
WHO's ICF and Functional Status Information in Health Records

T. Bedirhan Üstün, M.D., Somnath Chatterji, M.D., Nenad Kostansjek, M.Sc., and
Jerome Bickenbach, Ph.D., L.L.B.

A common framework for describing functional status information (FSI) in health records is needed in order to make this information comparable and of value. The World Health Organization's (WHO's) International Classification of Functioning, Disability and Health (ICF), which has been approved by all its member States, provides this common language and framework. The biopsychosocial model of functioning and disability embodied in the ICF goes beyond disease and conceptualizes functioning from the individual's body, person, and lived experience vantage points, thereby allowing for planning interventions targeted at the individual's body, the individual as a whole or toward the environment. This framework then permits the evaluation of both the effectiveness and cost effectiveness of these different interventions in devising programs at the personal or societal level.

INTRODUCTION

A health system aims to improve the health of the people. Health is not only related to the absence of the disease, therefore we need to conceptualize and operationalize what health is. Increasingly, we have come to understand that information about functional status is needed in order

to appreciate the full picture regarding the health of an individual or a population. An individual's health fundamentally includes their capacity to carry out the full range of actions, activities and tasks required to fully engage in all areas of human life. The health state of a person can be described in terms of capacity to carry out a set of tasks or actions. In addition, the health state also includes changes in body functions and/or structures arising from a health condition. The impact of the health state on a person's life can be understood by measuring performance of tasks and actions in the person's real-life or actual environment. The full picture of the health experience can further be appreciated by taking into cognizance the value that people place on levels of functioning in given domains in association with a health condition. Plainly, the concept of functional status is integral to health and its achievement. Two individuals with identical diagnoses may have utterly different levels of functioning that determine their actual health status. Without FSI, our picture of the health of an individual, or a population, is flawed and incomplete.

FSI has, of course, long been collected in various ways and used clinically, especially in rehabilitative medicine; physical, occupational and speech and language therapy; and in nursing home and home care settings. FSI is essential for needs assessment as well as the development and monitoring of rehabilitative interventions to restore or maintain functions. It is also essential in this area of health care because the aim of

T. Bedirhan Üstün, Somnath Chatterji, and Nenad Kostansjek are with the WHO, Geneva, Switzerland. Jerome Bickenbach is with Queen's University, Kingston, Canada. The views expressed in this article are those of the authors and do not necessarily reflect the views of the WHO, Queens University, or the Centers for Medicare & Medicaid Services.

therapy is to assist patients in maximizing their capacities to perform activities needed for their lives. Although no one doubts that restoring functioning is restoring health (the ultimate purpose of all forms of health care) some clinicians, focusing exclusively on acute-care needs, do not see the need to collect or utilize FSI.

In most countries with a sophisticated health administrative data collection and utilization infrastructure, a wide variety of information is collected on disease burden, diagnostic tests, interventions, and treatment outcomes. What is often missing is information that would link diagnosis and treatment with health outcomes that are fully meaningful to the patient's life, namely information about the presence of decrements in capacity to carry out tasks and actions in areas of life as well as how these decrements play out in the person's actual, real-life environment (Deyo and Patrick, 1989; Lubetkin et al., 2003).

There is growing recognition that there is a gap in health administrative records: the failure to collect or disseminate FSI across all health care settings. Unless FSI becomes an essential part of administrative records, the potential value of these data will be lost, not merely to clinicians, but to health administrators concerned about management and quality of care issues, health researchers, and public health agencies. This insight is clearly expressed in a report by the National Committee on Vital and Health Statistics (NCVHS) (2001): "Without functional status information, the researchers, policymakers, and others who are already using administrative data have at best a rough idea of how people, individually and collectively, are doing and at worst they are making erroneous assumptions and decisions."

The report outlines in some detail the benefits of routinely collecting FSI across the entire health care delivery system and throughout all care settings. FSI can serve

management needs of all the stakeholders in the health care system—clinicians, providers, payers, patients, and government regulatory bodies. This is true especially with respect to evaluating outcomes, comparing treatment modalities, and predicting and managing costs. A related use of this data is in the domain of quality assurance. This links directly to debates of modes of service provision, single or multiple payer, managed care, fee-for-service, or some hybrid mixture.

The policy and research applications of FSI are evident for local health management and quality control, and in the broader arena of public health. Policy decisions about priorities must be made at the level of individual clinics or hospitals, local or regional health care agencies, or at the level of government planning and budgeting. Given the importance of getting the complete picture of health outcomes, FSI is an essential input into evidence-based policy decisionmaking.

Researchers in all areas of health and social policy, at all levels, need valid and reliable data about functional status in order to make informed decisions. For example, it is a matter of debate whether, as the world's population lives longer and ages, they will be unhealthy and pose a greater burden on health systems. There is some evidence suggesting that elderly persons today are functioning at higher levels than before. Without reliable information on levels of functioning, this debate would be unresolvable because it would not be possible to detect functional status, since the disease morbidity may not have changed very much. Compression of morbidity occurs when disability or decrement in functioning is postponed more than longevity is extended, as for example with the effects of exercise or better eating habits. The direct test of compression (or extension) of morbidity depends on the

effects of reduced health risks on cumulative lifetime disability (Fries, 1980, 2001; Vita et al., 1998).

In the wider realm of public health, FSI is a crucial element for the description of health states and quantification of overall health status in individuals that can be aggregated to a summary measure of population health. At the WHO, the use of FSI is in this area, in particular, because this data (collected by the World Health Survey now in the field in more than 70 countries) feeds into ongoing endeavors to determine levels and distributions of health. This survey would be inconceivable without information on health outcomes that describe health on multiple dimensions in terms of levels of functioning in a parsimonious set of domains.

The value of FSI goes beyond the area of health as well. It is commonly known that the demographic trends toward an older population, at least in developed countries, will create unprecedented burdens on all age-sensitive social policies, such as social security and other pensions, retirement, unemployment, and long-term care. Aging, according to a recent Organization for Economic Cooperation and Development (OECD) (2001) report, is the principal factor currently driving pension spending costs. Since age-sensitive social programming constitutes between 40 and 60 percent of total public spending, the impact of aging is considerable. To comprehend the nature and magnitude of its social impact, those responsible for policies from transportation and housing to employment and taxation, will need reliable data on functional status and how it plays out in the lives of the aging population.

For FSI to be available for this wide variety of uses, however, it must be routinely and consistently collected across the entire health care delivery system, preferably in some electronic format. This is likely to be

a difficult and expensive task. Nonetheless, before contemplating the systemwide changes required to collect FSI, a classification that provides a common language and framework to describe the universe of functioning and disability is required. In order to complement the classification scheme, a comprehensive coding system that creates consistent and comparable data across all settings of care and a method of routinely capturing and disseminating these data (in a mode and manner consistent with social interests in preserving privacy) linked to measurement tools for clinical and related encounters are also needed.

The foundation of a new structure for collecting FSI is, therefore, a standard classification and coding system that will make it feasible for FSI to be included in administrative data. As the NCVHS report stated: "...while the International Classification of Diseases (ICD) has served us well for more than a century in characterizing diagnoses, it is now time to complement it with a parallel system for characterizing functional status." The classification the committee pointed to is WHO's recently published ICF.

Although the committee argued that more research, analysis, testing, and demonstration projects are required before final recommendations can be made, it concluded that: "The concepts and conceptual framework of the ICF have promise as a code set for reporting functional status information in administrative records and computerized medical records. In the Committee's view, the ICF is the only existing classification system that could be used to code functional status across the age span."

In this article, we want to briefly describe the extensive international developmental process that led to the revision of the original *International Classification of Impairments, Disabilities and Handicaps*

(ICIDH) (World Health Organization, 1980) and produced the ICF. We also want to describe the basic principles and structure of the ICF, in particular, to show its value in the context of collecting FSI for administrative records.

NEW LANGUAGE OF HEALTH AND FUNCTIONING

The primary mandate of WHO is the production and dissemination of reliable and timely information about the health of populations. WHO's 1947 constitution requires that: "Each Member shall provide statistical and epidemiological reports in a manner to be determined by the Health Assembly." Countries have long reported causes of death or mortality statistics based on WHO's (1992) *International Statistical Classification of Diseases and Related Health Problems* (ICD-10). Though useful for calculating life expectancy for different countries, however, WHO recognized that these data did not capture the overall health status of living populations. Missing was information about non-fatal health outcomes, i.e., functioning and disability across all areas of life. To meet this need, WHO (1980) issued a tool for the classification of the consequences of disease, namely the ICIDH.

A considerable academic literature built up around clinical and other uses of the ICIDH, but much of this literature was critical of the underlying model of disability. Responding to these critiques and an international call for an updated version, WHO launched a revision process in 1993 to address what many viewed as an urgent international need for a framework for measuring and reporting the health as functional status at both individual and population levels.

Over the next 10 years, WHO's international collaborating centers and govern-

mental and non-governmental organizations, including groups representing persons with disabilities, engaged in the systematic revision of the ICIDH. From an exhaustive literature search of existing classifications and assessment tools, the WHO revision team developed a 3,000-plus item pool of potential classification domain names for areas of human functioning at the body, person, and social levels. All efforts were made to ensure that the ICIDH-2, as it was initially named, would be a suitable classification for all domains of functioning associated with both physical and mental health conditions. Adopting the strategy of computer software development, alpha and beta drafts were prepared from 1996 forward.

The original 1980 ICIDH had only been approved for field-trial purposes. In light of that, the WHO team felt for ICIDH-2 to have the necessary credibility and legitimacy to serve as the international standard language of health and functioning, that the revision process should include several years of field trials and other tests. The first phase of field trials concentrated on the cross-cultural and linguistic applicability of the model and classificatory structure and language of the ICIDH-2. The intent of this phase of field trials was to establish the conceptual and functional equivalence of the items contained within the classification. Üstün et al. (1999a,b; 2000) provide the rationale for the methodologies and presentation and analysis of the 15-country field trials. These results fed into further international collaboration in which the WHO team relied on a global network of WHO collaborating centers, non-governmental organizations, disability groups, and individual experts and key informants.

The next revision phase began in 1999 when a series of expert drafting teams were assembled in Geneva to produce the beta 2 draft. This draft was used for the second round of international field trials, these focusing on questions of reliability, utility, and feasibility of use. Once the results of these tests were collected and analyzed, a pre-final draft was produced in early fall 2000 as a result of an intensive editing process grounded in the expert input being received from around the world. The ICDH-2, unlike its predecessor, was from the outset developed in multiple languages, primarily to identify and respond to cross-cultural and linguistic differences that might affect the usefulness of the classification. The collaborating centers and others provided constant input at this stage as the language and classification structures were redrafted and refined in multiple iterations. The draft was put on the Internet for comment from a wide range of individuals, including both providers and consumers.

After presentation before the Executive Board in December 2000, the classification was put on the agenda of the Fifty-fourth World Health Assembly and renamed the ICF. The new title reflected the philosophy of moving beyond the consequence of disease approach and highlighted functioning as a component of health. In May 2001, it was unanimously endorsed, member States were urged "...to use the ICF in their research, surveillance and reporting as appropriate."

With its approval, the ICF became a member of the WHO family of international classifications. Whereas ICD-10 provides the codes for mortality and morbidity, ICF provides the codes to describe the complete range of functional states that capture the complete experience of health. The ICD-10 and ICF are, therefore, complementary and WHO encourages users to

utilize both together, wherever applicable. This will ensure a more meaningful and complete picture of the health of people or populations.

Soon after its official release, WHO's Director General, Gro Harlem Brundtland, announced that the ICF is WHO's framework for measuring health and disability at both the individual and population levels. WHO has already implemented ICF as the basis for its extensive World Health Survey program, demonstrating its use as a global and universal tool. To improve health, tools are needed to measure health, and in particular to measure the changes in health brought about by interventions. "ICF is the ruler with which we will take precise measurements of health and disability." (Brundtland, 2002.)

From the public health perspective, the usefulness of ICF goes beyond that of the measuring of population health and the effectiveness of internationally coordinated interventions funded by initiatives, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria. In addition, with the ICF as their framework, countries will be able to identify social factors such as education, transportation, or housing, both as determinants of health, and social factors influenced by improvements in health. Making these links will further support the relationship between health and economic development. In short, we have "...in the shape of a little red book, an extraordinarily versatile tool—a Swiss Army Knife for health ministries, researchers and decision-makers." (Brundtland, 2002.)

Undoubtedly the primary reason that ICF can plausibly claim to be a universal tool for classifying states of functioning and disability is that the underlying model of the ICF reflects our best understanding of the complex phenomena of functioning and disability in a manner that is, to the greatest extent possible, theory-neutral

and therefore compatible with whichever theoretical account of how disability arises, at the individual and population levels, that evidence may confirm. It is the conceptual basis for the definition, measurement, and policy formulations for all aspects of disability. A paradigmatic shift in the thinking with regard to disability that is captured in the ICF is the stress placed on health and levels of functioning. Heretofore, disability has been construed as an all or none phenomenon: a distinct category to which an individual either belonged or not. The ICF, on the other hand, presents disability as a continuum, relevant to the lives of all people to different degrees and at different times in their lives. Disability is not something that happens only to a minority of humanity, it is a common (indeed natural) feature of the human condition. The ICF is for all people, not just people traditionally referred to as disabled and isolated as a separate group.

ICF thus mainstreams the experience of disability and recognizes it as a universal human experience. By shifting the focus from cause to the full range of lived experiences, it places all health conditions on an equal footing, allowing them to be compared using a common metric—the ruler of health and disability. From emphasizing people’s disabilities, and labeling people as disabled, we now focus on the level of health and functional capacity of all people.

Decrements in functioning may be the result of decrements in intrinsic capacity or problems with body functions or structures; or they can result from features of the person’s physical, human-built or social environment that lead to problems in performance over and above decrements in capacity. Very likely, decrements in functioning are the result of both processes. Yet, the extent to which intrinsic decre-

ments in capacity or environmental factors are the cause is not a matter that can be determined a priori. It is a matter of empirical investigation.

Moreover, ICF is grounded in the principle of universality, namely that functioning and disability are applicable to all people, irrespective of health condition, and in particular that disability—or decrement in functioning at one or more levels—is not the mark of a specific minority class of people, but is a feature of the human condition, which is, epidemiologically speaking, over the lifespan, a universal phenomena. In addition, ICF is committed to the principle of parity, which states that the functional status is not determined by background etiology, and in particular by whether one has a physical rather than mental health condition.

Much time, effort, and international collaboration has gone into the development of the ICF. It is no longer plausible to insist that the ICF is a medical classification of people with disability, that it reduces all issues of functional status to underlying medical conditions, that it ignores the often salient role of the physical and social environment in the creation of restrictions of participation experienced by persons with functional problems. The revision process has produced a classification that has already stood up to rigorous tests of validity, reliability, and cross-cultural applicability. It is, as the NCVHS has concluded, “...the only existing classification system that could be used to code functional status across the age span.” We now turn to the structure of ICF as a classification system, in part to show why the committee has correctly assessed the value of the ICF as a coding system for functional status, suitable for use in administrative records.

Table 1
International Classification of Functioning, Disability and Health Definitions

Body Functions	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 or structure such as a significant deviation or loss.
Activity	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.

SOURCE: (World Health Organization, 2001.)

CLASSIFICATION OF FUNCTIONAL STATUS

The model that informs ICF, portrays functioning and decrements in functioning, or disability, as a dynamic interaction between health conditions (diseases, disorders, and injuries) and contextual factors. Contextual factors include environmental factors, that is, all aspects of the physical, human-built, social, and attitudinal environment that create the lived experience of functioning and disability. Although not classified in ICF, contextual factors also include personal factors such as sex, age, coping styles, social background, education, and overall behavior patterns that may influence how disability is experienced by the individual. The terms functioning and disability in the ICF are the general or umbrella terms for, respectively, the positive and negatives aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors). In the ICF, health condition is the umbrella term for disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as pregnancy, aging, stress, congenital anomaly, or genetic predisposition. Health conditions are coded using the ICD-10.

The ICF interactive model identifies three levels of human functioning: functioning at the level of body or body part, the whole person, and the whole person in

their complete environment. These levels in turn define three aspects of functioning: body functions and structures, activities, and participation. Disability similarly denotes a decrement in functioning at one or more of these levels—that is, an impairment, activity limitation or participation restrictions. Table 1 lists formal definitions of the ICF.

Table 2 shows the complete list of all of the chapters found in the three classifications included in ICF. Under each of these chapters are second, third, and in some instances, fourth levels of categories, arranged in a hierarchical, tree-branch-stem-leaf, arrangement. This structure makes it possible for ICF to be used as a classification tool for systematically describing situations of human functioning and problems with functioning. This complex information is organized by ICF by means of a hierarchical coding system, thereby creating a common international language for functioning and disability. ICF organizes information by means of several classifications distributed into two parts: (1) a component of functioning and disability that includes the component of the Body with the Body Function and Body Structure classifications, and the component of Activities and Participation that includes all domains denoting aspects of functioning from an individual and social perspective organized into a single classification, and (2) a component of Contextual Factors that has a list of Environmental Factors organized from the individual's most immediate

Table 2
International Classification of Functioning, Disability and Health's List of Human Functioning Categories

Body	
Function:	Structure:
Mental Functions	Structure of the Nervous System
Sensory Functions and Pain	The Eye, Ear and Related Structures
Voice and Speech Functions	Structures Involved in Voice and Speech
Functions of the Cardiovascular, Haematological, Immunological and Respiratory Systems	Structure of the Cardiovascular, Immunological and Respiratory Systems
Functions of the Digestive, Metabolic, Endocrine Systems	Structures Related to the Digestive, Metabolic and Endocrine Systems
Genitourinary and Reproductive Functions	Structure Related to Genitourinary and Reproductive Systems
Neuromusculoskeletal and Movement-Related Functions	Structure Related to Movement
Functions of the Skin and Related Structures	Skin and Related Structures
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	
Environmental Factors	
Products and Technology	
Natural Environment and Human-Made Changes to Environment	
Support and Relationships	
Attitudes	
Services, Systems and Policies	

SOURCE: (World health Organization, 2001.)

to the wider environment. The classifications in the first part identify all of the domains of functioning—from basic physiological functions and body structures, to simple and complex actions, tasks, social performances and relationships. The Environmental Factors list provides a tool for identifying those features of a person's physical, human-built, social and attitudinal environment that, in interaction with the domains of functioning, constitute the complete lived experience of human functioning and disability. Within the Contextual Factors part, besides the Environmental Factors, the ICF recognizes the existence of Personal Factors as another component, but provides no classification of these. Domains are a practical, meaningful set of

related physiological functions, anatomical structures, actions, tasks, or areas of life. Domains make up the different chapters and blocks within each component (World Health Organization, 2001).

In order for these domains to capture descriptive information about functioning and disability in particular cases, they must be used in conjunction with qualifiers that record the presence and severity of a problem or decrement in functioning at the body, person, and social levels.

For the classifications of Body Function and Structure, the primary qualifier indicates the presence of an impairment and, on a five-point scale, the degree of the impairment of function or structure (no impairment, mild, moderate, severe, and complete). In the case

Table 3

Organized Data are in the Activity and Participation Domains of the International Classification of Functioning, Disability and Health

Domains		Qualifiers	
		Performance	Capacity
d1	Learning and Applying Knowledge	_____	_____
d2	General Tasks and Demands	_____	_____
d3	Communication	_____	_____
d4	Mobility	_____	_____
d5	Self-Care	_____	_____
d6	Domestic Life	_____	_____
d7	Interpersonal Interactions and Relationships	_____	_____
d8	Major Life Areas	_____	_____
d9	Community, Social, and Civic Life	_____	_____

SOURCE: (World Health Organization, 2001.)

of the Activity and Participation list of domains, two essential qualifiers are provided to capture the full range of relevant information about disability.

The performance qualifier is used to describe what an individual does in their current or actual environment, including whatever assistive devices or other accommodations the person may use to perform actions or tasks and whatever barriers and hindrances exist in the person's actual environment. Because the current environment always incorporates the overall social context, performance might be understood as involvement in the lived experience of disability. The capacity qualifier describes an individual's inherent ability to execute a task or an action. Operationally, this qualifier identifies the highest probable level of functioning of a person in a given functional domain at a given moment without any specific assistance. For measurement purposes, this level of capacity presumes a standardized assessment environment, namely one that reveals the inherent capacity of a person in a specific functional domain without any particular enhancements. The Environmental Factors list can be used to describe such a standard assessment environment in order to ensure that results across different studies can be compared by holding this environment constant.

Intuitively, the performance qualifier captures what people actually do in their lives, whereas the capacity qualifier identifies the person's inherent capacity without explicit environmental facilitation (or hindrance). WHO is developing a standard application guide that will operationalize the constructs of capacity and performance with respect to individual items that form the classification. Table 3 shows how data can be organized to reflect the role of these two qualifiers used for the domains of the Activity and Participation classification.

As a general matter of describing functioning and disability phenomena fully and accurately, the performance/capacity construct is of great value. Having access to both performance and capacity data enables ICF users to determine the gap between capacity and performance. If capacity is less than performance, then the person's actual or current environment has enabled him or her to perform better than what data about their capacity would predict: the environment has facilitated performance. On the other hand, if capacity is greater than performance, then some aspect of the environment is acting as a barrier to a level of performance that is feasible in a more suitable environment. ICF thus makes it possible to measure the

effect of a person's environment on their decrement in functioning, given their health condition.

The Environmental Factors classification can be used to identify specific features of the person's actual environment that are barriers or facilitators in general for the person or with specific regard to each item of the person's body functions, body structures or activities and participation that have been described. It can also be used, as previously stated, to describe specific testing environments where capacity has been measured.

For its use as a classification of functional status relevant for health administrative records, ICF provides a complete classification of both body and person level domains of functioning. Given that it has been designed for a multiplicity of uses and users, there is far more in ICF than could ever be plausibly integrated into a viable coding system for health records, although it remains the ultimate lexicon to which any coder, for clinical or research purposes, could turn. Clearly, for implementation purposes in this area, a simplified checklist of items is needed. Such a checklist was produced and used during the beta 1 and 2 field-testing phase in the revision process (World Health Organization, 2001). This checklist, which takes less than 30 minutes to complete, is currently being extensively tested in clinical studies in different disorders in order to study its feasibility, reliability, and concurrent validity with existing assessment instruments as part of a larger project to define core sets of items that may be used in rehabilitation settings for specific conditions and across several disorders (Stucki et al., 2002). The core sets of items with their corresponding scales could also be then converted into even shorter assessment instruments. The challenge for incorporating the ICF into clinical and administrative records beyond a lexi-

con and framework lies in identifying this parsimonious set of domains or items that captures decrements in functioning across different health conditions and a smaller subset of domains or items that uniquely describe the decrements of functioning that typify a given health condition. In addition, the mapping of instruments (that measure functioning and disability that are already in use) onto ICF categories will allow a ready crosswalk between measurements already being made at points of encounter to a common framework (Cieza et al., 2002).

The use of the ICF in larger population based surveys will also provide data on norms and distributions of health, functioning and disability that will enable the setting of appropriate thresholds for a multitude of purposes. Table 4 maps the domains of the ICF that have been included in different waves of the World Health Survey that ought to be included as a minimum or ideal set for information systems. These domains are also included on the ICF checklist, which is designed to be a clinical tool.

Primary data collection strategies with regard to functional status, in a manner that is truly comparable, are in their infancy especially for international use and for use across population groups. Further tools need to be developed, and standards and procedures established, so that these data become meaningful and usable.

As a final issue, it must be mentioned that the ICF has been conceived as a dynamic classification that will not only serve multiple users requiring different levels of detail, but also will continue to evolve with advancements in science. The classification is flexible in its structure such that it can be expanded in the level of detail (for example, the fourth level) for specific uses, or new codes added where gaps have been left in the numbering

Table 4
International Classification of Functioning, Disability and Health Domains

Body Functions and Structures	Chapter and Code		Classification Block or Category
Vision	2	b210–b220	Seeing and Related Functions
Hearing	2	b230–b240	Hearing and Vestibular Functions
Speech	3	b310–b340	Voice and Speech Functions
Digestion	5	b510–b535	Functions of the Digestive System
Bodily Excretion	6	b610–b630	Urinary Functions
Fertility	6	b640–b670	Genital and Reproductive Functions
Sexual Activity	6	b640	Genital and Reproductive Health
Skin and Disfigurement	8	b810–b830	Skin and related Structures
Breathing	4	b440–b460	Functions of the Respiratory System
Pain ¹	2	b280	Pain
Affect ¹	1	b152–b180	Specific Mental Functions
Sleep	1	b134	Global Mental Functions
Energy/Vitality	1	b130	Global Mental Functions
Cognition ¹	1	b140,b144,b164	Attention, Memory and Higher–Level Cognitive Functions
 <u>Activities and Participation</u>			
Communication	3	d310–d345	Communication Receiving—Producing
Mobility ¹	4	d450–d465	Walking and Moving
Dexterity	4	d430–d445	Carrying, Moving and Handling Objects
Self-Care ¹	5	d510–d570	Self-Care
Usual Activities ¹	6, 8		Domestic Life; Major Life Areas
Interpersonal Relations	7	d730–d770	Particular Interpersonal Relationships
Social Functioning	9	d910–d930	Community Social and Civic Life

¹ Candidate items for a minimal list.

SOURCE: (World Health Survey 2003).

system. A set of operational rules will specify the procedure for this evidence-based expansion, adaptation, or revision of the classification.

CONCLUSION

A common language for describing FSI is the key to ensuring comparability of data from a myriad of sources as well as in providing users with a tool for precise and accurate communication with each other. The recognition that a description of health and health-related outcomes must go beyond a narrow view of health restricted to the absence of disease, as well as that the definition of disability must move beyond the narrow impairment-based view that has been traditionally adopted to define a minority population, will go a long way in bridging the gap between health

and disability data. It will also fill the void in existing health outcomes data while measuring the impact of interventions and monitoring them over time. Health records must include functioning information in order to ensure a complete description of health states. The ICF is the common language and framework that users will employ from now on.

In the same way that all languages grow, evolve, and flourish over time and are adapted and modified to express new ideas, the ICF will have a multitude of applications where it will be creatively used such that it continues to be a living classification. As with all new languages, it will be important to develop tools to learn this new language. Toward this end, WHO is developing standardized application manuals and Web-based learning courses that will use state-of-the-art pedagogic methodology to assist

end users. Its usefulness in describing functional health status information will be one of the measures of its success.

REFERENCES

- Brundtland, G.H.: WHO Conference on Health and Disability. Internet address: http://www.who.int/directorgeneral/speeches/2002/english/20020418_disabilitytrieste.html. (Accessed 2002.)
- Cieza, A., Brockow, T., Ewert, T., et al.: Linking Health-Status Measurements to the *International Classification of Functioning, Disability and Health*. *Journal of Rehabilitation Medicine* 34(5):205-210, September 2002.
- Deyo, R.A., and Patrick, D.L.: Barriers to the Use of Health Status Measures in Clinical Investigation, Patient Care, and Policy Research. *Medical Care* 27(Suppl 3):S254-S268, March 1, 1989.
- Fries, J.F.: Aging, Natural Death, and the Compression of Morbidity. *New England Journal of Medicine* 303(3):130-135, July 17, 1980.
- Fries, J.F.: Aging, Cumulative Disability, and the Compression of Morbidity. *Comprehensive Therapy* 27(4):322-329, Winter 2001.
- Lubetkin, E.I., Sofaer, S., Gold, M.R., et al.: Aligning Quality for Populations and Patients: Do We Know Which Way to Go? *American Journal of Public Health* 93(3):406-411, March 2003.
- National Committee on Vital and Health Statistics: *Classifying and Reporting Functional Status*. Report of the Subcommittee on Population. 2001. Internet address: <http://www.ncvhs.hhs.gov/010716rp.htm>. (Accessed 2003.)
- Organization for Economic Cooperation and Development: Fiscal Implications of Aging: Projections of Age-Related Spending. *OECD Economic Outlook* 69:145-167, 2001.
- Stucki, G., Cieza, A., Ewert, T., et al.: *Application of the International Classification of Functioning, Disability and Health (ICF) in Clinical Practice*. *Disability and Rehabilitation* 24(5):281-282, March 2002.
- Üstün, T.B., Chatterji, S., Bickenbach, J.E., et al.: Disability and Culture: Universalism and Diversity. Hogrefe and Huber. Bern, Switzerland. 2000.
- Üstün, T.B., Rehm, J., Chatterji, S., et al.: Multiple-Informant Ranking of the Disabling Effects of Different Health Conditions in 14 Countries. *Lancet* 354(9173):111-115, 1999a.
- Üstün, T.B., Saxena, S., Rehm, J., and Bickenbach, J.E.: Are Disability Weights Universal? *Lancet* 354(9186):1306, 1999b.
- Vita, A.J., Terry, R.B., Hubert, H.B., and Fries, J.F.: Aging, Health Risks and Cumulative Disability. *New England Journal of Medicine* 338(15):1035-1041, April 9, 1998.
- World Health Organization: *ICIDH: International Classification of Impairments, Disabilities and Handicaps. A Manual of Classification Relating to the Consequences of Disease*. Geneva, Switzerland. 1980.
- World Health Organization: *ICD-10: International Statistical Classification of Diseases and Related Health Problems*. Geneva, Switzerland. 1992. Internet address: <http://www.who.int/whosis/icd10/>. (Accessed 2003.)
- World Health Organization: *ICF: International Classification of Functioning, Disability and Health*. Internet address: <http://www.who.int/classification/icf>. (Accessed 2001.)

Reprint Requests: Somnath Chatterji, M.D., World Health Organization, Avenue Appia, Geneva 1207, CH1211, Switzerland. E-mail: chatterjis@who.int