ISDS Webinar: ICD-9/10 Transition for Syndromic Surveillance

or

Avoiding planning paralysis for the ICD-9/10 Armageddon

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Center for Surveillance, Epidemiology, and Laboratory Services
Division of Health Informatics and Surveillance

Agenda

1. Overview of ICD-9/10 transition
2. Project Planning
3. Conversion impact on Syndromic Surveillance
4. Code Mapping
5. Trend Analysis
6. Review of Tools & Resources
7. Benefits and future of ISDS ICD/9/10 CoP

Overview of ICD-9 /10 Transition

HIPAA Administrative Simplification: Modifications to Medical Data Code Set Standards

- Published January 16, 2009
- October 1, 2013 – Compliance date for implementation of ICD-10-CM and ICD-10-PCS (no planned delays or grace periods)

- Single implementation date for all users
- All HIPAA covered entities impacted
- CPT coding unaffected

ICD-9/10 Transition Delay

"The Secretary of Health and Human Services may not, prior to October 1, 2015, adopt ICD-10 code sets as the standard for codes sets under section 1173 (c) of the Social Security Act"

(42 U.S.C. 1320d-2 (c)) and section 162.1002 of title 45, Code of Federal Regulations.

Limitations of ICD-9 CM

- The number of available codes is limited and the structure is restrictive (14K)
- Lack clinical specificity to account for complexity or severity of medical diseases/diagnoses and conditions; up-coding / compliance
- Inability to capture data relating to factors other than disease affecting health
- Lack of context / venue of injury / disease / condition / laterality
- Inability to explore new questions regarding healthcare utilization, socio-economic / lifestyle issues related to health

Benefits of ICD-10 CM / PCS

- Greater specificity, sensitivity, and precision

	ICD-9-CM / CPT	ICD-10-CM / PCS
Diagnoses	*14,025 codes*	*68,069 codes (>4x)*
Procedures	*3,824 codes*	*72,589 codes (>18x)*

- Updated medical terminology and classification of diseases and procedures
- Easier comparison of mortality & morbidity diagnosis data

Benefits of ICD-10

Place of Occurrence

- -Y92.0xx Home
- - Y92.1x x Residential institution
- - Y92.2x x School, other institution & public admin area
- - Y92.3xx Sports and athletic area

Activities

- - Y93.0x Injured while engaged in sports activity
- - Y93.1x Injured while engaged in leisure activity

Potential impact upon Emergency Response / Occupational Health / Consumer Health

Useful ICD-10 CM Codes

- Bitten by a turtle – W5921XS
- Bitten by sea lion, subsequent encounter – W5611XD
- Struck by macaw, initial encounter – W6112XA
- Prolonged stay in weightless environment – X52
- Hurt walking into a lamppost, initial encounter – W2202XA
- Problems in relationship with in-laws – Z63.1

ICD-9/10-CM Structure Comparison

ICD-9-CM

- 3 -5 characters
- First character is numeric or alpha (E or V)
- Characters 2-5 are numeric
- Always at least 3 characters
- Use of decimal after 3rd character

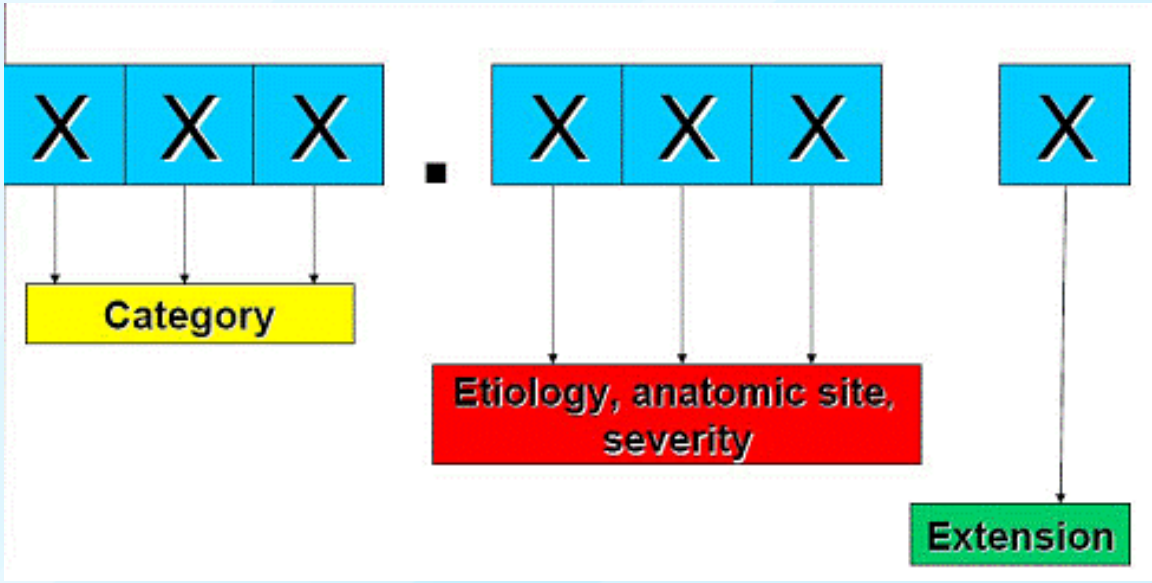
ICD-10-CM

- 3 -7 characters
- Character 1 is alpha (all letters except U are used)
- Character 2 is numeric
- Characters 3 -7 are alpha or numeric
- Use of decimal after 3rd character
- Use of dummy placeholder "x"
- Alpha characters are not case-sensitive

ICD-10 Structure

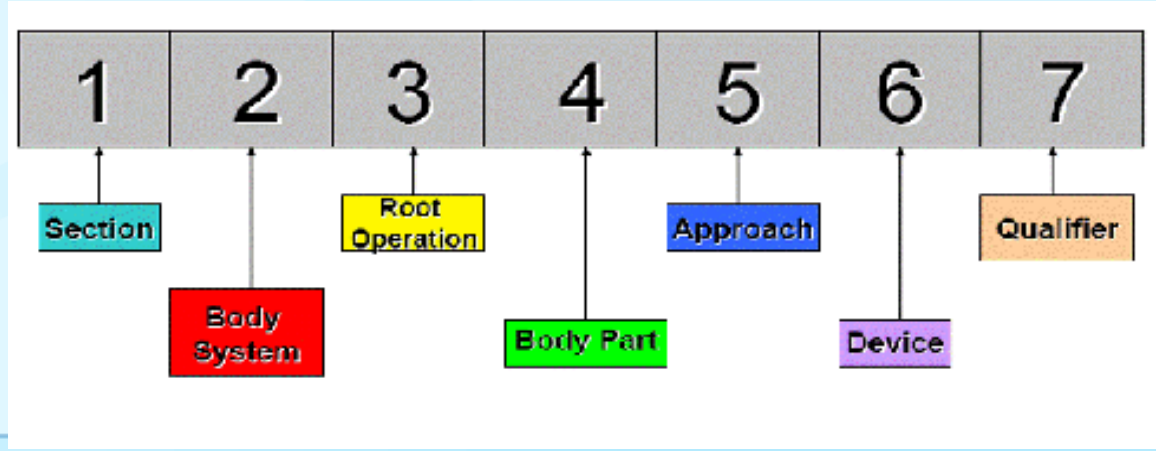
- Diagnosis

ICD-10-CM



- Procedure

ICD-10-PCS



Overview of ICD-9/10 transition

Differences Between ICD-9-CM and ICD-10 Code Sets		
	ICD-9-CM	**ICD-10 code sets**
Procedure **Diagnosis**	3,824 codes 14,025 codes	71,924 codes 69, 823 codes
ICD-10 Code Structure Changes (selected details)		
	Old	**New**
Diagnosis Structure	ICD-9-CM • 3 -5 characters • First character is numeric or alpha • Characters 2-5 are numeric	ICD-10-CM • 3 -7 characters • Character 1 is alpha • Character 2 is numeric • Characters 3 – 7 can be alpha or numeric
Procedure Structure	ICD-9-CM • 3-4 characters • All characters are numeric • All codes have at least 3 characters	ICD-10-PCS • ICD-10-PCS has 7 characters • Each can be either alpha or numeric • Numbers 0-9; letters A-H, J-N, P-Z

SOAP Note Example

7th Character
Injury codes require a 7th character extender that identifies the encounter. Documentation must be clear so that the correct extender can be applied.

Applied Specificity: Concussion
For a concussion documentation needs to include if the patient suffered loss of consciousness.

Acute vs. Chronic
Documentation of the patient's condition must include acute or chronic to assign the most appropriate ICD-10 code.

S: Mrs. Finley presents today after having a new cabinet fall on her last week, suffering a concussion, as well as some cervicalgia. She was cooking dinner at the home she shares with her husband. She did not seek treatment at that time. She states that the people that put in the cabinet in her kitchen missed the stud by about two inches. Her husband, who was home with her at the time, told her she was "out cold" for about two minutes. The patient continues to have cephalgias since it happened, primarily occipital, extending up into the bilateral occipital and parietal regions. The headaches come on suddenly, last for long periods of time, and occur every day. They are not relieved by Advil. She denies any vision changes, any taste changes, any smell changes. The patient has a marked amount of tenderness across the superior trapezius.

O: Her weight is 188 which is up 5 pounds from last time, blood pressure 144/82, pulse rate 70, respirations are 18. She has full strength in her upper extremities. DTRs in the biceps and triceps are adequate. Grip strength is adequate. Heart rate is regular and lungs are clear.

A: 1. Status post concussion with acute persistent headaches
2. Cervicalgia
3. Dorsal somatic dysfunction

P: The plan at this time is to send her for physical therapy, three times a week for four weeks for cervical soft tissue muscle massage, as well as upper dorsal. We'll recheck her in one month, sooner if needed.

External Cause
The falling cabinet is what caused the injuries. Description of the cause is required.

Activity
In ICD-10 the activity of the patient needs to be documented. An activity code is only used once at the initial encounter.

Location
Documentation needs to include the location of the patient at the time of injury or other condition. In ICD-10 the details include the actual room of the house the patient was in when the injury occurred.

Relief or No Relief
Intractable vs. non-intractable are an inherent part of the ICD-10 code for headaches and documentation needs to be clear for the appropriate code to be assigned.

	ICD-10 Coding
S06.0x1A	Concussion with loss of consciousness of 30 minutes or less initial encounter
G44.311	Acute post traumatic headache intractable
M54.2	Cervicalgia
M99.01	Segmental and somatic dysfunction of cervical region
W20.8xxA	Struck by falling object (accidentally) initial encounter
Y93.g3	Activity, cooking and baking
Y92.010	Place of occurrence, house, single family, kitchen

Subjective
Objective
Assessment
Plans

PHYSICIANS

- **Documentation:** The need for specificity dramatically increases by requiring laterality, stages of healing, weeks in pregnancy, episodes of care, and much more.
- **Code Training:** Codes increase from 17,000 to 140,000. Physicians must be trained.

CLINICAL

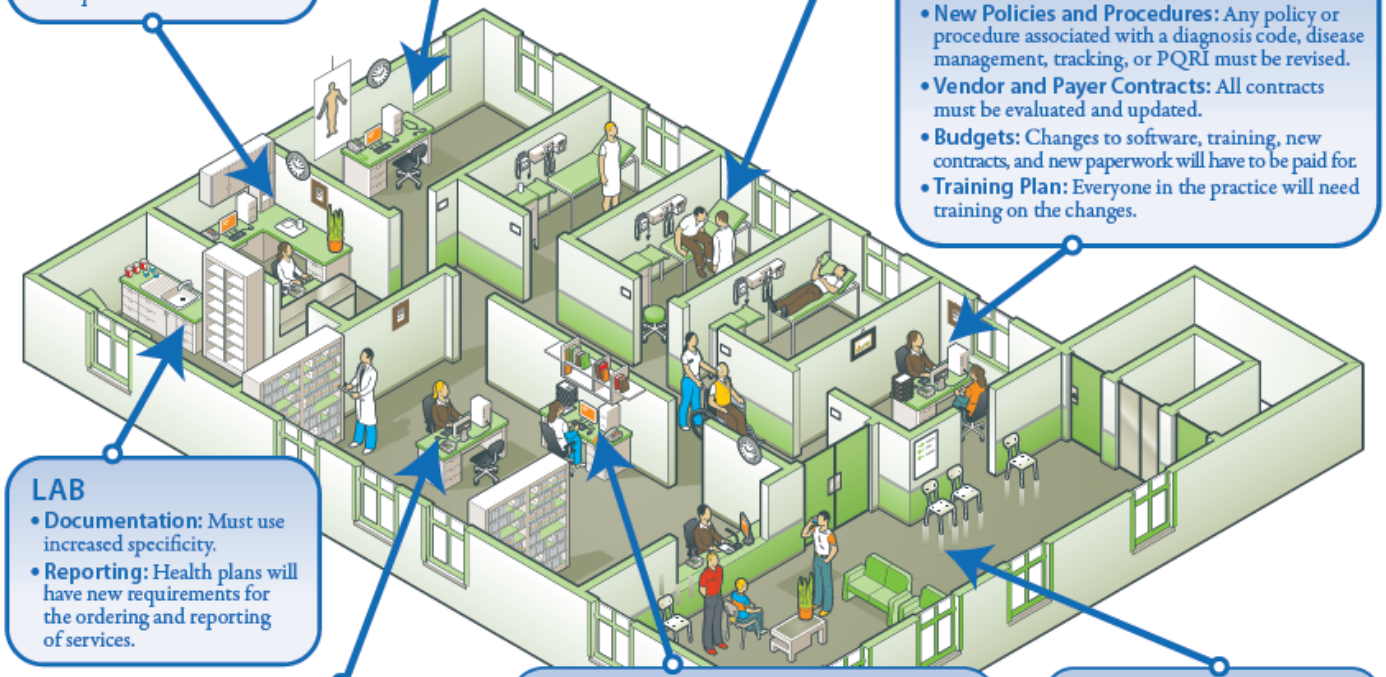
- **Patient Coverage:** Health plan policies, payment limitations, and new ABN forms.
- **Superbills:** Revisions required and paper superbills may be impossible.
- **ABNs:** Health plans will revise all policies linked to LCDs or NCDs, etc., ABN forms must be reformatted, and patients will require education.

NURSES

- **Forms:** Every order must be revised or recreated.
- **Documentation:** Must use increased specificity.
- **Prior Authorizations:** Policies may change, requiring training and updates.

MANAGERS

- **New Policies and Procedures:** Any policy or procedure associated with a diagnosis code, disease management, tracking, or PQRI must be revised.
- **Vendor and Payer Contracts:** All contracts must be evaluated and updated.
- **Budgets:** Changes to software, training, new contracts, and new paperwork will have to be paid for.
- **Training Plan:** Everyone in the practice will need training on the changes.



LAB

- **Documentation:** Must use increased specificity.
- **Reporting:** Health plans will have new requirements for the ordering and reporting of services.

BILLING

- **Policies and Procedures:** All payer reimbursement policies may be revised.
- **Training:** Billing department must be trained on new policies and procedures and the ICD-10-CM code set.

CODING

- **Code Set:** Codes will increase from 17,000 to 140,000. As a result, code books and styles will completely change.
- **Clinical Knowledge:** More detailed knowledge of anatomy and medical terminology will be required with increased specificity and more codes.
- **Concurrent Use:** Coders may need to use ICD-9-CM and ICD-10-CM concurrently for a period of time until all claims are resolved.

FRONT DESK

- **HIPAA:** Privacy policies must be revised and patients will need to sign the new forms.
- **Systems:** Updates to systems may impact patient encounters.

Planning for (Syndromic) Surveillance

ICD-10 Conversion Challenges

How Might You be Affected by the Transition?

Systems:

Changes may be needed to accommodate the new codes:

- Extend character length to 7
- Increase messaging capacity
- Increase storage capacity
- Modify system logic and edits
- Update system documentation
- Modify links with other systems

Processes:

Modifications may be needed for public health business processes:

- Statistical analysis programs
- Data extraction programs
- Data tables
- Publications
- Reports
- Health condition definitions
- Trend analyses

People:

Primary users: For those who assign diagnosis and/or procedure codes, you will need thorough training in ICD-10 code sets.

Secondary users: For those of you who utilize already coded ICD data, you will need to learn the new codes that apply to your data.

Training of staff will be critical to a smooth transition.

Impact of Transition on Public Health Surveillance

Public health entities whose systems, processes and people rely on already coded ICD data may face many challenges with the transition to ICD-10 code sets:

- Competing priorities with Meaningful Use and shrinking budgets
- Lacking ICD-10 expertise in public health sector
- Training needs for public health workforce
- Differing condition definitions across code sets
- Reporting 9 months of ICD-9-CM data and 3 months of ICD-10-CM/PCS in same year
- Analyzing multi-year data across code sets
- Achieving consensus on transition issues among stake-holders

ICD-10 Conversion Challenges

1. So much to do
   a. Build reverse translation analysis methodology
      - Syndrome/sub-syndrome classification
   b. Revise time series analysis methodology
   c. Develop new baselines with revised ICD-10 coding
   d. Access impact on statistical methods / tools (CUSUM, ESSENCE, etc.)
   e. Review and test Sensitivity, Specificity
   f. Develop new evaluation “Gold Standard”
2. Limited resources
3. Collaboration needed with Public Health partners
4. Lack of funding
5. Lack of standards
6. Best practices have yet to be developed

Overview of ICD-9/10 transition
Business Functions

1. Develop multi-functional plan to receive, process, store, and use ICD-10 CM / PCS codes
2. Develop technical requirements and specifications based upon business need
3. Develop ICD-9 CM to 10 CM code mappings
   (revise current ICD-9 CM mappings)
4. Revise existing syndromic definitions and queries
5. Revise analytical procedures
6. Produce codebooks, conversion tools, reference materials and best practices to share with the Public Health community

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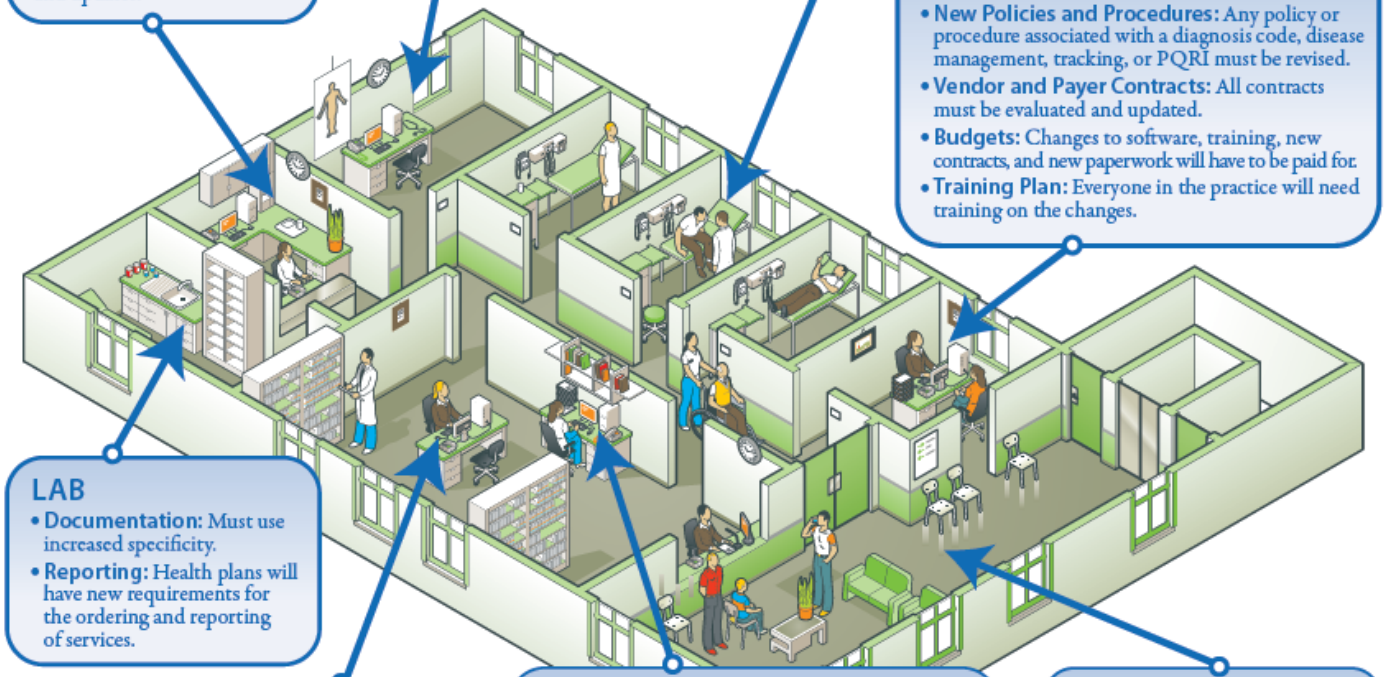

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Project Plan

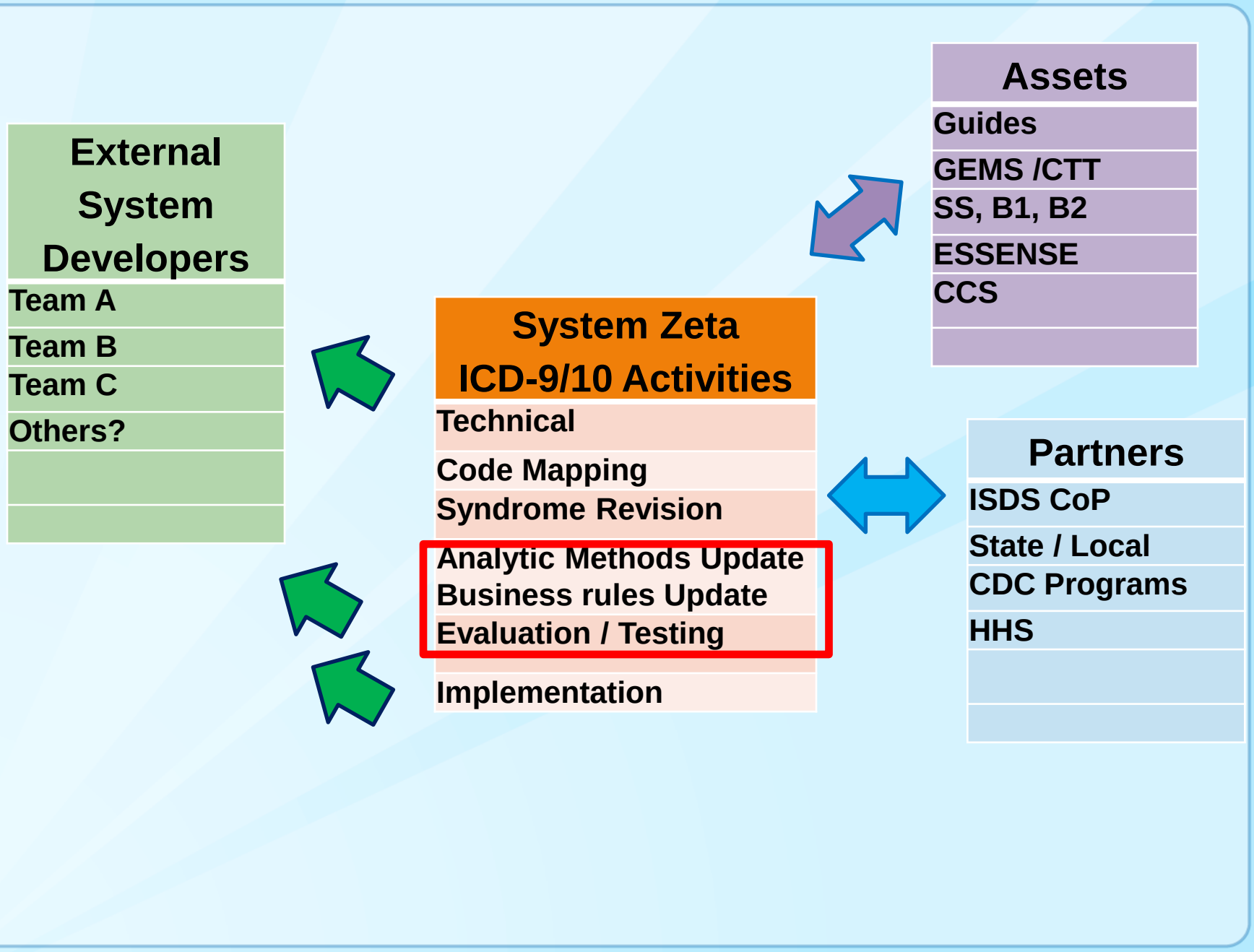
ID	Task	Task Name	Duration	Start	Finish	Predecessors	Resource Names	April	M
1		ICD 9 - 10 Transition							
2		Kickoff					Jeffrey Kriseman		
3		Planning	43 days	Thu 5/2/13	Mon 7/1/13				
4		EPLC	28 days	Thu 5/2/13	Mon 6/10/13				
5		Develop Project Plan	5 days				Jeffrey Kriseman,Umed Ajani		
6		Project Process Agreement	5 days				Jeffrey Kriseman,Umed Ajani		
7		Requirements Document	1 day				Jeffrey Kriseman,Umed Ajani		
8		Design Dcoument	5 days				Jeffrey Kriseman,Umed Ajani		
9		Test Plan	5 days				Jeffrey Kriseman,Umed Ajani		
10		Contingency Plan	3 days				Jeffrey Kriseman,Umed Ajani		
11		Training Plan	2 days				Jeffrey Kriseman,Umed Ajani		
12		Implementation Plan	2 days				Jeffrey Kriseman,Umed Ajani		
13		Governance Review	15 days	Thu 5/2/13	Wed 5/22/13				
14		ORGC	5 days						
15		IRGC	5 days						
16		BioSense	5 days						
17		Training	3 days	Thu 5/2/13	Mon 5/6/13				
18		Introduction to ICD 10	2 days				Achala Jayatilleke,Peter Hick		
19		BioSense	3 days						
20		ICD Mapping	3 days	Thu 5/2/13	Mon 5/6/13				
21		Forward	3 days	Thu 5/2/13	Mon 5/6/13				
22		ICD9 - 10 CM	3 days				Achala Jayatilleke,Peter Hick		
23		ICD9 - 10 PCS	2 days				Achala Jayatilleke,Peter Hick		
24		ICD9CM - 10 (Mortality)	1 day				Jim Selgiman		
25		Backward	3 days	Thu 5/2/13	Mon 5/6/13				
26		ICD10 CM/PCS - 9 CM	3 days				Achala Jayatilleke,Peter Hick		
27		Syndrome Definition	120 days	Thu 5/2/13	Wed 10/16/13				

Project: ICD10 Transition
Date: Mon 7/8/13

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Deadline	
External Tasks		Duration-only		Progress	

Project Plan

Tasks	Time
• **Technical** – (Plan / Implementation) • - Database Design and Specification • - Messaging • - Data Extraction Rules • - Data Binning and Classification • - Prospective / Retrospective re-classification	45 Days / unknown
• **Develop / Refine Business rules**	60 days
• **Mapping / Syndrome Definitions / Reverse Translation** (Plan / Finalize Provisional Output)	15 days / 120-160 days
• **Establish vetting / review process (internal / external)**	unknown
• **Revise Analytic Methods**	unknown
• **Evaluate / Test**	
• **Training – Community Engagement**	


External System Developers
Team A
Team B
Team C
Others?
System Zeta ICD-9/10 Activities
Technical
Code Mapping
Syndrome Revision
Analytic Methods Update
Business rules Update
Evaluation / Testing
Implementation
Assets
Guides
GEMS /CTT
SS, B1, B2
ESSENSE
CCS
Partners
ISDS CoP
State / Local
CDC Programs
HHS

Translation Overview

- **Assets**
  - GEMS, other references
  - CTT
  - HCUP CCS
  - Syndromic Surveillance Definitions 2003
  - BioSense 1 Definitions, BioSense 2 Definitions
  - Local / State Definitions
  - SNOMED CT
  - CPT

- **Process**
  - Intelligent
  - Un-intelligent
  - Hybrid

- **Review**
  - Internal Program
  - Local Experts – Program SMEs
  - External Partners – CoP, National Experts NADHO / UC-Davis

Syndromic Surveillance

Syndromic Surveillance

- Derived from pre-diagnostic , preliminary, or incomplete healthcare data *(e.g. chief complaint, working diagnosis, ICD-9)* prior to availability of lab data

- Can monitor seasonal trends or identify clusters of diseases that don't require lab confirmation

- Examples: a*sthma, burns, CO exposures, falls, heat-related, GI disease, influenza-like illness*

SURVEILLANCE

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents

Participating Agencies:

National Center for Infectious Diseases and Epidemiology Program Office, Centers for Disease Control and Prevention, Atlanta, Georgia
Division of Preventive Medicine, Walter Reed Army Institute of Research, Silver Spring, Maryland
Emergency Medical Associates of New Jersey Research Foundation, Livingston, New Jersey
Bureau of Epidemiology Services, New York City Department of Health and Mental Hygiene, New York City, New York
Harvard Medical School and Harvard Pilgrim Health Care, Boston, Massachusetts

Introduction

Recent events, including the emergence of severe acute respiratory syndrome (SARS), West Nile virus, and monkeypox, have resulted in the implementation of alternate methods of disease surveillance that can potentially identify clusters of cases before traditional methods. Some surveillance systems utilize International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) coded health information from physician visit records or emergency department discharge data (1). Other systems abstract data from emergency department logs, 911 calls, or nurse call line data through analysis of text or other developed coding systems (2). Such surveillance methods are often referred to as syndromic surveillance since they typically monitor the non-specific clinical information that may indicate a bioterrorism-associated disease before specific diagnoses are made. Syndromic surveillance systems often utilize data sources that already exist but have not been designed specifically for public health surveillance purposes. Two data sources that may be available to augment a public health agency's surveillance activities are ICD-9-CM-coded discharge diagnoses for outpatient visits and emergency department visits.

ICD-9-CM codes were developed to allow assignment of codes to diagnoses and procedures associated with hospital utilization in the United States and are often used for third-party insurance reimbursement purposes. ICD-9-CM codes have been monitored in several settings to support public health surveillance

Syndrome	Definition	Category A Condition
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs) SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox

Syndromic Surveillance ICD-9CM - 2003

Rash ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
050.0	SMALL POX, VARIOLA MAJOR	1
050.1	SMALL POX, ALASTRIM	1
050.2	SMALL POX, MODIFIED	1
050.9	SMALLPOX NOS	1
051.0	COWPOX	1
051.1	PSEUDOCOWPOX	1
692.9	DERMATITIS UNSPECIFIED CA	2
782.1	RASH/OTHER NONSPEC SKIN E	2
026.0	SPIRILLARY FEVER	3
026.1	STREPTOBACILLARY FEVER	3

Category 1 - Consists of codes that reflect general symptoms of the syndrome group and also include codes for the bioterrorism diseases of highest concern or those diseases highly approximating them.

Category 2 - Consists of codes that might normally be placed in the syndrome group, but daily volume could overwhelm or otherwise detract from the signal generated from the Category 1 code set alone.

Category 3 - Consists of specific diagnoses that fit into the syndrome category but occur infrequently or have very few counts. These codes may be excluded to simplify syndrome category code sets.

Syndromes within BioSense

- 11 syndromes defined by Federal, State, and Local Public Health SME working group
  - Botulism-like
  - Fever
  - Gastrointestinal
  - Hemorrhagic illness
  - Localized cutaneous lesion
  - Lymphadenitis
  - Neurological
  - Rash
  - Respiratory
  - Severe illness/death
  - Specific infection

http://www.bt.cdc.gov/surveillance/syndromedef/index.asp

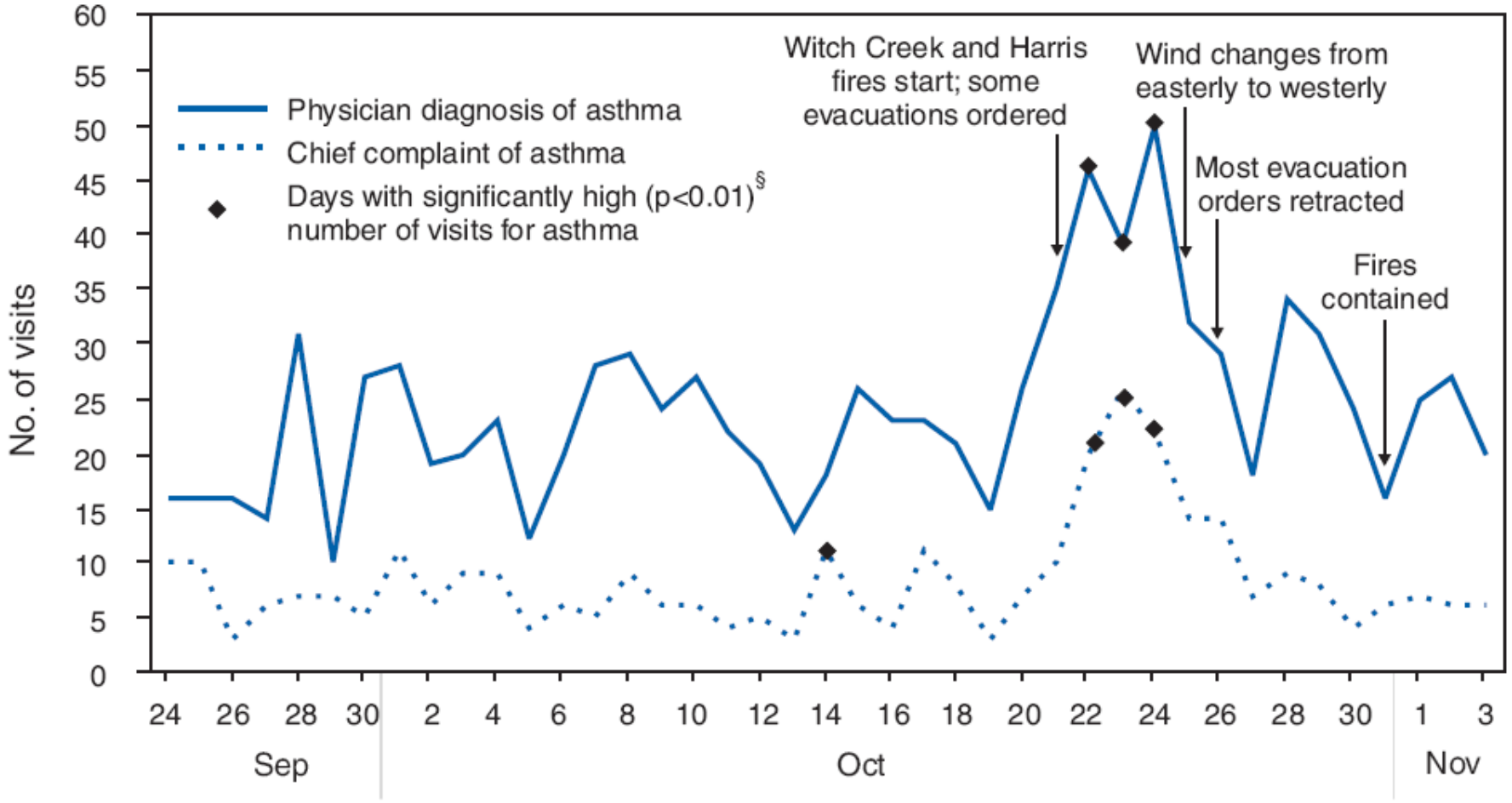
Sub-Syndromes (partial list)

Abdominal pain	COPD	Hemorrhage
Allergy	Cough	Hypertension
Alteration of consciousness	Cyanosis and hypoxemia	Hypotension
Anemia	Death	Influenza-like illness
Anorexia	Dehydration	Injury, nos
Asthma	Diabetes mellitus	Insect bites
Bites, animal	Diarrhea	Intestinal infections
Bronchitis and bronchiolitis	Dizziness	Jaundice
Burns	Dysphagia	Lymphadenopathy
Carbon monoxide poisoning	Dyspnea	Malaise and fatigue
Cardiac dysrhythmias	Edema	Meningismus
Cerebrovascular disease	Falls	Mental disorders
Chest pain	Fever	Migraine
CNS, inflammatory disease	Food poisoning	Motor vehicle traffic accidents
Coagulation defects	Fractures and dislocation	Myalgia
Coma	Gait abnormality	Nausea and vomiting
Convulsions	Gastrointestinal	

Examples of ICD-9 CM to Syndrome Mapping

ICD9 CM code	Syndrome	ICD9 CM description
787.03	Gastrointestinal	VOMITING ALONE
787.3	Gastrointestinal	FLATUL/ERUCTAT/GAS PAIN
787.91	Gastrointestinal	DIARRHEA
075	Respiratory	MONONUCLEOSIS, INFECTIOUS
381.4	Respiratory	OTITIS MEDIA NONSUPPURATI
381.50	Respiratory	EUSTACHIAN SALPINGITIS, U
381.51	Respiratory	EUSTACHIAN SALPINGITIS AC
382	Respiratory	OM SUPPURATIVE & UNSPEC
780.01	Severe Illness or Death	COMA
785.50	Severe Illness or Death	SHOCK (UNSPECIFIED)
785.59	Severe Illness or Death	SHOCK, OTHER, W/O TRAUMA
798.1	Severe Illness or Death	DEATH INSTANTANEOUS
798.2	Severe Illness or Death	DEATH IN E.R.
798.9	Severe Illness or Death	Death Unattended
799.9	Severe Illness or Death	Mortality or Morbidity, Cause Unknown
047.8	Neurological	MENINGITIS, VIRAL NEC
047.9	Neurological	MENINGITIS VIRAL NOS
048	Neurological	DIS ENTEROVIRAL OF CNS, NEC
049.0	Neurological	CHORIOMENINGITIS, LYMPHOCYTIC

FIGURE 2. Number of emergency department visits, by chief complaint* and diagnosis† of asthma — six hospitals, San Diego, California, September 22–November 17, 2007



Monitoring health effects of wildfires using the BioSense System—
San Diego County, CA, October 2007. MMWR 57: 741-744
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5727a2.htm?s_cid=mm5727a2_e

Surveillance Specific Challenges

- **Processing - Modification to accommodate alpha numeric encoding / field length**
- **Messaging – volume considerations**
- **DMB- New Consistency / Data quality checks**
  - Storage - Greater data volume / detail
  - Leverage historic / legacy data
    - Interim solution strategy (9/2013-2016) (2016+)
    - Map ICD-10 to ICD-9 leveraging GEMs
- Modify / expand current definitions **to leverage ICD-10**
- **Adjust / improve analytic methods**
- Accommodate early adopters during 2013 transition
- **Need to modify statistical, analytic, and business processes**
- **Evaluation and Assessment**
- **Training – impact upon analysis and reporting**

Reverse Translation Validation

Gastrointestinal Syndrome Example

ICD-9 CM	ICD-10
70 Discrete Codes comprise B2 – Gastrointestinal Syndrome	97
Accidental Poisoning By Other Specified Solvents, Not Elsewhere Classified	E862.4
Accidental Poisoning By Unspecified Solvent, Not Elsewhere Classified	E862.9
Toxic effect of petroleum products	E981.0
Contact dermatitis and other eczema due to other chemical products	E692.4
Accident caused by excessive heat due to weather conditions	E900.0

Gastrointestinal Syndrome Example

ICD-9 CM		ICD-10
70 Discrete Codes comprise Gastrointestinal Syndrome for B2	→	Resulting in **97** Discrete Codes
Results in **83** ICD-9 Codes	←	Reverse Translation Process
Assess and evaluate 13 code exclusion rule	→	Further review indicates **143** potential codes that ***could*** be included in new syndrome definitions
Results in **116** ICD-9 Codes	←	Reverse Translation Process
Assess and evaluate 42 code exclusion rule		***Assess and evaluate the impact of 46 code exclusion rule***

Trending

Possible Strategies

- Backwards map the 3 months of ICD-10-CM coded data into ICD-9-CM and report together
- Let 9 months of ICD-9-CM coded data represent entire year
- Report on first 9 months and last 3 months of data separately
- Forward map the 9 months of ICD-9-CM coded data to ICD-10-CM/PCS and report together

Reality of Impact

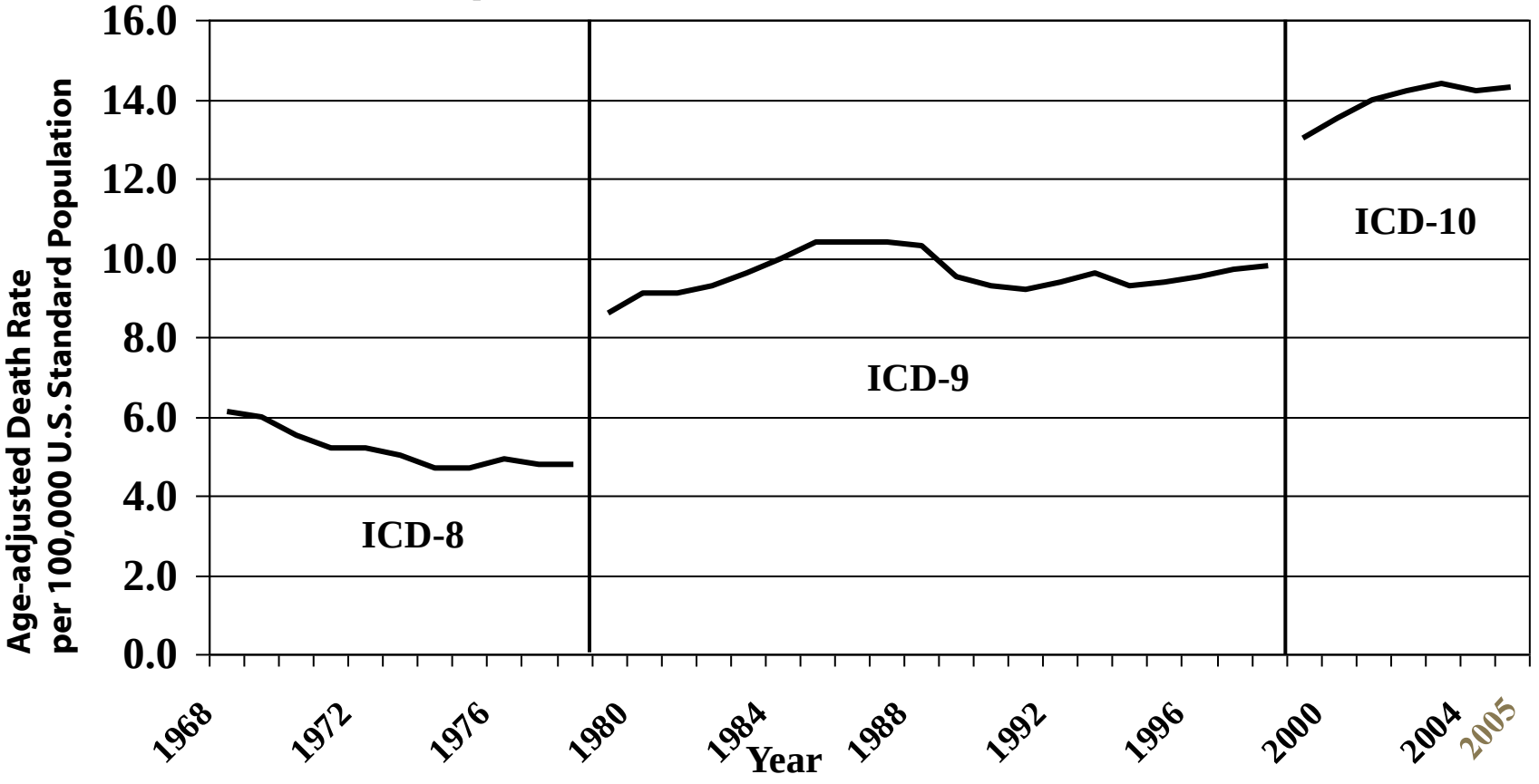
- ICD-9 CM codes updated regularly so data have always been impacted
- Transition will change the way public health defines, identifies, analyzes, and reports on ***many*** health conditions and health care services
- There will be some level of data discontinuity for analyses over time and across code sets
- No single best approach for conducting trend analyses; each program/project team will need to determine own approach

For Data Users: Selection and Interpretation of Data

- **Users of data derived from ICD codes need to understand how the data have changed**
  - Understand origin of the data (information supply chain)
  - Selection/extraction of data for independent analysis
  - Understand published data analysis/reports
- **Interpretation of data**
  - May be considered new baseline year
  - May not be able to draw conclusions for first year or two

Possible Trending Impact

Age-adjusted death rates for Nephritis, nephrotic syndrome, and nephrosis: United States, 1968-2005

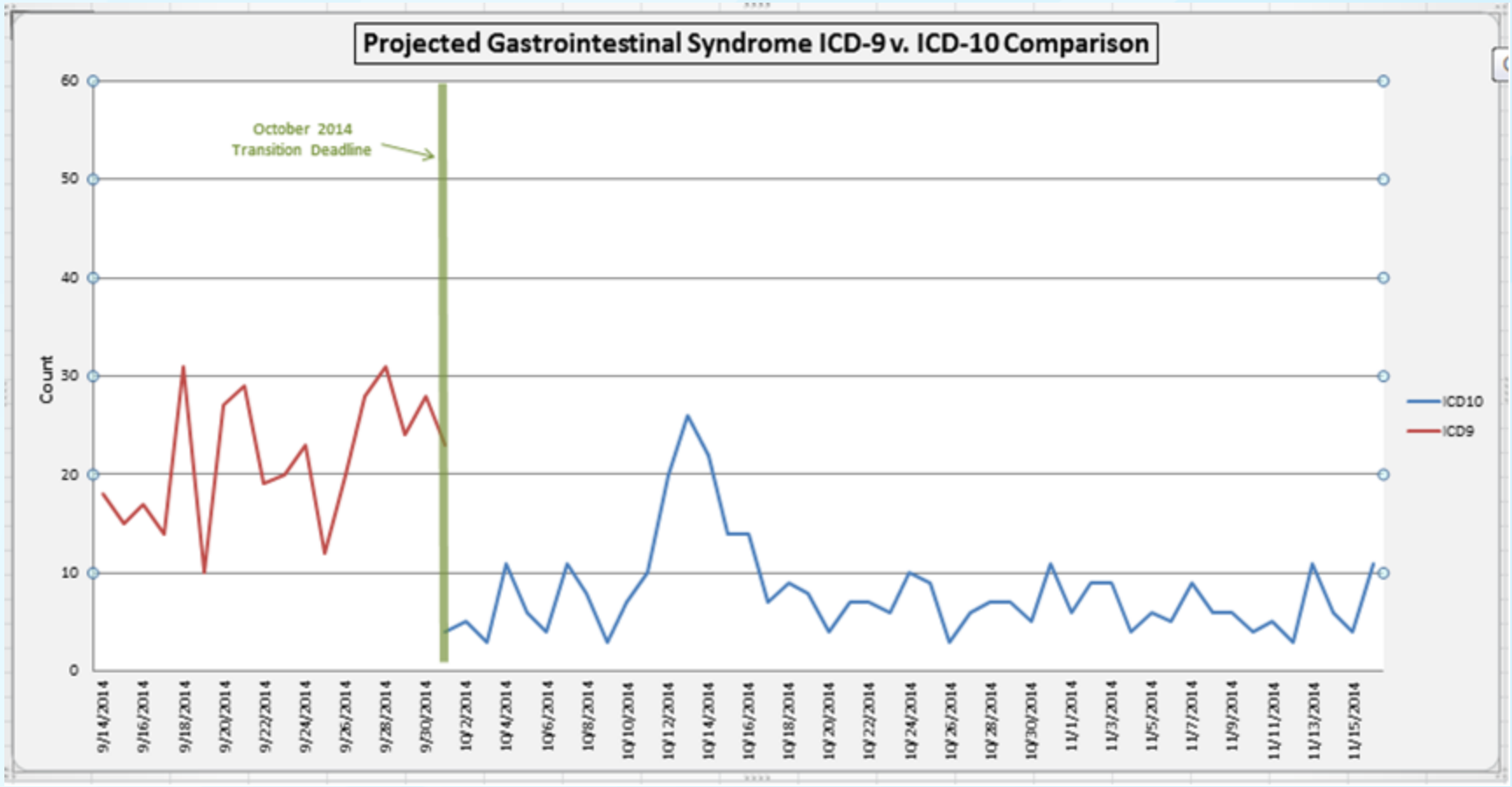


Reference: Robert Anderson (2011). Coding and Classifying Causes of Death: Trends and International Differences. In Rogers, Richard G., and Crimmins, Eileen M (Eds), International Handbook of Adult Mortality (467-489). Springer Science.

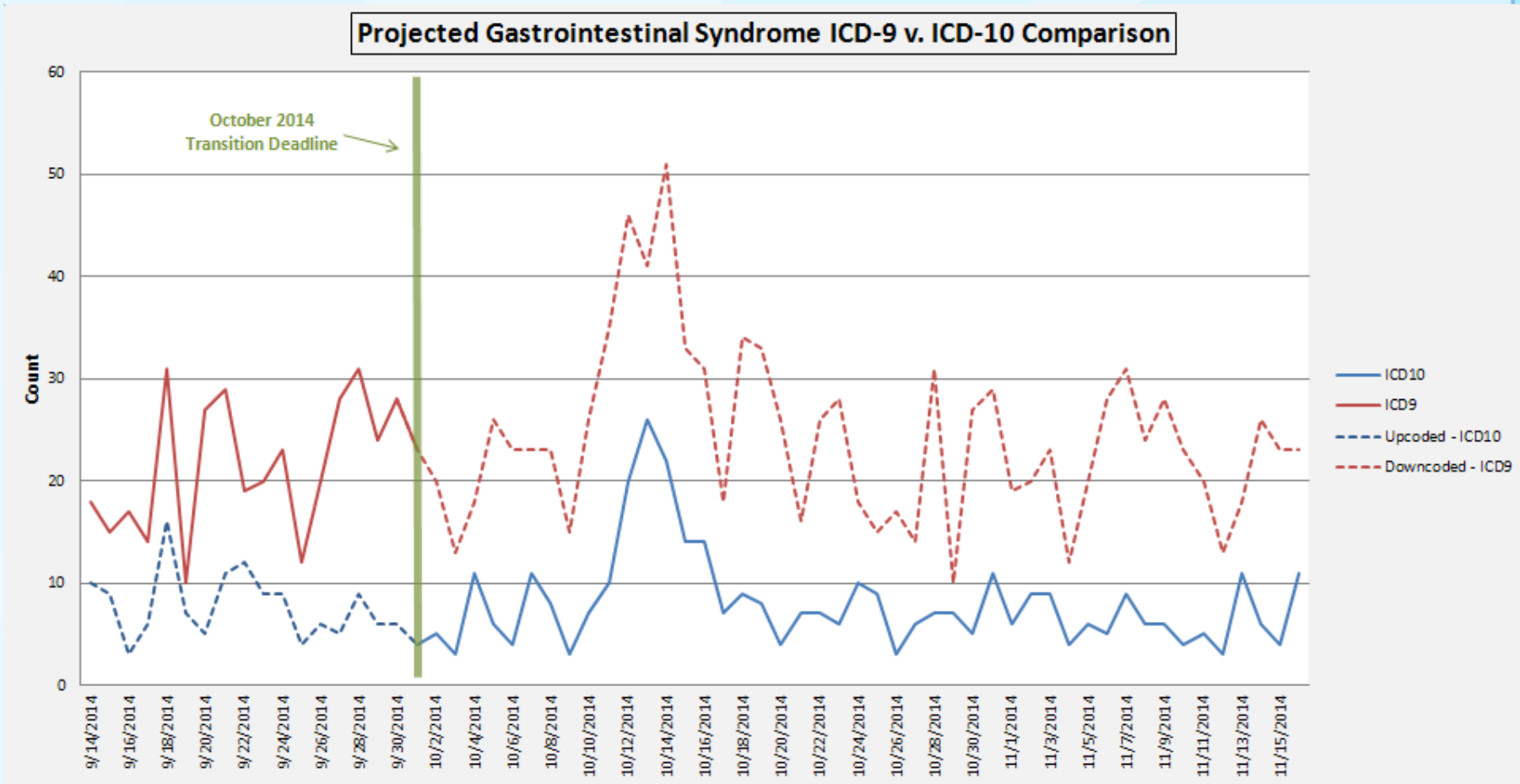
Possible Strategies for Deciding How to Trend

- **Comparability analysis for already coded data**
  - Take existing year/s of ICD-9-CM-based reporting and map them forwards into ICD-10-CM
  - Evaluate how original estimates (based on ICD-9-CM) compare with new estimates (ICD-10-CM)
  - Make determination from there (e.g., refine what ICD-10-CM codes to use, redo comparison, move forward with selected ICD-10-CM codes, etc.)
- **Comparability ratios for narrative clinical information**
  - Dual code data
  - Divide estimate for one coding scheme by estimate for other
  - Use to estimate values if coded in other coding scheme

Potential impact on time series analysis



Potential impact on time series analysis



Summary

- Many challenges for trending data over time and across the different code sets

- Analyses will depend on unique circumstances of each condition, range of codes used, reason for analysis, level and type (and source) of data collected, and ability to analyze and understand comparability between code sets

ICD-9 /10 Transition Resources

Conversion Tools

Tools You Can Use

Below are some free tools that may be useful to you in your transition planning efforts.

General Equivalence Mappings (GEMs) - These are bi-directional (backward and forward maps) mappings designed to aid in converting applications and systems from ICD-9-CM to ICD-10-CM/PCS. They can also be used to "find and replace" codes or lists of codes.

- To obtain GEMs for CM: http://www.cdc.gov/nchs/icd/icd10cm.htm and select "General Equivalence Mapping Files"
- To obtain GEMs for PCS: https://www.cms.gov/Medicare/Coding/ICD10/2013-ICD-10-PCS-GEMs.html

Systematized Nomenclature of Medicine—Clinical Terms (SNOMED CT) to ICD-10-CM map: http://www.nlm.nih.gov/research/umls/mapping_projects/snomedct_to_icd10cm.html

Cancer case finding lists for ICD-10: http://seer.cancer.gov/registrars/

ICD-10 On-line Look-up Conversion Tool:
http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z00-Z13/Z03-

ICD-9 On-line Look-up/Conversion Tool:
http://icd9cm.chrisendres.com/

Other Resources

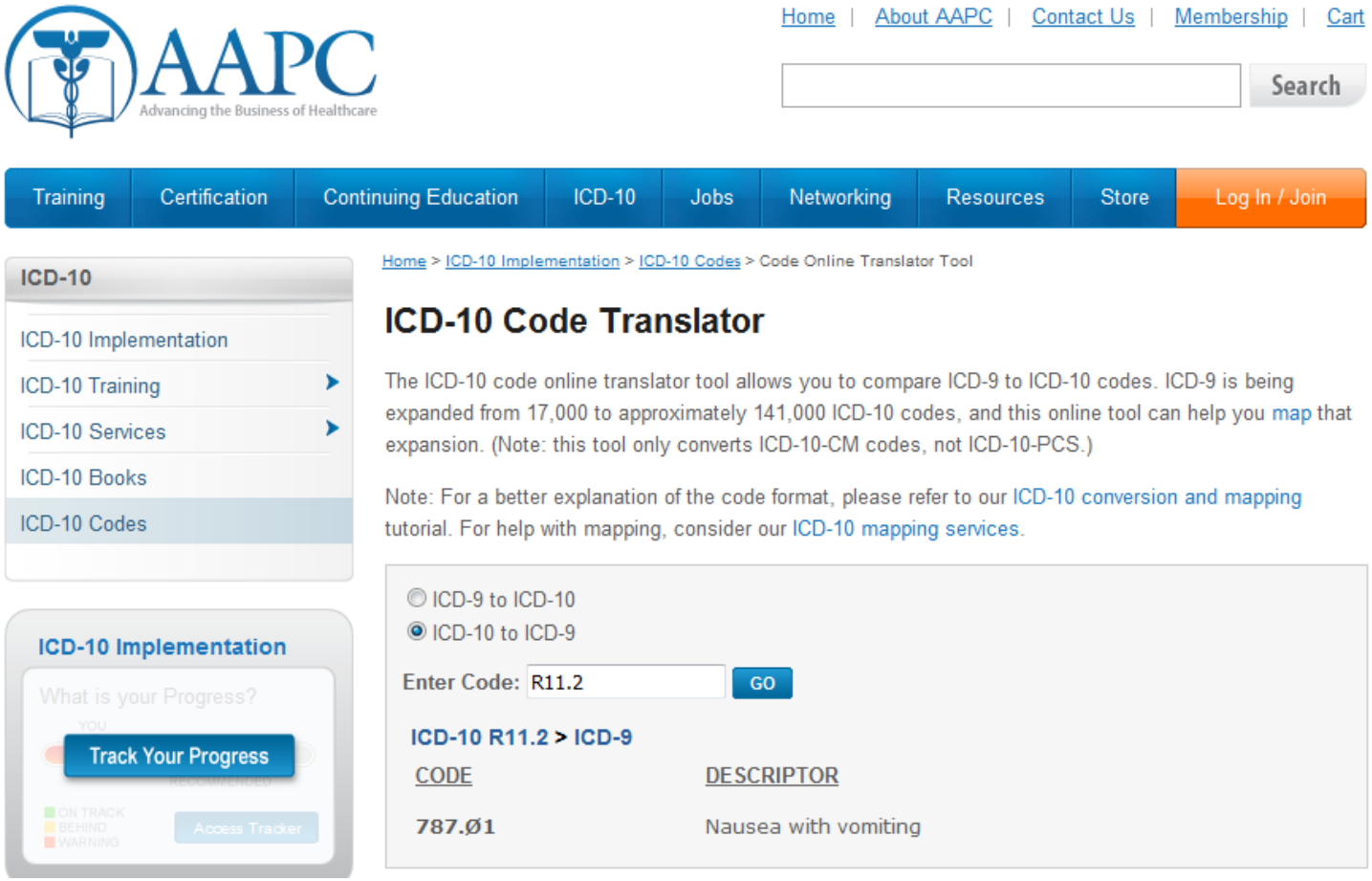
ICD-10 Resources
♦ Centers for Medicare and Medicaid Services ICD-10 website: http://www.cms.gov/Medicare/Coding/ICD10/ ♦ National Center for Health Statistics ICD-10 website: http://www.cdc.gov/nchs/icd/icd10cm.htm ♦ For more information on converting ICD-9-CM-based systems to ICD-10-CM/PCS go to: http://www.cms.gov/CD10/17_ICD10_MS_DRG_Conversion_Project.asp

CDC NCHS ICD Website

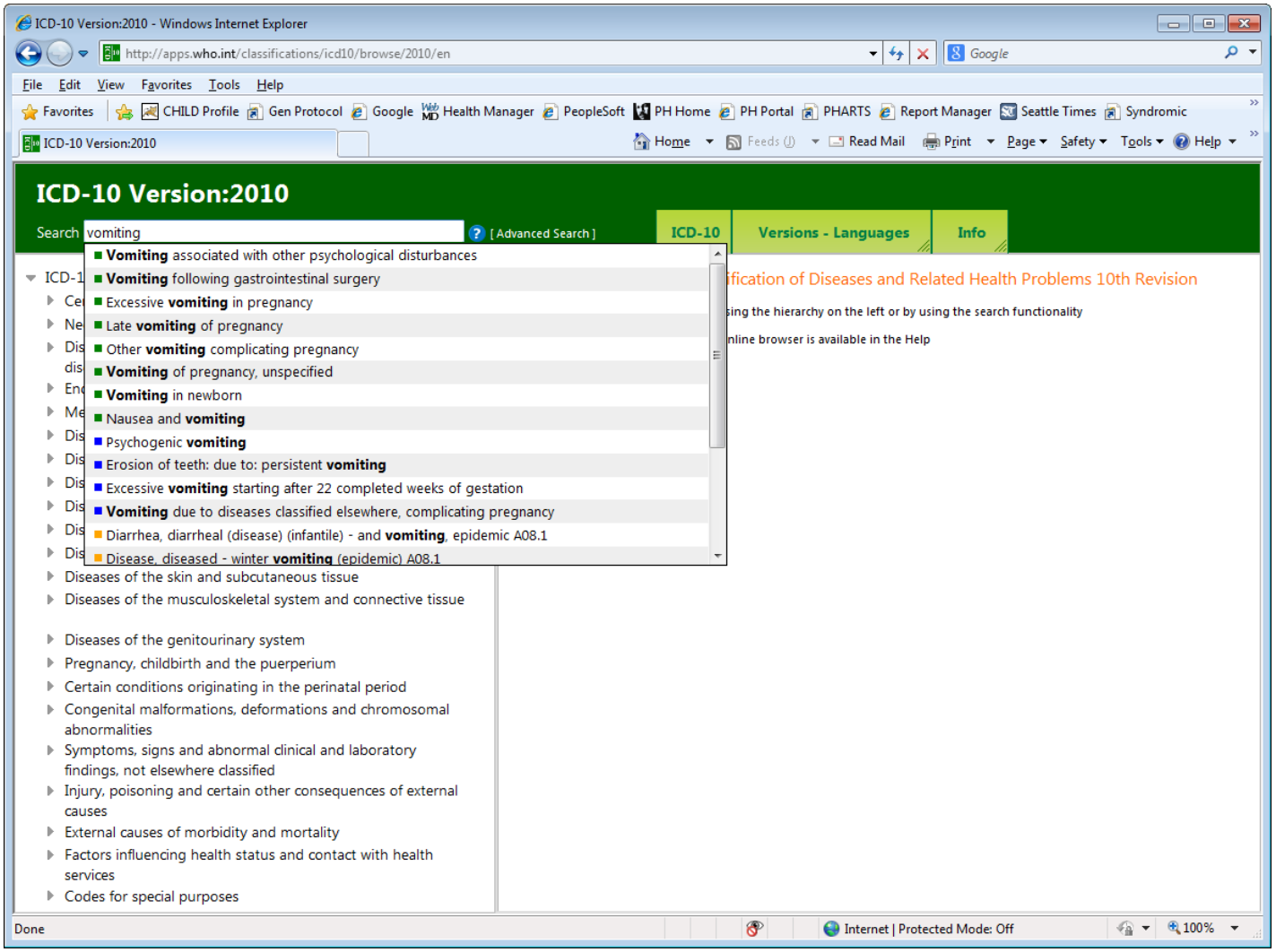
http://www.cdc.gov/nchs/icd/icd10cm_pcs.htm

Use the CMS ICD-9 code lookup tool to identify codes:
http://www.cms.gov/medicare-coverage-database/staticpages/icd-9-code-lookup.aspx

http://www.aapc.com/ICD-10/codes/index.aspx

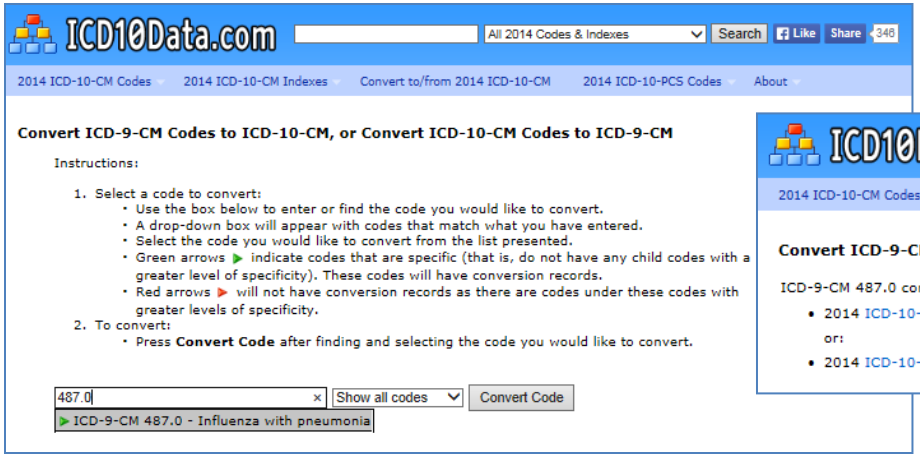


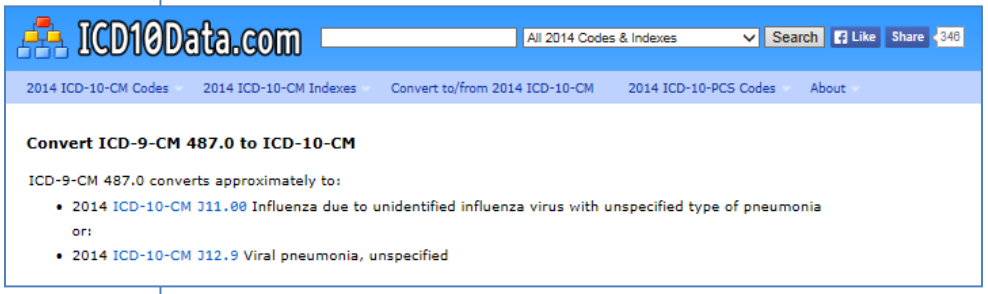
World Health Organization - WHO.INT

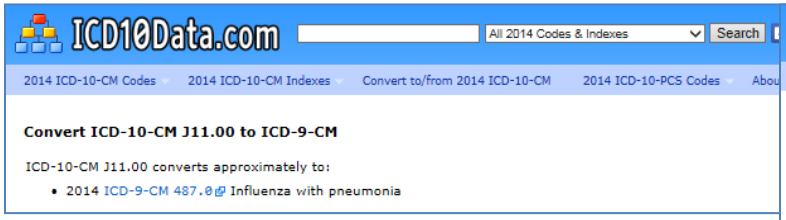


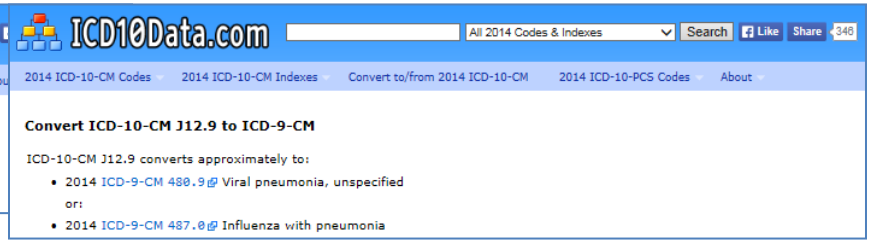
Public Health
Seattle & King County

http://www.icd10data.com/Convert

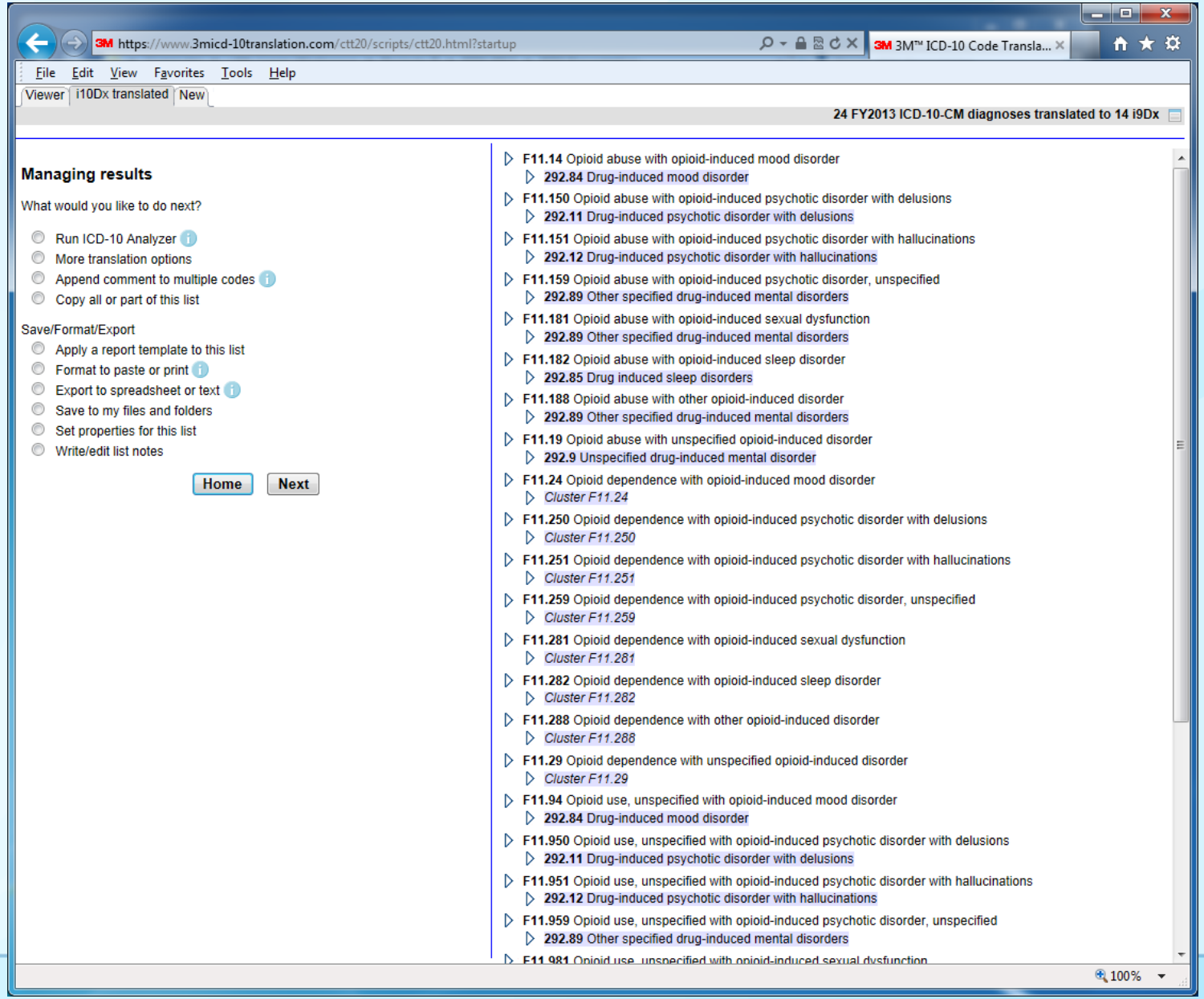








3M CTT Tool


https://www.3micd-10translation.com/ctt20/scripts/ctt20.html?startup
3M™ ICD-10 Code Transla...
File Edit View Favorites Tools Help
Viewer i10Dx translated New
24 FY2013 ICD-10-CM diagnoses translated to 14 i9Dx
Managing results
What would you like to do next?
Run ICD-10 Analyzer
More translation options
Append comment to multiple codes
Copy all or part of this list
Save/Format/Export
Apply a report template to this list
Format to paste or print
Export to spreadsheet or text
Save to my files and folders
Set properties for this list
Write/edit list notes
Home
Next
F11.14 Opioid abuse with opioid-induced mood disorder
292.84 Drug-induced mood disorder
F11.150 Opioid abuse with opioid-induced psychotic disorder with delusions
292.11 Drug-induced psychotic disorder with delusions
F11.151 Opioid abuse with opioid-induced psychotic disorder with hallucinations
292.12 Drug-induced psychotic disorder with hallucinations
F11.159 Opioid abuse with opioid-induced psychotic disorder, unspecified
292.89 Other specified drug-induced mental disorders
F11.181 Opioid abuse with opioid-induced sexual dysfunction
292.89 Other specified drug-induced mental disorders
F11.182 Opioid abuse with opioid-induced sleep disorder
292.85 Drug induced sleep disorders
F11.188 Opioid abuse with other opioid-induced disorder
292.89 Other specified drug-induced mental disorders
F11.19 Opioid abuse with unspecified opioid-induced disorder
292.9 Unspecified drug-induced mental disorder
F11.24 Opioid dependence with opioid-induced mood disorder
Cluster F11.24
F11.250 Opioid dependence with opioid-induced psychotic disorder with delusions
Cluster F11.250
F11.251 Opioid dependence with opioid-induced psychotic disorder with hallucinations
Cluster F11.251
F11.259 Opioid dependence with opioid-induced psychotic disorder, unspecified
Cluster F11.259
F11.281 Opioid dependence with opioid-induced sexual dysfunction
Cluster F11.281
F11.282 Opioid dependence with opioid-induced sleep disorder
Cluster F11.282
F11.288 Opioid dependence with other opioid-induced disorder
Cluster F11.288
F11.29 Opioid dependence with unspecified opioid-induced disorder
Cluster F11.29
F11.94 Opioid use, unspecified with opioid-induced mood disorder
292.84 Drug-induced mood disorder
F11.950 Opioid use, unspecified with opioid-induced psychotic disorder with delusions
292.11 Drug-induced psychotic disorder with delusions
F11.951 Opioid use, unspecified with opioid-induced psychotic disorder with hallucinations
292.12 Drug-induced psychotic disorder with hallucinations
F11.959 Opioid use, unspecified with opioid-induced psychotic disorder, unspecified
292.89 Other specified drug-induced mental disorders
100%

CDC / CSTE / ISDS / NAHDO Collaborations

ICD-9 /10 Transition Activities

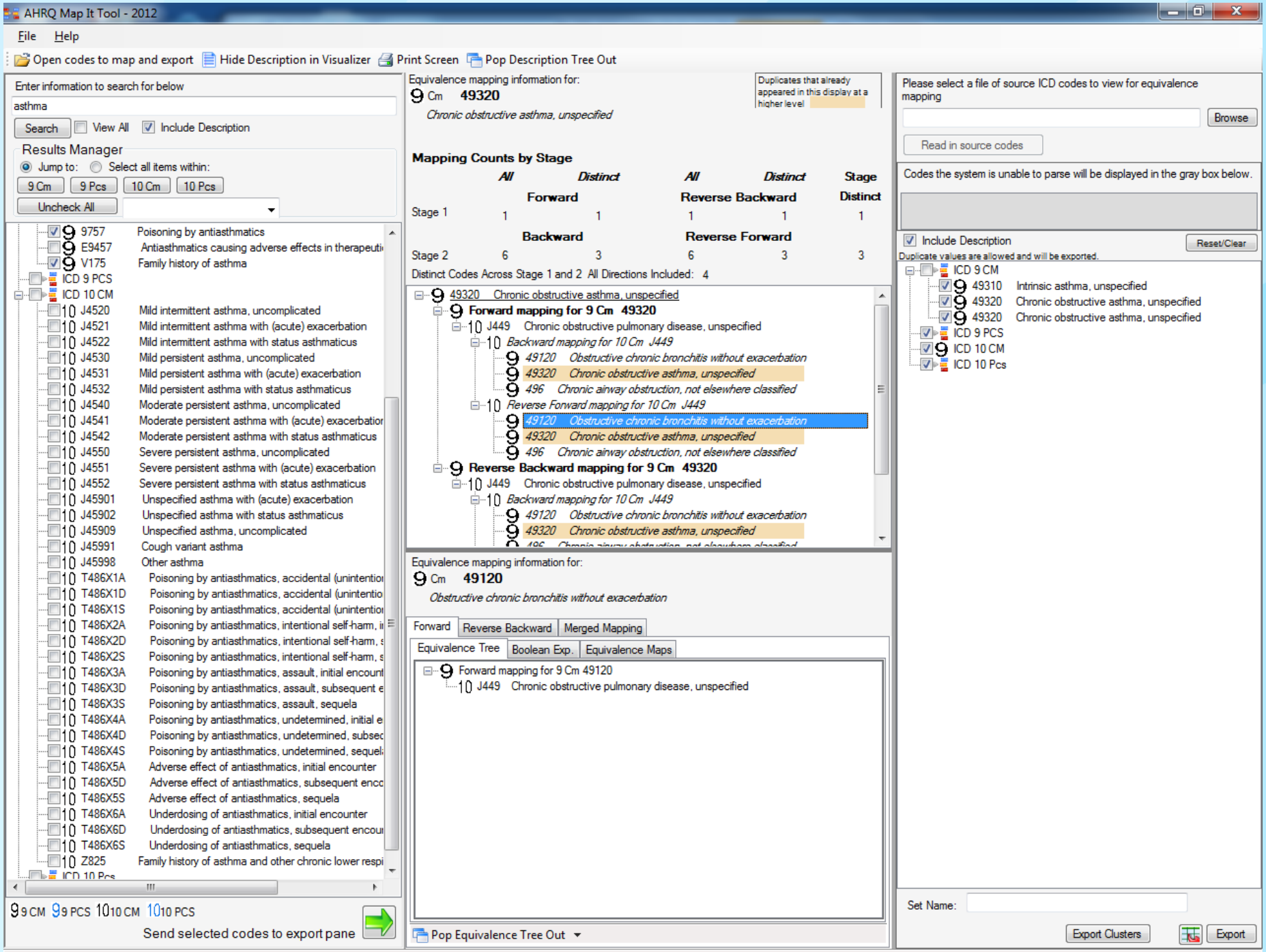
- **CDC / ISDS Co-operative Agreement**
  - Code Translation
  - Syndrome definition review and update
  - 2013-2014; to be renewed for 2015

- **CDC / NAHDO Co-operative Agreement**
  - Technical assistance Code Translation
  - Access to Map-It! Code translation tool

Placeholder to demo Master Reference Table

ICD-9 /10 Transition Consensus Process

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
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	ICD-9 Syndrome 2014	ICD-9 Sub-Syndrome 2014	ICD-10 Macro Syndrom	ICD-10 Micro Syndrome	CDC	P1	P2	P3	Remarks from Panel	ISDS - Consensus
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspe	Forward Map	J45.909	Unspecified asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspe	Forward Map	J45.998	Other asthma	Asthma	Asthma			C	A		A		
CDC	Asthma	493.91	493.xx	493.xx	493.91	Asthma, unspecified type, with	Forward Map	J45.902	Unspecified asthma with status asthmaticus	Asthma	Asthma			C	A		C		
CDC	Asthma	493.92	493.xx	493.xx	493.92	Asthma, unspecified type, with	Forward Map	J45.901	Cough variant asthma	Asthma	Asthma			C	A		C		
CDC	Asthma	--	493.xx	493.xx	493.81	Exercise induced bronchospasm	Forward Map	J45.990	Exercise induced bronchospasm	Asthma	Asthma			A	A		A		
CDC	Asthma	--	493.xx	493.xx	493.82	Cough variant asthma	Forward Map	J45.991	Cough variant asthma	Asthma	Asthma			A	A		A		
CDC	Asthma	[redacted]	493.xx	493.xx	493.21	Chronic obstructive asthma with	Forward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D	D		D		
CDC	Asthma	--	493.xx	493.xx	493.22	Chronic obstructive asthma with	Forward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D	D		D		
CDC	Asthma	--	493.xx	493.xx	493.20	Chronic obstructive asthma, uns	Forward Map	J44.9	Chronic obstructive pulmonary disease, unspecified					D	D		D		
CDC	Asthma	--	[redacted]	--	491.20	Obstructive chronic bronchitis w	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified					D	D		D		
CDC	Asthma	--	[redacted]	--	491.21	Obstructive chronic bronchitis w	Backward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D	D		D		
CDC	Asthma	--	[redacted]	--	491.22	Obstructive chronic bronchitis w	Backward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D	D		D		


AHRQ Map It Tool - 2012
File
Help
Open codes to map and export
Hide Description in Visualizer
Print Screen
Pop Description Tree Out
Enter information to search for below
asthma
Search
View All
Include Description
Results Manager
Jump to:
Select all items within:
9 Cm
9 Pcs
10 Cm
10 Pcs
Uncheck All
9757 Poisoning by antiasthmatics
E9457 Antiasthmatics causing adverse effects in therapeuti
V175 Family history of asthma
ICD 9 PCS
ICD 10 CM
J4520 Mild intermittent asthma, uncomplicated
J4521 Mild intermittent asthma with (acute) exacerbation
J4522 Mild intermittent asthma with status asthmaticus
J4530 Mild persistent asthma, uncomplicated
J4531 Mild persistent asthma with (acute) exacerbation
J4532 Mild persistent asthma with status asthmaticus
J4540 Moderate persistent asthma, uncomplicated
J4541 Moderate persistent asthma with (acute) exacerbatior
J4542 Moderate persistent asthma with status asthmaticus
J4550 Severe persistent asthma, uncomplicated
J4551 Severe persistent asthma with (acute) exacerbation
J4552 Severe persistent asthma with status asthmaticus
J45901 Unspecified asthma with (acute) exacerbation
J45902 Unspecified asthma with status asthmaticus
J45909 Unspecified asthma, uncomplicated
J45991 Cough variant asthma
J45998 Other asthma
T486X1A Poisoning by antiasthmatics, accidental (unintentior
T486X1D Poisoning by antiasthmatics, accidental (unintentio
T486X1S Poisoning by antiasthmatics, accidental (unintentior
T486X2A Poisoning by antiasthmatics, intentional self-harm, i
T486X2D Poisoning by antiasthmatics, intentional self-harm, s
T486X2S Poisoning by antiasthmatics, intentional self-harm, s
T486X3A Poisoning by antiasthmatics, assault, initial encount
T486X3D Poisoning by antiasthmatics, assault, subsequent e
T486X3S Poisoning by antiasthmatics, assault, sequela
T486X4A Poisoning by antiasthmatics, undetermined, initial e
T486X4D Poisoning by antiasthmatics, undetermined, subsec
T486X4S Poisoning by antiasthmatics, undetermined, sequel
T486X5A Adverse effect of antiasthmatics, initial encounter
T486X5D Adverse effect of antiasthmatics, subsequent encc
T486X5S Adverse effect of antiasthmatics, sequela
T486X6A Underdosing of antiasthmatics, initial encounter
T486X6D Underdosing of antiasthmatics, subsequent encou
T486X6S Underdosing of antiasthmatics, sequela
Z825 Family history of asthma and other chronic lower respi
ICD 10 Pcs
9 CM 9 PCS 10 CM 10 PCS
Send selected codes to export pane
Equivalence mapping information for:
9 Cm 49320
Chronic obstructive asthma, unspecified
Duplicates that already appeared in this display at a higher level
Mapping Counts by Stage
All Distinct All Distinct Stage
Forward Reverse Backward Distinct
Stage 1 1 1 1 1 1
Backward Reverse Forward
Stage 2 6 3 6 3 3
Distinct Codes Across Stage 1 and 2 All Directions Included: 4
49320 Chronic obstructive asthma, unspecified
Forward mapping for 9 Cm 49320
J449 Chronic obstructive pulmonary disease, unspecified
Backward mapping for 10 Cm J449
49120 Obstructive chronic bronchitis without exacerbation
49320 Chronic obstructive asthma, unspecified
496 Chronic airway obstruction, not elsewhere classified
Reverse Forward mapping for 10 Cm J449
49120 Obstructive chronic bronchitis without exacerbation
49320 Chronic obstructive asthma, unspecified
496 Chronic airway obstruction, not elsewhere classified
Reverse Backward mapping for 9 Cm 49320
J449 Chronic obstructive pulmonary disease, unspecified
Backward mapping for 10 Cm J449
49120 Obstructive chronic bronchitis without exacerbation
49320 Chronic obstructive asthma, unspecified
Equivalence mapping information for:
9 Cm 49120
Obstructive chronic bronchitis without exacerbation
Forward
Reverse Backward
Merged Mapping
Equivalence Tree
Boolean Exp.
Equivalence Maps
Forward mapping for 9 Cm 49120
J449 Chronic obstructive pulmonary disease, unspecified
Pop Equivalence Tree Out
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.
ICD 9 CM
49310 Intrinsic asthma, unspecified
49320 Chronic obstructive asthma, unspecified
49320 Chronic obstructive asthma, unspecified
ICD 9 PCS
ICD 10 CM
ICD 10 Pcs
Set Name:
Export Clusters
Export
Status

BioSense related activities

ICD-9 /10 Transition Activities

- **Modifications to BioSense Data model**
  - Differentiates between ICD-9/10 Codes
  - Accepts either ICD-9 or ICD-10 Codes
  - Calculates ICD-9 to ICD-10; ICD-10 to ICD-9
  - Leverages CDC / ISDS created Master Reference Table (MRT)
  - Implementation Complete by June 1, 2014
  - Synthetic Data (dual coded) project

Back-end Database Modifications

Visit Date Time	Patient Class	Chief Complaint	Diagnosis Text	Diagnosis Code	ICD-9_FD	ICD-10_FD	C-ICD-9	C-ICD-10	I9-Syndrome	I10-Syndrome
2/17/2012 7:12	E	CHEST PAIN	NULL	NULL	NULL					
2/17/2012 6:56	E	ABDOMINAL PAIN	NULL	NULL	NULL					
1/31/2012 11:56	O	NULL	MULTIPLE SCLEROSIS	340	340					
2/17/2012 7:10	E	p-eye complaint	NULL	NULL	NULL					
2/8/2012 11:02	O	NULL	HYPOSMOLALITY	276.1	276.1					
2/7/2012 7:55	O	NULL	MIXED HYPERLIPIDEMIA	272.2	272.2					
11/15/2011 17:35	O	NULL	ROUTINE GYN EXAM	V72.31	V72.31					
2/16/2012 13:47	E	NULL	SUICIDAL IDEATION: ALCOHOL ABUSE	V62.84:305.00	V62.84:305.00					

ICD-9 /10 Transition Consensus Process

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
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	ICD-9 Syndrome 2014	ICD-9 Sub-Syndrome 2014	ICD-10 Macro Syndrom	ICD-10 Micro Syndrome	CDC	P1	P2	P3	Remarks from Panel	ISDS - Consensus
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.00	493.xx	493.xx	493.00	Extrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.01	493.xx	493.xx	493.01	Extrinsic asthma with status ast	Forward Map	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.02	493.xx	493.xx	493.02	Extrinsic asthma with (acute) ex	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.1	493.xx	493.xx	493.10	Intrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.32	Mild persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.11	493.xx	493.xx	493.11	Intrinsic asthma with status ast	Forward Map	J45.52	Severe persistent asthma with status asthmaticus	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.12	493.xx	493.xx	493.12	Intrinsic asthma with (acute) ex	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation	Asthma	Asthma			A	A		A		
CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspe	Forward Map	J45.909	Unspecified asthma, uncomplicated	Asthma	Asthma			A	A		A		
CDC	Asthma	493.9	493.xx	493.xx	493.90	Asthma,unspecified type, unspe	Forward Map	J45.998	Other asthma	Asthma	Asthma			C	A		A		
CDC	Asthma	493.91	493.xx	493.xx	493.91	Asthma, unspecified type, with	Forward Map	J45.902	Unspecified asthma with status asthmaticus	Asthma	Asthma			C	A		C		
CDC	Asthma	493.92	493.xx	493.xx	493.92	Asthma, unspecified type, with	Forward Map	J45.901	Cough variant asthma	Asthma	Asthma			C	A		C		
CDC	Asthma	--	493.xx	493.xx	493.81	Exercise induced bronchospasm	Forward Map	J45.990	Exercise induced bronchospasm	Asthma	Asthma			A	A		A		
CDC	Asthma	--	493.xx	493.xx	493.82	Cough variant asthma	Forward Map	J45.991	Cough variant asthma	Asthma	Asthma			A	A		A		
CDC	Asthma	[redacted]	493.xx	493.xx	493.21	Chronic obstructive asthma with	Forward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D	D		D		
CDC	Asthma	--	493.xx	493.xx	493.22	Chronic obstructive asthma with	Forward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D	D		D		
CDC	Asthma	--	493.xx	493.xx	493.20	Chronic obstructive asthma, uns	Forward Map	J44.9	Chronic obstructive pulmonary disease, unspecified					D	D		D		
CDC	Asthma	--	[redacted]	--	491.20	Obstructive chronic bronchitis w	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified					D	D		D		
CDC	Asthma	--	[redacted]	--	491.21	Obstructive chronic bronchitis w	Backward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation					D	D		D		
CDC	Asthma	--	[redacted]	--	491.22	Obstructive chronic bronchitis w	Backward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection					D	D		D		

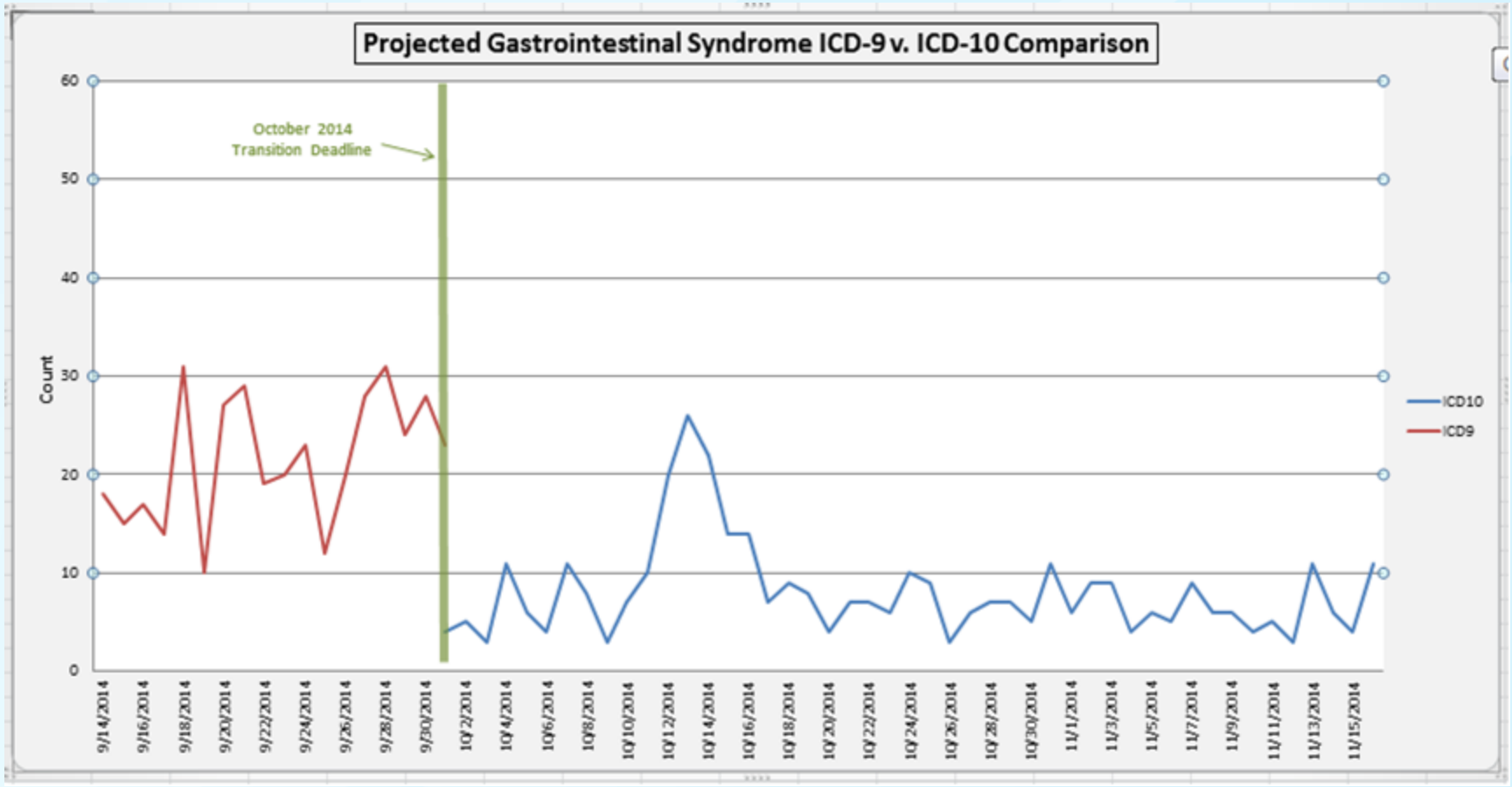
Master Reference Table Detailed

Origin	Concept (ICD-9 Syndro	Bio-terrorism Associate	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
CDC	Rash	050.0	050.0	050.0	050.0	Variola major	Forward Map	B03	Smallpox
CDC	Rash	050.1	050.1	050.1	050.1	Alastrim	Forward Map	B03	Smallpox
CDC	Rash	050.2	050.2	050.2	050.2	Modified smallpox	Forward Map	B03	Smallpox
CDC	Rash	050.9	050.9	050.9	050.9	Smallpox, unspecified	Forward Map	B03	Smallpox
CDC	Rash	051.xx	051.xx	051.xx	051.01	Cowpox	Forward Map	B08.010	Cowpox
CDC	Rash	051.xx	051.xx	051.xx	051.02	Vaccinia not from vaccination	Forward Map	B08.011	Vaccinia not from vaccine
CDC	Rash	051.1	051.1	051.1	051.1	Pseudocowpox	Forward Map	B08.03	Pseudocowpox [milker's node]
CDC	Rash	052.7	052.7	052.7	052.7	Chickenpox with other specified complications	Forward Map	B01.0	Varicella meningitis
CDC	Rash	052.7	052.7	052.7	052.7	Chickenpox with other specified complications	Forward Map	B01.81	Varicella keratitis
CDC	Rash	052.7	052.7	052.7	052.7	Chickenpox with other specified complications	Forward Map	B01.89	Other varicella complications
CDC	Rash	052.8	052.8	052.8	052.8	Chickenpox with unspecified complication	Forward Map	B01.89	Other varicella complications
CDC	Rash	052.9	052.9	052.9	052.9	Varicella without mention of complication	Forward Map	B01.9	Varicella without complication
CDC	Rash	057.8	057.8	057.8	057.8	Other specified viral exanthemata	Forward Map	B09	Unspecified viral infection characterized by skin ar
CDC	Rash	057.8	057.8	057.8	057.8	Other specified viral exanthemata	Forward Map	L44.4	Infantile papular acrodermatitis [Gianotti-Crosti]
CDC	Rash	057.9	057.9	057.9	057.9	Viral exanthem, unspecified	Forward Map	B09	Unspecified viral infection characterized by skin ar
CDC	Rash	692.9	692.9	692.9	692.9	Contact dermatitis and other eczema, unspecified	Forward Map	L23.9	Allergic contact dermatitis, unspecified cause
CDC	Rash	692.9	692.9	692.9	692.9	Contact dermatitis and other eczema, unspecified	Forward Map	L24.9	Irritant contact dermatitis, unspecified cause
CDC	Rash	692.9	692.9	692.9	692.9	Contact dermatitis and other eczema, unspecified	Forward Map	L25.9	Unspecified contact dermatitis, unspecified cause
CDC	Rash	692.9	692.9	692.9	692.9	Contact dermatitis and other eczema, unspecified	Forward Map	L30.9	Dermatitis, unspecified

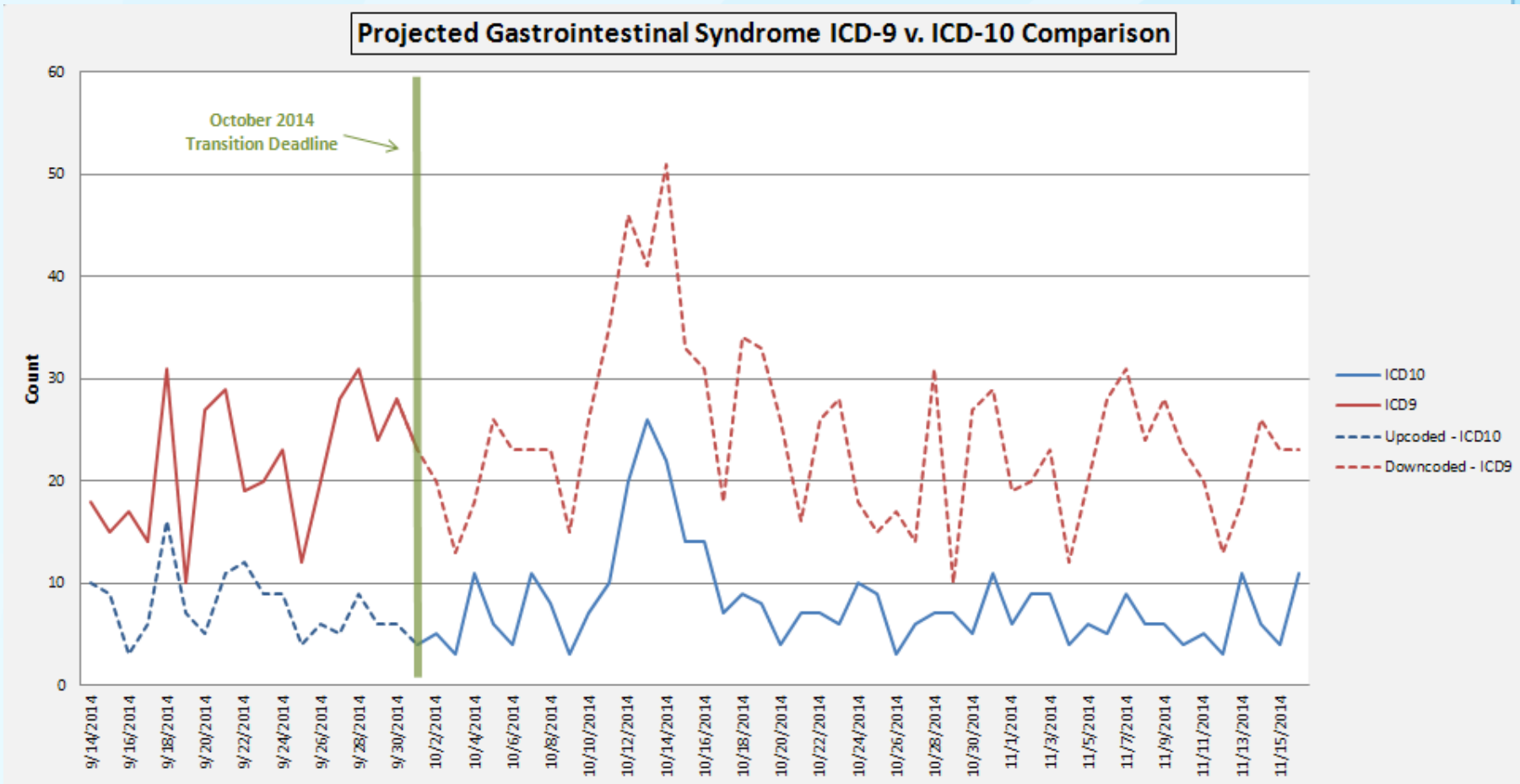
Master Reference Table

Syndrome Concept – Jan 2014 (I9)	ICD-9	Code Title	ICD-10	Code Title	Syndrome Concept – MAY 2014 (I10)
Rash	26	Spirillary fever	A25.0	Spirillosis	TBD
Rash	26.1	Streptobacillary fever	A25.1	Streptobacillosis	TBD
Rash	26.9	Unspecified rat-bite fever	A25.9	Rat-bite fever, unspecified	TBD
Rash	50	Variola major	B03	Smallpox	TBD
Rash	50.1	Alastrim	B03	Smallpox	TBD
Rash	50.2	Modified smallpox	B03	Smallpox	TBD
Rash	50.9	Smallpox, unspecified	B03	Smallpox	TBD
Rash	51.01	Cowpox	B08.010	Cowpox	TBD

Potential impact on time series analysis



Potential impact on time series analysis



CDC / ISDS Collaboration Code Mapping Project

ISDS Collaboration

Purpose:

1. Translate ICD-9 to ICD-10 codes
2. Compare translations across settings to identify discrepancies
3. Create code to parse data into syndromes
4. Develop analytical approaches to address the “changing baseline” issue

Current Focus: Code-mapping review

We need your help!

1. Volunteer to review code-mappings (indicate interest **by April 28th**)
2. Receive chapter assignments (1-16 total chapters, or syndrome groupings)
3. Complete your review in 2-4 weeks, depending on the number of chapters you are assigned
4. Each chapter or subsection will only take a few hours
5. When you sign up you will be asked to identify your role in your organization and area of specialty.

Interested? Sign up to review chapters here:
https://www.surveymonkey.com/s/9S262FH

Reviewer Template

Sheets | Charts | SmartArt Graphics | WordArt

F	G	H	I	J
ICD-9 Code 2014	ICD-9 Code Title 2014	ICD-10 Translation Directionality / Rational	ICD-10 Code 2014	ICD-10 Code Title 2014
493.00	Extrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated
493.00	Extrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated
493.00	Extrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated
493.00	Extrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated
493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus
493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.32	Mild persistent asthma with status asthmaticus
493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus
493.01	Extrinsic asthma with status asthmaticus	Forward Map	J45.52	Severe persistent asthma with status asthmaticus
493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation
493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation
493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation
493.02	Extrinsic asthma with (acute) exacerbation	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation
493.10	Intrinsic asthma, unspecified	Forward Map	J45.20	Mild intermittent asthma, uncomplicated
493.10	Intrinsic asthma, unspecified	Forward Map	J45.30	Mild persistent asthma, uncomplicated
493.10	Intrinsic asthma, unspecified	Forward Map	J45.40	Moderate persistent asthma, uncomplicated
493.10	Intrinsic asthma, unspecified	Forward Map	J45.50	Severe persistent asthma, uncomplicated
493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.22	Mild intermittent asthma with status asthmaticus
493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.32	Mild persistent asthma with status asthmaticus
493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.42	Moderate persistent asthma with status asthmaticus
493.11	Intrinsic asthma with status asthmaticus	Forward Map	J45.52	Severe persistent asthma with status asthmaticus
493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.21	Mild intermittent asthma with (acute) exacerbation
493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.31	Mild persistent asthma with (acute) exacerbation
493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.41	Moderate persistent asthma with (acute) exacerbation
493.12	Intrinsic asthma with (acute) exacerbation	Forward Map	J45.51	Severe persistent asthma with (acute) exacerbation
493.90	Asthma,unspecified type, unspecified	Forward Map	J45.909	Unspecified asthma, uncomplicated
493.90	Asthma,unspecified type, unspecified	Forward Map	J45.998	Other asthma
493.91	Asthma, unspecified type, with status asthmaticus	Forward Map	J45.902	Unspecified asthma with status asthmaticus
493.92	Asthma, unspecified type, with (acute) exacerbation	Forward Map	J45.901	Cough variant asthma
493.81	Exercise induced bronchospasm	Forward Map	J45.990	Exercise induced bronchospasm
493.82	Cough variant asthma	Forward Map	J45.991	Cough variant asthma
493.21	Chronic obstructive asthma with status asthmaticus	Forward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection
493.22	Chronic obstructive asthma with (acute) exacerbation	Forward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation
493.20	Chronic obstructive asthma, unspecified	Forward Map	J44.9	Chronic obstructive pulmonary disease, unspecified
491.20	Obstructive chronic bronchitis without exacerbation	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified
491.21	Obstructive chronic bronchitis with (acute) exacerbation	Backward Map	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation
491.22	Obstructive chronic bronchitis with acute bronchitis	Backward Map	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection
496	Chronic airway obstruction, not elsewhere classified	Backward Map	J44.9	Chronic obstructive pulmonary disease, unspecified

Next Steps

Join the Community:

•ICD-10 Conversion Community Forum Group:
http://communityforum.syndromic.org/group/icd-10-conversion

Questions Regarding the ISDS/CDC ICD-10 project?

•Email us at icd10@syndromic.org

ISDS
INTERNATIONAL SOCIETY FOR DISEASE SURVEILLANCE

Embrace and leverage the opportunity!

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