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 the 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 NEDS in data year 2015, refer to the document [2015 Healthcare Cost and Utilization Project \(HCUP\) Nationwide Emergency Department Sample: Change in Structure and Data Elements Caused by Transition to ICD-10-CM/PCS](#).

REVISED FILE STRUCTURE OF THE NEDS BEGINNING WITH DATA YEAR 2016

Similar to the file structure of the NEDS in data year 2014 and prior years, the NEDS beginning with data year 2016 is an annual, calendar year file. There are four 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 diagnosis codes, total charges for ED services).
- **Supplemental ED File** is a single file containing data elements specific to ED visits that do not result in an admission to the same hospital.
- **Supplemental Inpatient File** is a single file containing data elements specific to ED visits that result in an admission to the same hospital.
- **Diagnosis and Procedure Groups File** is a single file containing additional information on the ICD-10-CM diagnoses and ICD-10-PCS procedures, that is generally derived from the Agency for Healthcare Research and Quality (AHRQ) software tools.
 - Beginning with data year 2018, this file is available in the NEDS and includes the 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-PCS are also available in this file.

Hospital-level file

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

Users interested in applying AHRQ software tools to the NEDS 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 [HCUP Tools & Software](#) 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 AHRQ software tools to HCUP or other administrative databases.

A complete list of data element changes in the NEDS 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](#) section 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 NEDS 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 ICD10-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 NEDS

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

Table A1. Discontinued Data Elements

Data Element Name	Description	NEDS File	Year Discontinued
DXVER	Diagnosis codes ICD version indicator	Core	2018
I10_ECAUSE ^a	ICD-10-CM external cause of morbidity code n	Core	2017
I10_NECAUSE ^a	Number of ICD-10-CM external cause of morbidity codes on this record	Core	2017
PRVER	Procedure codes ICD version indicator	Supplemental Inpatient	2018

Abbreviations: HCUP, Healthcare Cost and Utilization Project; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; NEDS, Nationwide Emergency Department Sample.

^a Beginning with the 2017 NEDS, separate reporting of external cause codes is discontinued (formerly HCUP data element I10_ECAUSE^a). External cause codes have been added to the end of the ICD-10-CM diagnosis array (I10_DXⁿ).

Table A2. Newly Added Data Elements

Data Element Name	Description	NEDS File	Year Added
CMR_aaa ^b	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 ^c	Indicator 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 (inpatient data) and the first-listed diagnosis (outpatient data)	Diagnosis and Procedure Groups	2018
DXCCSR_VERSION	Version of CCSR for ICD-10-CM diagnoses	Diagnosis and Procedure Groups	2018
I10_INJURY	Injury ICD-10-CM diagnosis reported on record	Core	2017

Data Element Name	Description	NEDS File	Year Added
I10_ Injury mechanism and intent indicators	ICD-10-CM injury and mechanism and intent indicators: injury by cut, drown, fall, fire, firearm, machinery, motor vehicle traffic, nature, overexertion, poison, struck, suffocation; and intent by assault, self-harm, and unintentional	Core	2018
I10_MULTINJURY	Multiple ICD-10-CM injuries reported on record	Core	2017
PCLASSn	Procedure Classes Refined for ICD-10-PCS procedures	Supplemental IP	2019
PCLASS_VERSION	Version of the Procedure Classes Refined for ICD-10-PCS procedures	Supplemental IP	2019
PRCCSR_aaannn ^d	Indication that at least one ICD-10-PCS procedure code on the record is included in CCSR aaannn	Supplemental IP	2019
PRCCSR_VERSION	Version of the CCSR for ICD-10-PCS procedures	Supplemental IP	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; NEDS, Nationwide Emergency Department Sample.

^b Where aaa denotes the specific comorbidity measure.

^c Where aaa denotes the body system and nnn denotes the CCSR number within the body system.

^d Where aaa denotes the clinical domain and nnn denotes the CCSR number within the clinical domain.