

Training Session

Mapping Tool between code sets: ICD-9-CM and ICD-10-CM/PCS

Presenters:

Peter Hicks, MA, MPH, Centers for Disease Control and Prevention (CDC)

Denise Love, Executive Director/Project Manager, National Association of Health Data Organizations (NAHDO)

Ginger Cox, RHIT, CCS, ICD-9/10 Coding and Conversion Analyst, University of California, Davis (UC Davis), Center for Healthcare Policy and Research

Patrick Romano, MD, MPH, FACP, FAPP, Professor of Medicine and Pediatrics, UC Davis School of Medicine, Center for Healthcare Policy and Research

If you are seeking Certified in Public Health (CPH) recertification credit for this webinar, please be sure to fill out the evaluation form at the end of the webinar.

One credit is available for attending this webinar and completing the evaluation.

If you have any questions, please contact us at syndromic@syndromic.org.

Learning Objectives



By the end of this presentation, attendees will be able to:

1. Describe how to use the MapIt tool;
2. Determine tool access, capabilities, and application; and
3. Know how the MapIt tool can be applied to the current ICD-9/10 Transition.

Upcoming ISDS Events:

2014 ISDS Conference Abstract Submission NOW OPEN until September 3rd

<http://www.syndromic.org/annual-conference/2014-isds-conference/abstract-submission>

Webinar: Mortality Associated with Heat Wave of 2010 and Ahmedabad Heat Action Plan

Date/Time: TODAY, June 3rd, 11:30pm – 12:30am ET (June 4th)

Meaningful Use Community Call

Date/Time: Friday, June 6th, 1pm-2pm ET

BioSense User Group Call

Date/Time: Tuesday, June 10th, 3pm-4:30pm ET

Research Committee Call

Date/Time: Wednesday, June 11th, 1pm-2pm ET

Webinar: New challenges in tobacco surveillance: monitoring the prevalence of electronic cigarettes and hookah use in the United States

Date/Time: Tuesday, June 24th, 2pm-3pm ET

Learn more at www.syndromic.org

Training Session: Mapping Tool between two code sets ICD-9-CM and ICD-10-CM/PCS

ICD-10 Transition Workgroup

Centers for Disease Control and Prevention



Overview

❑ Introduction

- ❑ Kickoff: BioSense Syndromic Surveillance Mapping Work
- ❑ Development
- ❑ Background: Mapping logic
- ❑ Online tools and Mapping logic
- ❑ GEM flags
- ❑ Mapping Examples
- ❑ Demonstration of MapIT and changes
- ❑ Summary



Introduction

- ❑ **Peter Hicks, Project Manager, DHS/CSELS/OPHSS/CDC, ICD-10 Transition Workgroup**
- ❑ **Denise Love, Executive Director/Project Manager, National Association of Health Data Organizations (NAHDO)**
- ❑ **Ginger Cox, RHIT, CCS, ICD-9/10 Coding and Conversion Analyst, University of California, Davis Center for Healthcare Policy and Research**
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Overview

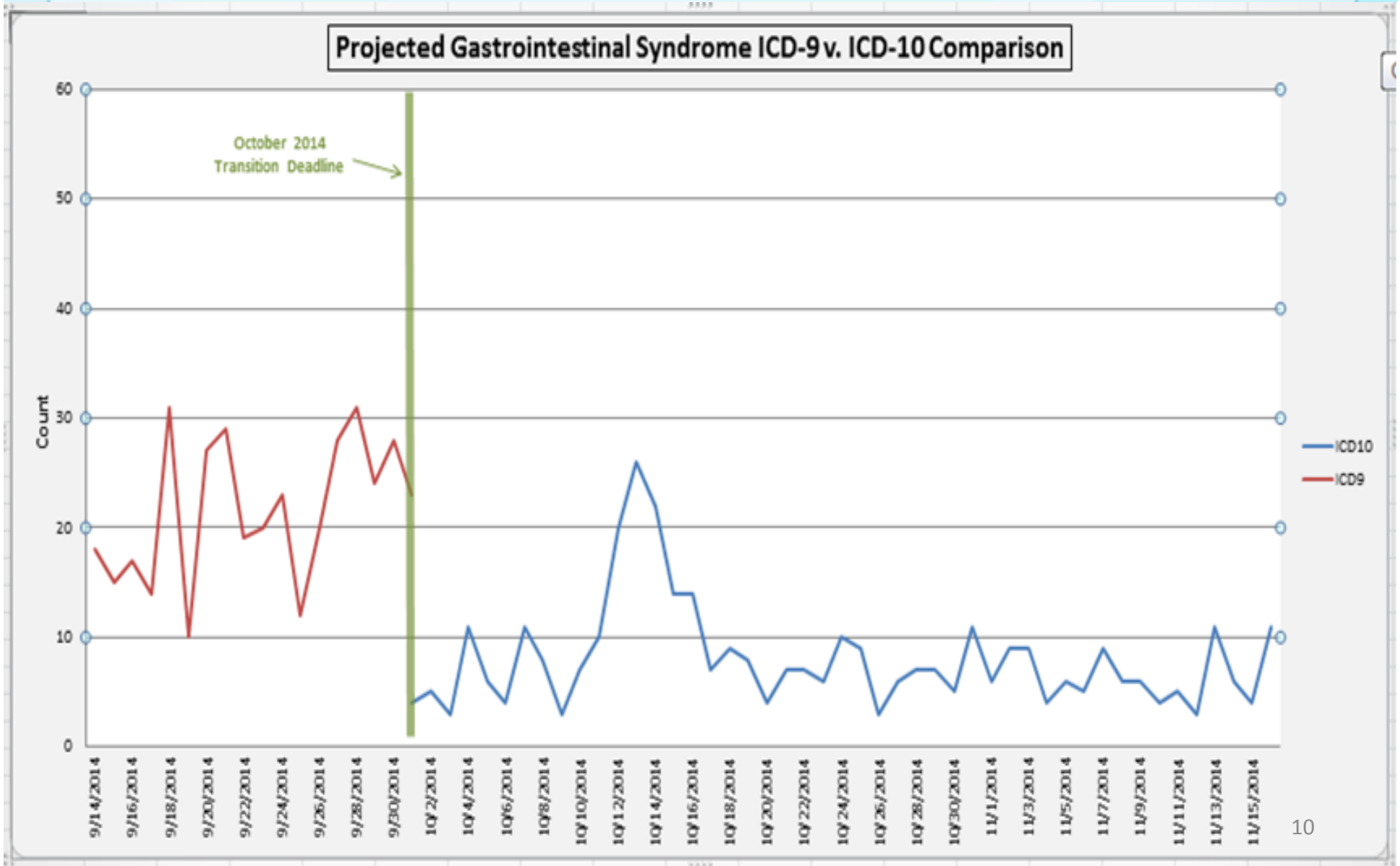
- ❑ Introduction
- ❑ **Kickoff: BioSense Syndromic Surveillance Mapping Work**
- ❑ Development
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CDC / CSTE / ISDS Syndromic Surveillance Definition ICD Code Mapping Consensus Process



Potential Impact on Time Series Analysis

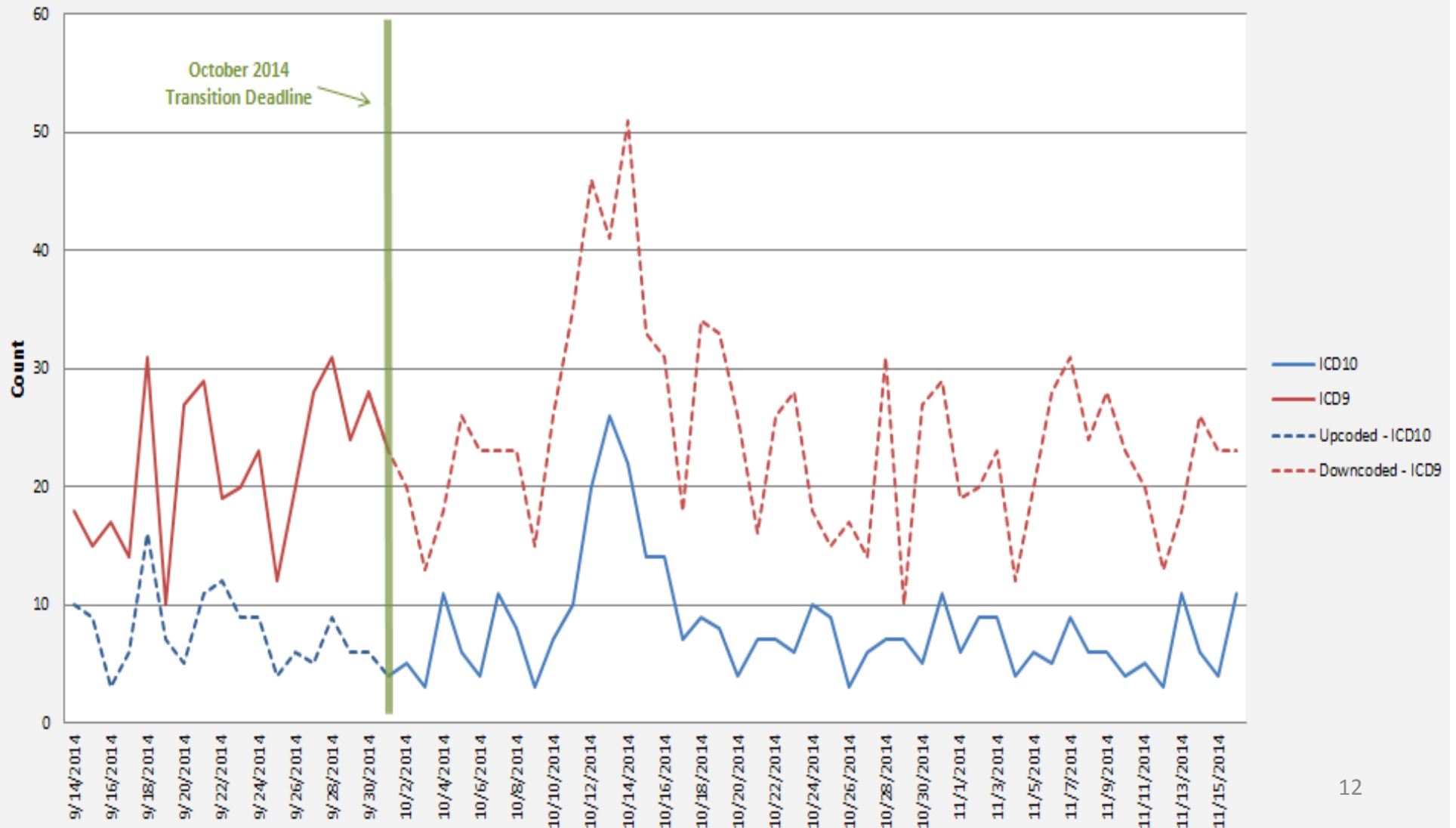


Master Reference Table

Syndrome Concept – Jan 2014 (I9)	ICD-9	Code Title	ICD-10	Code Title	Syndrome Concept – MAY 2014 (I10)
Rash	026.0	Spirillary fever	A25.0	Spirillosis	TBD
Rash	026.1	Streptobacillary fever	A25.1	Streptobacillosis	TBD
Rash	026.9	Unspecified rat-bite fever	A25.9	Rat-bite fever, unspecified	TBD
Rash	050.0	Variola major	B03	Smallpox	TBD
Rash	050.1	Alastrim	B03	Smallpox	TBD
Rash	050.2	Modified smallpox	B03	Smallpox	TBD
Rash	050.9	Smallpox, unspecified	B03	Smallpox	TBD
Rash	051.01	Cowpox	B08.010	Cowpox	TBD

Potential Impact on Time Series Analysis

Projected Gastrointestinal Syndrome ICD-9 v. ICD-10 Comparison



	A	B	C	D	E	F	G	H	I	J
	Origin	Concept (ICD-9 Syndrome)	Bio-terrorism Associated Agents 2003	BioSense 1.0 2003	BioSense 2.0-2013	ICD-9 Code 2014	ICD-9 Code Title 2014	ICD-10 Translation Directionality /	ICD-10 Code 2014	ICD-10 Code Title 2014
1										
2	CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated
3	CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated
4	CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated
5	CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated
6	CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus
7	CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.32	Mild persistent asthma with status asthmaticus
8	CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus
9	CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.52	Severe persistent asthma with status asthmaticus
10	CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation
11	CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation
12	CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation
13	CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation
14	CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated
15	CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated
16	CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated
17	CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated
18	CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus
19	CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.32	Mild persistent asthma with status asthmaticus
20	CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus
21	CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.52	Severe persistent asthma with status asthmaticus
22	CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation
23	CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation
24	CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation
25	CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation
26	CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspecified	Forward Map	J45.909	Unspecified asthma, uncomplicated
27	CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspecified	Forward Map	J45.998	Other asthma
28	CDC	Asthma	493.91	493.xx	493.xx	493.91	Asthma, unspecified type, with status asthmaticus	Forward Map	J45.902	Unspecified asthma with status asthmaticus
29	CDC	Asthma	493.92	493.xx	493.xx	493.92	Asthma, unspecified type, with (acute) exacerbation	Forward Map	J45.901	Cough variant asthma
30	CDC	Asthma		493.xx	493.xx	493.81	Exercise induced bronchospasm	Forward Map	J45.990	Exercise induced bronchospasm
31	CDC	Asthma		493.xx	493.xx	493.82	Cough variant asthma	Forward Map	J45.991	Cough variant asthma
32	CDC	Asthma		493.xx	493.xx	493.21	Chronic obstructive asthma with status asthmaticus	Forward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respi infection
33	CDC	Asthma	--	493.xx	493.xx	493.22	Chronic obstructive asthma with (acute) exacerbation	Forward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation
34	CDC	Asthma	--	493.xx	493.xx	493.20	Chronic obstructive asthma, unspecified	Forward Map	J44.9	Chronic obstructive pulmonary disease, unspecified
35	CDC	Asthma	--		--	491.20	Obstructive chronic bronchitis without exacerbation	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified
36	CDC	Asthma	--		--	491.21	Obstructive chronic bronchitis with (acute) exacerbation	Backward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation
37	CDC	Asthma	--		--	491.22	Obstructive chronic bronchitis with acute bronchitis	Backward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respi infection
38	CDC	Asthma	--		--	496	Chronic airway obstruction, not elsewhere classified	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified
39										
40										
41										
42										
43										
44										

	I	J	K	L	M	N	O	P	Q	R	S	T
	ICD-10 Code 2014	ICD-10 Code Title 2014	ICD-9 Syndrome 2014	ICD-9 Sub-Syndrome 2014	ICD-10 Macro Syndrome	ICD-10 Micro Syndrome	CDC	P1	P2	P3 (NH)	Remarks from Panel	ISDS - Consensus
1												
2	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A			A		
3	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A			A		
4	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A			A		
5	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A			A		
6	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A			A		
7	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
8	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
9	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
10	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
11	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
12	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
13	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
14	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A			A		
15	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A			A		
16	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A			A		
17	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A			A		
18	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A			A		
19	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
20	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
21	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A			A		
22	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
23	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
24	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
25	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A			A		
26	J45.909	Unspecified asthma, uncomplicated	Asthma	Asthma			A			A		
27	J45.998	Other asthma	Asthma	Asthma			C			A		
28	J45.902	Unspecified asthma with status asthmaticus	Asthma	Asthma			C			C		
29	J45.901	Cough variant asthma	Asthma	Asthma			C			C		
30	J45.990	Exercise induced bronchospasm	Asthma	Asthma			A			A		
31	J45.991	Cough variant asthma	Asthma	Asthma			A			A		
32	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D			D		
33	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D			D		
34	J44.9	Chronic obstructive pulmonary disease, unspecified					D			D		
35	J44.9	Chronic obstructive pulmonary disease, unspecified					D			D		
36	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D			D		
37	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D			D		
38	J44.9	Chronic obstructive pulmonary disease, unspecified					D			D		
39												
40												
41												
42												
43												
44												

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Development

- ❑ **Mapping require the use of a basic foundation**
 - ❑ General Equivalence Mappings (or GEMs)
 - ❑ Provide all plausible translation alternatives
 - ❑ Useful for applied mapping to meet your specific map
- ❑ **Created a software tool, based on CMS GEMs**
 - ❑ Mapped ICD-9-CM to ICD-10-CM (diagnosis and external causes)
 - ❑ Mapped ICD-9-CM to ICD-10-PCS (procedures)
 - ❑ Use Forward, Backward, Reverse Forward, Reverse Backward Logic
- ❑ **Mapping Tool offered by AHRQ**
 - ❑ Tool is available on AHRQ website
- ❑ **Currently being updated with GEMs FY 2014**
 - ❑ Code, Description, Mapping changes effective 10/1/2013



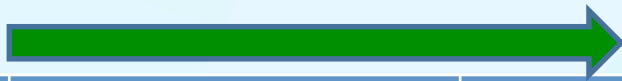
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DX Example: Proper Direction

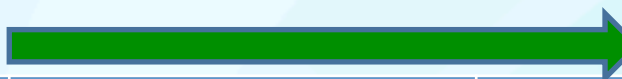
9-to-10



Forward Map

ICD-9	Description	Map	ICD-10	Description
451.81	Phlebitis and thrombophlebitis, iliac vein	F Map	I80.219	Phlebitis and thrombophlebitis, unspecified iliac vein

10-to-9



Backward Map

ICD-10	Description	Map	ICD-9	Description
I80.219	Phlebitis and thrombophlebitis, unspecified iliac vein	B Map	451.81	Phlebitis and thrombophlebitis, iliac vein

Match in general description



DX Example: Reverse Direction

Reverse Map ← 10-to-9

ICD-10	Description	Map	ICD-9	Description
180.211	Phlebitis and thrombophlebitis, <u>right</u> iliac vein	RB Map	451.81	Phlebitis and thrombophlebitis, iliac vein
180.212	Phlebitis and thrombophlebitis, <u>left</u> iliac vein	RB Map		
180.213	Phlebitis and thrombophlebitis <u>bilateral</u> iliac veins	RB Map		

Reverse Backward mapping logic

Use the backward map and reverse the lookup

Provide more specific codes



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ICD-10-CM

ICD-10-CM Codes

ICD-10-CM Tabular

ICD-10 to ICD-9

ICD-10-CM Thesaurus

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NCI Thesaurus



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FORWARD MAP

ICD-9-CM to ICD-10-CM Codes and Description - online

ICD-9-CM TO ICD-10-CM

451.81|

Search

1 codes were found, showing 1 codes from 1 to 1.

ICD-9-CM Code:

451.81 Phlebitis and thrombophlebitis of iliac vein



Related ICD-10-CM Code(s):

I80.219 (10000) - Phlebitis and thrombophlebitis of unspecified iliac vein



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BACKWARD MAP

ICD-10-CM to ICD-9-CM Crosswalk (GEM) - 2013

ICD-10-CM Code

180.219

Search

ICD-10-CM Code:

180.219 Phlebitis and thrombophlebitis of unspecified iliac vein



Crosswalked ICD-9-CM Code(s):

451.81 - Phlebitis and thrombophlebitis of iliac vein

1 Code(s) Found



Convert 2012 ICD-9 Codes to ICD-10, or Convert ICD-10 Codes to ICD-9

Proper Directions

Type a couple of digits or characters to find an ICD-9 or ICD-10 code to convert:

Tip: Use this shorthand URL to quickly convert a code:

www.icd10data.com/Convert/<Insert ICD-9/ICD-10 code here>

For example, convert ICD-9 code 001.0 to its ICD-10 equivalent using:

www.icd10data.com/Convert/001.0. The website will automatically determine if the code you have entered is an ICD-9-CM or ICD-10-CM code and display the appropriate conversion data.

Or [Subscribe](#) to Find-A-Code today for instant access to all the coding information you need.

SAMPLE:

Map-A-Code uses the Medicare General Equivalence Mappings (GEMs) and Reimbursement Mappings (RMs) to map codes from ICD-9-CM (v1 and v3) to ICD-10-CM and ICD-10-PCS.

1. Select mapping type:

Forward Mappings (ICD-9 to ICD-10 GEMs)

- ICD-9-CM to ICD-10-CM
- ICD-9 v3 to ICD-10-PCS

Backward Mappings (ICD-10 to ICD-9 GEMs)

- ICD-10-CM to ICD-9-CM
- ICD-10-PCS to ICD-9 v3

Reimbursement Mappings (ICD-10 to ICD-9 RMs)

- ICD-10-CM to ICD-9-CM
- ICD-10-PCS to ICD-9 v3

2. Enter ICD codes:

001.0
754.35
806.00

ICD-9-CM Example:

001.0
754.35
806.00

ICD-9 v3 Example:

00.01
95.13
21.21

ICD-10-CM Example:

A00.0
Q65.02
S12.000A

ICD-10-PCS Example:

6A750Z4
B845ZZZ
09JKXZZ

3. Map Codes

Enter information to search for below

Search [input] View All [checked] Include Description [checked]

Results Manager

Jump to: Select all items within:

9 Cm 9 Pcs 10 Cm 10 Pcs

Uncheck All

- ICD 10 Pcs
 - 0016070 Bypass Cerebral Ventricle to Nasopharynx with A
 - 0016071 Bypass Cerebral Ventricle to Mastoid Sinus with .
 - 0016072 Bypass Cerebral Ventricle to Atrium with Autolog
 - 0016073 Bypass Cerebral Ventricle to Blood Vessel with A
 - 0016074 Bypass Cerebral Ventricle to Pleural Cavity with A
 - 0016075 Bypass Cerebral Ventricle to Intestine with Autolc
 - 0016076 Bypass Cerebral Ventricle to Peritoneal Cavity wi
 - 0016077 Bypass Cerebral Ventricle to Urinary Tract with A
 - 0016078 Bypass Cerebral Ventricle to Bone Marrow with A
 - 001607B Bypass Cerebral Ventricle to Cerebral Cistems wi
 - 00160J0 Bypass Cerebral Ventricle to Nasopharynx with S
 - 00160J1 Bypass Cerebral Ventricle to Mastoid Sinus with !
 - 00160J2 Bypass Cerebral Ventricle to Atrium with Syntheti
 - 00160J3 Bypass Cerebral Ventricle to Blood Vessel with S
 - 00160J4 Bypass Cerebral Ventricle to Pleural Cavity with S
 - 00160J5 Bypass Cerebral Ventricle to Intestine with Synth
 - 00160J6 Bypass Cerebral Ventricle to Peritoneal Cavity wi
 - 00160J7 Bypass Cerebral Ventricle to Urinary Tract with S
 - 00160J8 Bypass Cerebral Ventricle to Bone Marrow with S
 - 00160JB Bypass Cerebral Ventricle to Cerebral Cistems wi
 - 00160K0 Bypass Cerebral Ventricle to Nasopharynx with P
 - 00160K1 Bypass Cerebral Ventricle to Mastoid Sinus with
 - 00160K2 Bypass Cerebral Ventricle to Atrium with Nonaut

Single lookup

Equivalence mapping information for:

Mapping Counts by Stage

	All Direction	Distinct !Direction	All Reverse !Direction	Distinct Reverse Direction	Stage Distinct
Stage 1					
Stage 2					

Distinct Codes Across Stage 1 and 2 All Directions Included:

Instant result

Equivalence mapping information for:

Direction Reverse !Direction Merged Mapping

Equivalence Tree Boolean Exp. Equivalence Maps

[Empty mapping area]

Pop Equivalence Tree Out

Please select a file of source ICD codes to view for equivalence mapping

[input] Batch text file [Browse]

Read in source codes

Codes the system is unable to parse will be displayed in the gray box below.

- 585

Include Description [checked] [Reset/Clear]

Duplicate values are allowed and will be exported.

- ICD 9 CM
 - 40300 Hypertensive chronic kidney disease, malignant, with chronic kid
 - 40301 Hypertensive chronic kidney disease, malignant, with chronic kid
 - 40310 Hypertensive chronic kidney disease, benign, with chronic kidne
 - 40311 Hypertensive chronic kidney disease, benign, with chronic kidne
 - 40390 Hypertensive chronic kidney disease, unspecified, with chronic k
 - 40391 Hypertensive chronic kidney disease, unspecified, with chronic k
 - 40400 Hypertensive h... sease, malignant, witho
 - 40401 Hypertensive h... sease, malignant, with t
 - 40402 Hypertensive h... sease, malignant, witho
 - 40403 Hypertensive heart and chronic kidney disease, malignant, with t
 - 40410 Hypertensive heart and chronic kidney disease, benign, without l
 - 40411 Hypertensive heart and chronic kidney disease, benign, with hea
 - 40412 Hypertensive heart and chronic kidney disease, benign, without l
 - 40413 Hypertensive heart and chronic kidney disease, benign, with hea
 - 40490 Hypertensive heart and chronic kidney disease, unspecified, with
 - 40491 Hypertensive heart and chronic kidney disease, unspecified, with
 - 40492 Hypertensive heart and chronic kidney disease, unspecified, with
 - 40493 Hypertensive heart and chronic kidney disease, unspecified, with
 - 5855 Chronic kidney disease, Stage V
 - 5856 End stage renal disease

Excel Output

Set Name: DX-CRENLF- Chronic renal failure-v4.5PQI

Export Clusters [icon]

Export [icon]

9 9 CM 9 9 PCS 10 10 CM 10 10 PCS

Send selected codes to export pane [icon]

MapIT Output: Excel

YOUR NAME

Set Name	Set name for CDC program	Number of Codes	Types of Codes	Subject Matter Experts Work group
PE	Pulmonary embolism	42	Diagnosis	DVT-PE Work Group

Stage 1: ICD-10 Codes Identified Through Forward and Reverse Backward Mapping from Original ICD-9 Codes

ICD-9	Description	Map Type	ICD-10 Code	Description	Approx	No Map	Combo	Scenario	Choice
415.0	Acute cor pulmonale	RB Map	I26.01	Septic pulmonary embolism with acute cor pulmonale	1	0	1	1	2
415.0	Acute cor pulmonale	RB Map	I26.02	Saddle embolus of pulmonary artery with acute cor pulmonale	1	0	1	1	2
415.0	Acute cor pulmonale	F Map	I26.09	Other pulmonary embolism with acute cor pulmonale	1	0	0	0	0
415.0	Acute cor pulmonale	RB Map	I26.09	Other pulmonary embolism with acute cor pulmonale	1	0	1	1	2
415.11	latrogenic pulmonary embolism and infarction	F Map	I26.90	Septic pulmonary embolism without acute cor pulmonale	1	0	1	1	2
415.11	latrogenic pulmonary embolism and infarction	F Map	I26.99	Other pulmonary embolism without acute cor pulmonale	1	0	1	1	2
415.11	latrogenic pulmonary embolism and infarction	F Map	T80.0XXA	Air embolism following infusion, transfusion and therapeutic	1	0	1	1	1
415.11	latrogenic pulmonary embolism and infarction	F Map	T81.718A	Complication of other artery following a procedure, not elsewhere	1	0	1	1	1
415.11	latrogenic pulmonary embolism and infarction	F Map	T81.72XA	Complication of vein following a procedure, not elsewhere	1	0	1	1	1
415.11	latrogenic pulmonary embolism and infarction	F Map	T82.817A	Embolism of cardiac prosthetic devices, implants and grafts,	1	0	1	1	1
415.11	latrogenic pulmonary embolism and infarction	F Map	T82.818A	Embolism of vascular prosthetic devices, implants and grafts,	1	0	1	1	1
415.12	Septic pulmonary embolism	RB Map	I26.01	Septic pulmonary embolism with acute cor pulmonale	1	0	1	1	1
415.12	Septic pulmonary embolism	F Map	I26.90	Septic pulmonary embolism without acute cor pulmonale	1	0	0	0	0
415.13	Saddle embolus of pulmonary artery	RB Map	I26.02	Saddle embolus of pulmonary artery with acute cor pulmonale	1	0	1	1	1
415.13	Saddle embolus of pulmonary artery	F Map	I26.92	Saddle embolus of pulmonary artery without acute cor pulmonale	1	0	0	0	0
634.61	Spontaneous abortion, complicated by	F Map	O03.2	Embolism following incomplete spontaneous abortion	0	0	0	27	0

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GEM Flag: Exact Match

ICD-9	Desc	ICD10	Desc	Approx	No Map	Comb	Scenario	Choice
453.1	Thrombophlebitis migrans	I82.1	Thrombophlebitis migrans	0	0	0	0	0

- The Approximate Flag: code **0** means exact match.
- Business rule:
 - Do you take them as face-value?
 - Do you want to evaluate these exact-matches as well?





GEM Flag: Approximate Match

ICD-9	Desc	ICD10	Desc	Approx	No Map	Comb	Scenario	Choice
518.53	Acute and chronic resp failure following surgery	J96.20	Acute and chronic resp failure with hypoxia	1	0	0	0	0

- The **Approximate** Flag: code **1** means approximate match in descriptions.
- Business rule:
 - How will these descriptions affect your project or study?





GEM Flag: No Map

ICD-9	Desc	ICD10	Desc	Approx	No Map	Comb	Scenario	Choice
707.25	Pressure ulcer, unstageable	NoDx	No Dx	1	1	0	0	0

- The No Map Flag: code **1** means there are no codes to match the description (often found in the proper direction).**
- Business rule:**
 - Are there any other codes to consider?**
 - Consider reverse map to find additional codes?**





GEM Flag: Example of “No Map”

ICD9	Description	Map	ICD10	Description
707.25	Pressure Ulcer, unstageable	F Map	No DX	No DX
		RB Map	L89.000	Pressure ulcer, unstageable, unspec. elbow
		RB Map	L89.010	Pressure ulcer, unstageable, right elbow
		RB Map	L89.020	Pressure ulcer, unstageable, left elbow
		RB Map	L89.100	Pressure ulcer, unstageable, unspec. back
		RB Map	L89.110	Pressure ulcer, unstageable, rt.upper back
		RB Map	L89.120	Pressure ulcer, unstageable, lt.upper back
		RB Map	L89.130	Pressure ulcer, unstageable, rt.lower back
		RB Map	L89.140	Pressure ulcer, unstageable, lt.lower back
		RB Map	L89.1xx	Many, many more!



GEM Flag: Combination

Source: 415.11 Iatrogenic pulmonary embolism and infarction

ICD10 Target	Desc	Approx	No Map	Comb	Scenario	Choice
T80.0xxA	Air embolism following infusion, transfusion, therapeutic injection, initial encounter	1	0	1	1	1
I26.90	Septic pulmonary embolism without acute cor pulmonale	1	0	1	1	2
I26.99	Other pulmonary embolism without acute cor pulmonale	1	0	1	1	2

- The **Combination Flag**: code **1** means it takes more than one target code to satisfy all the meaning of the source code.
- Business rule:**
 - Do you want to capture all choices or are you limited to one choice?



GEM Flag: Example of Combination Clusters

Scenario	Choice	ICD-10	Description
1	1	T80.0xxA	Air embolism following infusion, transfusion, therapeutic injection, initial encounter
1	2	I26.90	Septic pulmonary embolism without acute cor pulmonale
Scenario	Choice	ICD-10	Description
1	1	T80.0xxA	Air embolism following infusion, transfusion, therapeutic injection, initial encounter
1	2	I26.99	Other pulmonary embolism without acute cor pulmonale

Source: 415.11 Iatrogenic pulmonary embolism and infarction



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Diagnosis Mapping Example

Dx: Severe Sepsis with septic shock

3 codes	ICD-9-CM
038.9	Unspecified septicemia
995.92	<u>Severe sepsis</u>
785.52	<u>Septic shock</u>

2 codes	ICD-10-CM
A41.9	Septicemia, unspecified
R65.21	<u>Severe sepsis with septic shock</u>

ICD-10-CM has more combination codes.

Condition + Site/Symptom + Attribute about the diagnosis.



Procedure Mapping Example

Px: Partial Gastrectomy with anastomosis to jejunum

1 code	ICD-9-CM
43.7	<u>Partial gastrectomy</u> with <u>anastomosis to jejunum</u>
2 codes	ICD-10-PCS
0DB60ZZ	<u>Excision of stomach</u> , open approach
0D160ZA	<u>Bypass stomach to jejunum</u> , open approach

ICD-10-PCS will not have combination codes.

Every objective and approach must have a **separate code for each site.**



Mapping Result: Will require team discussion

Did not result in ICD-10-CM codes with coma.

ICD-9-CM	Description	ICD-10-CM	Description
070.42	Hepatitis delta with hepatic coma	B17.0	Acute delta(super) infection of hepatitis B carrier
070.43	Hepatitis E with hepatic coma	B17.2	Acute Hepatitis E
070.44	Chronic hepatitis C with hepatic coma	B17.8	Chronic viral hepatitis C

Look up in ICD-10-CM codebook for codes with coma.

ICD-10-CM	Look up in the ICD-10-CM for hepatic coma
K72.01	Acute & subacute hepatic failure with coma
K72.11	Chronic hepatic failure with coma



Quick Review: Mapping Logic

KEY	Name of Map	GEM Files	Method
F	Forward Map	9-to-10	Normal Lookup: We look up an ICD-9-CM code and get the closest ICD-10-CM/PCS equivalents.
RB	Reverse Backward Map	10-to-9	<u>Reverse Lookup:</u> We look up an ICD-9-CM code and get additional ICD-10-CM/PCS equivalents that map backward to the same ICD-9-CM code.
KEY	Name of Map	GEM Files	Method
B	Backward Map	10-to-9	Normal Lookup: We look up an ICD-10-CM/PCS code and get the closest ICD-9-CM equivalents.
RF	Reverse Forward Map	9-to-10	<u>Reverse Lookup:</u> We look up an ICD-10-CM/PCS code and get additional ICD-9 equivalents that map forward to the same ICD-10-CM/PCS code.



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MapIT Demonstration

- ❑ Will show the single lookup
- ❑ Will show the batch mode for large set of ICD codes
- ❑ Will show 9 to 10
- ❑ Will show 10 to 9
- ❑ Will show the output
- ❑ If you have a favorite ICD-9-CM code for us to map, let us know!



How to Download MapIT

- ❑ <http://qualityindicators.ahrq.gov/Resources/Toolkits.aspx>
- ❑ Under Toolkits, go to “MapIT Tool”
- ❑ Under Toolkits, go to “MapIT Tool documentation: Conversion of ICD9 to ICD10” (3 page of step-by-step)

- ❑ MapIT Tool Zip File: Drag and Drop into a folder or desktop
 - ❑ MapIT_FY_Comp_2_1_120
- ❑ Click on the above folder and two more folders will appear
 - ❑ MapIT_FY12_2_1_120
 - ❑ MapIT_FY13_2_1_120



How to Run the Application

MapIT_FY_Comp_2_1_120 > MapIT_FY13_2_1_120

File Tools Help

Open Include in library Share with Burn New folder

Name	Date modified	Type	Size
Files	5/27/2014 10:50 AM	File folder	
GemFiles	5/27/2014 10:50 AM	File folder	
Ahrq.Data.dll	4/30/2013 1:53 PM	Application extens...	158 KB
Ahrq.Data.GemLoader	5/12/2013 10:22 PM	Application	105 KB
Ahrq.Data.GemLoader.pdb	5/12/2013 10:22 PM	PDB File	218 KB
Ahrq.Data.pdb	4/30/2013 1:53 PM	PDB File	296 KB
Ahrq.Mapped.Ui	5/21/2013 10:40 PM	Application	350 KB
Ahrq.Mapped.Ui.exe.config	3/11/2013 11:14 AM	CONFIG File	2 KB
Ahrq.Mapped.Ui.pdb	5/21/2013 10:40 PM	PDB File	498 KB
Ahrq.Reporting.dll	5/21/2013 10:40 PM	Application extens...	371 KB
Ahrq.Reporting.pdb	5/21/2013 10:40 PM	PDB File	170 KB
AHRQ_QI_Example_Export	3/1/2013 3:09 AM	Microsoft Excel W...	9 KB
Antlr3.Runtime.dll	3/1/2013 3:09 AM	Application extens...	101 KB
BooleanParser.dll	4/30/2013 1:53 PM	Application extens...	13 KB
BooleanParser.pdb	4/30/2013 1:53 PM	PDB File	32 KB
MapperData	3/12/2013 11:06 AM	XML Document	117,073 KB
Microsoft.ReportViewer.Common.dll	3/1/2013 3:09 AM	Application extens...	6,239 KB
Microsoft.ReportViewer.DataVisualization...	3/1/2013 3:10 AM	Application extens...	3,785 KB
Microsoft.ReportViewer.ProcessingObjec...	3/1/2013 3:09 AM	Application extens...	90 KB
Microsoft.ReportViewer.WinForms.dll	3/1/2013 3:10 AM	Application extens...	534 KB

Double click to open
or
Right click and select "Run as administrator"

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AHRQ Map It Tool - 2013

AHRQ Map It Tool - 2013

File Help

Open codes to map and export Hide Description in Visualizer Print Screen Pop Description Tree Out

Enter information to search for below

Search View All Include Description

Results Manager

Jump to: Select all items within:

9 Cm 9 Pcs 10 Cm 10 Pcs

Uncheck All

ICD 10 Pcs

- 0016070 Bypass Cerebral Ventricle to Naso
- 0016071 Bypass Cerebral Ventricle to Mastc
- 0016072 Bypass Cerebral Ventricle to Atrium
- 0016073 Bypass Cerebral Ventricle to Blood
- 0016074 Bypass Cerebral Ventricle to Pleur
- 0016075 Bypass Cerebral Ventricle to Intest
- 0016076 Bypass Cerebral Ventricle to Perito
- 0016077 Bypass Cerebral Ventricle to Urinar
- 0016078 Bypass Cerebral Ventricle to Bone
- 001607B Bypass Cerebral Ventricle to Cereb
- 00160J0 Bypass Cerebral Ventricle to Naso
- 00160J1 Bypass Cerebral Ventricle to Mastc
- 00160J2 Bypass Cerebral Ventricle to Atrium
- 00160J3 Bypass Cerebral Ventricle to Blood
- 00160J4 Bypass Cerebral Ventricle to Pleur
- 00160J5 Bypass Cerebral Ventricle to Intesti
- 00160J6 Bypass Cerebral Ventricle to Perto
- 00160J7 Bypass Cerebral Ventricle to Urinar
- 00160J8 Bypass Cerebral Ventricle to Bone
- 00160JB Bypass Cerebral Ventricle to Cereb
- 00160K0 Bypass Cerebral Ventricle to Naso
- 00160K1 Bypass Cerebral Ventricle to Mastc

Equivalence mapping information for:

Mapping Counts by Stage

	All	Distinct	All	Distinct	Stage
Direction			Reverse !Direction	Distinct	
Stage 1					
!Direction			Reverse Direction		
Stage 2					

Distinct Codes Across Stage 1 and 2 All Directions Included:

Equivalence mapping information for:

Direction Reverse !Direction Merged Mapping

Equivalence Tree Boolean Exp. Equivalence Maps

Please select a file of source ICD codes to view for equivalence mapping

Browse

Read in source codes

Codes the system is unable to parse will be displayed in the gray box below.


Include Description Reset/Clear

Duplicate values are allowed and will be exported.

Set Name:

Export Clusters Export

99 CM 99 PCS 1010 CM 1010 PCS

Send selected codes to export pane 

Pop Equivalence Tree Out

Status

MapIT New Changes: FY 2014 (effective 10/1/2013)

Actions	Diagnosis or Procedure	How many?
New codes	Diagnosis	0
New codes	Procedure	7
Deleted codes	Diagnosis	9
Deleted codes	Procedure	3
Description changes	Diagnosis	28
Description changes	Procedure	8
Mapping changes-GEM	Diagnosis	15
Mapping changes -GEM	Procedure	13



AHRQ Map It Tool - 2013 Will be 2014

File Help Two Panes

Open codes to map and export Hide Description in Visualizer Print Screen Pop Description Tree Out

Enter information to search for below

Search View All Include Description

Results Manager

Jump to: Select all items within:


9 Cm 9 Pcs 10 Cm 10 Pcs

Uncheck All

Single lookup of one or more codes and then export.

ICD 10 CM

- 10 A000 Cholera due to Vibrio cholerae 01, biovar cholerae
- 10 A001 Cholera due to Vibrio cholerae 01, biovar eltor
- 10 A009 Cholera, unspecified
- 10 A0100 Typhoid fever, unspecified
- 10 A0101 Typhoid meningitis
- 10 A0102 Typhoid fever with heart involvement
- 10 A0103 Typhoid pneumonia
- 10 A0104 Typhoid arthritis
- 10 A0105 Typhoid osteomyelitis
- 10 A0109 Typhoid fever with other complications
- 10 A011 Paratyphoid fever A
- 10 A012 Paratyphoid fever B
- 10 A013 Paratyphoid fever C
- 10 A014 Paratyphoid fever, unspecified
- 10 A020 Salmonella enteritis
- 10 A021 Salmonella sepsis
- 10 A0220 Localized salmonella infection, unspecified
- 10 A0221 Salmonella meningitis
- 10 A0222 Salmonella pneumonia
- 10 A0223 Salmonella arthritis
- 10 A0224 Salmonella osteomyelitis
- 10 A0225 Salmonella ovelonephritis

9 9 CM 9 9 PCS 10 10 CM 10 10 PCS 

Send selected codes to export pane

Status

Please select a file of source ICD codes to view for equivalence mapping

Batch Mode lookup, using created text files and then export.


Include Description

Duplicate values are allowed and will be exported.

ICD 10 CM

- 10 E1100 Type 2 diabetes mellitus with hyperosmolality without nonketotic hyperglycemic-hyp
- 10 E1101 Type 2 diabetes mellitus with hyperosmolality with coma
- 10 E1121 Type 2 diabetes mellitus with diabetic nephropathy
- 10 E1122 Type 2 diabetes mellitus with diabetic chronic kidney disease
- 10 E1129 Type 2 diabetes mellitus with other diabetic kidney complication
- 10 E11311 Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
- 10 E11319 Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular ede
- 10 E11321 Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macula
- 10 E11329 Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without mac
- 10 E11331 Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with m
- 10 E11339 Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy witho
- 10 E11341 Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with mac
- 10 E11349 Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without r
- 10 E11351 Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
- 10 E11359 Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular ede
- 10 E1136 Type 2 diabetes mellitus with diabetic cataract
- 10 E1139 Type 2 diabetes mellitus with other diabetic ophthalmic complication
- 10 E1140 Type 2 diabetes mellitus with diabetic neuropathy, unspecified
- 10 F1141 Type 2 diabetes mellitus with diabetic mononeuropathy

Set Name:



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Summary

- ❑ **Mapping logic knowledge will help you troubleshoot mapping problems.**
- ❑ **Tool is available and FREE.**
- ❑ **Easy to map legacy to new codes.**
- ❑ **Easy to map new codes to legacy.**
- ❑ **Eliminate the time to map manually or lookup in the codebook.**
 - ❑ **Refer to the codebook for coding notes and coding guidelines.**
- ❑ **Allow your team to focus on discussions on which code(s) needed for the project.**
- ❑ **Allow your program to move forward to other activities:**
 - ❑ **Upgrading system format.**
 - ❑ **Testing ICD-10 codes in the test environment.**
 - ❑ **Create report and compare to the legacy reports.**



Questions?



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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

