# Advisory Committee on Statistics

## First Report

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Washington 6, D.C.  
1960
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ADVISORY COMMITTEE ON STATISTICS
First Report

1. Introduction

The Advisory Committee on Statistics met in Washington, D.C., on June 20 and 21, 1960. At the opening session, Dr. Abraham Horwitz, Director of the Pan American Sanitary Bureau, welcomed the members and explained the policy of the Organization in inviting scientists in a particular field to analyze the current situation with regard to policy, objectives and accomplishments and to suggest new paths to be taken to solve the present problems and to fulfill the commitments of the Organization. Advice was requested in the complex and fundamental discipline of vital and health statistics, which permeates the entire structure of a national or local health organization and therefore of an international organization. The activities of the Organization are distributed in the four major lines of action: (1) strengthening national and local health services (2) eradication or control of communicable diseases (3) education and training and (4) research. Statistics has an important role in many phases of these activities. The Committee made suggestions and recommendations recorded in the sections which follow.

2. Coordination of Reports of International Agencies

In 1962 and 1963 three important reports are to be released by the World Health Organization, the United Nations and the Pan American Health Organization, namely: The Second Report on the World Health Situation\(^1\) for the World Health Assembly in 1962, the Compendium of Social Statistics\(^2\) in 1963 by the United Nations and the Summary of Health Conditions in the Americas 1957-1960\(^3\) for the 1962 Pan American Sanitary Conference. Since estimated populations and birth and death rates will be included in all three documents, it is important that coordination be effected through joint activities for the provision of identical data.
a. *Population estimates*

It is essential that a single official population estimate be prepared in the countries for use not only as part of the national statistics but also for the various international offices. At this time it is especially important because of the release in 1962 and 1963 of reports by the World Health Organization, the United Nations and the Pan American Health Organization in which it is advisable to use for the purpose of international health planning the same official estimates of populations as well as the same figures for birth and death rates.

The international agencies should endeavor through correspondence and through their consultants to assist countries in this respect. Although it is advisable to have official estimates made in the countries, if differences still occur, they will have to be reconciled among the international agencies in conjunction with the national offices. The situation might be improved if international organizations work together in reconciling the various estimates. Current population estimates for major cities and large political divisions are also needed, especially in the health field.

b. *Vital statistics*

Standards available through the World Health Organization and the United Nations should be followed as far as possible by National Health Services in the collection and analysis of vital statistics. The international agencies can render assistance to National Health Services in establishing procedures to meet these standards. The Inter-American Statistical Institute (IASI) is carrying on an enquiry as a basis for the revision of recommendations for tabulations and establishing priority for the most important. Tabulations being requested by international organizations will be reviewed in the light of this study. The Vital Statistics Subcommittee of the Committee on Improvement
of National Statistics will meet in February 1961 to make recommendations regarding the future program of national statistical offices.

Efforts should be made to have complete and accurate vital statistics for the countries with release of official data for use not only by the countries themselves but by international agencies. This work can be stimulated by consultants of international agencies and through National Committees on Vital and Health Statistics.

The National Committees on Vital and Health Statistics should be urged to carry on activities for the improvement of coordination and for the elimination of duplication in the collection and tabulation of vital statistics.

Reference was made to the fact that the World Health Organization Expert Committee on Health Statistics has several times recommended meetings of national and international committees on a regional basis. The Advisory Committee endorsed this recommendation for a regional meeting.

It was recommended that the Pan American Health Organization should make recommendations regarding the organization of statistical services in the national health administrations. A high level health statistics department is essential for rendering needed services to other departments of the national health administration.

3. Activities of Statistical Consultants

At present provision is made for the services of statistical consultants in the six zones of the Pan American Health Organization. There has been considerable difficulty in finding persons with the required competence in health statistics interested in international service.
The Pan American Health Organization needs well-trained statistical consultants in the various zone offices. The required type of educational background and experience for a consultant is not necessarily the same for all the zones. Someone highly trained in registration problems would be particularly useful for some of the zones. Someone with more theoretical training might be more useful in other zones. Indeed some of the more specialized personnel might be made available on a regional rather than on a zone basis.

Efforts should be made to utilize more fully the skills of the consultants who serve on a long-term assignment in the various zones by offering them a greater opportunity for participating in the training and research activities of local universities and medical schools, as well as participating in the research programs of the health departments. If the zone includes a school of public health, the consultant might have his headquarters there rather than in the zone office. In order to attract a well qualified consultant and keep his skills up to date, provision should be made for periodic leaves for purposes of study.

4. Education and Training Program

a. Undergraduate education in statistics

At present in most Latin American countries there are few schools or programs in the universities which have a curriculum in statistics or give a basic general undergraduate education to which graduate statistical education can be added. Most students enter universities to prepare for a career in a specific profession such as medicine, law, etc., and studies are directed to this end. Universities should be stimulated to admit students to a professional school, such as the faculty of philosophy, for preparation of statisticians for the many
fields in which they are needed. For health statisticians the basic undergraduate education should include courses in the sciences, mathematics and some statistics.

A professional school in Latin America to train only statisticians would be an expensive operation since costs for teachers, staff and fellowships are high. Positions in the various fields of statistics in both government and commerce must be assured with acceptable remuneration and career service to attract students into the field and retain them in later years.

A curriculum for the preparation of statisticians in Latin American countries is envisioned as one of four to six years of study. The first three or four would consist of basic general education applicable to all, whether preparing for actuarial or health statistics, econometrics, etc. In the last two or three years the student would specialize in his chosen field. These latter years for the health statistician would be spent on biostatistics and public health and other medical courses in a school of medicine or public health.

In a few countries where the medical curriculum has been divided into premedical and medical years, such as in Colombia and Panama, it should be possible to give statisticians the basic undergraduate preparation in the premedical course. Their education in biostatistics and public health could be completed as graduate education in a school of public health.

The development of a professional curriculum in statistics is a long range program which could help to meet future needs. It will not immediately remedy the present deficiencies in the numbers of trained statisticians and other statistical personnel. More immediate steps must be taken
for rapid improvement. Training through short courses will be of greatest help to meet the present needs. There are several levels of statistical personnel to be trained. Those in health services who have completed their high school education can be trained for their specific activities as is being done at the school of public health in Chile. On their return to their health departments they will be able to instruct the clerical workers under them. For the present, many of the professional statisticians for national health services and for the teaching profession can continue to be prepared in the United States. The latter group will become increasingly important in the extension of the teaching of statistics in the Latin American countries.

b. Courses in schools of public health

The schools of public health in Latin America (11 at present) should be encouraged to provide instruction in statistics in addition to that usually given in the principal course directed essentially to health officers. Schools could be stimulated to have advanced courses in statistics taught for physicians interested in specializing in statistics and non-medical persons of suitable caliber, such as engineers or persons with good university preparation for specialization. Also schools should provide short courses for statisticians of health services of states or provinces or of health centers such as is being done by the schools of public health of Mexico and Chile.

Many of these schools are in the process of expansion and change from institutes to schools of public health with full-time faculty. Each school of public health should be encouraged to build a nucleus of faculty members in the department of statistics for such instruction.
At the second meeting of deans of schools of public health to be held in the latter part of 1961 in Venezuela, sessions will be devoted to teaching of statistics. Professors of statistics will participate also in these discussions of the role of schools of public health in the education and training of statisticians. This meeting provides an opportunity to create an awareness on the part of the deans of the functions of schools of public health regarding basic courses in statistics, and for advanced courses as well as for instruction of an elementary nature. Students prepared through such instruction will contribute to the improvement of statistics in a country.

c. Courses in schools of medicine

The importance of the teaching of medical statistics for indoctrination of physicians and the value of a nucleus of statisticians in a medical school rendering service to the faculty in other departments on research have been stressed in the report of the South American Conference on Teaching of Medical Statistics. The Committee endorses these earlier recommendations and stresses the value of awakening interest in this subject. In addition to short courses in statistics for faculty members, a technique used in several medical schools, it is suggested that at meetings of deans of medical schools or of other members of the faculties of medical schools efforts be exerted to develop interest and support for an active program to find and prepare physicians for specialization in medical statistics and for establishing positions for them on the faculties.

d. Special activities for teaching of medical statistics

At a meeting in 1958, plans were made for the development of teachers of medical statistics
in three steps. The first step is to awaken interest in medical statistics and to find personnel for specialization through courses consisting of approximately 10 evening classes in statistics for faculty members in basic sciences, preventive medicine and other departments of a medical school. The second step will be to have international intensive short courses on medical statistics provided for members of faculties of medical schools interested in additional instruction at a Latin American medical school or school of public health. The third step will be the development of a special course in medical statistics in a medical school or school of public health where potential professors of medical statistics would receive instruction in the application of statistical methods in biological and medical research as well as in vital and health statistics.

The progress made in these three steps was discussed. As the first step, statisticians in the countries and consultants should give short courses in medical schools to develop interest. Already progress has been made in awakening interest, although this first step has not been completed.

In regard to the second step there was support of the more extensive courses for carefully selected persons who had some training in statistics. Courses of approximately six weeks in a Latin American center would be useful in providing additional instruction. At least two such intensive courses would be advisable and those sufficiently interested and able to participate on a full-time basis should for the present have fellowships for continuation of education either in the United States or in medical schools in Latin America where professors of medical statistics are carrying on instruction. The support of such instruction by a group such as deans of schools of public health or medical schools would be helpful. Financial sup-
port for a course in 1961 is needed and it is recommended that applications be made to the National Institutes of Health of the United States Public Health Service and to other appropriate agencies.

The development of a full-year course in medical statistics, as stated in the third step, would depend on results of the second. Additional senior faculty members would be needed for instruction.

e. Training of hospital personnel in medical records and statistics

The following points were made with regard to the development of a program of training of hospital personnel in medical records and statistics:

1. In the development of good medical records systems within the hospital, emphasis should be placed on the need for a flexible rather than a mechanical approach to the problems which arise in the establishment of a records system. In developing various types of indexes or filing systems in the hospital such as name card files, X-ray files, pathology indexes, diagnostic indexes or various forms of case registers, unit medical records, etc., stress should be placed upon the nature of the classification process and the kinds of questions these various indexes and filing systems are designed to answer. Examples of various adaptations of these indexes to meet varying situations in different hospitals should be presented along with the reasons for these adaptations.

2. Instruction should be given in the types of administrative statistics of value to the individual hospital as well as to the national hospital system.

3. In those Latin American countries where there are national medical care programs, an unusual
ADVISORY COMMITTEE

opportunity exists to develop simple administrative statistics reflecting the utilization of medical care facilities, including hospitals. The training program for record librarians or hospital statisticians in these countries should take cognizance of this fact and begin to call attention to these opportunities. Medical record librarians and hospital statistics consultants can contribute much to the development of statistics in the medical care system as a whole as well as to the improvement of records in the individual hospital.

4. Consideration should be given in the training program to the use of modern tabulating devices in developing statistics both within the individual hospital and for the medical care program as a whole. Again the approach should be in terms of the problems to be solved through the use of such equipment and the kinds of situations which call for the use of such equipment and those which do not.

5. In view of the above, the program for the training of medical record librarians and technicians should not be developed entirely separately from the training program in medical statistics, and ways to relate these two programs should be sought.

f. In-service training

The desirability of in-service training was stressed as a proven means of supplementing the education of statisticians or statistical personnel. This may take the form of study tours of a few or more months duration for professional personnel. At other levels, personnel returning from periods of formal training may impart such knowledge to co-workers. Seminars and courses at the regional and national levels or for groups of countries are
most useful devices. In general, the recommendation of the committee is that in-service training be provided to meet specific needs as they arise.

5. Statistical and Epidemiological Research

A project has already been initiated through a National Institutes of Health (NIH) grant for collection of authoritative information on the geographic pathology of atherosclerosis in Latin America. This project is an outgrowth of the recommendations of the World Health Organization Study Group on Atherosclerosis. Evaluation of the pathological findings and clinical data collected by 12 pathological laboratories in the United States, Central America and South America will be carried out in a central laboratory to determine the prevalence of each type of atherosclerotic lesion with age, sex, race, geography, state of nutrition and other associated diseases. The significance of this study of atherosclerosis will be increased if medical certification and mortality from cardiovascular diseases are studied in the same cities in which the pathological laboratories are located.

As cardiovascular disease assumes growing importance in the list of causes of death, it becomes more important to define its characteristics and to study its epidemiology. Three crucial questions are to be investigated in the proposed study of cardiovascular disease in Latin America:

1. What is the mortality from cardiovascular diseases in these areas?

2. Are the diseases composing the group similarly defined, diagnosed and classified in different countries?

3. What can be learned from the two studies regarding the etiology of atherosclerosis and the
role played by various factors such as age, sex, race, geography, state of nutrition and other diseases?

In view of the excellent work of the Institute of Nutrition of Central America and Panama (INCAP), its central location and its interest in broad health problems, it is suggested that the study be conducted in close cooperation with the atherosclerosis study underway in the 12 pathological laboratories, which is coordinated by INCAP.

Another series of questions concerns the possible relation of high mortality from childhood infectious diseases (such as pertussis and measles) to nutritional deficiencies. It seems well worth while to investigate possible correlations between specific deficiencies and high case fatalities. Since many other variables presumably will be associated with the two in question, it is recommended that such a study be well planned epidemiologically and carried out under the strict supervision of qualified personnel.

6. Program of Regional Activities in the Americas in Preparation for the Eighth Revision of the International Classification of Diseases

The International Classification of Diseases constitutes the basis for the classification of causes of illness and of death for national morbidity and mortality statistics. For international comparability of data, it is essential that a single classification be adopted and used.

The special needs of the Latin American countries have not received full recognition in the past revisions of the International Classification of Diseases and Causes of Death. Of particular concern to the Latin American countries is the classification of nutritional, infective and parasitic
diseases and especially the diarrheal diseases. The proper classification of these diseases is of special importance to the health services in the Latin American countries.

In view of the importance of the International Classification of Diseases in making available needed statistics, it is recommended that the Pan American Health Organization in collaboration with the Latin American Center for the Classification of Diseases develop an active working program directed toward the Eighth Revision of the International Classification of Diseases. In keeping with the World Health Organization timetable for the Eighth Revision, specific revision proposals representing the views of the American Region should be developed and thoroughly tested by the middle of 1963 and before release of the World Health Organization Headquarters' draft. The outline of the World Health Organization Headquarters' time schedule is as follows:

In December 1960, a progress report on the next revision of the Classification will be given at the meeting of the Expert Committee on Health Statistics.

In December 1961 a subcommittee will meet for discussion of the structure of the classification and one of the subjects will be classification of cardiovascular diseases.

In 1962 there will be another meeting of the Expert Committee on Statistics and the Classification will be included in the agenda. A meeting for discussion of the cardiovascular classification will be held about the same time.

In December 1963 there will be another subcommittee meeting when the classification of mental diseases will be one of the main subjects.
In December 1963 the first draft of the new Revision will be distributed. A year later in December 1964, another meeting of this subcommittee will take place to process the final draft which will be sent out for discussion at the Revision Conference in early 1965.

In developing revision proposals which represent the needs of the various Latin American countries, it is suggested that the following steps be taken:

a) Comments on the present International Classification of Diseases and suggestions for revision be obtained from the health administrations of the various Latin American countries.

b) Study of these comments and suggestions and development of proposals for revision by a committee of experts drawn from various parts of the Americas.

c) Testing of the proposed revisions in various countries, and assessment of the results.

d) Revision of the proposals by a committee of experts as indicated by the results of the field tests.

e) In all these stages, the Region will keep in close touch with the World Health Organization Headquarters in these activities.

The official Spanish editions of the International Classification of Diseases have facilitated the use of the Classification in the Latin American countries. However, the differences in medical terminology employed in the different countries have given rise to problems in defining uniformly the various categories of the International
Classification. For purposes of producing comparable statistics, it is essential that a systematic study be made of the meaning of certain medical terms being employed in each country. On the basis of such studies, it will be possible for each country to define the rubrics of the Classification in accordance with current medical usage of particular diagnostic terms in the country.

The Latin American Center for Classification of Diseases should draw up guidelines for the study of the meaning of medical terms being employed, and work with the various countries in the conduct of the study. This is a long-term study which needs immediate attention.

Attention was called to the publication of the International Classification of Diseases as adapted for indexing hospital records in the United States. It was the view of the Advisory Committee that such an adaptation in Spanish would be useful in the Latin American countries.

REFERENCES


