



World Health Organization
Sustainable Development and
Healthy Environments

WHO/SDE/OEH/99.11
English only
Distr.: Limited

**International Statistical Classification of
Diseases and Related Health Problems (ICD-10)
in Occupational Health**

by

**Antti Karjalainen
Finnish Institute of Occupational Health**

**Protection of the Human Environment
Occupational and Environmental Health Series**

Geneva, 1999

The illustration of the cover page is extracted from Rescue Mission: Planet Earth, © Peace Child International 1994; used by permission.

© World Health Organization 1999

This document is not issued to the general public and all rights are reserved by the World Health Organization. The document may not be reviewed, abstracted, quoted, reproduced or translated, in part or in whole, without the prior written permission of WHO. No part of this document may be stored in a retrieval system or transmitted in any form or by any means - electronic, mechanical or other without the prior written permission of WHO.

The views expressed in documents by named authors are solely the responsibility of those authors.

Preface

Classifications of occupational diseases have been developed mainly for two purposes: (1) notification for labour safety and health surveillance and (2) compensation. The absence of unified diagnostic criteria, coding systems and classifications reduce the compatibility and comparability of national statistics on occupational diseases. The main purpose of this document is to serve as a guideline for the use of ICD-10 in notification of occupational diseases in countries which do not have a well-established notification system. The document contains general guidelines for the use of ICD-10 codes and a comprehensive list of ICD-10 codes which are relevant for notification of occupational diseases. The list enables one to select, for each country, a selection of occupational disease entities that are the most relevant when building a notification system for that country. The document also provides typical examples of the causative agents/risk factors and risk industries/occupations for each occupational disease. It is to be underlined that these lists are meant to be only examples and should not be taken as exhaustive. In order to increase the comparability of occupational diseases statistics, a detailed and specific enough coding of the medical diagnosis should be used. In this respect, the guidelines presented in this document could be helpful also in countries already possessing a notification system for occupational diseases. As the document is focused on the use of ICD-10 in the notification of occupational diseases, the use of ICD-10 in the notification of occupational injuries is only briefly described.

In 1997 WHO in co-operation with NIOSH (USA) prepared a draft document on the use of ICD-10 in Occupational Health. A group of experts reviewed the draft at an international consultation on "Strengthening of Health Surveillance of Working Populations – The use of International Statistical Classification of Diseases (ICD-10) in Occupational Health", held in Geneva, 8-10 July, 1998. The consultation proposed some improvements and the report was finalised by the Finnish Institute of Occupational Health.

Table of contents

1. INTRODUCTION	1
1.1 CLASSIFICATION AND NOTIFICATION OF OCCUPATIONAL DISEASES	1
1.2 THE BACKGROUND AND PURPOSE OF THE PRESENT DOCUMENT	2
1.3 NOTIFICATION OF OCCUPATIONAL INJURIES	3
2. ICD-10	3
2.1 GENERAL STRUCTURE AND GUIDELINES OF ICD-10 CODING	3
2.2 GUIDELINES FOR ICD-10 CODING OF SOME WORK-RELATED HEALTH PROBLEMS	4
2.2.1 <i>Diseases caused by mechanical vibration affecting the hands and arms</i>	4
2.2.2 <i>Central nervous system effects of solvents and other neurotoxic agents</i>	5
2.2.3 <i>Respiratory diseases</i>	5
2.2.4 <i>Diffuse and unspecified work-related conditions</i>	7
3. REFERENCES	8
ANNEX A. ICD-10 CODES OF SELECTED OCCUPATIONAL DISEASES	9
A.1 CERTAIN INFECTIOUS AND PARASITIC DISEASES (A00-B99)	9
A.1.1 <i>Intestinal and bacterial infections (A00-A69)</i>	9
A.1.2 <i>Chlamydial and rickettsial infections (A70-A79)</i>	10
A.1.3 <i>Viral infections (A80-B34)</i>	11
A.1.4 <i>Mycoses (B35-B49)</i>	12
A.1.5 <i>Protozoal and parasitic diseases (B50-B89)</i>	12
A.2 MALIGNANT NEOPLASMS (C00-C97)	13
A.3 NON-MALIGNANT DISEASES OF THE BLOOD (D50-D89)	15
A.4 MENTAL AND BEHAVIOURAL DISORDERS (F00-F99)	16
A.5 DISEASES OF THE NERVOUS SYSTEM (G00-G99)	17
A.6 DISEASES OF THE EYE AND ADNEXA (H00-H59)	19
A.7 DISEASES OF THE EAR AND MASTOID PROCESS (H60-H95)	20
A.8 DISEASES OF THE CIRCULATORY SYSTEM (I00-I99)	20
A.9 DISEASES OF THE RESPIRATORY SYSTEM (J00-J99)	21
A.9.1 <i>Pneumoconioses and pulmonary or pleural fibrosis caused by inorganic dusts</i>	21
A.9.2 <i>Occupational asthma and allergic respiratory diseases</i>	23
A.9.3 <i>Toxic and irritative respiratory diseases</i>	25
A.10 DISEASES OF LIVER (K00-K93)	26
A.11 DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE (L00-L99)	27
A.12 DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (M00-M99)	29
A.13 DISEASES OF THE GENITOURINARY SYSTEM (N00-N99)	30
A.14 SYMPTOMS, SIGNS AND ABNORMAL CLINICAL AND LABORATORY FINDINGS, NOT ELSEWHERE CLASSIFIED (R00-R99)	31
A.15 INJURY, POISONING AND CERTAIN OTHER CONSEQUENCES OF EXTERNAL CAUSES (S00-T98)	33
A.16 EXTERNAL CAUSES OF MORBIDITY AND MORTALITY (V01-Y98)	35
A.17 FACTORS INFLUENCING HEALTH STATUS AND CONTACT WITH HEALTH SERVICES (Z00-Z99)	36
ACKNOWLEDGEMENTS	36

1. Introduction

1.1 Classification and notification of occupational diseases

Classification

An occupational disease is not characterised merely by the disease itself, but by a combination of a disease and an exposure, as well as an association between these two. Classifications of occupational diseases have been developed mainly for two purposes: (A) surveillance and notification for labour inspection purposes and (B) social security (compensation) purposes. The majority of the classification systems have the following hierarchy (1,2):

1. Diseases caused by agents
 - 1.1 Diseases caused by chemical agents
 - 1.2 Diseases caused by physical agents
 - 1.3 Diseases caused by biological agents
2. Diseases by target organ
 - 2.1 Occupational respiratory diseases
 - 2.2 Occupational skin diseases
 - 2.3 Occupational musculoskeletal diseases
3. Occupational cancer
4. Others

The classifications contain both categories defined by the causative agent and categories defined by the medical diagnosis. Cases of a given disease may therefore fall into several categories. The absence of unified diagnostic criteria, coding system and classification reduce the compatibility and comparability of national statistics on occupational diseases. Even for classical occupational diseases like asbestosis, there is heterogeneity in the national statistics and clinical practice in what kind of conditions are coded under the general heading of asbestosis (3).

Notification

In addition to the diagnosis of occupational disease, additional information should be included in the notification. ILO has defined the minimum information to be included (1):

- (a) enterprise, establishment and employer
 - (i) name and address of the employer
 - (ii) name and address of the enterprise
 - (iii) name and address of the establishment
 - (iv) economic activity of the establishment
 - (v) number of workers (size of the establishment)
- (b) person affected by the occupational disease
 - (i) name, address, sex and date of birth
 - (ii) employment status
 - (iii) occupation at the time when the disease was diagnosed
 - (iv) length of service with the present employer

(c) occupational disease

- (i) name and nature of the occupational disease
- (ii) harmful agents, processes or exposure to which the occupational disease is attributable
- (iii) description of work which gave rise to the condition
- (iv) length of exposure to harmful agents and processes
- (v) date of diagnosis of the occupational disease

The coding and classification of the above information can mostly be done according to the same guidelines as in accidents at work (4). These guidelines, however, do not contain classification systems for the diagnosis of the disease and for the agents and exposures that are relevant for occupational diseases. The central role of ICD (International Statistical Classification of Diseases and Related Health Problems) throughout health care and in health statistics make it the natural choice for coding of the medical diagnosis also in the notification of occupational diseases.

1.2 The background and purpose of the present document

In May 1996 the World Health Assembly approved a Resolution on Global Strategy for Occupational Health for All (WHA 49.12). One of the objectives of the Strategy required the establishment of registration and data systems in occupational health. In 1997 WHO in co-operation with NIOSH (USA) prepared a draft document on the use of ICD-10 in Occupational Health. A group of experts reviewed the draft in a 3-day meeting in July 1998 in Geneva and proposed some improvements. The draft was finalised according to these comments by the Finnish Institute of Occupational Health.

The main purpose of this document is to serve as a guideline for the use of ICD-10 in notification of occupational diseases in countries which do not have a well-established notification system. For such purposes it may be practical for each country to first create a notification system for a selection of occupational disease entities that are the most important in that country. Although the main aim is to guide the coding of the adverse medical effects, the document is not only a list of medical diagnoses and corresponding ICD-10 codes, but provides also typical examples of the causative agents/risk factors and risk industries/occupations for these diseases. The lists of agents, exposures, industries and occupations presented in the document should not be taken as exhaustive. New agents and new risk industries emerge, and for complete updated lists of causative agents and risk industries the interested reader should also refer to recent textbooks and related publications (e.g. 5,6,7,8).

In order to increase the comparability of occupational diseases statistics, a detailed and specific enough coding of the medical diagnosis should be used. In this respect, the guidelines presented in this document could be helpful also in countries already possessing a notification system for occupational diseases. Reference should, however, be made to the national legislation.

There is no generally accepted international exposure classification available. Some ICD-10 codes contain information on the exposure (E.g. J61 Asbestosis). Chapter XX of ICD-10 (External causes of morbidity and mortality, V01-Y98) also offers some exposure codes that are relevant for work-related diseases (see section A.16). Yet it is evident that the selection of these codes does not provide a basis for an exposure classification that would be detailed and comprehensive enough. There is a need to develop such a classification. Meanwhile, if a more detailed coding than that in Chapter XX of ICD-10 is needed, it is recommended to code the exposures according to the national or local coding systems.

1.3 Notification of occupational injuries

This document is focused on the use of ICD-10 in the notification of occupational diseases and other similar health problems. Guidelines for statistics of occupational injuries, whether from notification systems or from other types of sources, have recently been thoroughly reviewed by the International Labour Office (4). The guidelines refer to ICD-10 in the classifications of *Type of injury* and *Part of the body injured*. Chapter XIX of ICD-10 deals with Injury, poisoning and certain other consequences of external causes. Codes of the chapter are relevant for the coding of injury type and part of the body injured. The codes, however, are mostly combinations of these two classifications (e.g. S51.0 Open wound of the elbow). This makes the use of the codes cumbersome, particularly when information is needed for all cases of injury to a particular part of the body, or for all cases of a particular type of injury, regardless of the part of body injured. Therefore the ILO guidelines present separate classifications for *Type of injury* and *Part of the body injured*, which however both are based on ICD-10.

Chapter XX of ICD-10 contains codes which permit the classification of environmental events and circumstances as the cause of injury, poisoning and other adverse effects. Such codes are useful for example in the coding of accidents at work (e.g. X13 Contact with steam and hot vapours) and commuting accidents (e.g. V04 Pedestrian injured in collision with heavy transport vehicle or bus). In addition to the core codes, chapter XX also offers an additional subdivision according to *Place of occurrence* for some of the codes and an additional (optional) *Activity code* to indicate the activity of the injured person at the time the event occurred. It is to be noted, however, that the ILO statistical guidelines point out a need for further development of these two and some related classifications describing the circumstances leading to the occupational injury (4).

The information to be included in the notification of occupational injuries follows the same logic as described for occupational diseases in section 1.1, but is not further dealt in this document. The codes of chapters XIX and XX are dealt only when relevant for notification of occupational diseases and related health problems. A reader interested in notification of occupational injuries is recommended to look closer at chapters XIX and XX of ICD-10 as well as to references 1 and 4.

2. ICD-10

ICD-10 is the last edition of the International Statistical Classification of Diseases and Related Health Problems published by WHO (9). It is a system of categories to which morbid entities are assigned according to established criteria. The ICD is used to translate diagnoses of diseases and other health problems from words into an alphanumeric code, which permits easy storage, retrieval and analysis of the data. In practice ICD has become the international standard diagnostic classification for all general epidemiological and many health management purposes.

2.1 General structure and guidelines of ICD-10 coding

The core classification of ICD-10 is the three-character code, which is the mandatory level of coding for international reporting to the WHO mortality database and for general international comparisons. The four-character subcategories, while not mandatory for reporting at the international level, are recommended for many purposes. Many of the four-character categories are relevant in work-related settings and are therefore listed in this document. Because it is not possible to present all possible subcategories of the relevant three-character categories, the following formats are used in this document:

- J45.- Indicates that this code is subdivided in ICD-10. The most relevant subcategories from the point of view of occupational health are listed below the main category, but for the complete selection of available subcategories the reader should refer to ICD-10
- J61 A code which is not subdivided in ICD-10

For dataprocessing purposes it may be useful to extend the three-character codes to the same length as the four-character codes. ICD-10 recommends using the letter "X" for this, but this practice is not followed by all countries.

2.2 Guidelines for ICD-10 coding of some work-related health problems

As a general rule, the relevant codes of each medical diagnosis should be used. The main condition should be coded as the primary diagnosis. ICD-10 defines the main condition as the condition, diagnosed at the end of the episode of health care, primarily responsible for the patient's need for treatment or investigation. In addition to the main condition, one should, whenever possible, also list separately other conditions dealt with during the episode of health care. A detailed list of relevant ICD-10 codes is presented in annex A. It is not possible to list the diagnostic criteria of each of these conditions in this report, but guidelines on how to apply the above general rule are presented for some complex occupational disease categories in this chapter.

This document mainly deals with notification of occupational diseases, but a process of diagnosing an occupational disease and the general surveillance of working populations necessitate coding of health conditions that finally did not fulfil the diagnostic criteria of any disease as well as the coding of reasons to contact health personnel. According to ICD-10, if no definite diagnosis has been established by the end of the episode of health care, then the information that permits the greatest degree of specificity and knowledge about the condition should be recorded. This should be done by stating a symptom, abnormal finding or problem rather than qualifying a diagnosis as "possible", "questionable" or "suspected" when it has been considered but not established. Therefore the following examples also illustrate the coding of such conditions, which one should be able to separate from occupational diseases. However, it is not possible to guide the coding of the variety of conditions that are relevant as non-occupational differential diagnoses for occupational diseases. The general guidelines of ICD-10 coding in morbidity applications are presented in Volume 2 of ICD-10 (pages 96-123).

2.2.1 Diseases caused by mechanical vibration affecting the hands and arms

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_30536

