THE NEUROLOGICAL ADAPTATION OF ICD-10 (ICD-10 NA)

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The systematic categorization of disorders, provided by the World Health Organization in the "International Statistical Classification of Diseases, Injuries and Causes of Death" (ICD) is an essential tool for epidemiological and clinical research, for the indexing of national and international statistics of morbidity and mortality, to monitor health services and to formulate public health policy. The Tenth Revision was adopted in 1990, and the classification was published in 1992 [1].

As the ICD is primarily an instrument for the reporting of national and international statistics of morbidity and mortality, it is therefore subject to the constraint of providing for each category or subcategory one unique code number which shows its place within the classification. An important characteristic of the structure of the ICD is that it can be adapted to the different types of users: the "core" of 3 and 4 character codes can be further subdivided for use by specialties, where more detailed diagnoses are needed, but they can also be contracted or condensed with less detail and broader groups, e.g. for use in primary care. In development are several adaptations of ICD-10 to specialties, one of which is the neurological adaptation, at present in print. Already for ICD-9 a neurological adaptation has been prepared and published for trial purposes [2]. It was received with interest by the scientific community and other users. In view of this experience WHO has undertaken the preparation of a neurological adaptation to the ICD-10 as well.

The neurological adaptation aims
1. to provide one unique code for each recognized neurological disorder;
2. to encourage making detailed diagnoses using as many codes as necessary;
3. to provide a standard recording system for neurological disorders, available in several languages;
4. to encourage national and international epidemiological research for support of programmes of prevention and control.

The need to be internationally acceptable implies an extensive process of consultation with members states and their professional organizations, so that as many viewpoints as are practicable and compatible are represented in the classification. Thus for the development of the neurological adaptation of ICD-10 support has been sought through and provided by many leading international organizations in the field of neuroscience (see Table 1).

Table 2 shows an example of a category which can be found in the ICD-10 NA: G43 Migraine. The titles with 3 and 4 characters are exactly the same as in the core ICD-10. The additional categories with 5 and 6 characters have been designed for use within the neurological field. This additional subcategorization has been developed in close collaboration with among others the International Headache Society [3].

Another development is the production of "fascicles" that deal with a selected group of disorders within ICD-10 and bundle together all information that is needed in classifying this group of disorders. This is useful since the divisional structure of ICD-10 into 21different chapters has, as a consequence, that codes for etiology and codes for the manifestation of certain illnesses may be found in different chapters. Moreover, these fascicles will contain definitions and diagnostic criteria for this selected group of disorders. The fascicles are produced by leading international organizations in this specific field, in cooperation with WHO. Table 3 gives an overview of the fascicles that are at present in preparation. They will become available in the course of 1995 and 1996. More fascicles may be prepared in the future for the other groups of disorders.

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Table 1. Non-governmental organizations supporting the development of ICD-10 NA.

American Academy of Neurology	International Federation of Multiple Sclerosis Societies
American Neurological Association	International Headache Society
American Sleep Disorders Assocation	International League against Epilepsy
European Federation of Neurology	International Movement Disorder Society
International Bureau for Epilepsy	International Society of Neuropathology
International Brain Research Organization	International Stroke Society
International Child Neurology Association	World Federation of Mental Health
International Cerebral Palsy Society	World Federation of Neurology
	World Federation of Neurosurgical Societies

Table 2. Example of a category in the ICD-10 NA.

G43 **Migraine**

Use additional external cause code (Ch. XX), if desired, to identify drug, if drug-induced

Excludes: headache NOS (R51)
atypical facial pain (G50)

G43.0 Migraine without aura [common migaine]

G43.1 Migraine with aura [classical migraine]

G43.10 With typical aura
G43.11 With prolonged aura
G43.12 With acute onset aura

Use sixth character, if desired, to identify neurological symptoms:

G43.1x0 Hemianopic and other visual migraine
G43.1x1 Hemisensory migraine
G43.1x2 Migraine with aphasia
G43.1x3 Basilar migraine
G43.1x4 Migraine aura (all types) without headache
G43.1x5 Familial hemiplegic migraine

G43.1x7 Multiple types of aura
G43.1x8 Other specified migraine with aura

Table 3. Fascicles, linked to ICD-10, in preparation.

Cerebrovascular disorders	Multiple sclerosis
Epilepsy	Neuromuscular disorders
Headaches	Pain disorders
Hereditary ataxias	Psychogeriatry, including Dementia
Mental retardation	Sleep disorders
Movement disorders	

REFERENCES

1. International Statistical Classification of Diseases and Related Health Problems. Tenth Revision. Vol 1: Tabular list, 1992. Vol 2: Instruction Manual, 1993. Vol 3: Index, 1994. Geneva: WHO.
2. Application of the International Classification of Diseases to Neurology (ICD NA). Geneva: WHO, 1987.
3. Orgogozo J-M, Van Drimmelen JJ, Bradley WG, Sartorius N. The WHO view on Disease Classification and Diagnosis. Copenhagen: Proceedings of Headache Research Seminar, Nov 19-21, 1993.