2016 HEALTHCARE COST AND UTILIZATION PROJECT (HCUP) NATIONWIDE READMISSIONS DATABASE: 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 Readmissions Database (NRD) has changed in file structure (as compared with the 2015 NRD) and resumes a format similar to those 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[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. Because of the change in diagnosis and procedure coding, the 2015 NRD included nine months of data with ICD-9-CM coding and three months of data with ICD-10-CM/PCS 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.

In contrast, the 2016 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 of the 2016 NRD is similar to the file structure of the NRD in data years prior to 2015 with one exception: Data elements derived from AHRQ software tools are not available in the 2016 NRD 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 NRD, 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 NRD at www.hcup-us.ahrq.gov/tech_assist/tutorials.jsp.

This document outlines the revised file structure of the HCUP NRD 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 READMISSIONS DATABASE

The 2016 NRD 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). The difference in 2016 is that it does not contain the following data elements derived from ICD-10-CM/PCS codes: Clinical Classification Software categories (I10_DXCCSn, I10_PRCCSn, I10_ECAUSECCSn), hospital service line (I10_ServiceLine), number of chronic conditions (I10_NCHRONIC), and major operating room procedure indicator (I10_ORPROC).
  - **Severity File** is a single file containing additional data elements to aid in identifying the severity of the condition for a specific discharge (e.g. All-Patient Refined Diagnosis-Related Group [APR-DRG], APR-DRG Risk of Mortality, and APR-DRG Severity of Illness). The difference in 2016 is that it does not contain the Elixhauser Comorbidity Software indicators.
  - The 2016 NRD does not include a **Diagnosis and Procedure Groups File**.
- **Hospital-level File:** Contains information on hospital characteristics.

A complete list of discontinued data elements in the 2016 NRD 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 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 2016 NRD, 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 NRD

Appendix A includes a complete list of discontinued data elements on the 2016 NRD. 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 (i.e., I10_ORPROC and I10_SERVICELINE).

Data Element Name	Description	NRD File
I10_BODYSYSTEMn[a]	Body system n	DX_PR_GRPS
I10_CHRONn[a]	Chronic condition indicator n	DX_PR_GRPS
I10_CM_ - comorbidity measures[a]	Elixhauser Comorbidity Measures	Severity
I10_DXCCSn[a]	Clinical Classifications Software (CCS): Diagnosis n	Core
I10_DXMCCS1[a]	Multi-Level CCS: Diagnosis 1	DX_PR_GRPS
I10_ECauseCCSn[a]	CCS: E cause n	Core
I10_ECauseMCCS1[a]	Multi-level CCS: E cause 1	DX_PR_GRPS
I10_NCHRONIC[a]	Number of Chronic Conditions	Core
I10_ORPROC[b]	Major operating room procedure indicator	Core
I10_PCLASSn[a]	Procedure class n	DX_PR_GRPS
I10_PRCCSn[a]	CCS: procedure n	Core
I10_PRMCCS1[a]	Multi-Level CCS: Procedure 1	DX_PR_GRPS
I10_SERVICELINE[c]	Service line	Core

[a]Data elements derived from HCUP software tools are not available in the 2016 NRD 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]I10_ORPROC is derived from the procedure class software, which is not available on the 2016 NRD; therefore, ORPROC also is not available.
[c]I10_SERVICELINE is derived from the principal diagnosis CCS and DRGs. Because the diagnosis CCS is not available on the 2016 NRD, SERVICELINE also is not available.