

# **Department of Veterans Affairs**

**ICD-10 Follow On Class 1 Software Remediation Project**

## **Emergency Department Integration Software (EDIS)**

### **Release Notes**



**VistA EDP\*2.0\*2**

**GUI EDIS Version 2.1.2**

**November 2014**

**Office of Information and Technology (OI&T)**

**Product Development**

## Revision History

Date	Version	Description	Author
November 2014	1.0	Tech Writer edit; baseline document.	redacted
March 2014	0.1	Draft document.	HP

# Table of Contents

- 1. Introduction ..... 1**
  - 1.1. Purpose..... 1
  - 1.2. Background ..... 1
  - 1.3. Scope of Changes ..... 2
  - 1.4. Documentation ..... 3
- 2. New Features and Functions..... 6**
  - 2.1. ICD Codes Change..... 6
  - 2.2. Text on Screens ..... 6
    - 2.2.1. Modifications to the Disposition Pane in Edit Closed View..... 6
    - 2.2.2. Modifications to the Disposition Pane in the Visit Worksheet View ..... 7
    - 2.2.3. Modifications to the Delay Report..... 8
    - 2.2.4. Modifications to the ED Mental Health Patients Report ..... 9
    - 2.2.5. Modifications to the Exposure Report..... 11
    - 2.2.6. Modifications to the VA Admissions Report ..... 12
    - 2.2.7. Modifications to the Activity Report ..... 13
    - 2.2.8. Modifications to the Active Problems Pane in Assess Worksheet View ..... 14
- 3. ICD-10 Searches ..... 15**
  - 3.1. ICD-10-CM Diagnosis Code Search ..... 15
- 4. Additional Software Fixes..... 16**
  - 4.1. Remove Patient without Provider for Certain Dispositions..... 16
  - 4.2. Correct Nurse and Resident Roles in Edit Closed ..... 16
  - 4.3. Fix Bed Selection in Visit Worksheet ..... 16
  - 4.4. Remove Provider Report ..... 16
  - 4.5. Fix Visit Worksheet When Switching from Edit Closed ..... 16
- 5. Technical Information ..... 17**
  - 5.1. Routines..... 17
  - 5.2. Online Help for ICD-10 Codes ..... 18

# 1. Introduction

## 1.1. Purpose

The purpose of these Release Notes is to identify enhancements to the Emergency Department Integration Software (EDIS) software contained in patch EDP\*2.0\*2 and EDIS 2.1.2.

## 1.2. Background

On January 16, 2009, the Centers for Medicare & Medicaid Services (CMS) released a final rule for replacing the 30-year-old International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code set with International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) and International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) with dates of service or dates of discharge for inpatients that occur on or after October 1, 2015 (current implementation date).

The classification system consists of more than 68,000 codes, compared to approximately 13,000 ICD-9-CM codes. There are nearly 87,000 ICD-10-PCS codes, while ICD-9-CM has nearly 3,800 procedure codes. Both systems also expand the number of characters allotted from five and four respectively to seven alpha-numeric characters. This value does not include the decimal point, which follows the third character for the ICD-10-CM code set. There is no decimal point in the ICD-10-PCS code set. These code sets have the potential to reveal more about quality of care, so that data can be used in a more meaningful way to better understand complications, better design clinically robust algorithms, and better track the outcomes of care. ICD-10-CM also incorporates greater specificity and clinical detail to provide information for clinical decision making and outcomes research.

**Table 1: ICD-9-CM and ICD-10-CM Comparison**

ICD-9-CM	ICD-10-CM
13,000 codes (approximately)	68,000 codes (approximately)
3-5 characters	3-7 characters (not including the decimal)
Character 1 is numeric or alpha (E or V)	Character 1 is alpha; character 2 is numeric
Characters 2 - 5 are numeric	Characters 3-7 are alpha or numeric (alpha characters are not case sensitive)
Decimal after first 3 characters	Same

**Table 2: ICD-9-CM and ICD-10-PCS Comparison**

<b>ICD-9-CM Procedure Codes</b>	<b>ICD-10-PCS</b>
3-4 characters	7 alphanumeric characters
All characters are numeric	Characters can be either alpha or numeric. Letters O and I are not used to avoid confusion with the numbers 0 and 1.
All characters are numeric	Each character can be any of 34 possible values. The ten digits 0-9 and the 24 letters A-H, J-N and P-Z may be used in each character.
Decimal after first 2 characters	Does not contain decimals

### 1.3. Scope of Changes

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**NOTE: Existing ICD-9 functionality has not changed.**

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EDIS is used by healthcare professionals to track and manage the flow of patient care in the Emergency Department. EDIS utilizes Web-based views that provide users with the following capabilities:

- Add emergency department patients to the Display Board
- View information about patients on the Display Board
- Edit patient information on the Display Board
- Remove patients from the Display Board
- Generate administrative reports
- Input discharge diagnosis

EDIS integrates with VistA Scheduling (Appointment Management) through the creation of scheduled or unscheduled appointments; these appointments will display in the Computerized Patient Record System (CPRS).

EDIS is a Java-based package with a Graphical User Interface (GUI).

Patch EDP\*2\*2/EDIS v2.1.2 makes the following changes to the EDIS application:

- ICD-10-CM replaces ICD-9-CM as the diagnostic coding system for outpatient encounters with an encounter date on or after the ICD-10 activation date.
- Online forms display “ICD-10” instead of “ICD-9” where appropriate.
- Search features for codes are standardized and enhanced.

- On the EDIS **Configuration** window, if you do not select **Diagnosis must be coded as ICD**, the application accepts only free-text diagnoses (the default setting), and does not utilize ICD codes. Free-text diagnoses have no ICD impact.

In addition, EDP\*2\*2/EDIS v.2.1.2 fixes the following Remedy tickets:

1. CQ EDIS00001187 (Remedy INC000000897239): EDIS will now allow a user to remove a patient without selecting a Provider for the following special classes of Disposition:
  - a. Left without being treated
  - b. Patient name entered in error
  - c. Sent to primary care
2. CQ EDIS00001188 (Remedy INC000000897799): Nurses and Resident roles now correctly open the Edit Closed worksheet.
3. CQ EDIS00001189 (Remedy INC000000898138): Selecting the first bed in the list of the Visit worksheet no longer brings up a 'Missing Bed' popup when clicking on the "Save" button.
4. CQ EDIS00001190: The Provider report has been removed from EDIS.
5. CQ EDIS00001192: After a user switches from viewing an Edit Closed worksheet to editing and saving a Visit worksheet, the Visit worksheet no longer blanks out.

## 1.4. Documentation

The following documents and files are available on the Anonymous software directories identified in the table below:

- EDIS v.2.1.2 Server and Client Installation Guide
- EDIS v.2.1.2 Big Board Installation Guide
- EDIS v.2.1.2 Release Notes
- EDIS v.2.1.2 Technical Manual
- EDIS v.2.1.2 User Guide
- EDIS Glossary
- EDIS Installation Package Zip File (contains Launch\_EDIS.bat and edisautologon.reg)

The documents (except the zip file) are also available on the VistA Documentation Library (VDL), which is located at <http://www.va.gov/vdl/application.asp?appid=179>.

**Table 3: ANONYMOUS Software Directories**

OIFO	FTP Address	Directory
Albany	redacted	redacted
Hines	redacted	redacted
Salt Lake City	redacted	redacted
VistA Download Site	redacted	redacted

The documents appear on the Anonymous software directories under the file names listed in the table below.

**Table 4: Document Files**

File Name	Title	FTP Mode
EDIS_2_1_2_IG.PDF	Emergency Department Integration Software Version 2.1.2 Server and Client Installation Guide	Binary
EDIS_2_1_2_BigBrd_IG.PDF	Emergency Department Integration Software Version 2.1.2 Big Board Installation Guide	Binary
EDIS_2_1_2_RN.PDF	Emergency Department Integration Software Version 2.1.2 Release Notes	Binary
EDIS_2_1_2_TM.PDF	Emergency Department Integration Software Version 2.1.2 Technical Manual	Binary
EDIS_2_1_2_UG.PDF	Emergency Department Integration Software Version 2.1.2 User Guide	Binary

File Name	Title	FTP Mode
EDIS_2_1_2_Glossary.PDF	Emergency Department Integration Software Glossary	Binary
EDP2_1_1.zip <b>NOTE:</b> The zip file and its contents have NOT been updated for the EDIS v.2.1.2/EDP*2.0*2 release. The file is included with the latest release documentation for ease of reference but is still named for the release in which it was last modified (EDIS v.2.1.1/EDP*2.0*6).	Emergency Department Integration Software Installation Package Zip File	Binary



## 2. New Features and Functions

**NOTE: Existing ICD-9 functionality has not changed.**

### 2.1. ICD Codes Change

Generally, on or after October 1, 2015, the available diagnosis codes will change from ICD-9 to ICD-10. This change is keyed on the dates of patient service, which is the Time In for the Emergency Department visit.

For example, if the patient's emergency department visit Time In is before the ICD-10 activation date, then ICD-9 codes are used. If the patient's emergency department visit Time In is on or after the ICD-10 activation date, then ICD-10 codes will be used.

### 2.2. Text on Screens

Several reports have information added to differentiate between ICD-9 and ICD-10 entries.

#### 2.2.1. Modifications to the Disposition Pane in Edit Closed View

See callouts below.

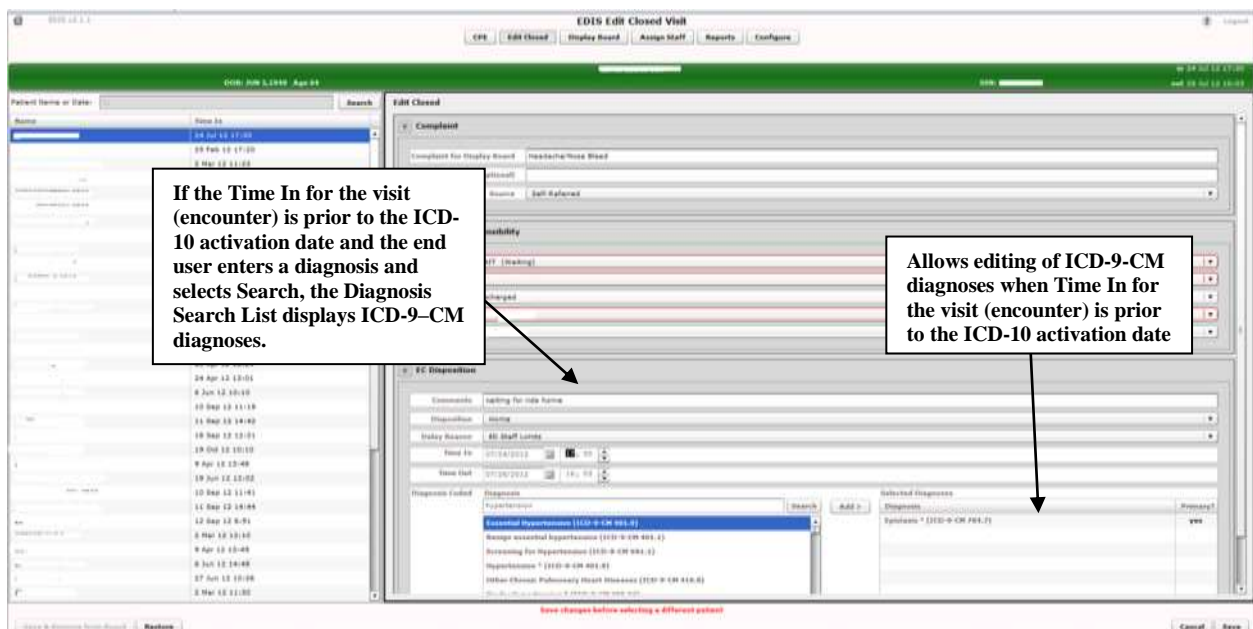


Figure 1: Disposition Pane in Edit Closed View

## 2.2.2. Modifications to the Disposition Pane in the Visit Worksheet View

See callouts below.

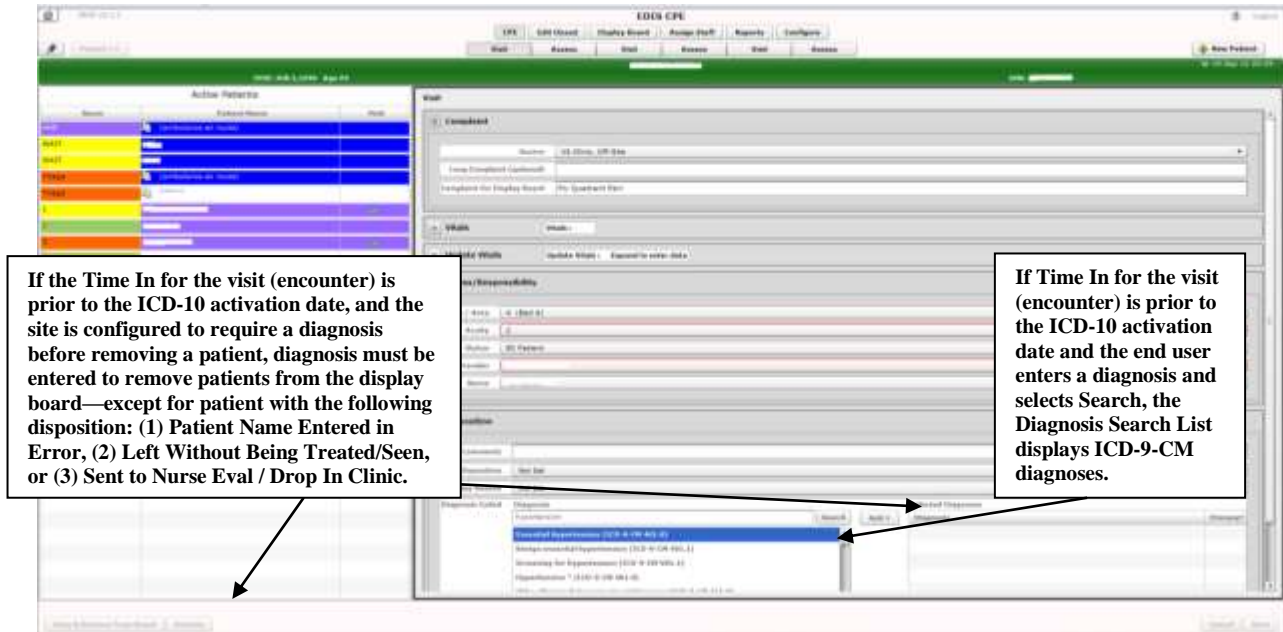


Figure 2: Disposition Pane in Visit Worksheet View

### 2.2.3. Modifications to the Delay Report

“ICD” and “ICD Type” columns have been added right after the Diagnoses column.

If the report start date is *prior to* the ICD-10 activation date, and stop date is *on or after* the ICD-10 activation date (which means that patient visits with ICD-9 diagnoses and patient visits with ICD-10 diagnoses associated may appear on the report), the new “ICD” column displays the appropriate code and the new “ICD Type” column indicates ICD-9-CM or ICD-10-CM as applicable.

The screenshot shows the EDIS Reports interface with a 'Delay Report' table. The table title is 'Delay Report from 03 Nov 10 00:00 to 07 Feb 14 00:00'. The table has the following columns: ID#, Patient, From At, Elapsed, Description, Policy Number, ICD, ICD Type, Priority, and Diagnosis. The 'ICD' and 'ICD Type' columns are highlighted with a red box in the original image.

ID#	Patient	From At	Elapsed	Description	Policy Number	ICD	ICD Type	Priority	Diagnosis
0	00070271	01/03/14 00:00	2420:00 *	Adm to Hospital Dept	00070271_000			0	Acute Respiratory Infection (ICD-9-CM 480.0)
10	00070271_000	01/03/14 00:00	00:00:00 *	Admission to Hospital Dept	00070271_000			0	Respiratory Infection (ICD-9-CM 480.0)
10	00070271_000	01/03/14 00:00	00:00:00 *	Admission to Hospital Dept	00070271_000			0	Respiratory Infection (ICD-9-CM 480.0)
0	00070271_000	01/03/14 00:00	00:00:00 *	Admission to Hospital Dept	00070271_000			0	Respiratory Infection (ICD-9-CM 480.0)
0	00070271_000	01/03/14 00:00	00:00:00 *	Admission to Hospital Dept	00070271_000			0	Respiratory Infection (ICD-9-CM 480.0)
0	00070271_000	01/03/14 00:00	00:00:00 *	Admission to Hospital Dept	00070271_000			0	Respiratory Infection (ICD-9-CM 480.0)

Figure 3: Delay Report

## 2.2.4. Modifications to the ED Mental Health Patients Report

The ICD-10 update differentiates between ICD-9-CM selection criteria and ICD-10-CM selection criteria to determine which records will be included in the ED Mental Health Patients Report View/Export/Print to include Records with ICD-10-CM Diagnosis Codes in Categories F10 through F99 Inclusive (as shown below) on or after the ICD-10 activation date.

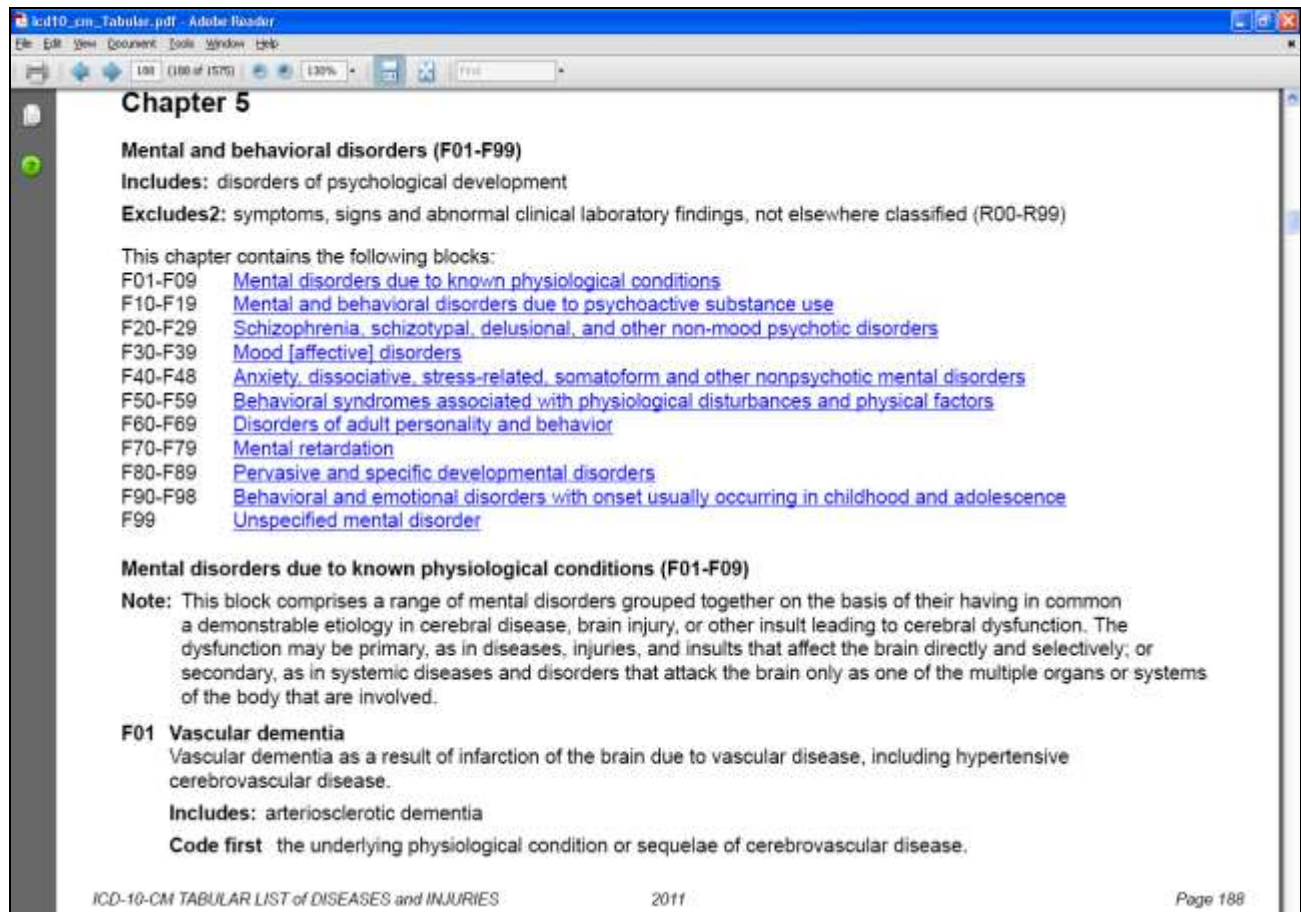


Figure 4: ICD-10-CM List of Diseases, Chapter 5, Mental and Behavioral Disorders (F01-F99)



## 2.2.5. Modifications to the Exposure Report

“ICD” and “ICD Type” columns have been added right after the Diagnoses column.

The “Time In” for the visit determines whether the new “ICD” column displays the ICD-9 or ICD-10 code and the new “ICD Type” column indicates ICD-9-CM or ICD-10-CM as applicable.

The screenshot displays the 'EDIS Reports' interface for an 'ED Exposure Report'. The report is for patient 'Elyse Kason' on 11/13/2014. It is divided into several sections:

- Diagnoses Patient Information:** A table with columns for ICD, ICD Type, Description, and Action. It contains one entry for 'Wasting' with ICD code 'E03.014' and ICD Type 'E03.014'. The description is 'Wasting' and the action is 'Self-Administered'.
- Multiple Visits Exposed to Different Treatment Routes:** A table with columns for ICD, ICD Type, Description, and Action. It contains four entries:
  - Wasting (E03.014 0044) - Diabetes due to underlying con. 908.00 - Self-Administered
  - Wasting (E03.014 0048) - Diabetes due to underlying con. 908.00 - ICD-10-CM 1A - Self-Administered
  - Wasting (E03.014 0049) - Psychophysical activity, unacc. 400.00 - ICD-10-CM 1A - On-Site Nursing Home
  - Wasting (E03.014 0112) - Bipolar disorder, unacc. 400.00 - ICD-10-CM 1A - On-Site Nursing Home
- Other ED Visits:** A table with columns for ICD, ICD Type, Description, and Action. It contains one entry for 'Wasting' with ICD code 'E03.014' and ICD Type 'E03.014'. The description is 'Wasting' and the action is 'Self-Administered'.
- The Study Staff:** A table with columns for Location, Name, and Role. It lists 'DOTTEN, GAB' and 'DOTTEN, TAD' at 'DOTTEN, TAD'.

Figure 6: Exposure Report

## 2.2.6. Modifications to the VA Admissions Report

“ICD” and “ICD Type” columns have been added right after the Diagnoses column.

If the report start date is *prior to* the ICD-10 activation date, and stop date is *on or after* the ICD-10 activation date (which means that patient visits with ICD-9 diagnoses and patient visits with ICD-10 diagnoses associated may appear on the report), the new “ICD” column displays the appropriate code and the new “ICD Type” column indicates ICD-9-CM or ICD-10-CM as applicable.

The screenshot shows the EDIS Reports interface. The main report is titled "EDIS to VA Admissions Report from 01 Oct 11 00:00 to 22 Jan 14 00:00". The table below shows the data for this report.

ICD	Date	Description	ICD	Counts	Description
9	01/01/12 07:00	Head Injury	ED10EET.ONE	1	ED10EET.ONE
9	01/01/12 10:00	Head Injury	ED10EET.TWO	1	ED10EET.TWO
9		Severe knee pain	ED10EET.ONE	1	ED10EET.ONE
9		Injured right elbow	ED10EET.ONE	1	ED10EET.ONE
9	01/01/12 10:00	Seizure	ED10EET.ONE	1	ED10EET.ONE
9	01/01/12 10:00	Chronic Pain	ED10EET.TWO	1	ED10EET.TWO
9	01/01/12 10:00	Headache	ED10EET.ONE	1	ED10EET.ONE

Below the main report is a summary table titled "Averages for Different Categories from 01 Oct 11 00:00 to 22 Jan 14 00:00".

Category	Count	ICD	ICD Type	Description	Count
New Release of Admission	1	ED10EET	ED10EET	ED10EET	1
9	1	ED10EET	ED10EET	ED10EET	1
9	1	ED10EET	ED10EET	ED10EET	1

Figure 7: VA Admissions Report

## 2.2.7. Modifications to the Activity Report

“ICD” and “ICD Type” columns have been added right after the Diagnoses column.

If the report start date is *prior to* the ICD-10 activation date, and stop date is *on or after* the ICD-10 activation date (which means that patient visits with ICD-9 diagnoses and patient visits with ICD-10 diagnoses associated may appear on the report), the new “ICD” column displays the appropriate code and the new “ICD Type” column indicates ICD-9-CM or ICD-10-CM as applicable.

The screenshot shows the EDIS Reports interface. The main table is titled "Activity Report from 01 Oct 11 00:00 to 23 Jan 14 00:00". It contains columns for ID#, Name In, Name Out, Complaint, ICD, ICD Type, Priority, Disposed, Image, Weight, Disage, Adm Dis, Adm Disag, Discharge, and ICD Type. The ICD and ICD Type columns are highlighted in blue. Below the main table is a summary table titled "Averages for Different Categories from 01 Oct 11 00:00 to 23 Jan 14 00:00".

Category	Total	Adm	Disage	Admission Disag	Admission Discharge	Disposed
All Patients	27	4636.33	4636.33	0.42	4287.44	2471.03
Not Admitted	0	0.00	0.00			27.48
Admitted	27	7863.07	7863.07	0.42	4287.44	4489.33
CL	0	0.00	0.00	0.00	0.00	0.00
MCI	0	0.00	0.00	0.00	0.00	0.00
Wk	4	8847.18	8847.18	1.10	8847.10	8847.10
W	1	0.00	0.00		0.00	0.00
UW	8	4372.03	4372.03	0.23	3896.02	3897.21
Home	0	0.00	0.00	0.00	0.00	0.00

Figure 8: Activity Report



## 2.2.8. Modifications to the Active Problems Pane in Assess Worksheet View

If the patient has Active problems in their Problem List which have ICD-9 diagnosis codes associated, the ICD-9 diagnosis code displays in the ICD column, as per existing functionality. If the patient has Active problems in their Problem List which have ICD-10 diagnosis codes associated, the ICD-10 diagnosis code displays in the ICD column.

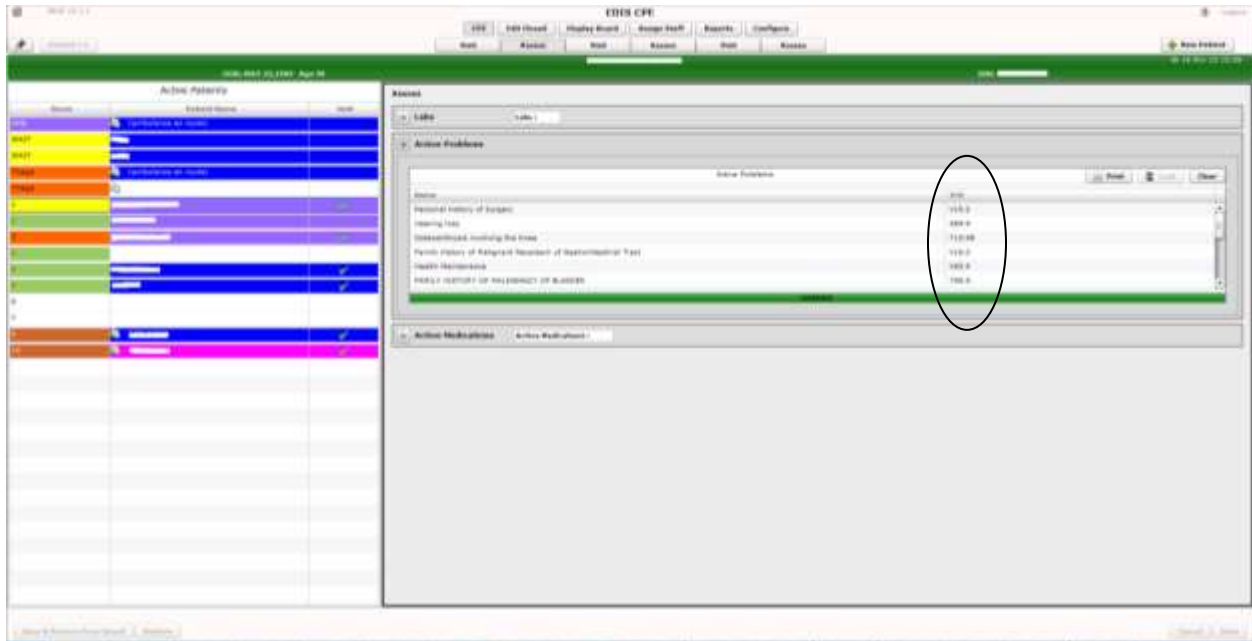


Figure 9: Active Problems Pane in Assess Worksheet View

## 3. ICD-10 Searches

The EDIS package provides the ability to search on ICD-10-CM diagnosis codes.

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**NOTE: Existing ICD-9 functionality has not changed. If the Time In for the visit (encounter) is prior to the ICD-10 activation date and the end user enters a diagnosis and selects Search, the Diagnosis Search List displays ICD-9–CM diagnoses.**

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### 3.1. ICD-10-CM Diagnosis Code Search

The ICD-10 diagnosis code search functionality allows the end user to select a single, valid ICD-10 diagnosis code and display its description. The user interface prompts the user for input, invokes the Lexicon utility to get data, and then presents that data to the end user.

This search method provides a “decision tree” type search that uses the hierarchical structure existing within the ICD-10-CM code set, as defined in the ICD-10-CM Tabular List of Diseases and Injuries, comprising categories, sub-categories, and valid ICD-10-CM codes.

ICD-10-CM diagnosis code search highlights include:

- Text-based search using one or more words as search terms, finding matches based on full descriptions, synonyms, key words, and shortcuts associated with ICD-10-CM diagnosis codes, which are inherently built into the Lexicon coding system.
- The more refined the search criteria used (i.e., the more descriptive the search terms), the more streamlined is the process of selecting the correct valid ICD-10 diagnosis code.
- The user is presented with a manageable list of matching codes with descriptions, consisting of any combination of categories, sub-categories and valid codes. The length of the list of items that is presented is set to a default of 20,000. If the list is longer, the user is prompted to refine the search.
- The user can “drill down” through the categories and sub-categories to identify the single, valid ICD-10-CM code that best matches the patient diagnosis.
- Short descriptions for the valid ICD-10-CM codes display.
- Partial code searches are also possible, as is full ICD-10-CM code entry, for situations where all or part of the code is known.

## **4. Additional Software Fixes**

In addition to introducing ICD-10 functionality, EDP\*2\*2/EDIS v.2.1.2 fixes the Remedy tickets described below.

### **4.1. Remove Patient without Provider for Certain Dispositions**

CQ EDIS00001187 (Remedy INC000000897239): EDIS will now allow a user to remove a patient without selecting a Provider for the following special classes of Disposition:

- Left without being treated
- Patient name entered in error
- Sent to primary care

### **4.2. Correct Nurse and Resident Roles in Edit Closed**

CQ EDIS00001188 (Remedy INC000000897799): Nurses and Resident roles now correctly open the Edit Closed worksheet.

### **4.3. Fix Bed Selection in Visit Worksheet**

CQ EDIS00001189 (Remedy INC000000898138): Selecting the first bed in the list of the Visit worksheet no longer brings up a 'Missing Bed' popup when clicking on the "Save" button.

### **4.4. Remove Provider Report**

CQ EDIS00001190: The Provider report has been removed from EDIS.

### **4.5. Fix Visit Worksheet When Switching from Edit Closed**

CQ EDIS00001192: After a user switches from viewing an Edit Closed worksheet to editing and saving a Visit worksheet, the Visit worksheet no longer blanks out.

## 5. Technical Information

### 5.1. Routines

Some EDIS routines were modified to replace direct global reads and old Application Programming Interfaces (APIs) with new Standards and Terminology Services (STS) APIs and Lexicon APIs wherever possible.


The routines listed in the table below were updated in patch EDIS v2.1.2/EDP\*2.0\*2. The checksums listed in the “After Checksum” column are new checksums and can be checked with CHECK1^XTSUMBLD.

**Table 5: Updated Routines**

<b>Routine Name</b>	<b>Before Checksum</b>	<b>After Checksum</b>
EDP22PST	N/A	737172
EDPCONV	69787121	70928886
EDPFAA	36904209	37763699
EDPFLEX	1745474	10693270
EDPLEX	N/A	11049187
EDPLOG	58048189	64279489
EDPLPCE	32808524	39952113
EDPQLE	43232281	55054483
EDPQPCE	3317665	6816999
EDPRPT1	50357723	51586751
EDPRPT10	30220543	32122849
EDPRPT2	24332800	26475007
EDPRPT7	20666458	23000869
EDPRPT7C	22153636	24197469
EDPRPTBV	28273730	30889629
EDPX	12709600	16354064

## 5.2. Online Help for ICD-10 Codes

The Emergency Department Integration Software (EDIS) help file is updated to differentiate when ICD-9-CM and ICD-10-CM diagnosis codes are used according to the ICD-10 activation date requirements.

Click the help file icon  at the top right of the application to view the help file.