...have an idea of how the ICF can be implemented

- at the population or country level
- at the individual level
ICF in practice

As a trainer, you will be able to..

- provide concrete examples of how the ICF has been implemented at the population and individual levels
- offer participants the opportunity for exchange of experiences (both positive and negative) of using the ICF
- inspire participants to use the ICF in their own context if they have not yet used ICF
- provide participants the opportunity to be creative in finding solutions to open questions about ICF use in their context
**Model Disability Survey (MDS)**

- a general population survey
- aims to enable comparison between groups with differing levels and profiles of disability, as well as to those without disability
- will help policymakers identify which interventions are required to maximize the inclusion and functioning of people with disability
- can also contribute to monitoring the Sustainable Development Goals (SDGs)

http://www.who.int/disabilities/data/mds/en/

- Basis is the concept of disability in the ICF as the outcome of the interaction between health conditions/impairments in b,s,d and contextual factors
- Full version has 400+ items
- Brief version of 40 functioning-related items
Example

Article 27 – Work and Employment

(a) Prohibit discrimination on the basis of disability...recruitment, hiring and employment, continuance of employment, career advancement and safe and healthy working conditions

(d) Enable persons with disabilities to have effective access to general technical and vocational guidance programmes, placement services and vocational and continuing training

![Model Disability Survey (MDS)]

National framework of disability evaluation and welfare services in Taiwan

ICF in practice
### FUNDES – Functioning Scale of Disability Evaluation System

#### Activities & Participation – D08 Motor Action

Example covering d4400, d4402, d4408, d4104, d4105, d450, d4103

<table>
<thead>
<tr>
<th>Performance Dimension</th>
<th>D8.1 Pick up a pen or spoon</th>
<th>D8.2 Button up</th>
<th>D8.3 Tie something</th>
<th>D8.4 Stand up from chair sitting</th>
<th>D8.5 Bend down to pick something up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0: No difficulty</td>
<td>1: slight difficulty</td>
<td>2: medium difficulty</td>
<td>3: high difficulty or unable</td>
<td>9: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity dimension evaluated through direct testing without mobility devices</th>
<th>D8.1 Pick up a pen or spoon</th>
<th>D8.2 Button up</th>
<th>D8.3 Tie something</th>
<th>D8.4 Stand up from chair sitting</th>
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</tr>
</tbody>
</table>

---

### Taiwan Experience – Implications

**For applicants/potential beneficiaries**
- Existing disability certifications may change
- Some may become ineligible for services
- Application processing may take longer

**For hospitals & other medical providers**
- Encourage multi/interdisciplinary work
- Increase in number of trained staff
- Increase cost due resources/space for assessments

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ICF Research Branch
ICF in practice

**Taiwan Experience – Implications**

**For the local/country policy-makers**
- Also increase in number of trained staff
- Increased budgeting for disability assessments
- Need to develop capacity building for professionals
- Need to develop mechanism for resolving disputes over disability evaluation decisions
- Need to adapt long-term care and medical care to the changing perspective of disability


**Learning from the Taiwan experience**

- Implement FUNDES
- Develop short version of FUNDES and modify process
- Learn from Survey
  - FUNDES useful in identifying people’s difficulties and needs in their daily lives
  - However, process is complicated, time-consuming, and inconvenient
  - Assessment tool needs simplification

Chang JH, Chi WC, Huang SW, Chang FH, Liao HF, Escorpizo R, Lin TH. Perceptions and attitudes towards the implementation of a disability evaluation system based on the ICF among people with disabilities in Taiwan. Disabil Rehabil. 2018 Feb 28. [epub]
The WHO meeting on Rehabilitation 2030: A call for action calls for stakeholders to enhance HIS by including system level rehabilitation data and information on functioning, utilizing the ICF.
Simple, intuitive descriptions of ICF Generic-30 Set

EXEMPLARY DUTCH/FLEMISH VERSION

I.C.30 Energy and drive functions (G)
Mentale functies, maat energie en motivaal om doelen te bereiken aan behoeften te voldoen en impulsen te beheersen.

I.C.34 Sleep functions
Slaapfunctionen, slaappatroon, kwaliteit en hoeveelheid slaap.

D.C.1 Emotional functions (G)
Reguleren van gevoelens, emoties en stemming.

D.G.1 Caring for body parts
Verzorgen van huid, mond, haar, nagels, geslachtsdelen, etc. wat meer nodig is dan was het en drogen.

D.B.50 Remunerative employment
Uitvoeren van betaald werk in al zijn facetten.

ICF Rehabilitation Set = ICF Generic-30 Set

Development of ICF data collecting systems in Japan

Led by the Japanese Association of Rehabilitation Medicine (JARM)
## Development of ICF data collecting systems

- Preparation of a user-friendly ICF-based rating system for daily clinical practice
- Use in clinical quality management

### Issues with using the ICF in Japan:

- Difficulty in understanding definitions of categories
  - Developed simple, intuitive descriptions of the ICF Generic-30

- Lack of sensitivity
  - Added information of Environmental Factors, *Example: d450 Walking independently with orthosis*

- Vague guidelines for rating
  - Developed specifications for rating
ICF in practice

Development of computer app

Now going to share for free to promote use of ICF

Simple, intuitive descriptions
Definitions
Rating examples
Progress
Dependency for environmental factors
Standardization of data using Rasch analysis
Standardized, interval metrics
Ordinal scales
Rasch analysis
Transformation Table

Use in Clinical Quality Management

Examples of use:

- How good is the patient's performance compared to the others?
- Which services have improved outcome of individual or groups of patients?

When we know this

Clinical Quality of Rehabilitation
ICF in practice

UEMS-PRM Workshop
Nottwil January 2016

Exploration of strategies for implementing the ICF

Reports UEMS PRM Nottwil Workshop 2016
Clinical Assessment Schedules (CLASs)

For each rehabilitation service a CLAS is developed

DEFINITION

A clinical assessment schedule (CLAS) is an ICF-based framework that follows a set of principles and encompasses a set of tools to systematically organise the assessment process in rehabilitation.

<table>
<thead>
<tr>
<th>Considerations when determining the appropriate ICF set(s) for a specific rehabilitation service</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you need to document functioning...</td>
</tr>
<tr>
<td>ICF Set</td>
</tr>
<tr>
<td>in all applications of the ICF, be it in clinical practice or in research</td>
</tr>
<tr>
<td>at all levels of the health system, and along the continuum of care in all patients irrespective of the presence of a health condition</td>
</tr>
<tr>
<td>with the least number of categories</td>
</tr>
<tr>
<td>ICF Generic-7 Set or ICF Generic-30 (Rehabilitation) Set depending on the maximum number of categories required</td>
</tr>
<tr>
<td>of persons with various health conditions in any rehabilitation setting</td>
</tr>
<tr>
<td>ICF Generic-30 (Rehabilitation) Set</td>
</tr>
<tr>
<td>for multidisciplinary settings</td>
</tr>
<tr>
<td>Any one or a combination of the health condition-specific ICF Core Sets</td>
</tr>
<tr>
<td>of persons with a specific health condition in any rehabilitation setting</td>
</tr>
<tr>
<td>Any one or a combination of the ICF Core Sets for a health condition group</td>
</tr>
<tr>
<td>of a persons in a hospital department that specifies a health condition group</td>
</tr>
<tr>
<td>of a group of persons with different health conditions within a condition group</td>
</tr>
</tbody>
</table>
Clinical Assessment Schedules – For whom to document

Specialized Post-Acute Rehabilitation

Patient group(s): Diverse neurological conditions, traumatic brain injury (TBI) and spinal cord injury (SCI)

ICF set(s):
ICF Rehabilitation Set + ICF Core Set for neurological conditions in post-acute care + ICF Core Sets for TBI and for SCI

EXAMPLE

When to document

Long-term Rehabilitation in the Community

\( T = \text{time point} \)

- \( T_0 \) Before discharge from hospital
- \( T_1 \) Within 2 weeks after admission to community rehabilitation
- \( T_2 \) Assessment using specific ICF Core Sets
- \( T_2 \) Goal-Setting
- \( T_3 \) Intermediate assessment defined during goal-setting
- \( T_3 \) Assessment using specific ICF Core Sets
## Selecting a battery of assessment tools

**Step 1. Identify a preliminary battery of assessment tools**

**Step 2. Map (or link) each tool to the ICF**

**Step 3. Based on the mapping establish a battery of assessment tools for each rehabilitation service**

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### Applying the ICF Linking Rules

<table>
<thead>
<tr>
<th>Item</th>
<th>SF-36 category</th>
<th>Common metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF36e Climbing one flight of stairs</td>
<td>d455</td>
<td>Mobility</td>
</tr>
<tr>
<td>SF36f Bending kneeling or stooping</td>
<td>d410</td>
<td>Changing basic body position</td>
</tr>
<tr>
<td>SF36f Dressing</td>
<td>d440</td>
<td>Fine hand use</td>
</tr>
<tr>
<td>SF36f Putting on socks by bending forward</td>
<td>d410</td>
<td>Changing basic body position</td>
</tr>
<tr>
<td>SF36f Getting into and out of a car</td>
<td>d410</td>
<td>Changing basic body position</td>
</tr>
<tr>
<td>SF36f Getting in and out of a bed</td>
<td>d410</td>
<td>Changing basic body position</td>
</tr>
<tr>
<td>SF36f Getting up and down a standard flight of stairs</td>
<td>d410</td>
<td>Changing basic body position</td>
</tr>
<tr>
<td>SF36f Standing</td>
<td>d410</td>
<td>Mobility</td>
</tr>
<tr>
<td>SF36f Walking</td>
<td>d410</td>
<td>Mobility</td>
</tr>
<tr>
<td>SF36f Walking more than a mile</td>
<td>d410</td>
<td>Mobility</td>
</tr>
<tr>
<td>SF36f Walking half a mile</td>
<td>d410</td>
<td>Mobility</td>
</tr>
<tr>
<td>SF36f Walking 100 paces</td>
<td>d410</td>
<td>Mobility</td>
</tr>
</tbody>
</table>

---

Implementation in Electronic Health Records

Future plan - Scoring algorithms corresponding to the transformation tables can be integrated into electronic health records

⇒ to enable immediate access to scores calculated based on data entered on a form

ANY QUESTIONS?
ICF in practice

ICF Implementation

At the individual level

Using ICF at VIRK, a nationwide vocational rehabilitation service in Iceland

Hans Jakob Beck
Medical Director VIRK
Vocational Rehabilitation Fund
Vocational Rehabilitation Fund

- Founded in 2008 by all the principal public and private sector unions in Iceland, the Confederation of Icelandic Employers and public sector employers
- Financed by employers, pension funds and the government
- **Purpose:** Reduce the probability that employees leave their jobs due to long-term illness and disability
ICF implementation in post-discharge assessments

REHAB Basel - Center for Paraplegics and Brain injuries
- integrated pre-set of ICF categories in their EHR system
- for documenting and monitoring the functioning status of discharged patients with spinal cord injury
- to help ensure the sustainability of inpatient rehabilitative care

ICF in practice

ICF - Use in electronic health records

ICF implementation in post-discharge

The patient, doctor, PT and OT are assigned selected ICF categories from the designated set that they are asked to rate a 0-4 scale (0 = no problem to 4 big problem).

Once all of the data has been entered, the doctor meets with the patient to discuss goals and possible treatment.
ICF - Use in electronic health records

Visual representation of the results (radar diagram)

**Hospital level:**
Reports on the results of all the patients evaluated based on specifically-chosen criteria, e.g., status of activities and participation sorted according to age. Each coloured line represents an age group.


ICF - Use in electronic health records

- Integrated in
- Supports inter-professional interactions
- Documentation and processes of staff visible
- Encompasses inter-professional reporting form and staff communication platform
- Shows inter-professional task list

ICF in practice

**For Goal-setting**

- **ICF - Use in electronic health records**

**For Reporting**

- **ICF - Use in electronic health records**
ICF in practice

Lighthouse Project Hand

ICF-based Documentation und Reporting ⇔ e-tool Hand

Body structures
- e.g. bones, nerves, muscles

Body functions
- e.g. swelling, touch functions, pain

A&P
- e.g. fine hand use, lifting & carrying, work

Location: right/left

Specific tests conducted

Screening not able to be completed
Screening not relevant

Systematic documentation of Localisation und type of body structure impairment
ICF in practice

Lighthouse Project Hand

ICF-based Documentation und Reporting ⇒ e-tool Hand

Report shows:
- General patient information and case history, e.g. first and last intervention
- Localisation and type of impairment of the hand
- Extent of impairment and change over the course of interventions
ICF in practice

Frequently Asked Questions in this Module

1. Do I need to get permission to use the ICF and ICF Core Sets in my context (institution/hospital, etc.)?
2. Have the ICF Core Sets or ICF sets been implemented in real-life?
3. Is there a database or website listing all ICF implementation all over the world?
ICF in practice

Tips & Tricks on Training Methodology

- present real-life uses of the ICF from your context or region of the world
- allow enough time for exchange of the participant’s experience of using the ICF in their context
- invite participants who are using the ICF in their organisation to give a 5-min. presentation (perhaps with a demo of their system if relevant) and 5 min. question and answer to facilitate the exchange
- encourage participants to read the publications if they want details on the real-life uses of the ICF. Unfortunately, some publications are not available (e.g. VIRK)