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**THE ORGANIZATION AND
ADMINISTRATION
OF MATERNAL AND CHILD
HEALTH SERVICES**

**Fifth Report
of the WHO Expert Committee on
Maternal and Child Health**

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WHO EXPERT COMMITTEE ON MATERNAL AND CHILD HEALTH

Geneva, 26 November - 2 December 1968

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THE ORGANIZATION AND ADMINISTRATION OF MATERNAL AND CHILD HEALTH SERVICES

Fifth Report of the WHO Expert Committee on Maternal and Child Health

The WHO Expert Committee on Maternal and Child Health met in Geneva from 26 November to 2 December 1968 to discuss trends in planning, organizing, and implementing maternal and child health services. The meeting was opened by Dr P. Dorolle, Deputy Director-General, who welcomed the participants on behalf of the Director-General.

1. AIMS OF MATERNAL AND CHILD HEALTH SERVICES

The objectives of maternal and child health (MCH) services begin with the immediate health problems of mothers and children and extend to health throughout life and to community health. Through concern with child development and the health education of parents and children, the ultimate objective of MCH services is lifelong health. The effect of careful and informed mothering on the health of the entire family and the relation of family health to community health are important factors in individual, community and national development.

The health of mothers and children is influenced by what happens in and to the family as a whole. The family, in turn, is inevitably affected by the human and environmental conditions of the community whose life it shares. Most MCH problems are public health and community problems that can be solved only by applying general measures to a whole area.

MCH is concerned with the biological demands of reproduction, growth, and development; with the vulnerability of mothers and children as a

result of these demands ; and with the special services required. Since injury during development may damage the organism permanently, health measures taken at this stage are potentially of long-term benefit. Recognition of MCH as an entity is desirable in order to focus concern on the special needs of mothers and children and to mobilize, develop, and organize the services required to meet these needs.

The Committee reaffirms the statement in the report of a previous WHO Expert Committee that the ideal for which MCH services should aim is to ensure that "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".¹

The first report of the WHO Expert Committee on Maternal and Child Health² contained a definition of maternity care that was later adopted, with the addition of the words between square brackets, by the WHO Expert Committee on the Midwife in Maternity Care :³

"The object of maternity care is to ensure that every expectant and nursing mother maintains good health, learns the art of child care, has a normal delivery, and bears healthy children. Maternity care in the narrower sense consists in the care of the pregnant woman, her safe delivery, her postnatal [care and] examination, the care of her newly born infant, and the maintenance of lactation. In the wider sense it begins much earlier in measures aimed to promote the health and well-being of the young people who are potential parents, and to help them to develop the right approach to family life and to the place of the family in the community. It should also include guidance in parent-craft and in problems associated with infertility and family planning."

Although the health goals for mothers and children are expressed in separate statements, the Committee stresses the close relation of maternal health to child health.

The Twenty-first World Health Assembly recognized "that family planning is viewed by many Member States as an important component of basic health services, particularly of maternal and child health, and in the promotion of family health, and plays a role in social and economic development [and] that every family should have the opportunity of obtaining information and advice on problems connected with family planning, including fertility and sterility".⁴ The Committee is in agreement with these views.

¹ *Wld Hlth Org. techn. Rep. Ser.*, 1957, No. 115.

² *Wld Hlth Org. techn. Rep. Ser.*, 1952, No. 51.

³ *Wld Hlth Org. techn. Rep. Ser.*, 1966, No. 331.

⁴ *Off. Rec. Wld Hlth Org.*, 1968, 168, 21 (Resolution WHA 21.43).

2. PROBLEMS OF CONCERN TO MCH SERVICES

MCH problems cover a broad spectrum. At the one extreme, the most advanced countries are concerned with the problems that remain after existing knowledge has been applied by means of the available resources. Examples are certain perinatal problems, congenital malformations, genetic problems, mental illness, accidents, obesity, and certain new problems of adolescence. Even in countries where the improvement in MCH has been spectacular, its effects have not been felt equally in all sectors of the community. For some population groups, the optimum levels of maternal and child care available to more affluent groups or areas have not yet been achieved.

At the other extreme, in developing areas the primary concern is with the most efficient application of existing knowledge in the context of limited resources and difficult conditions. The much higher rates of maternal and child mortality and morbidity in developing areas are mainly the result of poor nutrition, widespread infection, and hazardous reproduction. In most parts of the world these three interrelated problems are still the principal concerns of MCH services.

2.1 Nutrition

Nutrition is of fundamental importance to the health of mothers and children. In the world as a whole, the largest part of preventable mortality is due to the combined effect of malnutrition and infection in the first years of life.¹ Because malnutrition is difficult to define, its contribution to mortality tends to be less well reported than that of infections, which are more dramatic in their origin and symptoms. Investigations of infant and child deaths reported to be due to infections frequently show that malnutrition is an underlying factor or even that the infection is only the terminal event. On the other hand, both chronic and acute infections interfere with nutrition.²

Adolescent girls, pregnant women, nursing mothers, infants, and children are particularly vulnerable to the effects of undernourishment, and in many countries chronic malnutrition is a general condition. Undernourished women tend to produce babies of low birth weight even at term, and frequently the onset of labour is premature. Mothers and children subsist on a diet defective in quality as well as quantity, and in addition they may

¹ For a full discussion of this question, see: Scrimshaw, N. S., Taylor, C. E. & Gordon, J. E. (1968) *Interactions of nutrition and infection*, Geneva (World Health Organization: Monograph Series, No. 57).

² *Wld Hlth Org. techn. Rep. Ser.*, 1965, No. 314.

suffer from a variety of chronic conditions and infections. The most obvious diagnosis in such cases is anaemia, but while this condition is important in itself, it is also an indication of a host of deficiencies in amino acids, vitamins, and minerals.

Specific preventable vitamin deficiencies are still major problems in some areas. Many children are still losing their sight because locally available foods containing vitamin A do not form part of their diet.

Most important of all is the effect of protein-calorie malnutrition on the growth and development of infants and children. There is a great deal of evidence that malnutrition retards development and restricts performance and that in many areas this problem affects the population in general. Although it is a complicated task to isolate the effects of nutrition from the complex of socio-environmental factors that can affect early mental development, a growing body of information suggests that the adverse effects of malnutrition are large enough to be detected even by our present inadequate methods for measuring intellectual level in various societies.

Even though many of the resources needed to improve nutrition may be at hand, the magnitude of the task of preventing malnutrition may not be appreciated. Aspects of this task in which MCH services are concerned include :

- (1) Careful survey of nutritional problems ; identification of the most practical and available food resources ; and close acquaintance with cultural factors that interfere with the consumption of the necessary nutrients and need to be influenced.

- (2) Education and nutritional guidance by MCH workers of mothers and children, teachers, extension workers, and community leaders.

- (3) Extensive distribution of specific dietary supplements, such as iron, where this is the most expeditious way to raise intake to the required level.

- (4) Surveillance of mothers and children in order to identify and manage nutritional problems as early as possible ; careful education to prevent relapse.

- (5) Prevention and management of infections that interfere with nutrition.

- (6) Family planning, where acceptable, to improve the nutrition of mothers through spacing of pregnancies, and to improve family nutrition by limiting the number of children so that all can be cared for adequately.

2.2 Infections

In developing countries, infections are among the most important health problems, and preventive measures must be taken as early as possible. Tetanus neonatorum is a cause of more than half the neonatal mortality in

some areas. Pertussis and measles are particularly dangerous to malnourished infants, who should be immunized early in life. The high level of immunization required in a population in order to eradicate smallpox also entails vaccination in early infancy. There are advantages in giving BCG immunization to newborn infants.

Routine immunization in infancy, carried out in permanent health establishments, is an ultimate objective. In developing countries, however, mass campaigns may initially be the most efficient approach to the control of certain communicable diseases, e.g., malaria, smallpox, and tuberculosis; this is because of the wide prevalence of these conditions, the magnitude of the preventive measures required, the scarcity of permanent establishments, and certain logistic difficulties in organizing decentralized activities. From the start, such campaigns should have a plan for eventual consolidation and maintenance by the basic health services. In the meantime, close co-ordination between the developing permanent health services and the mass campaigns is essential, since the permanent services can assist in surveillance and case-finding.¹

Most mortality and morbidity from infectious diseases is from widely prevalent enteric and respiratory diseases. In efforts to prevent these diseases stress must be laid not only on specific preventive measures but also on the fundamental role of improved nutrition, infant care, and environmental health. The counselling of parents, home visiting, and school health programmes all have a part to play.

2.3 Hazardous and excessive reproduction

Hazardous and excessive reproduction places a heavy burden upon mothers. The need for assistance during childbirth has always been the basis of MCH services. This assistance has been extended to include care before, during, and after pregnancy. Such care, together with the spacing of pregnancies and the avoidance of too many pregnancies, is important for both the mother and the foetus.

All over the world, there is a statistical relation between the number of pregnancies and maternal and infant death rates. High infant and child mortality rates reflect the dangers of excessive pregnancies for the health of mothers and children and the inability of large families in developing areas to support all their offspring. Large families often cannot adequately feed and nurture all their children, and those who survive are often stunted in their growth and development. On the other hand, high infant mortality is one reason for consecutive pregnancies that debilitate the mother and

¹ *Wld Hlth Org. techn. Rep. Ser.*, 1965, No. 294; Gonzalez, C. L. (1965) *Mass campaigns and general health services*, Geneva, World Health Organization (*Publ. Hlth Pap.*, No. 29).

result in high maternal morbidity. It is well known that maternal mortality rises with each successive pregnancy. Repeated pregnancies are not only a drain on maternal nutrition and haemoglobin level, but may also cause serious pelvic disease.

The result is too often an anaemic, malnourished mother whose already inadequate reserves are further depleted by almost continuous pregnancy and nursing, and an infant of low birth weight who dies if the breast milk fails or is curtailed by another pregnancy, or whose growth and development are stunted if he survives.

3. TRENDS IN EFFORTS TO IMPROVE MCH SERVICES

It is now widely recognized that comprehensive planning of MCH programmes, based on careful evaluation and co-ordinated with the overall health, social and economic plan of a country, is required to ensure the efficient development and even distribution of MCH skills, facilities, and services.

The authorities responsible for social and economic development are becoming increasingly aware of the significance of high maternal and child mortality and morbidity and of high natality; of the fact that a large proportion of the population is in the young dependent age group; and of the importance of human development. Particularly in some heavily populated countries, the interrelations between mortality and natality are now a top national concern.

One of the factors required to influence the adverse pattern of mortality, morbidity, and natality is health education of the family. In developing areas, changes in knowledge, attitudes, and practice with regard to family planning depend on person-to-person communication. Mass media have a limited impact, even in areas within their reach. Changing family nutritional and hygienic practices form a similar problem. Contact by MCH workers and even by "traditional" midwives has proved an effective method of family health education, and in some developing countries these workers are rapidly being mobilized and augmented.

The trend is to aim at providing the entire population with at least minimum services, including elementary care, health education, and a system of screening to identify individuals and groups at high risk who require more than minimum attention. This is being achieved by developing a wide network of auxiliaries, working closely with professional medical staff on the one hand and with community leaders on the other. In many areas, it is customary for health education and MCH services to be provided by female auxiliaries working closely with mothers.

In order to make essential services as wide in coverage and as efficient as possible, integration is taking place: preventive services are being integrated with curative services, maternity services with child health services, and, where policy allows, family planning services with MCH services. *These multi-purpose MCH services are not isolated from other health services, but are built into and often provide a nucleus for basic health services.* They have a versatile staff concerned with all the main needs of mothers and children, whether the reason for the contact is infant illness, nutritional counselling, maternity care, or family planning. This generalization of functions also provides continuity of care and enables a single worker, familiar with the individual's background and family situation, to make an impact by reiterating important educational points and by providing the necessary follow-up.

Extensive manpower development is required to meet these expanding needs. This in turn requires comprehensive planning, with much stronger emphasis on training large numbers of auxiliaries, and on training better balanced, co-ordinated teams of nurse-midwives and physicians, competent to undertake the supervision and in-service training of auxiliaries. Closer collaboration between training institutions and community services has a beneficial effect on both training and service.

These new trends do not mean that all the answers to MCH problems have been found, but programmes are now being based on careful research and evaluation to determine what approaches are the most effective in various settings, and new approaches are being tested. This contrasts favourably with the former dependence on subjective opinion, dogmatism, or vague awareness of effectiveness.

4. PLANNING

MCH services can be planned and operated only within the context of the general health services and a country's broad programme for social and economic development. However, basic health services need to be specially designed and directed to enable them to meet the specific needs of mothers and children. An MCH planning and administration unit at national level will do much to ensure that policy and planning with regard to training and services take into account the extra requirements of mothers and children.

Once the central administrative unit has become well established and health services have spread into rural areas, a trend towards decentralization will begin and similar units will be established at intermediate levels. The integration of MCH activities into the work of local health centres will permit administrators to plan and develop a country-wide network and to adapt MCH activities to local requirements and resources.

The responsible MCH unit can receive great assistance from advisory bodies that are able to enlist the co-operation of the community. In many countries, this function is satisfactorily performed by committees that draw their members from interested government units—e.g., other departments within the Ministry of Health and other ministries such as those for education, welfare, and agriculture—and from professional and voluntary organizations, and may also include prominent paediatricians, obstetricians, nurses, midwives, educators, social workers, etc. These committees can play a most useful role in advising the responsible MCH unit, in pointing out special problems, in helping to assess the effectiveness of services, in determining priorities, and in stimulating interest in particular fields.

The orientation desirable for MCH programmes in developing countries is often discussed. Variations in historical development and environmental circumstances render a uniform policy for all countries impracticable. Although there is general agreement on the principles underlying MCH programmes, the means used to put these principles into practice should always be selected in the light of local conditions and will, therefore, be different in each country. Flexibility, along with the capacity to modify and improve existing resources, is an important prerequisite of success.

When developing health services, each country must be fully aware of its resources and potential and of what families feel their needs to be; information on the attitudes and needs of families should be collected by health workers and forwarded to the central unit, together with the health workers' own data on needs and personnel. Experience has shown that health services for mothers and children are more likely to be accepted and used when they are attuned to the cultural heritage, beliefs, and customs of the people.

After stock has been taken of the health needs of mothers and children and of existing resources, it is necessary to decide what type of service is best suited to fulfil these needs, and at the same time acceptable to the people and financially feasible. A decision must also be taken as to the allocation of resources to different parts of the programme. In developing countries particularly, the funds, manpower, and facilities available are not sufficient to enable governments to deal effectively with the problems facing them. Priorities must be established, on the basis of the country's principal health problems. With these priorities clearly defined, it will be necessary to set up realistic short-term and long-term targets, based on quantified programmes of action.

There is a need for continuing surveillance of the form of MCH services; they need to be adjusted in accordance with changes in the social and economic development of a country or in the needs of the people. Future trends and needs must be anticipated and planned for. Provision must be made for the measurement and evaluation of results.

5. ADMINISTRATIVE FUNCTIONS

Many of the principles that apply to planning apply also to administrative functions, since the latter are largely dependent on initial and continuous planning. For both planning and administration, it is necessary to have a central MCH unit. The advisory committee on planning can provide policy guidance on administration. It is particularly desirable for administrators to maintain close liaison with training institutions.

Some of the functions of the central MCH administrative unit are as follows :

(1) To serve as a focal point for integrating and promoting MCH information, policy, planning, and administration ; to co-ordinate with, receive guidance from, and give guidance to related units of the Ministry of Health, including those concerned with health education, nutrition, nursing, training, vital statistics, environmental health, communicable disease control, and mental health ; to co-ordinate with other relevant ministries, including those for education, welfare, information, and community or rural development ; to collaborate with other professional, administrative, educational and community leaders and groups, as well as with voluntary agencies and programmes.

(2) To study maternal and child health problems, services and needs, by means of special surveys, the collection and analysis of reports, records, and other data ; to stimulate, co-ordinate and develop relevant research projects.

(3) To plan and adapt the programme to meet needs with maximum efficiency.

(4) To seek support for programmes ; to recommend legislation ; to participate in budgeting ; and in some areas to allocate grants-in-aid for regional or local activities.

(5) To develop MCH activities throughout the country within the network of basic health services, giving attention to adequate distribution of services and to general coverage of mothers and children in the population : the programme includes the supervision of personnel, provision of supplies, systems of referral from peripheral to intermediate and central services, and screening services to identify special problem groups so that they can be provided with intensive services (see section 6) ; to establish standards and performance norms ; and to give operational instruction and provide guidelines.

(6) To oversee manpower development and training activities.

(7) To advise on and participate in the preparation and use of mass media and other health education procedures pertinent to maternal and child health.

Depending on the local administrative arrangements, the central MCH unit may have varying degrees of responsibility for the following activities :

- (1) School health services.
- (2) Administration of certain maternity and paediatric service establishments and training institutions.
- (3) Comprehensive family planning programmes—most family planning programmes are implemented at least in part through the MCH programmes.
- (4) Social welfare support for mothers and children.
- (5) Services for handicapped children.

5.1 Decentralization

Central administration here refers primarily to functions at the national level, but the term applies to other levels in countries where programming is based mainly on the state, province, district, or community. It is desirable to decentralize administrative functions, allowing responsibilities similar to those of the central MCH unit to be assumed in different areas, while maintaining over-all planning at the central level. Where there are sharp differences in the characteristics of various regions, decentralization permits special orientation of the regional programme to meet different needs. The intermediate administrative units are likely to engage in referral as well as administrative functions. Peripheral units, in collaboration with local community resources, have a particular opportunity to become more intimately associated with service functions in general.

6. REACHING THE WHOLE POPULATION

Even in developed countries a principal concern is to reach the whole population with adequate services, since some groups with the most problems are reached least by MCH services. Coverage involves not only the distribution but also the utilization of services. Where available services are not fully used, the reasons for this must be ascertained. Are the services provided at a time when people are not free to use them? Are they inappropriate to the population's needs? Are special extension services and educational efforts required?

In developing countries, problems of coverage are far more critical. Personnel and facilities are in short supply, and in many areas the MCH services provided are hardly more than token services. The distances to clinics may be great and transport insufficient.

6.1 Integrating MCH services into basic health services

The present trend to integrate MCH services into basic health services rather than to establish them as a separate entity makes for more efficient coverage, allowing the most economic and widespread use of a single network of facilities, personnel, supervision, supply, and transport.

The same principle of efficiency applies to the merging of curative and preventive services. Furthermore, the treatment of disease is often the foundation upon which other services are built. Health promotion and the prevention of disease clearly deserve strong emphasis, but families are most likely to come for attention, and mothers are most responsive to health instruction, when threatened by illness. Disease can motivate people to try to understand its causes and to learn simple preventive measures. In order to exploit this opportunity fully, the treatment of disease should extend beyond dealing with the initial complaint. The patient should be viewed in a broad context: growth and development should be assessed, faulty nutrition detected, and the social and environmental factors influencing health should be investigated.

In developing countries, few children are free from infection or from some degree of malnutrition. If the child is to gain full benefit from educational activities, these will have to be supplemented by treatment. The same applies to a great extent to pregnant and lactating women. Preventive and curative measures for the health of mothers and children must be blended in varying proportions, according to local circumstances.

6.2 Minimum MCH activities for maximum coverage

At the peripheral level it is desirable to take the provision of certain minimum services in all areas as a primary objective. The Committee suggests that the following activities could and should be provided in every rural community:

- (1) The recognition and primary management of certain of the most common diseases and problems in the area.
- (2) Elementary health education, with special emphasis on nutrition, hygiene, childbearing, child rearing, and fertility problems. Such education can accompany all other activities.
- (3) The screening of expectant mothers and children, identification of high risks and abnormalities, and referral to more qualified personnel.
- (4) Assistance during delivery and the puerperium, ensuring maximum safety and cleanliness. Care should be taken to avoid undue interference and harmful practices.
- (5) Simple record-keeping.

(6) The distribution of simple medicines, food supplements, and, whenever in accordance with policy, some types of contraceptives.

(7) The provision of information on community health problems. The peripheral unit or worker should serve as a point of contact and arrange attendance for itinerant services and mass campaigns.

Where the network of peripheral health units is not sufficient to offer services within easy reach of a population, some success has been achieved by recruiting, training, and supervising local workers, such as the traditional village midwife.

The activities listed will be effective only if the following conditions are fulfilled :

(1) The responsibilities of the health workers must be clearly defined and controlled, and the geographical area in which they are to work must be specified.

(2) Whenever applicable, personnel should work in a team.

(3) There should be a system of referral to the next higher health unit.

(4) The next higher health unit must exercise supervision and give constant in-service training, guidance, and encouragement.

(5) Facilities, supplies, and equipment must be available to enable workers to perform these activities.

(6) The community must participate in the services.

6.3 Mobile services

The provision of mobile services should be considered carefully. There are two major arguments against large-scale mobile services. One is concerned with logistic considerations such as cost, lack of roads, vehicle maintenance, time spent in travelling, inconvenience to staff, and lack of synchronization with community demands. The second is that mobile services do not develop the permanent focus that is necessary to achieve health objectives. In general, mobile services should be limited to those that can be provided efficiently on a mass basis, particularly immunizations, until these can conveniently be provided on a continuous basis within the community. Beyond this, mobility in MCH services is chiefly needed to ensure supervision and support for permanent health services and the provision of consultation facilities and in-service training for local staff.

6.4 Screening to reveal high risks and special problems

In order to make the most effective use of available personnel and facilities, it is wise to introduce a system of screening to select those individuals and groups who need more services and attention than are routinely pro-

vided. This enables resources to be deployed strategically so that skills and services can be placed at the disposal of those most at risk. Clearly, all mothers and children are subject to special risks by comparison with the general population, but among them certain individuals and groups are particularly at risk. Furthermore, all mothers and children pass through certain critical periods when they require particular attention, e.g., delivery and the weaning period. Early identification of high-risk cases is important, since early action may avert the need for complicated and expensive procedures.

In developed countries, high-risk groups may be identified not only by specific clinical findings but also by such characteristics as low socio-economic status, or rejection of health services. In developing areas health services may be inundated with patients, most of them at high risk by some of these criteria, as well as by others. Even under these circumstances, however, it is particularly valuable for health services to screen cases that can be handled routinely so that they are alerted as early as possible to those cases that may demand extra attention. Rather than have skilled professionals giving cursory attention to the common problems, it is preferable for auxiliaries to give these adequate time and attention and select those problems that require referral for higher skills. Some examples are given below.

Expectant mothers should be screened to establish whether their pregnancies are likely to be complicated. The health worker responsible for deliveries should be aware of danger signals during childbirth—prolonged labour in particular—indicating that urgent referral is required. During routine nutritional counselling and management, children who are not thriving should be identified and referred early for intensive treatment, before severe malnutrition demands extensive attention. During rehydration counselling, the worker should be able to identify patients in danger of severe dehydration, and for whom oral rehydration is not possible, in order to refer them for parenteral hydration. After a case of tuberculosis has been identified, immediate additional steps are necessary to protect other persons exposed. Finally, during all activities the worker can look out for families where the parents may wish to be referred for family planning assistance.

6.5 Need for a team approach

In both developed and developing countries, the efficiency of health services is being increased by greater use of auxiliaries. Developing countries are particularly dependent on the widespread use of auxiliaries to meet the needs of mothers and children, because professional staff are in short supply and it is inefficient and uneconomical to use them for routine tasks. The availability of professional services at the peripheral level is further

limited by the reluctance of professional staff to reside in rural areas and, in some countries, by the necessity of employing women in maternity care, even though women professionals are scarce. Professional staff should be employed primarily in training and supervising teams of auxiliaries.

Only a very exceptional auxiliary can function successfully in isolation, but unfortunately auxiliaries often have to work alone and without guidance. By and large, the effectiveness of an auxiliary is in direct proportion to the amount of in-service training given by the professional supervisor and to the interest shown in her work.

6.6 Combined maternal health and child health services

The care of mothers and the care of children should be combined for a number of reasons: child health is closely related to maternal health; combined services are more effective and offer more opportunities for family care and health education; and more efficient use can be made of available personnel.

The problems of infant health must often be approached through the care of the mother. Low birth weight and tetanus neonatorum are striking examples of this in the perinatal period. Efforts to improve maternal nutrition and to space pregnancies will have more impact on the low birth weight problem than efforts limited to the management of the infants concerned. Tetanus neonatorum can be prevented only at the time of delivery, or by immunization of the mother. Infant anaemia is often the result of poor foetal reserves, which in turn are due to maternal anaemia. Protein-calorie malnutrition affects the weanling whose mother has become pregnant while still lactating.

Combined services promote continuity of care and reduce the number of visits the family has to make. Pregnant women may have ill or malnourished children; diarrhoea or some other illness may affect more than one member of a family; malnourished children may have siblings who are ill. From the mother's point of view, it is inconvenient to go to one place to receive care for herself, to another for care for her children, and to yet another for family planning, or to go for different purposes at different times or to see different persons; indeed, much will be lost if she has to do so. Since no opportunity to give personal health services should be missed, preventive, educational and curative work must be carried out whenever the family presents itself, no matter what the initial reason for the visit may be.

Many reasons can be given for keeping the mother and child together in hospital. In maternity wards, for example, the mother can establish lactation more successfully if the child remains with her; she can help care for her infant when staff is short; and the danger of transmitting infection in overcrowded nurseries is avoided. When an infant requires hospitaliza-

tion later, it is usually best for the mother to accompany him in order to maintain breast feeding. However well certain illnesses are managed, there is always the possibility of recurrence unless the mother is taught the necessary preventive measures. Physicians and nurses must work with the mother as well as with the child. This practice of teaching parents on the ward should be incorporated into clinical training. The parent must be made an ally in the management of child health problems.

It is particularly important to bear in mind the advantages of combined services when organizing MCH activities in areas where women can be approached only by female workers. Particularly in rural areas, such workers should generally be prepared to handle the problems of both mother and child.

7. THE RELATION OF FAMILY PLANNING TO OTHER MCH ACTIVITIES

Since family planning is a relatively new component of MCH programmes in certain countries, its relation to other aspects of MCH is given particular attention.

7.1 Medical indications for integrating family planning into MCH services

Both MCH and family planning are directly concerned with the health of the individual and with the physical and emotional quality of family life. Combined MCH and family planning efforts may have a better chance of strengthening family life and improving the quality of parental care than either approach alone.

The outcome of pregnancy bears a direct relation to family planning. Families will accept family planning only when foetal, infant, and child mortality rates are reduced. Improvement of the health of mothers and children is therefore a prerequisite for family planning.

On the other hand, studies have shown a correlation between high parity and infant mortality. Child spacing is an important factor in the outcome of a pregnancy. Optimum spacing of pregnancies may lower the incidence of prematurity; it also gives mothers a better opportunity to nurture each individual child, and may thus prevent or reduce such complications as gastrointestinal infections and malnutrition during infancy and early childhood.

There is a relation between maternal mortality on the one hand and gravidity, parity, and maternal age on the other. In the interest of prevention, therefore, family planning services should be directed toward certain high-risk groups such as older women and grand multiparae. The very young mother is also subject to excessive risks, and efforts should be made

through education and other measures to avoid early teenage pregnancy. Child spacing can also be of help in preventing the syndrome of maternal depletion.

One of the major causes of maternal mortality is illegal abortion. When family planning is not available or is unsuccessful, women may resort to abortion. The entire abortion problem should be reviewed—the incidence, indications, circumstances, safety, outcome, supervision, and legal aspects.

Family planning may be desired by couples with certain debilitating diseases or by women with histories of reproductive complications.

Some forms of contraception require trained health workers for selection and introduction of methods, for follow-up, and for management of complications.

7.2 Variations in the setting for family planning

There are wide variations in the setting for family planning. In the developed countries, where the population is well educated and easily informed, parents have interests that conflict with the raising of large families. The number of pregnancies corresponds closely to the number of children they want, since most of their children survive. At the other extreme, there are areas where infant mortality is so high that there is little desire for family planning; infertility, although a common problem everywhere, causes particular concern in these areas. Nevertheless, even under these conditions, family planning to space pregnancies is always desirable.

Most areas fall between these extremes, and have falling death rates and persistently high birth rates. Many people do not know that they can plan their families; and even when they do know, they have difficulty in using methods that require repeated action. On the other hand, it has been found in most of these areas that the majority of women are in favour of family planning, and their demand is often not met. Hazardous abortions are likely to take place under these conditions. Pregnancies constitute a hazard not only because of their frequency but also because the general level of maternal health is poor, and facilities for the management of complications of pregnancy are lacking. Although prolonged lactation undoubtedly lowers fertility, nursing mothers may become pregnant. Simultaneous pregnancy and lactation constitute a double drain on the mother; frequently the infant is weaned abruptly, thus precipitating kwashiorkor.

7.3 Advantages of integrating family planning into MCH services

There are many advantages, both administrative and technical, in integrating family planning into MCH services. Funds may be pooled for

the ultimate strengthening of both activities. All types of available trained personnel (physicians, nurses, midwives, health educators, etc.) can be used to provide broader services, to reach more patients, and thus extend coverage of the community. It should be possible to provide more comprehensive care at lower cost to the community as a whole. The use of existing resources and personnel will help prevent duplication, avoid fragmentation of programmes, and hence promote efficiency.

Where MCH administrators are not given, or do not accept, responsibility for family planning, other administrators are likely to assume leadership and use the resources in this field. There is then a danger that family planning and other MCH services will not be developed in a complementary and balanced manner. It must be recognized that in both developed and developing countries some personnel are already leaving key positions in MCH for family planning work, not infrequently because higher salaries are available. A related problem is the diversion of funds from public health services and MCH into family planning, thus weakening the basic health services. At the same time, the close contact that MCH services have with mothers provides a good opportunity for family planning work that is sometimes missed.

MCH care can best be provided by integrating family planning into the services. Care for girls and women of childbearing age should be provided at several stages—preconceptional, antepartum, postpartum, and interconceptional. Family planning is related to every phase of maternity care, in both service and educational aspects. If it is separated from the rest of maternity care, its potential availability and effectiveness are reduced. Family planning may also be relevant when counselling mothers on child care, for it is an important factor in the optimum nurture of the child. Periodic visits for child care provide an opportunity for continuous supervision, often required for successful family planning. Furthermore, all the priority needs of the mother, child, and family can be considered at each contact with the mother.

Permanent MCH services with broad health interests are able to provide the continuity and follow-up that are desirable for family planning efforts. Single-purpose campaign efforts have met with initial success, only to founder later because of the lack of follow-up services. Perhaps even more important, a long-standing community contact is desirable for overcoming initial ignorance and apathy.

7.4 Methods of introducing family planning into MCH services

Whenever there is contact with mothers and children, there is an opportunity to introduce family planning information and services. Many such opportunities are already available :

(1) Family planning should be discussed during premarital counselling. Registration of marriages provides one means of reaching young couples.

(2) Information can be provided on methods of family planning during contacts with expectant parents, e.g., attendance at prenatal clinics, individual and group counselling.

(3) Information and contraceptive measures may be provided while caring for postpartum patients. Experience has indicated that the provision of family planning services as part of the postpartum examination has significantly increased the percentage of women who return for a postpartum examination. Women are apt to be particularly receptive to family planning when the recent pregnancy and delivery are still fresh in their minds.

(4) While counselling mothers on child care, there is an opportunity for the reinforcement and follow-up that are often required for successful family planning. In most developing countries this is a much more important opportunity, since mothers often fail to return for postpartum care. Family planning can also be introduced whenever supplementary foods are distributed, e.g., in nutritional rehabilitation centres.

(5) The need for family planning advice is particularly urgent after induced abortion.

(6) School health services can reach potential parents through courses in family life.

(7) The need for family planning can be explored and advice can be given during home visits, whatever the principal reason for the call. In some areas systematic household surveys and registration are undertaken in order to identify couples who desire family planning services.

(8) MCH services can give guidance on the development of family planning educational materials and can incorporate family planning education into other public health educational activities.

(9) Family planning services may be provided in conjunction with other social welfare services, and in cases of child neglect.

(10) MCH workers can co-operate with other workers and services to provide family planning advice, for example with home extension and agricultural extension services and with community development workers.

(11) Birth registration services can identify families that desire advice on family planning.

(12) Village midwives using traditional methods have in some areas been recruited and used very effectively to provide family planning education and non-clinical contraception services and to refer cases for clinical contraception.

8. A BROADER CONCEPT OF SCHOOL HEALTH PROGRAMMES

School health programmes are often narrowly conceived as being concerned only with the health of schoolchildren. In fact, a much broader orientation is warranted: if school health programmes are regarded as an approach to the health of the community through the school, they can contribute to an attack on health problems at all stages of life. Children of school age constitute a relatively accessible and adaptable segment of the population, and are in a position to influence general community health problems. Children take back to their parents the health instruction they receive in school and, even more important, when they become adults they apply this knowledge to their own families. Furthermore, the educated family tends to provide leadership for the community as a whole.

The most important element of the school health programme is health education. This is a matter not merely of developing curricula and materials, but also of insisting on high standards of cleanliness in school, of introducing healthy practical diets into the school lunch programme, of improving water supplies and latrines, and of seeing that the children understand and use these improvements. Visits to observe community health problems and, even better, participation in community health action programmes, are excellent methods of instruction. In fact, in developing countries, where ill health is a major problem, the precept that "every schoolchild is a health worker" is a good one to follow.

A large number of children in rural areas either never attend school or cease attendance after a few years. The reasons for this are numerous: too few schools, too few teachers, poverty that makes it necessary for the child to work, and other social reasons. Since such children are not reached by other services, MCH services should assume responsibility for their health care within the framework of the country's general health services. Immunization, environmental health services, and health education should be made available to them. Health supervision during pre-vocational and vocational training is also desirable.

Children who reach school age in a developing country, often under difficult conditions of life, have surmounted many of the health dangers and hazards of infancy and early childhood, and are entering a period of relative security. Routine school health examinations and screenings are not emphasized, for as yet many countries have insufficient facilities to provide routine services to correct defects discovered at school; there is obviously little point in detecting what cannot be remedied.

When a school health programme is planned in developing countries, foremost attention should be given to the teacher and the training he receives. In rural areas, teachers are often community leaders and in a key

position to modify existing health attitudes, and if their co-operation is enlisted this will give a sound and realistic foundation to the school health programme. When designing the programme, therefore, planners should co-operate closely with teacher-training institutions. Efforts should be made to strengthen the health content of teacher-training courses by including such subjects as growth and development and nutrition. All teacher training should also cover the elements of first aid and promote an understanding of and interest in personal and environmental hygiene. For this reason, the sanitary facilities and personal health services provided for student teachers should receive careful attention. Due emphasis should be given to nutrition education, especially its practical aspects, e.g., the use of locally available foodstuffs. Student teachers should be taught how to recognize early symptoms of disease, particularly infections and malnutrition, how to handle mild physical and mental handicaps that might interfere with the learning process, and how to utilize existing health services for the benefit of their pupils.

Where resources are plentiful, special school health services may be developed. Their tasks are manifold and vary according to local priorities. Some aspects of a school health service are as follows :

- (1) The health appraisal of schoolchildren through teacher observation ; through teacher-nurse conferences ; through periodic screening for problems of hearing, vision, some communicable diseases, and nutritional states ; and through health examinations, especially prior to or at admission, and prior to school-leaving.
- (2) Correction of adverse health conditions.
- (3) Communicable disease prevention and control.
- (4) Family life education.
- (5) Environmental health.
- (6) Nutrition education and supplementary meals.
- (7) School safety and accident prevention ; first aid and emergency care.
- (8) Mental health.
- (9) Dental health.
- (10) Education of handicapped children.
- (11) Early identification and management of children with special learning or school adjustment problems, children who are frequently absent, and those who are potential dropouts.
- (12) Devoting special attention to certain problems of adolescents, such as venereal disease, use of drugs, and pregnancy.
- (13) Vocational guidance and assistance.
- (14) Health supervision and care for school personnel.

Encouraging young people to engage in healthy activities and to make their environment healthy is an important function of school health services. In industrially developed countries there is increasing recognition that many of the major degenerative diseases of adults have their origin in poor health habits formed in childhood. Cigarette smoking is an example of a public health problem that should be tackled in schools. Many poor health habits cannot be changed by the direct didactic approach, and student involvement may be the key to success.

Family life education is becoming increasingly recognized as a priority in both developed and developing countries. Here the school health service is concerned not only with the development of healthy lives but also with healthy attitudes towards human reproduction.

School health services may be developed and financed through the ministry of health, the ministry of education, or both. Because these services are the concern of many different bodies, however, close co-operation is essential. Co-ordinating committees that bring together persons concerned with such matters as health, education, agriculture, community development, vocational training, and voluntary agencies may play a useful role.

The Committee noted the important recommendations regarding the health needs of and health services for school-age children and young people made by previous WHO Expert Committees.¹ In addition, WHO and UNESCO have convened a joint expert committee to consider teacher preparation for health education,² and a special publication on the planning of school health education³ has been prepared on behalf of the two organizations.

9. ADOPTION, INSTITUTIONAL CARE, AND DAY CARE

Marriage is generally regarded as the basis of society. The child born out of wedlock, or the child deprived of one or both parents by death, divorce, separation, or illness, is commonly at a disadvantage. This is less true for certain cultures, where the extended family supports the child and may offset some of the disadvantages of parental deprivation, but even there rapid urbanization and industrialization are breaking down traditional social structures.

If the child is entirely deprived of his parents and his home, the principal means of child care are (1) adoption, (2) placement in a supervised foster-home, and (3) care in a children's home.

¹ *Wld Hlth Org. techn. Rep. Ser.*, 1951, No. 30; *Wld Hlth Org. techn. Rep. Ser.*, 1965, No. 308.

² *Wld Hlth Org. techn. Rep. Ser.*, 1960, No. 193.

³ Turner, C. E. (1966) *Planning for health education in schools*, London and Paris, Longmans/UNESCO.

(1) *Adoption*. Under favourable conditions this may be the most satisfactory solution. The laws concerning adoption vary considerably in different countries, but are now framed to protect both the adopted child and the adopting parent. The child and the prospective parents should be subjected to a full examination to assess their physical and mental status, and it is necessary to evaluate the home and the reasons for the adoption in order to prevent emotional disturbances. The skills of paediatricians and other health workers, psychologists, and social workers may be required in assessing the suitability of the adoption.

(2) *Foster-homes*. The aims of foster care are somewhat similar to those of adoption, but foster-parents are paid for looking after the child. The arrangement may be temporary, and frequent changes of home should be avoided because of the harmful effect they may have on the child's emotional development. It is essential to supervise foster-homes in order to avoid health hazards, neglect, cruelty, and exploitation. Adopted children and foster-children require the same degree of comprehensive health care as is provided for other children in a community.

(3) *Children's homes and institutions*. A WHO Expert Committee on Mental Health that met in 1949 pointed out that "only where family care proves for some reason impossible should recourse be had to institutional care".¹ Children's institutions may be organized by voluntary bodies, by the local authority, or by the state. Permanent skilled health supervision and high standards of hygiene are required in children's homes, particularly in institutions admitting infants. Standards for the health care of children in institutions should be established. Such institutions should have to be licensed, and undergo supervision in which MCH personnel participate.

9.1 Day-care centres

The objectives and functions of day-care centres are different from those of children's homes. The centres are a relatively new type of institution that has arisen in countries where social and economic change, industrialization and urbanization cause mothers of young children to take employment outside their homes. Frequently social legislation compels enterprises of a certain size to provide day-care centres for the infants of their female workers. The centres may also be supported by state or municipal authorities or by welfare organizations. In addition to the children of working mothers, they may also admit children from especially unfavourable social environments, such as slum areas. A certain type of day-care centre operates only during peak seasons of work, such as harvest-time when all the older members of the family are away working in the fields.

¹ *Wld Hlth Org. techn. Rep. Ser.*, 1950, No. 9.

Although in principle a day-care centre looks after healthy children, it may be possible and helpful for children suffering from a number of conditions (malnutrition, anaemia, physical handicaps, behaviour disorders) to be admitted into groups of healthy children or into special groups. The day-care centre's programme is designed to promote the child's full development—physical, intellectual, emotional, and social. Bringing children together makes it easier to supervise their health and carry out immunization programmes, permits malnutrition and other problems to be tackled more successfully, and provides better opportunities for health education of the parents. On the other hand, the risks of cross-infection are increased and there is an added likelihood of infections being introduced from the children's homes.

The emotional and educational problems of children attending day-care centres are complex and require careful attention.

It is stressed that adequate medical supervision should be provided in day-care institutions, and that the personnel should be well acquainted with the health and educational problems they are likely to face.

10. HANDICAPPED CHILDREN

One of the objectives of maternal and child health services is the prevention of handicapping conditions and the early management of illness to prevent crippling sequelae.

10.1 Primary prevention

The ideal is to prevent the handicap from occurring in the first place. Preventive measures already available can be applied during the preconceptional, antepartum and intrapartum periods, and during infancy, childhood, and adolescence. They include the continuous health care of mothers and children, and correction of adverse health conditions; preparation for marriage and parenthood and premarital examination; genetic counselling and family planning; avoidance of infectious diseases and potentially teratogenic drugs during pregnancy; improvement of maternal nutrition; special care of high-risk women; good, safe care during labour and delivery; and accident prevention. While these measures need to be applied to all mothers and children, particular care must be taken of those at high risk, i.e., those who are more vulnerable and more likely to develop certain conditions.

10.2 Secondary prevention

The purpose of secondary prevention is to minimize the severity of the condition or handicap, or to minimize the effect of the handicap upon the child and his family.

10.3 Management of handicapped children

The resources for managing handicapping conditions in children vary from country to country. In developed countries, handicapping conditions constitute a major health problem because of the elimination or diminution of some other problems (such as malnutrition and infection), and because of the increasing longevity of persons with some types of handicap. Nevertheless, such countries are more able to make special provision for handicapped persons. In developing countries other health needs are more urgent, but the problem of handicaps does exist and must be faced as practically as possible.

The ultimate goal is to assist the handicapped child and his family so that the child will be able to reach his maximum potential, to lead as normal a life as possible, to become as independent as possible, and to become a productive and self-supporting member of society.

Steps in the management of handicapped children include such measures as case-finding ; parent counselling and patient referral ; evaluation, diagnosis, treatment, and rehabilitation ; education ; vocational assistance ; transportation and day care ; and such other services as the use of risk registers, recreation, guardianship, foster care, home care, genetic studies and counselling, and long-term institutional care.

The management of handicapped children requires the co-operation of health, welfare, social, and educational agencies ; administrative responsibility may vary according to the conditions.

11. TRAINING

The training of personnel for MCH work is a major administrative problem all over the world. The Committee noted the deliberations of a previous WHO Expert Committee¹ on the training of such personnel, and endorsed its recommendations.

11.1 Qualifications of MCH medical administrators

MCH medical administrators should have the following qualifications :

(1) Sound clinical training in the health care of mothers and children. This is best represented by postgraduate training in paediatrics, with a working knowledge of obstetrics and maternal health ; or by postgraduate training in obstetrics and gynaecology, with a working knowledge of paediatrics and child health.

¹ *Wld Hlth Org. techn. Rep. Ser.*, 1961, No. 212.

(2) Postgraduate training and experience in public health ; knowledge of public health administration, including MCH administration ; and at least some basic instruction in programme evaluation.

(3) Ability to work with community organizations and with public health workers of various disciplines.

11.2 Professional training

Professional workers principally concerned with MCH include doctors, public health nurses, nurse-midwives, midwives, and in some countries female health visitors or the equivalent. Some joint training of these various types of staff helps to promote mutual understanding.

In the training of physicians in developing areas, more emphasis should be given to problems of maternal and child health. Physicians should be trained to work with other professional staff as members of health teams, and should be oriented towards public health problems.

Professional MCH workers should have :

(1) An orientation towards preventive medicine and a broad view of illness and its control.

(2) An orientation towards generating community development, self-help, and co-operation, and towards supporting local health efforts.

(3) Familiarity with mass campaigns, mass educational media, food enrichment, environmental sanitation, and fluoridation in relation to MCH programmes.

(4) Knowledge of health education methods.

(5) Ability to collaborate with teams of health workers.

(6) An appreciation of economy, since the most efficient use of limited resources and personnel must always be stressed.

(7) Ability to evaluate local problems and resources and to adapt approaches to local priorities.

11.3 Qualifications and training of auxiliaries

An auxiliary is a paid technical worker in a particular field who has less than full professional qualifications and who is supervised by a professional worker.¹ Voluntary, unpaid collaborators may act in a similar capacity.

Workers at the lowest level are generally trained on the job and supervised by a professional health worker or senior auxiliary ; they are particularly dependent on continuing in-service training. They should be trained

¹ See *Wld Hlth Org. techn. Rep. Ser.*, 1961, No. 212, p. 4.

in the simplest, most practical way to perform carefully defined tasks; they should receive continuing guidance, and their competence and performance should be carefully evaluated. By acting as supervisor as well, the teacher becomes clearly aware of what the worker is expected to do. Such workers are especially valuable because they are satisfied to remain in the community, of which they have an intimate understanding.

The "traditional" birth attendant already working in the village may be effectively recruited and trained to work at this level. Failure to recognize active local health workers often results in antagonism. With proper supervision, such workers can perform some of the functions described in section 6.2.

Institutionally trained auxiliaries, such as assistant nurse-midwives, should also receive instruction on the predominant rural problems; preferably they should be recruited and trained in an area not too dissimilar from that in which they will be expected to work. Their training should include practical experience in a rural setting. The health services should play a major role in the training of such auxiliaries.

Both as an incentive and as a practical measure, it is a good idea to offer exceptional auxiliaries the prospect of being selected and trained for posts of greater responsibility. Lack of basic education does not necessarily mean lack of potential. Very often practical experience in the field is a better background for a supervisor than a high level of basic formal education.

Each country must define the general educational background and technical training required of its auxiliaries. The technical training, which should be aimed at local needs, should include both pre-service and in-service training, with coverage of MCH and, where pertinent, family planning.

Standards used in other countries may be inappropriate to the local situation, and should not be adopted without careful consideration.

11.4 Recruitment and training

MCH personnel at high administrative and consultant levels should devote some attention to manpower needs, recruitment and training. There should be continuing appraisal of the number (including the attrition rate) and quality of professional and auxiliary health personnel in employment and under training.

The curricula of all schools training health workers should be reviewed periodically to make sure that there is adequate emphasis on the health care of mothers and children. Training programmes should keep abreast of developments in such areas as family planning. There is a need for regional field training centres with well-organized MCH services in order to demonstrate good field practice.

Most important of all, more emphasis needs to be placed on training teams of auxiliaries and their trainer-supervisors in a manner related to a country's principal MCH problems.

12. PROGRAMME EVALUATION AND OPERATIONAL RESEARCH

Studies of problems and of problem-solving methods are an essential part of planning and administering programmes. Without evaluation, it is usually impossible to determine whether initial aims and objectives have been achieved, whether targets have been reached, whether the health of the people has improved, whether specific expenditures have been justified, and whether personnel have been productive. Programmes should not be copied blindly from other areas, but each programme should be based on an assessment of the problems and of available resources.

Evaluation also serves to stimulate workers, for they perform better when they know their work is being evaluated. Furthermore, when workers are involved in evaluation themselves, they become more interested in their programme.

The evaluation of public health programmes varies from relatively simple activities to highly complex exercises requiring great skill in research design, data collection, and analysis. Thus, evaluation might include the following gradations:

(1) *Empirical observation.* Because of the extreme difficulty of carrying out well-controlled studies on various questions, and because comprehensive data may not be available, empirical observation is often the mainstay of programme evaluation and operational research. If routine observations are to be useful, workers must be trained to be good observers, must investigate particular problems, and must have a good reporting channel to planners and administrators. Although controlled studies have their advantages, programme improvements have often resulted from alert empirical observation.

The administrator must depend on direct observation to supplement the reports and data submitted to him, since the latter can never fully describe problems and performance.

(2) *Data collected from routine registration and reporting.* These include data from the registration of births and deaths and the reporting of diseases, and the statistics collected by services. Routine reports are required so that important service measures can be tabulated. Information in many areas may be markedly inaccurate and incomplete, and must be supplemented by data collected from special demonstration areas and projects, and by direct observations and surveys.

(3) *Data collected on a sample basis.* In areas where general reporting is inadequate, routine data may be provided more immediately by sample survey and/or by intensive registration in certain sample areas. Sample studies should observe certain criteria as far as possible: they should be representative, sample size should be adequate, and the data should be uniform. Sample surveys are also a valuable means of cross-checking the validity of routine registration and reporting.

(4) *Controlled studies.* The ideal method of investigation is to introduce a given measure on an experimental basis, isolating it as far as possible from other changes, and to compare progress in the experimental area with results in areas where the measure has not been introduced. Much skill is required in designing these studies and in selecting the experimental and control groups. It is difficult to find the time and resources that these studies require, particularly in view of the pressure of operational demands and the complex conditions in developing areas. Nevertheless, such experiments are the only sure way of confirming observational hypotheses.

12.1 Staff responsible for evaluation

Programmes may be evaluated by personnel engaged in MCH work or responsible for MCH services, by faculties of training institutes, or both. When evaluation has been carried out by service personnel alone, questions have been raised about the possible introduction of bias or loss of objectivity. On the other hand, if the results of evaluation are to be applied rapidly to improve programmes, it is clear that service administrators must be involved intimately in the planning, conduct, and review of the study.

It is preferable for research to be undertaken jointly by programme personnel and university faculty: the faculty can provide skills to develop research designs; it is useful to involve the faculty in programme problems; and students can benefit from first-hand observation of and participation in operational research.

12.2 Training of personnel

Programme evaluation is one of the greatest current needs in the field of MCH. Since the basic deterrent is the lack of personnel able to design such projects, two steps are suggested:

(1) Programme evaluation and operational research should be included in all curricula for graduate MCH students in schools of public health, institutes of hygiene, departments of paediatrics and social medicine, and schools of nursing. In some cases it would be necessary to strengthen the relevant faculties.

(2) Consultants should be enlisted to work closely with MCH administrators and help them to evaluate programmes.

12.3 Evaluation of family planning activities

In countries that attach importance to family planning, national planners have demanded a detailed programme assessment. Among the aspects being studied are the effects of the programme on the birth rate and on age-specific fertility; the amount of use, effectiveness, cost, and complications of each method of contraception; the state of knowledge, attitudes, and practice, and any changes therein. This involves the participation of other disciplines, such as demography, sociology, and economics, and careful identification of the inputs and indices to be measured. Evaluation of the family planning programme may serve as an example for the assessment of other aspects of MCH services.

13. LEGISLATION

The field of maternal and child health is covered primarily by public health laws, but also by other laws related to education (school health), social affairs (adoption, institutional care, day care, care of children in foster-homes), labour (employment during pregnancy), etc.

MCH legislation may be classified as follows :

- (1) Legislation regarding registration and reporting, e.g., the registration of births and deaths, the reporting of communicable diseases.
- (2) Legislation regarding licensing, e.g., licensing of personnel (physicians, nurses, midwives) or of services (hospitals, institutions, day-care centres).
- (3) Legislation regarding action, e.g., immunization of certain groups, such as children, examination of certain groups, such as children on admission to school, or protection of certain groups, such as pregnant working women.

MCH administrators should inquire into the need for legislation, advocate legislation where it is necessary, and assist in the drafting of laws.

The reasons and need for legislation should be clearly explained. Before legislation is enacted it is sound practice to conduct hearings with experts in the field concerned and with interested organizations and groups. Following enactment, it is essential to make provision for consultation with the agencies, organizations, and individuals concerned so that the intent and purpose of the legislation are observed. Consultative and supervisory staff are needed for this.

In general, specific procedures required by law usually represent the necessary minimum. Manuals of recommended procedures usually set higher standards.

14. RECOMMENDATIONS

The Committee makes the following recommendations :

(1) There is an urgent need to provide organized health services for greater numbers of mothers and children. Those with the most problems have been least reached by services. Developing countries are particularly dependent on person-to-person education to bring about changes in habits of hygiene and nutrition, and, where pertinent, to promote family planning. An immediate objective should be to provide at least minimum services to deal with the priority problems of malnutrition, infection, and reproduction.

(2) MCH services should generally be provided within the framework of basic health services ; preventive and curative services should be combined, as should maternity and child health services.

(3) MCH facilities provide many opportunities for effective family planning, and should include this activity where policy permits. Family planning and other MCH activities should be mutually supporting.

(4) While the integration of MCH activities into basic health services should continue, MCH should remain a separate entity at policy and planning levels so that training and services can be organized to meet the special needs of mothers and children. This requires a central unit and decentralized administrative and technical functions.

(5) Planning is necessary to develop, organize, and distribute services to cover the population. This calls for careful assessment of the local problems and of the approaches and resources at hand. Advisory bodies to co-ordinate the interests of all groups concerned with mothers and children are also desirable.

(6) Plans for evaluation should be built into the programme at an early stage. MCH workers should be assisted in designing evaluation studies and should be trained in evaluation techniques.

(7) A national plan is needed to recruit workers in the field of MCH and provide them with training, including in-service training. To extend coverage of the population, more auxiliaries should be trained ; their work should be supervised by professional staff. Professionals should be trained to work as members of a team with professionals of other disciplines and with auxiliaries, and to train and supervise cadres of auxiliary workers.