APPLICATION OF THE INTERNATIONAL CLASSIFICATION OF DISEASES TO DENTISTRY AND STOMATOLOGY

ICD–DA

SECOND EDITION

WORLD HEALTH ORGANIZATION
GENEVA
1978

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 150 countries exchange their knowledge and experience with the aim of achieving the highest possible level of health throughout the world.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries ; promoting the health of mothers and children ; combating malnutrition ; eradicating smallpox throughout the world ; controlling malaria and other communicable diseases including tuberculosis and leprosy ; promoting mass immunization campaigns against a number of preventable diseases ; improving mental health ; providing safe water supplies ; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals ; recommending international nonproprietary names for drugs ; administering the International Health Regulations ; revising the international classification of diseases and causes of death ; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

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PREFACE TO THE SECOND EDITION

On the initiative of the International Dental Federation a meeting of consultants was convened by the World Health Organization in 1964 to consider the classification of diseases of the buccal cavity in relation to the impending Eighth (1965) Revision of the International Classification of Diseases (ICD). It was recognized that a manual and guide should be compiled to assist in the application of the ICD to dentistry and stomatology. A text was drafted and tested in four countries, and then revised and published for general use, the first edition of Application of the International Classification of Diseases to Dentistry and Stomatology (ICD–DA) *being issued in English in 1969*[1] *and 1973*[2] *and in Spanish in 1970.*[3] *This edition was also given a series of field trials in various countries ; in particular, trials in dental hospitals and schools in London in 1976 revealed a number of deficiencies in the Eighth Revision of the ICD so far as dentistry and stomatology are concerned.*

With the coming into effect in 1979 of the Ninth (1975) Revision of the ICD, it has become necessary to issue a correspondingly revised second edition of the ICD–DA, which is presented in the following pages. In preparing it, full use has been made of the experience gained with the first edition. A debt of gratitude is owed to many national institutes and individual specialists for their help in revising the ICD–DA. Special acknowledgement is made to the International Dental Federation's Intercommission Group on Uniform Definition of Dental Terms and to Professor I. Kramer, Institute of Dental Surgery, Eastman Dental Hospital, London, England ; Professor J. Pindborg, Royal Dental College, Copenhagen, Denmark ; Mme L. Ruch, Directrice, Pratique Odonto-Stomatologique, Paris, France ; and Professor J. Payen, Centre hospitalier et universitaire, Poitiers, France. The two last-named contributed particularly to the French edition.

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[1] *Application of the international classification of diseases to dentistry and stomatology (ICD–DA)*, Dental Department, University Hospital, Copenhagen, 1969.

[2] WORLD HEALTH ORGANIZATION. *Application of the international statistical classification of diseases to dentistry and stomatology (ICD–DA)*, Geneva, 1973.

[3] PAN AMERICAN HEALTH ORGANIZATION. *Clasificación internacional de enfermedades, aplicada a odontología y estomatología*, Washington, DC, 1970 (PAHO Scientific Publication No. 206).

INTRODUCTION

When any substantial volume of data has to be recorded, a system of classification and coding is necessary, and coding is especially important if the data are to be retrieved or analysed by mechanical or electronic means.

The Application of the International Classification of Diseases to Dentistry and Stomatology (ICD–DA) is intended to provide a basis for such classification and coding. Within the framework of the International Classification of Diseases (ICD), with which it is designed to be compatible, the ICD–DA aims at providing a convenient coding method for use by those concerned with oral and dental disorders.

ICD–DA is a direct extract from the Ninth (1975) Revision of the ICD [1, 2] of diseases and conditions that occur in, have manifestations in, or have associations with the oral cavity and adjacent structures.

Classifications and terminology used in the ICD (Ninth Revision) have been subdivided or expanded. In general, data from ICD–DA can be reassembled into ICD categories by simple addition. It is recommended that the ICD–DA be used with the Ninth Revision of the ICD available for reference where necessary. The reasons for not using the ICD alone are :

(1) that the diseases and conditions of interest to dentists and stomatologists are insufficiently subdivided, and

(2) that such diseases and conditions are scattered throughout the ICD, which imposes difficulties in its use by the dentist and stomatologist.

The main objectives of the ICD–DA are :

(1) To focus the attention of the dental profession on detailed diagnosis for each patient, using a comprehensive and consistent classification of oral diseases and oral manifestations of other diseases.

(2) To provide a standard recording system for all oral diseases and conditions.

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[1] WORLD HEALTH ORGANIZATION. *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Volume 1 [Tabular List]*, ninth (1975) revision, Geneva, 1977.

[2] WORLD HEALTH ORGANIZATION. *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Volume 2 [Alphabetical Index]*, ninth (1975) revision, Geneva, 1978.

(3) To make possible, by using the recording system of the ICD–DA, the collection of epidemiological data and comparisons of the prevalence of oral diseases on an international level. It is hoped that the system may eventually facilitate the collection of epidemiological data on the rarer oral diseases, where the numbers and the rigorous sampling required tend to make the survey method impracticable.

ICD–DA is of value to a great variety of users, ranging from governments concerned with the collection of data under relatively few main headings to individual lecturers requiring a convenient basis for the indexing of their teaching material. Thus, it is capable of contraction to a few broad categories, or of further expansion in areas in which the user may have a special interest. Finally, the ICD–DA provides a method of classification that facilitates international collaboration and exchange of information.

MANUAL OF THE INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES, INJURIES, AND CAUSES OF DEATH (ICD)

Both the reader and the user are referred to the Ninth Revision of the ICD for general principles, historical and recent background, and description of the ICD classification. The following description presents only those features essential to use of the ICD–DA.

The ICD is a systematic classification of diseases, subject to agreement by governments. It is widely used for national mortality and morbidity statistics and is revised decennially. The Ninth Revision will come into effect on 1 January 1979, and is in two volumes. The first includes an explanatory text and a tabular (numerical) presentation of the classification. The second lists all items of the classification alphabetically. The taxonomic philosophy of the ICD is somewhat eclectic, as no strictly systematic classification is really practicable, because of different national views as to disease classification and terminology. The classification is arranged in 17 main sections, which have been followed for the ICD–DA. It also includes a coded nomenclature of the morphology of neoplasms, of which an extract is included in the present volume.

Not every condition receives a particular rubric or number, but there is a category to which every condition can be referred, and this has been achieved by the method of selective grouping. The principles of determining what conditions should be specified as definite categories are based on frequency, importance, and clarity of characterization of the condition.

A decimal system of numbering has been adopted in which the detailed categories of the classification are designated by 3-digit numbers. In many instances, the first 2 digits of the 3-digit number designate important or summary groups that are significant. The third digit divides each group into categories that represent specific disease entities or a classification of the disease or condition according to some significant axis, such as anatomical site. Further, the detailed or 3-digit categories have not been numbered consecutively, but numbers have been omitted in order that the summary character of the first 2 digits could be preserved wherever it is meaningful. No additional 3-digit categories may be introduced in the classification, except when the list is revised by international agreement.

The ICD also contains a fourth digit designed for more comprehensive studies of the causes of illness and disability. An attempt has been made to show most of the diagnostic terms given in the standard or official nomenclatures, as well as terms commonly used in different countries; these terms have been called " inclusion terms ". Where there is a reasonable risk that a condition will be wrongly classified cross-reference to relevant categories is achieved by " exclusion terms ". The last 2 numbers of the fourth digit (.8 and .9) very often carry the connotation " other " and " unspecified " respectively. " NOS " is an abbreviation for " not otherwise specified " and is virtually the equivalent of " unspecified " and " unqualified ".

The general arrangement of the Ninth Revision is much the same as that of the Eighth Revision, though with much additional detail. Care has been taken to ensure that the categories are meaningful at the 3-digit level. There are certain innovations, which are detailed on pages XVI and XVII of Volume 1 of the Ninth Revision manual (*op. cit.*).

THE ICD–DA

The ICD–DA, like the ICD, has a tabular (numerical) section and a comprehensive alphabetical list. Liberal use has been made of inclusion and exclusion terms in the tabular section, the latter being provided with classification numbers, so that the user will have as much assistance as possible in finding the correct category for any condition diagnosed.

Numbering system of the ICD–DA

Each main numerical heading in the ICD–DA is an ICD number at the 3-digit level. Titles for each of these numbers and for numerical

groups and main sections remain exactly the same as those given by the ICD, except for minor changes intended to clarify and not to change the meaning of the title.

Examples

ICD title " Malignant neoplasm of lip, oral cavity and pharynx ", which refers to numbers 140–149 (inclusive), becomes " *Primary* malignant neoplasm of lip, oral cavity and pharynx " in the ICD–DA.
ICD 213 " Benign neoplasm of bone and articular cartilage " becomes " Benign neoplasm and *tumour-like conditions* of bone, articular cartilage, *and teeth* " in the ICD–DA.

However, the whole of the ICD–DA is based on 5-digit code numbers related to ICD 3- and 4-digit codes in the following way :

The first 3 or 4 digits of any ICD–DA number are those of the ICD, the fifth digit being exclusive to the ICD–DA. Where the number relates to a 3-digit ICD category having no fourth-digit subdivisions, a dummy digit " X " is used as the fourth digit in ICD–DA. A few instances occur where an ICD fourth digit exists but is irrelevant to ICD–DA ; in these cases it is replaced by the dummy fourth digit " V ". The fifth digit identifies ICD–DA subdivisions of the ICD category ; where the ICD–DA identifies a complete ICD category without further subdivisions, the dummy digit " X " is used in the fifth digit. The table below summarizes the position.

Digit		
1	0–9	} – ICD 3-digit category
2	0–9	
3	0–9	
4	0–9	ICD fourth digit
	X	ICD fourth digit does not exist
	V	ICD fourth digit exists but is not used in ICD–DA
5	0–9	ICD–DA fifth digit
	X	ICD–DA fifth digit does not exist

N.B. ICD–DA subdivision at the fifth digit often consists of an 0 category, which denotes oral manifestations of the ICD 3- or 4-digit category.

The purpose of this numbering system is to enable the relationship between the ICD–DA category and the parent category in the ICD to be established from the code itself, and thus to facilitate comparisons between statistics compiled according to the ICD–DA and, say, national morbidity statistics compiled according to the ICD.

Suppose, for example, that a table gave frequencies of consultations for the following ICD–DA categories :

1	142.0X	Malignant neoplasm, parotid gland
2	461.X0	Acute sinusitis, maxillary
3	461.1X	Acute sinusitis, frontal
4	461.9X	Acute sinusitis, unspecified
5	475.XX	Peritonsillar abscess (syn. quinsy)
6	520.00	Anodontia, partial
7	520.01	Anodontia, total
8	520.09	Anodontia, unspecified
9	250.V0	Diabetes mellitus, oral manifestations

It would be evident that line 1 would be comparable with ICD category 142.0, that the total of lines 2–4 would be comparable with ICD category 461, that line 5 would be comparable with ICD category 475, that the total of lines 6–8 would be comparable with ICD 520.0, and that the addition of line 9 would provide a return for all oral manifestations of ICD category 250, irrespective of ICD fourth-digit subdivision.

In the last example and in other cases with only oral manifestations of a general disease category (e.g., 115.X0 Oral manifestations of histoplasmosis) returns would give statistics on oral manifestations of these diseases. They would not be added to national returns for particular diseases because these diseases would presumably have been recorded in non-dental institutions and services. The term " oral manifestations " is used in the broadest sense, and refers both to conditions that may be observed on clinical inspection, e.g., oral manifestations of herpes zoster (053.X0) and to conditions not readily observed, e.g., oral manifestations of calculus of pancreas (577.80), which will affect the parotid gland, or of Albright's syndrome (756.50), affecting the jaws.

The numerical classification has been set out with increasing standard margins for 3-, 4-, and 5-digit numbers (see Example 1). Where they are superfluous, 4-digit sub-headings have been omitted, but the 5-digit margin remains the same (see Example 2).

Example 1

520 Disorders of tooth development and eruption

520.0 *Anodontia*

520.00 Partial anodontia
520.01 Total anodontia
520.09 Unspecified

520.1 *Supernumerary teeth*
Includes : supplemental
520.10 Incisor and canine regions
Includes : mesiodens
520.11 Premolar region
520.12 Molar region
520.19 Unspecified

Example 2

095 Other forms of late syphilis, with symptoms

095.X0 Gumma of oral tissues
Excludes : palatal perforation due to syphilis 0.95.X1
095.X1 Palatal perforation due to syphilis
095.X2 Syphilitic glossitis
095.X3 Syphilitic osteomyelitis of jaw
095.X8 Other oral manifestations
095.X9 Oral manifestations unspecified

Neoplasm section

The section on neoplasms, both malignant and benign, in the ICD–DA is primarily and as far as possible classified according to topography. Every effort has been made to have malignant and benign classifications parallel, where this has been possible. As far as possible, also, a distinction has been made between neoplasms and hyperplasias that are reactive or inflammatory.

The publications in the WHO series *International Histological Classification of Tumours* have also been utilized. The classifications of special interest to dentistry concern oral and oropharyngeal tumours ; [1] odontogenic tumours, jaw cysts, and allied lesions ; [2] and salivary gland tumours.[3] These classifications appear as Annexes 1, 2, and 3 in this book (see pages 145–150). Throughout the ICD–DA tabular list footnotes indicate when a disease has been included in one of these classifications and show in which annex it can be found.

Users seeking a morphological coding, which the ICD–DA proper does not provide, should turn to page 101.

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[1] WAHI, P. N., COHEN, B. & TORLONI, H. *Histological typing of oral and oropharyngeal tumours*, Geneva, WHO, 1971 (*International histological classification of tumours*, No. 4).

[2] PINDBORG, J. J., KRAMER, I. R. H. & TORLONI, H. *Histological typing of odontogenic tumours, jaw cysts, and allied lesions*, Geneva, WHO, 1971 (*International histological classification of tumours*, No. 5).

[3] THACKRAY, A. C. & SOBIN, L. H. *Histological typing of salivary gland tumours*, Geneva, WHO, 1972 (*International histological classification of tumours*, No. 7).

RECOMMENDED USE OF THE ICD–DA

This system may be used at national, regional, institutional, or individual practice level. The recommended procedure is as follows :

(1) All diagnoses must be recorded as 5-digit numbers with 3 whole numbers (015–999) and 2 decimal places (.00–.99, X0–X9, V0–V9, 0X–9X, VX, or XX).

Pretesting of the manual has shown that it is extremely rare to have more than 12 diagnoses for any one patient.

(2) The most effective routine by which ICD–DA recording might be introduced and maintained would be office coding of written diagnoses, rather than direct entry of ICD–DA numbers in clinical records at the time of examination. One clerical assistant, familiar with this manual, could, with a high level of consistency, code each day's diagnoses for a number of examiners. An example of a form suitable for ICD–DA recording and for annual summary (mostly on the basis of number of cases per population) for national and international use is shown below. It will probably be most convenient for those using the ICD–DA to design their own forms, arrange for computer summaries locally, and keep WHO, Geneva, informed of annual results, It is possible that the intermediate step of card punching

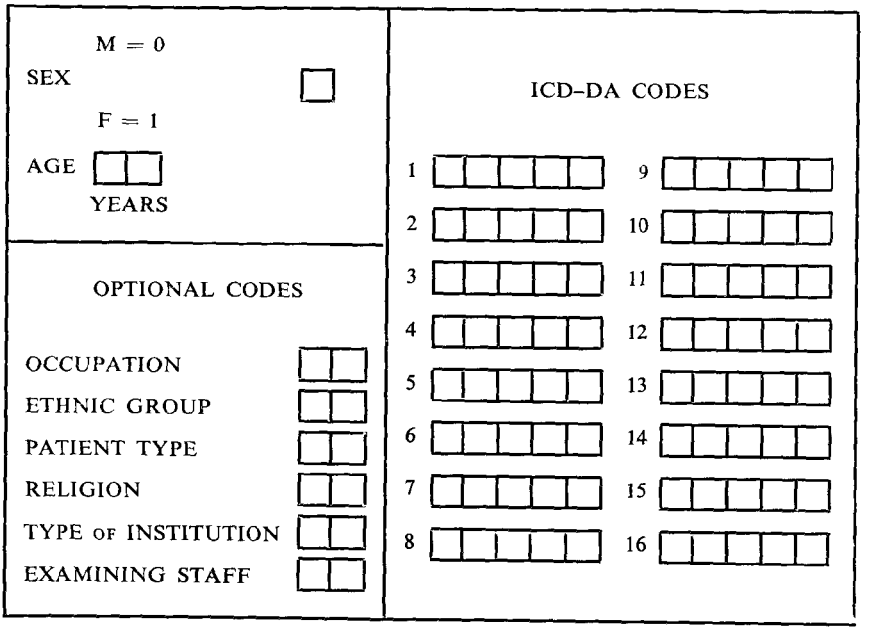

Fig. 1. ICD–DA record form