

International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)

The International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) is the global health information standard for mortality and morbidity statistics. ICD is increasingly used in clinical care and research to define diseases and study disease patterns, as well as manage health care, monitor outcomes and allocate resources. More than 100 countries use the system to report mortality data, a primary indicator of health status. About 70% of the world's health expenditures (USD \$3.5 billion) are allocated using ICD for reimbursement and resource allocation. ICD-10 serves as a language-independent framework and has been translated into more than 40 languages. Work currently is underway on the eleventh revision; ICD-11 will be finalized in 2015.

The Components of ICD-10

ICD-10 consists of three volumes:

Volume 1. Tabular List contains an alphanumeric listing of codes for diseases, injuries, external causes of injury and poisonings, and factors influencing health status and contact with health services presented in 22 chapters with inclusion and exclusion notes and some coding rules. Codes representing the morphology of neoplasms are presented in a separate list. The international agreements about adoption of ICD in international reporting of health data (Nomenclature regulations) and special tabulation lists at different levels of aggregation for international reporting and comparisons are also included in Volume 1.

The diseases are organized in chapters according to two main criteria (variable axes):

- special disease chapters relating to the aetiology of disease (infectious diseases, neoplasms, diseases originating in the perinatal period, injuries ...)
- body system chapters (diseases of the digestive system, diseases of the respiratory system, ...)

Generally, priority is given to assigning conditions to the special disease chapters, and this general concept has important implications in understanding how ICD-10 is structured and how to interpret the derived statistical data.

Volume 2. Instruction Manual contains an introduction to the classification and its history, explains ICD conventions, presents the international medical certificate of cause of death and gives instructions on coding causes of death reported according to that standard. It also provides guidance for coding of hospital medical records and other forms of health information. Volume 2 includes useful definitions for the calculation of statistical indicators and an overall introduction to statistical presentation of coded data.

Volume 3. Alphabetic Index is an alphabetical list of the diseases and conditions and their codes in the Tabular list. The Index is designed to enable the user to identify code(s) according to the clinical terminology used to describe diseases and other health conditions. It has separate sections for diseases, external causes, and drugs and chemical substances.

The process for updating ICD-10

The **Update and Revision Committee (URC)** manages the process for updating the ICD-10 and the ICF (International Classification of Functioning, Disability and Health), two core reference classifications in the WHO Family of International Classifications ([WHO-FIC](#)). The URC acts in the framework of the [WHO-FIC Network](#) of experts and takes into account submissions from the WHO-FIC reference groups, collaborating centres and other experts. The reference groups dealing with ICD-10 include the:

Mortality Reference Group (MRG). This group identifies, discusses and solves problems related to the interpretation and application of ICD-10 to mortality coding and classification, supports the development of internationally applicable software for mortality classification, and addresses issues of

analysis and assessment of mortality statistics; and the

Morbidity Reference Group (MbrG). This group identifies, discusses and solves problems related to interpretation and application of ICD-10 to morbidity coding and classification, through the development of agreed coding rules and guidelines. This group has been subsumed by the Morbidity Topic Advisory Group for ICD-11 during the revision process.

How is ICD-10 used?

ICD-10 is the foundation for the identification of health trends and statistics globally. It allows the world to compare and share health information using a common language. It organizes information into standard groupings of diseases, which allows for 1) easy storage, retrieval and analysis of health information for evidence-based decision-making; 2) sharing and comparing health information between hospitals, regions, settings and countries; and 3) data comparisons in the same location across different time periods.

Primary users include physicians, nurses, health workers, researchers, health information managers, policy-makers, insurers and national health programme managers, among others. The classification is used in public health, primary, secondary and tertiary care settings. In particular, it is used to classify diseases, injuries, external causes of injury and poisoning, reasons for encounter with health services, and other health problems recorded on many types of health and vital records, including death certificates and medical records.

How do ICD-10 coded mortality and morbidity data differ?

ICD was first developed as a classification system of causes of death. Since 1948, it has been used for both mortality (causes of death) coding and morbidity (illness, injuries and reasons for contact with health services) coding.

Cause-of-death statistics are the most widespread sources of health information worldwide. The underlying cause of death (UCOD) defined as “(a) the disease or injury which initiated the train of morbid events leading directly to death or (b) the circumstances of the accident or violence which produced the fatal injury” (ICD-10, volume 2) is

selected from the information reported on the WHO-recommended medical certificate of cause of death. ICD-10 is used to code the UCOD, which in turn determines statistical-epidemiological indicators. The UCOD is the core concept that allows cause-of-death comparison nationally and internationally. The guidelines for presentation of coded statistical data in ICD-10 facilitate international comparisons of mortality statistics. The coding and selection of the underlying cause in accordance with ICD provides a workable base of information with which to perform comparisons and statistical analyses.

There are many sources of morbidity data (e.g., medical records, disease registries, health surveys) and a variety of uses for these data as mentioned above. The condition to be used for single-condition morbidity analysis in ICD-10 is the main condition. Main condition is “...the main condition treated or investigated during the relevant episode of health care. The main condition is defined as the condition, diagnosed at the end of the episode of health care, primarily responsible for the patient’s need for treatment or investigation. If there is more than one such condition, the one held most responsible for the greatest use of resources should be selected. If no diagnosis was made, the main symptom, abnormal finding or problem should be selected as the main condition.” (ICD-10, volume 2). However, international comparisons of morbidity data are at present very limited and only for clearly defined purposes due to differences in: health systems and legal frameworks, national clinical modifications of the classification with variation in the definition of main condition and other coding rules, and language versions.

For additional information

WHO – Classifications:

www.who.int/classifications

ICD: <http://www.who.int/classifications/icd/en/>

ICF: <http://www.who.int/classifications/icf/en/>

ICD-10 Training tool:

<http://www.who.int/classifications/icd/implementation/en/index.html>

ICF Introductory Training Tool:

<http://www.icf-research-branch.org/icf-training/icf-e-learning-tool.html>

This document has been produced by the *WHO Family of International Classifications Network* [<http://www.who.int/classifications/en/>].