Keeping Classification in the Family: WHO Framework Assigns Systems Based on Numerous Factors

Save to myBoK

by Catherine Sykes

Classifications are an essential part of health information infrastructures—they "group and organize information meaningfully and systematically into a standard format that is useful for determining the similarity of ideas, events, objects or persons."[1] Nationally endorsed classifications facilitate data storage, retrieval, analysis, and interpretation, including comparison within populations over time, comparison between populations at a single point in time, and compilation of nationally consistent data.

Classifications can promote data consistency and thus improve data quality by reducing the need to map, translate, or re-enter data. They reduce the cost of developing, collecting, aggregating, and analyzing data. Consistent and comparable data are important for providing information on aspects of patient care, including efficiency and effectiveness of resource utilization, and for monitoring the care and services provided and outcomes.

The WHO Family of International Classifications

The World Health Organization (WHO) has developed two classifications that can be used to describe an individual's health status at a particular point in time. Diseases and other health-related concepts, such as symptoms and external causes of injury, are classified by the International Statistical Classification of Diseases and Related Health Problems, in its 10th revision (ICD-10).[2] Functioning and disability are classified separately by the International Classification of Functioning, Disability and Health (ICF).[3]

Generally speaking, individual health experiences can be described using the dimensions of the ICD and ICF. The needs of the user will determine the number of dimensions and the level of specificity of classification used. The purpose of the WHO Family of International Classifications (FIC) is to promote the appropriate selection of classifications in the range of settings in the health field internationally. WHO member states are encouraged to use WHO-FIC classifications in their research, surveillance, and reporting. The family provides:

- A conceptual framework of information domains for which classifications are or are likely to be required for purposes related to health and health management
- A statement of endorsed classifications for particular purposes defined within the framework

Scope of the WHO-FIC

WHO defines health as "a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity."[4] Health, or state of health, can be defined in terms of an individual and that person's goals and expectations. For example, a professional gymnast with a need to be extremely flexible will feel unhealthy at a level most people would consider healthy; a person born with cystic fibrosis may never know the level of energy most people associate with health. The individual defines when his or her state of health generates a health problem, either by accessing or seeking access to the health system or by describing the issues of concern to a physician. The health system includes "all activities whose primary purpose is to promote, restore, or maintain health."[5]

The following are included within the scope for WHO-FIC purposes:

- Health status
- Healthcare
- Health policy and planning
- Disability policy and planning

- Communicable disease control
- Selected health promotion
- Organized immunization
- Environmental health
- Food standards and hygiene
- Health screening
- Prevention of hazardous and harmful drug use
- Public health research
- External causes of injury
- Occupational health

To specify a manageable family of classifications, the health system can be described using two dimensions. A conceptual framework of the health system has been used for one dimension. This is based on the Canadian Health Information Roadmap, developed in 1998 to guide health information developments in that country.[6] The framework is also consistent with the conceptual model for the Australian health system, a process under way in the US to develop a vision for national health statistics, and the WHO's view of health that places people at the center of health services.[7,8,9]

The second dimension is areas of application. This is a multiconceptual dimension including a combination of settings, measurement methods, target group, methods of data collection, and data informants. Putting the two dimensions together produces a matrix (see below). The matrix has been devised as the entry point to a knowledge base: from each cell it is possible to drill down to a classification for use in a more specialized area of application. An electronic tool to view the scope of the matrix has been developed.

Classifications in the WHO-FIC

Three types of classification in the WHO-FIC are recognized in the United Nations' basic principles for standard statistical classifications.

Reference classifications are a product of international agreement. They have achieved broad acceptance and official agreement for use and are approved and recommended as guidelines for reporting. They may be used as models for the development or revision of other classifications, with respect to both structure and character and definition of the categories.

Derived classifications are based upon reference classifications. Derived classifications may be prepared either by adopting the reference classification structure and categories and providing additional detail beyond that provided by the reference classification or through rearrangement or aggregation of items from one or more reference classifications. Within the WHO-FIC, derived classifications may include specialty-based adaptations of ICF or ICD, such as the International Classification of Diseases for Oncology, third revision (ICD-O-3).

Related classifications are those that partially refer to reference classifications or that are associated with the reference classification at specific levels of the structure only. The International Classification of External Causes of Injury is a related member of the WHO-FIC.[10] It refers to Chapter XX of ICD-10, but also includes dimensions to classify activity when injured, mechanism of injury, place of occurrence, and other dimensions of interest when collecting data to inform injury prevention.

At present there are cells in the matrix for which there are no identified and endorsed classifications. It is desirable that further classifications will be brought within the WHO-FIC so that a better picture of world health and health systems can be described.

WHO Family of International Classifications						
Area of Application	Factors influence health and well being		Health and well being		Interventions/ services	Resources
	Environ-mental	Personal	Health condition, disease, problem	Function-ing and disability	Prevention, assessment, and diagnosis,	Research, evalu-ation, monitoring, other infor-mation,

					therapeutic, maintenance	financial, material, human
Mortality (cause of death)	**ICD-10**	The United Nations maintains classifications of a range of variables relevant to this, including industry and occupation. These standard classifications, or classifications which are compatible with them, are to be used in health data collection. Some personal factors have not been defined and classified (e.g., genetic profile or coping styles).	**ICD-10**			The United Nations maintains classifications of a range of variables relevant to these, including industry and occupation. These standard classifications, or classifications which are compatible with them, are to be used in health data collection.
Self-report (e.g., population health survey and reason for encounter)	**ICF**			**ICF**		
Population and environmental health	**ICF**		**ICD-10**	**ICF**	ISO9999**	
Primary care - Gen. Pract. - Emergency - Other	**ICF** - ICECI** -		ICPC-2**	**ICF**	ICPC-2**	
Acute hospital admissions	**ICD-10** (Ch. XX)		**ICD-10**	**ICF**	**ICHI***** ATC/DDD** ISO9999**	
Specialized care (residential or nonresidential)	**ICF**		ICD-0-3* ICD-DA* ICD-NA* ICD Mental Health*	**ICF**	ATC/DDD** ISO9999**	

Blank cells represent lack of identified and endorsed classifications.

Bold = reference classification

*   Derived classification

**   Related classification

***   Reference classification under development

The FIC can be visualized as a matrix, with areas of application plotted against health factors, health conditions, services, and resources. Classification systems are assigned to the intersections.

Notes

1. Hoffman, Eivind, and Mary Chamie. "Standard Statistical Classifications: Basic Principles." New York: United Nations, 1999.
2. World Health Organization (WHO). *International Statistical Classification of Diseases and Related Health Problems.* 10th edition. Geneva: WHO, 1992.
3. WHO. *International Classification of Functioning, Disability, and Health.* Geneva: WHO, 2001.
4. WHO. *Constitution of the WHO.* Reprinted in "Basic Documents," 37th ed. Geneva: WHO.
5. WHO. "The World Health Report 2000 Health Systems: Improving Performance." Geneva: WHO, 2000.
6. Canadian Institute for Health Information. "Health Information Roadmap: Responding to Needs." Available online at http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=profile_roadmap_needs_e.
7. Australian Institute of Health and Welfare. *Australia's Health 2004.* Canberra, Australia: AIHW, 2000.
8. National Center for Vital and Health Statistics. "Shaping a Vision for the 21st Century: Final Report." Available online at www.ncvhs.hhs.gov/210final%20report.pdf.
9. WHO. *International Classification of Diseases for Oncology.* 3rd ed. Geneva: WHO, 2000.
10. WHO Working Group on Injury Surveillance Methods. *International Classification of External Causes of Injury (ICECI): Data Dictionary*, version 1.1a. Consumer Safety Institute, Amsterdam, and AIHW National Injury Surveillance Unit: Adelaide, 2003.

Acknowledgment

Catherine Sykes *(catherine.sykes@aihw.gov.au) is with the Australian Institute of Health and Welfare.*

Article citation:
Sykes, Catherine. "Keeping Classification in the Family: WHO Framework Assigns Systems Based on Numerous Factors." *Journal of AHIMA* 75, no.8 (September 2004): 72-74.

Driving the Power of Knowledge