International Classification of Health Interventions (ICHI)

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National Centre for Classification and Health
Outline

• WHO classifications
• ICHI background, scope, use cases
• ICHI structure
• ICHI content
• Testing, education, maintenance
• ICHI communication
• Timetable
Development of a new International Classification of Health Interventions (ICHI)

- ICHI is a member of the WHO Family of International Classifications
- Classifies interventions across all sectors of the health system
WHO Reference Classifications

Classifications provide a firm base for data collections
economic, social (including health)

**ICD** Causes of death classified internationally since 1890s (ICD)
  ICD extended to morbidity and external causes in 1948
  ICD-10 1990, ICD-11 2018

**ICF** Functioning and disability 2001
  Biopsychosocial model of functioning and disability
  Body Functions and Structures, Activities and Participation
  Classifies Environmental Factors

**ICHI** Original International Classification of Procedures in Medicine 1978
  Not maintained, mainly surgery
  Multiple national classifications then developed
Interventions the missing link for WHO
ICH1 journey: 2007 to 2018

2007: No useable international classification
- Proliferation of national classifications
- Many countries without a classification
- International comparisons difficult
- ICH1 development commences

2019: WHO ICH1 Beta-2 version
- Broad based reviews and updates
- Extension codes for detail and flexibility
- Wide range of 2018 tests used in Beta-2 version
Broad Scope of ICHI

National classifications of interventions focus on acute diagnostic, medical and surgical interventions provided to hospital in-patients.

ICHI covers the entire health system, including:

• acute care
• mental health
• primary care
• allied health
• assistance with functioning
• rehabilitation
• prevention
• public health
• traditional medicine
Use cases for ICHI

• International comparisons

• National uses
  • Countries with no classification of health interventions
  • Countries that have used ICD-9-CM Vol 3
  • Countries wishing to align national classification with ICHI
  • Adding components of ICHI to national classifications

• Patient safety and quality

• Health System Performance (including Financing)
A health intervention is an act performed for, with or on behalf of a person or a population whose purpose is to improve, assess, maintain, promote or modify health, functioning or health conditions.
ICHI Structure: Three axes

**Target**: entity on which the Action is carried out

**Action**: a deed done by an actor to a Target

**Means**: the processes and methods by which the Action is carried out.
ICHI is a tri-axial classification

**TARGET**
Oesophagus (KBA)

**ACTION**
Biopsy (AD)

**MEANS**
Per orifice endoscopic (AD)

**Endoscopic biopsy of oesophagus**
*KBA.AD.AD*
ICHI Organising Principle

“What is done to what target, and how”

ICHI does not include:

- The health condition or human functioning that are the *reason(s)* for the intervention (use ICD or ICF)
- The *provider* of the intervention
- The *setting* of the intervention
- The *outcome* of the intervention (ICD or ICF)
ICH I interventions

Each ICHI intervention has a unique combination of categories from the three axes
Not every possible combination of the three axes is represented as an ICHI code.
An intervention may be designated using a common clinical title, e.g., appendicectomy
All necessary elements of an intervention are included: not coded separately
Use Extension codes for detail (use as needed)

Therapeutic products  Assistive products  Medicaments

Quantifiers
Additional descriptive information
Topology: laterality, measurement, relational
Telehealth
Diagnostic tests
Additional Target
Additional anatomy

Extension codes limit the detail and granularity of ICHI stem codes
• similar to ICD-11 post coordination
Any Intervention in ICHI is represented by:

<table>
<thead>
<tr>
<th>Title of Intervention</th>
<th>Unique axis combination</th>
<th>Textual definition</th>
<th>Inclusions, Exclusions etc</th>
</tr>
</thead>
</table>

**Descriptive characteristics**

**Target**
- **A** Body Part(s) or Anatomical site(s)
- **B** Body Function
- **C** Activities and Participation

**Action**
- **A** Diagnostic
- **B** Therapeutic

**Means**
- **A** Approach
- **B** Technique

**Extension codes (Use when needed)**
- **A** Therapeutic products
- **B** Assistive products
- **C** Medicaments
- **D** Other extension codes
Combining codes

• ICHI code & extension code(s)

• Interventions performed together: Intervention 1 / Intervention 2

• Packages of interventions: Intervention 1 + Intervention 2 + ...
  • rehabilitation, mental health, public health
Assistive products

Based on ICF entities for assistive products

- Includes WHO Essential Assistive Products list
- Maximum alignment sought with ISO 9999

Assistive products for

- Personal use in daily living
- Mobility and transportation
- Communication
- Education
- Employment
- Culture, recreation, sport and play
- Practice of religion or spirituality

Design, construction and building projects
<table>
<thead>
<tr>
<th>Therapeutic products</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>Genitourinary</td>
</tr>
<tr>
<td>Dental</td>
<td>Nervous</td>
</tr>
<tr>
<td>Ear</td>
<td>Orthopaedic</td>
</tr>
<tr>
<td>Endocrine/metabolic</td>
<td>Respiratory</td>
</tr>
<tr>
<td>Eye</td>
<td>Skin and subcutaneous tissue</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>Other and unspecified</td>
</tr>
</tbody>
</table>
ICHI Beta-2 2018

ICHI Beta-2 2018: a stable version
Includes Introduction, Guidelines for users
7,000 interventions, with a wide variety of extension codes

https://mitel.dimi.uniud.it/ichi/
<table>
<thead>
<tr>
<th>Chapters</th>
<th>Interventions on</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-12</td>
<td>Body Systems and Functions</td>
</tr>
<tr>
<td>13-21</td>
<td>Activities and Participation domains</td>
</tr>
<tr>
<td>22-26</td>
<td>Environment</td>
</tr>
<tr>
<td>27</td>
<td>Health-related behaviours</td>
</tr>
</tbody>
</table>

Note: Public health interventions generally have Targets in chapters 22 to 27
## Examples of interventions in ICHI

<table>
<thead>
<tr>
<th>Target</th>
<th>Action</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laparoscopic appendicectomy</td>
<td>KBO</td>
<td>JK AB</td>
</tr>
<tr>
<td>Appendix Excision, total</td>
<td>KBO</td>
<td>Percutaneous endoscopic</td>
</tr>
<tr>
<td>Replacement of pulmonary valve</td>
<td>HDG</td>
<td>ML AA</td>
</tr>
<tr>
<td>Pulmonary valve Reconstruction Open approach</td>
<td>HDG</td>
<td>AA</td>
</tr>
<tr>
<td>Assessment of joint mobility</td>
<td>MTB</td>
<td>AA ZZ</td>
</tr>
<tr>
<td>Mobility of joint functions</td>
<td>MTB</td>
<td>ZZ</td>
</tr>
<tr>
<td>Animal infection control measures</td>
<td>UBQ</td>
<td>VE ZZ</td>
</tr>
<tr>
<td>Animals as vectors of disease</td>
<td>UBQ</td>
<td>ZZ</td>
</tr>
<tr>
<td>Infection control measures</td>
<td></td>
<td>Unspecified</td>
</tr>
</tbody>
</table>
ICHI Education

Education material has been prepared
  • this will be improved in the light of the 2019 ICHI tests

A Training Manual was produced for 2018 tests and has been upgraded

Contents:
• ICHI Scope and Structure
• Using the ICHI platform
• Coding using ICHI
Phase 1 Tests (2018)

Some 25 tests were undertaken in a variety of settings:

- Coding interventions data/lists using ICHI
- Systematic reviews
- Mapping existing classification / term set to ICHI
Completing ICHI

WHO plans formal tests (Phase 2 tests) through WHO-FIC Collaborating Centres in 2019

- Electronic testing tool adapted from ICD-11 testing (ICHI-FiT)
- Commonly used interventions will be the focus of these tests
- Educational material and Training Manual will be available

An ICHI pre-final version is planned for October 2019
ICHII Development phase should then end
Release for implementation will follow
Maintaining and Improving ICHI

ICD-10 has been updated from 2000, ICF since 2008

Well established update process through WHO-FIC Network

WHO-FIC Health Interventions Reference Group, based on existing models for ICD (mortality and morbidity) and ICF, is proposed

• Monitor implementation
• Advise on updates
• Discuss emerging issues
ICH\textsuperscript{H}I Communication

Objective: To make potential users and decision makers
- \textbf{Aware} of ICH\textsuperscript{H}I and its uses and benefits
- \textbf{Interest} them in its key features and ease of use.
- \textbf{Encourage} to try and \textbf{implement}

Advise of potential advantages for early adopters

Key communication targets include countries, professional associations and WHO (Geneva and regions)

\textbf{ICH\textsuperscript{H}I Brochure}
ICHI

The new interventions classification for every health system

Now available for comment

International Classification of Health Interventions

World Health Organization
Conclusion

- After 11 years, ICHI is a reality
- Completion envisaged in 2019
- Expected release during 2020
- Thanks to many developers across the WHO-FIC Network