User's Guide to Emergency Department Tables

Emergency Department Data Collection in Vermont

Collection of Vermont (VT) hospital emergency department (ED) data began in January 2001, under the authority of the Department of Banking, Insurance, Securities and Health Care Administration (BISHCA). Like the inpatient and outpatient procedure files, the ED data are collected by the Vermont Association of Hospitals and Health Systems - Network Services Organization (VAHHS-NSO) and managed by the Vermont Department of Health (VDH).

To improve our understanding of utilization patterns in the health care system, ED data were selected as the next logical subset of outpatient data to be collected. ED usage is particularly of interest in a rural state that may have limited sites and hours available for provision of primary and urgent care in some areas. ED data also provide essential information for injury control studies since this is often the setting in which accidental and intentional injuries are evaluated and treated.

Definitions

Recent Changes in Definition of Emergency Department Data

In data years 2001 and 2002, ED data analyses included all records coded as emergency room visits by hospitals (patient type "E") as well as inpatient records (patient type "I") that were coded as having an ED admission source. These inpatient records that originated in the ED were included in the inpatient Monographs as well as the ED tables.

Beginning with data year 2003, two changes were made to the way in which records were selected for inclusion in ED data analyses. ED data selection was expanded to include all patient type records which had an associated revenue code beginning 45 (Emergency Room). At the same time, ED data records decreased because some patient type "E" records were determined not to be true ED visits (had no associated ER revenue record).

The expanded dataset continues to include patient types "I" and "E" records, but has added records of other outpatient types which originated in the ED:

- observation bed records (patient type "O") of patients requiring additional observation of their condition,
- ambulatory surgery records (patient type "A") of patients requiring an outpatient procedure, and
- series patient records (patient type "X") of patients who might be returning for ongoing treatment.

The decrease in records occurred when more than 12,000 patient type "E" records were found in 2003 to have no associated ER revenue charge. Many of these records turned out to be for clinics held after hours in hospital EDs.

In the Hospital Setting Comparison tables which follow this ED section, ED records include only outpatient records that originated in the ED. Inpatient stays that originated in the ED are retained as part of the overall inpatient dataset.

Comparison to Previous Monographs

Because of the change in record selection rules described above, the ED tables presented in this Monograph cannot meaningfully be compared to the tables published in the 2001 and 2002 Monographs. The overall number of records increased from 213,987 records in most

2002 tables to 221,892 records in most 2003 tables. The number of ED records has continued to climb in 2004 to 223,192 records in 2004.

The change in record selection rules also affected the nature of the records included. For example, of the 9,537 ED visits in 2003 that did not result in admission but required skin suturing or phlebotomy (ICD-9-CM codes 86.59 and 38.99, respectively), more than 40% (4,060) were coded as other outpatient types (patient types "A," "O," or "X"). In 2001 and 2002, such records were not included in ED analyses. This coding shift of ED patients to other outpatient types is seen in 2004 as well.

Sources of Data

All fourteen of Vermont's civilian acute care hospitals participate in the ED reporting system. The Veterans Administration hospital in White River Junction does not participate in ED data collection. Collection procedures are the same as those for inpatient and outpatient data, with hospitals providing data to a contractor of VAHHS-NSO, and VAHHS-NSO, in turn, providing the data to VDH, the data management designee of BISHCA.

Beginning with reporting year 2001, ED data for Vermont residents using New Hampshire (NH) hospitals have been received from the New Hampshire Department of Health and Human Services and appear in selected tables. ED data for Vermont residents are not yet available from Massachusetts (MA) and New York (NY).

Clinical Classifications Software (CCS) Grouper

Clinical Classifications Software (CCS) is a tool that collapses principal diagnosis (over 12,000) and procedure (over 3,500) codes into meaningful categories. The single-level diagnosis CCS aggregates illnesses and conditions into more than 260 mutually exclusive categories. Similarly, the single-level procedure CCS aggregates procedures into 231 mutually exclusive categories, most representing single types of procedures. High-level CCS groups further collapse single-level CCS groups into broad categories based on body systems or condition.

The CCS diagnosis grouper is used in the ED tables and other tables in this Monograph comparing patient records across health care settings. CCS was developed at the Agency for Healthcare Research and Quality (AHRQ) and is available to the public at the website: http://www.ahrq.gov/data/hcup/ccs.htm

Hospital vs. Hospital Service Area Data

In the tables that follow, ED data are reported by hospital, but not by hospital service area. Unlike the inpatient dataset, the ED dataset does not include records for the V.A. Hospital or for Vermont residents who had ED visits in MA or NY hospitals. Therefore, ED visit rates cannot be calculated on a hospital service area or population basis.

Emergency Department (ED) Reporting

ED visits are reported in several ways in the ED tables and the Hospital Setting Comparison tables. Visits are presented in terms of Vermont or Vermont plus NH hospitals, admission or non-admission to the inpatient setting, and all visits versus visits by Vermont residents only. The following table presents an overview of the number of records and how ED visits were selected in each of the ED (Tables E1-E10, Figures E1-E4) and comparison (Tables C1-C9) tables and figures.

Guide to Tables with Emergency Department (ED) Data

Table and Figure Numbers	Pages	Record Types Included in Table or Figure							
		Total ED Visits	Hospitals		Type of ED Visits		Type of Residents		Records with Procedures in 0.0-86.99 ICD-9-CM Range Only
			VT Hospitals	NH Hospitals	Not Admitted	Inpatient Admission	VT Residents	Non-Residents	
Tables E1–E9, Figures E1–E4	367-385, 389-395	223,192	X		X	X	X	X	
Tables E10	386-387	218,942	X	X	X	X	X		
Tables C1-C2, C5-C6	402-406, 412-413	199,035	X		X		X	X	
Tables C3-C4	407-411	15,013	X		X		X	X	X
Tables C7-C8	414-415	24,157	X			X	X	X	
Tables C9	416	195,299	X	X	X		X		