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METHODS OF IMPROVING VITAL AND HEALTH STATISTICS

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IMPROVEMENT OF ORIGINAL STATISTICAL INFORMATION -
AN URGENT TASK FOR THE HEALTH ADMINISTRATION

by

Enrique Pereda, M. D.
Consultant, Pan American Health Organization

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Enrique Pereda, M. D.
Consultant, PAHO

1. The Problem

It is known that vital and health statistics in the Latin American countries have great deficiencies with regard to reliability, coverage and promptness of publication.

Several factors have contributed to this situation:

- a) The slow pace of community development impedes the creation of attitudes which might stimulate an upward trend of well-being, for example, of health.
- b) Weakness of the organization of the health services.
- c) Slow development of public health services, which should be based on statistical information.
- d) Direction of medical teaching and medical practice toward individual curative medicine with very little orientation toward public health.
- e) Scarcity of professional personnel with good training in epidemiology, statistics and health administration.
- f) Scarcity and low salaries of statistical personnel at all levels: high, intermediate and auxiliary.

2. Indices of Progress

In spite of this dense array of negative factors, progress is being observed in several fields.

- a) The majority of the Latin American countries comply with the international agreements relative to a decennial population census. However, obvious deficiencies still persist in intercensal estimates, due specially to underregistration of births.
- b) Some advances have been made in the organization and functioning of the Civil Registry services, but there still remains much room for improvement.

- o) There are also encouraging signs of improvement in the organization and operation of the national statistical services.
- d) There is a trend toward strengthening the organization of the health services, but the goal is not yet in sight, namely, that they function in accordance with the concept that raising the level of health is to be done by means of integrated or coordinated services for protection, promotion and restoration.
- e) Slowly the Schools of Medicine are incorporating the teaching of public health and its principal working tools, epidemiology and statistics. However, this action has not yet resulted in the inclusion in the curriculum of the subject which is perhaps most important, health administration. Until the present the teaching of this course has been the responsibility of the school of public health, but, for reasons which are not pertinent to discuss in this paper, the knowledge imparted is not as broad or has not been applied as it should be.
- f) The public health physician has improved his professional status. Even so, he continues to be underestimated and considered to be a physician who chose that specialization because he could not be successful in the individual private practice of medicine or had little chance of success.
- g) Advances have been made in the training of high level statistical personnel, who perform their duties in the administrative offices of the health services and of intermediate personnel who take responsibility in the regions, health centers and hospitals. On the contrary, only very recently, and still at a very slow pace, have first steps been taken for training of auxiliary personnel, at a minimal level, who are concerned directly with the collection of the original information.

On the other hand, there are other factors which are forcing the improvement of statistical systems. For the last few years, with growing insistence, those responsible for the administration of health services, as well as various study groups and experts, have been pointing out the existing disparity between the accelerated growth of scientific knowledge and the slow, very slow, pace of its application to the sphere of improving well-being. These discrepancies have become more obvious for two principal reasons: the poor results of many health programs, and, the changes in the value judgments regarding diseases which are taking place in social groups. And as the professionals acquire greater understanding of the usefulness of quantitative methods of analysis and

as to a greater degree the communities cast out antiquated beliefs about the origin of diseases and the methods of preventing and curing them, social pressure will become greater on the governments to take measures to raise the well-being of the population. Indeed, one of the practical means of increasing the coverage of health services with the limited resources of the developing countries is to improve their administration: to intensify planning, to define objectives of the programs in quantitative terms, to develop programs within specified time periods, to increase the yield of the resources and to evaluate the periodic and final results of programs. Also, evidence is gradually accumulating that we know little about the size and nature of the risks of illness in relation to regional characteristics, that we have not entered into the study of the attitude of the population toward its health problems in relation to its cultural, social and economic patterns, and finally, that the tools which the health administrator uses are very limited because we have not advanced sufficiently in the field of operational research. The irreplaceable instrument for development of all these activities is a statistical system with data of good quality.

How may the dissatisfaction and the drive existing among a small proportion of health professionals be utilized for improving statistical information which all of the above-mentioned studies require?

- a) The recording of vital events, births, deaths, etc. is a responsibility of the services of civil registration. Their degree of organization is variable whether countries are compared to each other or whether regional and local services are compared within a single country. Frequently, in Latin America, the collection of the data in small nuclei of population is the task of officials whose level of education is very low and who have little or no administrative relationship or responsibility.

Therefore, it is necessary to seek ways to improve this organization at all levels and to simplify as much as possible the registration systems.

It is essential that the health professionals assume leadership in this activity, and that the governments, by themselves or with the collaboration of the international organizations, improve their advisory services through the work of specialists in civil registration, statisticians and, above all, sociologists who will teach methods of stimulating positive behavior of the community toward an activity as important as registering vital events, since their underregistration appears to be seriously influenced by beliefs, customs and social, economic and cultural factors.

- b) In the field of health statistics it is the responsibility of the Ministries of Health and National Health Services, (as well as of other agencies, governmental and private) to give momentum to the task of enriching the collection and use of statistical information. The methods to attain this end are many but they all relate to the motivation of health officials at all levels, from the highest to the lowest, to the importance and necessity for the systematic use of the data in their planning, programming and evaluation activities. In other words, leadership of the health professionals is also of the utmost importance in this sphere of action.

3. The Education and Training of Statistical Personnel

Statisticians are the instrument for the above-mentioned purposes. We have said that in the past decade considerable effort was made to increase the numbers of personnel and train them, specially at high and intermediate levels, but that nevertheless the deficit is still alarming. Nor has significant progress been made at the level of statistical auxiliaries, those directly responsible for the collection of information.

Even though in the Latin American countries social pressure for the improvement of statistical information has not acquired sufficient intensity, it is permissible to hypothesize that a rapid and massive change for the better in the organization of the local statistical offices would bring about some or all of the following situations:

- a) A change in the general policy of statistical offices at the higher levels of the health services with emphasis on prompt publication of data and advisory services to improve the original information and popularize the use of the data;
- b) An encouragement to the health services to make more extensive use of statistics and to the universities and colleges to intensify the teaching and application of statistics to clinical medicine, public health and health administration.
- c) A change of attitude in the community which would result in its more active participation in health programs. (Until systematic contact between the health services and the community is attained, the latter will continue to be reluctant to collaborate and will not contribute its enormous potential of material resources and voluntary personnel. This collaboration and the utilization

of its resources are the only possible means which the developing countries have of attaining satisfactory coverage in their programs.)

- d) A substantial improvement of the local health programs would be obtained by better use of the available resources as well as by community organization.

A problem presents itself: the great majority of health professionals, technical and administrative, receive low salaries. This problem is often closely bound to the budgetary possibilities of the developing countries. For the specific field of statistical personnel there are countries which have improved the economic situation of statisticians at a high or intermediate level, but not at all or very slightly that of the auxiliary personnel. Furthermore, when it has not been possible to bring about improvements, there has been observed an exodus of these workers to private industry where they obtain substantially higher incomes.

It would be necessary to increase the salaries of statistical auxiliaries as a group, even though it may be on a small scale to begin with, as an incentive to obtain a higher level of knowledge in short in-service training courses.

4. Training of Statistical Auxiliaries

The objective of the program would be to train, in a very short period of time, two years at most, all of the auxiliary statistical personnel which the country needs. This training would be followed by a plan of advisory services until efficient functioning of the statistical services and proper utilization of the information in health programs are attained. Such a short period is set because the various teaching schemes, requiring more time per course, produce such a small number of graduates that they have practically no influence on the improvement of the statistics of the country in general.

The problem remaining is to demonstrate whether the idea can be translated into reality. The task is an ambitious one because the statistical auxiliaries needed for all the health centers of a country, including hospitals, are probably in the order of hundreds.

What type of training would be adequate? It would have to be elementary and minimum: management of clinical records, of data on utilization of hospital beds and of other resources, reporting of communicable diseases, collection of birth and death certificates.

How would the training be programmed? The following would be the principal steps:

- a) To investigate the needs for auxiliary statistical personnel for the entire country.
- b) To determine the present quality of the data in order to be able to evaluate later the results of the program.
- c) To determine the quantity of resources required (on a minimum basis) to complete the installation of local statistical offices and their financing on a two-year plan.
- d) To set up a statistical office in a health center, including the hospital. In this work the following would collaborate: a statistician from the highest level of the national health service, an international consultant, the statistical auxiliaries of the health center, and six or eight auxiliaries from centers in other provinces who would afterwards take the responsibility of performing the same work in their own localities.

This group would be charged with planning, programming and executing the activities of the statistical office in accordance with the principles and procedures of efficient administration. Note that the group of auxiliaries would not receive in-service training as such but would be exposed to the study of organization and measures to be adopted in order to solve difficulties or remedy deficiencies in the same field. This method would give the students the opportunity to develop that skill which cannot be learned in books nor in well-organized offices: the use of imagination to find the root of problems and how to solve them with the available tools, not limiting themselves to waiting for advice and resources from higher levels. This is probably one of the reasons for the unsatisfactory results of the usual training courses: the field practice is done in offices which have already gone beyond this stage of organization to the extent that they cannot demonstrate to the students where the defects were and what were the ways to resolve them.

- e) Once the training period is over, the students from the other provinces would return to their places of work to improve the efficiency of the statistical units and periodically would receive advisory services. In one of them the cycle would be resumed: organizing a new office, and training of six or eight auxiliaries from other provinces, with national and international advisory services.

The very rapid growth of this procedure would be limited only by losses of workers (resignations, lack of competence, etc.), lack of consultants, eventual shortage of the means of financing the programs, etc. In any case, it is assumed that the method is compatible with attainment of the objectives of the program. In fact, if each short course takes two or three weeks, around 150 persons could be trained in one year. If the needs were larger, the program would begin with two parallel courses (in which case it would be necessary to increase the number of consultants) or the period would be extended to two years, a highly satisfactory period in any case.

The resources needed for the courses themselves would be small since the international organizations would collaborate by providing consultants and the countries by providing the traveling expenses and services of national advisors. The countries would also be responsible for selecting the students and providing their financial support.