## FIFTH REGIONAL STEERING GROUP MEETING BANGKOK 17-19 SEPTEMBER 2019

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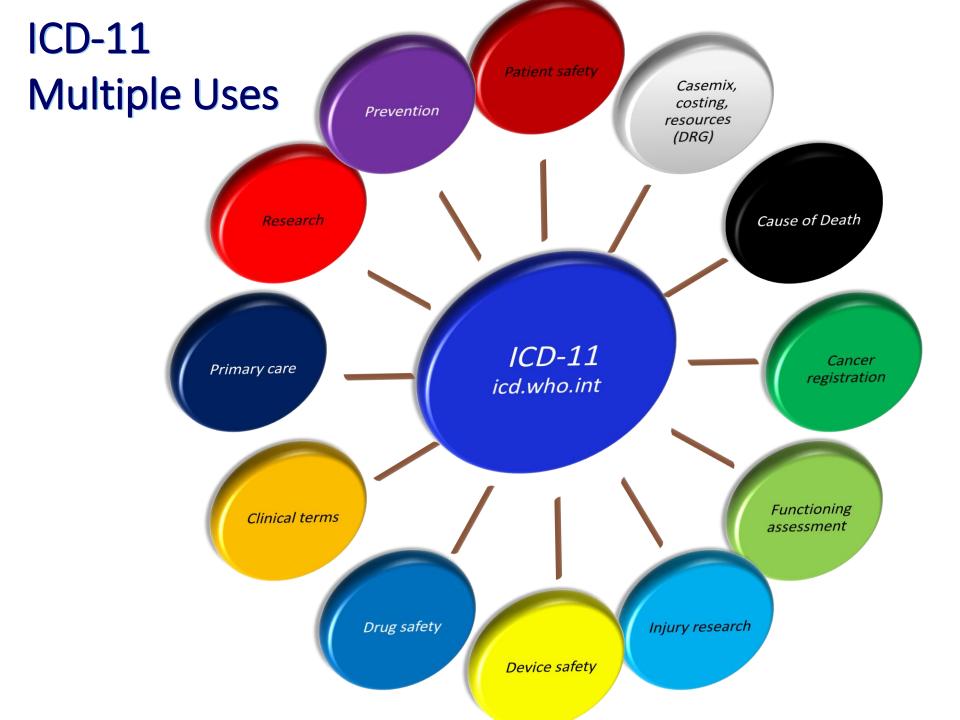


# ICD-11 Global Standard for Health Information

is the **international standard** for recording, reporting and measuring health & health services

- Mortality Statistics
- Morbidity Statistics
- Quality and Safety
- Primary care
- Health Care Costs
- Clinical documentation
- Progress towards SDGs





# ICD-11 Much more than diagnoses





# WHO Family of International health related Classifications (WHOFIC)

#### **RELATED Classifications**

Covering other relevant dimensions in health

International Classification of Primary Care (ICPC)

The Anatomical, Therapeutic, Chemical (ATC) classification with Defined Daily Doses (DDD)

ISO 9999 Technical aids for persons with disabilities – Classification and Terminology

International Classification of Nursing Practice

#### **REFERENCE Classifications**

I nternational C lassification of D iseases

I nternational
C lassification of
F unctioning,
Disability & Health

I nternational
C lassification of
H ealth
I nterventions

#### **Special versions**

Derived from reference classifications

Application of the International Classification of Diseases to

- Dentistry and Stomatology
- Dermatology
- Neurology
- Paediatrics
- Pain
- Oncology
- Mental and Behavioural Disorders

ICD national applications

ICHI national applications

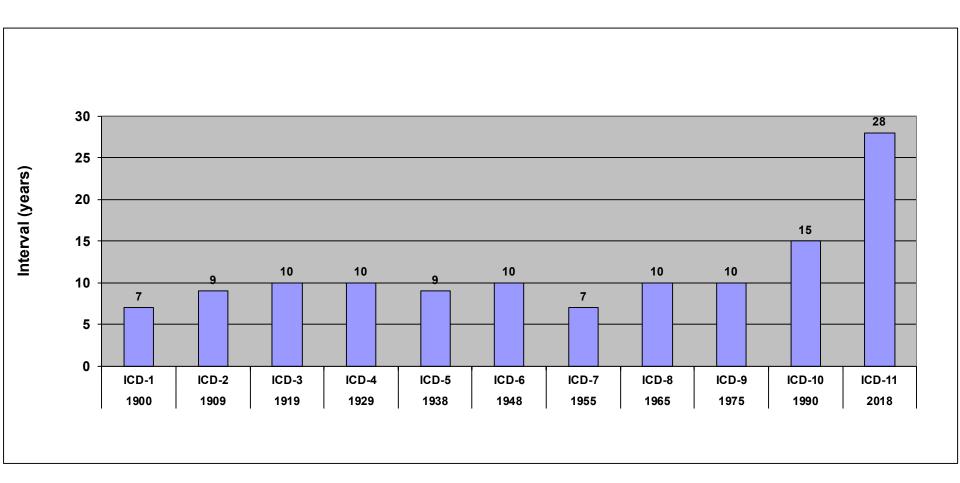
# WHO Family of International health related Classifications - Terminology view

**ICD-11 ICHI ICF Extension Codes WHO INN (medicaments) WHO Devices Histopathology (tumours) Anatomy Details of external causes Severity** 

Related Classifications and terminologies

ICNP, ICPC, ATC, ISO 9999, SNOMED, Orphanet

## **ICD Revisions**







**55000 codes** in ICD-11 v 14400 in ICD-10

31 countries were involved in ICD-11 field testing

1673 participants taking part in 112383 code assignments



**#ICD11** 



# ICD-11 Revision was more than necessary

- Improve usability
  - Less training
- Update scientific content
- Enable coding of all clinical detail
- Make eHealth (digital) ready for use in electronic(digital) environments
- Linkage to relevant other classifications and terminologies
- Full multilingual support on translation and output



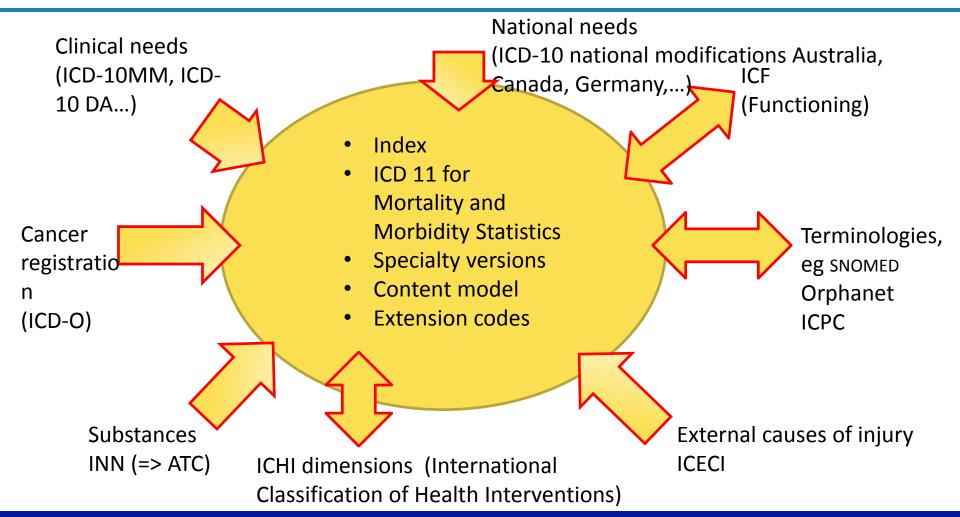
## **ICD-11 Timeline**

- 2001 Start planning
- 2007 Start ICD-11 editing
- 2019 Adoption World Health Assembly
- 2022 Official reporting with ICD-11
   Note: national use can start earlier

# ICD-11 Scientific clinical input

- Extensive participation by national and international scientific societies
- Over 300 clinical specialists organized in 30 topic advisory groups, 270 Institutions, 55 countries
- Input from clinical modifications of old ICD-10 and they were based on clinical needs
- Reviews, testing, commenting => 99 countries

# ICD-11 Foundation – input from ICD-10 and derived classifications, links



# Examples of problems solved with ICD-11

- Antimicrobial resistance essentially missing in ICD-10
- HIV subdivisions outdated detail in ICD-10
- Skin cancer melanoma types missing basalioma missing in ICD-10
- Valve diseases outdated structure, need by valve, less rheumatic
- Postprocedural conditions clarify when use 19 and when not for postprocedural
- Diabetes coding clinically more relevant and flexible
- External causes Loosing detail in non-accidents; traffic accidents



## ICD-11 IT friendly –

- Web services full functionality available in the software of choice - you keep your preferred software user interface
  - Online services everybody can use ICD without any local software
  - Offline services –all the functionality on a local computer and updates when internet is available
- Output files formats include CSV, ClaML and others as necessary
- Print version Real paper version gives look and feel of the past

Log in



ICD API allows programmatic access to the International Classification of Diseases (ICD). 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.

#### Register for using the API

Register to get access to the APIs (if you haven't registered already)

View API access key(s) (requires logging in)

#### How to Use the APIs

ICD REST API Documentation ICD API Authentication

# **ICD-11** User friendly

- Easier coding coding tool, more instructions built in
- Guidance how to use code combinations
- Specialty versions focus on needs for particular specialties

 And all features are available for every language version

## **Browser and Coding tool**

### https://icd.who.int



ICD-11 Browser

for seeing the content ICD-11 Coding Tool for coding with ICD-11

web services to get programmatic access to ICD-11

ICD Home Page ICD-11 Reference Guide About ICD-11 ICD Video

Our maintenance platform provides

various ways to contribute

Comments Proposals

**Translations** 



### The ICD-11 browser

- Blue browser is the official release of ICD-11
- Not only a search tool, but (orange brower) also the mechanism to add proposals and comments after registering
- Registered users are able to:
  - Comment on the content
  - Submit proposals for change
  - Read comments and proposals from others
  - Access PDF or Word versions of the classification
- Multiple languages controlled translation platform

### **ICD-11 Browser**

#### [Register] | [Log In] **ICD-11** (Mortality and Morbidity Statistics) Last Update: Feb Search [ Advanced Search ] Foundation Linearizations Contributions Info ICD-11 - Mortality and Morbidity Statistics **User Guide** ICD-11 Maintenance 01 Certain infectious or parasitic diseases **02** Neoplasms **Platform Training Videos** 03 Diseases of the blood or blood-forming organs Welcome to the ICD-11 Mainter 04 Diseases of the immune system Caveats **05** Endocrine, nutritional or metabolic diseases **IMPORTANT!** The content mad **06** Mental, behavioural or neurodevelopmental of the ICD-11. It is a work in pro ICD-11 Reference Guide disorders For the latest release of the clas **07** Sleep-wake disorders ICD Revision Site 08 Diseases of the nervous system You need to create an account to 09 Diseases of the visual system classification by writing proposa Downloads 10 Diseases of the ear or mastoid process below Register 11 Diseases of the circulatory system Please note that the accounts y Frozen Releases 12 Diseases of the respiratory system classification are still valid. 13 Diseases of the digestive system



## **ICD-11 Coding tool**

- This tool works by searching all ICD-11 terms and is the ICD-11 index
- Generates and dynamically updates two different outputs
  - Word list
  - Matched entities
- Synonyms, word completion... like online search engines

## Simple search

### Type a diagnostic statement into the Coding Tool

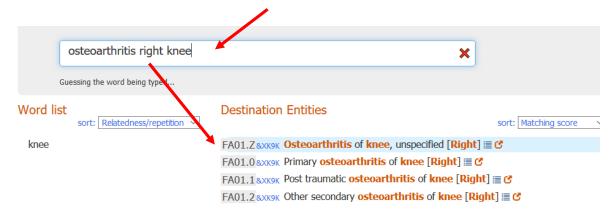
#### e.g. cancer of stomach



# Simple search

Type a diagnostic statement into the Coding Tool

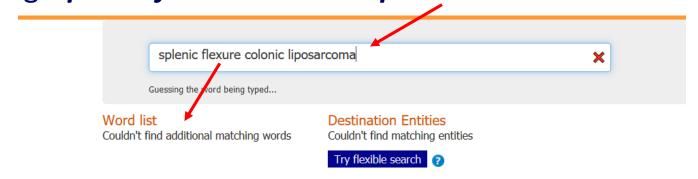
### e.g. Osteoarthritis of right knee



## Flexible search

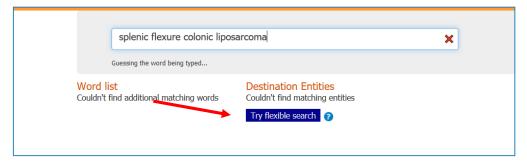
Type a diagnostic statement into the Coding Tool

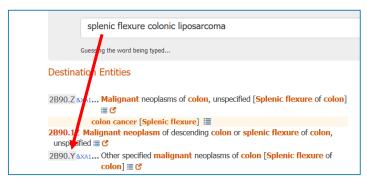
e.g. splenic flexure colonic liposarcoma



## Flexible search cont.

#### Try flexible search





## No change to ICD-10

- Conditions included in following chapters have not been subjected to moves:
  - Maternal
  - Perinatal
  - Injury
  - Tumour

Mortality coding rules have kept their intent

### **ICD-11**

- 26 chapters, (17000 codes)
- Special tabulation lists
   (for analysis only, e.g. infections by agent)
- Functioning section (for assessment)
- Supplementary chapter traditional medicine diagnoses
- Extension codes

## Special Topic gaming disorder

- Only for very serious cases
  - impaired control over gaming
  - increasing priority given to gaming takes precedence over other life interests and daily activities;
  - continuation or escalation of gaming despite the occurrence of negative consequences.
  - over a period of at least 12 months

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## Reference Guide

- Detailed description of structure of ICD
- Detailed description of differences between ICD-11 and ICD-10
- Rationale for changes
- Updated mortality rules
- Fully rewritten morbidity rules

## Mortality Rules – Principles for revision

- Basically no major changes in the rules
  - Minimizing the rule change would allow assessing the impact of structure change better
- Text has been formatted using more easy wordings
  - In order to enhance user understandings
- Detailed review reflects the classification structure change to the mortality rules

## Morbidity rule sets

- Based on many countries experience with ICD-10
- Rules for coding an episode (main diagnosis)
  - Additional rules for coding patient safety
  - Additional rules for coding traditional medicine
- Recommendations for recording
  - Main diagnosis
  - Main intervention
  - Additional diagnoses
  - Additional interventions

## **Morbidity Rules**

New definition of main diagnosis:

# Reason for encounter after assessment at the end of the stay!!!

Patient comes with cough

- => examinations
- => has pneumonia (that explains the cough)
- => Main diagnosis is pneumonia



# OPTIONAL Extension codes – add all the detail you need, if you want

#### Type 1

- Severity
- Temporality (course of the condition)
- Temporality (Time in life)
- Aetiology
- Anatomic detail Topology Anatomic location
- Histopathology (ICD\_O)
- Biological Indicators
- Consciousness
- Substances Medicaments (WHO INN\*)
  Chemicals
- External Causes detail
- Injury Specific detail
- Health Devices, Equipment and Supplies

#### Type 2

- Main Condition
  - Reason for encounter
  - Reason for admission
  - Main Resource Condition
- Present on Admission
  - Developed after admission
  - Uncertain timing relative to admission
- Provisional diagnosis
- Diagnosis confirmed by...
  - Lab
  - Serology
  - Histology
  - Genetics
  - Imaging –
  - Unspecified means
- Differential Diagnosis

<sup>\*</sup>International Nonproprietary Names: https://www.who.int/medicines/services/inn/en/



# Patient safety

#### "Cause" of harm

- Substances
- Procedures
  - Devices
- Other Aspects of Care

A cluster of codes to denote the

"Injury or Harm"

that resulted from the event

"Mode or Mechanism" of harm

e.g. overdose/underdose for substances

e.g. accidental perforation for procedures

e.g. dislodgement/malfunction for devices

e.g. mismatched blood used in transfusion for other aspects of care



## A clinical example - device

A respirator malfunction causes a barotrauma with air embolism in a patient

### Coding:

- PK9C.1& XD4M09 Cause of harm (medical devices associated with injury or harm & Ventilator, Adult)
- PL12.1 Mode/mechanism (Functional device failure)
- NF0A.0 Harm (Air embolism, traumatic)

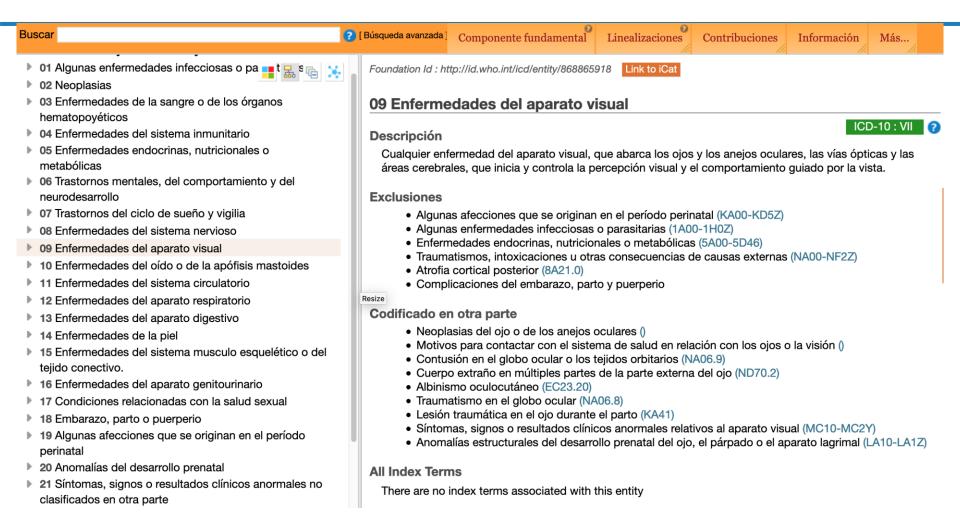
# A clinical example - medicament

A patient presents with an intracranial hemorrhage arising while on warfarin anticoagulation. INR found to be 7.0 and careful history reveals patient to have accidentally taken double doses over several days.

#### Coding:

- PH80 & XE9AC Code for the cause of harm (exposure to drug in therapeutic intent & warfarin)
- PH92.0 Code for mode/mechanism (overdose)
- 8B00.Z Code for actual harm (intracranial hemorrhage)

## Spanish





### Chinese

查找 基础 线性组合 贡献 信息 更多...

#### ICD-11 - Mortality and Morbidity Statistics



- ▶ 01 某些感染性疾病或寄生虫病
- ▶ 02 肿瘤
- ▶ 03 血液或造血器官疾病
- 04 免疫系统疾病
- ▶ 05 内分泌、营养或代谢疾病
- ▶ 06 精神、行为或神经发育障碍
- 07 睡眠-觉醒障碍
- ▶ 08 神经系统疾病
- 09 视觉系统疾病
- 10 耳或乳突疾病
- 11 循环系统疾病
- ▶ 12 呼吸系统疾病
- ▶ 13 消化系统疾病
- ▶ 14 皮肤疾病
- 15 肌肉骨骼系统或结缔组织疾病
- 16 泌尿生殖系统疾病
- ▶ 17 性健康相关情况
- ▶ 18 妊娠、分娩或产褥期
- ▶ 19 起源于围生期的某些情况
- 20 发育异常
- 21 症状、体征或临床所见。不可归类在他处者
- ▶ 22 损伤、中毒或外因的某些其他后果
- 23 疾病或死亡的外因
- ▶ 24 影响健康状态或与保健机构接触的因素
- ▶ 25 用于特殊目的的编码

Foundation Id: http://id.who.int/icd/entity/868865918

Link to iCat

#### 09 视觉系统疾病

#### 描述

ICD-10 : VII (?)

This refers to any diseases of the visual system, which includes the eyes and adnexa, the visual pathways and brain areas, which initiate and control visual perception and visually guided behaviour. [No translation available]

#### 不包括

- 起源于围生期的某些情况 (KA00-KD5Z)
- 某些感染性疾病或寄生虫病 (1A00-1H0Z)
- 内分泌、营养或代谢疾病 (5A00-5D46)
- 损伤、中毒或外因的某些其他后果 (NA00-NF2Z)
- 后部皮质萎缩 (8A21.0)
- 妊娠、分娩和产褥期的并发症

#### 编码至他处

- 眼或眼附属器的肿瘤 ()
- 与视力或视力有关的医疗保健系统接触的原因 ()
- 眼球或眶组织挫伤 (NA06.9)
- 外眼多部位异物 (ND70.2)
- 眼皮肤白化病 (EC23.20)
- 创伤性眼球损伤 (NA06.8)
- 眼的产伤 (KA41)
- 视觉系统的症状、体征或临床所见 (MC10-MC2Y)
- 眼、眼睑或泪器结构发育异常 (LA10-LA1Z)



## Bilingual version





## Implementation package

- Browser, Coding tool, API
- Reference Guide (user manual online)
- Information material (online)
- Transition guide
- Translation tool
- Mapping between ICD-11 and ICD-10
- Training material (in preparation)



ICD-11 for you – by you – for best possible health for all people Thank you