A conceptual framework for the revision of the ICD-10 classification of mental and behavioural disorders

**International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders**

Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland

The World Health Organization (WHO) is revising the ICD-10 classification of mental and behavioural disorders, under the leadership of the Department of Mental Health and Substance Abuse and within the framework of the overall revision framework as directed by the World Health Assembly. This article describes WHO’s perspective and priorities for mental and behavioural disorders classification in ICD-11, based on the recommendations of the International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders. The WHO considers that the classification should be developed in consultation with stakeholders, which include WHO member countries, multidisciplinary health professionals, and users of mental health services and their families. Attention to the cultural framework must be a key element in defining future classification concepts. Uses of the ICD that must be considered include clinical applications, research, teaching and training, health statistics, and public health. The Advisory Group has determined that the current revision represents a particular opportunity to improve the classification’s clinical utility, particularly in global primary care settings where there is the greatest opportunity to identify people who need mental health treatment. Based on WHO’s mission and constitution, the usefulness of the classification in helping WHO member countries, particularly low- and middle-income countries, to reduce the disease burden associated with mental disorders is among the highest priorities for the revision. This article describes the foundation provided by the recommendations of the Advisory Group for the current phase of work.

**Key words:** Mental disorders, classification, International Classification of Diseases, clinical utility, cross-cultural applicability

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The World Health Organization (WHO) is in the process of revising the International Classification of Diseases and Related Health Problems, currently in its tenth version (ICD-10). The WHO Department of Mental Health and Substance Abuse is responsible for the revision of the ICD-10 classification of mental and behavioural disorders, within the overall framework of the ICD revision effort. The purpose of this article is to articulate WHO’s perspective and priorities for the ICD-11 mental and behavioural disorders classification, based on the initial period of work by the International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders.

The WHO is a specialized agency of the United Nations established in 1948, whose mission is the attainment by all peoples of the highest possible level of health. The WHO has explicitly defined mental health as a part of health from its inception. WHO’s constitution (1), ratified by all 193 current WHO member countries, enumerates its core responsibilities, which include: establishing and revising international nomenclatures of diseases, causes of death and public health practice; and standardizing diagnostic procedures as necessary. Classification systems are therefore a core constitutional responsibility, which the WHO does not have the option of devolving to other parties. The ICD is the oldest, most central, and most historically important of WHO’s classification systems.

The purpose of the ICD is to serve as an international standard for health information to enable the assessment and monitoring of mortality, morbidity, and other relevant parameters related to health. The WHO is the only organization with the ability to secure global cooperation and international agreement on these issues and is therefore in a unique position to initiate and promote global health standards. WHO’s classification systems are the basis for tracking epidemics and disease burden, identifying the appropriate targets of health care resources, and encouraging accountability among member countries for public health at the population level. WHO’s classification systems are also among the core building blocks for the electronic health information systems that are of increasing importance in many countries.

As a common classification framework, the ICD has fostered global communication and information exchange. At the clinical level, classifications enable communication among health professionals, their patients, and the health systems in which they work, and facilitate the training of health professionals across countries and cultures. WHO classifications also serve other sectors, including health policy makers and payers of health care services, the judicial system, and governments. Because the ICD plays such a crucial role in the international health community, it is critical that it be based on the best available scientific knowledge and that it keep pace with significant advances in health care that have the potential to improve its reliability, validity, and utility. The ICD-10 was approved by the World Health Assembly in 1990 and published in 1992 (2), making the current period the longest in the history of the ICD without a major revision. The World Health Assembly, comprised of the health ministers of all WHO member countries, has directed WHO to revise the ICD-10. The technical work associated with the preparation of ICD-11 in scheduled for completion in 2013. It is envisioned that the World Health Assembly will ap-
prove the ICD-11, covering all diseases, disorders, injuries, and health conditions, in 2014.

Within the context of the overall revision framework, the revision of ICD-10 Chapter V (F), Mental and Behavioural Disorders, is being undertaken. Conducting the Chapter V revision within the overall context of ICD revision facilitates coordination with classification of other disorders, including neurological and other medical conditions that are frequently comorbid with mental and behavioural disorders. The inclusion of mental and behavioural disorders alongside all other diagnostic entities in health care is an important feature of the ICD, facilitating the search for related mechanisms of etiology, pathophysiology, and comorbidity of disease processes and providing a solid basis for the parity of psychopathology with the rest of the medical system for clinical, administrative, and financial functions in health care.

To assist with the current revision of the ICD mental and behavioural disorders classification, the WHO convened a high-level International Advisory Group in January 2007, with the primary task of advising on all steps leading to the revision of the chapter on mental and behavioural disorders in ICD-10 in line with the overall revision process. The Advisory Group includes experts from all WHO regions, as well as representatives of international associations of multidisciplinary mental health professionals. The Advisory Group has considered a number of important foundational issues on which specific revision activities in the next phase of work have to be based, achieving a fairly remarkable degree of consensus in its perspective. The following sections describe some of the basic conceptual issues considered and recommendations made by the Advisory Group.

WHAT IS A MENTAL DISORDER?

One of the earliest questions confronting the Advisory Group was how mental disorders should be defined. This definition of mental disorders sets the boundaries for what is being classified, and has enormous consequences for public health action, for governments, for health systems, and for research. For example, how mental disorders are defined affects epidemiological estimates of their prevalence, the legal protections available to people affected by them, the structure, functioning, and payment mechanisms for mental health service systems, and evaluation of the outcomes of mental health interventions.

The clinical descriptions and diagnostic guidelines for ICD-10 mental and behavioural disorders (3) define a mental disorder as “a clinically recognizable set of symptoms or behaviours associated in most cases with distress and with interference with personal functions”. The definition of mental disorders found in DSM-IV-TR (4) is similar, and has not changed since DSM-III (5): “a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress ... or disability or with a significantly increased risk of suffering death, pain, disability, or important loss of freedom...[that is] considered a manifestation of behavioral, psychological, or biological dysfunction in the individual”. The Advisory Group recommended that ICD-11 use the same definition for mental and behavioural disorders used in ICD-10, favoring its simplicity over the more complex definition used in DSM. The Advisory Group also noted that the DSM-IV definition has a different relationship to issues of functional status than does the ICD-10 definition, a topic that is explored further in a later section of this article.

WHO’S CONSTITUENCIES FOR THE REVISION OF THE CLASSIFICATION

Due to their broad importance, the WHO considers that classifications should be designed in consultation and, where possible, collaboration with stakeholders. The first direct stakeholder group to which WHO considers itself accountable during the ICD revision, and WHO’s primary constituency, consists of the governments of WHO member countries. These governments have specific interests in ICD for several reasons. First, governments are asked to report morbidity and mortality statistics to the WHO according to the ICD classification. Second, governments want health classification to reflect their particular perspectives and priorities for health care. For example, they may not share the assumption that categories of mental illness are both culturally universal and adequately defined by existing categories. Third, governments are interested in the ICD because diagnostic classification provides a large part of the framework that defines the government’s obligations to provide free or subsidized health care, social services, and disability benefits to its citizens. Fourth, the interests of governments are aligned with the global public health priorities that are the reason for WHO’s existence: they want help in reducing the disease burden of mental and behavioural disorders. Finally, any changes to the existing ICD as it is used by member countries may involve the commitment of substantial resources to change existing record systems, health survey instruments, administrative procedures, health policy, and even legislation related to diagnosis. Governments may also have to make large investments in training health professionals to use the new system.

The second important group of direct stakeholders in the revision of the ICD mental health classification is health care professionals. Psychiatrists are not the only professionals involved in the diagnosis and classification of mental disorders. Only a very small percentage of individuals with mental disorders will ever see a psychiatrist. Psychiatrists are in relatively generous supply in high-income countries: about 10.5 per 10,000 population (6). But the proportion of the world’s population that live in these countries is small, only about 15%, and declining. By contrast, there is less than 1 psychiatrist per 100,000 population in low-income countries, which are home to nearly half the world’s people.
In lower-middle income countries, there is an average of about 1 psychiatrist per 100,000 population, and an average of 2.7 in upper-middle income countries (6).

Therefore, psychiatrists cannot be seen as the primary users and the sole professional constituency for the classification. Other professional groups should also have a meaningful and proportionate role in the process. This includes other mental health professionals such as psychologists, social workers, and psychiatric nurses. It also includes other physician groups, especially primary care physicians, as well as lay health care workers who deliver the majority of primary and mental health care in some developing countries. For this reason, representatives of international professional associations representing these groups have been included in the Advisory Group from the beginning. Geographic and linguistic diversity must also be addressed carefully in creating mechanisms for participation, as in the past it has generally been professionals from wealthier, usually Anglophone, countries who have been most easily able to travel and participate in meetings conducted in English. The influence of the pharmaceutical industry on some groups of professionals must also be addressed seriously. In order to avoid undue influence, the WHO considers that it is imperative to examine carefully possible conflicts of interest among participants in the revision of mental disorders classification and diagnostic criteria.

For the mental disorders classification in ICD, the WHO recognizes the users of mental health services and their family members as a third direct stakeholder group. The user community in mental health has been increasingly aligned with the disability rights movement, adopting the motto of ‘Nothing about us without us’, rejecting what they see as medical paternalism, and demanding to be consulted about the decisions that affect their lives. The ICD revision process must encompass substantive and serious opportunities for participation of user groups, not just symbolic and ritualistic gestures. At the same time, service user and family organizations are not monolithic, but rather characterized by a wide diversity of perspectives and opinions. Opportunities must be created for broader input that are structured and timed so that they contribute constructively to the revision process and are more than a political exercise.

UNIVERSALITY OF CATEGORIES

Universality of specific categories of mental disorders is an inherent assumption in ICD-10. This assumption has not been proven, however, and in spite of the repeated call for more attention to culture in psychiatric diagnosis by some authors, the issue of culture has largely been viewed as a distraction or source of error in classification (7). Attention to cultural framework cannot be optional but should become a key element in defining future classification concepts (8).

The WHO and the Advisory Group have been pursuing several strategies for increasing the global scope and range of information considered as a basis for revising the ICD mental and behavioural disorders classification, with the goal of improving its clinical utility and cultural applicability. First, a series of international and multilingual literature reviews have served to evaluate major trends, themes, and areas of active debate related to the classification of mental disorders, particularly concerning clinical utility in low- and middle-income countries. A second project has been a systematic analysis of country-level and regional diagnostic systems for mental disorders (e.g., 9,10), providing important data regarding which ICD elements are endorsed by local users as useful, which are seen as lacking, and what additional categories and alternative disorder descriptions may be needed. A third project has been a large international survey, carried out in collaboration with the WPA, of the attitudes of psychiatrists of the various countries of the world concerning diagnosis and classification of mental disorders. The results of this survey appear in this issue of World Psychiatry (11).

USES OF ICD-10 MENTAL AND BEHAVIOURAL DISORDERS CLASSIFICATION

The nature of the changes that will be made in the course of the revision will be heavily influenced by the uses of the classification that are considered important during the revision process. Five main uses of the ICD-10 mental and behavioural disorders classification can be identified: clinical uses; research uses; teaching and training uses; health statistics uses; and public health uses. How changes in the classification will influence its utility for all these purposes is an important focus of the revision process.

Clinical uses

Past revisions have focused primarily on the use of the classification by mental health professionals, particularly psychiatrists, in specialty mental health settings. The WHO published a volume of clinical descriptions and diagnostic guidelines (3), primarily intended for such applications. But the ICD mental and behavioural disorders classification is applied in a much broader range of settings – for example, primary, secondary and tertiary medical settings, substance abuse settings, and rehabilitation centres – and must be responsive to their needs.

From WHO’s point of view, the usefulness of the ICD mental and behavioural disorders classification in primary care settings is one of the most important considerations in the current revision. By definition, primary care settings are those in which people are most likely to come into contact with the health care system. Across the world, when people with mental disorders do receive care, they are far more likely to receive it in primary care than in specialty mental health settings (12). Therefore, primary care settings repre-
sent the best opportunity to improve the identification and effective treatment of people with mental disorders.

A classification system that is usable and useful for health care workers in those settings is a fundamental requirement for such an effort. Globally, primary health care workers are often not physicians, and are highly unlikely to be mental health professionals. In many community-based primary care settings in low-income countries, health workers may have limited formal professional training of any kind. After the previous revision of the ICD, the WHO created a modification of the mental and behavioural disorders classification for primary care (13). However, the usefulness of this system has been limited by the fact that it was adapted from the specialty classification, primarily by collapsing it, rather than being created on the basis of the needs and priorities of primary care settings (14). The Advisory Group has strongly emphasized the need for a separate primary care version of the ICD-11 mental and behavioural disorders classification. In contrast to the last revision process, however, the primary care version is being created simultaneously with the specialty version, based on the diversity and particularities of primary care settings and the characteristics of the health care personnel who work in them.

The revision process must also consider several other uses of the ICD in assessment and decision-making with individuals who may have mental disorders. These include forensic settings, where diagnosis and classification may be used as part of making decisions about competency and future risk, and social assistance settings, where eligibility and selection of benefits and services is partly based on diagnostic information. Another major sector in which the classification is used is educational settings, where diagnostic information is often used as a part of decision-making about the most appropriate educational placement and the nature of the educational services that a child receives. These applications tend to be very important to governments because of the direct implications they have for government decisions and responsibilities, but they received very little systematic consideration in previous revisions of the ICD mental and behavioural disorders classification.

Research uses

Mental and behavioural disorders classifications are used in a wide variety of research areas, including genetics, neuroscience, epidemiology, development of pharmacological and psychosocial treatments, health services and outcomes, and prevention and health promotion research. However, the requirements of clinical trials have had a disproportionate influence on the nature of the classification over time. Clinical trials require highly specified patient groups that can be described as having a specific diagnosable disorder based on explicit criteria that can be precisely replicated in different settings by different researchers. Sometimes, this results in large numbers of potential research participants being excluded for a particular trial, even when clinicians would judge them to have the relevant condition. This emphasis has contributed to the problems of over-specification and reification that characterize current classification of mental disorders (15,16). These characteristics have not only limited the classification’s clinical utility, but have also created barriers to research into shared basic mechanisms underlying mental disorders and symptom expression (17).

Utility for research is an important consideration, but this is only one of several major uses of the ICD. Moreover, the usefulness of the classification as an organizing framework for research should not be confused with the scientific basis of the classification itself. In recognition of the specific needs of researchers and the need for operationalized criteria that could be used in epidemiological and clinical studies, the WHO published diagnostic criteria for research for the ICD mental and behavioural disorders classification in 1993 (18). Whether or not such criteria are published as a separate book, operationalized and replicable diagnostic criteria will also be needed for ICD-11 for these same purposes.

Teaching and training uses

The ICD-10 mental and behavioural disorders classification is an integral part of training for a wide range of mental health providers, and serves as an organizing principle in the education of psychiatrists, psychologists, social workers, mental health nurses, and other social, mental health, and occupational professionals. It is also important in the training of general medical professionals, including physicians, nurses, and other practitioners. And it is used in the training of professionals outside the health sector, for example of forensic and educational professionals. This area has not been a systematic focus in the past, but a variety of initiatives to assist in the training of professionals to use ICD-11 will be necessary.

Health statistics uses

As noted, ICD-10 is used as a basis for routine population-based collection of health information as well as mandatory statistical reporting by WHO member countries. This information is used for both internal and external purposes. The nature of health information systems using the ICD varies dramatically across WHO member countries, ranging from sophisticated, integrated, electronic case records to nearly nonexistent health records where information is recorded entirely by hand, if at all. The expenses involved in making the transition to a new classification may be difficult for governments to take on, regardless of how much better the new system is. The WHO will need to develop effective ways of making the case to the health ministries of member countries’ governments that the new classification will produce benefits that justify the costs of making the change.
Public health uses

If the ICD-11 classification of mental and behavioural disorders is to be true to WHO's constitution and charter, its public health application must be its most important orienting principle. The revision should seek to maximize the contribution of the classification to collective action for sustained population-wide health improvement. More specifically, as part of the revision process, consideration should be given to how the classification system can assist in: a) decreasing the incidence and prevalence of mental disorders; b) decreasing disability associated with mental disorders; c) improving the accessibility and delivery of mental health services; d) promoting mental health; and e) evaluating public health needs and monitoring trends.

The most important global challenge in mental health is what the WHO often refers to as the mental health gap (19). Neuropsychiatric disorders account for a greater share of total global disease burden and disability than any other category of non-communicable disease (20). Yet, treatment remains unavailable or woefully inadequate. In developing countries, fewer than 25% of people with even severe mental disorders receive any treatment at all (21). Worldwide, the gap between those who need treatment and those who receive it ranges from 32% to 78%, depending on the disorder (22). In addition to the scarcity of mental health professionals, other factors that contribute to the mental health gap include the under-resourcing of mental health care systems, issues of stigma, inadequate prevention programming, and lack of parity in health financing including through insurance coverage (23).

To address the mental health gap, WHO considers the development of more accessible and less stigmatized services, that reach more of the population in need and increase the population impact of services for mental health and substance abuse disorders, to be an urgent priority. Currently available services often bear little relation to those with sound scientific support that may be more cost-effective. In order to improve the quality of mental and substance use disorder treatment at a population level, the allocation of limited intervention resources should be brought more in line with the epidemiology, natural course and disease burden of these disorders. The ICD is an integral part of such an effort. People are only likely to have access to the most appropriate mental health services when the conditions that define eligibility and treatment selection are supported by a precise, valid, and clinically useful classification system.

DISENTANGLING DIAGNOSIS AND THE FUNCTIONAL IMPACT OF MENTAL DISORDERS

In 2001, the World Health Assembly approved the International Classification of Functioning, Disability, and Health (ICF) (24). The ICF provides a systematic and universal framework for describing the ways in which human functioning may be affected by a health condition. The ICF was designed to “provide a unified and standard language and framework for the description of health and health-related states”. The ICF does not classify diseases, disorders, injuries, or health problems, which is the purpose of the ICD. The ICF was designed as a complementary system, meant to be used together with the ICD, to classify the functional consequences, components, or correlates of health conditions.

The approval of the ICF represents a policy basis for the position that functional status and disability – those things that are categorized by the ICF – should not be part of the definitions and criteria for the diagnostic entities classified by the ICD. Another reason that this discussion has been an important focus of the Advisory Group is that differing conceptualizations of functioning and disability in relation to diagnosis are one of the most significant differences between the ICD-10 mental and behavioural disorders classification and the DSM-IV (25). As noted earlier in this article, the Advisory Group endorsed the ICD-10 definition of a mental disorder as a working definition for ICD-11. This definition refers to functional impairment but does not require it, simply indicating that mental disorders often interfere with personal functioning. The clinical descriptions and diagnostic guidelines for ICD-10 mental and behavioural disorders (3) provide more specific guidance, stating as a general principle that interference with the performance of social roles (e.g., family, employment) should not be used as a diagnostic guideline or criterion.

Üstün and Kennedy (26) have proposed an even stricter separation of functional status and diagnosis than characterizes ICD-10: “No functioning or disability should appear as part of the threshold of the diagnosis... A separate rating of the disorder severity (i.e., mild, moderate, or severe), after a diagnosis has been made, would rely on an assessment of the development of the disease, its spread, continuity or any measure independent of disability parameters, so as to avoid co-linearity”. The Advisory Group, however, suggested that the ability to make this distinction is less than perfect given the current state of science and clinical practice, citing the general lack of direct, objective disease indicators for mental disorders as well as the continuity of some phenomena considered to represent mental disorders with normal variations in behaviour. Consequently, in some specific diagnoses it may be necessary to refer to specific types of functional impairment as thresholds for separating disorder from non-disorder when more “direct” indicators of disease processes are not available.

Therefore, the Advisory Group has recommended that a reformulation of diagnostic definitions, descriptions, and criteria so as to exclude the phenomena considered to be representative of functional impact be undertaken where possible, and categories where it is not possible be clearly identified. If an inference about an underlying pathological phenomenon is being made based on a distinctive pattern of functional disturbance, this should be made explicit. The Advisory Group also noted that the development of valid and systematic methods for assessing functional status is a
separate activity that it sees as falling outside the scope of the classification itself.

THE SCOPE OF THE DIAGNOSTIC CLASSIFICATION

A related question is whether the diagnostic classification should include additional information or dimensions that, while not a part of diagnosis per se, are important for making decisions about patient care, such as associated disability, acuity, exacerbating psychosocial factors, level of social support, and cultural factors. Some have suggested that, when there is strong evidence for the use of particular treatments for particular disorders, this information should be included in the diagnostic classification. From a public health perspective, information about risk factors and protective factors may also be very important in formulating population-based strategies.

However, the Advisory Group took the position that diagnostic classification is only a part of patient assessment and that the classification system should not attempt to function as a guide to patient care or a comprehensive textbook of psychiatry. The focus of the ICD is on the classification of disorders and not the assessment and treatment of people, who are frequently characterized by multiple disorders and diverse needs. The mental and behavioural disorders classification must also be consistent with the rest of the ICD, which does not include such information for other areas. Therefore, the Advisory Group recommended against attempting to provide associated features and disorders, laboratory findings, physical examination, medical conditions, prevalence, course, and familial patterns as a part of the diagnostic classification system, unless these are needed for making a diagnosis. Similarly, most risk factors and protective factors are non-specific; they are common to many mental disorders and indeed to other types of health conditions, so it may be more useful to include a chapter on these as part of the overall ICD rather than as part of the mental and behavioural disorders classification.

Additional information beyond the diagnostic categories and descriptions is clearly needed to improve the quality of care and the impact of services for mental and behavioural disorders. It may be useful for countries, regions, or international professional associations to develop additional guidance about the use of the ICD-11 classification of mental and behavioural disorders as a part of patient assessment and treatment in different care settings. It is essential that such elaborations be consistently based on the ICD diagnostic definitions and the WHO will consider being a partner in the development of such additional materials in order to facilitate this goal.

PRIORITIES FOR THE CLASSIFICATION OF MENTAL AND BEHAVIOURAL DISORDERS IN ICD-11

A purely scientific basis for mental disorders classification continues to be elusive. Thus far, neurobiological phenotypes or genetic markers useful in making the diagnosis of specific mental disorders in particular individuals have not been identified, and dramatic advances in neurosciences still fall short of providing a basis for a classification that is usable in clinical settings (27,28). Research to date has not provided a clear, validity-based overarching structure or coherent set of organizing principles for a standard diagnostic system or led to the scientific validation of individual diagnostic entities and criteria. At the same time, there is no shortage of evidence that existing classifications are characterized by serious problems of clinical utility (29-31). Based on this state of affairs, the Advisory Group has suggested that the current, mandated revision of the ICD mental and behavioural disorders classification represents an important opportunity to focus on improving the clinical utility of the classification system.

The Advisory Group has affirmed that scientific evidence for validity should not be, and has never been, the sole criterion for making change in the classification. However, despite the pragmatic, “utilitarian” connotations of the term, utility is not a simple construct. As has been suggested in the preceding discussion, utility is often specific with respect to purpose (e.g., individual treatment, public health, education, statistical reporting). Utility for research has often been conflated with scientific validity but, as described, research is only one purpose of the classification. Obtaining significant input from primary care and public health, for example, may inform changes in the system's organization and presentation that improve the classification's utility for those purposes. It is clear that compromising validity should be avoided when making such changes. It is much less clear how to prioritize among different purposes of the classification – different utilities – when these lead to divergent conclusions.

CONCLUSIONS

Based on WHO's mission and constitution, public health utility must clearly be the highest priority in revising the classification. The guiding question must be “How can a diagnosis and classification manual assist in increasing coverage and enhancing mental health care across the world?”. In part, this question would suggest a focus on epidemiology and statistics, but information without practice will not reduce disease burden. To do this, it is even more important that the classification provide a basis for efficiently identifying people with the greatest mental health needs when they come into contact with health care systems, and ensuring that they have access to appropriate and cost-effective forms of treatment. The classification must lend itself to use in countries and settings with limited resources, especially primary care settings, and be usable by a range of mental health professionals, non-specialty health professionals, and even lay health care workers. To satisfy these requirements, one size is unlikely to fit all.
The conceptual decisions and recommendations of the Advisory Group discussed above have provided a solid foundation for the current phase of work on the ICD revision. We look forward to even greater collaboration with our international colleagues as we proceed with the development of ICD-11.

Acknowledgements


References