



ICD-11 tooling and implementation

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ICD-10 coding starts with



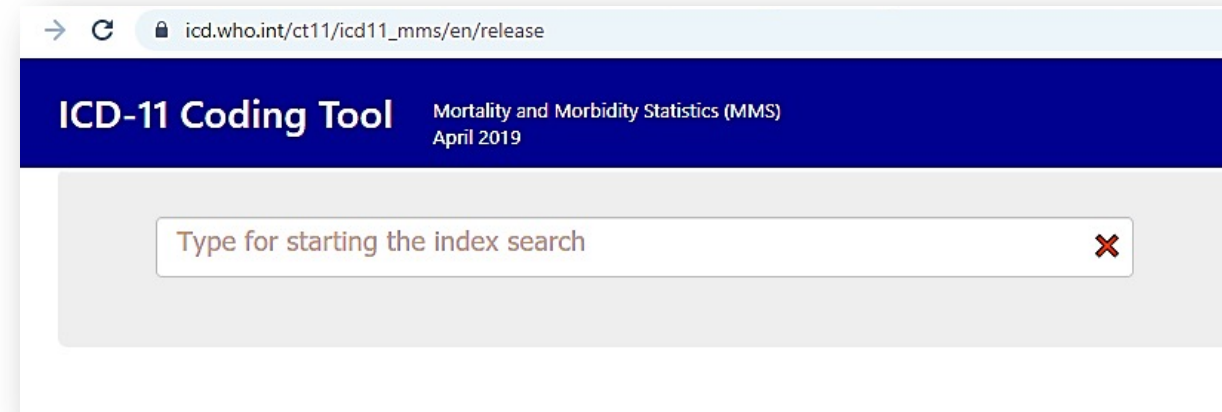
Alphabetical index

to find the lead (main) term

then

you move on to the Tabular List to find the code

ICD-11 coding starts with



Electronic coding tool

to enter the diagnosis or condition

then

select the matching term, or one closest to what you are looking for, among the displayed options

Capturing detail of diagnostic information with ICD-10/9

OUTPUT VOCABULARY

N18.5 Chronic kidney disease, stage 5 (ICD-10)



Manual coding/ trained expert coders/ complex rule base/
commercial coding software / interface terminology



NATURAL LANGUAGE

“Patient with end stage renal failure”

New Garden level A17.1
Kidney – see condition
Kienböck's disease or osteochondritis

Crema, chronic (coma) N18.9
– **chronic** (see also Disease, **kidney**,
chronic) N18.9

Disease, diseased—continued

- joint—continued
- – Charcot's—continued
- – – diabetic (see also E10-E14 with fourth character .6) E14.6† M14.6*
- – – nonsyphilitic NEC G98† M14.6*
- – – syphilitic (tabetic) A52.1† M14.6*
- – – syringomyelic G95.0† M49.4*
- – degenerative M19.9
- – – multiple M15.9
- – – spine M47.9
- – sacroiliac M53.3
- – specified NEC M25.8
- – spine NEC M53.9
- – suppurative M00.9
- Katayama B65.2
- Keshan E59
- kidney (functional) (pelvis) N28.9

Note: Where a term is indexed only at the three-character level, e.g. N01.-, reference should be made to the list of four-character subdivisions in Volume 1 at N00-N08.

- – with
- – – edema – see Nephrosis
- – – glomerular lesion – see Glomerulonephritis
- – – – with edema – see Nephrosis
- – – interstitial nephritis N12
- – acute – see Nephritis, acute
- – chronic N18.9
- – – end-stage N18.5
- – – stage 1 N18.1
- – – stage 2 N18.2
- – – stage 3 N18.3
- – – stage 4 N18.4
- – – stage 5 N18.5

Capturing health information with the ICD-11 coding tool

ICD-11 Coding Tool

Mortality and Morbidity Statistics (MMS)
Working Draft with daily updates

Help

2021-02-02

Guessing the word being typed...

Filter ☐

Word list

sort :
Relatedness/repetition ▼

failure

Destination Entities

sort: Matching score ▼

GB61.5	Chronic kidney disease, stage 5 end stage kidney failure ▼ *	J + [Details]
3A71.2/...	Anaemia in chronic kidney disease [Chronic kidney disease, stage 5] Anaemia in chronic kidney disease [end stage kidney failure] ▼	J + [Details]

Search term renders stem code with extension or other stem code

Example 2: automated indexing of postC dimension for causing condition

ICD-11 Coding Tool

Mortality and Morbidity Statistics (MMS)
2020-09

T2dm with diabetic foot



Guessing the word being typed...

Filter ☐

Word list

sort : Relatedness/repetition ▼

foot

Destination Entities

sort: Matching score ▼

BD54/5A11 Diabetic foot ulcer [Type **2 diabetes** mellitus]

   [Details]

Diabetic foot [T2DM - [Type 2 diabetes mellitus]] ▼

FA38.10 Diabetic Charcot arthropathy [Type **2 diabetes** mellitus]

  [Details]

Diabetic Charcot foot [T2DM - [Type 2 diabetes mellitus]]



Smart search features in ICD-11

- **Similar words** (tuberculosis – tuberculous)
- Aware of **Spelling variants** (edema, oedema)
- Understand synonyms (renal - kidney) (cancer – malignant neoplasm)
- Diacritic **normalization** (behcet, behçet)
- Handling **compound words** (Searching **myelitis** will get you “**Neuromyelitis**” “**polymyelitis**” as well).

Smart search features in ICD-11 (cont.)

Supports **word completion** during search

ICD-11 Coding Tool Mortality and Morbidity Statistics (MMS) December 2018

dial ✕

Guessing the word being typed...

Word list

sort: Relatedness/repetition

dialysis
dialysis-associated
dialysis-related

Destination Entities

QB94.Z Care involving **dialysis**, unspecified ⓘ

dialysis NOS ⓘ

SD00.3 **Dialysis-associated** amyloidosis ⓘ

Search results **dynamically** available as user types
Organized by **matching score** and classification hierarchy

ICD-11 Coding Tool Mortality and Morbidity Statistics (MMS) December 2018

asthma ✕

Related words...

Word list

sort: Relatedness/repetition

bronchial
catarrh
allergic
hay
fever
allergy
bronchitis
pollen
rhinitis
pulmonary
chronic
acute
obstructive
extrinsic
severe
cardiac
rostan
millar
disease

Destination Entities

sort: Matching score

CA23 **Asthma** ⓘ

CA23.00 Allergic **asthma** with exacerbation ⓘ

CA23.01 Allergic **asthma** with status **asthmaticus** ⓘ

CA23.02 Allergic **asthma**, uncomplicated ⓘ

CA23.0Z Allergic **asthma**, unspecified ⓘ

CA23.1 Non-allergic **asthma** ⓘ

CA23.10 Non-allergic **asthma** with exacerbation ⓘ

CA23.11 Non-allergic **asthma** with status **asthmaticus** ⓘ

CA23.12 Non-allergic **asthma**, uncomplicated ⓘ

CA23.2 Other specified forms of **asthma** or bronchospasm ⓘ

CA23.20 Aspirin-induced **asthma** ⓘ

CA23.22 Cough variant **asthma** ⓘ

CA23.3 Unspecified **asthma** ⓘ

CA23.30 Unspecified **asthma** with exacerbation ⓘ

CA23.31 Unspecified **asthma** with status **asthmaticus** ⓘ

CA23.32 Unspecified **asthma**, uncomplicated ⓘ

ICD-11 Coding Tool Mortality and Morbidity Statistics (MMS) December 2018

malignant

Related words...

Word list

sort: Relatedness/repetition

neoplasm
site
carcinoma
cell
lymphoma
melanoma

Relevance based **word suggestion**

- You may click instead of typing the next word
- Sorting by alphabetical order is also provided

ICD-11 Coding Tool versions

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

cholera

Guessing the word being typed...

Word list sort: Relatedness/repetition

cholera
cholerae

Destination Entities sort: Matching score

1A00	Cholera *	[Details]
NE61	Harmful effects of or exposure to noxious substances, chiefly nonmedicinal as to source, not elsewhere classified Antimonial cholera	[Details]
QA08.0	Special screening examination for intestinal infectious diseases Cholera screening	[Details]
QC90.00	Exposure to cholera	[Details]
QD01.Y	Other specified carrier of intestinal infectious agents Cholera carrier	[Details]
QC03.0	Need for immunization against cholera with typhoid-paratyphoid	[Details]
NE60	Harmful effects of drugs, medicaments or biological substances, not elsewhere classified Harmful effects of Cholera vaccine	[Details]
QC00.0	Need for immunization against cholera alone	[Details]
PE88	Assault by exposure to or harmful effects of other or unspecified drug, medicament or biological substance Assault by or harmful exposure to cholera vaccine	[Details]

Blue: official release version

ICD-11 Coding Tool Mortality and Morbidity Statistics (MMS) Working Draft with daily updates Help 2019-08-2

cholera

Related words...

Word list sort: Relatedness/repetition

asiatic
epidemic
vibrio
cholerae
01
eltor
vaccine
biovar
against
prophylactic
vaccination
antimonial
alone
contact
exposure
classical
typhoid-paratyphoid
screening
tab
carrier
o1
enteritis
harmful
effects

Destination Entities sort: Matching score

1A00 **Cholera** * [Details]

→ NE61 Harmful effects of or exposure to noxious substances, chiefly nonmedicinal as to source, not elsewhere classified [Details]
Antimonial **cholera**

QA08.0 Special screening examination for intestinal infectious diseases [Details]
Cholera screening

QC90.00 Exposure to **cholera** [Details]

QD01.Y Other specified carrier of intestinal infectious agents [Details]
Cholera carrier

QC03.0 Need for immunization against **cholera** with typhoid-paratyphoid [Details]

NE60 Harmful effects of drugs, medicaments or biological substances, not elsewhere classified [Details]
Harmful effects of **Cholera** vaccine

QC00.0 Need for immunization against **cholera** alone [Details]

PE88 Assault by exposure to or harmful effects of other or unspecified drug, medicament or biological substance [Details]
Assault by or harmful exposure to **cholera** vaccine

PB28 Unintentional exposure to or harmful effects of other or unspecified drug, medicament or biological substance [Details]
Unintentional exposure to or harmful effects of **cholera** vaccine

Chapter distribution / filter

☒ External causes 5

☒ Factors influencing health 5

☒ Injury, poisoning, ... 2

Orange: maintenance version

Cross-reference to ICD-10

ICD-11 (Mortality and Morbidity Statistics)

Search [Advanced Search]

Foundation Linearizations Proposals Info More...

signed in as: tkostanjsek@gmail.com | Manage Account | Log out

Last Update: Nov 08

JA63.1 Pre-existing type 2 diabetes mellitus in pregnancy

JA63.2 Diabetes mellitus arising in pregnancy

JA63.Y Other specified diabetes mellitus in pregnancy

JA63.Z Diabetes mellitus in pregnancy, unspecified

JA64 Malnutrition in pregnancy

▶ JA65 Maternal care for other conditions predominantly related to pregnancy

▶ JA66 Clinical findings on antenatal screening of mother

▶ JA67 Complications of anaesthesia during pregnancy

MF34 Pregnancy symptom or complaint

JA6Z Maternal disorders predominantly related to pregnancy, unspecified

▶ Maternal care related to the fetus, amniotic cavity or possible delivery problems

▶ Complications of labour or delivery

▶ Delivery

▶ Complications predominantly related to the

Foundation URI : <http://id.who.int/icd/entity/750602160> [Link to iCat](#)

JA63.1 Pre-existing type 2 diabetes mellitus in pregnancy

Parent

[JA63 Diabetes mellitus in pregnancy](#)

Show all ancestors ▾

ICD-10 : O24.1 ?

Description

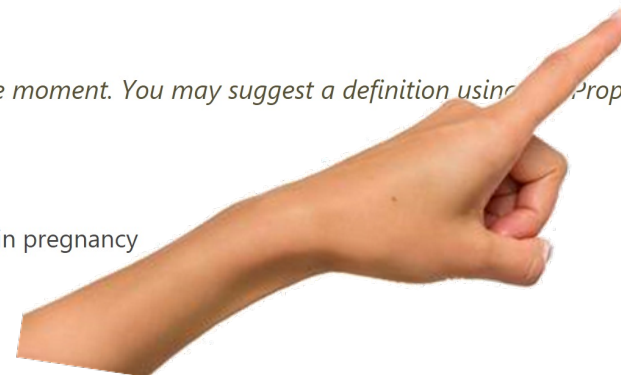
This entity does not have a definition at the moment. You may suggest a definition using the Proposal System available under the Contributions menu.

All Index Terms

- Pre-existing type 2 diabetes mellitus in pregnancy

Hide index terms ⌵

Proposals



ICD-11 Translation Tool

ICD-11 (Mortality and Morbidity Statistics)	ICD-11 (Mortality and Morbidity Statistics)	ICD-11 (Mortality and Morbidity Statistics)	ICD-11 (Mortality and Morbidity Statistics)	ICD-11 (Mortality and Morbidity Statistics)
Search	查找	Recherche	検索	Búsqueda
<p>ICD-11 - Mortality and Morbidity Statistics</p> <ul style="list-style-type: none"> 01 Ciertas enfermedades infecciosas o parasitarias 02 Neoplasias 03 Enfermedades de la sangre o de los órganos formadores de la sangre 04 Enfermedades del sistema inmune 05 Enfermedades endocrinas, nutricionales o metabólicas 06 Trastornos mentales, del comportamiento o del neurodesarrollo 07 Trastornos del sueño- vigilia 08 Enfermedades del sistema nervioso 09 Enfermedades del sistema visual 10 enfermedades del oído o de la oquía mastoidea 11 Enfermedades del sistema circulatorio 12 Enfermedades del sistema respiratorio 13 Enfermedades del sistema digestivo 14 Enfermedades de la piel 15 Enfermedades del sistema musculoesquelético o del tejido conectivo 16 Enfermedades del sistema genitourinario 17 Condiciones relacionadas con la salud sexual 18 Embarazo, parto o el puerperio 19 Ciertas condiciones originadas en el periodo perinatal 20 Anomalías del desarrollo 21 Síntomas, signos o hallazgos clínicos, no clasificados en otra parte 22 Lesiones, envenenamientos o algunas otras consecuencias de causas externas 23 Causas externas de mortalidad o morbilidad 24 Factores que influyen en el estado de salud o contacto con los servicios de salud 25 Códigos para propósitos especiales 26 Condiciones de la Medicina Tradicional Módulo I 	<p>ICD-11 - Mortality and Morbidity Statistics</p> <ul style="list-style-type: none"> 01 某些传染病或寄生虫病 02 肿瘤 03 血液及造血器官疾病 04 免疫系统的障碍 05 内分泌、营养和代谢性疾病 06 精神及行为障碍 07 睡眠-觉醒障碍 08 神经系统的疾病 09 眼及视神经疾病 10 耳及内耳迷路疾病 11 循环系统的疾病 12 呼吸系统的疾病 13 消化系统的疾病 14 皮肤的疾病 15 肌肉骨骼系统及结缔组织的疾病 16 泌尿生殖系统疾病 17 性健康相关情况 18 妊娠、分娩及产褥期 19 起源于围生期的某些状况 20 发育异常 21 症状、体征或临床综合征 22 损伤、中毒及中毒性反应 23 疾病和死亡的外因 24 影响健康状况或健康服务利用的外部因素 25 用于特殊目的的代码 26 传统医学状况 - 模块 I 	<p>ICD-11 - Mortality and Morbidity Statistics</p> <ul style="list-style-type: none"> 01 Certaines maladies infectieuses ou parasitaires 02 Tumeurs 03 Maladies du sang et certains troubles des organes formateurs de la sang 04 Maladies du système immunitaire 05 Maladies endocrines, nutritionnelles ou métaboliques 06 Troubles mentaux, du comportement ou du développement neurologique 07 Troubles du sommeil- veille 08 Maladies du système nerveux 09 Maladies de l'œil et de la vision 10 Maladies de l'oreille ou de la mastoïde 11 Maladies du système circulatoire 12 Maladies du système respiratoire 13 Maladies du système digestif 14 Maladies de la peau 15 Maladies du système musculo-squelettique ou du tissu conjonctif 16 Maladies du système urinaire et génital 17 Maladies liées à la santé sexuelle 18 Grossesse, accouchement et puerpère 19 Les affections nées pendant la période périnatale 20 Malformations chromosomiques 21 Symptômes, signes ou constatations cliniques, non classés ailleurs 22 Lésions traumatiques, empoisonnements ou autres conséquences de causes externes 23 Causes externes 24 Facteurs influant sur l'état de santé ou le recours aux services de santé 25 Codes d'utilisation spéciale 26 Codes d'utilisation spéciale 	<p>ICD-11 - Mortality and Morbidity Statistics</p> <ul style="list-style-type: none"> 01 感染症及び寄生虫病 02 新生物（腫瘍） 03 血液及び造血器の障害 04 免疫系の障害 05 内分泌、栄養及代謝の障害 06 精神及び行動の障害 07 睡眠・覚醒障害 08 神経系の疾患 09 眼及び付属器の疾患 10 耳及び内耳迷路の疾患 11 循環器系の疾患 12 呼吸器系の疾患 13 消化器系の疾患 14 皮膚の疾患 15 筋骨格系及び結核組織の疾患 16 泌尿器生殖器系の疾患 17 性の健康関連の疾患 18 妊娠、分娩及び産後 19 周産期及び新生児期の疾患 20 先天奇形 21 症状、兆候又は臨床的所見 22 損傷、中毒及び中毒性反応 23 傷病及び死亡の原因 24 健康状態に影響する外部要因 25 特殊目的用コード 26 伝統医学状態（モジュール I） 	<p>ICD-11 - Mortality and Morbidity Statistics</p> <ul style="list-style-type: none"> 01 Ciertas enfermedades infecciosas o parasitarias 02 Neoplasias 03 Enfermedades de la sangre o de los órganos formadores de la sangre 04 Enfermedades del sistema inmune 05 Enfermedades endocrinas, nutricionales o metabólicas 06 Trastornos mentales, del comportamiento o del neurodesarrollo 07 Trastornos del sueño- vigilia 08 Enfermedades del sistema nervioso 09 Enfermedades del sistema visual 10 enfermedades del oído o de la oquía mastoidea 11 Enfermedades del sistema circulatorio 12 Enfermedades del sistema respiratorio 13 Enfermedades del sistema digestivo 14 Enfermedades de la piel 15 Enfermedades del sistema musculoesquelético o del tejido conectivo 16 Enfermedades del sistema genitourinario 17 Condiciones relacionadas con la salud sexual 18 Embarazo, parto o el puerperio 19 Ciertas condiciones originadas en el periodo perinatal 20 Anomalías del desarrollo 21 Síntomas, signos o hallazgos clínicos, no clasificados en otra parte 22 Lesiones, envenenamientos o algunas otras consecuencias de causas externas 23 Causas externas de mortalidad o morbilidad 24 Factores que influyen en el estado de salud o contacto con los servicios de salud 25 Códigos para propósitos especiales 26 Condiciones de la Medicina Tradicional Módulo I

Makes ICD-11 translation easier, faster and better through

- translation memory (use of existing ICD-10 translations)
- multiple translators can work simultaneously
- automatic update of structural changes in translation
- Notification and track change function for content changes
- commenting on the translations

Ongoing translation: 14 languages including official WHO languages

ICD-11 Coding training and self-evaluation tool (ICD-FIT)



ICD-FIT v3.14.0 [Settings](#) [Logout](#)

Home

[Settings](#)

Account [Admin](#)

Name Nenad Kostanjsek

Email kostanjsekn@who.int

Language English

[Settings](#)

Admin dashboard

18 centers
You are the admin of all centers

[Dashboard](#)

User dashboard

Dashboard is only for your completed modules

[Dashboard](#)

✦ You are a coordinator of these centers:

Center

Uganda
National Center
46 participants
2 modules
tags: Morbidity Uganda

Center

Egypt
Center for Egypt Workshop
16 participants
2 modules
tags: Morbidity Egypt Workshop

Center

Romania
National Center
6 participants
2 modules
tags: Morbidity Romania

Center

India
National Center

Center

WHO HQ
Center for WHO Headquarters

Center

Malaysia
National Center

Module

Morbidity

Chapter

No chapters [50 cases]

Case

Rheumatoid arthritis in the knees

Module Score

98 / 100
Performance

1 / 6
Rank

Results

#	Code	Details
6	FA20.Z&XA8RL1 gold standard your answer	equivalent
1	FA20.Z	undercoded

Purpose

- ICD user can test their accuracy in coding with ICD-11
- WHO & Member States can check translation and data quality

Features

- immediate user feedback on their coding performance
- ranking with peers

Results & conclusion

- Good to very good ICD-11 coding results with basic training

UGANDA Morbidity 02 results			
Diagnostic Term	Grand Total of code assignments	# of correct code assignments	Percent correct
Gastric ulcer with acute haemorrhag	18	1	5.56%
NSTEMI	19	5	26.32%
Respiratory failure	19	7	36.84%
Cataract	19	17	89.47%
Pneumonia	21	19	90.48%
Typhoid Fever confirmed	18	17	94.44%
Conjunctivitis	18	17	94.44%
Neonatal Sepsis	18	17	94.44%
Febrile Convulsion	18	17	94.44%
Substances induced psychosis	19	18	94.74%
Sepsis (septic shock)	19	18	94.74%
RDS	19	18	94.74%
bilateral Conductive Hearing Loss	21	20	95.24%
Peptic ulcer disease	21	21	100.00%
Charcot-Marie-Tooth disease	20	20	100.00%
Friedreich ataxia	20	20	100.00%
Ovarian Cyst	20	20	100.00%
Uterine Fibroid	20	20	100.00%
Schizophrenia, unspecified	20	20	100.00%
Temporal lobe epilepsy	20	20	100.00%
Congenital malformation	19	19	100.00%
Periventricular leukomalacia	19	19	100.00%
Cerebro Vascular Accident (CVA)	19	19	100.00%
OSA syndrome	19	19	100.00%
Viral hepatitis	19	19	100.00%
TB meningitis	19	19	100.00%
Pre-eclampsia	19	19	100.00%
Chronic Osteomyelitis	19	19	100.00%
Dental caries	18	18	100.00%
Complete heart block	18	18	100.00%

- **Module 2 (n=30):**
 - **27 terms** -> coding accuracy **90% or higher**

Conclusion: Good to very ICD-11 coding results with basic training

ICD-11 rule engine for automated coding for selection of the Underlying Cause of Death

SMoL
Death certificate

Underlying cause of death computing

Controls

Classification
ICD11

Example form
Compute

Death certificate

Information on the deceased

Sex
Male

Date of birth*
1/3/2016

Date of death*
2/9/2021

Birth date unknown* ☐

Estimated age*
5

FrameA: Medical data: Part 1 and 2

Part1: Cause of death

A
PA61&XE9CV - fall from tree

Due to

B
NA22.Z - Fracture of neck, unspecified

Due to

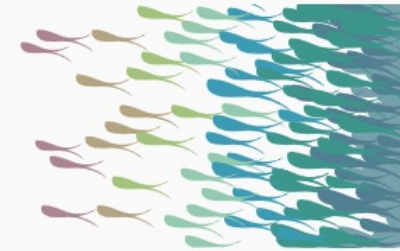
C

Basic features of Rule engine

- Rules coming from SMOL and from ICD-11 Reference Guide
- Abstract, high level rules based on **code sets** (based on ICD-11, SMOL, ICD-10)
- Rules
 - written in a JSON-based format (i.e. open, readable)
 - When working with ICD-11, causing condition linkages between entities can be exploited to use the correct code
 - New rules could be added rather easily
 - Possibility to have a collaborative authoring platform to edit/discuss existing or suggested new rules
- Technical approach in line with the current WHO-FIC framework (i.e. openness, rest-based API, locally installable platform)
- A demo (cloud-based) frontend has been developed for testing the API and validating results. Final version will be integrated in upcoming ICD-11 API release.

Analyzing ICD-11 coded Cause of Death Data with ANACoD3

Welcome to ANACoD 3!



The Analyzing Mortality and of Cause of Death 3 (ANACoD3) online tool helps you to perform a comprehensive and systematic analysis of mortality and cause of death data. The tool automatically tabulates data and presents basic mortality measures in tables and figures. It highlights potential inconsistencies and errors in the data and estimates the completeness of reporting. ANACoD3 generates indicators that reveal potential data-quality issues, as well as an array of comparable indicators including sex- and age-specific mortality rates, crude death rates, life expectancy at birth, causes of death distributed by global burden of disease categories, the top 20 causes of death, and the percentage of ill-defined causes of death.

This latest version allows for the analyses of cause-of-death data coded in ICD-10 as well as ICD-11 formats. ANACoD3 analyzes sub-national level data to inform of potential health equity issues or outbreak patterns; it also analyzes data over multiple time periods for trend analyses.

For additional information or support, please contact mortality@who.int.

Suggested citation for the tool: *Analysis of Mortality and Cause of Death, ANACoD V3, WHO, 2020.*


Upload data

Or

Use sample dataset

ICD-11 Application Programming Interface (APIs) for easy integration of ICD-11 in any Software <https://icd.who.int/icdapi>

[Home](#) [About](#) [Register](#) [Log in](#)



ICD API

ICD API allows programmatic access to the International Classification of Diseases (ICD). It is an HTTP based REST API. You may use this site to access up to date documentation on using the API as well as managing the keys needed for using the API.

[The list of available classification versions](#)

How to Use the API

Version 2 new

- [What's new in version 2](#)
- [API Documentation](#)
- [API-Reference \(swagger\)](#)

[ICD API Samples GitHub repository](#)

API Access

View API access key(s) *(please login first)*

If you haven't registered already please [Register](#) to get access to the API

Embedded Coding Tool new

You can easily integrate ICD-11 Coding Tool into your applications.

[Learn more](#)

Embedded Coding Tool is powered by the ICD-API

ICD-API in container new beta

You may deploy the ICD-API locally using Docker

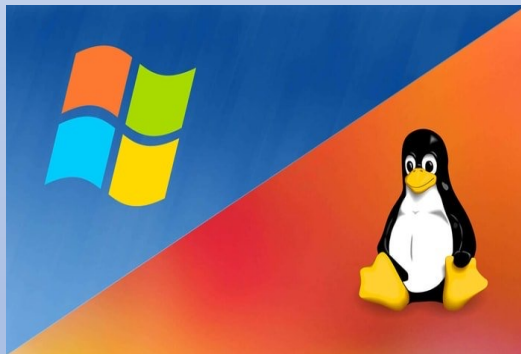
[Learn more](#)

Local Deployments of ICD-11



Docker based deployment

- Very light weight docker images
- Supports multilingual versions
- Linux / Windows / Cloud



Other local deployment options coming

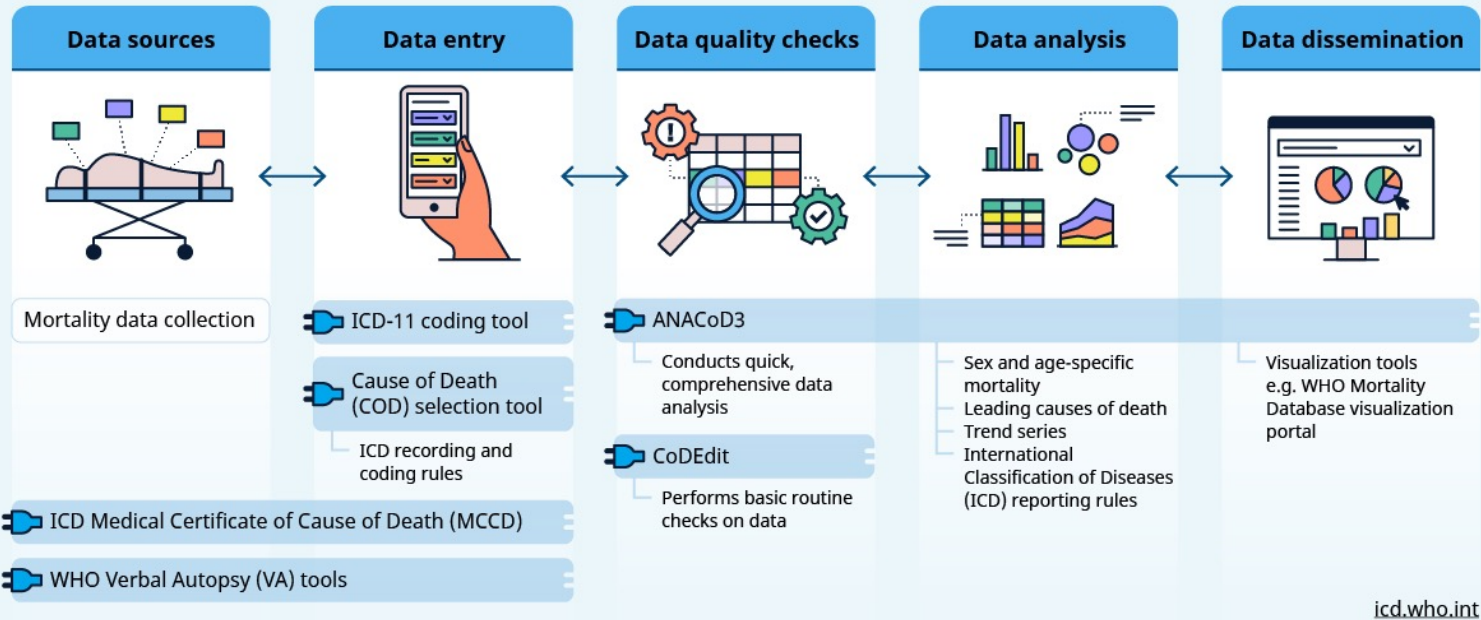
- Windows service
- Linux systemd service

ICD-11 digital infrastructure

(e.g. ICD-11 CoD tools)

Cause of Death reporting in the ICD-11 universe

Plug and Play tools for Cause of Death reporting



Why does it matter? ICD-11 tools are

- **freely available** (no licensing, no fees)
- **easy to use** & integrate into software for use in all settings, **without additional tooling**
- **multilingual**
- **Future-proofed** to enable semantic interoperability
- kept clinically **up-to-date** through an **open, public and transparent maintenance process**
- **controlled by member states for member states** (recall WHO's Director General's request to all Member states for nomination of official ICD focal point)

Key consideration for ICD-11 implementation

National plan to transit from ICD-10 to ICD-11

Planned activities	Expected results	Year 1				Yaer 2			
		I yn	II yn	III yn	IV yn	I yn	II yn	III yn	IV yn
ONE: Establish working group at national level involving stakeholders and partners, get approval and support from the Cabinet									
Finalize translation of the classification, user guide and other documents	Transalted ICD-11 book								
Organize virtual trainings to introduce ICD-11	Organized trainings for working group, all 21 provinces, national centers and hospitals								
Develop a national standard to introduce ICD-11 in Mongolia	Developed standard								
Check computer system thru manual coding and transcription, make adjustments if necessary	Uploaded ICD-11 platform								
Link ICD-11 with health insurance, national statistics office an civil registration systems x	Linked information systems								
Evaluate coding capacity	Conducted evaluation, evaluation on implementation								
Training of trainers on ICD-11	Trained trainers								
Develop training curriculum based on needs of the users (coders, health care workers, researchers etc)	Developed training curriculum and plan								
Training on how to use users guide for coders, health care workers, health insurance staff	Organized training								
Training on use of computer tools for coders, health care workers, health insurance staff	Organized training								
Training on morbidity and mortality data analysis and quality of the information	Organized training								
Evaluation of impact of trainings on coders, health care professionals, others	Conducted evaluation								

- **Establish ICD-11 reference centre/taskforce & nominate ICD-11 focal point** as requested by DG letter to Member States in 2019.
- **Maintenance of existing system during the transition**
- **Project management and strategic planning**
 - Set vision & formulate strategy
 - Designate project management team
 - Ensure stakeholder representation
- **Develop and follow National Plan to transit from ICD-10 to ICD-11**
 - Use **WHO ICD-11 implementation and transition plan** as reference
 - Carry out a **Health Information System ecosystem analysis** and review
 - current practice of documenting, coding, analysing and using ICD coded mortality and morbidity data
 - specify important areas/data gaps/future data needs for which ICD coded data should be available
 - Health IT infrastructure (what IT hardware/software needs to be adapted, data entry form)
 - Human workforce (who is coding, analyzing and using ICD data)

Key consideration for ICD-11 implementation (cont.)

- Develop and follow National Plan to transit from ICD-10 to ICD-11 (cont.)
 - Specify the **value proposition** of ICD-11 (e.g. faster, easier, more accurate coding) **from the country perspective**
 - Specify **opportunities & challenges** for ICD-11 implementation
 - Specify and carry out a **step-wise transition process**
 - **Integration and piloting of ICD-11 APIs in software applications** (e.g. e-death certification, EMR, DHIS-2) & **training and capacity building of coding workforce**
 - **Scaling up of ICD-11 pilots & training** (i.e. country-wide capacity building and piloting of ICD-11 incl. analysis of coded data, Start country wide advocacy and dissemination, Start pilot in routine environment)
 - **Prepare system-wide implementation** (i.e. ensure comparability and quality of data; large-scale piloting in routine environment, Use of ICD-11 with terminologies and electronic health records, Identify technical requirements and plan lead time for health information system changes, mortality and morbidity coding tools and casemix groupers)
 - **Routine reporting with ICD-11** (i.e. national deployment)



ICD-11
Implementation or Transition Guide

[ICD-11 Implementation and Transition Guide_Draft_v105.edited.pages \(who.int\)](#)

ICD-11 implementation in Mortality

- ▶ ☐ Kabuchai Sub County
- ▶ ☐ Kanduyi Sub County
- ▶ ☐ Kimilili Sub County
- ▶ ☐ Mt Elgon Sub County
- ▶ ☐ Sirisia Sub County
- ▶ ☐ Tongaren Sub County
- ▶ ☐ Webuye East Sub County
- ▶ ☐ Webuye West Sub County
- ▶ ☐ Busia County
- ▶ ☐ Elgeyo Marakwet County
- ▶ ☐ Embu County
- ▶ ☐ Garissa County
- ▶ ☐ Homa Bay County
- ▶ ☐ Isiolo County

Part 2: Medical Data


	Cause of death	Code	Time interval from onset to death		Time interval from onset to death
Report disease or condition directly leading to death on line a	a	Acute respiratory failure, uns	CB41.0Z	3	Minute(s) ▼
Report chain of events 'due to' (b to d) in order (if	b	pneumonia due to covi			Pick one ▼

Filter ☐

Destination Entities

RA01.0/CA... COVID-

RA01.1/CA... COVID-



La salud es de todos

Minsalud

Nacido vivo ▼

Defunción ▼

Nacimientos y Defunciones

ND 2.0

[Salir](#)

Usuario: CC16598352-

Entidad: 050010210401 HOSPITAL PABLO TOBON URIBE

Rol: Rol_NDv2_ProfesionalSaludIPS

Example of ICD-11 Coded and certified Death in DHIS2:

Use of (google like search) with embedded ICD-11 coding tool instead of drop-down list.

51. Causas de la defunción (en caso de muerte fetal, o de menores de 7 días, informe también las causas maternas directas o indirectas en c y d)

Tipo causa
Directa - A ▼

Debido a
Otra peritonitis secundaria especificada [Bacteria gramnegati

Código
DC50.1Y&XNf

Tiempo

U.
medida ▼

Tipo causa
Antecedent ▼

Debido a
APENDI

Código

Tiempo

U.
medida ▼

Guessing the word being typed...

Word list

sort: Relatedness/repetition ▼

apendice

apendices

apendicitis

Destination Entities

DB10.Y Otra **apendicitis** especificada

DB10.Z **Apendicitis**, sin especificación

sort: Matching score ▼

[J](#) [+](#) [\[Details\]](#)

[J](#) [+](#) [\[Details\]](#)

ICD-11 MCCoD in DHIS-2

WHO Tracker Configuration Development Instance - Cause Of Death App

Org unit: **Trainingland** [New Registration](#) Search

Date of Death: 2021-05-10
Reported Date: 2021-05-10
System ID:
Family name: Tester
Given name: John

☐ Date of birth is estimated

Date of birth: 1978-05-09 Age (years):
Sex: Male
Address (current): 120 Test drive

[Save](#)

Cause of death

Frame A Frame B

Medical data

Disease or condition directly leading to death

Cause of death

Immediate A **NA22.Z** Fracture of neck, unspecified

Report chain of events in "due to" order (B - C - D) if applicable. State the underlying cause on the "Underlying"

Cause of death

Due to B **PA61&XE9CV** Unintentional fall from tree



INSTALLATION OF WHO MCCD PACKAGE

☒ Use global WHO ICD Tool url ☐ Use other ICD Tool url

<https://icd11restapi-developer-test.azurewebsites.net/icd/>

Default Installation



Use default MCCOD program with minimum configurations

Custom Installation

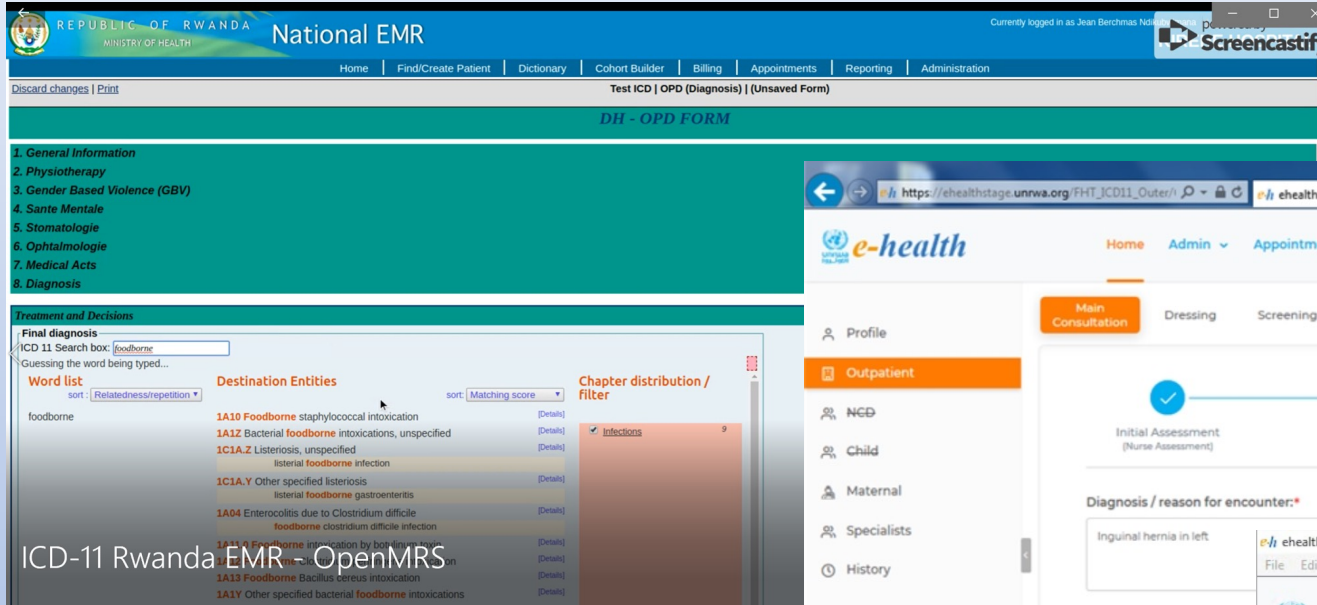


Use default MCCOD program with additional metadata as you need

How to install ICD-11 API Server using Docker:

<https://icd.who.int/icdapi/docs2/ICDAPI-DockerContainer>

ICD-11 implementation in Morbidity



REPUBLIC OF RWANDA
MINISTRY OF HEALTH

National EMR

Currently logged in as Jean Berchmas Ndab...

Home | Find/Create Patient | Dictionary | Cohort Builder | Billing | Appointments | Reporting | Administration

Test ICD | OPD (Diagnosis) | (Unsaved Form)

DH - OPD FORM

1. General Information
2. Physiotherapy
3. Gender Based Violence (GBV)
4. Sante Mentale
5. Stomatologie
6. Ophtalmologie
7. Medical Acts
8. Diagnosis

Treatment and Decisions

Final diagnosis
ICD 11 Search box: foodborne

Guessing the word being typed...

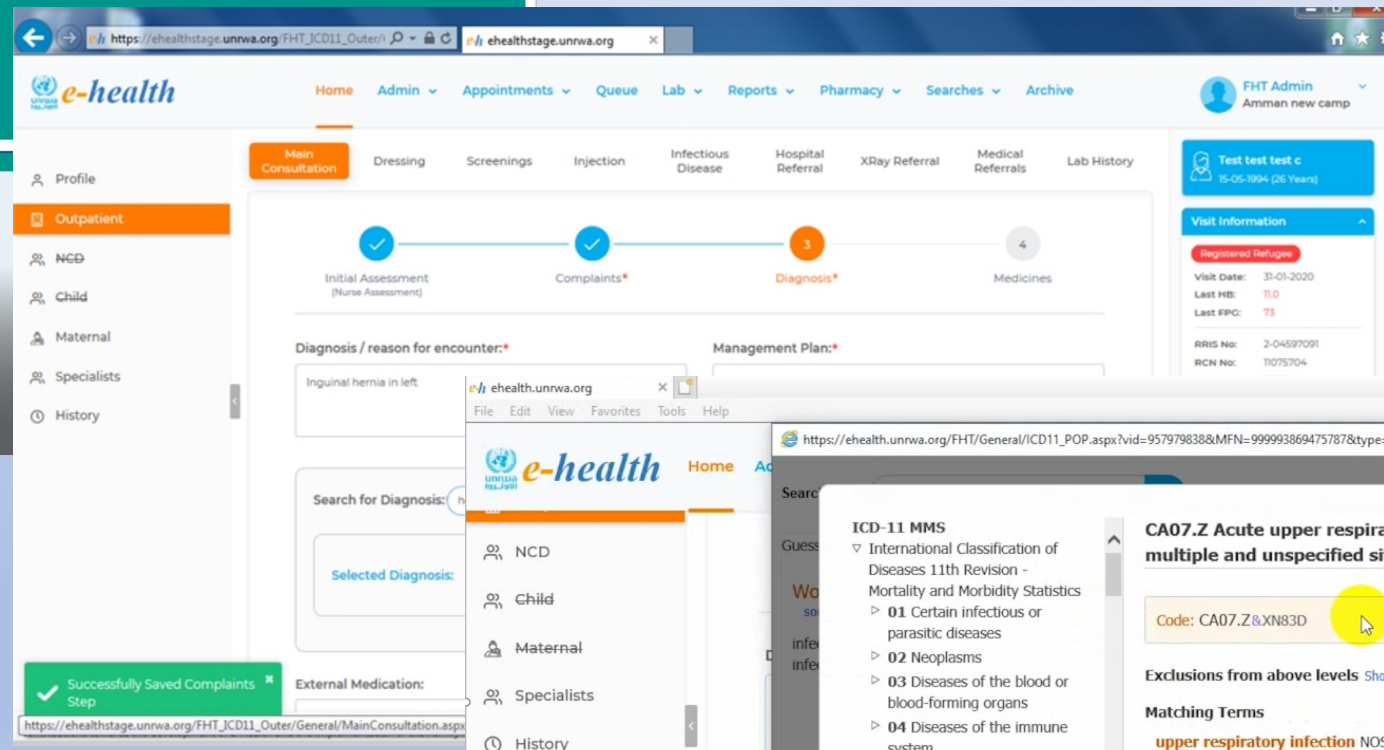
Word list
sort: [Relatedness/repetition]

Destination Entities
sort: [Matching score]

Chapter distribution / filter

1A10 Foodborne staphylococcal intoxication [Details]
1A12 Bacterial foodborne intoxications, unspecified [Details]
1C1A.Z Listeriosis, unspecified [Details]
1C1A.Y Other specified listeriosis [Details]
1A04 Enterocolitis due to Clostridium difficile [Details]
1A11 Foodborne intoxication by botulinum toxin [Details]
1A13 Foodborne Bacillus cereus intoxication [Details]
1A1Y Other specified bacterial foodborne intoxications [Details]

ICD-11 Rwanda EMR - OpenMRS



e-health

Home | Admin | Appointments | Queue | Lab | Reports | Pharmacy | Searches | Archive

FHT Admin
Amman new camp

Test test test c
15-05-1994 (26 Years)

Visit Information
Registered Refugee
Visit Date: 31-01-2020
Last Hb: 11.0
Last FPG: 73
RRIS No: 2-04597091
RCN No: 11075704

Main Consultation | Dressing | Screenings | Injection | Infectious Disease | Hospital Referral | XRay Referral | Medical Referrals | Lab History

Profile
Outpatient
NCD
Child
Maternal
Specialists
History

Initial Assessment (Nurse Assessment) | Complaints* | **Diagnosis*** | Medicines

Diagnosis / reason for encounter:*
Inguinal hernia in left

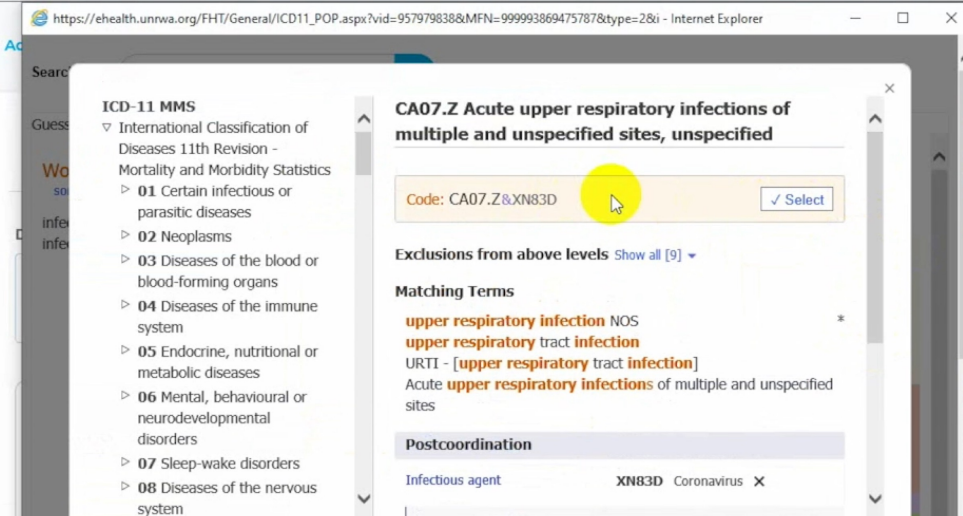
Management Plan:*

Search for Diagnosis: h

Selected Diagnosis:

Successfully Saved Complaints Step

https://ehealthstage.unrwa.org/FHT_JCD11_Outer/General/MainConsultation.aspx



ICD-11 MMS
International Classification of Diseases 11th Revision - Mortality and Morbidity Statistics

- 01 Certain infectious or parasitic diseases
- 02 Neoplasms
- 03 Diseases of the blood or blood-forming organs
- 04 Diseases of the immune system
- 05 Endocrine, nutritional or metabolic diseases
- 06 Mental, behavioural or neurodevelopmental disorders
- 07 Sleep-wake disorders
- 08 Diseases of the nervous system

CA07.Z Acute upper respiratory infections of multiple and unspecified sites, unspecified

Code: CA07.Z&XN83D [Select]

Exclusions from above levels Show all [9]

Matching Terms

upper respiratory infection NOS
upper respiratory tract infection
URTI - [upper respiratory tract infection]
Acute upper respiratory infections of multiple and unspecified sites

Postcoordination

Infectious agent XN83D Coronavirus X

ICD-11 use as interoperability standard in COVID-19 Smart Vaccination Card

What is a Smart Vaccination Certificate?



- A **medical document** managed by **public health authorities** of member states
- A **digital vaccination certificate** based on the existing *home-based records* guidance and the *international certification of vaccination or prophylaxis*
- Can be **purely digital** (i.e., stored on a smartphone application) **or be a complementary digital “twin”** of traditional paper records
- The SVC only documents **vaccination events**, but is architected to evolve with the science, and needs of countries



NOT FOR DISTRIBUTION

5.0.2 Terminology: Value Sets

WHO Vaccine List	The WHO Vaccine List from ICD 11 is used by: <ul style="list-style-type: none"> the SVC Immunization
WHO List of Vaccinable Conditions	The WHO Vaccinable Conditions List from ICD 11 is used by: <ul style="list-style-type: none"> the SVC Immunization
WHO Vaccine List (COVID-19)	WHO Vaccine List (COVID-19) from ICD 11

5.11.1.1 Logical Definition (CLD)

- Include these codes as defined in <http://hl7.org/fhir/sid/icd-11>

Code	Display
XM1NL1	COVID-19 vaccine, inactivated virus
XM5DF6	COVID-19 vaccine, live attenuated virus
XM9QW8	COVID-19 vaccine, non-replicating viral vector
XM0CX4	COVID-19 vaccine, replicating viral vector
XM5JC5	COVID-19 vaccine, virus protein subunit
XM1J92	COVID-19 vaccine, virus like particle (VLP)
XM6AT1	COVID-19 vaccine, DNA based
XM6AT1	COVID-19 vaccine, DNA based
XM1NL1	COVID-19 vaccine, inactivated virus
XM5DF6	COVID-19 vaccine, live attenuated virus
XM9QW8	COVID-19 vaccine, non-replicating viral vector
XM0CX4	COVID-19 vaccine, replicating viral vector
XM5JC5	COVID-19 vaccine, virus protein subunit
XM1J92	COVID-19 vaccine, virus like particle (VLP)
XM6AT1	COVID-19 vaccine, DNA based
XM6AT1	COVID-19 vaccine, DNA based

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Next page

5.10.1.1 Logical Definition (CLD)

- Include these codes as defined in <http://hl7.org/fhir/sid/icd-11>

Code	Display
RA01.0	COVID-19, virus identified
RA01.1	COVID-19, virus not identified

Lesson learned so far

- **Working across all three levels** (HQ+ROs+COs) **of WHO** is critical
- **Country ownership** at technical and political level is key
 - shared understanding regarding ICD-10 problems and ICD-11 solutions
- Some countries face **difficulties** in integrating ICD-11 in their digital health infrastructure because they are bound to proprietary ICD-10 based software (i.e. EMR, HIS)
- **ICD-11 implementation** and data streams need **to be supported** by **Digital Health Information Strategies, Initiatives and Institutions**
- **ICD-11 is clinician friend allows coding at the point of care** (e.g. [\(141\) ICD-11 Pilot in Kuwait: The doctors' perspective \(Farwaniya hospital, Kuwait\) - YouTube](#))
- **Non-legacy countries can leapfrog** coverage and quality of ICD coded mortality and morbidity data