2016 HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)
NATIONWIDE EMERGENCY DEPARTMENT SAMPLE:
CHANGE IN STRUCTURE DUE TO ICD-10-CM/PCS

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INTRODUCTION

This document provides an overview of how the Healthcare Cost and Utilization Project (HCUP) 2016 Nationwide Emergency Department Sample (NEDS) has changed in file structure (as compared with the 2015 NEDS) and resumes a format similar to those prior to 2015.

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.

As a result of the introduction of ICD-10-CM/PCS[1] on October 1, 2015 (at 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 2015 NEDS, the names of diagnosis- and procedure-related data elements under ICD-10-CM/PCS have been changed to identify the coding scheme. Because of the change in diagnosis and procedure coding, the 2015 NEDS included nine months of data with ICD-9-CM coding and three months of data with ICD-10-CM/PCS coding.

In contrast, the 2016 NEDS 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 of the 2016 NEDS is similar to the file structure of the NEDS in data years prior to 2015 with one exception: Data elements derived from AHRQ software tools are not available in the 2016 NEDS because the ICD-10-CM/PCS versions of these tools are still under development. For users interested in applying the AHRQ software tools to the ICD-10-CM/PCS data in the 2016 NEDS, beta versions of the AHRQ software tools are available for download on the HCUP Tools & Software section of the HCUP User Support (HCUP-US) Web site. A tutorial is available to users interested in applying the AHRQ software tools to the 2016 NEDS at www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp.

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

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[1] 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 2016 NATIONWIDE EMERGENCY DEPARTMENT SAMPLE

The 2016 NEDS includes three discharge-level files and one-hospital level file:

- **Discharge-level Files**
    - o **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).
        - ▪ The difference in 2016 from years 2014 and prior is that it does not contain the following data elements derived from ICD-10-CM diagnosis codes: Clinical Classification Software categories (I10_DXCCSn, I10_ECAUSECCSn), chronic condition indicators (I10_CHRONn), and injury flags (I10_INJURY, I10_MULTINJURY).
    - o **Supplemental ED File** is a single file containing data elements specific to ED visits that do not results in an admission to the same hospital.
        - ▪ The difference in 2016 from years 2014 and prior is that it does not contain the following data elements based on ICD-10-PCS procedure codes: procedure codes (I10_PR_EDn), Clinical Classification Software categories of procedures (I10_PRCCS_EDn) and procedure class (I10_PCLASS_EDn). ICD-10-PCS procedure codes are not included on the ED supplemental file because this coding system was designed for procedure coding on inpatient data. The ED supplemental file includes Physicians' Current Procedural Terminology (CPT) codes.
    - o **Supplemental Inpatient File** is a single file containing data elements specific to ED visits that result in an admission to the same hospital.
        - ▪ The difference in 2016 from years 2014 and prior is that it does not contain the following data elements derived from ICD-10-PCS procedure codes: Clinical Classification Software categories of procedures (I10_PRCCS_IPn) and procedure class (I10_PCLASS_IPn).
- **Hospital Weights File** is a single file containing information on hospital characteristics.

A complete list of discontinued data elements in the 2016 NEDS is available in Appendix A.

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

The HCUP-US Web site 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 NEDS 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 2016 NEDS, beta versions of the software are available on the Tools & Software page of the HCUP-US Web site. Additionally, users may wish to review the HCUP Tools Loading Tutorial, which 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.

APPENDIX A: COMPLETE LIST OF DISCONTINUED DATA ELEMENTS IN THE 2016 NEDS

Appendix A includes a complete list of discontinued data elements on the 2016 NEDS. This list includes data elements derived from AHRQ software tools as well as additional data elements that rely on ICD-10-CM/PCS coding in the definition of one or more values (e.g., I10_INJURY and I10_MULTINJURY).

Data Element Name	Description	NEDS File
I10_CHRONn[a]	Chronic condition indicator n	Core
I10_DXCCSn[a]	Clinical Classifications Software (CCS): Diagnosis n	Core
I10_ECauseCCSn[a]	CCS: E cause n	Core
I10_INJURY	Identifies records with an ICD-10-CM diagnosis indicating an injury	Core
I10_MULITINJURY	Identifies records with more than one ICD-10-CM diagnosis indicating an injury	Core
I10_PR_EDn[b]	ICD-10-PCS procedure codes	Supplemental ED
I10_PCLASS_EDn[a]	Emergency department procedure class n	Supplemental ED
I10_PCLASS_IPn[a]	Inpatient procedure class n	Supplemental IP
I10_PRCCS_EDn[a]	CCS: Emergency department procedure n	Supplemental ED
I10_PRCCS_IPn[a]	CCS: Inpatient procedure n	Supplemental IP

[a]Data elements derived from HCUP software tools are not available in the 2016 NEDS because the ICD-10-CM/PCS versions are under development. If ICD-10-CM/PCS versions of AHRQ software tools are needed, please refer to the HCUP Tools and Software section of the HCUP-US Web site.
[b]ICD-10-PCS procedure codes are not included on the ED supplemental file because this coding system was designed for procedure coding on inpatient data. The ED supplemental file includes Physicians' Current Procedural Terminology (CPT) codes.