

Extensions & Clustering – Two New Features within ICD-11

PRESENTED BY:

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Kristen Eglintine

Coding Analyst Supervisor

Kristen is a Coding Analyst Supervisor for BESLER who was most recently with Saratoga Hospital as a Reimbursement Specialist focusing on accruing and reconciling hospital revenue by payor and preparing cost report information and tracking all related to COVID.

Prior to that, she worked for PCS as a Coding Consultant working on projects for Catholic Health and Children's Specialized.

Kristen has her CCS coding credential and her ICD-10-CM/PCS AHIMA Trainer certification. She received a BS in Business Management from the University of Utah.



Agenda

- Overview of ICD-11
 - Timeline
 - How it differs from ICD-10
- Code Structure
- Stem Codes
- Extension Codes
- Clusters
- Clinical Examples

ICD-11 Overview



ICD-11

- ICD-11 is the eleventh revision of the International Classification of Diseases (ICD).
- Replaces ICD-10 as the global standard for recording health information and causes of death.
- ICD is annually updated by the World Health Organization (WHO).



Timeline

- Development of the ICD-11 started in 2007.
- Was officially endorsed by WHO members in May 2019.
- Officially implemented in 35 countries on January 1, 2022.

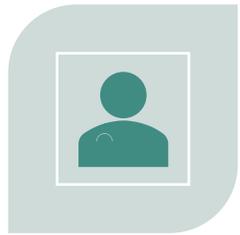


What about the United States?

Our expected implementation year is 2025.

However ... if there are clinical modifications , implementation may not begin until 2027.

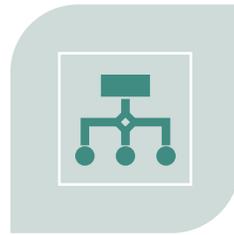
How is ICD-11 different from ICD-10



MORE CODES -
ICD-11 HAS AROUND 55,000
UNIQUE CODES
COMPARED TO 14,400



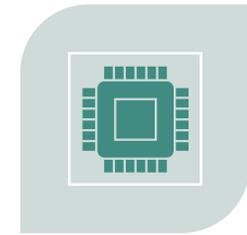
MORE CHAPTERS -
26 CHAPTERS;
SUBCATEGORIZED INTO
BODY SYSTEM AND
SPECIAL GROUPS AND
CHAPTERS NUMBERS ARE
IN ARABIC, NOT ROMAN



CONCEPT OF
DIMENSIONALITY FOR
DIAGNOSES - MORE
SOPHISTICATED AND
SIMPLE STRUCTURE, WITH
FOUR-CHARACTER
CATEGORY CODES AND
EXTENSIONS THAT ADD
FLEXIBILITY AND DETAIL



CHANGED SOME
DIAGNOSTIC CATEGORIES
AND CRITERIA,
ESPECIALLY FOR MENTAL,
BEHAVIORAL, AND
NEURODEVELOPMENTAL
DISORDERS



DESIGNED TO BE USED IN
MULTIPLE LANGUAGES
WITH A CENTRAL
TRANSLATION PLATFORM;
FEATURES AND OUTPUTS
ARE AVAILABLE IN ALL
TRANSLATED LANGUAGES

Per ICD – What's New In ICD-11

- Codes for antimicrobial resistance, in line with GLASS1
- Codes for full documentation of patient safety, in line with the WHO patient safety framework
- Necessary detail for cancer registration is fully embedded in ICD-11
- Specific coding for clinical stages of HIV
- More clinically relevant coding for complications of diabetes – simplified

Continued on next slide...

Per ICD – What's New In ICD-11

- Codes for common skin cancers basalioma, and melanoma subtypes.
- Classification of heart valve diseases and pulmonary hypertension, now matching current diagnostic and treatment capacity
- Coding for traffic accidents and causes of injuries is now consistent with current international practice for data documentation and analysis – better coding
- New chapters on sleep-wake disorders and sexual health have been added
- Gender incongruence (gender dysphoria in the DSM) is no longer listed as a mental disorder but rather a sexual health condition (This change is intended to reduce the stigma that is associated with a psychological rather than a medical condition)

Special Group Chapters

ICD-11 has 2 types of Chapters:

- Body System
- Special Group

In general, conditions are primarily classified to one of the 'special groups' chapters.

Where there is any doubt as to where a condition should be positioned, the 'special groups' chapters take priority. This principle is enforced in the 'excludes' notes at the beginning of each chapter in the ICD.

Chapter	Title
1	Certain infectious or parasitic diseases
2	Neoplasms
3	Diseases of the blood or blood-forming organs
4	Diseases of the immune system
18	Pregnancy, childbirth, or the puerperium
19	Certain conditions originating in the perinatal period
20	Developmental anomalies
22	Injury, poisoning or certain other consequences of external cause

Poll Question

True or False

ICD-11 will replace only ICD-10-CM and not ICD-10-PCS?



ICD-11 Code Structure



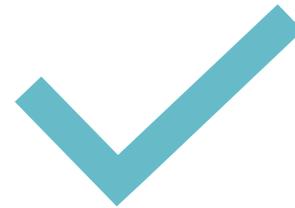
New Conventions & Terminology

- Stem Codes
- Extension Codes
- Clusters
- Cluster Syntax
- Pre-coordination
- Postcoordination

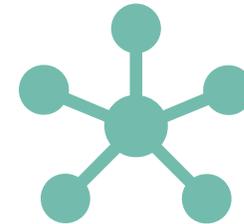
Code Structure



STEM CODES



EXTENSION CODES



CLUSTERS

Stem Codes

Examples:

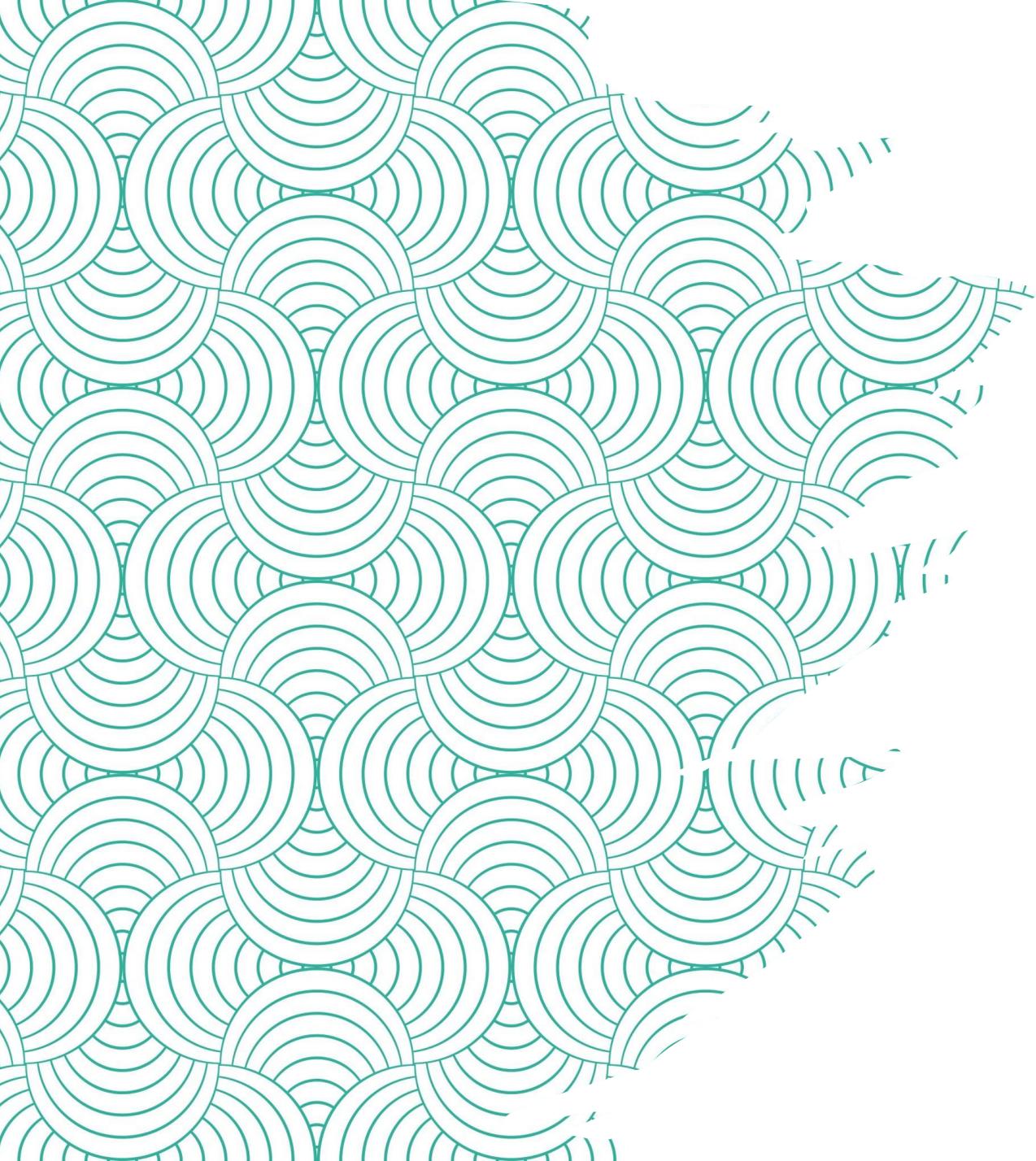
1A00 is a code from Chapter 1

BA00 is a code from Chapter 11

- Alphanumeric
- Range from 1A00.00 to ZZ9Z.ZZ
- First character always refers to the chapter number
- Are found in the tabular list
- Core diagnostic concepts
- They can be assigned alone
- First character always relates to the chapter number – can be EITHER a number or letter
- Always a letter in the second position to differentiate the codes from ICD-10
- The letters “O” and “I” are omitted to prevent confusion with numbers 0 and 1
- The stem codes of the ICD-11 are organized in 26 chapters
 - Relating to etiology, relevant organ system, maternal status, perinatal status, external causes, and factors influencing health status.

Extension Codes

- Always begin with "X"
- Appear in addendum titled " Chapter X"
- Two types – type 1 and type 2
- Extension codes are not mutually exclusive.
- They are not a classification and can never be used without a stem code for statistical purposes.
- Extension codes can never appear in the first position in a classification cluster.
- One or more extension codes can be linked when coding a specific condition.



Type 1 Extension Codes

Type 1 extension codes allow the user to add detail to a stem code in terms of:

- Severity scale value
- Temporality (course of the condition)
- Etiology
- Topology Scale Value
- Anatomy and topography
- Histopathology
- Dimensions of injury
- Dimensions of external causes
- Consciousness
- Substances
- ICD-0
- Health Devices, Equipment and Supplies

Type 2 Extension Codes

Type 2 extension codes represent diagnosis code descriptors which indicate how the diagnosis is to be used and/or interpreted.

Overview of Type 2 – Extension codes – Diagnosis Code Descriptors

- Discharge diagnosis types
- Diagnosis timing
- Diagnosis timing in relation to surgical procedure
- Diagnosis method of confirmation
- Diagnosis certainty
- Obstetrical diagnosis timing
- Encounter descriptors
- Capacity or context

Head categories: all parents in ICD-11 chapter X	Type of Extension codes	Examples in hierarchical order			
		Subheading (Parent)	Subheading (Parent)	Subheading (Parent)	Most detailed category
Severity Scale Value	1	Disease Specific Severity Scale Value	Tumour spread staging scale value		XS4P Stage II
Temporality	1	Duration of pregnancy			XT4J Duration of pregnancy 26–33 completed weeks
Aetiology	1	Infectious Agents	Virus	XN83D Coronavirus XN109 SARS-CoV-2	XN8V6 SARS-CoV-2 Delta
Topology Scale Value	1	Laterality			XK9K Right
Anatomy and topography	1	Functional anatomy	Digestive system	XA0KT3 Biliary tract	XA8KL9 Gallbladder
Histopathology	1	Adenomas and adenocarcinomas	Adenomas and adenocarcinomas, malignant		XH74S1 Adenocarcinoma, NOS
Dimensions of injury	1	Whether fracture is open or closed			XJ44E Closed fracture
Dimensions of external causes	1	Aspects of transport injury events	Mode of transport of person injured in transport event	XE7NK Motorcycle as mode of transport of person injured in transport related event	XE2J1 Moped as mode of transport of person injured in transport related event
Consciousness	1	Pupil reaction score			XC5Y Neither pupil reacts
Substances	1	Medicaments	Analgesics, antipyretics and anti-inflammatory drugs	Acetylsalicylic acid and other salicylates	XM4G06 Acetylsalicylic acid
Diagnosis code descriptors [#]	2	Diagnosis certainty			XY7Z Provisional diagnosis
Capacity or context*	2				XX2QG9 Condition of the fetus and newborn reported in the context of the mother
Health devices, equipment and supplies	1	Respiratory and anaesthesia devices	XD5GF6 Respiratory masks and balloons, single-use and reusable	XD3W67 Air/oxygen masks and nasal cannulas	XD0VQ3 Air/oxygen masks

[#]For details see Table 2

*This parent has only one detailed category

<https://bmcmmedinformdecismak.biomedcentral.com/articles/10.1186/s12911-021-01635-2/tables/1>

Subheading (Parent)	
Discharge diagnosis types	XY0Y Main condition
	XY7B Main resource condition
	XY6E Initial reason for encounter or admission
Diagnosis timing	XY6M Present on admission
	XY69 Developed after admission
	XY85 Uncertain timing of onset relative to admission
Diagnosis timing in relation to surgical procedure	XY9U Preoperative
	XY9N Intraoperative
	XY7V Postoperative
Diagnosis method of confirmation	XY3B Diagnosis confirmed by laboratory examination
	XY0E Diagnosis confirmed by serology
	XY9Q Diagnosis confirmed by histology
	XY8K Diagnosis confirmed by genetics
	XY9R Diagnosis confirmed by imaging
	XY19 Diagnosis confirmed by microscopy
	XY0K Diagnosis confirmed by culture
Diagnosis certainty	XY7Z Provisional diagnosis
	XY75 Differential diagnosis
Obstetrical diagnosis timing	XY3K Delivered with or without mention of antepartum condition
	XY8Q Delivered, with mention of postpartum condition
	XY8U Antepartum condition or complication
	XY9P Postpartum condition or complication
	XY9S Unspecified as to episode of care, or not applicable
Encounter descriptors	XY18 Initial encounter
	XY8S Subsequent encounter

<https://bmcmmedinformdecismak.biomedcentral.com/articles/10.1186/s12911-021-01635-2/tables/2>

Extension Code - Examples

Type 1

For a diagnosis of 'cervical disc prolapse C5-C6' ...

Code the following:

Stem code: FA80.1 *Intervertebral disc degeneration of cervical spine with prolapsed disc*

Extension code: XA1X49 *Cervical intervertebral disc or space C5-C6*

Type 2

For adverse event reporting ...

One of the follow type 2 extension codes would be added to a stem code. It is important to code diagnosis timing in terms of:

XY6M Present on admission

XY69 Developed after admission, or

XY85 Uncertain timing of onset relative to admission

Precoordination and Postcoordination

Precoordination is when a stem codes contain all pertinent information about a clinical concept in a pre-combined fashion.

A health condition may be further described by applying more than one code, or by 'postcoordinating' – combining codes such as:

- two or more stem codes, (i.e., code 1/code 2)
- stem codes with one or more extension codes. (i.e., stem code & extension code 1 & extension code 2)

A group of codes that have been postcoordinated is called a 'cluster'. A forward slash (/) or ampersand (&) is used to show the linkage between postcoordinated codes. In this manner, the classification can address many clinical concepts with a limited range of categories.

Examples

Precoordination of concept in a single code

Condition: 2C25.2 Squamous cell carcinoma of bronchus or lung

- both site and pathology are combined in a single precoordinated stem code

Postcoordination of concept combined in a cluster

Condition: GC08.0 Urinary tract infection, site not specified, due to Escherichia coli Associated with (use additional code, if desired): MG50.27 Extended spectrum beta-lactamase producing Escherichia coli

- Urinary tract infection due to Extended spectrum beta-lactamase producing Escherichia coli' is expressed through a combination of two linked or postcoordinated stem codes; Cluster code: GC08.0/MG50.27

Clusters Syntax

- If only one stem code is coded, no clustering mechanisms need to be observed.
- When postcoordinating to form a cluster, stem codes are always coded before extension codes
- If more than one stem codes are postcoordinated, any correlated codes are linked using a forward slash (/)
- If one stem code is postcoordinated with one or more extension codes, the combining syntax used is the ampersand (&)

Clusters Examples

Example 1: Acute ST elevation myocardial infarction, anterior wall, LAD Condition (code) - BA41.0 Acute ST elevation myocardial infarction
Specific anatomy - XA7RE3 Anterior wall of heart
Specific anatomy - XA7NQ7 Left anterior descending coronary artery
Cluster: BA41.0 & XA7RE3 & XA7NQ7

Example 2: Acute pyelonephritis, left side, E. coli
Condition (code) - GB51 Acute pyelonephritis
Laterality - XK8G Left
Infectious agent - XN6P4 Escherichia coli
Cluster: GB51 & XK8G & XN6P4

Clusters Examples

Example 3: Concussion and open fracture shaft of left ulna due to fall on uneven sidewalk

Condition (code) 1 - NA07.0 Concussion

Has causing condition (code also) - PA60 Unintentional fall on the same level or from less than 1 meter

Objects of living things involved in causing - XE1DA Uneven surface, not elsewhere classified

Place of occurrence - XE53A Sidewalk

Cluster - NA07.0 / PA60 & XE1DA & XE53A

Condition (code) 2 - NC32.2 Fracture of shaft of ulna

Laterality - XK8G Left

Fracture open or closed - XJ7YM Open fracture

Associated with: PA60 Unintentional fall on the same level or from less than 1 meter

Objects of living things involved in causing - XE1DA Uneven surface, not elsewhere classified

Place of occurrence - XE53A Sidewalk

Cluster: NC32.2 & XK8G & XJ7YM / PA60 & XE1DA & XE53A

Do Not Do This...

Postcoordination must never be used to replicate the meaning of a condition that is a precoordinated concept. The precoordinated code should be used.

Examples...

Acute RSV Bronchiolitis

Correct code: CA41.0 Acute bronchiolitis due to respiratory syncytial virus

Incorrect codes: CA41.Z Acute bronchiolitis, unspecified & XN275 Human respiratory syncytial virus

Fracture, shaft of ulna

Correct code: NC32.2 Fracture of shaft of ulna

Incorrect codes: NC32.Z Fracture of forearm, unspecified & XA8U33 Shaft of Ulna

Poll Question

True or False

Extension codes can be reported alone?



Case Examples



Example #1

A male patient, 75 years, is admitted to hospital for an elective endovascular repair of an infrarenal aortic aneurysm detected by ultrasound earlier. He has hypertensive heart disease associated with mild chronic left ventricular failure. His ejection fraction is unknown, but his physical activity is slightly reduced according to NYHA 2.

Postoperatively he presents a deep wound infection at the access site (left groin), reason unclear. Microbiological proof of a Methicillin resistant *Staphylococcus aureus*.

In ICD-10:

PDX:

I71.4 Abdominal aortic aneurysm, without mention of rupture.

SDX:

I11.0 Hypertensive heart disease with (congestive) heart failure.

T81.4 Infection following a procedure, not elsewhere classified.

B95.6 Staphylococcus aureus as the cause of diseases classified to other chapters.

U82.1 Resistance to methicillin.

In ICD-11:

PDX:

BD50.4Y Other specified abdominal aortic aneurysm &

XA2LN9 Infrarenal abdominal aorta &

XY9R Diagnosis confirmed by imaging &

XY0Y Main condition

SDX:

BA01 Hypertensive heart disease /

BD11.Z Left ventricular failure, unspecified &

XS6B NYHA Class II—Slight limitation of physical activity &

XY6M Present on admission.

NE81.21 Deep incisional site infection /

MG51.00 Methicillin resistant Staphylococcus aureus /

PK80.91 Vascular procedure associated with injury or harm, percutaneous approach /

PL11.Z Unspecified mode of injury or harm associated with a surgical or other medical procedure &

XA0NH8 Iliac region &

XK8G Left &

XY3B Diagnosis confirmed by laboratory examination &

XY7V Postoperative.

In ICD-10:

PDX:

I71.4 Abdominal aortic aneurysm,
without mention of rupture.

SDX:

I11.0 Hypertensive heart disease with
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5 codes

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XY6M Present on admission.
NE81.21 Deep incisional site infection /
MG51.00 Methicillin resistant Staphylococcus aureus /
PK80.91 Vascular procedure associated with injury or harm,
percutaneous approach /
PL11.Z Unspecified mode of injury or harm associated with a
surgical or other medical procedure &
XA0NH8 Iliac region &
XK8G Left &
XY3B Diagnosis confirmed by laboratory examination &
XY7V Postoperative

3 clusters for 3
medical
conditions; made
up of 7 stem
codes and 9
extension codes



Example #2

A female patient, 41 y, presents to ED with severe abdominal pain. She has a marked obesity (BMI 38 kg/m², according to Obesity class II WHO). A week before she had an open cholecystectomy due to cholecystitis from stones in gallbladder. Because of intraoperative bleeding, a conversion from laparoscopic to an open access to the gall bladder was necessary. The thorough examination including imaging revealed an intraabdominal foreign body. A surgical sponge causing a localized peritonitis was removed by laparotomy. No further problems during recovery. The protocols on team time out or counting results from the first operation are untraceable.

In ICD-11:

PDX:

DC50.14 Secondary peritonitis due to other diseases or agents /
PL11.3 Foreign body accidentally left in body, as mode of injury or harm /
PK80.30 Gastrointestinal, abdominal, or abdominal wall procedure
associated with injury or harm, open approach &
XY9R Diagnosis confirmed by imaging &
XY7V Postoperative &
XY0Y Main condition &
XY8S Subsequent encounter.

SDX:

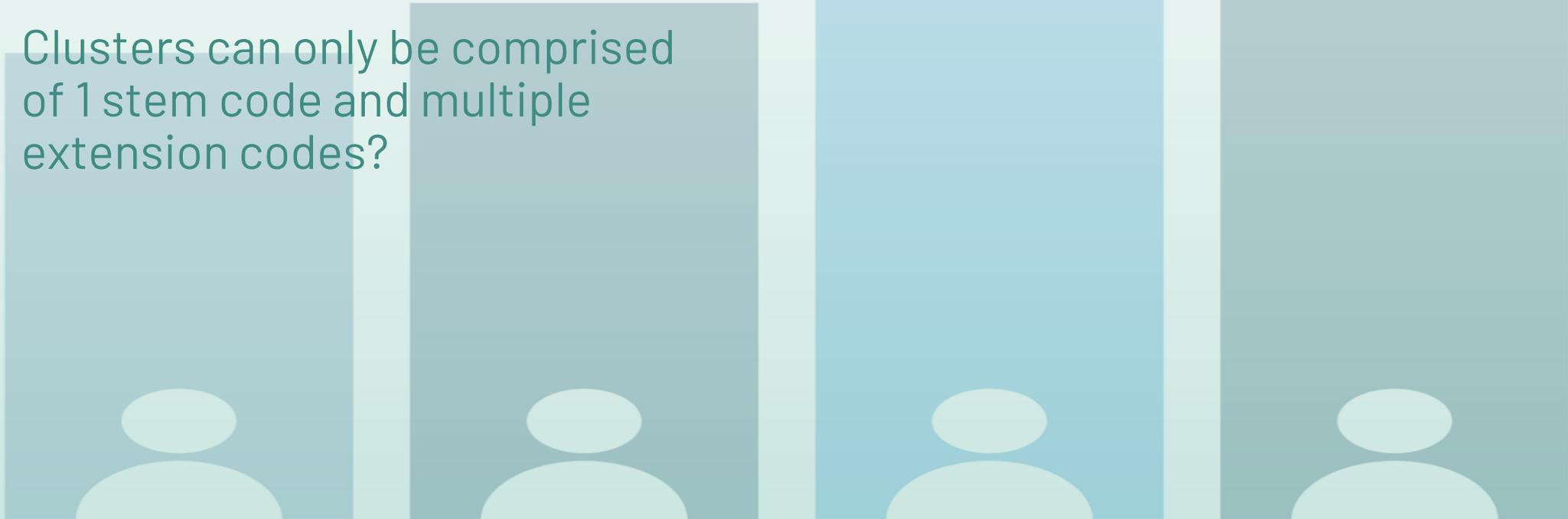
5B81.01 Obesity in adults &
XS6N Obesity class II BMI 35.0–39.9



Poll Question

True or False

Clusters can only be comprised of 1 stem code and multiple extension codes?



Preparing for ICD-11

- Become familiar with new ICD-11 codes and chapters
- Update EHR and revenue cycle management software
- Hire an ICD-11 implementation leader
- Hire an ICD-11 coding specialist



Questions?



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Thank you

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