Development of a New International Classification of Health Interventions based on an Ontology Framework

Béatrice Trombert Paviot
Lori Moskal
Cédric Bousquet
Pierre Lewalle

Richard Madden
Albrecht Zaiss
Anand Kumar
Jean Marie Rodrigues

Oral Presentation  MIE  Oslo 29 August 2011
Outline

› Why an International Classification of Health Interventions (ICHI)
› Definition
› ICHI Framework/structure
› ICHI method of development and examples
› Conclusion
WHO Family of Classifications

International Classification of Diseases – **ICD-10**

International Classification of Functioning, Disability and Health – **ICF**

International Classification of Interventions – **ICHI** *under development*
Development of ICHI

› WHO International Classification of Procedures in Medicine: 1978
› Out of date within 10 years
› Decision not to update in late 1980s
› Renewed interest from 2000, work begins 2006
› Structure, Content Model and Coding Scheme now in place
› Alpha version under development
Why develop ICHI?

› Proliferation of national classifications (US, Australia, France, Germany...)
› Limited scope of national classifications
› Many countries without a classification
› Enable international comparisons
› Base for international casemix system

and now

› End of ICD-9-CM Volume 3 (2013)
ICH will include
  › Medicine, surgery, diagnostics
  › Primary care
  › Allied health and rehabilitation
  › Assistance with functioning
  › Nursing
  › Traditional medicine
  › Public health
Possible Uses of ICHI

› Describe and compare with a common framework the provision and effectiveness of health interventions at the local, national or international level and across different populations or subpopulations

› To provide a classification of appropriate scope and detail to which countries may align their more finely grained national classifications

› To make available a classification that can be used without adaptation in countries which do not wish to develop their own classification or use another country’s coding system

› To support efficiency based health policies (eg, activity based funding)

› To avoid duplication of efforts at national level
Intervention Definition

› ‘An activity performed for, with or on behalf of a client(s)
› whose purpose is to
  - improve individual or population health,
  - to alter or diagnose the course of a health condition, or
  - to improve functioning’
Starting point:

pr EN ISO 1828: Categorial Structure for classifications and coding systems of surgical procedures

Used in several national classifications: France (CCAM), Canada (CCI)
ICH Structure -

**What is done to Whom and How**

Excludes: Who performs the intervention, Why, Where

› **Target**
  - Anatomy
  - Function
  - Activities & Participation
  - ...

› **Actions**
  - Investigation
  - Treating
  - Managing
  - Assisting
  - Preventing
  - ...

› **Means**
  - Approach
  - Technique
  - Method
  - ...

3 characters

2 characters

2 characters
Health Intervention

1. Target

2. Action

3. Means
› ‘hasFocus’ connects the Action and Target semantic categories

› ‘hasMeans’ connects the Action and Means semantic categories
Examples: ICHI alpha version

› Cryotherapy of corneal lesion: ABE LD AA 01
  
  ABE  Cornea
  LD    Reattachment
  AA    Open approach

› Reconstruction of intracranial vessel: AEA LF AA
  
  AEA  Intracranial artery
  LF   Reconstruction
  AA   Open approach

Mobilisation of spine: FKC HH AH
  
  FKC  Mobility of bone functions
  HH   Manual therapy
  AH   External
## Development of ICHI alpha version: 2010

<table>
<thead>
<tr>
<th>Classification</th>
<th>Content</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACHI (AUS)</td>
<td>Orthopaedics</td>
<td>100</td>
</tr>
<tr>
<td>CCI (CN)</td>
<td>Random selection</td>
<td>100</td>
</tr>
<tr>
<td>CCHI (CHINA)</td>
<td>Random selection</td>
<td>75</td>
</tr>
<tr>
<td>OPS (D)</td>
<td>Endovascular interventions, radiotherapy</td>
<td>100</td>
</tr>
<tr>
<td>NCSP (Scan)</td>
<td>Random selection</td>
<td>100</td>
</tr>
<tr>
<td>KTL (D)</td>
<td>Rehabilitation interventions</td>
<td>50</td>
</tr>
<tr>
<td>WCPT (USA)</td>
<td>Physiotherapy</td>
<td>257</td>
</tr>
<tr>
<td>CCAM (F)</td>
<td>Cardiology</td>
<td>100</td>
</tr>
<tr>
<td>(CCI/CCAM) (AUS)</td>
<td>Obstetrics</td>
<td>23</td>
</tr>
<tr>
<td>ICNP</td>
<td>Nursing practise</td>
<td>278</td>
</tr>
</tbody>
</table>
Development of ICHI alpha version 2011

Medical & surgical: alpha draft developed June 2011 (Sydney)
Functioning interventions: aligned with ICF
  ICD-9-CM interventions now in alpha version
Nursing interventions: aligned with ICNP
Public health interventions
Traditional Medicine: aligned with ICTM development
Conclusion

› A standards based approach to build a much needed statistical classification
› Low resource development: WHO has no funding
› Based on public domain material (ICPM, ICD-9-CM Volume 3)
› Input from many WHO Collaborating Centres (Australia, Canada, China, France, Germany, Italy, Netherlands, Nordic, South Africa, Thailand, USA)
› Use of existing terminologies wherever possible (anatomy, body functions, activities and participation, implanted devices, assistive devices,...)
oh darling... what a pity...
I think your interesting personality
has just been classified as
a personality disorder.