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An Appeal for Uniformity in Medical Terminology

In 1909, the Director of the United States Bureau of the Census, in describing the state of medical nomenclature and terminology at that time, wrote the following:

"Not only is the adoption of language of precision in the naming of disease imperative ... but it would seem absolutely indispensable for the advancement of medical science that the language of medicine concerning its prime subjects of consideration should be clear and unmistakable. The present condition in this respect is intolerable, and would seem incredible to those acquainted only with the definite terminology of the other sciences. "That the unscientific and extremely individualistic, even anarchistic, license in the nomenclature of diseases has a very definite retarding influence upon the progress of medicine must be apparent. A large part of the labors of medical investigators and writers is wasted on mere terminology, because it is necessary to consider questions of synonyms, variations in the use of names, and doubts as to the identity of diseases reported before positive assurance can be had as to the facts concerning diseases."

Despite numerous resolutions dating back to the International Statistical Congress in Brussels in 1853, little had been done to establish an internationally
agreed nomenclature of diseases, and little more was done for another 56 years despite the explosive growth of biomedical and health science and research, with its consequent vague and ambiguous terminology.

The Council for International Organizations of Medical Sciences (CIOMS) took an important step forward in 1965 when it convened an international group of experts to study the problems, needs and prospects of medical terminology. The results of this meeting included the formulation of guidelines for medical dictionaries and terminology as well as guides to medical lexicography. The Proceedings of the meeting are reproduced as Part II of the present publication.

The following year, during the Nineteenth World Health Assembly, Dr. W.H. Stewart, Surgeon General of the United States of America, presented to the Director-General of WHO a statement calling for more effective action, which led to a series of events resulting in the preparation by WHO and CIOMS of the International Nomenclature of Diseases, with the participation of nongovernmental organizations in all fields of health and biomedical sciences.

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This book is intended as a review, as an assessment of the present situation, and a glance into the future. It is intended to assist the health professions in bringing order to the confusion which exists in the names of disease entities and in improving international communication and understanding. As such, no medical faculty can ignore its contents or its message, and it will be invaluable to any individual or institution with a keen interest in the progress of medical science.

For the medical historian, the International Nomenclature of Diseases is a new approach which may explain why so little progress has been made, and will provide a challenge for further development. However, future progress will depend on all members of the health professions, and in particular on the nongovernmental organizations through which their international activities become known. In this endeavour, WHO and CIOMS are counting upon their support without which the task will never be complete.

Dr. T.A. Lambo, Deputy Director-General, WHO, Geneva

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Towards Uniformity in Medical Nomenclature
Statement by the Surgeon General of the United States to WHO in May 1966

Progress in medical science is dependent upon the free flow of information — upon the transfer of information, which is an inseparable part of research and development. Medical observation and experimentation provide raw information which is recorded, analyzed, correlated and assimilated by the body of organized knowledge. Such information suggests new observations and concepts, whereby knowledge continues to grow. It is the nutrient upon which science feeds.

The communication of information between health workers and the translation of these data into better health for all depends upon language. Uniformity in language, i.e., medical nomenclature, greatly facilitates data transfer, both contemporaneously and across a span of time. Standardization of nomenclature prevents the misunderstanding and misinterpretation that results from confusion in communication when the same object or concept is described in different terms, which may be obscure, ambiguous, archaic or otherwise undesirable.

Since the first International Statistical Congress in 1853, the need for standardized nomenclature and classification in medicine has been recognized. Continuing efforts have brought about the universal acceptance of the International Lists of Diseases and Causes of Death, an outstanding example of what can be accomplished when nations cooperate to meet an international need. The WHO has accepted responsibility for this most important undertaking since 1945.

Unfortunately, progress toward uniformity in medical nomenclature has not paralleled that achieved in classification. The international biomedical community is producing a flood of observations, concepts and discoveries, at the same time generating new, unorganized descriptors in a variety of languages and adding to the existing confused state of the vocabulary. Phenomena observed and described by one author may be confirmed in different terms by another in the same or another language.

Unlike engineering and technology, where much of the terminology describes concrete entities and objective concepts having the same meaning in different countries, medical terms reflect to a great extent hypotheses, theories, and schools of thought.

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Let me cite only a few examples of the confusion that exists today. A marked difference occurs among psychiatrists and neurologists in their
interpretation of the term `petit mal'. As a result, the proportion of all forms of epilepsy attributed to this condition ranges from 3 to 80%. It has been said that Candida albicans has been discussed in the literature under more than 170 different names. `Ulcère peptique' to a Frenchman does not have the same meaning it has for an American. WHO's Expert Committee on Dental Health has pointed out that dental epidemiological studies are being carried out on an ever-increasing scale, but that few results are comparable because of differences in terminology, among other factors. One shudders at the effect of this confused situation on the effective study and comparison of clinical and pathological reports — in fact, upon medical progress. The end result of this uncoordinated, undisciplined terminology is a serious and dangerous state of disorder that increasingly mars mankind's dialogue with one another. In the past we have temporized on solutions to this problem. We can afford this procrastination no longer. The increasing utilization of machine-search technology makes uniformity and standardization of vocabulary absolutely imperative for the most effective storage and retrieval of information.

If, as has been said, scientific documentation is international, interprofessional, interdisciplinary, and multilingual, then it most certainly is an ideal field for international cooperation. Many national and international agencies have indicated their concern with the confusion in nomenclature and have urged action be taken at once, to name a few: WHO, UNESCO, the International Brain Research Organization, the International Organization for Standardization, the International Conference of Scientific Unions, the Council for International Organizations of Medical Sciences, the Conference of Biological Editors, and the National Academy of Sciences—National Research Council. Some of these and other agencies are doing excellent work within limited subject areas. Thus, for its Medical Subject Headings authority list, the (US) National Library of Medicine recognizes and utilizes terminologies prepared by the International Anatomical Nomenclature Committee, the International Committee on Bacteriological Nomenclature, the WHO Study Group on Arthropod-Borne Viruses and the International Union of Biochemistry. During the past year, communication specialists from England, France, Germany, India, Japan, Russia, and South America have consulted with personnel of the National Library of Medicine concerning problems in nomenclature.

I am sure that the WHO has the wisdom to see the problem I have described as no less than global in scope and solution. Having demonstrated its abilities with respect to classification of morbidity and mortality, WHO
should now devote some of its abilities and energy to resolve the dilemma that faces health workers. This organization is in the best possible position to reconcile the fragments of a nomenclature that exist and to give equal weight, insofar as possible, to all national points of view. When such views confront one another, it is in a position to moderate them, a quality essential to cooperation and standardization. Moreover, WHO is aware of the special needs of the less developed nations who require the greatest application of medical knowledge gained throughout the world.

I call upon WHO to respond swiftly to the crisis that blocks the free flow of information. I urge the establishment of a program to develop a multilingual, international, standardized nomenclature in medicine, for the most effective origination, storage, retrieval and dissemination of information.

As a beginning, attention might be directed to areas of especial global interest, e.g., adverse drug reactions, epidemiology, and cancer.

The immediate objectives of the program should be:

1. to bring to a common meeting ground the cumulative experiences of individuals and organizations experienced in medical nomenclature;
2. to establish an acceptable vocabulary in which the language used by author, editor, indexer, abstractor, documentalist, librarian and user will coincide, and by which the probability of the retrieval of all documents pertaining to an enquiry, and none that are irrelevant, will be maximized;
3. to establish internationally recognized rulings regarding medical terminology, and
4. to establish a mechanism for revision and updating; since standards are not static, but, rather, dynamic, they must follow closely upon the heels of research and discovery.

The ultimate goal of this effort should be to translate research and research-generated knowledge into action toward the attainment of the highest possible level of health for all people, an objective that, I need not remind this assembly, is the first goal of WHO.

To assist in this undertaking, the United States offers the assignment of a full-time senior physician, as well as funds for two planning conferences of experts, perhaps 10 to 12 in number, one meeting to convene in Bethesda, Md., the other in Geneva.

William H. Stewart, MD, New Orleans, La.