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ADMINISTRATION OF MATERNAL AND CHILD HEALTH SERVICES

Second Report of the Expert Committee on Maternal and Child Health

Page

1. Introduction 3
2. General aims of maternal and child health 5
3. Content of a comprehensive MCH programme 5
4. Principles of programme planning 6
5. Organization and structure of MCH services 8
6. Techniques of administration 14
7. Functions and preparation of physicians in MCH programmes 17
8. The role of evaluation 19
9. Research 27

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EXPERT COMMITTEE ON MATERNAL AND CHILD HEALTH

Second Session

Geneva, 12-17 December 1955

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ADMINISTRATION OF MATERNAL AND CHILD HEALTH SERVICES

Second Report of the Expert Committee on Maternal and Child Health *

The second session of the Expert Committee on Maternal and Child Health was held in Geneva, from 12 to 17 December 1955. The session was opened by the Director-General of the World Health Organization, Dr M. G. Candau. Dr D. L. J. Kahawita was unanimously elected Chairman of the Committee, and Dr Dorothy M. Taylor Rapporteur. The agenda submitted was approved and adopted.

1. Introduction

The Committee agreed that as sound administration is an essential for a successful health programme, it appeared timely to review administrative principles and methods as they apply to maternal and child health (MCH) and to study some of the special problems which have been recognized in this field.

In recent years, there has been an unprecedented expansion of MCH activities in all parts of the world. The very rapidity with which new

* The Executive Board, at its eighteenth session, adopted the following resolution :
The Executive Board

1. NOTES the second report of the Expert Committee on Maternal and Child Health :
2. THANKS the members of the Committee for their work ;
3. AUTHORIZES publication of the report : and
4. IS OF THE OPINION that, when a further meeting of experts in this field is convened, it should be requested, bearing in mind the opinions expressed in the previous reports on the same subject, to establish a synthesis of those opinions before making any addition it may deem necessary.

(Resolution EB18.R21, *Off. Rec. Wld Hlth Org.*, 1956, **73**, 7)

programmes have been developed has impelled administrators to initiate new activities which have as yet been untried in their communities. Procedures and even whole programmes have been transplanted from one country to another without sufficient thought to their appropriateness. In some areas, the expansion has consisted largely of extension of old ideas and approaches with little consideration to changes which have taken place in the needs of the people and in developments in scientific knowledge. This rapid growth of health and welfare activities has resulted in growing competition among agencies for funds from tax and private sources. Government appropriating bodies and the public are demanding more concrete evidence that funds are being expended wisely in terms of the needs, and that results are being achieved. The fewer the resources and the more pressing the problems, the greater is the necessity to evaluate the needs, to establish priorities, to assess results of activities and to redirect them. The retention of unproductive measures is an ill-afforded extravagance.

Also, in the case of long-established programmes, one of the greatest problems is to keep them continuously directed towards meeting specific, current problems in a productive and efficient manner. Activities are started and tend to continue. New activities are added to meet new problems and the programme pyramids for human needs are infinite. But every administrator soon learns that funds and personnel are finite and many are beginning to realize that the weeding-out of unproductive and out-moded procedures with consequent savings is equivalent to increasing the budget for more productive activities. As the size and complexity of modern programmes increases, the need is being felt to substitute sounder, more scientific and business-like methods for the idealistic and haphazard approach of the early pioneers whose enthusiasm made up for administrative skills.

For these reasons the Committee directed its attention to current thought on the following subjects :

(1) Content of a comprehensive MCH programme

(2) Integration of MCH activities into the general public-health and medical services

(3) Principles of programme planning

(4) The organization and structure of MCH services

(5) Techniques of administration

(6) Functions and preparations of physicians in MCH programmes

(7) The role of evaluation

(8) MCH problems needing further research.

2. General Aims of Maternal and Child Health

The Committee first considered it desirable to define the ideal to which MCH services should aim, namely to ensure that:

1. " ... every expectant and nursing mother maintains good health, learns the art of child care, has a normal delivery, and bears healthy children"; [1]

2. every child, wherever possible, lives and grows up in a family unit, with love and security in healthy surroundings, receives adequate nourishment, health supervision, and efficient medical attention, and is taught the elements of healthy living.

It is recognized that the health of mothers and children is closely related to the general health of the community and to the social, economic, and cultural background of the country as a whole. All measures which improve the general public health will benefit mothers and children. Examples can be given of the contribution made by better sanitation and environmental hygiene, the control of communicable diseases, including tuberculosis and venereal disease, the introduction of nutrition schemes, and the production of reliable vital statistics. But, unlike other segments of the population, mothers and children are exposed to the processes of reproduction and of growth and development. Consequently, public health programmes must include measures directed to meeting these special needs. In addition, MCH services contribute to the general public health because of the unique opportunities offered for health education, the prevention of illness, and the promotion of health.

3. Content of a Comprehensive MCH Programme

It was agreed that MCH is concerned with all matters pertaining to the health of children of all ages from conception through childhood and adolescence, and of expectant and nursing mothers.

A comprehensive MCH programme would include the following:

1. Health protection for all mothers and children, as defined in the second report of the Expert Committee on Public-Health Administration: "Health protection include[s] the promotion of health, the prevention of sickness, and curative and restorative medicine in all its aspects." [2]

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1952, **51**, 3

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1954, **83**, 4

(*a*) Maternity care providing for adequate prenatal, natal, and postnatal care, including health supervision of nursing mothers.

(*b*) Continuing health supervision and total medical care of all children from birth through childhood and adolescence.

2. Studies of problems affecting the health and well-being of mothers and children (to serve as a basis or guide to programme development).

3. Analysis of vital data and statistics concerning mothers and children (to serve as a basis or guide to programme development).

4. Establishment of standards for health personnel serving mothers and children and for facilities providing for their care.

5. Co-ordination of MCH services with those of other health and social agencies serving mothers and children.

6. Health education of parents in child care, of schoolchildren, and of the general public in MCH matters.

7. Evaluation of the efficiency and effectiveness of MCH services.

8. Research and development of new methods.

9. Promotion of education of professional and auxiliary staffs through the utilization of MCH personnel and facilities.

Integration of MCH activities into the general public-health and medical services

The Committee considered that the integration of MCH activities into the general public-health and medical services was of great importance if mothers and children were to be provided with a comprehensive health service adapted to meet their special needs. In some countries, at certain stages of MCH development the health of mothers and children may be better served by general health measures such as mass campaigns, e.g., against malaria, than by traditional patterns of MCH services. Conversely, it was also recognized that an MCH programme can serve as a spearhead for the development of general public-health measures because of its popular and emotional appeal.

4. Principles of Programme Planning

A " programme " may be defined as an integrated series of activities, each focused on one or more aspects of a central problem, and " programme planning " as a process which includes fact-finding or assessment of specific health needs of the group to be served, review of existing or potential resources, the establishment of priorities, and the development of activities appropriate to the priority needs.

Fact-finding

Where available, natality, mortality, and morbidity data can be analysed to yield information of great value in programme planning. In countries where the collection of such data is not yet established or is incomplete, it is possible to obtain necessary information through special surveys or sampling studies of all births, deaths, and illnesses of certain types in limited areas, studies of hospital admissions and deaths,[1] and of MCH clinic records, e.g., growth patterns of children. Also, the opinions and experience of physicians, of other health personnel, and of parents may be sought with regard to current health problems. Consideration of methods for obtaining data on needs from the groups to be served appear in section 8 (page 19).

In addition to determining facts regarding mortality and the incidence and prevalence of health problems, it is necessary to study the influence of culture and economic and social factors on health in the community.

The Committee stressed the importance of utilizing to the best advantage data collected in all MCH activities. Consideration needs to be given to the type of data required, to methods of collecting them, and to their interpretation and use in planning, supervising, and evaluating MCH programmes. Therefore,

The Expert Committee on Maternal and Child Health

RECOMMENDS that WHO convene an expert committee to consider the administrative and scientific uses of statistics and service records in MCH, including school health programmes.

Establishment of priorities

A basic essential in planning an MCH programme is the establishment of priorities in order of their importance not only to MCH problems but to public-health needs of the community as a whole.

In assessing the priorities, the Committee considered that potential resources should be taken into account and preference given to activities which, in the first instance, would benefit the greatest number of mothers and children—e.g., improvement of nutrition—leaving the less acute problems for solution at a later date. In other words, the approach might be in terms of defining short- and long-term policies—for example, measures for saving maternal and infant lives should precede those designed to benefit a small or special group of the child population. Thus, measures to reduce infant mortality should be established before programmes for handicapped children. Initial planning should be for basic services on a

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1954, **85**, 11, 12

limited scale, capable of extension and adaptation to include more specialized activities at a future date, when the likelihood of success with available knowledge and techniques is assured.

Another factor to be considered in the establishment of priorities is the susceptibility of a problem to solution in the light of existing scientific knowledge and techniques and of available resources.

A part of sound programme planning is to devise each activity and to state clearly its objective, so that it may be evaluated at a later stage to assess whether it is meeting the need for which it was established and is providing the expected results.

The Committee realized that it is important for the MCH administrator to be alert in grasping opportunities to achieve the aims of the programme even though they were not anticipated in developing the formal plan. Flexibility and imagination are important.

5. Organization and Structure of MCH Services

The distribution of authority and responsibility for MCH among national, intermediate, and local public-health administrative units varies from country to country. In some, all of the functions listed below are assumed by the MCH unit at the national level for the country as a whole. In others, major responsibility for some functions is assumed by MCH units at the intermediate level for their jurisdictions. Broadly speaking, the chief functions of local units are operational.

There are still some countries in which there is no MCH unit in the national department of health. The Committee noted and strongly supported the recommendation of the first Expert Committee on Maternal and Child Health [1] and the Expert Committee on Maternity Care [2] that there be established in national health departments an administrative unit for MCH under the direction of a well-qualified and experienced full-time MCH administrator. The Committee considered that without such a unit an effective MCH programme could not be developed. Therefore,

The Expert Committee on Maternal and Child Health,

> RECOMMENDS that WHO bring to the attention of governments which have not yet established at the national level administrative units for MCH under the direction of well-qualified and experienced MCH

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[1] *Off. Rec. Wld Hlth Org.*, 1949, **19**, 43

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1952, **51**, 4

administrators, the recommendations of this committee and of two previous expert committees in this regard, and urge them to implement the recommendations without further delay.

At the national level it would be the responsibility of the MCH unit to :

(1) study the special problems affecting the health of mothers and children ;

(2) stimulate the formulation of broad policy ;

(3) promote co-ordination with other units in the department of health and with other government and voluntary agencies concerned with mothers and children ;

(4) secure adequate financial support for MCH services at intermediate and local levels ;

(5) promote the necessary legislation ;

(6) define standards of maternal and child care and for personnel rendering such care ;

(7) promote guidance and leadership ;

(8) stimulate planning and evaluation of programmes and research with personnel at intermediate or local levels ;

(9) provide consultation and advice on technical problems ;

(10) promote training of MCH personnel and to establish standards for MCH staff ;

(11) stimulate research.

The central policy should be formulated in general terms, after consultation with health personnel at the intermediate and local levels and representatives of the communities to facilitate mutual understanding and acceptance. Policies should be flexible so as to permit of adaptation to local needs and methods.

In some countries, there is a tendency to exert excessive central control over local health services. Under these conditions, local initiative is suppressed and the services are likely to be less responsive to local needs. As soon as possible, when circumstances permit, such rigid control should be reduced and local enterprise encouraged.

The real problem is to secure a practical working relationship at all levels by promoting and maintaining a continuous and accessible liaison of communication (see section 6, page 16). The Committee favoured decentralization of programme planning and operation with the object of encouraging the evolution of vigorous local health units.

Relationships with other government departments concerned with services for mothers and children

While the Committee recognized that in some countries there might be several government departments providing health services for mothers and children, it was of the opinion that there were many advantages in combining all MCH services, including school health services,[1] in one department. The Committee recommended that, where it was not yet feasible to achieve this ideal, steps should be taken to promote the closest possible co-ordination. " It is ... an overriding duty of a health administration to act as a general staff in co-ordinating the health services of a community, whether these services are carried out by official or voluntary organizations or a combination of both." [2]

In addition to the importance of establishing close working relationships between health agencies, it is of the utmost importance in MCH to secure equally close co-operation with social agencies serving families.

The Committee considered that MCH services should be made available to all mothers and children in the community, whether they are living in their own families or in residential homes or institutions providing for unmarried mothers, orphans, abandoned children, and others deprived of home life.

Relationships with hospitals

The Committee discussed the varying ways in which MCH activities and personnel could benefit from contact with staff of hospitals providing beds for mothers and children. These included :

(1) the holding of consultant sessions by obstetricians and paediatricians and other specialists at MCH centres ;

(2) access of MCH staffs, both medical and nursing, to hospitals :

(*a*) to acquaint clinicians on the home background of patients ;

(*b*) for interchange of information on individual patients to facilitate follow-up care in the home ;

(*c*) to enable MCH personnel to keep up-to-date in clinical knowledge and methods.

Relationships with training institutions

Good relationships between MCH administration and training institutions can have a profound effect on the future of all MCH services. When

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[1] See *Wld Hlth Org. techn. Rep. Ser.*, 1951, **30**, 34 (paragraph 7).

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1952, **55**, 6

medical and nursing students are offered practical experience of MCH activities early in their professional training, they are given a valuable introduction to preventive medicine. They learn to understand normal pregnancy and normal infant and child development before they study the abnormal. They have an opportunity to participate in a family health service with healthy people, and gain an appreciation of community health services early in their professional training. This type of experience will have a long-range beneficial effect on basic attitudes of future staffs towards the mothers and children they will serve.

When the services of the teaching staff of training institutions are utilized by MCH services, the standard of practice in the MCH field is raised. At the same time, the teaching staff are closely associated with community problems. The training institutions are able to provide refresher courses for MCH personnel and general practitioners which not only improve the competence of these workers to care for mothers and children, but are also closely related to the problems of the community.

The Committee considered these relationships to be of great importance and urges those concerned with medical and nursing education and with MCH programmes to recognize their value and to implement them wherever possible.

Relationships with the medical profession

It is desirable to keep practising physicians informed on problems and progress of MCH programmes and to seek their help and advice in planning and executing policies. This has been successfully accomplished through joint committees on MCH of medical societies at national and local levels, committees to review maternal and infant deaths and utilization of the services of practising physicians in community MCH services.

Integration of MCH services

In general, it can be seen that in countries with MCH programmes of longest standing the services are more specialized and self-contained. The reasons for this are in part historical, since at the time when organized activities in child health began in these countries there was often little formal public-health organization and the activities were principally concerned with environmental sanitation and communicable-disease control. There were few, if any, services being rendered to individuals by health departments. The voluntary groups which did the pioneering in MCH developed new approaches to the specific problems of the time—the very high infant mortality, child neglect, and widespread ignorance concerning child care. In later years, as public health departments assumed responsibility for

MCH activities, the special patterns which had been developed by the voluntary agencies were to a large extent adopted and those patterns still continue to exercise their influence in the type of MCH services provided.

Another factor which affected the earlier MCH administration patterns in these countries was that medical and hospital services for sick children were comparatively well developed at the time. As a result, the public health efforts were directed almost exclusively to preventive and educational services, with a consequent unfortunate separation of preventive and curative services. There is now an increasing awareness of the need to bring preventive and curative services into closer relationship and to bring about greater integration of MCH services with those serving the family as a whole.

The Committee stressed that the MCH service must always keep prevention as its principal responsibility. However, a consideration of great importance is that it should also accept responsibility for providing, if necessary, or securing comprehensive medical and nursing care for mothers and children. The Committee deprecated the separation of preventive and curative services, particularly in countries where illness is rampant and medical-care facilities are inadequate. In these countries, it is unwise to exclude treatment services in MCH clinics. But attention must be given, not only to the immediate illness for which advice is sought, but mainly to the general health of the mother or child, the prevention of further illness, and the attainment of good health. By treating the disease, confidence is established and co-operation secured for continuing health supervision.

Where curative services are well developed, MCH can concentrate more on providing preventive services and health education, at the same time providing a smoothly functioning link-up with curative medical and nursing services, so that continuity of care is assured.

In practice, it is impossible to make clear distinctions between preventive and curative services. A child with growth failure as a result of under-nutrition is not a normal child. Treatment of under-nutrition or malnutrition involves the prevention of a more serious nutritional disease or death. Treatment of syphilis in the expectant mother is prevention of congenital syphilis in the infant.

The Committee considered that all MCH services, including school health, especially at the local level, should be an integral part of the general public-health services, and that both should have as their aim the health supervision of the family as a unit. The Committee was also of the opinion that the MCH service had the responsibility of giving leadership in promoting the integration of all health services for mothers and children (whether publicly or privately supported) into the total public-health and medical-care programme.

In larger communities and cities where there is a tendency for more specialized services to develop, the integration of all health services for mothers and children must be achieved by co-ordination, consultation, and interchange of records and information.

In some of the countries with more recently developed MCH programmes, the approaches and administration have been much influenced by earlier patterns of other countries. In others, there has been from the beginning a greater degree of integration with general public health and with curative services. At the present time there are countries with highly specialized programmes in which MCH personnel at national, intermediate, and local operating levels carry on an almost self-contained programme. At the other extreme are countries in which there are no MCH personnel at either the planning or operating level and where MCH services are carried out by general physicians and nurses in general clinics and the homes. In between are to be seen various plans, the most usual being an MCH unit at the national or intermediate planning level or both, with the programme being carried out by general staff in rural areas and more specialized staff in cities.

The Committee recognizes that in many countries voluntary agencies play important roles in MCH. In some countries, most of the responsibility for rendering direct service is assumed by voluntary agencies, government subsidies enabling them to carry the load, whereas in other countries the health department has assumed all or most of the responsibility for staffing and operating MCH centres and home visiting services, and the voluntary groups have taken up pioneering in less well-developed fields such as services for handicapped children and mental health.

A common problem is that of maintaining quality of care where the health department has no supervisory authority. In some places, efforts are made to influence standards by the inclusion of qualified MCH personnel from the health department or of paediatricians or other specialists on voluntary agency boards where policies are determined. This is successful only in the degree to which non-professional board members are willing to accept professional guidance. Another method of controlling standards is making the governmental grants conditional on meeting standards set by the health department. Conditional grants from national governmental departments to intermediate and local departments, as well as to voluntary agencies, have proved effective in raising and maintaining standards.

The increasing recognition of the inter-dependence of health and social factors, of the values of the family approach, and of the importance of the closest possible integration of preventive and curative health services, is beginning to influence public health philosophy and the organization and staffing of MCH programmes. The Expert Committee on Public-Health

Administration concluded in its first report : " The present trend in the development of health care does not warrant a fractioning of health administration." [1]

In order to facilitate integration in all the respects discussed, it is necessary that there be established some formal administrative device such as one or more co-ordinating committees at national or intermediate levels. The Committee would be composed of representatives from the appropriate professional groups—e.g., paediatricians, obstetricians, general practitioners, nurses, dentists, and general public health administrators—and from hospitals, training institutions, and other government and voluntary agencies concerned with the health of mothers and children. The central purpose of the co-ordinating committee would be to help each group represented to understand and appreciate the problems and contributions of the other groups and plan how they can work together more effectively to achieve common aims.

6. Techniques of Administration

Human relations

Administration is often referred to as the art of carrying into effect policies and plans. An important element in this art is dealing with a staff each member of which has a part in carrying out the policy. One essential responsibility of the administrator then is to create an environment or atmosphere in the department which will enable the staff to make their maximum contributions. Knowledge of the nature of human motivation and human relations is therefore as important to the administrator as is technical competence in his particular field.

Knowledge of the science and art of human relations has been increasing in recent years as a result of research and of the application of theory to practice in industry and public administration. Perhaps, because of the universal human appeal that invariably surrounds MCH, it is natural that MCH administrators are particularly interested in human relations and are therefore more sensitive to the value of these principles.

A few examples of principles having particular applicability to MCH administration are :

1. Participation of staff in arriving at decisions affecting them and their work is important in gaining their understanding and co-operation.

2. Staff must accept the purpose and methods involved in policies which they are expected to carry out.

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1952, **55**, 41

3. A basic need of every individual is security. Every person, including the administrator, needs recognition, support, and guidance in carrying out his work.

4. To be contented and productive staff must be fully participant rather than merely obedient. A small participant staff will produce more work than a large one which only carries out orders.

5. Perception of status has an important bearing on staff relationships and on the relationship of staff with the people served in the programme.

These principles have important implications for MCH administration, for manpower is always in short supply and it is of utmost importance to utilize to the fullest the capacities of available staff.[1]

Examples of application

The importance of joint planning of policies between national, intermediate, and local administrative units has been mentioned in this report. This can be achieved through the medium of periodical conferences in which representatives of each level meet together to pool their ideas and arrive at decisions.

Staff meetings, at which all members are encouraged to contribute their ideas for discussion by the group, help to make each member feel one of the team. Agenda should be flexible and sufficient time allowed for discussion of problems brought up by any member of the staff.

For promotion of staff morale, it is necessary that individual members of the staff should feel that they can bring their problems to their chiefs and receive a sympathetic hearing.

Frequently, consideration is given to the needs for the administrator to learn about problems of his staff. It is equally desirable that the staff have opportunities to gain an understanding of some of his administrative problems. Both are essential to harmonious staff relationships.

In an organization which depends so greatly upon team work and upon genuine acceptance by the people served, it is essential that everyone on the staff, from the top administrator to the lowliest helper, be made to feel that he is respected as a person, and that his contribution is important to the success of the total effort. Equal consideration of the rights and feelings of others by each member is necessary for harmonious team work. These considerations also apply to the attitudes of staff to mothers and children served. If a staff member does not feel sympathy for, and is unable to identify with, the children and their problems, he cannot expect to influence their behaviour.

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[1] Unpublished working document WHO/MCH/58

In spite of the best methods, serious problems in staff morale and administrative effectiveness may result from personality problems. For such problems, the expert help of psychiatric personnel may be of assistance.

Opportunities for joint discussions between public health staff and other physicians, nurses, and professional workers will facilitate mutual understanding and respect for one another's roles.

The development of committees representing the public which have a continuing interest in health may be of utmost importance in carrying MCH plans into effect both from the standpoint of acceptance by the community and from the point of view of active support of governmental and voluntary appropriations to support the programme. These lay groups also provide a convenient index to the health needs as felt by the people of the area.

Personnel policies

Policies with regard to recruitment, selection of personnel, security of tenure, salary, recognition, promotions, leave, sick benefits, living conditions, particularly in remote rural areas, and opportunities for further training are of great importance not only for staff morale but for securing and holding staff on the job. Also the provision of clerical help, adequate transportation, and means of communication are essential to morale as well as to efficiency of staff.

Reports

Reports from staff are necessary for administrative purposes, but the Committee agreed that often excessive demands are made on them for information which serves no useful purpose. Only such information as will be used for assessment of work accomplished, for evaluation and planning should be required. Joint planning of reporting practices with field staff will help to bring about acceptance and co-operation.

Reciprocal communication

The critical importance of joint planning between national, intermediate, and local levels has already been mentioned. The development and maintenance of frequent cordial and varied ways of communication provides the key to this goal. No other single method is so potent in dispelling the confusion, resistance, and suspicion which so often occur between the separate administrative levels.

In imaginative administration, the methods of achieving the necessary interchange of ideas and information are endless.

Written communications should always be phrased in polite, clear, and simple language, remembering that the reader is a person and not a division of government. The receipt of statistics and other types of information from local levels should invariably be reciprocated by analytical reports from intermediate or national levels which are useful and stimulating to the local staff. Reports of progress and events relating to the MCH programme and appropriate literature should be made available to field workers. Many problems are of such a nature that the telephone, where available, is a more effective way of accomplishing two-way communication.

Nevertheless, there is no substitute for on-the-spot visits to local areas by the intermediate and central MCH administrators and various professional consultants. This is necessary to keep programme policies sensitive to, and in harmony with, local problems and needs. On some occasions, joint conferences of various levels should be held in local areas with the field workers acting as hosts.

Basic to all the above is the concept of accessibility. Adequate means of communication can only occur in a situation where any staff member, or any representative of the people served, can easily secure a personal conference with the person concerned with his problem.

7. Functions and Preparation of Physicians in MCH Programmes

The Committee clearly recognizes that there is wide variation in the amount and quality of obstetrics, paediatrics, maternal and child health, nutrition, and social medicine offered in medical schools throughout the world. There are also great differences in the nature and breadth of the responsibilities which physicians are expected to assume in connexion with MCH services. It is therefore impossible to set down inflexible standards for either their functions or their preparation. It was felt, however, that certain guiding principles might be indicated.

There is pressing need in rural areas of many countries for physicians to render direct health services, including MCH. Medical colleges have responsibility for offering training which will equip physicians to deal effectively with the common health problems of the country. In many countries, the training is especially deficient in paediatrics and in preventive medicine.

Continuing effort to improve the basic preparation of physicians is of great importance to public health in general as well as to MCH.

Since the preparation of personnel should be based on their functions, consideration was given to responsibilities commonly assumed by physicians serving at various levels in MCH programmes.

Physicians in rural areas

In rural areas, the same physician commonly renders MCH services as a part of responsibility for general community health services. He often must render both preventive and curative services in clinics, schools, and homes, assume responsibility for sanitation and disease-control programmes, and supervise midwives and nurses.

The first essential in the training for such an officer is that he be a good general practitioner, whose training included obstetrics, paediatrics, nutrition, and preventive medicine and a good knowledge of the common health problems of the area. In addition, he should have an opportunity to receive a period of orientation in a demonstration training area devoted to providing practical experience in MCH and the application of his knowledge to dealing with general community health problems. For this purpose, the establishment of training areas is an essential part of public health structure.

Physicians in urban areas

In urban communities, there is greater likelihood that the health services can afford a degree of specialization. Here, the physician serving mothers and children will be less likely to have as widely diversified responsibilities and will have specialists to help him in rendering direct services. Concomitantly, his administrative duties will be greater and may include :

(*a*) planning of prenatal, post-natal, child-health clinics, and school-health services, including care of the adolescents ;

(*b*) supervision of domiciliary midwifery services ;

(*c*) co-ordination of preventive services with medical, nursing and hospital care ;

(*d*) delegation of authority and supervision of staff ;

(*e*) integration of MCH services into the general public-health service.

Under these circumstances, in addition to a good basic medical education, he needs some graduate training in paediatrics or obstetrics or both, MCH, nutrition, and experience in administration. Opportunities to work under supervision in a well organized MCH programme integrated with general public health would be of value in providing the desirable administrative experience needed.

MCH administrators at intermediate and national levels

Since such officers require wide administrative knowledge and skills, in addition to those previously mentioned (see page 9), preparation for such

posts should include public health training in a recognized course of study. The present trend in schools of public health to offer training in general public-health administration, with opportunity for special study in MCH, is commended.

8. The Role of Evaluation

The Committee considered evaluation to be of great importance for the good administration of MCH programmes and accordingly decided to give it special consideration and emphasis.

Evaluation may be defined in various ways but, as used in the context of a maternal and child health programme, it may be said to be *the systematic assessment of progress made towards reaching a predetermined goal.* It is an energetic process of accumulating and assessing facts and opinions about the needs of the group to be served and about the results obtained from the procedures initiated and methods used. Its purpose is to assist in planning and in the making of intelligent decisions about every phase of a programme.

Perhaps the first essential to successful evaluation is an objective attitude towards the programme or activity for which one is responsible. Some administrators unwittingly develop emotional, proprietary, or defensive attitudes towards their programmes. For them, evaluation may create anxiety as to their adequacy as administrators, as well as to the value of the programme to which they have committed themselves. On the other hand, experience with evaluation, and participation in the process, helps to develop objectivity.

Evaluation may range from a simple enumeration in answering a specific question as to how many mothers or children received services from a specific programme during a specified period, to the more complex consideration of establishing scientific evidence that a certain programme changed the behaviour of mothers in caring for their children and that such change is associated with improvements in health of the children.

It has been pointed out that an activity may be evaluated on the basis of one or more levels or types of measurement based on different value systems : [1]

(1) An estimate which a recipient group places on an activity, according to its own objectives and value systems.

[1] United States of America, National Advisory Mental Health Council, Community Services Committee, Subcommittee on Evaluation of Mental Health Activities (1955) *Evaluation in mental health : a review of the problem of evaluating mental health activities*, Washington, D.C., p. 17 (US Department of Health, Education, and Welfare, Public Health Service Publication No. 413)

(2) The value placed on an activity or service by "experts" after examination and comparison with other services.

(3) Assessment by scientific measurement against acceptable standardized procedures.

Estimates of recipient groups

In programmes aimed at meeting the needs of people, it is essential to know in the first place what people think their needs are. Their views may be quite different from those of professional persons responsible for planning programmes, and lack of "co-operation" is often the result of differences in the value systems of the people and planners. It is axiomatic that the health administrator must be familiar with the background, culture, and way of life of the people, must know "their values, beliefs, traditions, customs, and taboos with respect to health and illness",[1] and must be aware of changing trends.

Learning what people think about their health problems requires great skill. The inquiry must be conducted in an atmosphere which is inducive to their expressing their true feelings. Often people will say what they think is expected or what they consider to be polite, unless they can be sure that there is an earnest desire to obtain the truth. The person conducting such an inquiry must be one in whom the people have confidence. Sometimes, it is possible to obtain the help of their natural leaders—persons whom they know and trust. Sometimes, needed information has to be obtained by indirect approach and observation.

The same principles, of course, apply to methods of obtaining reactions of recipient groups to established programmes. Asking the mothers themselves is the only way to find out why they do not return to the antenatal clinic as advised. But how they are asked makes all the difference as to whether one receives excuses or real reasons. Curt questions by an accusing clinic attendant may be answered by such excuses as "illness in the family", while carefully structured interviews or questionnaires might reveal that the real reasons centred about poor clinic management, long waiting periods on hard benches, and frequent changes of clinic physician.

Another example of evaluation by recipients is the survey of community programmes by citizens' groups. The method usually involves the use of a checklist or guide for gathering information and standards developed by experts, against which the citizens themselves judge the programme. This method has the advantage of acquainting citizens with the public health programme in their community, allows them to discover for themselves

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1954, **89**, 12

the unmet needs, and stimulates them to take a greater interest in bringing about changes. The educational values to the citizens participating in such an evaluation are very great. In no other way could they gain the depth of understanding about the meaning of the programme to them as individuals and to the community as a whole. Many programmes in health and welfare are initiated and developed as a result of the community estimate that certain services are worth supporting—according to their own system of values.

Evaluation by experts

The most commonly used method of evaluation in the past involved assessment by trained observers or those considered to be "experts" in the field being studied. In this process of evaluation, the observers compare the programme with similar ones or with standards. Usually, no precise yardstick is used and there is always danger that personal bias and faulty judgement may enter into the evaluation process. This is particularly true where the observer is unfamiliar with the local situation, history and culture of the people, and background of the programme. Another weakness of this type of evaluation lies in the fact that it may not carry with it the seeds of action, either by the administrator of the programme or by the community, unless both are involved and motivated in some manner. It is not uncommon for an administrator to file away and forget this type of evaluation of his programme if the conclusions are not to his liking.

Experts in evaluation methods, however, may be of great assistance to programme directors or community groups in helping them in the definition of the areas to be evaluated, in the choice of appropriate tools for measurement, and in the gathering and compilation of data and their significance. But the misconception that evaluation is something for experts only is all too common and has deterred many administrators from themselves assuming responsibility for undertaking evaluation of their programmes. Furthermore, active participation in evaluation is the best possible education for the administrator and his staff.

Assessment by scientific measurement

While the two previously described methods or levels of evaluation are usually applied to programmes as a whole, it is seldom, if ever, possible to assess an entire programme by more accurate and scientific means. In this third method, certain aspects of the total programme are brought under sharp focus and examined carefully, using measuring devices which meet the requirements of scientific study. When used properly, this type of evaluation is of greatest value in improving the over-all programme and is also useful in gaining public support for continuation or expansion.

Although this type of evaluation uses scientific methods, it is distinguished from basic research " whose objective is the accumulation and analysis of data in order to formulate hypothesis and theory for the sake of new knowledge itself, irrespective of judgment of the value of the knowledge ".[1]

There are several essential steps in the process of scientific evaluation :

(1) clearly defining the goals of the programme as a whole ;

(2) setting down the specific objectives of the particular procedure or activity to be evaluated ;

(3) establishing a base-line against which to measure progress ;

(4) selecting tools or methods appropriate for the measurement of the activity ;

(5) measuring the degree of change that has taken place ;

(6) studying the results to include determination as to whether any change which has taken place is the result of the activity or due to some other cause ;

(7) initiating such changes in the programme as may be indicated as a result of the findings.

An illustration is given of how these steps might be applied in the evaluation of a training programme for " traditional birth-attendants " :

Goals or objectives of the MCH programme include the reduction of maternal and infant deaths in the community. The objective of the training programme might be to bring about a measurable reduction in preventable maternal deaths, and in those of infants due to tetanus of the newborn, among the women attended by birth attendants who have had the prescribed training course.

Base-line measures are necessary to provide a basis for comparison. Therefore it is essential to know the results of the performance of the same birth attendants *before* they took the course, expressed in the same terms as will be used later.

Control group. In addition to comparing the results obtained against the base-lines, it is desirable to compare changes in the performance of the group of attendants which had received training with that of a similar group which did not.

Control of variables. Such factors as age, socio-economic status, education, amount and character of past experience, and selection of attendants taking the course may influence the results and should be controlled in so far as possible. If it is not possible or feasible to control them all, their existence must be recognized and taken into account in drawing conclusions, as should also sources of statistical error relating to size of groups, etc.

Methods used in this case would include those for obtaining validated reports of all cases attended by the groups in the study, of records of maternal and newborn deaths

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[1] United States of America, National Advisory Mental Health Council, Community Services Committee, Subcommittee on Evaluation of Mental Health Activities (1955) *Evaluation in mental health : a review of the problem of evaluating mental health activities*, Washington, D.C., p. 2 (US Department of Health, Education, and Welfare, Public Health Service Publication No. 413)

which have occurred, as well as a suitable method for determining preventability—such as establishment of a committee of professional persons.

Evidence of durability of any observed changes in the group would need to be done by a follow-up study at some later period. Such a study might indicate the need for closer supervision or of refresher courses to maintain any improvements in performance noted.

In addition to the approach outlined, it would be helpful to conduct a study of the opinions of the attendants themselves as to the value of the training. This might show up possible weaknesses in the course. Also, before and after, observations of the performances of the women by professional persons might add a valuable dimension to the evaluation.

An evaluation study such as this would require the expenditure of time and money. But in a country contemplating the inauguration of training programmes of this kind on a wide scale, the lessons learned from one careful study might well result in tremendous savings of misdirected effort and funds.

Another example follows with several possible approaches to evaluation of long-established child-welfare centres in a community with relatively high educational and economic standards :

The opinions of practising physicians and of health and social agencies might be sought with regard to the principal current child-health problems in the community. Similarly, the views of the staffs serving the centres would be helpful. Group discussions of mothers attending the centres might be a good way of learning the kinds of problems on which they feel they most need help. These are evaluations using the first type of measurement previously described. Another approach might involve an appraisal of practices in the centres by an expert or group of experts.

Let us assume that these inquiries indicate that both professional groups and mothers feel that greater emphasis needs to be given to the emotional aspects of health services in the centres.

As one of the steps in the re-orientation of the work of the centres, it is desired to provide more time for the mothers to discuss their questions regarding the behaviour of their children and to express their anxieties, and for the staff to do better counselling and education. An increase in staff or clinic time is not feasible. Therefore, it is deemed necessary to eliminate clinic procedures which are time-consuming and are not productive. The value of routine measuring and recording of weight and height is questioned. It is therefore decided to test one or more of the following hypotheses :

(*a*) Nutritional problems resulting in growth failure are rarely seen in the centres in this community.

(*b*) Multiple recording of height-weight data is no longer providing information which is necessary to the staff in guiding mothers in the care of their children.

(*c*) The procedure of measuring and recording heights and weights of every child at every visit requires a substantial amount of the time of nursing staff.

(*d*) Routine weighing and measuring at the centres tend to unduly magnify the importance of rapid growth and weight gains in the minds of mothers and staff.

(*e*) The procedure tends to establish false ideas of norms and thus contributes to the production of anxieties in some mothers by inviting comparison between their children and those with different body build and growth.

Testing hypotheses

It would be rather easy to test hypothesis (*a*) by reviewing a representative sample of records and comparing the recorded growth patterns with valid standards of normal growth.

The value of the recorded data (*b*) could be tested by observing the frequency with which the clinic physician makes use of the data in advising the mothers in the care and feeding of their children over a designated period of time.

Testing of (*c*) would involve a time study—the total amount of time devoted by nursing staff to the taking of weights and heights, recording them, and discussing them with the mothers.

The testing of hypotheses (*d*) and (*e*) would be more difficult by strictly scientific means as they involve opinions and feelings. However, the amount of time devoted to a procedure by the staff might be taken as an indication of the importance they attach to it. The number and kinds of comments and questions by the mothers about the weights of their children, and their reactions to the elimination of the procedure as a routine, might be indicative of their feelings. Any anxieties of the mothers centring about the rate of growth would have to be brought out by sympathetic patient counselling by the staff over a period of time.

Vital statistics in evaluation

As every MCH programme has among its principal objectives the reduction of preventable deaths among mothers and children, accurate and complete registration of births and deaths and statistics on causes of deaths are the *vade mecum* of the MCH director. Without up-to-date analysis of such data for at least some sections of the community served, it is impossible to plan intelligently, or to assess progress and changing trends. In countries and areas where a compulsory system of registration and the statistical services are in the developing stages, there are a number of methods which can be used to obtain data which are useful in the planning and evaluation of programmes.[1] Much useful information will be supplied by periodical medical surveys of limited areas aimed at obtaining data on all vital events occurring during a stated period, with details on causes of deaths of mothers and children, and by review and summarization of mortality and morbidity data on hospital and clinic records, with scrutiny of causes and circumstances surrounding individual cases. The participation of a group of practising physicians or midwives or both in a systematic review of all or of samples of maternal and infant deaths has proved a valuable device. The " case study " method is applicable to many activities in MCH and has value as an educational device for participants, as well as in revealing weaknesses and gaps in programmes.

In the absence of accurate recorded data, " progress " is likely to be assumed by evidences of an *increase in facilities* (e.g., numbers of maternity or children's beds or of clinics) and of an *increase in effort* (e.g., numbers

[1] See *Wld Hlth Org. techn. Rep. Ser.*, 1954, **85**.

of mothers or children visited or examined). The hypothesis that certain levels or standards of facilities and of services of specific types will result in decreased death-rates or improved health needs to be tested. In most MCH programmes great effort, time, and expenditure of funds are devoted to untested hypotheses.

Comparison with standards

Comparison of facilities or services with standards is a common method of evaluation. It is useful in certain circumstances provided the standards are up to date and valid. For example, school lighting can be measured quantitatively with a photometer and compared with recommended standards. Modern methods of screening visual and auditory acuity involve the use of tested measuring devices for purposes of comparison with standards. A distinction, however, has to be made between such scientifically developed standards and those which represent no more than opinions or guesses, and which are frequently not applicable to local conditions.

Service records

Service records can be invaluable aids to evaluation, provided they are properly designed. After the objectives of a service are clearly stated, the procedures used to reach these objectives can be used as a basis for construction of good records. Such records have proved to be of great value in helping individual staff workers to assay their effectiveness in attaining the objectives of the service and helping them to plan their work. Good records also provide base-lines for comparing accomplishments of staff and of services in different areas. These principles are applicable to most aspects of the MCH programme.

In general, service records are of value in obtaining measurements of quantitative data, rather than of quality of services. Care needs to be exercised in the interpretation of quantitative evidence of performance, because quantity is sometimes in reverse ratio to quality. A nurse may feel so pressed to show numbers of visits that she feels she does not have the time needed to concentrate fewer visits on high priority patients. The establishment of standards with regard to numbers of routine services expected of staff may well discourage quality of performance.

Quantitative data may, however, give clues which can serve as starting points for studies of quality of services. For instance, a review of the service records of child health centres in a community may reveal that the percentage of toddlers attending Centre A is twice as high as that in other centres. This may mean any one or a combination of factors denoting

quality of services, such as greater diligence of the staff in the follow-up of older children, or greater interest among the staff in Centre A in behaviour problems, or that the mothers were returning of their own accord because they were receiving help.

Evaluation of preventive and health-promotion services

The evaluation of measures directed to the prevention of specific physical diseases or defects presents fewer difficulties than in the case of health-promotion activities. After establishment of appropriate base-lines, it is possible to measure differences in incidence and prevalence. One of the greatest problems, however, is controlling the multiplicity of variables which may effect changes. For example, a reduction in the incidence of diarrhoea among infants attending a child health centre may be the result of the education of mothers in child feeding practices or of improvement in the general environment sanitation or in the water or milk supplies.

It is frequently said that activities directed towards the promotion of health do not lend themselves to evaluation or measurement. This is partly true, but it is also often used as an excuse for not attempting to evaluate the large part of the average MCH programme devoted to such activities. Every activity has a purpose which can be stated, and evidence of progress towards its achievement can be described, if not precisely measured. Every MCH administrator should set down specifically what *he* means by health in the mothers and children in the context of its manifestations in the community in which his programme operates. This will serve as a point of departure in planning and measuring progress in the activities devoted to health promotion in his programme. Much thought is currently being given to evaluation of mental health activities. The problems and approaches are similar in all of the less tangible aspects of public health.

Resources for evaluation

Evaluation of some kind should be a continuous process in every maternal and child health programme. To some administrators, it may seem impossible to conduct evaluation along scientific lines because of staff and budgetary limitations, but a beginning can be made by basing every-day decisions between alternatives on all available relevant facts and weighing the evidence impartially. Seeking the opinions of other departments, especially those with appropriately trained statisticians, and of public and professional groups is relatively easy to do and adds greater dimensions to the judgement of the administrator as to the value of procedures. Scientific evaluation may have to be limited to explorations unless expert help can

be obtained. A source of help often overlooked is a nearby university or research centre. Such centres frequently carry out sterile research because they lack access to living problems. A relationship in which the centre becomes the research arm of the operating agency is mutually beneficial.

9. Research

In addition to evaluation, there is general recognition of the need for research to increase our knowledge of the nature, causes, and prevention of certain MCH problems which have been resistant to attack from the public health angle because of the lack of knowledge either of the etiology or of effective public health methods of combating them. Such problems as perinatal mortality, diarrhoea and enteritis, congenital defects, cerebral palsy, severe anaemia of pregnancy and toxaemia, remain largely unsolved.

Another urgent need is to find solutions to the problems of protein malnutrition (kwashiorkor) and of other types of malnutrition in infants and children in different countries, especially during the weaning period. Malnutrition, and diarrhoea and enteritis constitute the major child-health problems in the world today, in terms of mortality and morbidity.

More studies are required on infant-feeding practices, including breast-feeding.

Comparative research on subjects of mutual concern to several countries are needed. Toxaemia of pregnancy and rickets were suggested as examples of the many subjects which are appropriate for this type of research. Before studies of this kind could be undertaken, standardized methods of collecting and analysing data would have to be devised.

Suggestions for research in administrative methods include the methodology of assessment of health problems and the study of the potential and relative values of auxiliary personnel. Certain types of research in the field of MCH can be undertaken by the operating agency with expert guidance. Other research problems require the collaboration of expert teams, utilising public health facilities, their personnel and records, and universities and research institutions.

The Expert Committee on Maternal and Child Health,

Recognizing the contribution which WHO is making by stimulating research,

> RECOMMENDS that further studies be promoted in major MCH problems of mutual concern to several countries, using standardized methods designed for comparative research purposes.

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The Expert Committee on Maternal and Child Health,

Having considered how best to expedite the application of the principles of MCH administration elaborated in this report,

RECOMMENDS that WHO stimulate the holding of regional and national conferences to study these matters.