



## INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH (ICF) – UNDERSTANDING THE FRAMEWORK & ITS APPLICATION

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### ABSTRACT

A multidisciplinary care team is required to meet the various challenges faced to treat complex medical conditions like people facing chronic diseases. A tool that can function across professional boundaries and that can handle differences in perspective for various medical professionals is much needed. The International Classification of Functioning, Disability and Health (ICF), is used as common language to define medical conditions. This paper discusses the ICF model, and tries to understand the classification and few of its applications in medical, social and educational sector.

### KEYWORDS :

The health care sector needs an all-inclusive remedial approach and strategic interventions to cover complex medical conditions like people facing chronic diseases. This kind of integrated care requires systems that are capable of detailed and complete exchange of information among all people involved in the process. There needs to be a framework that functions across professional boundaries that is created keeping in mind the differences in perspective for eg. those shown to exist between nurses and physicians.

#### Defining ICF

The International Classification of Functioning, Disability and Health (ICF) is a framework for organising and documenting information on functioning and disability (WHO 2001). It conceptualizes functioning as a 'dynamic interaction between a person's health condition, environmental factors and personal factors.' ICF provides a standard language and conceptual basis for the definition and measurement of disability, and it provides classifications and codes. It integrates the major models of disability - the medical model and the social model - as a "bio-psycho-social synthesis". It recognises the role of environmental factors in the creation of disability, as well as the role of health conditions (Üstün et al., 2003).

The International Classification of Functioning, Disability and Health, known more commonly as ICF, provide a standard language and framework for the description of health and health-related states. ICF makes it possible to collect those vital data in a consistent and internationally comparable manner. For basic public health purposes, including the determine the overall health of populations, the prevalence and incidence of non-fatal health outcomes, and to measure health care needs and the performance and effectiveness of health care systems, we need reliable and comparable data on the health of individuals and populations. ICF provides the framework and classification system for these purposes. (WHO 2002)

#### Aim of ICF

The ICF model is a multipurpose system that can be used in various disciplines and sectors. This includes health and community services as well as education sectors.

#### The aims of the ICF (WHO 2001:5) are to:

- provide a scientific basis for understanding and studying health and health-related states, outcomes, determinants, and changes in health status and functioning;
- 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;

- permit comparison of data across countries, health care disciplines, services and time; and
- provide a systematic coding scheme for health information systems.

The ICF 'has been accepted as one of the United Nations social classifications and provides an appropriate instrument for the implementation of stated international human rights mandates as well as national legislation' (WHO 2001:5-6). Hence, the ICF provides a valuable framework for monitoring aspects of the UN Convention on the Rights of Persons with Disabilities (UN 2006), as well as for national and international policy formulation.

#### Underlying principles of ICF

The ICF Model was developed keeping in mind four major guiding principle that are also essential to its application across sectors.

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1. **Universality.** The model was never meant to and should never be used to label and separate any social group. It considers everyone's and all types of functionality irrespective of their health condition in all physical, social and cultural contexts.
2. **Parity and aetiological neutrality.** Neither 'mental' or 'physical', there is no distinction between these conditions and places all health conditions on the same ground and are measured on a common metrics.
3. **Neutrality.** The classification records both positive and negative aspects of functioning and disability by using neutral language in domain definitions wherever possible,
4. **Environmental Influence.** Physical factors and social factors are essential aspect of the scientific understanding of disability and functioning.

#### The WHO Family of International Classifications

ICF belongs to the WHO family of international classifications, the best known member of which is the ICD-10 (the International Statistical Classification of Diseases and Related Health Problems). ICD-10 gives users an etiological framework for the classification, by diagnosis, of diseases, disorders and other health conditions. By contrast, ICF classifies functioning and disability associated with health conditions. The ICD-10 and ICF are therefore complementary, and users are encouraged to use them together to create a broader and more meaningful picture of the experience of health of individuals and populations. Information on mortality (provided by ICD-10) and information about health and health-related outcomes (provided by ICF) can be combined in summary measures of population health. In

short, ICD-10 is mainly used to classify causes of death, but ICF classifies health. (WHO 2002)

### The ICF Model

The IDF model is based on two major conceptual models of disability.

1. Medical Model
2. Social Model

### Medical Model

The medical model categorizes disability as a condition that is generally caused by disease, health or trauma conditions which will require medical care and professional treatment and calls for medical intervention.

### Social Model

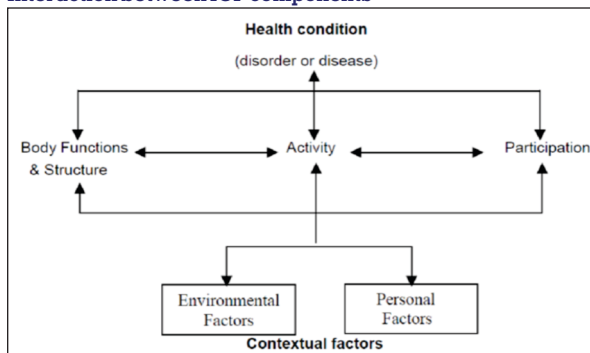
Compared to medical model, social model believes that the condition is a socially created problem not a quality of the individual. The condition is caused by difficult physical environment and other features of the social environment.

Considering disability complex phenomena, neither of these models is adequate on their own. Both internal and external factors, the person's physical environment and the person himself, add to context. In other words, both medical and social responses are appropriate to the problems associated with disability; we cannot wholly reject either kind of intervention. Therefore ICF looks at a more integrated framework with both social and medical, offering, a coherent view of different perspectives of health: biological, individual and social.

### ICF Information Organization

As stated by WHO, ICF has moved away from being a consequence of disease classification to become components of health classification.

### Interaction between ICF components



(WHO 2001)

ICF organises information in two parts; the Functioning & Disability and Contextual factors. And further each of these parts are organized in two parts;

### Functioning and Disability:

- Body Functions and Body Structures
- Activities and Participation

### Contextual Factors:

- Environmental Factors
- Personal Factors

### Definitions

#### In the context of health:

- **Functioning** is an umbrella term for body functions, body structures, activities and participation. It denotes the positive aspects of the interaction between an individual (with a health condition) and that individual's contextual

factors (environmental and personal factors).

- **Disability** is an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors).
- **Body functions** - The physiological functions of body systems (including psychological functions).
- **Body structures** - Anatomical parts of the body such as organs, limbs and their components.
- **Impairments** - Problems in body function and structure such as significant deviation or loss.
- **Activity** - The execution of a task or action by an individual.
- **Participation** - Involvement in a life situation.
- **Activity limitations** - Difficulties an individual may have in executing activities.
- **Participation restrictions** - Problems an individual may experience in involvement in life situations.
- **Environmental factors** - The physical, social and attitudinal environment in which people live and conduct their lives. These are either barriers to or facilitators of the person's functioning.

(WHO 2001)

**The ICF has a separate chapter for each of the domains as listed below:**

#### 1. Body Function:

- Mental functions
- Sensory functions and pain
- Voice and speech functions
- Functions of the cardiovascular, hematological, immunological and respiratory systems
- Functions of the digestive, metabolic, endocrine systems
- Genitourinary and reproductive functions
- Neuromusculoskeletal and movement-related functions
- Functions of the skin and related structures

#### 2. Activities and Participation:

- Learning and applying knowledge
- General tasks and demands
- Communication Mobility Self care
- Domestic life Interpersonal interactions and relationships
- Major life areas
- Community, social and civic life

#### 3. Body Structure:

- Structure of the nervous system
- The eye, ear and related structures
- Structures involved in voice and speech
- Structure of the cardiovascular, immunological and respiratory
- Systems Structures related to the digestive, metabolic and endocrine systems
- Structure related to genitourinary and reproductive systems
- Structures related to movement
- Skin and related structures

#### 4. Environmental Factors:

- Products and technology
- Natural environment and human-made changes to environment
- Support and relationships
- Attitudes Services, systems and policies

(WHO 2001)

### Application of ICF Framework

The ICF framework documents all levels of functioning whether permanent, temporary, continuous or irregular. It is

applicable to anyone who wishes to describe their functionality and level of health, irrespective of specific health conditions, in all physical, social and cultural contexts.

### How to use ICF?

The ICF framework is flexible with its details and complete classification as well as operationally defined domain with inclusions and exclusions. This also indicated that the framework can be used to answer a wide range of questions involving clinical, research and policy development issues. Following are some of the applications identified at individual, institutional and social level;

### ICF Applications

#### Service Provision

##### At the individual level

- For the assessment of individuals: What is the person's level of functioning?
- For individual treatment planning: What treatments or interventions can maximize functioning?
- For the evaluation of treatment and other interventions: What are the outcomes of the treatment? How useful were the interventions?
- For communication among medical professionals like physicians, nurses, physiotherapists, occupational therapists and other health workers, as well as social service works and community agencies
- For self-evaluation by consumers:

##### At the institutional level...

- For educational and training purposes
- For resource planning and development: What health care and other services will be needed?
- For quality improvement: How well do we serve our clients? What basic indicators for quality assurance are valid and reliable?
- For management and outcome evaluation: How useful are the services we are providing?
- For managed care models of health care delivery: How cost-effective are the services we provide? How can the service be improved for better outcomes at a lower cost?

##### At the social level...

- For eligibility criteria for state entitlements such as social security benefits, disability pensions, workers' compensation and insurance: Are the criteria for eligibility for disability benefits evidence based, appropriate to social goals and justifiable?
- For social policy development, including legislative reviews, model legislation, regulations and guidelines, and definitions for anti-discrimination legislation: Will guaranteeing rights improve functioning at the societal level? Can we measure this improvement and adjust our policy and law accordingly?
- For needs assessments: What are the needs of persons with various levels of disability - impairments, activity limitations and participation restrictions?
- For environmental assessment for universal design, implementation of mandated accessibility, identification of environmental facilitators and barriers, and changes to social policy: How can we make the social and built environment more accessible for all people, those with and those without disabilities? Can we assess and measure improvement?

(WHO 2001)

### Other Applications of ICF

The ICF framework is being used across various sectors other than health and disability like rehabilitation, community care, insurance, social security, employment, education, economics, social policy, legislation and environmental design and

modification.

The versatility and utility of the ICF model of functioning and disability being demonstrated by the variety of application, using it a common language. Some of these are as follows:

- In Latin America, the framework is being used in their social security and registration systems. As more countries ratify the UN Convention on the Rights of Persons with Disabilities, it is hoped that the ICF will become the world standard for disability data and social policy modeling for all countries. It provides a valuable information framework for monitoring mechanisms in order for countries to report to the UN on progress against the Convention's targets.
- In clinical settings the ICF can be used in its full range as a framework for rehabilitation programming (Martinuzzi et al 2010). (For specific disease conditions, instead of using the entire ICF (with its approximately 1400 categories) it can be useful to have a short list of ICF categories that are essential to describe the disability experience of the person. To achieve this, ICF 'core sets' have been developed with practitioners and people who experience the disease, in a systematic consensus approach ([www.icf-research-branch.org/publications/publications](http://www.icf-research-branch.org/publications/publications))
- In Switzerland, the ICF is used in education as a model and classification to establish eligibility ([www.sav-pes.ch](http://www.sav-pes.ch)) and to organise school-based support (Hollenweger, Lienhard 2007). In Italy a nationwide experience in the employment sector and local experiences in education have shown great potential ([www.reteclassificazioni.it/](http://www.reteclassificazioni.it/)).
- The definition of disability can influence advocacy cases and the ICF can be used to support the rights based approach to disability. This broader potential value of the ICF was recognised by advocates involved in its development (Hurst 2003).
- The ICF is suitable for use in community based life and care, and across multi-disciplinary care. The model can be used to underpin case planning, monitoring of progress, and outcomes evaluation. It is consistent with an approach to care and treatment that is person-centred, a partnership, and holistic. Accordingly, its use in primary care has been advocated (e.g. Veitch et al 2009)
- The ICF is valuable as a unifying model in rehabilitation medicine practice, research and education (Stucki et al 2007). It assists professionals to look beyond their own areas of practice, communicate across disciplines, and think from a functioning perspective rather than the perspective of a health condition.

### Using ICF Framework in Education and Training

ICF use can improve education of health professionals by enhancing and balancing curriculum design. The incorporation of the ICF framework in the education of health professionals can improve approaches to patient care and inter-professional collaboration. The ICF can be used in undergraduate and post-graduate training of any health professional, as well as in primary care settings and by community care workers (Snyman et al., 2012).

The use of the ICF framework as an approach to patient care can play a strategic role in transforming the education of health professionals (Geertzen et al., 2011) and improving inter-professional collaboration (Allan, et al., 2006). This process can contribute to the strengthening of health systems and the health status of individuals.

### Following are some of the advantages of incorporating ICF in medical education models;

- Helps professionals model a holistic health care system and patient care system
- Allows team members to be equally involved in the management of a patient
- Provides a improved health outcomes

- Strengthens health care systems
- Improved inter-professional education, collaboration and practice and Task sharing and task shifting.

## CONCLUSION

ICF provides a conceptual framework for understanding disability. It defines disability not as a problem in the individual, but as a health experience that occurs in a context, which is affected by social, physical and environmental factors. The model mainstreams the experience of disability, shifting the focus from cause to impact and places all health conditions on an equal and common metric of health.

The ICF model is a valuable tool which has gradually been implemented in a variety of sectors both medical and non-medical. The model allows patients as well as care givers to evaluate appropriate health care settings that can deal with the chronic illness. The need and longevity of services such as rehabilitation centers, nursing homes, psychiatric institutions, and community services, can be calculated accordingly.

Since 2001, after its publication, the model has been gradually implemented in a variety of settings and sectors both medical and non-medical. The data procured from this model enriches the diagnostic information providing a broader perspective to patient's health, which can help make better health management decisions.

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