ICF

International Classification of Functioning, Disability and Health

World Health Organization
Geneva

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Contents

ICF

Introduction

1. Background

This volume contains the *International Classification of Functioning, Disability and Health,* known as ICF.[1] The overall aim of the ICF classification is to provide a unified and standard language and framework for the description of health and health-related states. It defines components of health and some health-related components of well-being (such as education and labour). The domains contained in ICF can, therefore, be seen as *health domains* and *health-related domains.* These domains are described from the perspective of the body, the individual and society in two basic lists: (1) Body Functions and Structures; and (2) Activities and Participation.[2] As a classification, ICF systematically groups different domains[3] for a person in a given health condition (e.g. what a person with a disease or disorder does do or can do). *Functioning* is an umbrella term encompassing all body functions, activities and participation; similarly, *disability* serves as an umbrella term for impairments, activity limitations or participation restrictions. ICF also lists environmental factors that interact with all these constructs. In this way, it enables the user to record useful profiles of individuals' functioning, disability and health in various domains.

ICF belongs to the "family" of international classifications developed by the World Health Organization (WHO) for application to various aspects of health. The WHO family of international classifications provides a framework to code a wide range of information about health (e.g. diagnosis, functioning and disability, reasons for contact with health services) and uses a standardized common language permitting communication about health and health care across the world in various disciplines and sciences.

In WHO's international classifications, health conditions (diseases, disorders, injuries, etc.) are classified primarily in ICD-10 (shorthand for the International

[1] The text represents a revision of the International Classification of Impairments, Disabilities, and Handicaps (ICIDH), which was first published by the World Health Organization for trial purposes in 1980. Developed after systematic field trials and international consultation over the past five years, it was endorsed by the Fifty-fourth World Health Assembly for international use on 22 May 2001 (resolution WHA54.21).

[2] These terms, which replace the formerly used terms "impairment", "disability" and "handicap", extend the scope of the classification to allow positive experiences to be described. The new terms are further defined in this Introduction and are detailed within the classification. It should be noted that these terms are used with specific meanings that may differ from their everyday usage.

[3] A domain is a practical and meaningful set of related physiological functions, anatomical structures, actions, tasks, or areas of life.

Classification of Diseases, Tenth Revision),[4] which provides an etiological framework. Functioning and disability associated with health conditions are classified in ICF. ICD-10 and ICF are therefore complementary,[5] and users are encouraged to utilize these two members of the WHO family of international classifications together. ICD-10 provides a "diagnosis" of diseases, disorders or other health conditions, and this information is enriched by the additional information given by ICF on functioning.[6] Together, information on diagnosis plus functioning provides a broader and more meaningful picture of the health of people or populations, which can then be used for decision-making purposes.

The WHO family of international classifications provides a valuable tool to describe and compare the health of populations in an international context. The information on mortality (provided by ICD-10) and on health outcomes (provided by ICF) may be combined in summary measures of population health for monitoring the health of populations and its distribution, and also for assessing the contributions of different causes of mortality and morbidity.

ICF has moved away from being a "consequences of disease" classification (1980 version) to become a "components of health" classification. "Components of health" identifies the constituents of health, whereas "consequences" focuses on the impacts of diseases or other health conditions that may follow as a result. Thus, ICF takes a neutral stand with regard to etiology so that researchers can draw causal inferences using appropriate scientific methods. Similarly, this approach is also different from a "determinants of health" or "risk factors" approach. To facilitate the study of determinants or risk factors, ICF includes a list of environmental factors that describe the context in which individuals live.

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[4] International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Vols. 1-3. Geneva, World Health Organization, 1992-1994.

[5] It is also important to recognize the overlap between ICD-10 and ICF. Both classifications begin with the body systems. Impairments refer to body structures and functions, which are usually parts of the "disease process" and are therefore also used in the ICD-10. Nevertheless, ICD-10 uses impairments (as signs and symptoms) as parts of a constellation that forms a "disease", or sometimes as reasons for contact with health services, whereas the ICF system uses impairments as problems of body functions and structures associated with health conditions.

[6] Two persons with the same disease can have different levels of functioning, and two persons with the same level of functioning do not necessarily have the same health condition. Hence, joint use enhances data quality for medical purposes. Use of ICF should not bypass regular diagnostic procedures. In other uses, ICF may be used alone.

2. Aims of ICF

ICF is a multipurpose classification designed to serve various disciplines and different sectors. Its specific aims can be summarized as follows:

- to provide a scientific basis for understanding and studying health and health-related states, outcomes and determinants;
- to establish a common language for describing health and health-related states in order to improve communication between different users, such as health care workers, researchers, policy-makers and the public, including people with disabilities;
- to permit comparison of data across countries, health care disciplines, services and time;
- to provide a systematic coding scheme for health information systems.

These aims are interrelated, since the need for and uses of ICF require the construction of a meaningful and practical system that can be used by various consumers for health policy, quality assurance and outcome evaluation in different cultures.

2.1 Applications of ICF

Since its publication as a trial version in 1980, ICIDH has been used for various purposes, for example:

- as a statistical tool – in the collection and recording of data (e.g. in population studies and surveys or in management information systems);
- as a research tool – to measure outcomes, quality of life or environmental factors;
- as a clinical tool – in needs assessment, matching treatments with specific conditions, vocational assessment, rehabilitation and outcome evaluation;
- as a social policy tool – in social security planning, compensation systems and policy design and implementation;
- as an educational tool – in curriculum design and to raise awareness and undertake social action.

Since ICF is inherently a health and health-related classification it is also used by sectors such as insurance, social security, labour, education, economics, social policy and general legislation development, and environmental modification. It has been accepted as one of the United Nations social classifications and is referred to in and incorporates *The Standard Rules on the Equalization of*

Opportunities for Persons with Disabilities.[7] Thus ICF provides an appropriate instrument for the implementation of stated international human rights mandates as well as national legislation.

ICF is useful for a broad spectrum of different applications, for example social security, evaluation in managed health care, and population surveys at local, national and international levels. It offers a conceptual framework for information that is applicable to personal health care, including prevention, health promotion, and the improvement of participation by removing or mitigating societal hindrances and encouraging the provision of social supports and facilitators. It is also useful for the study of health care systems, in terms of both evaluation and policy formulation.

[7] *The Standard Rules on the Equalization of Opportunities for Persons with Disabilities.* Adopted by the United Nations General Assembly at its 48th session on 20 December 1993 (resolution 48/96). New York, NY, United Nations Department of Public Information, 1994.

3. Properties of ICF

A classification should be clear about what it classifies: its universe, its scope, its units of classification, its organization, and how these elements are structured in terms of their relation to each other. The following sections explain these basic properties of ICF.

3.1 Universe of ICF

ICF encompasses all aspects of human health and some health-relevant components of well-being and describes them in terms of *health domains* and *health-related domains.*[1] The classification remains in the broad context of health and does not cover circumstances that are not health-related, such as those brought about by socioeconomic factors. For example, because of their race, gender, religion or other socioeconomic characteristics people may be restricted in their execution of a task in their current environment, but these are not health-related restrictions of participation as classified in ICF.

There is a widely held misunderstanding that ICF is only about people with disabilities; in fact, it is about *all people.* The health and health-related states associated with all health conditions can be described using ICF. In other words, ICF has universal application.[2]

3.2 Scope of ICF

ICF provides a description of situations with regard to human functioning and its restrictions and serves as a framework to organize this information. It structures the information in a meaningful, interrelated and easily accessible way.

ICF organizes information in two parts. Part 1 deals with Functioning and Disability, while Part 2 covers Contextual Factors. Each part has two components:

1. Components of Functioning and Disability

The **Body** component comprises two classifications, one for functions of body systems, and one for body structures. The chapters in both classifications are organized according to the body systems.

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[1] Examples of health domains include seeing, hearing, walking, learning and remembering, while examples of health-related domains include transportation, education and social interactions.

[2] Bickenbach JE, Chatterji S, Badley EM, Üstün TB. Models of disablement, universalism and the ICIDH, *Social Science and Medicine*, 1999, 48:1173-1187.

The **Activities and Participation** component covers the complete range of domains denoting aspects of functioning from both an individual and a societal perspective.

2. Components of Contextual Factors

A list of **Environmental Factors** is the first component of Contextual Factors. Environmental factors have an impact on all components of functioning and disability and are organized in sequence from the individual's most immediate environment to the general environment.

Personal Factors is also a component of Contextual Factors but they are not classified in ICF because of the large social and cultural variance associated with them.

The components of Functioning and Disability in Part 1 of ICF can be expressed in two ways. On the one hand, they can be used to indicate problems (e.g. impairment, activity limitation or participation restriction summarized under the umbrella term *disability*); on the other hand they can indicate nonproblematic (i.e. neutral) aspects of health and health-related states summarized under the umbrella term *functioning).*

These components of functioning and disability are interpreted by means of four separate but related *constructs.* These constructs are operationalized by using *qualifiers.* Body functions and structures can be interpreted by means of changes in physiological systems or in anatomical structures. For the Activities and Participation component, two constructs are available: *capacity* and *performance* (see section 4.2).

A person's functioning and disability is conceived as a dynamic interaction[10] between health conditions (diseases, disorders, injuries, traumas, etc.) and contextual factors. As indicate above, Contextual Factors include both personal and environmental factors. ICF includes a comprehensive list of environmental factors as an essential component of the classification. Environmental factors interact with all the components of functioning and disability. The basic construct of the Environmental Factors component is the facilitating or hindering impact of features of the physical, social and attitudinal world.

3.3 Unit of classification

ICF classifies health and health-related states. The unit of classification is, therefore, *categories* within health and health-related domains. It is important to note, therefore, that in ICF persons are not the units of classification; that is, ICF does not classify people, but describes the situation of each person within an array of health or health-related domains. Moreover, the description is always made within the context of environmental and personal factors.

[10] This interaction can be viewed as a *process* or a *result* depending on the user.

3.4 Presentation of ICF

ICF is presented in two versions in order to meet the needs of different users for varying levels of detail.

The *full version* of ICF, as contained in this volume, provides classification at four levels of detail. These four levels can be aggregated into a higher-level classification system that includes all the domains at the second level. The two-level system is also available as a *short version* of ICF.

4. Overview of ICF components

DEFINITIONS[11]

In the context of health:

Body functions are the physiological functions of body systems (including psychological functions).

Body structures are anatomical parts of the body such as organs, limbs and their components.

Impairments are problems in body function or structure such as a significant deviation or loss.

Activity is the execution of a task or action by an individual.

Participation is involvement in a life situation.

Activity limitations are difficulties an individual may have in executing activities.

Participation restrictions are problems an individual may experience in involvement in life situations.

Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.

An overview of these concepts is given in Table 1; they are explained further in operational terms in section 5.1. As the table indicates:

- ICF has two *parts*, each with two *components:*

  Part 1. Functioning and Disability
  - (a) Body Functions and Structures
  - (b) Activities and Participation

  Part 2. Contextual Factors
  - (c) Environmental Factors
  - (d) Personal Factors

- Each component can be expressed in both *positive* and *negative* terms.
- Each component consists of various domains and, within each domain, categories, which are the units of classification. Health and health-related states of an individual may be recorded by selecting the appropriate category

[11] See also Annex 1, Taxonomic and Terminological Issues.

code or codes and then adding *qualifiers*, which are numeric codes that specify the extent or the magnitude of the functioning or disability in that category, or the extent to which an environmental factor is a facilitator or barrier.

Table 1. An overview of ICF

<table>
<tr><td></td><td colspan="2">Part 1: Functioning and Disability</td><td colspan="2">Part 2: Contextual Factors</td></tr>
<tr><td>Components</td><td>Body Functions and Structures</td><td>Activities and Participation</td><td>Environmental Factors</td><td>Personal Factors</td></tr>
<tr><td>Domains</td><td>Body functions
Body structures</td><td>Life areas
(tasks, actions)</td><td>External influences on functioning and disability</td><td>Internal influences on functioning and disability</td></tr>
<tr><td>Constructs</td><td>Change in body functions (physiological)

Change in body structures (anatomical)</td><td>Capacity
Executing tasks in a standard environment

Performance
Executing tasks in the current environment</td><td>Facilitating or hindering impact of features of the physical, social, and attitudinal world</td><td>Impact of attributes of the person</td></tr>
<tr><td rowspan="2">Positive aspect</td><td>Functional and structural integrity</td><td>Activities
Participation</td><td rowspan="2">Facilitators</td><td rowspan="2">not applicable</td></tr>
<tr><td colspan="2">Functioning</td></tr>
<tr><td rowspan="2">Negative aspect</td><td>Impairment</td><td>Activity limitation
Participation restriction</td><td rowspan="2">Barriers / hindrances</td><td rowspan="2">not applicable</td></tr>
<tr><td colspan="2">Disability</td></tr>
</table>

4.1 Body Functions and Structures and impairments

Definitions: ***Body functions*** *are the physiological functions of body systems (including psychological functions).*

Body structures *are anatomical parts of the body such as organs, limbs and their components.*

Impairments *are problems in body function or structure as a significant deviation or loss.*

(1) Body functions and body structures are classified in two different sections. These two classifications are designed for use in parallel. For example, body functions include basic human senses such as "seeing functions" and their structural correlates exist in the form of "eye and related structures".

(2) "Body" refers to the human organism as a whole; hence it includes the brain and its functions, i.e. the mind. Mental (or psychological) functions are therefore subsumed under body functions.

(3) Body functions and structures are classified according to body systems; consequently, body structures are not considered as organs.[12]

(4) Impairments of structure can involve an anomaly, defect, loss or other significant deviation in body structures. Impairments have been conceptualized in congruence with biological knowledge at the level of tissues or cells and at the subcellular or molecular level. For practical reasons, however, these levels are not listed.[13] The biological foundations of impairments have guided the classification and there may be room for expanding the classification at the cellular or molecular levels. For medical users, it should be noted that impairments are not the same as the underlying pathology, but are the manifestations of that pathology.

(5) Impairments represent a deviation from certain generally accepted population standards in the biomedical status of the body and its functions, and definition of their constituents is undertaken primarily by those qualified to judge physical and mental functioning according to these standards.

(6) Impairments can be temporary or permanent; progressive, regressive or static; intermittent or continuous. The deviation from the population norm may be slight or severe and may fluctuate over time. These characteristics are captured in further descriptions, mainly in the codes, by means of qualifiers after the point.

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[12] Although organ level was mentioned in the 1980 version of ICIDH, the definition of an "organ" is not clear. The eye and ear are traditionally considered as organs; however, it is difficult to identify and define their boundaries, and the same is true of extremities and internal organs. Instead of an approach by "organ", which implies the existence of an entity or unit within the body, ICF replaces this term with "body structure".

[13] Thus impairments coded using the full version of ICF should be detectable or noticeable by others or the person concerned by direct observation or by inference from observation.

(7) Impairments are not contingent on etiology or how they are developed; for example, loss of vision or a limb may arise from a genetic abnormality or an injury. The presence of an impairment necessarily implies a cause; however, the cause may not be sufficient to explain the resulting impairment. Also, when there is an impairment, there is a dysfunction in body functions or structures, but this may be related to any of the various diseases, disorders or physiological states.

(8) Impairments may be part or an expression of a health condition, but do not necessarily indicate that a disease is present or that the individual should be regarded as sick.

(9) Impairments are broader and more inclusive in scope than disorders or diseases; for example, the loss of a leg is an impairment of body structure, but not a disorder or a disease.

(10) Impairments may result in other impairments; for example, a lack of muscle power may impair movement functions, heart functions may relate to deficit in respiratory functions, and impaired perception may relate to thought functions.

(11) Some categories of the Body Functions and Structures component and the ICD-10 categories seem to overlap, particularly with regard to symptoms and signs. However, the purposes of the two classifications are different. ICD-10 classifies symptoms in special chapters to document morbidity or service utilization, whereas ICF shows them as part of the body functions, which may be used for prevention or identifying patients' needs. Most importantly, in ICF the Body Functions and Structures classification is intended to be used along with the Activities and Participation categories.

(12) Impairments are classified in the appropriate categories using defined identification criteria (e.g. as present or absent according to a threshold level). These criteria are the same for body functions and structures. They are: (a) loss or lack; (b) reduction; (c) addition or excess; and (d) deviation. Once an impairment is present, it may be scaled in terms of its severity using the generic qualifier in the ICF.

(13) Environmental factors interact with body functions, as in the interactions between air quality and breathing, light and seeing, sounds and hearing, distracting stimuli and attention, ground texture and balance, and ambient temperature and body temperature regulation.