Application of WHODAS 2.0 and FUNDES
Taipei, Taiwan, 4 Sept 2013

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Setting the scene


Recommendations 8 and 9

Incheon Strategy

Article 31

650 million persons (15%) with disabilities live in Asia-Pacific

Goal 8: Improve the reliability and comparability of disability data
66th World Health Assembly adopts resolution calling for better health care for people with disabilities

**Disability statistics**

"The ICF is the ruler..."

Dr Gro Harlem Brundtland

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**Why measure functioning?**

- Identifying needs
- Matching treatments and interventions
- Measuring outcomes and effectiveness
- Setting priorities
- Allocating resources

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**What are we going to measure?**

- Prevalence
- Types of disability
- Severity of disability
- Needs for services
- Services delivered
- Equity of access to services
### Any questions?

### Instruments for measuring functioning
- Censuses
- Surveys
- Administrative collections
  - Eligibility assessment
- Clinical

### Census
- Cover the whole population of a country
- Few questions, sometimes only one, generally not more than 5 or 6
- Self reported
- Generally once every 10 years

### Population censuses—Advantages
- Prevalence rates
- Cross-tabulations
- Compare rates across time
- Set of people with disabilities is usually large
- Sampling frame for research

### Population censuses—Disadvantages
- Questions limited
- Data collection is infrequent.
- Time between data collection and dissemination
- Institutionalised people with disabilities
- High non-response rates
- Is costly and time consuming
- Costly to train enumerators

### The Washington Group
**Aims:**
- Provide a structure for the measurement of disability within the international community
- Provide measurement tools that are designed to produce comparable data cross-nationally
- Address the implementation problems and methodological issues that arise in censuses and national surveys

http://www.cdc.gov/nchs/washington_group/wg_questions.htm
### WG short disability measure

**Core Questions:**
1. Do you have difficulty seeing even if wearing glasses?
2. Do you have difficulty hearing even if using a hearing aid?
3. Do you have difficulty walking or climbing stairs?
4. Do you have difficulty remembering or concentrating?

**Additional Questions:**
5. Do you have difficulty with (self-care such as) washing all over or dressing?
6. Because of a physical, mental, or emotional health condition, do you have difficulty communicating (for example understanding others or others understanding you)?

**Response options:**
- No difficulty
- Some difficulty
- A lot of difficulty
- Unable to do

### Surveys

- Samples often derived from the census
- Focus on specific issues
- More detailed than census

### Surveys—Advantages
- Flexibility
- Special probes can be used
- Relatively easy to initiate
- Detecting change over time
- Control over the conditions of observation and interviewing

### Surveys—Disadvantages
- Limited ability to analyse prevalence rate for local areas
- Sample size
- Coverage
- Time series analysis of ad hoc surveys is uncertain
- Training for field supervisors and interviewers

### What are administrative data collections?

- Data collected in the normal course of service provision
- Not as resource-intensive as surveys
- Data are available on a regular basis
- Information only about people receiving services
- Information useful to a range of stakeholders,
Purposes of administrative collections: for example

• To provide information for senior bureaucrats responsible for funding disability and rehabilitation services, to inform policy and high level service planning.
• To provide information for other stakeholders:
  • service users and carers;
  • service provider agencies;
  • disability consumer groups;
  • other government departments (e.g. Treasury);
  • the public; and
  • Researchers.

Uses of administrative data

For:
• compiling regional/national comparisons
• monitor trends
• develop consumer profiles
• respond to public enquiries
• develop budget submissions for funding and planning

Administrative data—Advantages

• Generally available on an ongoing basis
• Use less resources than surveys and census
• Data tend to be more reliable, complete and of higher quality
• Useful for a wide range of stakeholders

Administrative data—Disadvantages

• Data is limited to service users or people otherwise known to the service, such as those on waiting lists
• Are not useful for estimating disability prevalence

Eligibility assessment

• A specific collection with a dedicated purpose
• Historically disease or impairment based
• Now more commonly biopsychosocial approach
• More than one source of data

Functioning and disability continuum

Walking
Mild-Moderate walking limitation: Needs a walking stick
Severe limitation: Needs operation
Complete limitation: Needs personal assistance, technical aids, pension, environmental modifications?
Clinical data collections

Use of clinical data for management

Disability groups, 2004-05

- Scheduling
- Resource allocation
- Performance monitoring
- Target setting
- Billing
- Statutory reporting

Sensory/speech
Primary disability only
All significant disabilities

Performance monitoring
Target setting
Billing
Statutory reporting

10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
100,000
110,000
120,000

The ICF is compatible with...

A range of assessment approaches
Specific assessment procedures
Clinical judgment

The ICF is compatible with...

A range of assessment approaches
Specific assessment procedures
Clinical judgment

Advantages of an ICF approach

- Comprehensive
- Self report
- Lived experience of the individual
- Provides data on a continuum
- Neutral, inoffensive language
- Cross cultural development

Intervention target | Intervention | Phys | Med | Ot | Psych | First value | Goal value | End value
--- | --- | --- | --- | --- | --- | --- | --- | ---
L28013 Pain in the back
L21050 Immune response
L170 Muscular tone functions
L7090 Vestibular movement functions
L890 Fixed and posture functions
L8002 Structure of the skin - at risk
G5000 Handling stress and other psychological demands
G7000 Managing body function limitations
G8020 Maintaining in a sitting position
G8030 Transferring oneself while sitting
G8040 Moving around using equipment
G8050 Reaching
E170 Assistive products for personal consumption
E110 Assistive products: Chair cushions
E2510 Ways of handling stress
E2520 Ways of relating to the own body

ICF

Survey
Relatable data
Service admission
Census
Any questions?

Convention on the Rights of Persons with Disabilities and Optional Protocol

Changing lives of people with disabilities

• Came into force on 3 May 2008
• Now signed by 156 countries and optional protocol by 91

Convention on the Rights of Persons with Disabilities and Optional Protocol

Optional protocol

United Nations

World Confederation for Physical Therapy

Where the world of physical therapy meets

www.wcpt.org/congress
Aims
1 Describe:
   • the WHO Disability Assessment Schedule 2.0;
   • its relationship to the WHO’s International Classification of Functioning, Disability and Health (ICF); and
   • its structure

2 Select as appropriate for purpose, the version and mode of administration;
3 administer the WHODAS 2.0 12-item version as an interview;
4 discuss a range of uses of the WHODAS 2.0 citing published literature; and
5 discuss the actual and potential usages of the WHODAS 2.0 (such as FUNDES-adult version) in Taiwan.

What is WHODAS 2.0?
• Generic assessment instrument for measuring health and disability at population level or in clinical practice
• Provides a disability profile and a summary measure that is reliable and applicable across cultures, in all adult populations.
WHODAS 2.0...
Captures the level of functioning in six domains of life:
- Domain 1: Cognition
- Domain 2: Mobility
- Domain 3: Self-care
- Domain 4: Getting along
- Domain 5: Life activities
- Domain 6: Participation

Why use WHODAS 2.0?
- Generic
- Cross-cultural comparability
- Psychometric properties
- Ease of use
- Freely available
- Translations in many languages
- Direct link to the ICF

WHODAS 2.0 in the context of health status information
- Disease status (ICD)
  - Clinician’s diagnosis
- Functional status (ICF)
  - WHODAS 2.0
- Quality of life
  - WHOQoL

Development of the WHODAS 2.0
- Original WHODAS published in 1988
- Collaborative international process
  - Review of existing instruments
  - Core domains of functioning identified
  - Data reviewed
  - Initial pilot tests

Development of the WHODAS 2.0
- Cross cultural applicability studies
  - empirical feedback on the metric qualities
  - possible redundancy
  - screener performance in predicting the results of the full instrument
  - suitability of different disability recall time frames
  - cognitive interviews

Development of the WHODAS 2.0
- Reliability and validity field studies
  - Item reduction
- Internal consistency
- Item response characteristics
- Test-retest reliability
- Concurrent validity
- Face validity

Source: Bull World Health Organ 2010;88:915–923
Any questions?

WHODAS 2.0 Versions

<table>
<thead>
<tr>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self administered 12 question version</td>
</tr>
<tr>
<td>Interviewer administered 12 question version</td>
</tr>
<tr>
<td>12 plus 24 item version</td>
</tr>
<tr>
<td>Self administered 36 question version</td>
</tr>
<tr>
<td>Interviewer administered 36 question version</td>
</tr>
<tr>
<td>Proxy 12 item version</td>
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<tr>
<td>Proxy 36 item version</td>
</tr>
</tbody>
</table>

Modes of administration

- Self-administration
- Interview
- Proxy

WHODAS 2.0 – 36 item version

- provides most detail
- allows to compute overall and 6 domain specific functioning scores
- available as interviewer-, self- and proxy-administered forms
- average interview time: 20 mins

WHODAS 2.0 – 12 item version

- for brief assessments of overall functioning in surveys or health-outcome studies
- allows to compute overall functioning scores
- explains 81% of the variance of the 36-item version
- available as interviewer, self and proxy administered forms
- average interview time: 5 min.

WHODAS 2.0 – 12+24-item version

- uses 12 items to screen for problematic domains of functioning
- based on positive responses to the initial 12 items, respondents may be given up to 24 additional questions
- can only be administered by interview or computer-adaptive testing (CAT)
- Average interview time 20 mins
12 item version

Four sections:
• Face sheet
• Demographic and background information
• Preamble
• Core questions
• Two flash cards

WHODAS 2.0 functioning questions
12 item version

In the last 30 days how much difficulty did you have in:

1. Standing for long periods such as 30 minutes?
2. Taking care of your household responsibilities?
3. Learning a new task, for example, learning how to get to a new place?
4. How much of a problem did you have joining in community activities (for example, festivities, religious or other activities) in the same way as anyone else can?
5. How much have you been emotionally affected by your health problems?
6. Concentrating on doing something for ten minutes?
7. Walking a long distance such as a kilometre [or equivalent]?
8. Washing your whole body?
9. Getting dressed?
10. Dealing with people you do not know?
11. Maintaining a friendship?
12. Your day to day work?

Relationship between WHODAS 2.0 and ICF

<table>
<thead>
<tr>
<th>WHODAS 2.0</th>
<th>ICF</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Standing for long periods such as 30 minutes?</td>
<td>Maintaining a standing position</td>
<td>d6154</td>
</tr>
<tr>
<td>2 Taking care of your household responsibilities?</td>
<td>Domestic life</td>
<td>d6</td>
</tr>
<tr>
<td>3 Learning a new task, for example, learning how to get to a new place?</td>
<td>Acquiring complex skills</td>
<td>d5251</td>
</tr>
<tr>
<td>4 How much of a problem did you have joining in community activities</td>
<td>Community life</td>
<td>d8910</td>
</tr>
<tr>
<td>(for example, festivities, religious or other activities) in the same way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>as anyone else can?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 How much have you been emotionally affected by your health problems?</td>
<td>Emotional functions</td>
<td>b152</td>
</tr>
<tr>
<td>6 Concentrating on doing something for ten minutes?</td>
<td>Focusing attention</td>
<td>d7400</td>
</tr>
<tr>
<td>7 Walking a long distance such as a kilometre [or equivalent]?</td>
<td>Walking long distances</td>
<td>d4501</td>
</tr>
<tr>
<td>8 Washing your whole body?</td>
<td>Washing whole body</td>
<td>d8161</td>
</tr>
<tr>
<td>9 Getting dressed?</td>
<td>Dressing</td>
<td>d540</td>
</tr>
<tr>
<td>10 Dealing with people you do not know?</td>
<td>Relating with strangers</td>
<td>d7300</td>
</tr>
<tr>
<td>11 Maintaining a friendship?</td>
<td>Informal relationships with friends</td>
<td>d7500</td>
</tr>
<tr>
<td>12 Your day to day work?</td>
<td>Remunerative employment; Vocational training; School education</td>
<td>d8500; d825; d8250</td>
</tr>
</tbody>
</table>

WHODAS 2.0—simple scoring

• Summing-up of scores assigned to each of the items
  • none (1)
  • mild (2)
  • moderate (3)
  • severe (4)
  • extreme (5)
• No recoding or collapsing of response categories
• Scores NOT comparable across populations

WHODAS 2.0—complex method

• Recoding/collapsing of response categories for each item
• Summing of recoded item scores within each domain
• Summing of all six domain scores
• Converting the summary score into a metric ranging from 0 to 100 (where 0 = no disability; 100 = full disability)
• Scores comparable across populations “item-response-theory” (IRT) based scoring

Any questions?
Where the world of physical therapy meets

www.wcpt.org/congress
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Administration of WHODAS 2.0
- Self-administration: 12 item
- Interview: 12 + 24 item
- Proxy: 36 item

Interviewing using WHODAS 2.0
Catherine Sykes

Be prepared
WCPT Policy statements and guidelines
- Ethical responsibilities of physical therapists and WCPT members
- Physical therapy records management: record keeping, storage, retrieval and disposal
To improve consistency…

- Questions should be asked as on the questionnaire
  - Wording
  - Order
  - All questions
- Wait for the respondent to finish talking before starting to record the response
- Neutral tone
- Probing

Frames of reference

1. Degree of difficulty
2. Due to health conditions
3. In the past 30 days
4. Averaging good and bad days
5. As the respondent usually does the activity
6. Items not experienced in the last 30 days are not rated

… in more detail

1. Degree of difficulty
   - Increased effort
   - Discomfort or pain
   - Slowness
   - Change in the way the activity is performed.

2. Due to health conditions
   - Diseases, illnesses, other health problems
   - Injury
   - Mental or emotional problems
   - Problems with alcohol
   - Problems with drugs

… in more detail

3. In the past 30 days – Flashcard 1
4. Averaging good and bad days
5. As the respondent usually performs the activity
6. Activities that are not experienced in the last 30 days are rated not applicable.

Response options

- None
- Mild
- Moderate
- Severe
- Extreme or cannot do
Treat people with disabilities the same as you would anyone else.

Accommodate communication differences.

Accommodate the blind respondent.

Accommodate the deaf respondent.

Accommodate the person with intellectual disability or brain injury.

Probing

When to probe:
- To clarify understanding
- To get more information
- To complete the response

How to probe:
- Repeat the question
- Pause – give more time
- Reflect back the respondents reply
- Use neutral prefaces
Common probing situations

Don’t know:
• Could you give me your best estimate?
• Which would be closer?

Not applicable:
• Why do you think that is?
• Can you tell me more about that?

Feedback

• Feedback must always be neutral
• May keep the respondent focused
• Non-verbal as well as verbal
• Brief pause for more effect
• Vary type of feedback using different phrases
• Some comments may make the respondent feel important

Before you leave…

Check:
• All questions have been answered.
• Information recorded is clear and legible
• Comments are indicated
• Open-ended questions are written in full sentences and not in abbreviations
• The interviewer reporting requirements are complete
• The respondent thanked

Any questions?

http://www.unescap.org/publications/detail.asp?id=1274

World Confederation for Physical Therapy

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1-4 May 2015

Singapore

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WHODAS 2.0
Uses around the world
Catherine Sykes

Multi-country studies

- WHO Multi Country Survey Study (MCSS)

- World Mental Health Survey (WMHS)

- Global Study on Ageing (SAGE)
  http://www.who.int/healthinfo/systems/GenericIndividualQ.pdf

Country population surveys

- Ireland’s National Physical and Sensory Disability Database (NPSDD)

- Survey of Mental Health and Well-being (Australia)

Disease specific validation studies / health outcome assessment

- Anxiety disorders

- Stroke
  Ferri et al. J Neurol Neurosurg Psychiatry. 2011 October; 82(10): 1074–1082

- Inflammatory arthritis
  Baron M et al. Arthritis Care & Research 59(3) 382–390, 2008
Disease specific validation studies / health outcome assessment

- Low back pain
  Chwastiak LJ et al. Clinical Epidemiology 56(6), 501-604, 2003
  Jonsdottir J et al. Disability and Rehabilitation 2010, 32(11)S78-S84

- Ankylosing spondylitis

- Injuries
  Derrett et al. Inj Prev 2011;17:415-418

Setting specific validation studies / health outcome assessment

- 10/66 Dementia Group
  Sousa et al 2009 [link]

- Adolescent health

- General practitioners
  Journal of the New Zealand Medical Association, 04-April-2003, Vol 116 No 1171

Any questions?

Where the world of physical therapy meets

[link]