ICD 11th revision

Member State Information Session
Geneva, 14 May 2017
Needs and Uses: Mortality statistics

Mortality by age, sex, and cause of death is the foundation of public health, globally and in countries: comparable mortality statistics over time.

Sustainable Development Goals (SDG) 2016-2030: nearly a dozen mortality by-cause targets and indicators (NCD, suicide, violence, environmentally related, maternal, etc.)
ICD- Number of codes by ICD revision

WHO Nomenclature Regulations

Morbidity

179 189 205 214 200 954 965 1040 1164 2034 4637

ICD 1  ICD 2  ICD 3  ICD 4  ICD 5  ICD 6  ICD 7  ICD 8  ICD 9  ICD 10  ICD 11

Trends in cause-of-death reporting by ICD revision

Number of countries

Reference year of data

Reference year of data
Global number of deaths by registration and reporting status to WHO

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<tr>
<th>Category</th>
<th>Value</th>
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<td>Deaths</td>
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<tr>
<td>Reported to WHO, by ICD code</td>
<td>16</td>
</tr>
<tr>
<td>Reported to WHO, detailed listing &amp; non-garbage</td>
<td>14</td>
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Estimates, WHO, 2016
Needs and Uses: Morbidity Statistics

Morbidity statistics (incidence, prevalence, sequelae) are also an essential foundation for public health.

Morbidity statistics are much less widely applied:
- Fully implemented in 41 countries
- Partially implemented in 6 countries

Comparative morbidity statistics are often lacking:
- Based on special surveillance systems, with limitations (e.g. HIV, TB, cancer)

Need for simplified lists and tools.
Other needs and uses of ICD

Administrative tool
- Used for reimbursement and resource allocation in significant number of countries;
- National clinical modifications in almost 30 countries

Clinical research

Monitoring specific areas
- Health care quality and safety: health-care associated adverse events including AMR
- Primary care
- Surveillance and identification of reportable events
ICD-10 in 2018

Translated into 43 languages

Used in over 100 countries, including more than 2 dozen modifications

Basis for global cause-specific mortality statistics

But now >25 years old
ICD-11: Revision Impetus

- Capture advances in health science and medical practice
- Make better use of the digital revolution
- Better address multiple topics; e.g. quality & safety, traditional medicine, etc.
- Address persistent major gaps in basic use for mortality statistics
- Improve morbidity statistics
- Easier use
- Manage national clinical modifications in more effective manner
- Improve integration of other classifications and terminologies
- Improve comparability of translations
Better integration with other classifications

**OTHER REFERENCE Classifications**
- International Classification of Functioning, Disability, & Health
- International Classification of Health Interventions

**RELATED Classifications**
- International Classification of Primary Care (ICPC)
- International Classification of External Causes of Injury (ICECI)
- The Anatomical, Therapeutic, Chemical (ATC) classification system with Defined Daily Doses (DDD)
- ISO 9999 Technical aids for persons with disabilities – Classification and Terminology

**DERIVED Classifications**
- International Classification of Diseases for Oncology, Third Edition (ICD-O-3)
- The ICD-10 Classification of Mental and Behavioural Disorders
- Application of the International Classification of Diseases to Dentistry and Stomatology, 3rd Ed. (ICD-DA)
- Application of the International Classification of Diseases to Neurology (ICD-10-NA)
- ICF, Children & Youth Version (ICF-CY)

**Terminologies**
- e.g. SNOMED-CT
ICD-11: the revision process

Largest revision enterprise ever

Internet platform for inputs and collaborative authoring platform (iCAT)

Hundreds of scientists / clinicians have contributed

More than 90 countries have been involved in production, reviews, testing or commenting

More than 10000 proposals received

All processed* (2 pending feedback)

*All proposals received by the deadline of 31 December 2017, plus additional proposals received after the deadline as time and urgency permitted
ICD-11: what's new?
Foundation Component

54,000 entities

Entities can be diseases, disorders, injuries, external causes, signs and symptoms, or reasons for encounter.

Each entity is described by 13 properties, such as body structure, manifestation properties, causal properties, etc.
# ICD-11: what's new

## Tabular Lists

Fit for a particular purpose: reporting mortality, morbidity, or other uses.

Entities of the foundation become categories that are *Jointly Exhaustive* and *Mutually Exclusive* of each other.

## New Contents – 27 Chapters

In several instances, new chapters:

- Disorders of the Immune system
- Dis. of blood & blood forming organs
- Conditions related to Sexual Health
- Sleep-wake disorders
- Traditional medicine
- Extension codes

## New methods

- Precoordination and stem codes
- Post-coordination (*optional* extension codes)
- Sanctioning rules
- Multiple parenting
- Linearizations

## New and improved tools

- Coding tools
- Browsing tools
- Translation tools
- Mapping tool
- Proposal tool
ICD Revision Process

External review in 2015

Phase 1: until 2015: extensive clinical inputs from TAGs and methodological work to meet the many uses

Phase 2: from April 2015 to present: focus on mortality and morbidity statistics (MMS)

Phase 3: from now until May 2019: preparations for implementation version

Phase 4: thereafter: Maintenance
ICD-11: WHO Executive Board, 139th session
Geneva 30-31 May 2016

Positive feedback on increased focus, use of technology, and inclusion of traditional medicine

Commitment to testing

Expressed need for materials for implementation

ICD-11 2016 version for Member State comment (10/2016)

Version for implementation (June 2018)
Tokyo Revision Conference
12-14 October 2016

Organized by WHO, hosted by the WHO Collaborating Centre at the Ministry of Health, Labour and Welfare of Japan together with the Japan Hospital Association

More than 400 participants, including MOH representatives of 50 Member States, Collaborating Centres, technical experts, etc.

Opened by Dr Margaret Chan, Director General, WHO
Launch of the ICD-11 2016 version for Member State comment

Sessions focused on the advances and added value of ICD-11 with parallel sessions focused on specific contents (e.g. traditional medicine, women's and children's health, mental health)
Demand for data growing: data integration on the critical patient pathways for diagnosis, treatment, and outcome; ICD-11 provides opportunities to consider extended information opportunities including cluster coding and post-coordination (Australia)

Considering whether there would be an efficiency with ICD-11 in not having to maintain a national modification (Australia)

Continuity of mortality statistics critical: aims to find ways to minimize discontinuities (USA) by leveraging the new features of ICD-11 (e.g. cluster coding); concerns about added value for mortality statistics and the use of automated coding (IRIS) in European region (Netherlands)
**ICD Revision conference (2)**

*Preparation for the transition:* countries should prepare their national decision makers about ICD-11, that it is important that all levels of government are involved, and that the transition needs to be planned carefully with sufficient time to plan for this change (Australia, USA, Finland, Sweden); need for a broad implementation plan (Netherlands).

Importance of special attention for countries that have weak systems to support cause of death reporting, and also consider deaths without medical certification (Myanmar, Rwanda, Mozambique, Tanzania, Namibia and Nepal)

Collaborative work between ICD and SNOMED-CT is needed as electronic systems are increasingly used in health care settings (Kenya)
Open process

Invitation to Member States to participate

Online platform, open to proposals from anyone

Reviews

Member State Comments

Field testing

Statistical review

Second round of testing
General comments
• Need clinical utility and utility for causes of death
• Need statistical continuity

Use and implementation related comments
• Clarify use and updating of extension codes
• Publicize ICD-11 and prepare information materials
• Official release will allow time for for translation and testing
• Have transition plans and files in place
• Clarify governance for updating and future maintenance
• Need links to SNOMED-CT
• Clarify use of code combinations

Detailed input
• Correct spelling of “Miller Fisher syndrome“
• Suggest renaming “Idiopathic interstitial pneumonia“
Overall structure of ICD-11 was presented and reviewed, chapter by chapter → ready to be released
- Some small corrections were suggested
- Need additional user guidance in some places

Updated mortality coding rules reviewed → ready to be used
- Improvements in wording suggested
- Some clarifications by Mortality Reference Group made
- Usage of code combinations for the underlying cause of death is desirable, but feasible only in some settings
- Multiple cause analysis relevant in aging populations is desirable, but feasible only in some settings
Regional meetings 2017/2018 (PAHO, ASIA-PACIFIC, EMRO, AFRO)

Comments:

• Easier use of classification
• Improved clinical detail
• Includes new diseases
• Easier to add new terms
• Generates more benefits than costs (survey AMRO/PAHO)
• Reduction of costs for printing and distribution
• Easier data processing
Field testing 2017/2018

More than 30 countries

Line coding, case coding, mortality coding

Results satisfactory – some issues with code combinations

Clear improvement in second round one year later, after user guidance was improved
Agreed Updating Cycle

Updating will be carried out at different levels with different frequencies. That will keep stability for mortality while allowing quicker updates for morbidity use.

- **10 years** - Mortality and morbidity rules
- **5 years** - Updates that impact on international reporting (the 4- and character structure of the stem codes)
- **1 year** - Updates at a more detailed level
- **1 year** - Additions to the index or extension codes
Examples of problems solved with ICD-11

Antimicrobial resistance - essentially missing in ICD-10

HIV subdivisions - outdated detail in ICD-10

Simplified Diabetes coding

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

Cancers with histopathology – ICD-O for cancer registries embedded

External causes – better coding traffic accidents
ICD-11 IT friendly

**Web services** – full functionality available in the software of choice

**Online services** – everyone can use ICD without any local software

**Offline services** – all functionality available on a local computer with updates when internet is available

**Output files** – formats include CSV, Excel, ClaML, and others as necessary

**Print version** – Real paper version gives the look and feel of the past
ICD-11 – Implementation Package

- Advocacy materials
- Training materials
- Quick guide
- Maps from and to ICD-10 (transition tables)
- Training and test platform
- Translation tools
- Reference Guide (formerly “Volume 2”)
- URIs for detailed recording (e.g. rare diseases)
- Available in many formats: online, files, web services
Process of agreeing and adopting ICD-11

Step 1 was the formulation of ICD-11 over the past several years, with input from international working groups with more than 300 specialists from over 270 institutions in 55 countries of all regions.

- This included clinical specialty NGOs, research institutions, centres nationally responsible for maintenance of ICD, and international data analysts of other departments of WHO, contributors to WHO reporting and treatment of diagnostic standards, and others.
- In addition, there is the proposal platform where anyone can propose changes (based on documented evidence), discuss proposals and monitor processing of proposals. (so far, some 10000 have been processed)

Step 2 invited comments from Member States, technical consultations in regions and field trials. (added another 40 countries to the process)

- All input has been received and processed - the majority incorporated, following consultation with the Medical Scientific Advisory Committee for ICD and the Joint Task Force for ICD-11. This task force is composed of specialists from different countries that work with ICD and are aware of the needs in coding and analysis for mortality and morbidity.
- Morbidity includes epidemiology, casemix, and primary care. In primary care we collaborate closely with WONCA.
Process of agreeing and adopting ICD-11 (2)

Step 3 will be the release of the version for implementation in June.

- Feedback from start of preparations for implementation by Member States will serve to improve user guidance. From this June release on, the classification is stable, and the set of categories is considered complete. A release of such a version was not possible earlier, because the input received from testing and Member States needed to be incorporated.

Step 4 will see a summary report that is submitted to the EB 144, January 2019.

- The report will be based on the outcomes of the statistical meeting this April, the Joint Task Force for the ICD-11 revision meeting and the meeting of the Classifications and Statistics Advisory Committee that will also support WHO in the future maintenance of ICD, and the other classifications of the family.
- Based on the report the EB would recommend ICD-11 submission to the Health Assembly for adoption.

Step 5 is submission of ICD-11 through the EB to the World Health Assembly in May 2019 to come into effect on 1 January 2022
ICD-11 Development releases

2010 / 10  Alpha release
2015 / 10  Beta 1 release
2016 / 10  Beta for Member State comment
2017 / 04  Beta for field testing
2017 / 11  Beta for mortality testing
2018 / 02  Beta for second round of testing
2018 / 04  Beta for statistical review
2018 / 06  Version for preparation of implementation
Updated scientific content

Improved usability
- Less training (use coding tool)
- More clinical detail – code combinations

Improved incorporation in electronic environments

Linkage to other relevant classifications and terminologies

Improve comparability of translations

Implementation package
Way forward

Maintenance and updates
• Governance – WHO-FIC Network

Development of new tools
• e.g. mobile coding
• Ongoing crosswalks, i.e. SNOMED-CT

Country support
• Workshops and integration of tooling

Classifications and Statistics Advisory Committee (CSAC)
ICD-11
icd.who.int

With participation by

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