Insights into the Next Revision: Like Texas, Everything is Bigger in ICD-11

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Goals/Objectives

• State how ICD-11’s overall design is different than ICD-10’s
• Describe ICD-11-MMS’s new features
• What makes ICD-11-MMS bigger and better
• State the status of ICD-11-MMS adoption
Understanding the Acronyms

• ICD-10
• ICD-10-CM
• ICD-11
• ICD-11-MMS
Architecture: ICD-11 Foundation Component

• Data source for
  – ICD entities and their Uniform Resource Identifiers
  – Building a linearization (Tabular List)
    • Examples: Mortality and Morbidity Statistics (MMS), national tabulations
  – Index
    • Synonyms
Architecture: ICD-11 Foundation Component

A collection of ALL ICD entities: diseases, disorders, injuries, external causes, sign and symptoms (ICD Universe)

ICD entities
- Each described by 13 properties
- Not necessarily mutually exclusive
- Allow multiple parenting
  - An entity may be in more than one branch
Cerebral ischaemic stroke due to cardiac embolism

**Description**

#DRAFT# This is a sudden loss of brain function due to a lack of adequate blood flow. It is the result of an embolism associated with the heart.

**Synonyms**

- cardioembolic infarction
- cardioembolic stroke
Uniform Resource Identifiers (URIs)

• Unique worldwide
  – Look like website URLs
    • http://id.who.int/icd/entity/369985440
  – Used as
    • Identifiers for ICD-11 entities
    • Endpoint of the web services (API)
  – Will be stable over time
ICD-11 Architecture: Linearization

A subset of the foundation component fit for a particular purpose, e.g., MMS

Jointly Exhaustive of ICD Universe (Foundation Component)

Composed of entities that are mutually exclusive of each other

Each entity is given a single parent
CEREBRAL ISCHAEMIC STROKE
CODE 8811

Stroke is now classified as a disease of the brain rather than the circulatory system, in line with modern thinking

#ICD11
ICD-11-MMS

Entities from the Foundation Component chosen and organized to serve the two core primary use-cases

To classify causes of death (mortality)

To classify morbidity data
ICD-11-MMS Structure

• Selected entities become Tabular List categories
• Overall chapter structure much the same as ICD-10
  – New chapters
    • Conditions related to sexual health
    • Sleep-wake disorders
    • Traditional Medicine
    • Supplementary section for Functioning Assessment
    • Extension codes
ICD-11-MMS Structure

• Code structure
  – Minimum of four characters
    • First character relates to the chapter (number or letter)
    • Second character is always a letter
    • Third character is always a number
  – Terminal character
    • Y reserved for other specified
    • Z reserved for unspecified
ICD-11-MMS Key Features

• Stem code
• Extension code
• Pre-coordination
• Post-coordination
  – Cluster coding
    • Syntax
• Sanctioning rules
  – Permissible combinations of stem codes and extension codes
ICD-11-MMS Stem Code

• Codes in a particular tabular list
• Organized in 26 chapters that follow the traditional pattern of ICD
• Can be used alone or in combination
  – Combining syntax: forward slash (/)
  – DD51/ME24.2 Inguinal hernia with obstruction
    • DD51 Inguinal hernia
    • ME24.2 Digestive system obstruction
ICD-11-MMS Extension Code

• Used to limit content volume but allow detailed classification of disease entities
• Provide the basis for post-coordination
• Standardize the way additional information is added to a stem code
• Can never be used without a stem code and never appear in the first position of a cluster
ICD-11-MMS Extension Code

• Not all extension codes can be used with every stem code
• Start with an “X”
• Two types
• Combining syntax: ampersand (&)
  – GB51&XK8G&XN6P4 Acute pyelonephritis, left side caused by E. coli
    • GB51 Acute pyelonephritis
    • XK8G Left
    • XN6P4 E. coli
Extension Codes: Type 1

- Severity scale value
- Temporality
- Etiology
- Topology scale value
- Anatomy and topography
- Histopathology
- Dimensions of injury
- Dimensions of external causes
- Consciousness
- Substances
Extension Codes: Type 2

- Diagnosis code descriptors
  - Discharge diagnosis types
  - Diagnosis timing
  - Diagnosis timing in relation to surgical procedure
  - Diagnosis method of confirmation
  - Diagnosis certainty
  - Obstetrical diagnosis timing

- Capacity or context
- Health devices, equipment and supplies
  - Assistive devices
  - Medical devices
  - Sets, kits, systems
ICD-11-MMS Pre-Coordination

• A stem code that contains pertinent information about a clinical concept in a pre-combined fashion
  – CA40.06 Pneumonia due to Staphylococcus
ICD-11-MMS Post-Coordination

- Linking multiple codes (through cluster coding) to describe a single diagnosis, condition or event
  - Syntax
    - a forward slash (/) separates 2 stem codes
    - an ampersand (&) links stem code with extension code
  - CA40.06/MG51.00 Pneumonia due to Methicillin resistant Staphylococcus
ICD-11-MMS Sanctioning Rules

• Sanctioning rules
  – Embedded in the Foundation Component
  – Permissible code combinations
    • Prevents
      – Creation of combinations that already exist (pre-coordinated)
      – Impossible combinations
  – CA41.0 Acute RSV bronchiolitis
ICD-11-MMS Resources

• Tools
  – Coding
  – Browser
  – Translation
  – Mapping
  – Proposal
• Implementation package
• Reference Guide
ICD-11-MMS Tools

ICD-11 Coding Tool
Mortality and Morbidity Statistics (MMS)
04/2019

embolic stroke

Guessing the word being typed...

Word list
sort: Relatedness/repetition

stroke

Destination Entities

sort: Matching score

8B11.2 Cerebral ischaemic stroke due to embolic occlusion

8B11.20 Cerebral ischaemic stroke due to cardiac embolism

8B11.21 Cerebral ischaemic stroke due to aortic arch embolism

8B11.22 Cerebral ischaemic stroke due to paradoxical embolism

8B11.2Y Cerebral ischaemic stroke due to other specified embolic occlusion
Online Browser

Foundation Id: http://id.who.int/icd/entity/369985440

8B11.20 Cerebral ischaemic stroke due to cardiac embolism

Parent
8B11.20 Cerebral ischaemic stroke due to embolic occlusion

Postcoordination
8B11.20 Cerebral ischaemic stroke due to cardiac embolism

Has manifestation
8B26.2 Middle cerebral artery syndrome

Add detail to Cerebral ischaemic stroke due to cardiac embolism

Has manifestation (use additional code, if desired.)

Search

Code: 8B11.20/8B26.2

8B26 Vascular syndromes of brain in cerebrovascular diseases

8B26.0 Brainstem stroke syndrome
8B26.1 Cerebellar stroke syndrome
8B26.2 Middle cerebral artery syndrome
8B26.3 Anterior cerebral artery syndrome
8B26.4 Posterior cerebral artery syndrome
8B26.5 Lacunar syndromes
8B26.50 Pure motor lacunar syndrome
8B26.51 Pure sensory lacunar syndrome
8B26.5Y Other specified lacunar syndromes
8B26.5Z Lacunar syndromes, unspecified
8B26.Y Other specified vascular syndromes of brain in cerebrovascular diseases
8B26.Z Vascular syndromes of brain in cerebrovascular diseases,
ICD-11-MMS Reference Guide

ICD-11

International Classification of Diseases for Mortality and Morbidity Statistics

Eleventh Revision

Reference Guide

World Health Organization
ICD-11: Bigger and Better

55,000 codes in ICD-11 vs 14,400 in ICD-10

31 countries were involved in ICD-11 field testing

1,673 participants taking part in 112,383 code assignments

#ICD11
ICD-11: What’s Better

• Reflects critical advances in science and medicine
• Ready for integration with electronic health applications and information systems
  – Fully electronic
  – More accessible
  – Allows more detail to be recorded
ICD-11-MMS: Bigger and Better

ICD-11 has improved the ability to record information about quality of care and patient safety.
ICD-11-MMS: Bigger and Better

Gender incongruence (transgender) is no longer classified as a mental disorder in ICD-11. This should reduce stigma and improve care.
ICD-11-MMS: Bigger and Better

Anorexia nervosa with significantly low body weight, restricting pattern associated with underweight in infants, children or adolescents, moderate severity

ICD-10-CM
- F50.01 restricting type

ICD-11-MMS
- 6B80.00/5B50&XS0T
  - 6B80.00 with significantly low body weight, restricting pattern
  - 5B50 Underweight in infants, children or adolescents
    - XS0T Moderate severity
ICD-11-MMS: Bigger and Better

Opioid dependence, current use with moderate intoxication

- ICD-10-CM
  - F11.229 Opioid dependence with intoxication, unspecified

- ICD-11-MMS
  - 6C43.20/6C43.3&XS0T
    - 6C43.20 Opioid dependence, current use
    - 6C43.3 Opioid intoxication
    - XS0T Moderate severity
ICD-11-MMS: Bigger and Better

Hospital-acquired bilateral pneumonia due to Methicillin resistant Staphylococcus aureus

- ICD-10-CM
  - J15.212 Pneumonia due to Methicillin resistant Staphylococcus aureus

- ICD-11-MMS
  - CA40.06&XK9J&XN6BM&XB25/MG51.00
  - CA40.06 Pneumonia due to Staphylococcus
    - Laterality: XK9K Bilateral
    - Infectious agent: XN6BM Staphylococcus aureus
    - Causality: XB25 Nosocomial
    - Associated with: MG51.00 Methicillin resistant Staphylococcus aureus
ICD-11-MMS: Bigger and Better

Chronic atrial fibrillation
Severe tricuspid valve regurgitation

- ICD-10-CM
  - I48.2 Chronic atrial fibrillation
  - I07.1/I36.1 default is rheumatic/nonrheumatic

- ICD-11-MMS
  - BC81.32 Permanent atrial fibrillation
  - BB81.Z&XS25
    - BB81.Z Tricuspid valve insufficiency, unspecified
    - Has severity: XS25 Severe
ICD-11-MMS: Bigger and Better

Chronic atrial fibrillation caused by severe tricuspid valve regurgitation

– BC81.32/BB81.Z&XS25
WHO Requirements

1. All countries planning to produce national modifications have to make the relevant contractual arrangements with WHO.

2. Rules must be followed when developing a national modification of ICD-11.
WHO Licensing

• Contractual arrangements include requirements on distribution within the respective country
  – WHO’s operational mechanisms regarding copyright restrictions unknown
  – Need to define “for US government purposes”
  – Impact ICD-11 copyright would have on cost and use in the US
    • Vendor, publishers, and system implications
ICD-11: National Modification for Morbidity Coding

• WHO’s intention is to limit development of national modifications
  – WHO does recognize a country may require development of a national modification

• Subject to the same international process as all ICD changes
  – Submission on the WHO-ICD maintenance platform
  – Review and agreed by the ICD-11 maintenance bodies as part of the Foundation Component and then MMS prior to implementation nationally by the requesting country
Status of ICD-11-MMS Adoption

• NCVHS Meeting June 5-6, 2019
  – Reviewed the Evaluating Pathways to ICD-11 project goals
    • Foster early stakeholder engagement and industry communications
    • Develop recommendations for the HHS Secretary regarding a pathway to ICD-11
Recommendations

• A simplified regulatory process for version updates (February 21 letter)
• Evaluate the benefits/costs/problems resulting from ICD-10 transition
• Evaluate ICD-11 against updated Criteria for Adoption and Implementation of Health T&V Standards
• Evaluate moving to ICD-11 for mortality
• Evaluate moving to ICD-11 for morbidity
ICD-11 Evaluation Expert Roundtable Meeting

• Objectives
  – Develop a shared understanding of lessons learned from the ICD-10 planning process/transition and the differences between ICD-10 and ICD-11
  – Reach consensus on the research questions to be answered to inform evaluation of cost and benefit of transition from ICD-10 to ICD-11 for mortality and morbidity – and to identify impacts of not moving to ICD-11 for morbidity
  – Identify key topics/messages to communicate to the industry to foster early stakeholder engagement and preparation for the transition to ICD-11
Summary

• ICD-11 Architecture
• ICD-11-MMS
• ICD-11-MMS Key Features
• ICD-11-MMS Resources
• Examples of what makes ICD-11-MMS bigger
• Status of ICD-11-MMS adoption
Questions
References

- National Committee on Viral and Health Statistics. (2019, June 5-6). [https://ncvhs.hhs.gov/meetings/june-5-6-2019-full-committee-meeting/](https://ncvhs.hhs.gov/meetings/june-5-6-2019-full-committee-meeting/)