Technical Discussions

Washington, D. C.
September-October 1965

Provisional Agenda Item 19

CD16/DT/2 (Eng.)
27 August 1965
ORIGINAL: ENGLISH

METHODS OF IMPROVING VITAL AND HEALTH STATISTICS

Second Working Paper

THE PUBLIC HEALTH STATISTICIAN

by

W. P. D. Logan, M. D.
Director, Division of Health Statistics,
World Health Organization, Geneva

THE PUBLIC HEALTH STATISTICIAN

W. P. D. Logan, M. D.

Director, Division of Health Statistics,
World Health Organization, Geneva

Public Health people agree that health statistics are essential yet they do not do much to get good statistical services and to use them properly. This is due to several causes among which is a lack of understanding of the range of subjects of public health interest to which an organized statistical service can contribute and a failure to integrate the health statistician fully into the operational public health team. Too often, the public health statistican is left in the background to carry out the task of assembling a few annual statistics of national death rates and communicable disease notifications. He is not given enough opportunity to participate in the day to day activities of the health department, to get to know what kinds of statistical data are wanted and to contribute facts and figures that are relevant to the task in hand.

One of the things we need is a departure from the old-fashioned concept of the health statistician as a backroom technician segregated from the active heart of the health service and expected to do no more than produce some dull and not very useful statistics. Unless we can get him right into the middle of things so that he knows what is going on he can be no more use than a navigator who has not been told where the ship is meant to be going.

Traditionally the tendency is to regard the health statistician's role as that of tabulating mortality statistics; yet mortality statistics, important as they are, represent only a small part of the total field of health statistics. This field includes not only all the kinds of statistics that describe the health status of the population but also the statistics that describe the resources of the health service in terms of institutions, equipment, personnel and special services and the extent to which these resources are being utilized. Moreover, as well as statistics of health status and health services the health statistician has to have at this disposal statistics of the population, its size, age, structure, geographical distribution, and socio-economic characteristics. Data are also wanted on nutrition, housing, education and other matters of interest to the health service.

This is a broad field and I do not want to suggest that the health statistician should try to assemble statistics on every part of the field so as to meet every need. Not only would this be wasteful, it would be unrealistic. Some kinds of information will have to be tabulated routinely but other data can remain either on punch cards or magnetic tape ready for extraction if required. In addition there will be many questions that cannot be answered by resort to routine data and a special enquiry or ad hoc survey, quickly launched and of short duration may be necessary to fill gaps and to meet sudden demands. The statistical service must therefore be able

to deal not only with a wide range of subjects but be flexible enough to use routine collecting systems and ad hoc sample survey systems freely. It must also be able to produce statistics describing not only the long term changes in health and health services, but also to describe the short term changes important in day to day health administration. It must also be able to provide statistical indices for evaluating long term and short term programmes and for the planning and development of future activities.

The statistician must, so far as possible, foresee the things that the health service has to do and the kinds of data he will be called on to provide. He must decide what types of data justify routine collection and what can be left for ad hoc enquiry when the need arises. He must ensure that the data he provides are up-to-date, relevant, and as accurate as the circumstances demand. Absolute accuracy is seldom attainable but grossly inaccurate statistics are not worth looking at. For some purposes a rough indication of what is going on may be sufficient and in these circumstances it would be wasteful to strive after precise statistics. In general, however, accuracy is worth aiming for, since a target of anything less may result in data so crude and biassed as to be useless.

Statistics can never be any better than the basic records from which they are compiled. One of the main tasks of the statistician is to try to improve the quality of his raw material and to understand its limitations. He must do this if he is to stop people being misled and particularly to make sure that he does not mislead himself.

Nowadays there is so much talk about electronic computers that there is a risk that people without computers may feel it is impossible to do any worthwhile statistical work. Computers are important, are making things possible that were impossible before, are revolutionizing our thinking and our doing. They cannot however make bad basic data into good statistics and they cannot make people use statistics intelligently. But they can contribute enormously to the processing of data and to that extent give the statistician a heaven-sent tool and an easier life. With the economists, scientists and industrialists using computers the health statistician must not lag behind. He too must be able to use the latest modern techniques available. More important than technical developments however is good organization and here too modernization is needed at every level from that of peripheral recording and reporting to the final interpretation and communication of the centralized data, and its transformation from information into decision and action.

In summary what I have been trying to present is the picture of the modern public health statistician, well trained for his job, equipped with up-to-date machinery, deriving information in an efficient, well organized and flexible way, using meaningful and reliable basic records, occupying a position near the centre of the public health team and contributing with his special skill and experience to the better administration, planning, and evaluation of all aspects of the health service.