ICD-10 Follow On Class 1 Software Remediation

Laboratory: Emerging Pathogens Initiative (EPI)

Application Version 5.2

Release Notes

LR*5.2*421



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Department of Veterans Affairs

Office of Information and Technology

Product Development

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1. Introduction

1.1. Purpose

The purpose of these Release Notes is to identify enhancements to the Emerging Pathogens Initiative (EPI) package contained in patch LR 5*2*421.

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 the ICD-10 Activation 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.

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		

ICD-9-CM and ICD-10-PCS Comparison

ICD-9-CM Procedure Codes	ICD-10-PCS
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

NOTE: Existing ICD-9 functionality has not changed.

Patch LR* 5.2*421 makes the following changes to the Emerging Pathogens Initiative (EPI) application:

- The following fields and screens have been updated to refer to "ICD" rather than "ICD9":
 - o Laboratory Search/Extract Parameters Input screens
 - o Enter/Edit Local Pathogens screens
 - o Detailed Verification Report
 - Help text
- Within the Enter/Edit Local Pathogens and Laboratory Search/Extract Parameters Input screens, users are prompted to specify a code set on which to search prior to entering an ICD code. Based on this input, the system will only allow ICD-9 entry or ICD-10 entry.
- The Pathogen Inquiry option has been modified to list both ICD-9 and ICD-10 codes.
- The Generate Local Report/Spreadsheet option has been modified to include both the Diagnosis Code Set Designation and the Diagnosis Code.
- HL7 Reports that are sent to AITC have been modified to include ICD-10 Codes and Descriptions, which are included in the DG1 HL7 Segments.

1.4. Documentation

The EPI manuals are posted on the VistA Documentation Library (VDL) page:

http://www.va.gov/vdl/application.asp?appid=118.

The following EPI user manuals are updated with changes for LR 5*2*421:

- Rollup Modifications Technical and User Manual
- Technical and User Guide
- Hepatitis C and EPI Technical and User Guide
- Search/Extract Technical and User Guide

The following manual does not exist for this package:

Security Guide

NOTE: Security Information is contained within the Search/Extract Technical and User Guide and Rollup Modifications Technical and User Manual.

2. Modified Screens

The following screens have been modified:

- Laboratory Search/Extract Parameters Input
- Enter/Edit Local Pathogens Menu Option

2.1. Laboratory Search/Extract Parameters Input Screen

The following modifications have been made to the Laboratory Search/Extract Parameters Input Screen:

- A new prompt "ICD Coding System [ICD-9 or ICD-10]? (9/10):" has been added so that users must specify an ICD-9 or ICD-10 code set on which to search.
- A "CD Set" column header, which indicates the ICD code set (ICD-9 or ICD-10), has been added.
- Two column headers have been modified so that they refer generically to "ICD" rather than indicate an ICD code set (ICD-9 or ICD-10):

ICD Code

ICD Description

Example of Updated Lab Search/Extract Parameters Input Screen

```
LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN Page 1 of 5

NAME: PNEUMONIA442 INACTIVE: NO

Laboratory Test(s) Indicator Value

ICD Coding System [ICD-9 or ICD-10]? (9/10): 10

ICD Code Cd Set ICD Description
*A48.2 ICD-10 Nonpneumonic Legionnares' Disease (Pontiac Fever)
```

2.2. Enter/Edit Local Pathogens Menu Option

The Enter/Edit Local Pathogens screen has been modified from "ICD9" to "ICD DIAGNOSIS" and a "CODING SYSTEM:" field has been added to indicate whether the ICD Diagnosis is based on the ICD-9 and/or ICD-10 coding system.

Example of Updated Enter/Edit Local Pathogens Menu Screen

```
Select Local Pathogen Menu Option: Ent Enter/Edit Local Pathogens
LOCAL PATHOGEN NAME: pneuMONIA442
This pathogen is already entered as a local pathogen.
NAME: PNEUMONIA442 INACTIVE: NO
PROTOCOL: LREPI REFERENCE NUMBER: 100
ICD DIAGNOSIS: 010.94 CODING SYSTEM: ICD-9-CM
ICD DIAGNOSIS: A15.6 CODING SYSTEM: ICD-10-CM
Is this the correct one?
```

2.3. Pathogen Inquiry Screen

The Pathogen Inquiry screen has been modified from "ICD9" to "ICD DIAGNOSIS" and a "CODING SYSTEM:" field has been added to indicate whether the ICD Diagnosis is based on the ICD-9 or ICD-10 coding system.

Example of Updated Pathogen Inquiry Screen

```
CHOOSE 1-5: 5 LREPI SEARCH EXTRACT MENU
                                             Lab EPI Primary Menu
                             Lab EPI Primary Menu
  ENH
         Lab EPI Manual Run (Enhanced)
  VR
         Print Detailed Verification Report
  LO
         Local Pathogen Menu ...
         Pathogen Inquiry
  PТ
         Lab EPI Parameter Setup
  UP
         Lab EPI Protocol Edit
         Antimicrobial Link Update
You have PENDING ALERTS
         Enter "VA to jump to VIEW ALERTS option
Select Lab EPI Primary Menu Option: pi Pathogen Inquiry
Select Pathogen: legioNELLA
NAME: LEGIONELLA
                                       INACTIVE: YES
                                       RUN DATE: JUL 15, 2000
 LAG DAYS: 15
  CYCLE: MONTHLY
                                       PROTOCOL: LREPI
 FOLLOW PTF: YES
                                       REFERENCE NUMBER: 7
LAB TEST: LEGIONELLA AB
                                       INDICATOR: Equal To
 INDICATED VALUE: POS
ETIOLOGY: LEGIONELLA BOZEMANII
ETIOLOGY: LEGIONELLA DUMOFFII
ETIOLOGY: LEGIONELLA GORMANII
ETIOLOGY: LEGIONELLA JORDANIS
ETIOLOGY: LEGIONELLA LONGBEACHAE
ETIOLOGY: LEGIONELLA MICDADEI
ETIOLOGY: LEGIONELLA OAKRIDGENSIS
ETIOLOGY: LEGIONELLA PNEUMOPHILA
ETIOLOGY: LEGIONELLA SP
ETIOLOGY: LEGIONELLA WADSWORTHII
                                       CODING SYSTEM: ICD-9-CM
ICD DIAGNOSIS: 482.80
ICD DIAGNOSIS: A48.1
                                       CODING SYSTEM: ICD-10-CM
ICD DIAGNOSIS: A48.2
                                       CODING SYSTEM: ICD-10-CM
ICD DIAGNOSIS: 482.84
                                       CODING SYSTEM: ICD-9-CM
ICD DIAGNOSIS: A48.8
                                       CODING SYSTEM: ICD-10-CM
Enter RETURN to continue or '^' to exit:
Description: Legionella (Reference #7)
```

3. Modified Reports

3.1. PRT LAB EPI Print Local Report/Spreadsheet

 The LAB EPI Local Report/Spreadsheet option has been modified so that they each include the Diagnosis Code Set Designation (ICD-9 or ICD-10) as a prefix to the Diagnosis Code.

С

Example of Updated PRT LAB EPI Print Local Report/Spreadsheet (On-Screen Report Display)

О

Example of Updated PRT LAB EPI Print Local Report/Spreadsheet (Spreadsheet Output)

```
DEVICE: HOME// HOME (CRT)

|0| |PID|SSN|MPI|Patient Name|Date of Birth|Sex|Race|Homeless|State|Zip|County|Ethnicity|POS|
|1| |PV1|Patient Class|Hospital Location|Discharge Disposition|Facility|Admit Date/Time|Discharge Date/Time|
|2| |DG1|Diagnosis Code|Diagnosis|Admission Date|

1|2|1| |ICD10 A90.|DENGUE FEVER [CLASSICAL DENGUE]|11-09-2012@0917|
```

3.2. Detailed Verification Report

The Detailed Verification Report of EPI Extracted Data has been modified so that the code set (ICD-9 or ICD-10) is not indicated. Rather, the description refers generically to an "ICD coded diagnosis."

Example of Updated Detailed Verification Report of EPI Extracted Data

```
DETAILED VERIFICATION REPORT OF EPI EXTRACTED DATA
FROM STATION 442 CHEYENNE VAMC
PROCESSING PERIOD: 09-01-2014 through 10-30-2014

NTE~7- Report of Legionella/Legionnaire's
These data note persons at your facility during the month who had EITHER an ICD coded diagnosis for Legionella/Legionnaire's disease OR a positive
```

3.3. Report Transmission to Cincinnati Group

The VistA Laboratory Emerging Pathogens Initiative shall retain the ability to transmit diagnosis codes and ICD code set designation within the LREPISERVER Data Server triggered report option for the Cincinnati mail group G.EPI-SITE@CINCINNATI.VA.GOV.

Example of Cincinnati Report

```
Subj: 1ALBANY EPI (3131011.094951)
                                [#41916] 10/11/13@09:49 343 lines
From: POSTMASTER In 'IN' basket.
                                Page 1
REPORT triggered at 1ALBANY by DEVRD on 3131011.094939
*=*=*=*=*=*=*=*=*=*=*=*=
                           Ref# Cy LD Protocol FPTF Active
Pathogen
VANC-RES ENTEROCOCCUS
                              1 M 15 LREPI 1 0
  Lab Test
                                               Indicator
                                                             Value
  Etiology
ENTEROCOCCUS (STREPT. FAECALIS-GROUP D)
   ICD
```

Microbial Susceptibility					Indicator	Value
==*=*=*=*=*=*=*=*=*=						
Pathogen HEPATITIS C ANTIBODY POS					FPTF Active	
	2	ΙVΙ	15	LREPI		Value
Lab Test Etiology					Indicator	value
ICD						
Microbial Susceptibility	,				Indicator	Value
==*=*=*=*=*=*=*=*=*=		= * = :	*=*=	*=*=*=*=		value
Pathogen					FPTF Active	
PEN-RES PNEUMOCOCCUS		M				
Lab Test					Indicator	Value
Etiology						
ICD						
Microbial Susceptibility	7				Indicator	Value
==*=*=*=*=*=*=*=*=*=						
					FPTF Active	
CLOSTRIDIUM DIFFICILE	4	M	15	LREPI		
Lab Test					Indicator	Value
Etiology						
ICD					T 44	77-1
Microbial Susceptibility		_ + -	.		Indicator	Value
==*=*=*=*=*=*=*=*=*= Pathogen					'=*=*= FPTF Active	
TUBERCULOSIS		Cy M			1 0	
Lab Test	5	141	13	LKEPI	Indicator	Value
Etiology					Indicacoi	value
ICD						
Microbial Susceptibility	7				Indicator	Value
==*=*=*=*=*=*=*=*=*=		= * = :	*=*=	*=*=*=*=		
Pathogen	Ref#	Су	LD	Protocol	FPTF Active	
STREPTOCOCCUS GROUP A	6					
Lab Test					Indicator	Value
Etiology						
ICD						
Microbial Susceptibility					Indicator	Value
==*=*=*=*=*=*=*=*=						
Pathogen		_			FPTF Active	
LEGIONELLA	.7	M	15	LREPI	1 0	77-1
Lab Test					Indicator	Value
Etiology LEGIONELLA BOZEMANII						
LEGIONELLA DUMOFFII						
LEGIONELLA MICDADEI						
LEGIONELLA PNEUMOPHILIA						
LEGIONELLA SP						
ICD						
482.80 (ICD-9)						
A48.1 (ICD-10)						
A48.2 (ICD-10)						
A48.8 (ICD-10)						
Microbial Susceptibility					Indicator	Value
==*=*=*=*=*=*=*=*=*=						
Pathogen		_			FPTF Active	
CANDIDA	8	M	Т2	LREPI		Value
Lab Test					Indicator	Value
Etiology CANDIDA ALBICANS						
CANDIDA ALBICANS CANDIDA GUILLIERMONDII						
CANDIDA GOILLIERMONDII CANDIDA KRUSEI						
CANDIDA NACOBII CANDIDA PARAPSILOSIS						
CANDIDA PSEUDOTROPICALIS						
CANDIDA SKIN TEST ANTIGEN						
CANDIDA STELLATOIDEA						
CANDIDA TROPICALIS						
CANDIDA, NOS						
ICD						
Microbial Susceptibility					Indicator	Value
==*=*=*=*=*=*=*=*=*=						
Pathogen		_			FPTF Active	
CRYPTOSPORIDIUM	9	M	15	LREPI	1 0 Indicator	Value
Lab Test						

```
Etiology
   ICD
007.8
         (ICD-9)
      (ICD-10)
(ICD-10)
A07.2
A07.9
IEN # 9 damaged. (No ICD)
  Microbial Susceptibility
                                          Indicator
                                                       Value
*=*=*=*=*=*=*=*=*=*=
               Ref# Cy LD Protocol FPTF Active
Pathogen
E. COLI 0157:H7
                          10 M 15 LREPI 1 0
 Lab Test
                                           Indicator
                                                         Value
  Etiology
   ICD
    Microbial Susceptibility
                                           Indicator
                                                        Value
*=*=*=*=*=*=*=*=*=*=
             Ref# Cy LD Protocol FPTF Active
Pathogen
                          11 M 15 LREPI 1 0
MALARIA
 Lab Test
                                           Indicator
                                                       Value
 Etiology
  ICD
084.0
        (ICD-9)
084.1
       (ICD-9)
      (ICD-9)
(ICD-9)
084.2
084.3
084.4
       (ICD-9)
084.5
       (ICD-9)
      (ICD-9)
(ICD-9)
084.6
084.7
084.8
     (ICD-9)
084.9
        (ICD-9)
B50.0
        (ICD-10)
B50.8
       (ICD-10)
       (ICD-10)
B50.9
      (ICD-10)
(ICD-10)
B51.0
B51.8
B51.9
       (ICD-10)
       (ICD-10)
(ICD-10)
B52.0
B52.8
       (ICD-10)
B52.9
B53.0
       (ICD-10)
       (ICD-10)
(ICD-10)
(ICD-10)
B53.1
B53.8
    Microbial Susceptibility
                                          Indicator
                                                       Value
Ref# Cy LD Protocol FPTF Active
Pathogen
DENGUE
                          12 M 15 LREPI 1 0
  Lab Test
                                            Indicator
 Etiology
  ICD
065.4 (ICD-9)
061. (ICD-9)
061.
A90.
       (ICD-10)
A91. (ICD-10)
A93.8 (ICD-10)
 Microbial Susceptibility
                                          Indicator
                                                       Value
Pathogen Ref# Cy LD Protocol FPTF Active CREUTZFELDT-JAKOB DISEASE 13 M 15 LREPI 1 0
                          13 M 15 LREPI 1 0
 Lab Test
                                            Indicator
                                                        Value
  Etiology
   ICD
046.1
        (ICD-9)
A81.00 (ICD-10)
A81.01 (ICD-10)
A81.09 (ICD-10)
A81.1
        (ICD-10)
A81.2
       (ICD-10)
A81.81 (ICD-10)
A81.82 (ICD-10)
A81.83 (ICD-10)
A81.89
        (ICD-10)
```

```
(ICD-10)
  Microbial Susceptibility
                                       Indicator
                                                   Value
*=*=*=*=*=*=*=*=*=*=
Pathogen
                     Ref# Cy LD Protocol FPTF Active
LEISHMANIASIS
                       14 M 15 LREPI 1 0
                                        Indicator Value
 Lab Test
 Etiology
  ICD
085.0
      (ICD-9)
085.1
       (ICD-9)
085.2
       (ICD-9)
(ICD-9)
085.3
085.4
      (ICD-9)
085.5
085.9
     (ICD-9)
     (ICD-10)
(ICD-10)
B55.0
B55.1
B55.2 (ICD-10)
B55.9 (ICD-10)
B55.9
   Microbial Susceptibility
                                                  Value
*=*=*=*=*=*=*=*=*=*=
          Ref# Cy LD Protocol FPTF Active
Pathogen
HEPATITIS C ANTIBODY NEG 15 M 15 LREPI 1 0
 Lab Test
                                        Indicator
                                                   Value
 Etiology
  ICD
   Microbial Susceptibility
                                                   Value
*=*=*=*=*=*=*=*=*=*=
          Ref# Cy LD Protocol FPTF Active
Pathogen
HEPATITIS A ANTIBODY POS 16 M 15 LREPI 1 0
 Lab Test
                                        Indicator
                                                   Value
 Etiology
  ICD
    Microbial Susceptibility
                                                   Value
Pathogen Ref# Cy LD Protocol FPTF Active
HEPATITIS B POS
                      17 M 15 LREPI 1 0
 Lab Test
                                        Indicator
                                                   Value
 Etiology
  ICD
   Microbial Susceptibility
                                                   Value
*=*=*=*=*=*=*=*=*=*=*=
Pathogen
         Ref# Cy LD Protocol FPTF Active
VANC-RES COAG NEG STAPH
                      21 M 15 LREPI 1 0
 Lab Test
                                        Indicator
                                                  Value
  Etiology
STAPHYLOCOCCUS (COAGULASE NEGATIVE)
STAPHYLOCOCCUS EPIDERMIDIS
STAPHYLOCOCCUS HAEMOLYTICUS
STAPHYLOCOCCUS SAPROPHYTICUS
STAPHYLOCOCCUS SALIVARIUS
STAPHYLOCOCCUS SIMULANS
   TCD
    Microbial Susceptibility
                                       Indicator Value
    VANCMCN
                                       Unknown
*=*=*=*=*=*=*=*=*=*=
Pathogen
              Ref# Cy LD Protocol FPTF Active
ALL STREP PNEUMO
                        22 M 15 LREPI 1 0
 Lab Test
                                       Indicator
                                                   Value
 Etiology
STREPTOCOCCUS PNEUMONIAE
   Microbial Susceptibility
                                                  Value
*=*=*=*=*=*=*=*=*=*=
                    Ref# Cy LD Protocol FPTF Active
Pathogen
ALL ENTEROCOCCI
                        23 M 15 LREPI 1 0
 Lab Test
                                       Indicator
                                                  Value
  Etiology
ENTEROCOCCUS (STREPT. FAECALIS-GROUP D)
```

STREPTOCOCCUS FAECALIS						
STREPTOCOCCUS FAECIUM						
ICD				To 33 and 5 and	TT - 7	
Microbial Susceptibility			-*-*-*-	Indicator	value	
==*=*=*=*=*=*=*=*=*=*=*= Pathogen METH-RES STAPH AUREUS	Ref#		Protocol	FDTF Active		
METH-RES STAPH AUREUS	19	M 15	LREPI	1 0		
Lab Test				Indicator	Value	
Etiology						
STAPHYLOCOCCUS AUREUS						
ICD						
Microbial Susceptibility	?			Indicator	Value	
OXACILLIN				Unknown Unknown		
NAFCILLIN *=*=*=*=*=*=*=*=*=*=*=*=	-*-*-*-	-*-*-*-	-*-*-*-			
Pathogen				FPTF Active		
ALL STAPH AUREUS			LREPI			
Lab Test				Indicator	Value	
Etiology						
STAPHYLOCOCCUS AUREUS						
ICD						
Microbial Susceptibility				Indicator	Value	
==*=*=*=*=*=*=*=*=*=						
Pathogen VANC-RES STAPH AUREUS	#iex	M 1E	Protocol	FPTF Active		
Lab Test	∠∪	LAI T.D	TKFLI	I U Indicator	Value	
Etiology				Indicator	varac	
STAPHYLOCOCCUS AUREUS						
ICD						
Microbial Susceptibility	<i>!</i>			Indicator	Value	
VANCMCN				Unknown		
==*=*=*=*=*=*=*=*=*=						
Pathogen				FPTF Active		
ADD THIS ONE!10	100		LREPI	0 Indicator	77-1	
Lab Test Etiology				indicator	Value	
ICD						
500. (ICD-9)						
Microbial Susceptibility	7			Indicator	Value	
==*=*=*=*=*=	= * = * = * =	= * = * = *	= * = * = * = *	*=*=*=		
Pathogen	Ref#	_		FPTF Active		
NEWEXAMPLE10	101		LREPI			
Lab Test				Indicator	Value	
Etiology						
ICD Microbial Susceptibility	,			Indicator	Value	
==*=*=*=*=*=*=*=*=*=		=*=*=*	=*=*=*=		value	
Pathogen				FPTF Active		
EXAMPLEPATHOGEN10	102	- 1 - 10	LREPI	0		
Lab Test				Indicator	Value	
Etiology						
ICD					3	
Microbial Susceptibility				Indicator	Value	
==*=*=*=*=*=*=*=*=*=						
Pathogen EXAMPLEPATHOGEN01010	103	су гр	LREPI	FPTF Active 0		
Lab Test	Τ03		TKFLT	U Indicator	Value	
Etiology				Indicator	varac	
ICD						
Microbial Susceptibility	7			Indicator	Value	
==*=*=*=*=*=	= * = * = * =	= * = * = *	= * = * = * = * =	*=*=*=		
Pathogen		Cy LD		FPTF Active		
ADD ANOTHER10	104		LREPI	0		
Lab Test				Indicator	Value	
Etiology						
ICD Migrobial Suggestibility	,			Indiantas	V21	
Microbial Susceptibility *=*=*=*=*=*=*=*=*=*=*=*=		_*_*-	_*_*_*_	Indicator *=*=*=	Value	
Pathogen				FPTF Active		
LEG10	105	טעע גי	LREPI	0		
Lab Test				Indicator	Value	
Etiology						

ICD			
Microbial Susceptibility	-	Indicator	Value
==*=*=*=*=*=*=*=*=		*=*=*=	
Pathogen	Ref# Cy LD Protocol	FPTF Active	
EXAMPLEPATHOGEN1010	106 LREPI	0	
Lab Test		Indicator	Value
Etiology			
ICD			
Microbial Susceptibility		Indicator	Value
==*=*=*=*=*=	:*=*=*=*=*=*=	*=*=*=	
Pathogen	Ref# Cy LD Protocol	FPTF Active	
ADD SOME TEXT	999 D 1 LREPI	0	
Lab Test		Indicator	Value
25 OH VITAMIN D		Contains	0
Etiology			
1(1-NAPHTHYL)-2-THIOUREA			
ICD			
100.0 (ICD-9)			
800.04 (ICD-9)			
200.01 (ICD-9)			
250.00 (ICD-9)			
F17.203 (ICD-10)			
Microbial Susceptibility	•	Indicator	Value
AMIKACN		Unknown	
==*=*=*=*=*=			
Pathogen	Ref# Cy LD Protocol	FPTF Active	
IEN # 108 damaged. (No Protoco	•		
==*=*=*=*=*=*=*=*=			
Pathogen	Ref# Cy LD Protocol	FPTF Active	
IEN # 109 damaged. (No Protoco	•	4 _ 4 _ 4 _	
Pathogen IEN # 110 damaged. (No Protoco	Ref# Cy LD Protocol	FPIF ACLIVE	
==*=*=*=*=*=*=*=*=*=		*-*-*-	
Pathogen	Ref# Cy LD Protocol		
TESTROB10	111 LREPI		
Lab Test	III LREPI	Indicator	Value
Etiology		Indicator	value
ICD			
Microbial Susceptibility	,	Indicator	Value
==*=*=*=*=*=*=*=*=*			valac
Pathogen	Ref# Cy LD Protocol		
ADD SOME TEXT10	112 LREPI		
Lab Test		Indicator	Value
Etiology		11101100101	• • • • • • • • • • • • • • • • • • • •
ICD			
Microbial Susceptibility	•	Indicator	Value

4. ICD-10 Searches

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

NOTE: Existing ICD-9 functionality has not changed.

4.1. ICD-10-CM Diagnosis Code Search

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

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 the process of selecting the correct valid ICD-10 diagnosis code will be.
- 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.

5. Technical Information

5.1. Routines

Some EPI routines were modified to replace direct global reads and old APIs with new Standards and Terminology Services (STS) APIs and Lexicon APIs wherever possible. The following new routines are added:

Routine Name	Function
LR421P	ICD-10 Post Install Routine. (Populates new ICD-10 coding system fields for current records in the EPI Extract File (File # 69.5).
LREPICD	ICD-10 determines coding system (9 or 10) for extract parameter.
LREPIXDG	Called to pull in ICD Description and Code Set information for Enter/Edit Local Pathogens and Lab EPI Parameter Setup screens.

5.2. HL7 Messages

The DG1segment of HL7 Messages has been updated to include an ICD-9 or ICD-10 code set indicator.

Example: HL7 MailMan Message

```
DG1|1||A90.~DENGUE FEVER [CLASSICAL DENGUE]~<mark>I10</mark>|20121023183419-0400||PR
DG1|2||A91.~DENGUE HEMORRHAGIC FEVER~<mark>I10</mark>|20121023183419-0400||
DG1|3||A93.8~OTHER SPECIFIED ARTHROPOD-BORNE VIRAL FEVERS~<mark>I10</mark>|20121023183419-0400||
```

5.3. Online Help for ICD-10 Codes

Help text (?) and extended help text (??) is included for prompts related to ICD-10 codes.

Example: Help Text with 1 and 2 Question Marks (? and ??)

```
LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN Page 1 of 5

NAME: LEGIONELLA INACTIVE: NO

Laboratory Test(s) Indicator Value

ICD Coding System [ICD-9 or ICD-10]? (9/10): 10

ICD Code Cd Set ICD Description
+A48.2 ICD-10 Nonpneumonic Legionnaires' Disease [Pontiac Fever]
A48.8 ICD-10 Other Specified Bacterial Diseases?

Answer with ICD DIAGNOSIS
Choose from:
482.80
A48.1

Enter RETURN to continue or '^' to exit: <Return>
```

```
A48.2
A48.8
Enter RETURN to continue or '^' to exit: <Return>
   You may enter a new ICD DIAGNOSIS, if you wish
 Select the ICD standardized code, used nationwide in federal and non-federal private
health care facilities, to be included in the search.
LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN Page 1 of 5
NAME: LEGIONELLA
                                                            INACTIVE: NO
Laboratory Test(s)
                                 Indicator
                                                            Value
ICD Coding System [ICD-9 or ICD-10]? (9/10): 10
ICD Code Cd Set ICD Description +A48.2 ICD-10 Nonpneumonic Legionnaires' Disease [Pontiac Fever]
          ICD-10 Other Specified Bacterial Diseases
A48.8
??
Choose from:
482.80
A48.1
A48.2
Enter RETURN to continue or '^' to exit: <Return>
A48.8
    You may enter a new ICD DIAGNOSIS, if you wish
Enter RETURN to continue or '^' to exit: <Return>
This defines an ICD for use in emerging pathogens data search/extract.
```