ICF - the WHO International Classification of Functioning, Disability and Health

Purpose

The purpose of this page is to provide background information on ICF, the International Classification of Functioning, Disability and Health.

Main facts

- **ICF provides a standard language and framework for the description of health and health-related states.**
- It is intended to be useful for a wide range of purposes by providing a classification of health and health-related domains, which will help to describe: changes in body structure and function, what a person with a condition is able to do in a standard environment - i.e. level of capacity -, as well as what the person actually do in his usual environment - i.e. level of performance.
- These domains are classified from body, individual, and societal perspectives through two lists:
  - a list of body functions and structure
  - and a list of domains of activity and participation
- In ICF, the term *functioning* refers to all body functions, activities, and participation, whereas the term *disability* is similarly an umbrella term for impairments, activity limitations, and participation restrictions. ICF also lists environmental factors that may interact with the previous components.
- The focus of the classification is on measuring functioning in society, independently of the reason for the impairment, and by doing so, becoming a more versatile tool than traditional classifications with focus on disability. The shift is from the cause to the impact, putting all health conditions on the same level, allowing them to be compared using a common metric, the ruler of health and disability.
- ICD and ICF are both part of the WHO Family of International Classifications and are complementary when providing a broader and more meaningful picture of the experience of health of individuals and populations: information on mortality (using ICD) and information about health and health-related outcomes (using ICF), can be combined in summary measure of population health. ICD classifies causes of death, while ICF classifies health.
Introduction

Purpose

The need for ICF was clear as studies showed that diagnosis alone did not predict services demand, length of hospitalization, level of care, or functional outcomes. Likewise, neither was the presence of a disease an accurate predictor of required disability benefits, performance at work, return to work potential, or likelihood of social integration; therefore, only using a classification of diagnosis will not provide enough information for health planning and management and therefore, complementary information on the levels of functioning and disability is missed. ICF was developed with the goal of collecting those data in a consistent and internationally comparable manner. ICF provides the framework and the classification system for determining the overall health of populations.

History

Member States of WHO agreed in 2001 to adopt ICF as the basis for the scientific standardization of data on health and disability world-wide; the idea was to go beyond the traditional mortality and morbidity measures with the inclusion of measures of the functional domains of health. ICF serves then to measure the health goals of health systems, ultimately looking to enhance the performance of the national health systems and, consequently, the health of the population.

A companion classification for children and youth was published in 2007.

Examples of ICF applications

- At the level of individuals:
  - Assessment of individuals: e.g. to answer "what is the person's level of functioning?"
  - Individual treatment planning: "what treatments or interventions can maximize his/her functioning?"
  - Evaluation of treatments and other interventions: "what are the outcomes of the treatment? How useful were the interventions?"
- At the level of institutions:
  - Resource planning and development: e.g. to answer "what health care and other services will be needed?"
  - Management and outcome evaluation: "how useful are the services provided?"
  - Management of health care delivery models: "how cost-effective are the services provided?"
- At the level of society:
  - Establishing eligibility criteria for security benefits, disability pensions, etc: e.g. to answer "are the criteria for eligibility for disability benefits evidence based, appropriate to social goals and justifiable?"
  - Assessing needs: "what are the needs of the persons with different levels of disability-impairments, activity limitations, and participation restrictions?"
  - Assessing environmental designs, facilitators, etc.: "how can the social and built environment be more accessible for all persons?"
The model of ICF

ICF follows the biopsychosocial model for disability, which integrates both the medical and social models. The reason for this integrated approach is that disability is undoubtedly a complex phenomena, it is at the same time a problem at the level of a person's body, and a social phenomena. Disability represents the interaction of the features of a person and the features of the overall context in which the person lives and works, i.e., while some aspects of the disability are almost entirely internal to the person, others are entirely external. Consequently, medical and social responses together are required to solve the problems associated with disability.

In ICF, disability and functioning are viewed as the outcomes of the interactions between health conditions (diseases, disorders, and injuries) and contextual factors. The contextual factors include external environmental factors (e.g. social attitudes, architectural characteristics, legal and social structures, climate, terrain, etc.) and internal personal factors (e.g. gender, age, coping styles, social background, education, profession, past and current experience, overall behaviour patterns, character, etc.), which influence how disability is experienced by the individual.

In the diagram on the right, the three levels of human functioning classified by ICF are identified:

1. functioning at the level of body or body part
2. the whole person
3. and the whole person in a social context

Disability involves dysfunctioning at one or more of these three levels: impairments, activity limitations, and participation restrictions.

The Structure of ICF

ICF is a hierarchical classification: a branch of the classification comprises very general categories that include entire domains of functioning down to very detailed descriptions of specific aspects of functioning. As a classification, the data coded at a very granular level is preserved at the broader level as well.

ICF is organised in two parts, each of them comprising two components:
Part 2 - Contextual Factors includes

- Body Functions and Structures
- Activities and Participation

Contextual Factors,
Each component is subdivided into domains and categories at varying levels of granularity (up to four levels), each represented by a numeric code.

The prefix of an ICF code is a letter (b, s, d, or e) that represents the component where the code appears: the prefix "d" represents the Activities and Participation component; although, a user, depending on his specific needs, may choose the more granular optional "a" for Activities or p for "Participation".

Following the initial letter, the number of digits that make up the code indicates the category and its level:
First digit is used to represent the first-level categories
- Chapters 1-8 body functions and structures
- Chapters 1-9 activities and participation
- Chapters 1-5 environmental factors

3 digits are used for second-level categories
4 digits for the third-level categories
5 digits for fourth-level categories

When selecting the most appropriate category for a specific aspect of functioning, the first step is to allocate the item to the appropriate component, then to the domain and chapter, and finally, within a given block of the chapter, select the category that best describes the aspect of functioning with the required level of detail.

Qualifiers

To complete a code a qualifier needs to be present (a minimum of one qualifier must be indicated for each code). the qualifier is placed after the ICF code, separated by a decimal point or + sign. Qualifiers specify information about functioning status, such as the magnitude, the location, or the nature of a problem:

- The first, common qualifier specifies the extent of the problem, whether it is the impairment of a body function or structure, a limitation in activities, or a restriction in participation. It is also used to convey that there is no functioning problem (qualifier '0'), which constitutes a neutral description of human functioning.

For environmental factors, the first qualifier specifies the extent of a negative effect (e.g. the size of a barrier) or that of a positive effect (e.g. how strong a facilitator factor is); in this latter case, the decimal point after the ICF code is replaced by the + sign.

Values of the generic qualifier of a problem (impairment, limitation, restriction, or barrier), which, as said above are added to the code after the decimal point are shown below. This qualifier uses a five point scale to indicate the presence of an impairment and its degree:

<table>
<thead>
<tr>
<th>xxx.0</th>
<th>NO problem</th>
<th>none, absent, negligible</th>
<th>0-4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>xxx.1</td>
<td>MILD problem</td>
<td>slight, low</td>
<td>5-24%</td>
</tr>
<tr>
<td>xxx.2</td>
<td>MODERATE problem</td>
<td>medium, fair</td>
<td>25-49%</td>
</tr>
<tr>
<td>xxx.3</td>
<td>SEVERE problem</td>
<td>high, extreme</td>
<td>50-95%</td>
</tr>
<tr>
<td>xxx.4</td>
<td>COMPLETE problem</td>
<td>total</td>
<td>96-100%</td>
</tr>
<tr>
<td>xxx.8</td>
<td>not specified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>xxx.9</td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example of an ICF code with a 'mild' qualifier:

<table>
<thead>
<tr>
<th>b2.1</th>
<th>Sensory functions and pain</th>
<th>1st level item</th>
</tr>
</thead>
<tbody>
<tr>
<td>b210.1</td>
<td>Seeing functions</td>
<td>2nd level item</td>
</tr>
<tr>
<td>b2102.1</td>
<td>Quality of vision</td>
<td>3rd level item</td>
</tr>
<tr>
<td>b21022.1</td>
<td>Contrast sensitivity</td>
<td>4th level item</td>
</tr>
</tbody>
</table>

The performance qualifier

This qualifier indicates what a person does in his environment; that environment includes the overall societal context, since performance can also be understood as the involvement in a life situation or the "lived experience" of a person in his actual context. The person's environment will include assistive devices or assistance, whenever he uses them to perform actions or tasks.

The capacity qualifier

This qualifier describes a person's ability to execute a task or an action. It indicates the highest probable level of functioning of a person in a given domain at a given moment.

When a person has a capacity problem associated with a health condition that incapacity is part of his state of health. To assess the full ability of a person, a standardized environment is needed to neutralize or account for the varying impact of different environments on the ability of the person. A standardized environment could be: an actual environment commonly used for capacity assessment in test settings; an assumed environment thought to have a uniform impact; or an environment with precisely defined parameters based on extensive scientific research. The capacity construct will then reflect the environment-adjusted ability of the person in a specified domain. The assessment is carried out without assistive device or assistance.

For international comparisons, the environmental adjustments need to be the same; with this purpose, features of that standardized environment can be coded using the Environmental Factor classification.
## Formal definitions of ICF components

<table>
<thead>
<tr>
<th>Component</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body functions</td>
<td>Physiological functions of body systems (including psychological functions)</td>
</tr>
<tr>
<td>Body structures</td>
<td>Anatomical parts of the body such as organs, limbs, and their components</td>
</tr>
<tr>
<td>Impairments</td>
<td>Problems in body function or structure such as a significant deviation or loss</td>
</tr>
<tr>
<td>Activity</td>
<td>Execution of a task or action by an individual</td>
</tr>
<tr>
<td>Participation</td>
<td>Involvement in a life situation</td>
</tr>
<tr>
<td>Activity limitations</td>
<td>Difficulties an individual may have in executing activities</td>
</tr>
<tr>
<td>Participation restrictions</td>
<td>Problems an individual may experience in involvement in life situations</td>
</tr>
<tr>
<td>Environmental factors</td>
<td>Factors that make up the physical, social, and attitudinal environment in which people live and conduct their lives</td>
</tr>
</tbody>
</table>