The International Classification of Functioning, Disability and Health (ICF): What it is and what it can be used for

Rosamond H. Madden and Vera Dimitropoulous

It has been said that the International Classification of Functioning, Disability and Health (ICF) is the classification for life, while the International Classification of Diseases (ICD) is the classification for death and disease. While this may be a dramatic and over-simplified way of contrasting the two classifications, it vividly illustrates their complementarity, and why World Health Organization (WHO) recommends their joint use: ‘Together, information on diagnosis plus functioning provides a broader and more meaningful picture of health of people or populations, which can then be used for decision-making purposes’ (WHO 2001: 4).

The ICF is a framework for describing and organising information on functioning and disability (WHO 2001). It provides a standard language and a conceptual basis for the definition and measurement of health and disability. The ICF was approved for use by the World Health Assembly in 2001, after extensive testing across the world (Üstün et al. 2003).

It can be seen from Figure 1 that functioning and disability are multi-dimensional, reflecting effects on body function and structure, the activities people do, and their participation in all areas of life. Health conditions and environmental factors both influence these outcomes. The language of the ICF is neutral where possible, while recognising that difficulties with functioning require specific, respectful language: ‘disability’ is an umbrella term for impairment of body function or structure, activity limitations or participation restrictions. The ICF classifies all these dimensions of functioning and disability, and also the environmental factors which affect these experiences.

Figure 1 also shows that functioning and disability are interactive. All components of disability are important and any one may interact with another. Environmental factors must be taken into consideration as they affect everything and may require intervention to change them.

The ICF model, being interactive, is not a simple linear causal model. The description of a person’s functioning using the ICF does not depend on the specific health condition. Further, the model clarifies that we cannot infer participation in everyday life from diagnosis alone. A child with cerebral palsy, for instance, may be participating fully in school, with an accessible and positive environment, or may experience serious participation restrictions if these facilitators are absent.

Each component of the ICF contains hierarchically arranged domains. These are sets of related physiological functions, anatomical structures, actions, tasks, areas of life, and external influences. The ICF has a separate chapter for each of the domains, with further codes arranged hierarchically below chapter level.

Qualifiers are codes used, together with the domains, to record the extent of functioning or disability in a domain or category, or the extent to which an environmental factor is a facilitator or barrier. A uniform or ‘generic’ qualifier scale (essentially on 5 points from 0 to 4) is provided to record the extent of the ‘problem’ in relation to impairment, activity limitation and participation restriction. The environmental factors qualifier uses both a positive and negative scale, to indicate the extent to which an environmental factor acts as either a facilitator or barrier to functioning. Figure 2 provides an example of a code.

The code in Figure 2 represents a moderate problem lifting and carrying objects in a person’s usual environment. The code comprises: a letter for the component (‘d’ signifying Activities and Participation not differentiated), first digit for the chapter (Mobility), the next two digits for a second level in
The ICF is widely used around the world (Cerniauskaite et al. 2011; Jelsma 2009; WHO 2013), for the full range of uses for which it was designed, namely 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, healthcare disciplines, services and time
- provide a systematic coding scheme for health information systems (WHO 2001:5).

Like the ICD, the ICF is an international standard for use across different countries and cultures. The ICD, the ICF and the developing International Classification of Health Intervention are the reference members of the WHO Family of International Classifications. The ICF perhaps differs from the ICD, however, in that it is a multipurpose classification system designed to serve various disciplines and sectors – for example in community services and education as well as in health.

The recently released ICF Practical Manual provides guidance on how to apply the ICF concepts and framework. It describes and references examples of ICF applications from around the world, and provides a complementary resource to the ICF (WHO 2013). As well as general advice on using the ICF, the Manual contains sections on ICF use: in clinical practice and the education of health professionals; community support services; censuses and surveys; education systems; in policy and for advocacy purposes.

Examples of ICF use include:

- In the education of health professionals, it has been found that the use of the ICF framework as an approach to patient care can play a strategic role in transforming the education of health professionals and improving inter-professional collaboration. Its use can result in better patient experience, improved health outcomes, the strengthening of health systems, improved inter-professional education, collaboration and practice, task sharing and task shifting (WHO 2013 Section 3.1)
- When population data use the same concepts and frameworks as administrative and service data, a strong, integrated national information array can be developed. For example, Australian national data standards (based on the ICF) are designed to promote some uniformity and standardisation of definition and data collection, without dictating the precise content of collections (WHO 2013 Section 4.2). The Washington Group on Disability Statistics has worked to create, test and adopt a short set of six questions for use in censuses and surveys, following the Fundamental Principles of Official Statistics and consistent with the ICF (WHO 2013 Section 5).
- The ICF has been found relevant in the monitoring and evaluation of community-based services and community development approaches such as community-based rehabilitation (WHO 2013 Section 4.5).
- The ICF practical manual also discusses the use of the ICF in casemix systems.

The ICF can be used at various levels; at chapter level or at more detailed levels. Its use in Australia’s national data collection on disability services illustrates a validated example of use at chapter level. Questions on support needs use all nine chapter headings of the ICF Activities and Participation dimension, along with questions on the frequency of support needed (aligned with the Australian Bureau of Statistics Survey of Disability Ageing and Carers and thus ensuring that the population receiving services can be compared with the general population with disability) (Anderson & Madden 2011).

Analysis of the statistical behaviour of the ‘support needs’ question found it offered promise as a general data capture tool for indicating ‘extent’ of disability. It was also noted that all nine chapters of Activities and Participation life areas were required for measurement in diverse populations.

The ICF ‘can add explanatory power to existing casemix grouping systems. For example, individuals may have a disability, rather than a co-morbidity, which may increase the cost of treatment for a given health condition. In the rehabilitation setting, services sometimes target functioning problems, rather than the medical diagnosis, making the inclusion of relevant categories of functioning especially useful’ (WHO 2013: 41).

Efforts to use the ICF for casemix purposes to date have been summarised (Hopfe et al. 2011). Initiatives are underway in a number of countries to develop improved casemix systems for rehabilitation services (Madden, Marshall & Race 2013). Recent work in Australia was initiated by the Independent Hospitals Pricing Authority in 2012-13, as part of its work on activity based funding, to identify instruments for assessment of subacute care patients, which address deficiences in existing tools for each care type.
There is more work to be done in Australia to incorporate the ICF into health information systems. ‘Functioning’ is of key importance in the context of chronic disease, mental health, healthy ageing, and the rights of people with disabilities and their carers to participate in society (Madden et al. 2012). For connected services, measurements and funding approaches, we need to use the consistent definitions provided by both world standard classifications: the ICD and the ICF.

References:
World Health Organization. See WHO.

Rosamond H. Madden
Australian ICF Disability and Rehabilitation Research Program
Centre for Disability Research and Policy
University of Sydney

Vera Dimitropoulous, BAppSc(HIM)
National Centre for Classification in Health
University of Sydney
Cumberland Campus C43T, NSW 1825
Tel: 61 2 9351 9394
email: vera.dimitropoulos@sydney.edu.au