WHO-FAMILY OF INTERNATIONAL CLASSIFICATIONS NETWORK MEETING 2005

Cross-walking assessment tools to ICF
Update on the work in progress

16-22 October
Tokyo Japan

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P2-20

Abstract Further operationalization of the ICF for measurement purposes is necessary in order to increase and sustain the utility of the classification. One important pathway to achieve this is by mapping of existing health status and disability assessment instruments to ICF. The poster summarizes the key components and work procedures of the cross-walk project which WHO and its partners is currently undertaking.

Introduction

Objective: Develop crosswalk (electronic database for mapping) of the following assessment tools to ICF:

- WHO Disability Assessment Schedule (WHO DAS II)
- WHO Quality of Life Measure (WHOQOL)
- SF 12, SF 36
- Barthel Index (BI)
- Functional Independence Measure (FIM)
- Activities of Daily Living (Katz)
- London Handicap Scale (LHS)

Domain Mapping

- Typology for mapping domains

Type of Match	Assessment Instrument	Example
1. One to one, full match	Item with one specific concept	"How much difficulty did you have in walking a long distance such as a kilometre (or equivalent)?" *(WHO DAS II)*
2. One to many, full match	Item with many specific concepts incl. concepts mention in response options	"Does your health now limit you in dressing/bathing yourself?" *(SF36)*
3. One to one, approx.	Item with one non-specific concept a) not explicitly mentioned in ICF b) more general	
4. One to many, approx.	Item with many non-specific concept (e.g. compound question with category examples)	" In the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives etc.)?" *(SF 12)*
5. Not definable (nd)	Item not defined in ICF	
6. Not contained (nc)	Item not represented in ICF	

- Decision rules for mapping domains
  - Mapping should be as precise as possible
  - Include concepts mentioned in response options of an item
  - Exclude items which use functioning terms as a synonym for symptom severity
  - Flag instrument items which make causal attributions.

Methods & Materials

Step 1: Planning & establishment of work group

- Draft workplan.
- Set up core working group consisting WHO CAT Team and mapping experts from IC and within the WHO FIC Network.

Step 2: Created preliminary crosswalk and electronic database

- Cross-reference instrument questions to ICF domains using the developed typology and decision rules
- Refine existing or develop new typology and decision rules for domain mapping if necessary
- Program electronic database for display of crosswalk
- Program web-based application for review of crosswalk

Step 3: Review of crosswalk by instrument owners and extended group

- Post web-based application for review of crosswalk on ICF website
- Contact instrument owners with the intend to:
  - provide opportunity to examine the mapping
  - identify agreement on instrument summary which includes information on: covered ICF items, non-covered ICF core domains, cross-referencing of instrument website, algorithms, datasets, languages etc.
- Provide opportunity to extended group to examine crosswalk
- Incorporate feedback received from instrument owners and extended group

Step 4: Publication and dissemination of crosswalk

- Post crosswalk on ICF website
- Integrate crosswalk in ICF Coding Tool
- Disseminate crosswalk in journals

Preliminary Results

Example of Cross-walking WHO DAS II to ICF

WHO DAS II Domain	ICF Code	ICF Domain	Type of Match
D1.1 How much difficulty did you have in **concentrating** on doing something for ten minutes?	b1400	Sustaining attention	one to one, full match
D1.2 How much difficulty did you have in **remembering** to do important things?	b144	Memory functions	one to one, full match
D1.3 How much difficulty did you have in analyzing and finding **solutions to problems** in day to day life?	d175	Solving problems	one to one, full match
D1.4 How much difficulty did you have in **learning a new task**, for example, learning how to get to a new place?	d155	Learning & acquiring skills	one to one, full match
D1.5 How much difficulty did you have in generally **understanding what people say**?	d310	Communicating with - receiving - spoken messages	one to one, full match
D1.6 How much difficulty did you have in **starting and maintaining a conversation**?	d3500	Starting a conversation	one to many, full match
	d3501	Sustaining a conversation	one to many, full match
D2.1 How much difficulty did you have in **standing** for long periods such as 30 minutes?	d4154	Maintaining a standing position	one to one, full match
D2.2 How much difficulty did you have in **standing up** from sitting down?	d410	Changing basic body position	one to one, full match
D2.3 How much difficulty did you have in **moving around** inside your home?	d4600	Moving around within the home	one to one, full match
D2.4 How much difficulty did you have in **getting out** of your home?	d4602	Moving around outside the home	one to one, full match
D2.5 How much difficulty did you have in **walking a long distance** such as a kilometer (or equivalent)?	d4501	Walking long distances	one to one, full match
D3.1 How much difficulty did you have in **washing** your whole body?	d5101	Washing whole body	one to one, full match
D3.2 How much difficulty did you have in **getting dressed**?	d540	Dressing	one to one, full match
D3.3 How much difficulty did you have in **eating**?	d550	Eating	one to one, full match

Example of Cross-walking FIM to ICF

	FIM Domain	ICF Code	ICF Domain	Type of Match
1	Feeding	d550	Eating	one to many, full match
		d560	Drinking	one to many, full match
2	Grooming	d520	Caring for body parts	one to many, full match
3	Bathing	d5101	Washing whole body	one to one, full match
4	Dressing (upper body)	d540	Dressing	one to one, full match
5	Dressing (lower body)	d540	Dressing	one to one, full match
6	Toileting	d530	Toileting	one to one, full match
7	Bladder management	b6202	Urinary continence	one to one, full match
8	Bowel management	b5253	Faecal continence	one to one, full match

Conclusions

Assessment instruments for disability measurement have been developed for practice with or without reference to ICF. However, they point to the domains that matter most for practical reasons, i.e. important aspects of life that are measurable, that are sensitive to change in response to interventions.

ICF on the other hand provides a comprehensive matrix of domains with a standard set of qualifiers. The existing assessment instruments could be mapped into the grid of ICF, that both helps to the users using ICF and also the ICF application guides as operational examples of grading the level of functioning (i.e. qualifiers).