

#### Component 9 - Networking and Health Information Exchange

Unit 4-2 - Basic Health Data Standards

#### Slide 2

# Unit 4-2 Objectives

- Understand the use, purpose and interrelation among sets of controlled vocabularies in use today.
- Identify the more common controlled vocabularies in use today: ICD, CPT, DRG, NDC, RxNorm, and LOINC.

Health IT Workforce Curriculum Version 2.0/Spring 2011

# Slide 3

#### International Classification of Disease

- ICD-9 CM [Clinical Modification]
   US is the only major country still using this controlled terminology; estimates to change range from \$5 b to \$15 b \$15 b

  ICD-10 (ICD-10-CM and ICD-10-PCS)

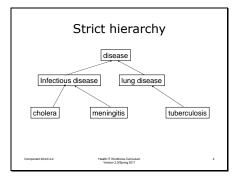
  Used by most of the world

  US committed to change; target date 1 January 2013

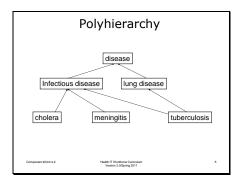
  ICD-11

- Dr. Chris Chute of Mayo Clinic is chief editor
   Includes SNOMED, DRG
- Target date for completion 2015
- Sponsored by World Health Organization

Health IT Worldorce Curriculum Version 2.0/Spring 2011

# Slide 5



# Slide 6

### ICD9-CM examples: 420 tuberculosis codes (plus 69 hierarchical codes)

	(p.as ss		ou. couce,	
010. 010.0 010.00 010.01 010.02 010.03 010.04 010.05 010.06 010.1 010.8 010.9	PRIMARY TB INFECTION* PRIMARY TB COMPLEX* PRIM TB COMPLEX-UNS PEC PRIM TB COMPLEX-UNS PEC PRIM TB COMPLEX-EXM UNIVE PRIM TB COMPLEX-EXM UNIVE PRIM TB COMPLEX-EXM UNIVE PRIM TB COMPLEX-ULT TS X PRIM TB COMPLEX-ULT TS X PRIM TB COMPLEX-UTT TS X PRIM TB COMPSEX VITE TS PRIMARY TB PLEURISY PRIM PROGRESSIVE TB NEC- PRIMARY TB INFECTION NOS*	017. 018.	PULMONARY TUBERCULOSIS OTHER RESPIRATORY TB ONTE RESPIRATORY TB ONTE STATE OF BONE AND JOINT GENTOURNEARY TB TUBERCULOSIS NECTUBERCULOSIS NECTUBERCULOSIS NECTUBERCULOSIS NECTUBERCULOSIS NECTUBERCULOSIS NECTUBERCULOSIS NE	S*
Comp	ponent S/Unit 4-2 Heal	th IT Workforce Curriculum		6

# Slide 7 The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) · Created to standardize diagnoses in psychiatry or mental health disorders Includes diagnostic definitional criteria • Published by American Psychiatric Association Not free for use Slide 8 Current Procedural Terminology (CPT) · Developed and owned by AMA · Required for procedure reimbursement · Required for physician visit reimbursement (E&M Coding) · Licensing fee per application, per seat Health IT Workforce Curriculum Version 2.0/Spring 2011 Slide 9 **CPT** examples 76090: Unilateral mammography 76091: Bilateral mammography 76092: Screening mammography, bilateral (two view film

study of each breast)

76096: Mammographic guidance for needle placement, breast (e.g., for wire localization or for injection), each lesion, radiological supervision and interpretation

76645: Ultrasound, breast(s) (unilateral or bilateral), B-scan and/or real time with image documentation

Component 9/Unit 4-2

Health IT Worldorce Curriculum Version 2.0/Spring 2011


		-		
Slide 10	Diagnosis Related Groups	_	 	
	DRG			
	Diagnoses, procedures, age, complications and other factors expected to have similar			
	hospital resource use	_	 	
	CMS codes for prospective payment			
		_		
		-	 	
	Componers 9Unit 4-2 Health IT Workforce Curriculum Version 2.0/Spring 2011			
		1		
		_		
		_	 	
		-		
		1		
Slide 11	DRG examples: pneumonia	_	 	
	75 Respiratory disease with major chest operating room			
	procedure, no major complication or comorbidity 76 Respiratory disease with major chest operating room			
	procedure, minor complication or comorbidity 77 Respiratory disease with other respiratory system	_		
	operating procedure, no complication or comorbidity 79 Respiratory infection with minor complication, age			
	greater than 17 80 Respiratory infection with no minor complication,	_	 	
	age greater than 17 89 Simple Pneumonia with minor complication,			
	age greater than 17 90 Simple Pneumonia with no minor complication,			
	age greater than 17 475 Respiratory disease with ventilator support	_	 	
	Component 9/Unit 4-2 Health IT Workforce Curriculum 11 Vernior 2.0 Spring 2011			
		1		
		_		
		_	 	
		-	 	
		7		
Slide 12	N .: 15 G 1 (NDG)	_	 	
	National Drug Codes (NDC)			
	US Food and Drug Administration			
	Identifiers for labeled, regulated products	-	 	
	Labelers get 4- or 5-digit code			
	Product code set by labeler: 3 or 4 digits		 	
		_		
	<ul> <li>Package code set by labeler: 2 digits</li> </ul>			

Health IT Workforce Curriculum Version 2.0/Spring 2011

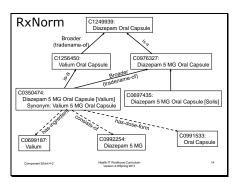
#### RxNorm

- Food and Drug Administration
- Veterans Health Administration
- · National Library of Medicine
- Drug knowledge base vendors

Component 9/Unit 4-

Health IT Workforce Curriculum Version 2.0/Spring 2011

# Slide 14



# Slide 15

# 


# Structured Product Labeling

- Defines the content of human prescription drug labeling in XML format
- Displayed in web browser using SPL style
- · Contains labeling plus machine readable information
- It is an HL7 standard and has been submitted to ISO

#### Slide 17

# The DailyMed

- Derived from Structured Product Labeling
   Medication information in computer readable form
   Easily imported into information system
- Comprehensive
- Includes all marketed productsReliable
- Information directly from labeling
- Up-to-date
   New information or changes added daily
- Free

Health IT Workforce Curriculum Version 2.0/Spring 2011

# Slide 18

#### Logical Observation Identifiers Names and Codes (LOINC®)

- Laboratory portion
   Standard test names and codes
   Includes chemistry, hematology, serology, microbiology (including parasitology and virology), toxicology
   Drugs and cell counts for blood smears and cerebrospinal fluids
   Antibiotic susceptibilities

- Clinical portion
   Vitals signs, hemodynamics, intake/output, ECG, obstetric ultrasound, cardio echo, urologic imaging, pulmonary ventilator management, survey instruments, other

Health IT Worldorce Curriculum Version 2.0/Spring 2011

_
_
_
_
_
_
_
_
_
_
 _
_
_
 _
 _
_
 _
 _
 _

		.9
lid		

# LOINC code

- Codes are unique and have no meaning
- Format is nnnnn-n where the last n is a mod 10 check digit
- Typical code: 4764-5
- Each LOINC record corresponds to a single test or panel
- Includes long names, short names and synonyms

omnonere Sil Init 4-1

Health IT Worldorce Curriculum Version 2.0/Spring 2011

# Slide 20

#### **Definition Axes**

- Component name (analytic)
- · Property measured
- Timing
- Type of sample
- Type of scale
- Method (where relevant) is used to separate axes

Component 9/Unit 4-2

Health IT Worldorce Curriculum Version 2.0/Spring 2011

# Slide 21

# Examples

- SODIUM:SCNC:PT:SER/PLAS:QN
- SODIUM:SRAT:24H:UR:QN
- GLUCOSE:3H POST 100 G GLUCOSE PO:SCNC:PT:SER/PLAS:QN

Component 9/Unit 4-2

Health IT Workforce Curriculum Version 2.0/Spring 2011


lic	2	

# LOINC today

- The current version of LOINC is v2.3.2 and was released in June 2010. The database contains 58,967 terms. It is free and may be downloaded from <a href="https://www.loinc.org">www.loinc.org</a>
- Mapping Assistant (RELMA) available for free

Component 9/Unit 4-2

Health IT Worldorce Curriculum

#### Slide 23

#### RELMA

The Regenstrief Institute provides a Windows-based mapping utility called the Regenstrief LOINC Mapping Assistant (RELMA) to facilitate searches through the LOINC database and to assist efforts to map local codes to LOINC codes. Like the LOINC database, this program is also available for free use.

Component 9/Unit 4-

Health IT Workforce Curriculum Version 2.0/Spring 2011

# Slide 24

# Example of LOINC's Use in Data Exchange

- HL7 Message:
  - OBX|...|Observation|...|Result|...|
- Observation = Code^Name^Coding System
- Logical Objects, Identifiers, Names and Codes
- Self-defining names for lab tests

Component 9/Unit 4-2

Health IT Workforce Curriculum Version 2.0/Spring 2011

			_
			-
			-
			-
			-
		 	-
		 	-
			 -
		 	 -
			 -
		 	 -
			 -
		 	 -
			 -
		 	 -
			 -
		 	 -
	 	 	 -

# Summary

In this section, you have learned some of the more common controlled vocabularies. In many cases, a particular terminology is used for a specific purpose. In most cases, the doctor enters a textual term and a coder does the actual coding. You will be exposed to many of these vocabulary sets.

vit 4-2 Health IT World rose Curriculum Version 2.0/Spring 2011
