A CLASSIFICATION SYSTEM FOR MORTALITY AND MORBIDITY ABSTRACTS AND RELATED DATA

Subcommittee of ALIMDA Mortality and Morbidity Committee
RICHARD B. SINGER, MD, CHAIRMAN, JOHN R. AVERY, AND MICHAEL W. KITA, MD

Introduction
Readers of the 1976 and 1990 Medical Risks reference monographs, are aware that all mortality abstracts have been numbered according to a disease or impairment classification system, although the system differs somewhat in the two books. Tables in each abstract have been assigned a letter following the abstract number code. A reverse order has been used in the 1951 and the 1983 Impairment Studies: a letter has been used for the impairment category (these differ in the two studies), and a number has been used for the tables and results for each impairment within the letter category. No classification code at all has been used for the separate mortality abstracts, the morbidity abstracts, or other articles that report mortality data, when they have appeared in the Journal of Insurance Medicine (JIM) in the past few years (such results as were not included in the 1990 Medical Risks book).

As a subcommittee of the ALIMDA Mortality and Morbidity Committee, we have recognized the need for a uniform classification system to provide a unique identifier for these miscellaneous abstracts and articles, and for future abstracts, articles and mortality results, in the JIM or other sources. It is possible that all of these may be collected periodically for publication in a smaller but much more timely volume than the massive Medical Risks books, which took so many years to produce. The feasibility of such volumes, perhaps annual ones, is being considered by our subcommittee, together with the possibility of a looseleaf volume for early distribution of abstracts and updating. Our subcommittee has agreed that it would also be desirable to prepare a general index of the abstracts and mortality results already published in the books referred to, in various intercompany insurance reports, and in other follow-up studies, whether in abstract format or not. The period of publication covered by this index will be 1951-1990; prior studies are now chiefly of historical interest. The index will require a source code, to be described later, in order to accommodate the different methods used to identify the abstracts or the mortality results. The classification system could also be used for future abstracts and articles published in the JIM and in other ALIMDA publications.

The Disease Classification System and Numerical Code
The proposed classification system consists of a 3-digit numerical code covering neoplasms, seven major disease categories by system in an order commonly seen in textbooks of medicine, and a diagnostic test category. The third digit will be used only when an additional subdivision is needed and will not be included in the outline shown below. An initial category of "General Factors" encompasses such factors or causes external to the human body as environmental, socioeconomic, and occupational ones; injuries; poisons; and in addition, family history and infectious diseases. The final category is a new major group for diagnostic test results.

Nosology is a highly intricate subject, with no existing classification accepted as a standard for general medical use. The subcommittee felt that our design should not be modeled after complex systems such as the ICD, MEDLARS, and others, but should be easy for the medical director, actuary, underwriter, epidemiologist, and any interested physician to learn and use. The classification outline according to the first two digits is as follows:

Mortality/Morbidity Data Classification

General Factors
001 Methodology
010 Environmental (climate, pollution, radiation hazards, etc.)
020 Socioeconomic (income, type of work, education, etc.)
030 Occupational (governmental and insurance classifications)
040 Lifestyle (smoking, hazardous sports, physical activity, etc.)
050 Trauma and other types of injury
060 Toxins, poisons, side effects of drugs and any treatment method
070 Family history, excluding specific genetic factors (see 870)
080 Viral diseases
090 Bacterial, fungus, and parasitic diseases

Neoplasms
100 Benign tumors
110 Cancers and precancerous lesions
120 Cancers of brain and nervous system
130 Leukemias, polycythemia vera, multiple myeloma
140 Cancers of lung and respiratory system
150 Cancers of digestive system
160 Cancers of genito-urinary system
170 Cancers of endocrine system
180 Cancers of bone, cartilage, and soft tissues
190 Other malignant tumors not included above

Disorders of the Nervous System
200 Cerebrovascular disorders
210 Other brain disorders, extrapyramidal disorders
220 Spinal cord disorders
230 Peripheral nerve disorders
240 Disorders of the eye and ear
250 Psychoses
260 Neuroses
270 Character disorders
280 Addictions and substance abuse, alcoholism
290 Other neurological and psychiatric disorders, demyelinating disorders

**Disorders of the Cardiovascular System**
300 Arrhythmias, pulse rate
310 ECG abnormalities
320 Hypertension, blood pressure
330 Latent coronary heart disease (CHD), risk factors
340 Acute CHD, MI, and other acute coronary events
350 Chronic CHD, angina pectoris, chest pain, asymptomatic disease
360 Valvular heart disease
370 Ventricular failure, congestive heart failure, heart enlargement
380 Other heart disorders
390 Congenital cardiovascular disorders
400 Disorders of the aorta and arteries
410 Disorders of the veins
420 Other CV disorders, pulmonary vascular disorders

**Disorders of the Respiratory System**
430 Disorders of the nose, throat, sinuses; hay fever
440 Disorders of the larynx and trachea
450 Bronchial disorders, except asthma
460 Asthma
470 Lung infections, TB, pneumonia, pleural infections, etc.
480 Other lung disorders, emphysema, fibrosis, COPD, etc.
490 Other respiratory disorders not included above
(Pulmonary function evaluation, see 940)

**Disorders of the Digestive System**
500 Mouth, tongue, and pharynx
510 Esophagus
520 Stomach, peptic ulcer
530 Small intestine
540 Colon, appendix, rectum
550 Liver and gall bladder
560 Pancreas
570 Peritoneum, abdominal cavity
580 Spleen
590 Other digestive system disorders not included above

**Disorders of the Genito-Urinary System**
600 Urinary abnormalities except glycosuria
610 Disorders of the bladder
620 Disorders of the ureters
630 Disorders of the kidneys
640 Disorders of the prostate
650 Male genital disorders
660 Vaginal disorders
670 Disorders of the uterus and adnexa
680 Breast disorders
690 Pregnancy, and other GU disorders not included above

**Disorders of the Endocrine and Immune Systems**
700 Diabetes mellitus, including glycosuria and blood glucose tests
710 Other adrenal disorders
720 Thyroid and parathyroid disorders
730 Male gonadal endocrine disorders
740 Female gonadal endocrine disorders
750 Pituitary, thymus, and other endocrine disorders
760 Immune system disorders except asthma (460) and hay fever (430)
770 Metabolic disorders other than diabetes
780 Nutritional disorders
790 Other general disorders

**Musculoskeletal System and Other Disorders**
800 Disorders of the skin and connective tissues
810 Joint and back disorders
820 Other bone and cartilage disorders
830 Muscle disorders
840 Overweight, obesity, underweight, weight loss
850 Other musculoskeletal and integumentary disorders
860 Congenital disorders
870 Genetic disorders
880 Disorders of the blood and lymphatic systems
890 Miscellaneous disorders not classified elsewhere

**Diagnostic Tests**
900 Chest X-ray and other X-rays
910 Other imaging techniques (CT, MRI, etc.)
920 Endoscopy; angiography
930 Exercise and other cardiac testing (resting ECG, see 310)
940 Pulmonary function tests
950 Liver and GI function tests
960 Renal function and bladder function tests'
970 Cytological, genetic, and related tests
980 Blood chemistry and related tests (glucose, see 700)
990 Other tests not included above
(Urinary abnormalities, see 700 for glycosuria, 600 for all others)
Source Classification

The individual abstract or results identifier varies according to the book in which it is published. As a consequence, it becomes necessary to provide for a source code. The number of sources in the period 1951-1990 is limited, and it suffices to use a single letter code appended to the numerical disease code. The list of source codes is as follows:

Source Of Abstract/Mortality Studies

A 1951 Impairment Study (3)
B 1959 Build and Blood Pressure Study, Volume 1 (5)
C 1959 Build and Blood Pressure Study, Volume 2 (6)
D 1967 Occupation Study (7)
E Medical Risks: Patterns of Mortality and Survival, 1976 (1)
F 1979 Build Study (8)
G 1979 Blood Pressure Study (9)
H 1983 Impairment Study, Volume 1 (4)
J Medical Risks: Trends in Mortality by Age and Time Elapsed, 1990 (2)
K Other abstracts/mortality studies published 1951-1990
L Reserved for any special mortality studies published prior to 1951
M Abstracts/mortality studies published 1990-1999

The Unique Identifier

We intend to retain the identifying number (or combination of letter and number) used in each of the books that contains large numbers of mortality abstracts or impairments studied. A 3-digit number was used in the first Medical Risks book, but the numbers in the second Medical Risks extend to 4 digits because they are based on the numbers of the chapters, from Chapter 3 to Chapter 14, in which the abstracts are distributed. In the 1951 Impairment Study, the impairments are allocated into 9 lettered classes and given a number; an entirely different classification system with 25 letters, and a number for each impairment, is used in the 1983 Impairment Study.

Coding Examples

The new classification and source codes will be used anteriorly, followed by a dash and the identifier exactly as given in the source. Thus coding for the recent intercompany mortality experience on insured lives with diabetes mellitus would be 700H-U1. The 700 code is for the diabetes, the H code is for the 1983 Impairment Study, and the U1 code is the unique identifier in that source. The mortality experience in a group of diabetic patients followed in Edinburgh would be coded as 700J-1114. The same disease code is used (700 for diabetes), with source code J for the 1990 Medical Risks, and 1114 for the abstract number in Chapter 11, which covers Endocrine and Metabolic System Diseases.

Mortality abstracts published separately, often in the Journal of Insurance Medicine, would have to be assigned a unique identifier, chronologically by date of publication at the date of assignment. For example, a mortality abstract on a group of Harvard College alumni classified by habits of physical exercise would be coded as 040K-1. Habitual physical exercise is a “Lifestyle” descriptor, for which the 040 code is used, and the letter K for an individual abstract published in 1987. Since this is the first such abstract with this classification and source code, it is currently assigned the unique identifier, number “1.” This abstract was published in the Journal of Insurance Medicine in 1987, volume 19, issue number 4.

Conclusion

Our subcommittee of the Mortality and Morbidity Committee has prepared this classification system for coding mortality/morbidity abstracts and studies. This is for use in the future construction of a general index of such studies published during the period 1951-1990, and for current and future use in coding new abstracts and related studies as they appear in publication in the Journal of Insurance Medicine or in other ALIMDA-sponsored publications. The disease classification system may be expanded by defining the third digit of the code. In addition, the system may be subject to future revision if experience in its use indicates the need for such revision.

REFERENCES