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TWENTY-SIXTH WORLD HEALTH ASSEMBLY

Technical Discussions

BACKGROUND DOCUMENT BASED ON REPLIES RECEIVED FROM COUNTRIES

for reference and use at the

TECHNICAL DISCUSSIONS
ON
"ORGANIZATION, STRUCTURE AND FUNCTIONING
OF HEALTH SERVICES AND MODERN METHODS
OF ADMINISTRATIVE MANAGEMENT"

CONTENTS

INTRODUCTION

The subject chosen for the Technical Discussions at the Twenty-sixth World Health Assembly, May 1973, is a wide-ranging one. Many of the topics discussed on previous similar occasions might be considered to lie within its scope. In one sense there need be little ground for discussion in that there can be little doubt that the systems through which health provisions are administered, and health care delivered ought to be well managed, just as any activity which is worth doing at all is worth doing well. Where there is a great need for discussion and the review of experience, however, is in deciding how this general aim can be achieved.

There is an ever-increasing array of methods and techniques available to assist in management and it becomes a matter of some concern to decide what resources should be devoted to their adaptation and utilization in the health context. This can only properly be decided by a confrontation between the proponents of the methods available and those facing the problems of health administration at all levels, and these Technical Discussions may be seen as an important component of this process.

In conformity with previous practice, an Outline Document containing suggestions for discussion at country or agency level was sent in June 1972 to Member States, Associate Members and a number of non-governmental organizations in official relations with WHO. Comments were requested, both on the outline itself and on some general questions intended to help in the identification of the most urgent needs in applying modern management methods to health sector problems.

Up to date (15 February 1973) 33 replies have been received from Member States and 12 from non-governmental organizations. They have all been drawn upon in preparing the present document.

Together, these replies give a useful statement of the management problems of health services as perceived by governments and others concerned with these problems. Especially valuable is the frank recognition, throughout the replies, of current shortcomings and difficulties in management.

The purpose of the present document is to present a synopsis of the material collected and then to bring out certain themes and topics and issues which it would be useful to examine in further discussion.

The order of presentation is as follows:

for convenient reference, the main points of the outline are summarized;

certain amplifications suggested by the comments received are then made and the material provided by governments and other bodies is analysed;

headings are proposed for inclusion in the agenda for the Discussions.

PART I

SUMMARY OF THE OUTLINE DOCUMENT

The subject under discussion was selected because it is increasingly apparent that there is a world-wide need for better management of health services. This results from various trends.

In the first place the functions of these services are becoming more complex as a result of technological, social and economic advances. It is becoming necessary to consider together, as a single whole, services and activities which previously could have been regarded as separate. The range of possibilities for providing services and supplementary functions such as health education, and research, is increasing. Costs are increasing too, so that difficult choices must now be made.

Second, the preferred structure of services is changing in the direction of the delivery of care by multi-professional teams and in terms of an integrated system of health centres, local hospitals, regional hospitals, etc.

Third, the economic basis of health care has moved away from personal payment, with increasing responsibility accepted by the State. This has brought with it a deeper involvement of the state in the management of health services and calls for new skills and attitudes in addition to the traditional bureaucratic ones.

These, and other related trends are leading to the tentative adoption of methods of management developed to cope with similar complexity in sectors other than health, e.g.:

the "systems approaches" of operational research, systems analysis, programme budgeting, computer-based information systems;

techniques concerned with the productive use of resources such as work study, network analysis and cost analysis;

organizational and behavioural methods concerned with personnel selection, training, motivation, communications, adaptation to change, working in groups, the design of organizations, etc.

The process of management involves a wide variety of activities including: diagnosing present and anticipated problems in the field of concern; assessing the significance of problems and defining aims and objectives in relation to them; finding alternative means for meeting objectives and making rational choices between them; obtaining the necessary resources; defining tasks of organizations and of groups or individuals so as to make best use of available skills; development of personnel; communications and concern with morale, motivation etc.; monitoring, control and evaluation so as to adapt and learn in the light of experience.

These processes act together in a continuous cycle each influencing the others. In attempting to achieve better management of health systems, therefore, the various aspects of the management process should be developed in step. Attempts to improve one or two isolated aspects are unlikely to be successful.

The so-called "modern methods of management" all derive from sectors other than health but it is concluded that their application in the health field is justified and appropriate, despite some evident difficulties. One of these concerns the formulation of objectives, but some progress has been made with overcoming this problem. The need to involve the public, as "consumers" of health services, in the setting of objectives is discussed.

The various management techniques available are described and roughly classified in terms of their potential contribution to the recognition of problems, to evaluation of alternatives, to implementation, and to evaluation of results. A warning is also given that some demands for "research" would be better interpreted as requests for help in basic good management.

In regard to the problems of decision-making, these are presented as involving the reduction to acceptable levels, of uncertainties of various kinds. Some techniques for reducing the uncertainty about the likely effects of possible actions are described including:

statistical analysis and forecasting techniques;

epidemiological and sociological survey methods;

field experiments and controlled trials;

simulation studies;

input-output techniques.

A second form of uncertainty concerns values and objectives, in which some assistance can be obtained from:

cost-benefit analysis;

attitude survey methods;

systematic methods for quantifying subjective judgements.

The matter of choosing between alternative means of obtaining given objectives, subject to constraints on resources, etc. is facilitated by cost effectiveness studies:

linear programming.

The third form of uncertainty discussed, concerns the effects of one decision upon the decisions that will have to be taken later, or in regard to different but connected subjects. This raises the problems of co-ordination and planning and suggests use of:

programme budgeting;

techniques for selecting decisions which are "robust" against future uncertainties.

In using these quantitative techniques, the standards of precision sought should suit the circumstances and for managerial purposes it is often unnecessary to attempt the standards of precision that would be appropriate to a research study.

It is at the implementation stage that managerial shortcomings must often show up in practice. The main considerations are:

detailed programming of the steps necessary to give effect to the actions decided upon - for which the technique of network analysis is helpful;

selection, training, motivation, supervision etc. of the personnel involved - for which methods derived from behavioural science are useful;

organization and communications, formation of project teams, etc. - for which also there are useful results from the behavioural sciences;

efficient use of resources in individual institutions such as hospitals - for which work study and related techniques are used.

The interdependence of these techniques is stressed, and a balanced approach to development of improved management is advocated. No one technique or approach is likely to make much impact if others are absent. Better decisions, without the means to implement them, for instance, or computer based information systems without a management system geared to using their output, will not succeed.

The document continued, therefore, with a discussion of inhibiting factors tending to hold back the adoption of modern management methods. It concluded that a deliberate, co-ordinated strategy was required to overcome these obstacles in order to meet the need for more effective management of the very large resources now being devoted to health services.

PART II

AMPLIFICATIONS OF THE OUTLINE DOCUMENT

In general the outline document was accepted as providing a proper framework for the discussion of modern management. Nevertheless the comments received do suggest the desirability of certain changes of emphasis.

To speak of "modern methods of administrative management" perhaps implies a rather false and unreal distinction between what is modern and what is traditional. In consequence, the document tended to concentrate on quantitative techniques and, despite the importance of these, perhaps gave an unbalanced view which had not been intended. The parallel importance of general (as distinct from technical) abilities in management, administration and supervision needs to be emphasized. Although it was not appropriate in the outline document to write at length about these general aspects of management, they need to be developed just as much as the more technical aspects for the latter on their own would be quite ineffective.

It is also necessary to confront the suggestion that use of quantitative techniques is associated with only one of several alternative ideologies. To quote from one of the comments received:

> "But more important is to point out the political or ideological contents of the application of the various techniques. Most of the engineering techniques mentioned are developed with the management aim of strengthening the influence of the present élite in the organization. The structure of power or influence prevailing in the system is considered granted, and it is possible, of course, that it is to the benefit of the clients and the country as a whole, but as a rule this is an unanswered question. Some of the behavioural-science methods for organizational development may be applied with the same ideological pretext, but in practice they are often applied with the implicit aim of encouraging a harmonization of the structure of influence in order that each person has a greater influence on his own working situation, and maybe also on the work of the institution as a whole, in accordance with the lines from a UN seminar quoted on page 36 in the information sent out. The choice of management techniques is thus not a purely technical question, but also has an attitude towards important human values."

The reference, in this extract, to increasing the influence of a person on his own working situation is also limiting in a value sense, however, since the individual may also be regarded as having the right to influence in his situation as a "consumer" of health services or as a contributor to the economic basis of their provision. Although directed at the "engineering" origin of the quantitative management techniques a similar criticism may be directed at any tendency to regard the problems of health management and planning as the exclusive preserve of medically trained people.

It is not a matter of necessity for quantitative techniques to be used only to serve the purposes of an established élite. Indeed the process of dialogue and adjustment involved in the use of behavioural science methods for organizational development should be greatly enhanced and enriched by the appeal to quantitative models.

Equally, it is necessary to correct any impression that techniques alone could ever be expected of themselves to solve problems of fundamental priorities:

> "The most difficult managerial problem, which apparently remains to be solved, is to determine the relative importance of each categorical health programme to be included in the development planning in order to achieve harmoniously the selected global health service goals."

Here again, what the quantitative techniques can do is provide a clearer basis for dialogue and the discussion of priorities than can be provided by intuitive methods alone.

Another impression that seems to have been conveyed by the simplified treatment of the subject in the outline document was that modern management has its place inside individual institutions or in relation to specific action programmes but has little to contribute to the problems of co-ordination between the many agencies implicated in the delivery of health services or in other ways doing things that influence health. The multi-agency aspect was, in fact, referred to in the outline document but for the most part was taken for granted as an acknowledged characteristic feature of health services. This, in turn may have meant that insufficient attention was given to the problems arising from the existence of conflict.

The co-ordination problem was widely commented upon as a problem of special significance in the management of health services and some points for discussion of this important topic have therefore been included in Part III of the present document. Of course, co-ordination between agencies is rendered especially difficult if the agencies themselves are inadequately managed.

Many countries are facing the problems of organizational or structural change in their health services, and commented on the difficulties of overcoming resistances to such changes. It has therefore seemed appropriate to provide further material for discussion of the processess of change and this has also been included in Part III.

Although the comments revealed a substantial acceptance of the idea that the health sector has sufficient in common with other sectors for the latters' experience of management methods to be applicable, some further distinctive features were pointed out as needing to be taken into account in adapting and utilizing that experience. Such points included the fact that supply of health services tends to create demand, means that greater reliance must be placed on good planning and on the higher level allocation of resources than on the assumption that individual low-level decisions and the operation of a "market" will ensure a satisfactory overall outcome. This comment applies whatever the economic system of the country concerned.

The factors and relationships to be taken into account in management of health services were not considered to be entirely analogous to those involved, for example, in industrial management. Thus:

many of the relationships between factors cannot be known with any great degree of certainty and can therefore only be considered in terms of probabilities;

it is often difficult or dangerous to generalize from one situation to another the results of research or of practical experience;

the health system is based not on products but on services to human beings. There is a bilateral relationship involving trust and continuing mutual learning rather than independent encounters or transactions. These social processes can, however, be modelled and quantified to some extent to facilitate their being brought into account;

health institutions do not produce "health" as such but provide a service whose impact on health is indirect. Moreover, if the service is not utilized at the time and place where it is available, it cannot, unlike a physical product, be "stored" for later use.

Finally, in several of the comments there was a request for examples of the application of management techniques resulting in improved health care in the expectation that such examples would be convincing to those who would otherwise be inclined to ignore these techniques. Such requests are easier to make than to meet since to be useful each example would have to include an analytic description of the full management context. There can be no simple comparison on a "with" versus "without" basis. Especially is this true since to be able to evaluate anything in terms of "improved health care" itself implies the existence of a sophisticated management process.

Although the replies did not provide examples in this detail, the exchange of well documented examples of the adoption of improved management practice (and, equally important, of the reasons for failure) would have obvious value but not for the purpose of "selling" modern management as a "package". The approach adopted in the outline document (paragraph 68) still seems the appropriate one, namely that the initial step in a programme of managerial development must be taken on the general conviction that it is the right course to take, but that from then on it is an evolutionary process involving evaluation in locally relevant terms of each further step. The replies received indicate a willingness to engage in such programmes of management development.

PART III

COMMENTS ON SOME IMPORTANT MANAGEMENT PROBLEMS

The outline document posed several questions of which the first two were:

1. "In view of present trends, and of the country's policy for the future of its health services, what are the most important managerial problems foreseen and what reliance is being placed on modern management techniques for solving them?"

2. "Are these problems in the health sector considered to be of a special kind, different from those in other sectors, (and if so, in what ways?), or is it expected that experience from elsewhere can be applied?"

The answers to these questions showed that there is much in common between the managerial problems that countries feel themselves to have and in this Part, further consideration is given to those general problems which appear from the replies to be of greatest importance.

Naturally, the less developed countries give more stress to the problems arising from shortage of resources whereas the more developed emphasize the problems of co-ordination in their more complex health systems. Nevertheless, broadly similar management problems appear to be present all along the development spectrum, and in summarizing the main problems it has not been found necessary to make any strong distinctions according to the circumstances of the countries from whom the replies have come. It should not be inferred from this, however, that the most appropriate managerial treatment of these problems would be everywhere the same. Resources of managerial ability and expertise vary from one situation to another and although problems of the same general nature seem to be widespread different ones will be at the top of the list of urgency and importance according to the local situation. The question of the most appropriate deployment of management techniques seems likely to become a recurrent theme during these technical discussions.

Resources and costs

Finance is obviously a limiting factor that pervades the whole management problem, frequently expressed in terms of the need to avoid wasteful duplication, to make efficient use of what is available, to hold back rising costs, (e.g. of hospital care), and to set clear priorities. The following were among the more specific problems mentioned:

"With insufficient funds to provide minimum health services to the entire population, what can be afforded, and to which categories of population?" The problem here is one of national policy in the formulation of which information about the costs and the effects of various patterns of health service coverage would be invaluable. It is also a situation in which effective management to get maximum benefit from the resources that are available seems especially desirable.

"Foreign aid programmes should be scrutinized to see that preference is given to national priorities." The question raised here is not simply one of making good use of a source of additional resources, it also underlines the importance of having clear objectives and not allowing them to be confused by uncoordinated efforts.

"A simple system of cost standards is needed, both for detection of wasteful use of resources at the level of the operational units and so that realistic plans can be developed at the higher levels." Two things are being asked for here. It is too often the case that costs are unknown or that they cannot be attributed to specified services or categories of patient, etc. However, when such costs are known, it is

important to know whether or not they are excessive in relation to the results achieved, and whether to expect similar costs for similar services provided elsewhere. It is for these purposes that cost standards are required and simplicity and relevance would be of greater practical value than unnecessary precision or elaboration.

"Cutting costs is possible, e.g. by using trained personnel in diversified health programmes to prevent duplication and save on training and maintaining staff; also by encouraging participation of the general public in the delivery of health services where appropriate." These are useful suggestions and are typical of the kinds of possibility that a lively management would be expected to explore and to implement.

The possibility that improved management would also tend to attract more resources to the health sector should not be overlooked:

"There are some who believe that one of the major reasons that the Ministry of Public Health receives such a relatively small part of the overall national budget each year is that the plans are unimpressive and give little actual justification for the expenditures requested. If the budget were truly carefully prepared through an effective health planning process, there is reason to believe that the budget allocation might well be raised signficantly in terms of the percentage of the national budget expended for health."

Priorities, objectives and evaluation

Many of the replies have further emphasized the point made in the outline document that "- the difficulty in formulating clear objectives is one of the main inhibiting factors in the appreciation of modern management methods and thus merits further development." The central importance of this problem comes out in several ways. For example in the need to pick out the problems of greatest importance:

"The differences between the management problems in the health sector and other sectors are more apparent than real. Essentially they result from the difficulty of setting objectives. That is why the identification and formulation of problems seems to us to be a priority aspect of the adoption of management techniques."

and

"One of the major problem areas is the need for an adequate diagnosis of the health problems facing the country."

Some indications of the results of the absence of a system of objectives were also given:

"Health services are the result of decisions made by the people often on an irrational basis."

". . . health activities and their results largely depend on the motivations and attitude of the population at the level of the individual."

"The Ministry has recently attempted to set priorities for the delivery of health services. This is a difficult procedure at best, but had there been better data available on the large numbers of health problems facing the country, the job would have been much simplified. Similarly the priorities that were eventually established would have been much easier to have justified to outside authorities who have little understanding of the technical aspects of health care and its problems."

The difficulty of achieving a satisfactory system of objectives and priorities is, of course, recognized:

"The task of compromising the actual needs of a community as seen by experts, with the felt needs of the people."

". . . objectives of the health services have never been clearly defined . . . a definition of health that has truly measurable attributes has yet to be designed."

Then there is the important question of where the responsibility for formulating objectives ought to lie:

". . . it has only been possible to evaluate by far the greater part of the work performed by the health services on the basis of the personal views of the individual administrators and physicians . . . The greater part of the population and the politicians has up to now been unable to give actual guidance to the health authorities in these matters, and the debate within the health system has been modest."

"The tendency for the health professions to usurp the right to be the final arbiters on all issues pertaining to health, and their reluctance to surrender this right."

These quotations illustrate the importance of stating objectives in terms that can be evaluated rationally and can be widely understood. They also show some of the difficulties and the conflicts inherent in doing so. It has further been pointed out that the long time-lag between an action and its results being apparent in terms of improved health status means that intermediate assessments will usually have to suffice. With all this in mind, it would be useful to focus on the search for methods of evaluation and comparison which can at least start to meet the need for clarity in defining objectives.

Some of the difficulty stems from lack of knowledge, on such fundamental questions as the extent to which health care delivery services contribute to health and on more detailed questions of the same general nature. These are research questions of great difficulty and whilst their solution would greatly facilitate a rational process of setting objectives, the problem has to be tackled in the meantime by less exact methods.

The setting of objectives and priorities involves bringing together in the same framework, information of varying degrees of quality and accuracy ranging from precise technical assessments to guesswork. To encompass this variety, there would seem to be need for a simple method which can nevertheless be elaborated to any extent that is justified by the quality of the available data. Such a method, suggested in one of the replies, is described in Annex 2.

This simple method may provide a useful example on which to base further discussion. It would be easy to criticize it in terms of the problems that it does not solve, or of the relatively crude nature of the measurements it employs. On the other hand, many replies have suggested lack of a system of priorities as the reason for slow development of good management. The fact that something can be done on these lines rather tends to suggest that cause and effect may be in reverse order. Adoption of a priority system, even a crude one, is one of the first acts of sound management and is a powerful stimulus to further actions. It can be confidently stated that it will be possible to undertake the elaboration and sophistication of a simple method such as described in Annex 2 to cope with the remaining problems, once the quality of management information starts to improve. In fact, one valuable use for methods such as that in Annex 2 is to help in identifying those questions on which more precise information would be desirable. These questions would relate to projects or objectives about which there is major uncertainty as to whether they should be included or dropped.

There is a further important area for discussion regarding the compatibility of objectives between the planning level and the operational level. The problem may be illustrated by means of a hypothetical example.

Suppose that a given resource (surgery, say) may be used either to treat a condition which is disabling but not a threat to life or to treat a fatal condition with little chance of doing more than alleviate terminal suffering. Suppose further, that on the kind of grounds used in Annex 2, the former use of this treatment is regarded as worthwhile whereas the latter is not and correspondingly the resources provided are limited to be just sufficient for the one purpose. Consider now the decisions that are faced at the operational level where both kinds of case present themselves. Treatment of the fatal condition always appears more urgent than the disabling one, since the latter would still respond to treatment at a later date. Thus it seems likely that resources provided in pursuit of a clear objective would, in practice, often be pre-empted for a use which had not been given sufficient priority to justify the provision of resources for it. A similar point was made in some of the replies concerning the difficulty of implementing a greater emphasis on preventive rather than curative services.

> "heavy and insistent demand for curative and maternity services, leading to their pre-emption of the available funds."

Where such conflicts exist between objectives at higher and lower levels it would clearly be inappropriate to use demands created at the lower level as the means by which resources are allocated, and this should be determined independently. Furthermore, it may be necessary to do more than provide the necessary resources in order to ensure that higher level objectives are in fact pursued at the operational level. Other constraints may have to be imposed, e.g. by limiting the extent to which the delivery of services is integrated at the operating level and keeping certain activities separate.

The ultimate source of objectives is the general public and reference has been made several times to the desirability of arranging for public participation in the processes of planning and managing health services. This requires some rather closer definition in order that the topic may be usefully discussed.

From the management point of view the purpose of public involvement is to contribute to the process of establishing priorities. The field of conflict in which this process takes place cannot be left entirely to professional interests and the various sections of the community at large ought to be represented.

This does not mean that members of the general public should be able to involve themselves at will in the processes of management for this will confuse the clearly defined managerial responsibilities.

It does mean, however, that an important management task is to seek, in a systematic manner, the views and attitudes of the public on relative priorities, on the acceptability of services and so on. This in turn requires processes of education and the provision of information and explanations in popular terms regarding the main choices available. This process of extracting in simple terms the essential points of complex technical arguments, is not without its value in the management system itself.

One means that has been suggested for providing relevant background information to the public would involve publishing regular reviews of the operation of all those services that have impact on health, looking at their policies, their resources, their impact and so on. Such reviews would need to be conducted by a body independent of the direct management of these services.

It also means providing clear channels for comment, criticism and complaint regarding existing services. In fact the failure to provide such channels, or to make those involved aware of their existence, would be one indicator of inadequate management.

Naturally, the extent to which public involvement is possible depends on general educational standards and on the state of awareness of the issues involved. Initial attempts to increase public involvement are likely to be slow in bringing results but in the long run there can be no better answer to the problem of priorities and objectives.

Co-ordination

Problems of co-ordination were those most frequently mentioned in the replies. Although such problems are by no means unique to health services they will inevitably form an important topic of discussion, whether as a reason for failing to employ modern methods of management or, more constructively, as a starting point for considering what methods will have the most useful impact. The following points indicate both the need to pursue this topic, and its scope. A major concern is with the lack of balance and wasteful use of resources due to the multiplicity of agencies involved:

"The concensus of opinion is that the most important managerial problem foreseen is the continued reduction of the imbalance of the system and the lack of integration in the distribution of care with the existence of parallel systems with different objectives. Fragmentation and division of responsibility between the different levels of care have led to a lack of effective communication between the health and social welfare agencies."

". . . three main agencies providing medical care, namely the Government, Missions and the Mines. In addition to some extent personal health services and environmental sanitation activities are carried out by the local authorities. Further medical care is also provided by the private sector. As there are several agencies providing medical care there is overlapping and duplication of activities and available resources are not being utilized to the maximum benefit. . . . The future trends . . . would be to establish a unified service with central Government control."

"The health resources are distributed among various institutions with their own legislative provisions, with different rules governing the utilization of their resources, and with ill-defined populations, sometimes overlapping for two or more institutions, to be served."

"The major managerial problem . . . is to reorganize the various components of this system in a way that reflects complementarity eliminates duplication and minimizes waste of resources."

A related concern is that there is no point at which there is sufficient authority to make the kinds of decisions which effective co-ordination is felt to require:

". . . the problem of where the decision-making authority resides. There are currently in simultaneous operation several levels of health care delivery, without defined authority patterns vis à vis each other or defined spheres of operation . . . the active resistance of many of the nation's private physicians to the suggestion that management authority be in any way removed from the individual's authority."

". . . there are thousands of actors. They are decision-makers who are in a very loose and often uncommitted relation to one another. The objectives . . . can be derived from the pattern of expectations which the population have with respect to health care, as a result of lengthy contact between the population and health care as a service . . . with rising costs and the relatively decreasing return on high investments for diseases of a small number of persons in the population, an actor is being sought who has sufficient power to systematize the . . . set-up."

Apart from the problems which arise directly from the existence of multiple agencies responsible for delivery of health care, there are co-ordination problems which do not stem from organizational difficulties so much as from the complex nature of the factors affecting health:

> "the higher the level of health service activity, the more complex are the management problems";
>
> "eliminating one health problem brings another";
>
> "In recent years some of the areas previously included in the broad category of 'public health' have broken away to become parts of other new or growing areas of government responsibility. The establishment of new departments concerned with the environment, pollution, sport, recreation and fitness are all indicative of this trend. In addition, departments concerned with social welfare, education and food production also have health matters included in their areas of responsibility and which cannot by any standards be considered unimportant. There is now a need to take account of environmental factors and to take the opportunity to improve health standards through means which cannot be termed simply medical. These would include the further education of people in the use of health services.
>
> The problem is to ensure that health aspects are not overlooked throughout the whole range of welfare and associated responsibilities of governments and other instrumentalities. It is essentially a matter of co-ordination and this would seem to require the development of co-ordinating committees to ensure that overall health objectives are not overlooked."

To some extent these problems of co-ordination may be seen as matters of technical efficiency, to be resolved by better organization structures or by more adequate information. More fundamentally, though, they reveal the essential conflicts involved. For example, to achieve a more balanced availability of resources between urban and rural populations, between immediate care and longer term prevention, between community and hospital methods of delivery, requires confronting real conflicts of interest between sections of the population and between professional interests that are unlikely to result in an easy concensus. Wherever the boundary between managerial and political considerations may be drawn, the existence of the latter does underlie the co-ordination problem and must be a factor in the selection and application of management methods. It may be neither necessary nor desirable to rely on a single, hierarchical, structure of authority to solve these problems. The value attached to obtaining improved co-ordination is implicitly stated in the above quotations but, of course, this value has to be set against the costs (of various kinds) involved in achieving it.

Focussing on the question of relations between different agencies it may be useful to distinguish between two broad approaches to co-ordination. In the first, one of the agencies develops its plans and intentions before putting them to other agencies for their comment or in order that they may challenge (often too late) any aspect which conflicts with their own ideas and intentions. In the second approach, agencies whose plans and decisions are likely to have impact upon one another would examine the options together and reach a common conclusion. The former has been called "negative co-ordination", and the latter "positive co-ordination".

Positive co-ordination is not universally preferable, however, because the greater number of combinations of plans and options that are explored results in a higher administrative cost. This cost may well be justified in certain instances in terms of better plans, i.e. ones which have greater chance of acceptance and implementation and lead to more satisfactory outcomes. In other cases the cost of improved co-ordination would not be justified especially as, in practice, the availability of personnel capable of engaging in the work of "positive co-ordination" will be limited, and must be regarded as a scarce resource to be deployed selectively.

Similar arguments apply at the operational level. For example efficiency may be improved by employees of one agency undertaking tasks which would otherwise have to be done at greater cost by employees of another agency. Such savings may or may not exceed the additional costs of arriving at such a collaborative arrangement and of administering it.

Co-ordination would, of course, be impossible between two agencies which were in total conflict, that is to say where for either to meet its objectives would mean choosing courses of action which completely prevent the other from meeting its own objectives. Complete conflict in this sense is not common, however, and a more practical situation to contemplate is one in which some of the actions open to each agency would have some detrimental effects on the other, but where the possibility exists of each choosing actions which the other can accept as a compromise. This is the essence of what Lindblom[1] has called "partisan mutual adjustment".

Co-ordination is not necessarily, therefore, a matter either of establishing concensus among bodies of equal authority, or of the imposition of a solution from a level of authority super-ordinate to both.

Obviously the difficulties of management are greater where several agencies are involved than where there is a single homogenous managerial structure. Nevertheless, some progress is being made with the development of suitable management methods and the problem of co-ordination can be conveniently regarded as having two parts:

(a) the problem of selectively diagnosing those instances where positive co-ordination in the form of joint planning, joint decision-making and joint action are especially desirable; and,

(b) providing the opportunities, pressures, incentives and mechanisms to enable it to take place.

One of the means available for improving co-ordination is planning. Both the existence of a plan and the activities that have to take place in formulating it provide the opportunity for each agency to explore and understand the scope and intentions of the others. This assumes, of course, that the plan is not simply an imposed one and is formed by a continuous process of adjustment. Skill in handling the network of inter-agency relationships is an integral part of this process.

Such skills in communication between agencies are relatively scarce but they can be systematically developed by the movement of personnel as part of the development of their careers. Joint participation in schemes of management training and membership of "task forces" set up to work on specific problems lying at the boundaries between agencies would also contribute to the same end, namely to enhance the sensitivity of the staff of any one agency to the functions, problems, scope for action, etc. of the others. It is important, of course, that no one agency should have a monopoly of such skills since co-ordination is essentially a reciprocal process.

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[1] Lindblom, Charles E. (1965) The Intelligence of Democracy: decision making through mutual adjustment, New York Free Press, London Collier-Macmillan.

Effective co-ordination is more readily achieved when the functions of the different agencies are clearly defined. Organizational change may be necessary to allow for this. In this connexion it has to be remembered that requirements for co-ordination at a day-to-day operational level do not necessarily coincide with those at a planning level. Thus it is unlikely to be possible to choose organizational boundaries such that the need for inter-agency co-ordination of some kind disappears, moreover the larger the scope of each agency the greater its own problems of internal co-operation. In view of the time and effort that effective inter-agency co-ordination require, it would seem preferable, where the choice is available, to set the boundaries of the individual agencies in such a way that it is the more strategic long-term issues that fall to be dealt with by inter-agency co-ordination processes, for which special mechanisms can be created.

Joint committees are a common device for attempting co-ordination but for certain important issues a more open and wide-ranging process may be preferable. Provision of means for participation by the general public and of the health professions can be an added stimulus to identifying those aspects on which co-ordinated action is necessary as well as preparing the way for the implementation stage.

A common, shared, system of information can also have an important co-ordinating effect, especially where the information is used to create models with which alternatives may be mutually explored. Some work has been done on the question of extending the concept of a management information system so as to systematically identify "clusters" of issues which ought to be the subjects of deliberate co-ordination. The maintenance of common information systems, whether or not they include such sophistications, requires a suitable organizational or institutional framework and it would be useful to discuss the merits of the alternatives available for this purpose.

In short, there is no single answer to the problem of co-ordination but an overall policy of managerial development will include measures to enhance the identification of key issues and provide the means for tackling them. This process will not remove conflict. Nor will it remove the difficult value judgements that have to be reached and it may well increase their number. It will, however, enable conflicts to be recognized and brought out into the open where they can be used constructively and some of the more wasteful aspects be avoided.

Problems of change and reorganization

About 40% of the countries offering comments stated that they were currently undergoing, or actively contemplating, major changes in organization or structure of health services. Others see this as probably a necessary step to achieving better co-ordination and management.

> "because of lack of structure for basic health services and lack of proper definition of functions of health services at various levels, a most important managerial problem is to develop a uniform infrastructure throughout the country to facilitate efficiency of health personnel whenever they have to be moved for emergency health programmes or to make for fair distribution."

> ". . . weaknesses and shortcomings which are quite obvious for national administrators. The newest legislation intends to co-ordinate all health related services on the regional level and introduce a planning process which is suited to national political traditions. Very much attention has been given to the reorganization of primary health care services in the framework of a health centre concept."

> "Demands have been made on the part of many personnel groups for a democratization of the management form of the institutions . . .".

As was suggested in the previous section, organizational change may not be the most successful means for achieving better co-ordination and use of health care resources. Nevertheless it is not possible to escape the need for some change, even though it may not take the form of reorganization.

For example, many countries have expressed a belief that a better balance can be found between preventive services on the one hand, and curative and rehabilitative services on the other. They are, however, experiencing managerial problems in attempting to move away from a system geared to individual demands for care:

> "Unfortunately, young doctors are unprepared to plan and to provide care for such populations, and, as a result, often attempt to simply provide curative services to those who come to the clinic with complaints. They, thus, emphasize the provision of curative services and tend to ignore much of the preventive services that they should be planning. One cannot blame them; they simply have not been trained for the duties and challenges facing them and simple clinical services is the easiest way out."

Such tendencies make it difficult to achieve an optimum balance between prevention and care, even where it is possible to decide what the balance should be:

> "the fact, that many conclusions aiming at optimization of prevention and therapy are right in some cases, but wrong in the other ones, and it is difficult to generalize many of the research and practical results."

Whatever changes may be desirable, organizational or otherwise, they are bound to encounter resistance of some sort:

> "Parochialism is hard to overcome in the small areas and vested interests are entrenched there. The solution is really a matter of continuing massive public relations campaign reinforced, it is hoped, by recommendations which may come from a commission of inquiry which is currently investigating hospital and related services."

> ". . . there is a fairly clear-cut 'formal' organizational structure at national, state district and local levels, with levels of authority and responsibility fairly well defined. Within this 'formal' structure, there is a highly developed informal structure based on the inherent expertise possessed by senior clinical consultants and specialists in specific health programmes. The problem is one of using this expertise in the field of management (which is of little interest to them) or of making 'change' acceptable to these groups of 'peers in the health field'."

It has to be recognized, too, that change has its penalties in the form, often, of lost effectiveness during the uncertainties of the transition period as well as in the creation of new rigidities.

> "Determining a conception of health services system, which would meet health requirements and correspond to the health status of the society, social and economic, as well as scientific and technical developments and which would be of a long enough standing but flexible."

Resistance to organizational and structural change should not, therefore, be regarded simply as a nuisance to be set aside as rapidly as possible, but as providing a means of testing proposals for change, "working through" them in advance of implementation and if necessary modifying them to enhance their acceptability and flexibility. The frustration caused by the resistances to change came out clearly in the replies. Much has been written on the processes of innovation and change and on the need to prepare carefully for it. The following are among the important points that have been made:

a situation of crisis, or perceived crisis, may have to be present before the need for change can be accepted. Difficulty arises when the critical nature of the situation can be seen by some groups and not by others. Dissemination of information can therefore be an important factor;

the adoption of a particular organizational form can be as much a matter of dogma as resting on any empirical justification. There would seem to be room for comparative evaluations so as to derive tested principles for use in designing organizational changes in the health field;

each person goes through his daily working life acting and making his decisions against a background of assumptions, hopes and fears about his working environment. The prospect of change upsets these assumptions and introduces new uncertainties. Until these have been adequately "worked through" in the minds of all concerned the change presents a threat to them;

provision of information concerning the expected effects of change is necessary but not sufficient. Time has to be allowed and opportunity provided for discussion in a variety of group settings so that individuals can reorient to the new situation. Management "games" and other opportunities to try out one's own attitudes and behaviour under alternative assumptions, may help in this reorientation process. If, of course, there has been widespread participation in the formulation of the decision to change, then the reorientation process will already have started;

the role of a "change agent" committed to helping all parties in the reorientation process can be a crucial one. It requires a special skill equivalent in some ways to that required to help people cope with personal psycho-social crises such as bereavement. Such skills can be developed;

the more detrimental effects will be reduced if changes are guided by broad principles that are widely understood. Here the importance of general programmes of management education and development may be seen.

Information

Inadequate information by which to assess health needs, to measure the health status of populations, or even to know how resources are currently deployed, received frequent mention. In some cases lack of such information was quoted as a reason for inadequacies in management and in others as the result of them. This interdependence between "management" and "information" was, perhaps, taken too much for granted in the outline document although the point was emphasized that while statistical (and other) information is an essential ingredient of modern management methods, a great deal of effort can be wasted if the collection of statistics gets too far out of step with the purposes for which they are being used. The appetite for more and more detailed information can be insatiable. There would seem to be a need to discuss minimum requirements for management information, bearing in mind that needs for practical management purposes and for research purposes do not always coincide.

General

The kinds of management problem brought up here as a result of the replies sent in are of a very broad and general nature. In offering additional material for discussion of these problems, beyond what was provided in the outline document the attempt has been to show that these problems, difficult as they are, are not unapproachable given sufficient will to tackle them.

PART IV

THE WILL TO MANAGE

The need for improved management is recognized both by countries which have been able to devote substantial resources to health and by those working within severe limitations. The following extracts illustrate the somewhat different cases being made to reach a similar conclusion.

> "The preface (to the outline document) underlines that 'better management of health services is essential if higher standards of health and of health care are to be achieved'. This statement underlines, in spite of its almost tautological wording . . . that progress . . . today is to a higher extent dependent on education and development of the management than it is on medical research and increase of material resources."

> "Modern management techniques can insufficiently cope with these problems. However, more efficient use of operational research, systems analysis and programme budgeting might influence political leadership to accept more rational methods of health policy implementation and releasing more funds for this purpose."

The outline document asked, in a general way, for the experience of countries of the usefulness of modern management techniques. Many countries reported the application of a wide variety of methods, as had been described in the outline document, although often these applications were made in an exploratory sense rather than as "built-in" to regular management processes.

However the replies may have only mentioned examples which represented an innovation for the particular country concerned. Others, faced with extreme shortage of managerial resources are nevertheless proceeding with a more gradual adoption or with more limited applications, e.g. to specific programmes or to the hospital sector.

Although most of the replies were expressed in favourable terms, it is not really possible to evaluate this experience from the information available. However, most countries expressed the intention to utilize modern methods of management to an increasing extent if the barriers to doing so could be overcome. In other words, the desire to improve management does seem to be present even though in some cases this may not yet have proved strong enough to overcome the lack of knowledge or of examples that can easily be copied.

The replies are consistent with the view put forward in the outline document that improvement of management must be taken as a whole and that striking results are not to be expected from the isolated adoption of a particular technique. Similarly, the experience of tackling a particular problem is likely to be frustrated if the standard of management in associated areas is low.

This does not mean that appraisal of the experience of applying particular methods to particular problems would be irrelevant or useless. It does require, however, a depth of examination, and the comparative study of a variety of situations and examples, and this would not be satisfactorily undertaken on the basis of written answers to questions or of the literature alone. Many requests for increased provision by WHO of evaluated information on the adaptation of management methods to health problems were contained in the country replies. Should it be decided to commission practical digests of experience in tackling particular problems, then the information that has been provided by countries will provide a starting point for the selection of subjects and for seeking practical examples on which to base such reviews.

At an early stage of the Technical Discussions, it would be useful to consider what are the leading symptoms of managerial inadequacy both in general and as differential indicators for identifying aspects worthy of priority attention. Such indicators might be derived from the following list of characteristics that would be expected to be observable in a situation that was being managed well:

adequate and timely information (e.g. on costs) being used to assess the current situation;

agreed actions being implemented without undue delay;

plans and policies worked out with full recognition of how the health services actually work, so that they are capable of being implemented;

resources being used for their intended purposes, without being diverted to other uses;

ability to attract (and retain) a satisfactory share of national resources in competition with other sectors;

absence of excessive variations in performance (e.g. similar lengths of stay in all hospitals for cases of the same type);

balanced provision of resources so that each type of resource can be used effectively without being held back by avoidable lack of others;

effective utilization, without indications of over provision or wasteful duplication;

reasonable equality of service to different areas or sectors of the population, or active measures in hand to achieve equitable distribution;

a structure in which the functions of different agencies are clearly defined but can adapt to changing needs;

a system of objectives and priorities periodically reviewed;

consistency of aim, and adequate communication so that objectives are understood at all levels;

important questions of values and priorities brought out for public and political discussion and not hidden in technical arguments;

ability to promote and bring about changes that are accepted as desirable, e.g. to move towards an optimum balance between curative and preventive services;

use of the available managerial talent and specialized skills on problems of importance;

use of whatever management techniques are appropriate and within the capabilities of available personnel;

good morale and motivation of health services personnel;

clear policies for developing and using to the full the capabilities of all kinds of health service personnel;

opportunity for all kinds of personnel to participate in the decision-making process and absence of domination by e.g. the clinical professions;

maintenance of public confidence;

provision and use of adequate channels for complaint and suggestion.

Insofar as there is deficiency in respect of characteristics such as these, it may be inferred that there is room for improvement and for the greater development and application of management skills.

PART V

MANAGEMENT SKILLS: THEIR DEVELOPMENT AND APPLICATION

It has been widely acknowledged that the availability and application of modern management skills do not meet the needs that are felt to exist. Shortages and difficulties were mentioned by many countries, as follows:

shortage of experts in management techniques, and especially of those with knowledge and experience of the special problems of the health sector;

difficulty in recruiting staff to specialize in management and the managerial technologies due to working conditions or lack of career prospects for personnel other than physicians;

shortage of general management capability, together with lack of appreciation of "systems thinking" and orientation to modern management on the part of doctors and health administrators;

insufficient ability to identify situations where the available consultants and other sources of expertise could best be used;

lack of a form of organization that can fully utilize the available management skills;

shortages of staff of various kinds (not just those with specifically management skills);

shortage of teachers in management for medical schools etc.;

insufficient development of management methods for dealing with such difficulties characteristic of health services as: defining objectives, public participation, co-ordination, motivation and supervision.

The impression provided by these comments is of a need to make simultaneous progress on several fronts namley:

spreading the determination to overcome the difficulties mentioned and establishing confidence in using techniques;

general management training and experience for health professionals;

production of management specialists of various kinds, especially those with a broad experience in addition to their specialist skill;

organizational changes necessary to utilize management skills and provide appropriate career and working conditions for their practitioners;

research and development to adapt management techniques to health needs.

The proper balance between these aspects will, of course, vary from country to country. Moreover, in the atmosphere of continuous change and development that is implied by modern management, the need for flexibility and adaptability is paramount. The management situation in the health field is complex and may often be turbulent. In such circumstances the problems of communication, e.g. between the various professions and disciplines and between the various agencies, can become extreme. They are likely to be easier, however, the greater the extent to which people from these different disciplines and interests have shared practical experiences and some common elements in their training. If the conditions are not favourable for this to happen spontaneously, then it may be necessary to formulate a deliberate career development policy on a national level.

It would be wrong to think of the development of management skills too much in academic terms or in terms of formal courses since there are many aspects which cannot be understood and appreciated unless they have actually been experienced in a situation carrying appropriate responsibility and with adequate provision for digestion and absorption of the lessons learned.

The interplay of different disciplines, and of experience with inexperience are important components of the learning process in this as in many other professional fields. This seems to require provision for "internships" in management subjects, analogous with those by which clinical experience is required. One method would be via membership of project teams concerned with research, development, and application of management techniques to problems of practical significance and urgency. The formation, guidance and support of such teams cannot be left to ad hoc processes, however. Leadership of multidisciplinary efforts is itself a special skill, and support must be provided in various forms including specialist advice on certain techniques, the fruits of experience in previous studies, etc. This in turn makes a case for an institutional framework of a more lasting character.

It would also be wrong to concentrate solely on the production of people trained in management, in the belief that application of that training will automatically follow. As is indicated by some of the replies quoted above, positive steps are necessary to ensure that the management skills and sources of expertise that are available are used to good effect.

In this connexion, the replies given to questions of the outline document are of some significance:

> "What is being, or could be, done to build up institutions to undertake practical training and application of the needed managerial skills?"

Despite the specific reference to application the replies in most cases concentrated on existing facilities for management training or on plans to provide them. The most frequent reference was to courses in health administration in universities and schools of public health. Almost as common is a reliance on the facilities for management education either generally or specific to government service but with no element of specialization in the problems of health services as such. In other cases a mixed pattern is being followed involving university management education, special courses and seminars for the health professionals, and the use of consultant firms. The extent to which such a pattern adds up to a co-ordinated strategy for management development would seem to vary considerably.

Particular interest attaches, therefore, to the two cases where an institute has been, or is being established to pursue a co-ordinated programme of research, training and consultation in health management. Other replies mention the need to provide consultancy services specifically for the health sector.

Whether or not such an institution is the most suitable means for promoting improved management of health services depends of course upon the other facilities available but in the light of all the comments discussed in earlier parts of this document, the following points must be taken into consideration:

> there are management problems, or aspects of these problems, which are specific to the health sector. To maintain adequate knowledge of the nature of these problems and of research and experience relevant to them, therefore requires a greater degree of specialization than is possible in institutions mainly concerned with management education for sectors other than health;
>
> training in management cannot be entirely through individual study, but must include responsible experience. In view of the many disciplines etc. involved in health, experience in multidisciplinary team projects would be especially valuable;

requirements for management research arise out of practical needs and they should therefore be identified by those close to active management problems. This differs from the usual system in which a group of researchers, believing such and such a problem to be important, make a research proposal;

elements of management appreciation need to be included in the early stages of training of all health professionals;

advice on the identification of management problems and the application of suitable techniques to them should be based both on (a) experience of the management situation in the health services and on (b) wide knowledge of the techniques available. For such advice to be unbiased, it should come from a source which is not committed to a particular approach and which is able to make an impartial evaluation.

It is considerations such as these, in addition to recognition of the importance attached at a high level to improving management of health services which have led to proposals to set up special institutes. Other patterns may be equally suitable so long as there is a determination to build and maintain strong four-way connexions between application, training, research and the operation of the whole health services "system" itself.

The international aspects of these connexions were prominent in the replies and the useful suggestions which were made have been assembled for consideration in Annex 1 under the headings of Information; Training; Consultancy services; Research; and Institution for co-ordinated management development.

PART VI

HEADINGS UNDER WHICH DISCUSSIONS MIGHT BE STRUCTURED

1. In view of the wide scope of the subject chosen, it is suggested that typical important problems of management be first discussed in specific relation to each of the various functional levels of the health services organization and structure viz:

within individual institutions (e.g. hospitals);

in local urban areas;

in local rural areas;

at regional level;

at national level (including allocation of resources)

internationally.

For each of these levels, the discussion might cover:

problems of co-ordination (with non-health sectors; central with local; with community and voluntary effort; between public and private health sectors);

problems of change (resistances to change; flexibility versus commitment; manpower and career problems; public attitudes and participation);

methodological shortcomings (priorities and their evaluation; simplification of techniques);

indicators of the need for management development.

2. Against this background, it should then be possible to consider the development of managerial capabilities, including:

training of health professionals in management;

attraction, development and utilization of managerial talent;

career structures;

provision for the digestion, dissemination and application of the results of management research;

institutions for application and development of management principles in health services.

3. Conclusions - the urgenices and priorities for managerial development:

developing countries;

developed countries;

international action.

ANNEX 1

SUGGESTIONS FOR INTERNATIONAL ACTION

Suggestions made in response to question 6:

"What forms of action by WHO and other international agencies would be of most help to the country in its efforts to improve the management of its health services?"

For convenience the suggestions have been assembled under the headings of Information; Training; Consultancy services; Research; and Institutions for co-ordinated managerial development.

Information

Supply literature etc. to national institutes of public health and similar bodies concerned with management development;

demonstration projects to convince public and professions of the advantages of managerial improvement;

international meetings (conferences, symposia, courses, etc.) to exchange experience on application of modern management techniques in the health field;

publication of an international periodical review of management studies;

impress the "systems approach" on national health administrations;

supply international comparative data on costs, norms, indices, etc.;

exchange of information on successful applications of management techniques;

bibliographic reviews etc., especially with critical analysis of results and problems of application of techniques, and degree of expertise required.

Training

Provide advanced training beyond what can be generally available at national level;

visits by experts in health service management to conduct seminars etc.;

develop a system of programmed learning in management technology to be used by students in dispersed health care locations;

fellowships for advanced study of management and study of approaches in other countries;

assistance in design and running of management courses in existing institutions of a country;

promoting staff interchanges and exchange visits by multidisciplinary teams of health professionals and educators (and researchers?);

collaboration in development of "sensitivity courses" and of "staff-college" type training for senior and middle managerial levels. The latter training would be problem-oriented and coupled with action-research type programmes undertaken in conjunction with health authorities;

inter-country training programmes and creation of research and training centres as joint ventures between WHO and groups of countries.

Annex 1

Consultancy services

Form groups of experts to study adaptation of modern management methods to health problems and provide a consultative service to Member States;

provision of equipment to facilitate administrative work;

expert support of key units during formative stages.

Research

International co-operation on research problems;

comparative studies of management and organization conditions in the institutions of the health sector (e.g. to learn how a more democratic management influences fulfilment of aims; to compare under various management systems the extent of co-operation between institutions and their patients and families. N.B. the existence of relatively standardized institutions in each country tends to preclude such comparative studies at the national level).

Institutions for co-ordinated managerial development

Encourage existing national institutes (not only schools of public health) to undertake research and training in the management field, or recommend creation of such institutes at country or regional level.

ANNEX 2

AN APPROACH TO THE PROBLEM OF PRIORITIES

(Taken from one of the country replies)

Introduction

The public health authorities are of the opinion that a change in the system of allocation of resources may be needed but it would have to be based on a methodology for weighing priorities. For this reason a research study has been commissioned to devise a priority weighting method in collaboration with the long-term planning bureau of the Ministry. An experiment being devised to this end, is described.

The objectives of health care can be derived from the pattern of expectations which the population have as a result of their contact over a long period with the health services. These are:

protection of health

restoration of disturbed health

assistance in rehabilitation

alleviation of suffering where health cannot be restored

Rising costs and the relatively decreasing return on high investments for diseases affecting a small part of the population mean that some action must be taken to rationalize the allocation of resources.

Requirements of a priority weighting system

Doctors decide on the treatment and guidance of patients on their own personal medical responsibility. A system is sought in which medical responsibility and the responsibility of the authorities come to be in the same plane. Thus it is desirable that the medical experts participate in devising a method for weighting priorities, and that its principles are accepted as sound not only by them but also by consumers and by the authorities.

Three broad categories of expenditure may be distinguished, viz:

public health

extramural services

intramural services in hospitals, nursing homes, diagnostic centres, etc.

A large percentage of the total money is spent on the last mentioned sector. In this sector there is little scope for prevention of disease, whereas in the other two, prevention can be stressed. Thus better appraisal of the investment of financial resources in the intramural sector must be one of the chief aims of a new method for weighting priorities.

Annex 2

Determination of health gain

The method being devised for measuring health gain has drawn on several publications.[1] Attention has been directed in the first instance towards:

mortality

sickness

invalidity

discomfort and pain

severity of these cases

duration of these cases

burden or danger that these cases entail for others

the probable duration of the problem if there is no intervention

the chance of the problem disappearing of its own accord

The basis of the proposed technique for weighting priorities is the proposition that health care has the tasks: (1) of reducing (or if possible eliminating) the existing risk; (2) of restoring harmed health as far as possible with the means at its disposal, including restoration of social relations.

Where these main objectives are unattainable there is a subsidiary objective of alleviation of pain and discomfort.

The success of the endeavour to meet the primary objective will emerge in terms of the consequences of reduced risk, which requires that these consequences be expressed in measurable units. The units proposed are:

Life Expectance Years (LEY) - this figure is a measure of the shortening of life as a result of disease. It is necessary to compare the life expectancy without the risk of the disease now suffered by the patient with his life expectancy if the disease proceeds spontaneously.

It ought to be possible to establish a LEY figure for every disease but in some cases "guesstimates" will have to suffice[2] where more precise data are lacking. In addition

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[1] Notably: (1) World Health Organization (1971) Health project formulation, A manual of concepts and procedures, WHO document PSA/71.1 Rev.1.

(2) Blum, H. L. (1972) "Priority setting for problems, solutions and projects by means of selected criteria", Internat. J. Health Services.

(3) Kleczkowski, B. R. (1971) "Planning and evaluation of the community health care programmes" in La Santé Publique, 1971, No. 3, p. 259.

[2] For example using the "Delphi" technique as described in:

Brown, B., Cochran, S. & Dalkey, N. (1969) The Delphi Method, II: Structure of Experiments, Memorandum RM-5957-PR. Santa Monica, Calif. Rand Corporation.

Dalkey, N. C. (1969) The Delphi Method: An experimental study of group opinion. Memorandum RM-5888-PR. Santa Monica, Calif. Rand Corp.

Annex 2

there is the traditional method of "indication" which has come into being in the medical profession in the absence of sufficient data. For a given intervention, indications which justify its use are drawn up by the specialists involved. The extent to which efficiency considerations have been incorporated in the indications used in practice, requires further investigation.

Person-years in good health (PGH) - this criterion relates to morbidity with full chance of recovery, i.e., to those disease processes for which life expectancy could not be used as a criterion. The health gain is in terms of limiting the course of the disease and may be measured by the number of person-years of good health made possible by interventions that shorten the spontaneous course of disease.

Validity years (VY) - this concept applies to disease processes in which complete recovery may not be expected. The health gain may be thought of in terms of reduction in the degree of invalidity remaining.

These three indicators refer to different kinds of health gain. The differences may be conveniently illustrated in the following diagrams, which draw upon the concept of a health status index.[1]

Because each of these kinds of health gain is of a different qualitative nature, it is not possible to add them together directly. The relative weights to be attached to each must be a matter of value judgements in the determination of which the public, the caring professions and the administrative authorities all need to be involved. On the other hand the measurement of health gain in terms of such indicators does make it possible to refer many different diseases and interventions to a common scale.

Costs

Health gains have to be set against the costs, which may conveniently be divided between the costs of health care and the social costs. The costs of health care include the costs of treatment and preventive measures and also the costs that a patient incurs to make treatment possible. The social costs include those that have to be incurred to replace the patient in his work, the costs that sickness or death entail for the family and the costs of social security payments etc.

Health gain versus costs

Recognizing the crude nature of the measurements, it would be sufficient initially to establish rough categories according to cost and effectiveness, as for example in the following table.

[1] See Fanshel, S. & Bush, J. F. (1970) A health status index, Operations Research, December.

Annex 2

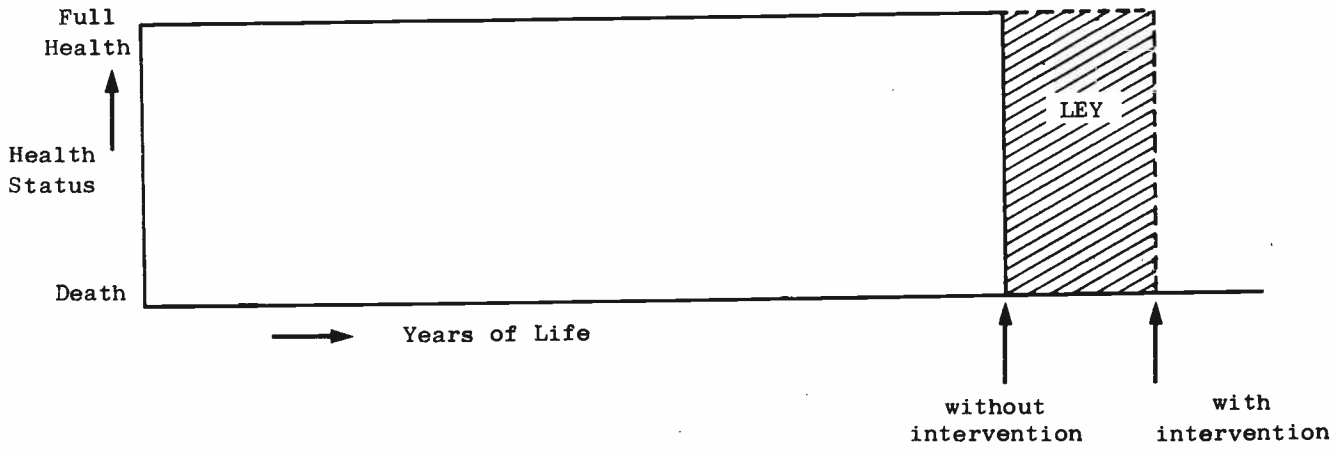

Fig. 1. "Life Expectancy Years"

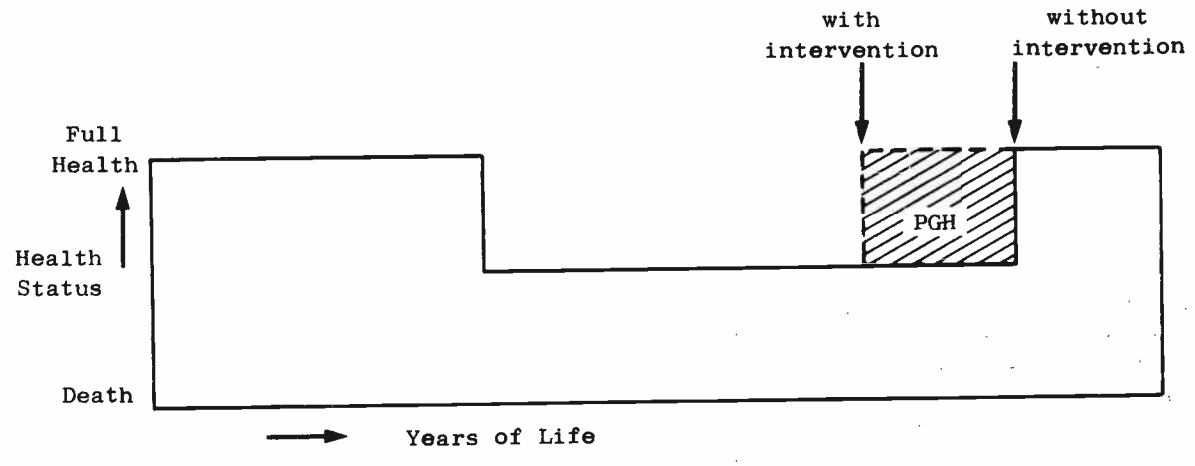

Fig. 2. "Person Years of Good Health"

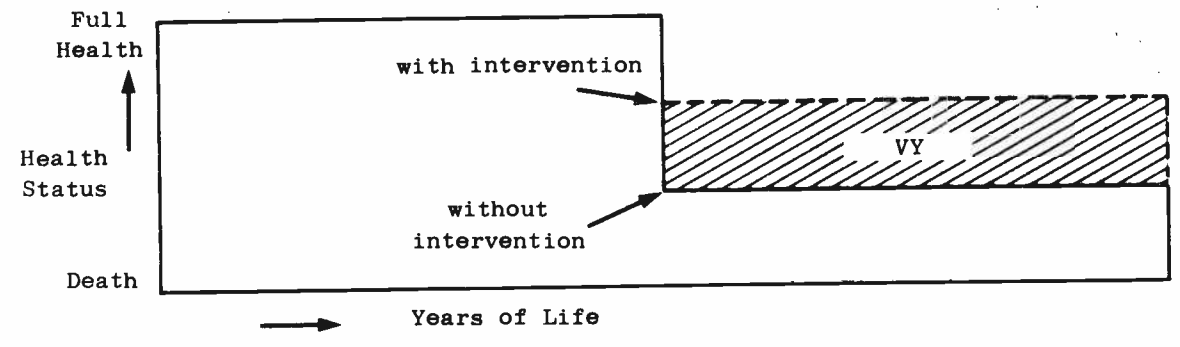

Fig. 3. "Validity Years"

Annex 2

		Gain	
		High	Low
Cost	Low	Diabetes mellitus Appendicitis Poliomyelitis Chorionepithelioma (1)	Arthrosis deformans Cerebrovascular accident Emphysema pulmorum (2)
	High	Coronary infarction in intensive care Renal transplantation (2)	Transverse lesion Multiple sclerosis Open heart surgery Imbecilitas mentis Leukaemia (4)

Here, obviously, the relative priorities run from the "high gain-low cost" to the "low gain-high cost" sector as indicated 1 - 2 - 4. These categories may be elaborated further as the available data may permit and so as to choose priorities to correspond to the available resources.

Commentary

This simple approach to the priorities problem does not, of course, overcome all the difficulties and some of these should be mentioned. First, the "cost" and the "gains" do not all occur at the same time, thus a balance may have to be struck between, say, cases where the cost is immediate but the gain appears much later and cases where the gain starts immediately but some of the costs are deferred.

Second, the term "cost" covers the consumption of many kinds of specific resources some of which may be restricted, or cannot be used for alternative purposes, or can only be increased in the long term. Moreover some costs may be common to several purposes and not capable of reduction if one of these purposes is abandoned.

Third, because of the way health services function in practice, it may not be possible (as was noted in Part III) to ensure that resources are used only for specific diseases or treatments. It may not then be feasible to use disease entities as the independent variables in a priority weighting system and necessary to substitute more indirect variables such as specific delivery services.

Fourth, there will be varying degrees of uncertainty surrounding the information so that a means will be needed for balancing, say, the uncertain possibility of a high gain against the certainty of a more modest gain.

These and related difficulties, however, are of the same kind as occur in other fields where choice of investments is a major concern. They have been satisfactorily handled by a combination of methods such as linear programming with a dialogue process of debating alternative plans, each calculated so as to be consistent with a different tentative formulation of the objectives.

Such elaborations are possible but, of course, they can only usefully be taken as far as is warranted by the information available.