Agency for Healthcare Research and Quality

Advancing Excellence in Health Care

ICD-10

Battelle

The Business of Innovation

UCDAVIS

HEALTH SYSTEM

ICD-10-CM/PCS CONVERSION
FOR
AHRQ QUALITY INDICATORS ™

OCTOBER 2012

Objectives

HIPAA Requirements for ICD-10-CM/PCS

Basics of ICD-10 Code Sets

ICD-10 Planning, Preparation, Go-Live

AHRQ Quality Indicators Project

Mapping Methods and examples

Challenges to consider

Questions to ask yourselves…..

- Jan 2009: Dept of Health and Human Services published its final rule for transition of ICD-9-CM to ICD-10-CM and ICD-10-PCS code sets.

- Under HIPAA, the medical code sets for coding diagnoses and inpatient hospital procedures will change Oct 1, 2014.

- Conversion will impact:
  - All health care claims
  - All prospective payment systems such as MS-DRGs
  - All risk adjustment software applications
  - AHRQ Quality Indicators ™
  - AHRQ Comorbidity software
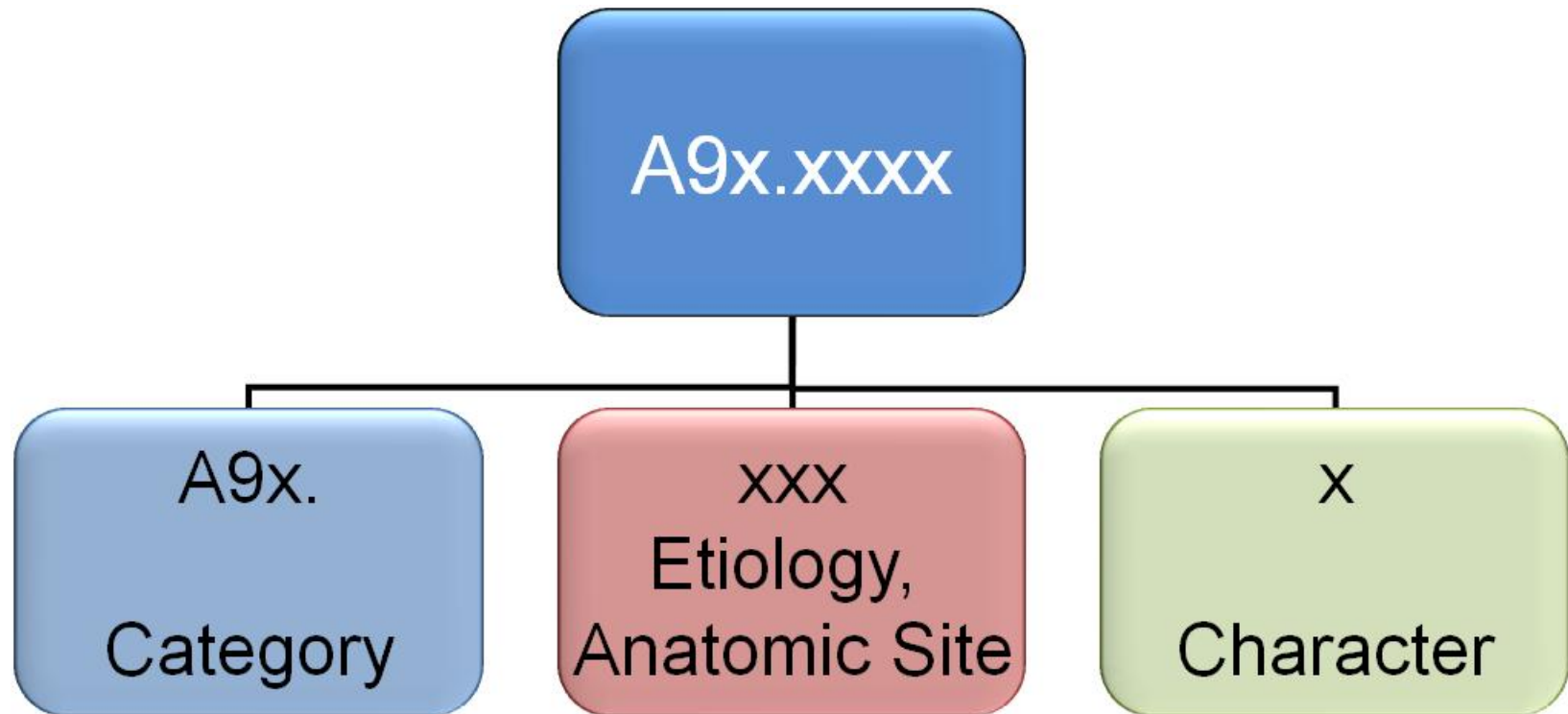 - AHRQ Clinical Classification System (CCS)

UCDAVIS and **Battelle**

ICD-10

International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)

http://www.cms.gov/Medicare/Coding/ICD10/2012-ICD-10-CM-and-GEMs.html

ICD-10-CM

(International Classification of Diseases, 10th Revision, Clinical Modification)

Diagnosis and External Causes

ICD-10-CM Chapters

(paraphrased)

#	Codes	Descriptions
1	A00-B99	Infections
2	C00-D48	Neoplasms
3	D50-D98	Blood Disorders
4	E00-E90	Endocrine/Metabolism
5	F01-F99	Mental
6	G00-G99	Nervous System
7	H00-H59	Eye
8	H60-H95	Ear
9	I00-I99	Circulatory System
10	J00-J99	Respiratory System

#	Codes	Descriptions
11	K00-K93	Digestive System
12	L00-L99	Skin
13	M00-M99	Muscle/Bone
14	N00-N99	Genitourinary
15	O00-O99	Pregnancy
16	P00-P96	Perinatal Period
17	Q00-Q99	Malformations
18	R00-R99	Symptoms
19	S00-T98	Injuries, External causes
20	V01-Y98	External Causes Morbidity
21	Z00-Z99	Health Factors

ICD-10 Impacts

- Few new Official Coding Guidelines were added.

- http://www.cdc.gov/nchs/icd/icd10cm.htm

- Myocardial Infarctions
  - ICD-9-CM codes   410 series
  - ICD-10-CM codes I21 and I22 series
  - Number of weeks changed from <u>8 weeks</u> in ICD-9-CM to <u>4 weeks</u> in ICD-10-CM
  - Codes for MI will be reported for duration of 4 weeks (28 days) or less from onset <u>in all healthcare settings</u>.
  - After 4 completed weeks, it is coded as old MI (I25.2)

International Classification of Diseases, Tenth Revision, Procedure Coding System(ICD-10-PCS)
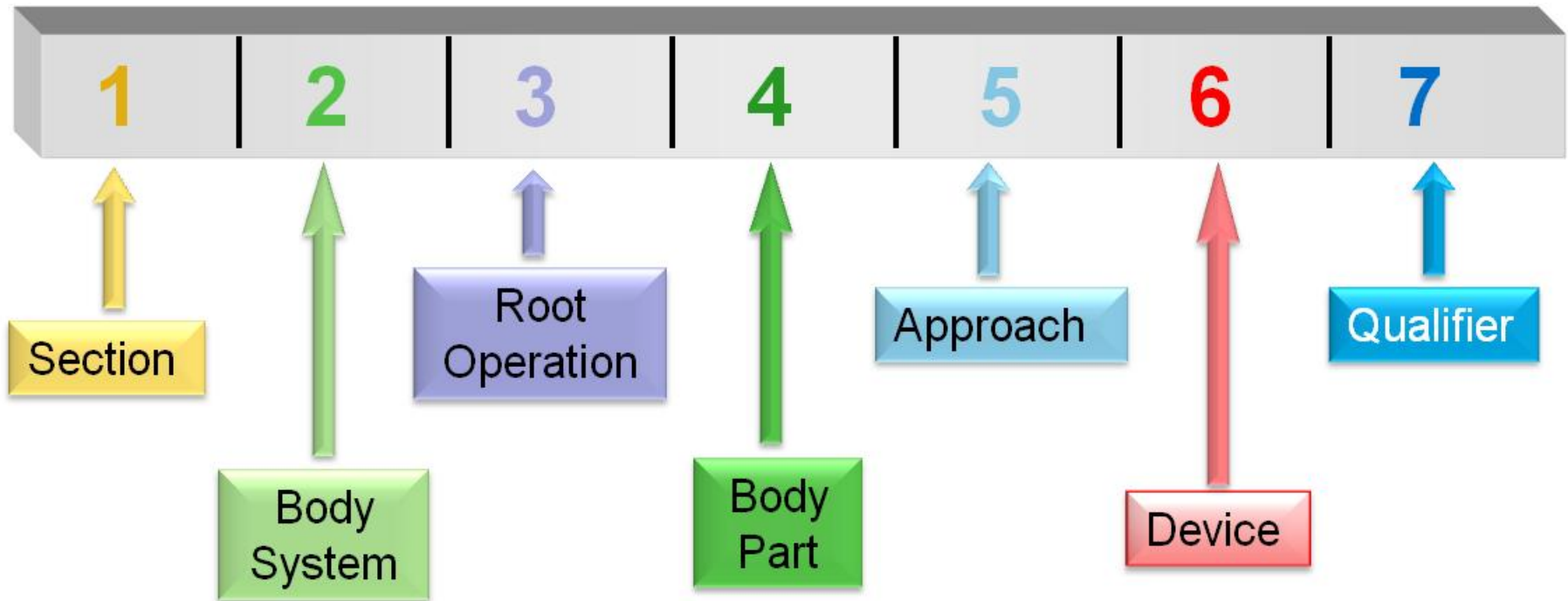
http://www.cms.gov/Medicare/Coding/ICD10/2012-ICD-10-PCS.html

ICD-10-PCS

(International Classification of Diseases, 10th Revision, Procedure Coding System)

Inpatient Procedure

ICD-10

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Section

Body System

Root Operation

Body Part

Approach

Device

Qualifier

New Procedure Definitions

ICD-10

ICD-9-CM Procedure Term	ICD-10-PCS Procedure Term
Amputation	Detachment
Amniocentesis	Drainage
Cystoscopy	Inspection
Closed Reduction	Reposition
Debridement	Excision, Irrigation, Extirpation, Extraction
Total Mastectomy	Resection
Subtotal Mastectomy	Excision
Tracheostomy	Bypass
Cesarean Section	Extraction of Products of Conception
Incision	No ICD-10-PCS term

October 1, 2014

- Compliance date for ICD-10 implementation
  - October 1, 2014
  - One day switch for all HIPAA-impacted entities
  - ICD-9-CM will not be accepted on or after 10/1/2014
  - Limited code set changes for 2013 and 2014
  - Full update will resume 10/1/2015
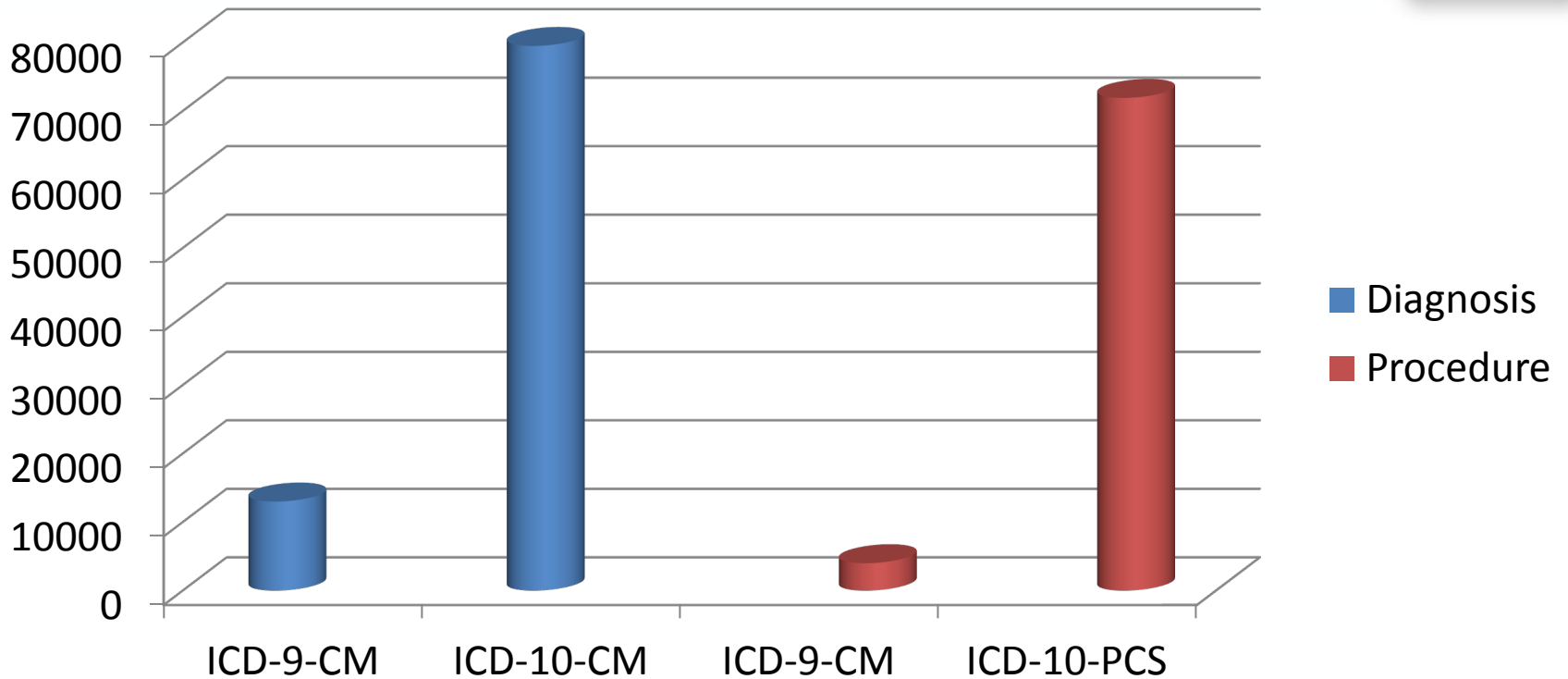- <u>Beware of duplication</u> between ICD-9 and ICD-10 codes, if you do not use decimals in output

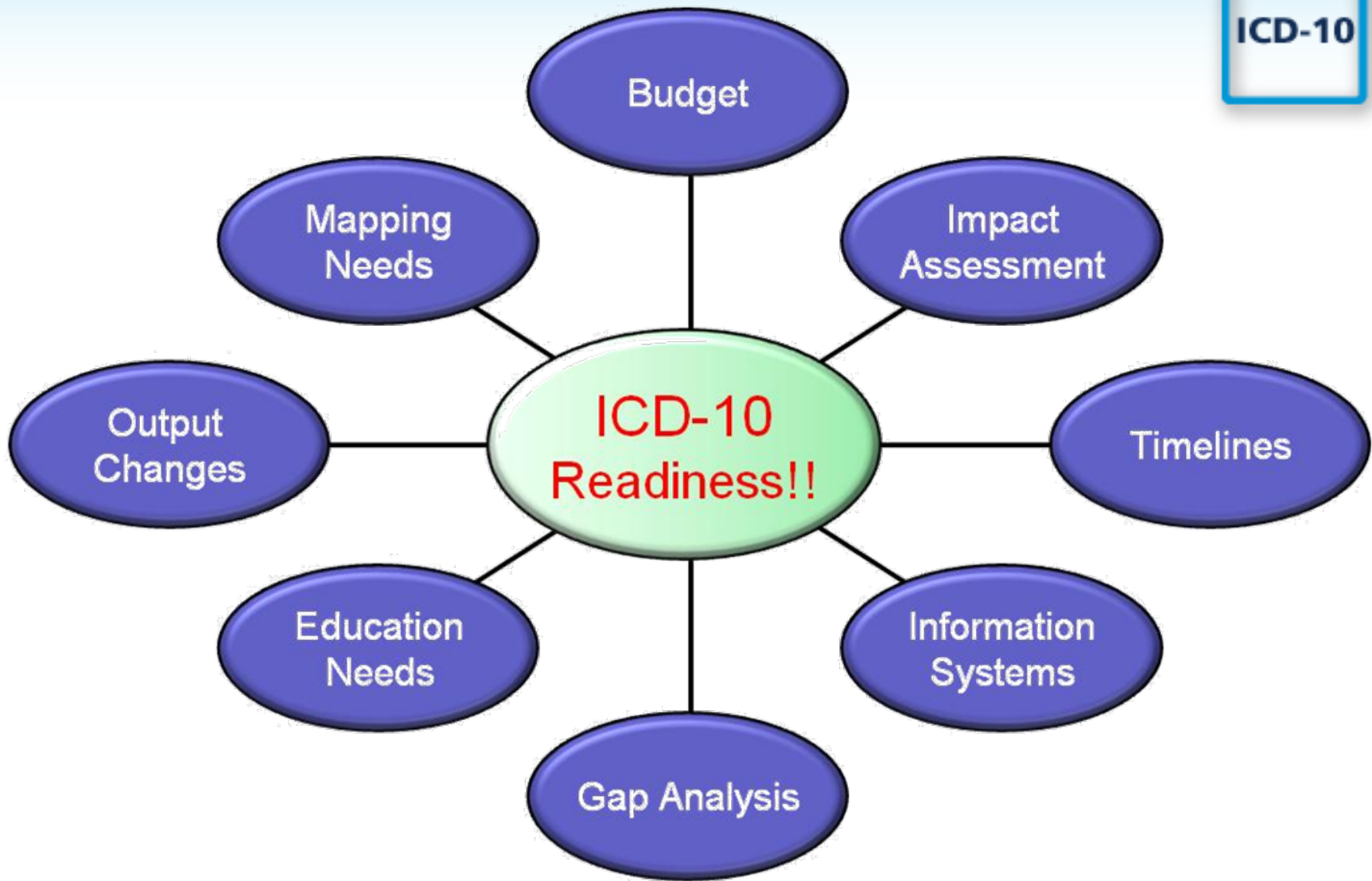| E895	Accident caused by controlled fire in private dwelling	E895	Postprocedural testicular hypofunction

Number of Codes

2013	Diagnosis	Diagnosis	Procedure	Procedure
Code Set	ICD-9-CM	ICD-10-CM	ICD-9-CM	ICD-10-PCS
Approx. Total	13,000	79,502	4,000	71,920

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Timeline

ICD-10

YEAR	Activity
2012	Impact analysis Basic education on ICD-10 code sets Communication is critical Budget for programming, hardware, education, vendor costs System Planning (business and technical requirements) Remediation for systems, programs, products, projects, edits,
2013	Systems Code Freeze (development, test, production) User Acceptance Testing with impacted areas Product Testing Add ICD-10 mapping tool and/or encoder; Training workshops for staff
2014	Go Live for Data Input Go live for systems, products, projects, edits Troubleshoot problems
2015	Post Implementation Go Live in creating data set files Review quality of reported IcD-10 data Develop new products with ICD-10 data (review mappings)

Planning

- Impact Analysis Assessment Plan
- Communication Plan
  - IT Core Team and Program Core Team
- Education Plan
  - Education – prior to business & system cl
- Training Plan
  - Training – set of skills related to ICD-10 functions
- ICD-10 Product Search Plan
  - Tool to help staff with ICD-9 and ICD-10

Communication

ICD-10

- SharePoint
  - Post Impact Assessments
  - Post ICD-10 codebooks from CMS
  - Post resources on ICD-10 changes, links, and internal presentations
- Maintain weekly or bi-weekly status meetings with all departments (ICD-10 Committee)
- Listen to staff concerns regarding impacts
  - Change is difficult and awkward. Help each other to accomplish ICD-10 .
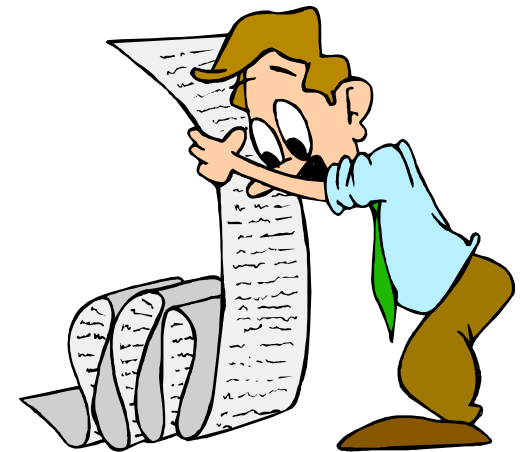
Education Assessment

ICD-10

- Determine what staff need to know before they make changes to requirements for systems, products, projects, and applications
  - Basic: familiarity and awareness of changes between ICD-9 and ICD-10 code sets to be conversant
  - Moderate: require understanding to interpret and use ICD-10
  - High: require detailed and expert understanding to apply ICD-10 codes

- Determine what staff need for skills or tools when using ICD-10 data

Inventory

ICD-10

- Determine how and where data are impacted
- Inventory via face-to-face interviews
  - Systems, programs, projects, products
  - Time, estimated costs, education
- Tool – Excel Spreadsheet
  - Process: What do they do
  - Output: What do they produce
  - Input: What do they need
  - Available in SharePoint for other business needs

AHIMA Tool

ICD-10

AHIMA ICD-10-CM/PCS - Readiness Assessment and Prioritization Tool																					
Importance Weight																					
Strategic Category	**Regulatory**				**Revenue Cycle**					**Operational Efficiency**					**Performance Management**					
	ICD-10-CM/PCS Compliance	5010 Compliance	Integration with other regulatory	Additional:	Regulatory Score	Drop bill and no change in A/R days	Portfolio management	Payer/Provider integration (Contracts)	Additional:	Revenue Cycle Score	IT System Integration	Clinical integration	Functional integration	Payer/Provider integration	Additional:	Operational Score	Accuracy	Quality reporting programs	Additional:	Performance Management	Overall ICD-10 Priority Score
Strategy Component: HIM Coding and Reimbursement																					
Encoding software					0					0						0				0	0
Case mix systems					0					0						0				0	0
DRG grouper					0					0						0				0	0
Compliance checking systems					0					0						0				0	0
Strategy Component: Revenue Cycle Management																					
Billing Systems					0					0						0				0	0
Claim submission systems					0					0						0				0	0
Registration and scheduling systems					0					0						0				0	0
Strategy Component: Clinical Systems																					
Test ordering systems					0					0						0				0	0
Pharmacy systems					0					0						0				0	0
Registries					0					0						0				0	0
Patient assessment data sets (PAI, OASIS)					0					0						0				0	0

Key	Relation to Strategic Category
400-600 - Highest Priority	Direct
200-399 - Medium Priority	Somewhat
0-199 - Low Priority	Not

http://www.ahima.org/icd10/assess.aspx

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OSHPD Products

ICD-10

Data Analysis

- Validation reports, Validated datasets, Mortality Indicator reports and technical notes, Outcome Reports, Data discrepancy report, Risk factor coding, Linked clinical data file, and Trend reports

Standard product changes

- Frequencies, Case Mix Index, AHRQ Mortality Indicators, Inpatient Volume & Utilization Quality Indicators, Patient Origin and Market Share, Top 25 MS-DRGs, Pivot tables

Standard dataset and product changes

- Aggregations and Statistical Summaries , Racial & Ethnic Disparities, Preventable Hospitalization, Health Facts, Perspectives

Preparation

- <u>Requirements, Changes and Testing</u> will begin
  - Systems
  - Programs

- <u>System Code Freeze</u> through 2015
  - Test system changes containing ICD-10 codes and formats

- <u>Product revisions</u>
  - Equivalent mapping, if needed

- <u>Education Workshops specific to that program</u>
  - Staff needs training on new changes, new tools
  - Staff needs more in-depth knowledge

OSHPD Edits

- Standard Edits for ICD-10-CM/PCS Codes
    - Invalid Codes
    - Age Edits for diagnosis, procedures, external cause of injuries
    - Sex Edits for diagnosis and procedures
    - POA Edits for diagnoses and external causes
- Coding Edits
    - Will be discontinued on or after 10/1/2014
    - Will need 1-2 years of analyses on reported ICD-10 codes
    - Coding guidelines will be finalized 10/1/2014

Vendors

- WEDI ICD-10 Vendor Resource Directory
  - http://wedi.org/public/articles/dis_viewArticle.cfm?ID=904
- Survey current vendors
  - Assessment and readiness tool
  - Work with IT leadership
- Readiness
  - Testing their system with ICD-10 codes
  - Revisions and corrections prior to Go-live

Outreach

Outreach on ICD-10 Readiness

- Communicate ICD-10 efforts to data researchers, contractors, surgeons, Agency, Director's Office, Clinical Advisory Panel, Auditors, Technical Advisory Committee, Public Health Stakeholders

- Updates on data set changes and documentation

- Updates on data quality, such as edits

- Updates on popular products

- For your dependencies, learn if other organizations are ICD-10 ready, such as AHRQ Quality Indicators, Clinical Classification Software, or CMS MS-DRGs

2015: Post Implementation

- **Share Experiences**
  - Reporting facilities and data users
  - Internal stakeholders
  - Train or re-train
- **Data Quality**
  - Review reported data for future edits
  - Develop requirements
  - Implement and test
- **Products**
  - Review mapping accuracy for reports
  - Create new products with new ICD-10 data

ICD-10-CM/PCS CONVERSION FOR
AHRQ QUALITY INDICATORS ™

Patient Safety, Today and Every Day

- AHRQ Quality Indicators ™
  - Unique set of measures for use with inpatient administrative data
  - Four modules:
    - Patient Safety Indicators (PSIs)
    - Prevention Quality Indicators (PQIs)
    - Inpatient Quality Indicators (IQIs)
    - Pediatric Quality Indicators (PedQIs)
  - Used for quality monitoring, hospital self-assessment
  - May support public reporting, pay for performance

UCDAVIS and **Battelle**

UCDAVIS and Battelle

ICD-10

- AHRQ committed to converting QIs from ICD-9-CM to ICD-10-CM/PCS in an accurate and transparent manner
  - Use ICD-10 version of QIs starting October 2014
- AHRQ contracted with Battelle
  - Manage the QI program, including annual updates, software, testing and validation, user support and education.
- Battelle subcontracted with UC Davis
  - Perform the ICD-10 <u>conversion project</u>
  - Lead and coordinate clinical expertise on the conversion
  - Recommend proposed specifications

Mapping Tool

- Mapping require the use of a basic foundation
  - General Equivalence Map (or GEMs)
  - Provide all plausible translation alternatives
- 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)
  - We will discuss this process more later.
- We mapped the set names as the basic foundations for 91 QIs.

Set Names	Number of Set Names	Number of ICD-9 codes
Diagnosis Sets Names	160	7,925
Procedure Set Names	68	1,769
Totals	228	9,694

Types of Mapping

- General Equivalence Mappings (GEMs)
  - Reference map
  - Provide all plausible translation alternatives
  - Useful for applied maps
- Applied Map
  - Meet your specific needs
  - Purpose
  - Business rules

http://www.cms.gov/Medicare/Coding/ICD10/index.html

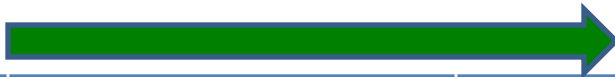# Mapping Methods: Proper

ICD-10

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.
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.

Examples: Proper Direction

9-to-10 →

ICD9	Description	Map	ICD10	Description
556.9	Ulcerative colitis	F Map	K51.90	Ulcerative colitis, without complications

10-to-9 →

ICD10	Description	Map	ICD9	Description
0BBK0ZZ	Excision of Right Lung, Open Approach	B Map	32.22	Lung volume reduction surgery

Mapping Methods: Reverse

KEY	Name of Map	GEM Files	Method
RB	Reverse Backward Map	10-to-**9** ←	Reverse Lookup: We look up an **ICD-9-CM** code and get additional ICD-10-CM/PCS equivalents.
RF	Reverse Forward Map	9-to-**10** ←	Reverse Lookup: We look up an **ICD-10-CM/PCS** code and get additional ICD-9 equivalents.

Example: Reverse Direction

9-to-10 →

ICD9	Description	Map	ICD10	Description
556.9	Ulcerative colitis	F Map	K51.90	Ulcerative colitis, without complications

← 10-to-**9**

ICD10	Description	Map	ICD9	Description
K51.911	Ulcerative colitis, with rectal bleeding	RB Map	**556.9**	Ulcerative colitis
K51.912	Ulcerative colitis, with intestinal obstruction	RB Map		
K51.913	Ulcerative colitis, with fistula	RB Map		
K51.914	Ulcerative colitis, with abscess	RB Map		
K51.918	Ulcerative colitis, with other complication	RB Map		
K51.919	Ulcerative colitis, with unspecified complications	RB Map		

2012 ICD-10-CM Codes

- A00-B99 Certain infectious and parasitic diseases
- C00-D49 Neoplasms
- D50-D89 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
- E00-E89 Endocrine, nutritional and metabolic diseases
- F01-F99 Mental, Behavioral and Neurodevelopmental disorders
- G00-G99 Diseases of the nervous system
- H00-H59 Diseases of the eye and adnexa
- H60-H95 Diseases of the ear and mastoid process
- I00-I99 Diseases of the circulatory system
- J00-J99 Diseases of the respiratory system
- K00-K95 Diseases of the digestive system
- L00-L99 Diseases of the skin and subcutaneous tissue
- M00-M99 Diseases of the musculoskeletal system and connective tissue
- N00-N99 Diseases of the genitourinary system
- O00-O9A Pregnancy, childbirth and the puerperium
- P00-P96 Certain conditions originating in the perinatal period
- Q00-Q99 Congenital malformations, deformations and chromosomal abnormalities
- R00-R99 Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
- S00-T88 Injury, poisoning and certain other consequences of external causes
- V00-Y99 External causes of morbidity
- Z00-Z99 Factors influencing health status and contact with health services

ICD10Data.com

The Free 2012 ICD-10-CM Reference

	All 2012 Codes & Indexes ▼	Search	

2012 ICD-10-CM Codes ▼   2012 ICD-10-CM Indexes ▼   Convert to/from 2012 ICD-10-CM   2012 ICD-10-PCS Codes ▼   About

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:

[   ]   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.

Convert ICD-9-CM 556.9 to ICD-10-CM

ICD-9-CM 556.9 converts approximately to:

- 2012 ICD-10-CM K51.90 Ulcerative colitis, unspecified, without complications

ICD10Data.com

The Free 2012 ICD-10-CM Reference

All 2012 Codes & Indexes | Search

2012 ICD-10-CM Codes ▼ | 2012 ICD-10-CM Indexes ▼ | Convert to/from 2012 ICD-10-CM | 2012 ICD-10-PCS Codes ▼ | About ▼

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Convert ICD-10-CM K51.90 to ICD-9-CM

ICD-10-CM K51.90 converts approximately to:

- 2012 ICD-9-CM 556.9 Ulcerative colitis unspecified

GEM Flag: Exact Match

ICD-9	Desc	ICD10	Desc	Approx	No Map	Comb	Scenario	Choice
579.1	Tropical Sprue	K90.1	Tropical Sprue	**0**	0	0	0	0

- The <u>Approximate</u> Flag: code 0 means exact match.
- You can come up with a 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 <u>Approximate</u> 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 <u>No Map</u> Flag: code 1 means there are no codes to match the description (found in proper direction)
- Business Rule:
  - Are there any other codes to consider?
  - Consider reverse method to find additional codes.

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!

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GEM Flag: Combination
52.7 Radical Pancreaticoduodenectomy (source)

ICD10 Target	Desc	Approx	No Map	Comb	Scenario	Choice
OFTG0ZZ	Resection of pancreas, open approach	1	0	**1**	2	1
ODT90ZZ	Resection of duodenum, open approach	1	0	1	2	2
OF190Z3	Bypass common bile duct to duodenum, open approach	1	0	1	2	3

- 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?

Example of "Combination"

Scenario	Choice	ICD-10	Description
2	1	0FTG0ZZ	Resection of Pancreas, Open Approach
2	2	0DT90ZZ	Resection of Duodenum, Open Approach
2	3	0F190Z3	Bypass Common Bile Duct to Duodenum, Open Approach
2	1	0FTG0ZZ	Resection of Pancreas, Open Approach
2	2	0DT90ZZ	Resection of Duodenum, Open Approach
2	4	0F1G0ZC	Bypass Pancreas to Large Intestine, Open Approach
2	1	0FTG0ZZ	Resection of Pancreas, Open Approach
2	2	0DT90ZZ	Resection of Duodenum, Open Approach
2	5	0D160ZA	Bypass Stomach to Jejunum, Open Approach

Diagnosis Mapping Example
Severe sepsis with septic shock

3 codes	ICD-9-CM
038.9	Unspecified septicemia
995.92	Severe sepsis
785.52	Septic shock

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

ICD-10-CM has more combination codes
Condition + Site/Symptom + Attribute about the diagnosis.

Procedure Mapping Example
Radical Pancreaticoduodenectomy

1 code	ICD-9-CM
52.7	Radical Pancreaticoduodenectomy

3 codes	ICD-10-PCS
OFTG0ZZ	Resection of pancreas, open approach
ODT90ZZ	Resection of duodenum, open approach
OF190Z3	Bypass common bile duct to duodenum, open approach

ICD-10-PCS will not have combination codes.
Every objective and approach must have a separate code for each site.

ICD-10-CM/PCS Conversion Work Groups

- Ten Work Groups – based on QI technical specifications
  - Cancer, Cardiac, Critical Care/Pulmonary, Infection, Internal Medicine, Neonatal/Pediatric, Neurology, OB/GYN, Orthopedic, and Surgery

- Roles
  - Evaluate the results of automated 'coding mapping' from ICD-9-CM to ICD-10-CM/PCS
  - Provide input and advice if mapped codes are appropriate
  - Offer specific recommendations how QIs should re-specified using ICD-10-CM/PCS codes
    - Retain clinical intent of each indicator

Questions to Ask Yourself….

❑ Are both ICD-9-CM and ICD-10-CM/PCS codes possible clinical equivalents?

❑ Do they contradict the intent of the data study?

❑ Are there coding guidelines that need to be considered for the use of this project?

❑ Are there missing codes that were not captured by the mapping process?

❑ Are there combinations of codes that warrant changes to the logic of your existing project?

❑ Determine how far do you want to go in mapping?

See the next few slides.

Mapping Results: Require Discussion

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 the ICD-10-CM for hepatic coma
K72.00	Acute & subacute hepatic failure with coma
K72.11	Chronic hepatic failure with coma

Factors to Think About....

- Time to map codes
- Time to review descriptions
- Time to review questionable codes
- Time to review coding instructions
- Time to discuss together
- Develop user-defined rules for your product or project
- Decision-making process on choices
- Time for additional reviews by subject matter experts
- Time to test the results
- Time to document the map, rules, choices, notes

Questions?

https://questions.cms.gov/

Stay focused on ICD-10 Readiness