

THE UTILISATION OF MEDICAL STATISTICS IN
RATIONAL PUBLIC HEALTH MANAGEMENT.

1. INTRODUCTION.

In October 1972 the Government of the Republic of South Africa received the following request for assistance from the Government of Lesotho:-

"Lesotho Government requests the services of a Medical Statistician who would investigate and establish proper statistical service for an initial period and later pay regular periodic visits."

An initial period of two weeks in Maseru was set aside for this purpose to be followed by six 1 to 2 day visits at intervals of about 2 months.

Dr. H.G.V. Küstner B.Sc. M.B. B. Ch. of the Directorate of Strategic Planning and Co-ordination of the State Health Department of South Africa was assigned this task and commenced his activities on 26th February, 1973. This report gives an account of his observations and findings.

2. SUMMARY.

In answer to a request by the Lesotho Government the Medical Statistician of the State Health Department of the Republic of South Africa spent two weeks in Maseru studying Lesotho Health Statistics. In this report, which gives an account of Health Services in Lesotho and how these are reflected in the available medical statistics, the approach to such statistics is discussed. The emphasis throughout falls heavily on practicability and usefulness of statistical information.

The Health Services of the country as a whole are briefly described followed by glimpses at Health Services as provided by the nine Administrative Districts. The major findings are reflected in a set of nine charts, viz. Appendices 1 to 4.

In the course of the analysis particular needs are identified and, in part, quantified as constituting areas requiring urgent attention.

Suggestions as to further action in the field of Community Health are touched upon and the form of the anticipated continued liason between the Medical Statistician and the Lesotho Health Authorities is outlined.

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3. SOME GENERAL CONSIDERATIONS ON HEALTH SERVICES AND MEDICAL STATISTICS.

What follows should be seen as the enunciation of certain premises many of which appear to be commonplace. They are nevertheless being spelt out for the sake of clarity and in an attempt to rule out ambiguity. Furthermore, they reflect a certain approach which has proved itself to be of use when evaluating Health Services and Medical Statistics.

3.1 Health Services.

3.1.1 Definition

The most widely held opinion on the definition of Health reads:

"Health is a total state of physical, mental, social and economic well-being of the individual, the family and community and is not merely the absence of disease."

Indeed health in this sense constitutes a fine goal well worth striving for. On the other hand it encompasses so wide a field that, for action in the medical field to occur, a starting point must somehow be decided upon.

For this reason and seen as an interim solution as a basis for action, the old-time definition of health has been resorted to, so to say as a "working definition", namely

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"Health is the absence of mental or physical disease in an individual."

3.1.2 Health Needs.

Governments and State agencies exist for the purpose of serving the community from which they arise, their overall objectives being to safeguard and ensure the further existence of the community and to improve, in every sense, the lives and living conditions of the members of the community. Diseases threaten the existence of communities. State action occurs in answer to this threat in the form of the provision of Health Services, i.e. the provision of Health Services occurs in response to needs for such services, which needs are identified and quantified by the prevalence of particular, defined disease entities in the community. These services usually combine preventive, curative, health promotive and rehabilitative aspects.

3.1.3 Specificity.

Specific communities require specific Health Services. Therefore, it is felt that planned Health Services should always be preceded by a comprehensive definition and description

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(demographically, sociologically, politically, culturally, geographically, economically, etc.) of the community on whose behalf Health Services are being designed. Once these parameters are known the resources can be allocated in a fashion that will ensure best value for money and benefits (in a medical sense) accruing to the greatest numbers and the most vulnerable sectors of the community. Clearly there will be areas such as programmes directed at the prevention of communicable diseases, common to all communities.

Nonetheless it is held that Health Services, should be tailored as neatly as possible to meet the specific needs of a particular community.

3.2 Medical Statistics

3.2.1 Definition

According to Kendall, 1952, the word "statistics" has more than a hundred definitions. Mainland in "Elementary Medical Statistics", 1963, p.2, states "In medicine the word (statistics) has two common meanings:

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1. masses of figures, such as disease incidence and death rates - "statistics" as a plural noun.
 2. mathematical methods of treating such figures and also much smaller sets of figures collected in laboratory and clinical investigations - "statistics" as a singular noun.
- In order to justify the collection and compilation of statistics, which costs time, effort and money, it is felt that these statistics should meet certain basic criteria.

3.2.2 Meaningfulness

All information, in this case statistics, being gathered must bear the characteristic of being meaningful to someone. This should apply to each and every data-item which is being asked for. Also, the person or office calling for a data-item should be clearly identified and the purpose of collecting that data-item should be clearly defined.

3.2.3 Responsibility

Many aspects of rendering a health service can be expressed in terms of statistics. A knowledge of the statistics of a particular work area means, to a large extent,

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control over that work area. It follows that personnel in charge of a specific scheme or health programme should be the persons who, in the first instance, would or should be most concerned with the statistics in that field. Indeed, it is felt that they should be responsible for all aspects of their statistics: data-capture, compilation, evaluation and use thereof. However this does not preclude the utilisation of the statistics by higher levels of authority, who, on the contrary, will be in a better position to correlate the findings produced by the various sectors of work, i.e. for planning purposes and co-ordinating services in a strategic sense.

3.2.4 Evaluation.

Evaluation and utilisation of statistical information is, in the final analysis, the reason and justification for their existence. The process of continuous evaluation of data by executive officers within the Health Departement or Ministry will preclude the possibility of statistical activity ever becoming an end in itself.

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After all, statistics are and should remain an invaluable means to an end, namely a powerful aid towards the goal-directed and efficient rendering of Health Services.

3.2.5 Measurement

It would be both foolish and futile to attempt to force all aspects of Health Services into a set of figures. However, there are vast areas in the realm of Health Services which lend themselves to precise formulation in terms of statistics. Measurement is extremely important, both of input of effort and resources as well as of the effects or results produced. This is particularly significant from a management point of view and is emphasised even further in view of the magnitude of health problems besetting many communities and the very limited financial, man-power and other resources which may be available. Under these circumstances particularly, sound management becomes mandatory and wastage of any sort can be construed as being wanton.

3.2.6. Quality.

A set of statistics is as good or as poor as the least accurate item it contains. All statistical effort should therefore be accompanied by quality controls of some sort or another. Also, every effort should be made to motivate peripheral personnel, the primary suppliers of statistical information, to make every effort at supplying information to the best of their ability, i.e. which is as accurate as they can make it. It has been found that feedback of information to the periphery strengthens motivation significantly, since it provides the staff in the field with insight into the use "their" statistics are being put to and also assists them in evaluating the efficacy of their own efforts.

3.2.7. The Fruits of Statistics

Statistical information flows from the periphery, where a particular health service is being rendered, to some central, co-ordinating office or person whence it is forwarded to management, i.e. executive officers.

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On the basis of this information decisions are made and instructions as to their implementation travel in the opposite direction, namely from the central managerial point via regional authorities to the periphery, where they give rise to action, the effects of which can be measured by perusing subsequent statistical returns on the subject or problem in question.

In this way effects become measurable and statistics reflect quantified activity. Poor results are spotted early and are corrected by appropriate action. Money is spent judiciously since activity is planned. Man-power similarly, is utilised optimally, because its deployment is geared towards the attainment of quantified goals.

3.2.8 Costs.

Collecting and compiling statistics costs money. This applies to each and every data-item that is collected. Statistical data give account of a variety of aspects of services being rendered. Therefore, the collection and utilisation of data should be regarded as an integral part of the service.

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Statistical data are a sine-quo-non for rational management. But in view of the high costs involved in collecting and handling them only those statistics that are really made use of (or data that "ought" to be utilised) should be collected. Periodic evaluations of data being received should be undertaken not only to assess what other items could or should be requested in response to changing circumstances but also to scrutinize critically incoming information with the view to assessing which items have become obsolete or are never utilised. In such a case their collection should be discontinued.

4. METHOD.

Within the compass of the two weeks allocated to the completion of this assignment it is perfectly obvious that not much more than a brief outline of Medical Statistics and Health Services in Lesotho can be given. As such this study claims to be neither complete nor faultless. As a matter of fact, before any use is made of the conclusions and figures arrived at, it is imperative that these should be checked by some competent person.

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What this report does, however, try to convey is an approach, a point of view, possibly a methodology and it is based on current Lesotho Health Statistics by way of illustration.

The method followed entailed an assessment of the status quo of Health Services in Lesotho using mainly the information contained on pages 40-71 of the Annual Statistical Bulletin 1971 as source document which was compiled and issued by the Bureau of Statistics, P.O. Box 455, Maseru, Lesotho.

Briefly, the crucial questions to be answered would read something like this:

"What Health Services are currently being provided in Lesotho, by whom, to what effect, where and at what cost?"

The rider to these questions would be "What are the felt health needs of the Kingdom of Lesotho?" or alternatively "What are the health needs of the people of Lesotho as reflected in their statistics?" On the basis of the answers to these questions, where should the points of emphasis in the provision of health services in Lesotho lie? And finally within the constraints of limited financial, man-power and other resources, how could or should present Health Services be modified and/or extended in order to optimise the utilisation of these resources?

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