SEMINAR ON MATERNAL AND CHILD HEALTH IN THE EASTERN MEDITERRANEAN REGION

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CHAPTER 1

GENERAL DESCRIPTION AND EVALUATION OF THE SEMINAR

The first Seminar on Maternal and Child Health organized by the Eastern Mediterranean Regional Office of WHO, in collaboration with the Government of Egypt, was held in Cairo, on 25 November - 7 December 1957.

The participants came from Aden, Cyprus, Egypt, Ethiopia, Iran, Iraq, Lebanon, Libya, Pakistan, Somalia, Sudan and Syria in the Eastern Mediterranean Region, and from Morocco, Greece and Turkey in the European Region—in all, fifteen countries.

The seminar was inaugurated by the Minister of Public Health, Egypt, who observed that the seminar was of a special character and dealt with a subject of top priority to humanity—maternal and child health. This special character was reflected in the wide variety of professional interests represented. Some of the participants were concerned with administration of national maternal and child health services, some with the practice and teaching of paediatrics and obstetrics at the university level or in schools of nursing and midwifery, and others with the training of auxiliary nurses and midwives in the field. A few worked in general public health programmes, in which maternal and child health played an important part. Observers from various national and international organizations were also invited to attend.

In his opening speech, Dr Taba, Regional Director of the WHO Regional Office for the Eastern Mediterranean, said:

"The need for maternal and child care in this region is very great indeed. In spite of the lack of accurate vital statistics we know that maternal and infant mortality and morbidity in the countries of this region are high. Pneumonia and malnutrition are just as important causes of death among infants and children as the major communicable diseases, like malaria, bilharziasis and typhoid. The fight against these major communicable diseases forms an important part of WHO programmes in this Region, but it is realized that maternal and child care should develop at the same time. In fact, the maternal and child health services in any country cannot and should not be separated either from other medical services or from the socio-economic conditions in that country. The development of maternal and child health activities should therefore be an integral part of the over-all activities of community development.

"The members of this maternal and child health seminar will, in the next two weeks, discuss and exchange ideas on the major problems affecting mothers and children in the Eastern Mediterranean Region and adjacent areas, their priorities, and the measures

which might be taken to meet them. I trust that constructive ideas will emerge from your deliberations and that the results of the seminar will prove valuable to the countries of the Region in their maternal and child health programmes and activities.

"This seminar, therefore, should not be regarded as complete in itself, but I hope that its conclusions will be applied in the progressive development of maternal and child health services in the Eastern Mediterranean Region and adjacent countries. I also hope that it may be a prelude to maternal and child health seminars at a national level, and be followed by further regional and inter-regional seminars where in subsequent years individual aspects of maternal and child health can be discussed".

The basic aim of the Seminar was therefore to provide an opportunity for people working towards the improvement of maternal and child health, to profit from the experience, the successes and mistakes of others, and to gain fresh knowledge and ideas which might be usefully adapted and applied to local circumstances. The Seminar might also, it was hoped, encourage further effort by lessening the feelings of isolation and frustration inevitable wherever personnel and resources are, as yet, inadequate for the needs.

The programme was planned to facilitate this aim as far as possible. A preliminary questionnaire was sent to all participants asking for basic information relevant to maternal and child health in each country, and from the replies received it was possible to arrive at some idea of the common problems, and also of the gaps in the clinical and statistical knowledge at present available. It appears that this procedure has been valuable not only in correlating known facts, but also in stimulating more intensive local efforts to collect reliable facts on a wider basis.

It had been decided in 1956 that this first international seminar on maternal and child health could most fruitfully consider the basic structural problems of work in this field, leaving the more detailed discussion of clinical and local problems to a future and possibly national seminar, and preparations were continued on this basis.

The subjects chosen were:

1. Methods (clinical and statistical) of assessing needs in maternal and child health.
2. The health education of the family.
3. The administration of a maternal and child health service.
4. The staffing and training problems in a maternal and child health service.
5. The integration of the preventive services.
6. The integration of other resources for the improvement of child health.

The main problems of child health in this region, as revealed by the preliminary questionnaire—nutrition, diarrhoeal diseases, eye diseases and mental health—were also considered briefly during the seminar.

Papers on most of these subjects were submitted by consultants and participants as background reading, and short lectures were given to bring

out the main points, and to stimulate the plenary or small group discussions which followed. Different examples of the methods adopted in Egypt to meet the problems of maternal and child health—in children's and maternity hospitals, in maternal and child health centres in industrial and rural areas, and in "combined centres" where maternal and child health work formed part of the general development of the community—were generously demonstrated by the Egyptian Government and formed an integral part of the programme. This report attempts to summarize the facts and ideas which emerged from these various experiences.

An evaluation of the total programme (carried out by means of a questionnaire at the beginning, and another at the end of the seminar) showed that, among the subjects presented, the participants' main interests were "methods of assessing needs", "health education" and "staffing and training problems", and that these were dealt with satisfactorily. It was repeatedly stressed, however, that a future seminar of this nature should be organized so that more time is available for the discussion of practical problems. Nutrition and the diarrhoeal diseases were the most frequently mentioned, along with anaemia in mothers and children. Maternal care, records, training, medical and paediatric education, the care of handicapped children, family planning and the social problems associated with increasing industrialization were also cited. There was obviously a strongly felt need for something of the nature of a refresher course on a limited number of subjects, so that participants could take home factual knowledge to be adapted and applied according to the resources of each country or area of work, and that this knowledge should be gained through a well-balanced programme of lectures and subsequent discussion—preferably in small groups. There was also a general feeling that visits and demonstrations should be intensive rather than extensive, and should allow enough time for thorough exploration and discussion of their aspects relevant to maternal and child health.

Some participants felt that there had not been adequate representation of the nurse's contribution to maternal and child health work, and that in future more nurses should attend. It was also suggested that although many valuable informal discussions had taken place between participants and consultants, it would be helpful, if, in future, some time could be set aside during working hours, when the consultants would be available for discussion of specific matters relating to their particular skills and experience. Otherwise, the evaluation reflected the general satisfaction of the participants with the content and conduct of the seminar, and their lively interest in the possibilities and problems of planning similar meetings in their own countries.

During the seminar it was announced by the participants from Iran that an invitation had been received from His Majesty the King of Iran to hold the next maternal and child health seminar in Ramsar on the Caspian

Sea. This news was warmly welcomed, and the chairman expressed the wish of all participants when he said that he hoped this invitation would be accepted and fulfilled in the near future.

The success of the seminar was in no small measure due to the facilities provided by the generosity of the Egyptian Government and to the untiring efforts of many members of different departments, who gave their time as generously as their hospitality to make the two weeks both profitable and enjoyable. Special gratitude is expressed to the Director of the Child Welfare Section of the Ministry of Health, Dr Sidky, and to his staff for their unflagging concern for the interests and welfare of the participants.

CHAPTER 2

THE ASSESSMENT OF MATERNAL AND CHILD HEALTH NEEDS

Two background papers were presented—one on the statistical and one on the clinical aspects of this subject, which was discussed in both the plenary session and the small groups.

One of the consultants opened the discussions with a brief résumé of the main points of both aspects of the problem of assessing the requirements when planning a maternal and child health programme.

The main purposes of assessment were, in her estimation:

1. To determine all aspects—physical and mental, social and educational, economic and environmental—of the existing status of mothers and children.
2. To discover the reasons for any deviations from what is normal or desirable.
3. To study what services and amenities are available for mothers and children, their efficiency and adaptation to existing needs and stages of progress.
4. To maintain flexibility of programmes for betterment and provide guidance for future planning.

Accurate assessment is important for several reasons.

Mothers and children form the majority of the population. Where the average life span is 60 years, children form one-fifth of the total population; where it is under 30 years they may form two-thirds of the total. They are particularly vulnerable and frequently neglected, though with them lies the future of the nation.

Without accurate assessment of their actual health status, and the causative and contributing factors, appropriate measures cannot be devised, nor existing services altered to meet the changing needs of this group. Misdirected efforts to improve maternal and child health are always deplorable. In countries where scientific medicine is still on trial they can be disastrous, as they prejudice the chance of acceptance of other more effective measures.

The analysis and scrutiny of statistics may disclose unsuspected trends in, or make possible the early recognition of new threats to, maternal and child health.

Another of the consultants with experience in a rice-eating country gave as an example the fact that an increase in infantile mortality, shown statistic-

ally, may be connected with a rising prosperity and finally traced to an increased consumption by the people of mechanically milled rice.

Again, figures [1] such as the following disclose how unwise the present concentration of effort on the reduction of the infant mortality alone can be:

	Infant mortality rate	*Deaths in age-group 1-4 years*
England and Wales 1955	25	0.9
Jamaica 1950	70	10
Egypt 1947	208	49

The above figures show that in Egypt in 1947 the infant mortality rate was 8 times higher than in England in 1955. But the 1-4-year mortality rate was no less than 50 times greater. (These figures for Egypt, however, were obtained from a special survey. Figures for the country as a whole are 127 and 31 respectively.)

Another analysis [2] shows the relationship between the deaths of children under 5 years of age with the total deaths (for the period 1949-51) in the populations of:

Sweden	4.5% of total deaths
Malaya	41.5% of total deaths
Ceylon	46.5% of total deaths
Mexico	49.6% of total deaths
Egypt	56.0% of total deaths

Furthermore, it appears that the mortality rate in the 1-4-year age-group is more easily influenced by improvements in the environment such as better nutrition, better housing or better hygiene. This is evident from the fact that the pre-school mortality rate is decreasing more rapidly than the infant mortality rate—the ratio between the two becoming greater as both are reduced—as shown below. [3]

Country	*Infant mortality*	*Mortality 1-4 years*	*Ratio*
Egypt	208	49.7	4.2
Algeria (Arab population)	154	38.3	4.0
Mexico	139	27.8	5.0
El Salvador	106	24.9	4.2
Mauritius	97	23.9	4.0
England and Wales	27	1.2	22.5
Sweden	19	1.1	17.2
France	43	1.9	22.6
Finland	34	1.9	17.9

It is universally recognized that health depends on the standards of living and of education, and not merely on the absence of the major epidemic diseases. As pointed out by Dr Taba in his opening address to the seminar, disease control programmes have a limited value unless they are accom-

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[1] United Nations (1956) *Demographic Yearbook 1956*, New York
[2] Crewe, F. A. E. (1957) Medicine as an Instrument of Social Policy, *E. Afr. med. J.*, 34, 487
[3] United Nations (1955) *Demographic Yearbook 1955*, New York

panied and followed by programmes to raise the general standards of health, of living and of responsibility. The discussion leader contended that it is largely through maternal and child health programmes that this aim can be facilitated, and by encouraging self-help and initiative in the place of passive acceptance.

One speaker with a wide experience in social paediatrics drew attention to the comparison of conditions in the USA and Puerto Rico as a striking example of the value of the maternal and child health aspects of the public health services. In 1915 in the USA, the infant mortality figure was 99 per 1000 live-births, or 17.8% of the total deaths. In 1949, the infant mortality had fallen to 31, or 7.7% of the total deaths. In Puerto Rico, between 1932 and 1949, a comparable fall in the infant mortality occurred, when the infant mortality figures fell from 131 to 68. Expressed as a percentage of the total deaths, however, these figures remained practically unchanged—at 24.7% in 1932 and 24.8% in 1949. The lack of intensive, well-integrated maternal and child health services in Puerto Rico had, in spite of a general improvement in the health of the people, left the infant mortality *comparatively* unaffected.

Again, in areas where the standards of living and education have improved together with the control of disease (e.g., Italy, Scandinavia, Australia) the birth-rate is generally found to diminish with the reduction in the infant and child mortality rates. In other countries (e.g., Ceylon and Singapore) the birth-rate has remained high—although this may be due to a "lag" period. Generally speaking, over-population is a serious menace to progress. A participant from Egypt thought that this would remain so as long as poverty makes parents feel that children are necessary to the family as wage-earners or as extra workers on the land. There was general agreement with the view that increased confidence in the survival of the child, and pride in his future will help to encourage parents to restrict their families to more manageable numbers, and that this confidence can best be fostered through efficient, continuous and sympathetic maternal and child health services.

A statistician who was present for this discussion insisted that the methods of assessment must be both statistical and clinical and that neither can be neglected. In some areas statistics do not yet exist. In such areas, efforts to collect reliable factual data should be based on a clear realization of the purpose and usefulness of the facts sought, and on agreement regarding the uniform definition of the items recorded. If possible, the basic data should conform with those defined and accepted by international agreement.

The following are considered essential to any measurement of the health of mother and child population.

1. *Birth-rate;* this should be related to the sex distribution of the population.

2. *Death-rate by age group*, with particular attention to the 0-1-year and 1-4-year age-groups, both per 1000 and as a percentage of the total deaths.

3. *Maternal mortality rates*, and total mortality rates of females in child-bearing years compared with males in same age-groups.

4. *Causes of death* should be registered as accurately as possible in relation to immediate and underlying causes. (For instance, a terminal pneumonia is often not a cause but a "symptom" of death.)

It was agreed, after some argument, that statistics can be misleading unless they are the result of accurate clinical observation and full recording. The statistician and the maternal and child health worker need to work together towards the establishment of reliable statistical records.

One of the consultants drew attention to the fact that improved accuracy of statistics may have surprising results. A fall in the infant mortality rate may in fact be due to better registration of births. On the other hand, the first results of intensive maternal and child health activity in an area where no such services have been available may be a rise in the recorded infant mortality and morbidity due to more complete investigation and reporting of sickness and deaths among the children.

The difficulty of collecting accurate statistical data was fully realized and discussed in the small groups.

In some areas accurate knowledge about the number of infant births or deaths depends on the willingness of illiterate peasants and midwives to report these matters. In a pilot area in Qalyub, Egypt, it was found that under-registration of infant births or deaths was proportional to the distance from the maternal and child health centre (10 % in areas near, and 40 % in the more distant areas) and that the under-registration of neo-natal deaths was practically double that of the deaths at under one year of age.

Various means which have been adopted to overcome this difficulty were described by participants. Some are based on education, and on linking the registration of births and deaths with malaria or sanitation projects, with the distribution of land or welfare foods, or with future admission into school or army. Generally, it has been found that birth registration improves when good relations are established with the traditional midwives and is handicapped where untrained midwives have been legally debarred from practice.

While progress is being made in the accuracy of reporting of births, it was obvious from the discussions that the reporting of deaths is still unsatisfactory in most areas in this region. In the Lebanon it has been found that the payment of a small fee to the *mukhtar* for each death notified works better when the *mukhtar* is appointed by the government than when he is elected.

Considerable discussion took place over the subject of surveys. It was agreed that they can be of great help in the assessment of maternal and child

health needs, in so far as they have sometimes proved to be a means of focussing attention on a previously unrecognized disease, a means of initiating better and more progressive policies, a starting-point for the training of workers in various fields and an opportunity for the broadening of experience and exchange of information at both national and international levels. The statistician pointed out that the purpose of a survey, however, must be defined precisely and it must be clearly understood what data are to be collected and why these particular facts will lead to the desired end. Care must be taken that the information is accurate and that the standards of comparison are valid. Surveys therefore have to be carried out by skilled and well-trained persons if the results are to provide a sound basis for future action.

On the other hand, the clinician felt that in a survey the mathematical chances of identifying chronic diseases are very much greater than those of identifying acute diseases. For instance, in a nutrition survey it is easy to record the stigmata of riboflavin deficiency in schoolchildren, and all too easy to omit the acute cardiac beri-beri, the fulminating tetany and the acute nutritional disorders which may occur in those not at school. These surveys may identify the stigmata, but unless extended to include the social and economic factors are rarely able to assess the causes that underly their appearance. The malnutrition found may be due to insufficient food, to chronic or recurrent digestive or dietetic disorders, to faulty preparation, distribution or timing of food. All these factors are of importance, but they may be difficult to assess statistically, and appreciation of them may depend to a large extent on the experience and the astuteness of the examining physician.

Both agreed that surveys can be of great value in giving an idea of status, but a short-term survey may give a false impression of the total picture, and is unable to give any idea of the dynamics of a population. This is only acquired by living and working with a community.

Sometimes, when a survey is conducted by a specialist in a certain branch of medicine, he is unable to assess the relative importance of his speciality in the total picture. It was suggested that much of the information collected by specialist surveys might be just as well, or better, obtained from well-trained and supervised doctors, nurses and midwives.

The seminar concluded that surveys, if they are to be of value, must be followed by constructive action. Too often surveys only breed more surveys, with the result that the population becomes allergic and uncooperative.

The discussion leader continued her elaboration of the general theme, stating that the assessment of maternal and child health must include an account of the services, medical, social and educational, available for mothers and children. Much of this can be obtained from official reports of the various departments, but much more will require collection and

appraisal. Here again, agreement as to a uniform method of compiling these official reports would be of value to future maternal and child health workers. The training and availability of staff within the medical and other services should be ascertained. Apart from numerical records, much will depend on the observed atmosphere and efficiency within the institutions, from the operating theatres to the kitchens, the types of records kept and the facilities for and diligence in the follow-up and continuing care of both sick and well mothers and children.

The living conditions of mothers and children, their attitudes and traditions, their food habits, the types of work they undertake and their status within the community are matters of the greatest importance.

Any available literature should be consulted and studied. In some countries the professional periodicals contain very little that is related to the problems of maternal and child health. On the other hand, there may happen to be admirable pamphlets and directives in the area.

The value of any assessment will ultimately depend on the observer—his experience, powers of observation, interests and diligence and above all his capacity for detached appraisal and criticism.

CHAPTER 3

THE MAIN PROBLEMS OF CHILD HEALTH IN THE EASTERN MEDITERRANEAN REGION

The maternal and child health questionnaire

During the preparation for the seminar, a questionnaire on the status of maternal and child health in their respective countries was sent to all the maternal and child health personnel invited to attend.

A summary of the answers received formed one of the background papers for the seminar. Some of the participants stated that they had found the questionnaire valuable and that they were still in the process of collecting some of the information. It was clear that in many countries statistical information is difficult to collect and is not yet very accurate, and that further consideration by the statistician and the maternal and child health worker on the best way of collecting reliable and uniform data would be useful.

From the answers, it was evident, however, that the main problems of child health in this region are malnutrition, gastro-enteritis and respiratory and eye diseases, and an attempt was made during the seminar to consider some of these briefly. There was also a generally expressed wish that these problems—together with the anaemias of pregnancy—should form the main subjects for discussion in a future seminar.

It is interesting to note, in this context, how the fin dingsin this Region reflect the general concern of maternal and child health workers in other parts of the world today.

Another background paper described the main problems with which WHO is concerned in the field of maternal and child health. Malnutrition, especially during the weaning period, diarrhoeas and enteritis, the anaemias of pregnancy were mentioned as of primary importance, along with the definition of prematurity, the correlation of record-keeping, and the evaluation of training programmes.

It would appear that the same problems are to the fore in the minds of maternal and child health workers everywhere, and that any constructive ideas which may emerge from a regional seminar may have a much wider usefulness.

It was suggested that the questionnaire, with some alterations to include more information on the available services for mothers and children, could be, if repeated from time to time, a valuable stimulus to the evaluation and possible expansion of present work in the field.

During the seminar one session was devoted to the consideration of some of the problems which the questionnaire showed to be important in the Region. A summary of the main points covered during this session (and, in the case of nutrition, during subsequent discussions) follows. It is hoped that the wish of the seminar (as expressed in the final evaluation) —namely, that these subjects should be dealt with in detail at the next meeting, will be implemented in the near future.

Nutrition

In some countries malnutrition in mothers and children is due to the absence of sufficient suitable food or of the means to buy it. In others, however, malnutrition, especially in children, is due to a combination of factors, some of which could be eliminated by education of the mothers in maternal and child health centres or in the homes, or by certain improvements in the environment.

Frequently the young child is given unsuitable food, too coarse or bulky or too highly spiced for an immature digestive system. One of the advantages of prolonged breast-feeding is that it allows the child's digestive system to become mature before the necessity arises for giving such available but unsatisfactory foods. These irritating or indigestible foods often cause a gastro-enteritis which may predispose to the later development of an infective enteritis. This may become recurrent, thus further lowering the child's nutritional status. The malnutrition itself may produce a diarrhoea, which again interferes with digestion and results in further malnutrition. The vicious circle of malnutrition and gastro-enteritis is one of the main hazards to child health in this region.

Any measure which diminishes the risk of gastro-enteritis in the young child—improved water supply, improved hygiene in the use of such water and in the preparation of the child's food, or in the care of the child (such as keeping its face clean and free from flies) will therefore do much to diminish the risk of malnutrition. Similarly, by ensuring the competent and early treatment of intercurrent diseases the child can be protected from an added burden on its meagre nutritional resources. The timing and spacing of meals is also important, for the child cannot withstand long periods of fasting, broken by a meal consisting largely of bulky cereals. To obtain sufficient calories from such a meal, the child has to be able to eat a very large quantity, and this is often physically impossible.

An upset or break in the mother-child relationship is also likely to impair the child's digestive powers and increase the chances of the development of severe malnutrition. In one investigation it was found that a large proportion of the children admitted to hospital suffering from kwashiorkor had recently suffered a sudden separation from the mother—usually coinciding with weaning. The child's despair at this seeming abandonment

by the mother had finally resulted in the anorexia of kwashiorkor. It was also found that the speed and permanence of the child's recovery depended on the quality of mothering it received during its convalescence.

In many areas much could be done to improve the health of mothers and children by the use of local foods, such as green-leaf vegetables or various preparations of beans. Demonstrations in the preparation and use of such foods could well be carried out in the maternal and child centre or in the homes, unless there is some strong local feeling against their use.

The admission of the mother into hospital with her sick child provides a rich opportunity of teaching her to feed her child more wisely. If, in addition, the relatives can observe, in their visits to the hospital, that the child is eating and enjoying "strange" foods, they are more likely to accept these innovations in the child's diet at home.

More and safer use could be made of the milk powder supplied by UNICEF, by advising the mother to add the powder to whatever food she normally cooks for the newly weaned child. Where water supplies are suspect and the general standard of personal and food hygiene low, the early addition of liquid milk, or introduction of mixed feeding to the diet of the child are fraught with the danger of gastro-enteritis. There are, however, numerous preparations familiar to this region, which could with advantage be used in the feeding of the weaned child—hommos and burghal, labaneh, rice and milk vegetables, milk and dates. In one area cake (sim sim) containing 15% protein is being tried out in the feeding of schoolchildren.

The nutritional state of the mother is, of course, fundamental to the health of the child, during both pregnancy and lactation. Every maternal and child health worker should therefore do all she can to encourage the mothers to make full use of all the available foods, including UNICEF milk, especially during the ante-natal period. Where the only available protein foods are the indigestible beans and cereals the mother's body is the best factory for the production of suitable protein for the young child, and the ante-natal period the best time to ensure, by improving the mother's nutrition, satisfactory lactation.

The intake of vitamin A may be inadequate and attention should be drawn to the importance of green-leaf vegetables as a good source of supply of this nutrient. The addition of vitamin C to the diet of the young child is usually desirable, and the mothers can be taught how to prepare the local fruits.

Lack of sunlight from excessive clothing or from over-crowded conditions in the narrow streets of slum quarters in the towns is the main cause of rickets in young children in this region. Here again the maternal and child health personnel can gradually persuade the mothers to give the young child a daily sun-bath, or to reduce the child's clothing to more reasonable limits.

Worm infestation probably plays an important part in exacerbating malnutrition. From animal experiment it appears that malnutrition

results in a heavier infestation with large worms than occurs when the animal is adequately nourished. In addition, heavy infestation with worms sets up a vicious circle. The worms interfere with the function of the bowel by their bulk and by the irritation they cause—and in the case of the *Ascaris*, by the action of the anti-tryptic enzymes they produce. This in turn leads to further malnutrition. Efficient treatment of this condition will therefore help to improve the nutritional state of the child.

The establishing of rehabilitation work at special centres or at children's clinics or maternal and child health centres where the child suffering from under-nourishment could be adequately fed for some time and thus prevented from lapsing into severe malnutrition—or where the child discharged from hospital could establish his recovery—would do much to prevent both the development of severe malnutrition and the relapses that so frequently occur.

Many doctors now practising have little knowledge of nutritional disorders or of child care. It is essential to provide adequate medical facilities, where the diseases from which children suffer can be properly diagnosed and properly treated both in wards and in out-patients departments. If possible the mother should be admitted to hospital with the child and taught how to look after it, feed it and give it sun-baths or whatever else is necessary. There must be arrangements for adequate follow-up so that a good diet is maintained after discharge. This can be organized where collaboration has been established between the welfare centres, the health visitors and the hospital.

Unless doctors, nurses and health visitors are adequately trained to recognize and treat cases of malnutrition in children it will be a long time before "preventive" work is effective. It is most important that early cases of malnutrition should be identified and proper management instituted as soon as possible. It is easy to recognize advanced cases. But it is the early cases which are so often missed by those who have insufficient clinical experience.

Where a country lacks paediatricians and hospital accomodation for children, these must be supplied. Once a good children's unit with well-integrated facilities for hospital care, maternal and child health centres and home care is organized, it is possible to institute refresher courses for doctors and nurses and so improve the standards of child care and of nutrition.

Mental health as related to maternal and child health

If we understand health as a unitary concept, in which physical, psychological and social aspects of human life contribute towards a final goal—the well-being of man—then mental health will have a definite place in

any consideration of the problems of health in general, and of maternal and child health in particular.

The nurse or midwife, whether she works in a maternity centre, public health centre, general or children's hospital or school, comes into direct and constant contact with both mothers and children. Unfortunately, up to the present, the training of nurses and midwives in this Region has been almost entirely confined to the physical aspects of health and disease, with little or no mention of the psychological aspect. This is unfortunate, because with a little understanding of the basic facts the nurse can do much to help the family in this respect.

During the ante-natal period the nurse or midwife can, by means of simple talks to individuals or to groups, help the young mother to overcome or reduce her fear of pregnancy and birth. Attitudes of rejection on the part of the mother, though often requiring expert psychiatric help, may in other cases be greatly improved by nurses well trained in the basic principles of mental hygiene.

The process of infant feeding, until recently considered to be a purely physical process, is now known to have a very important mental health component. Drying up of the mother's milk may be related to attitudes of rejection and hostility towards the child. An unhappy feeding experience—"oral frustration"—in the first year of life is now looked upon as one of the causes of neurotic illness later on. An understanding approach and guidance of the mother by the nurse can help to avoid this damaging experience.

The nurse or midwife can also be of great help in teaching the mothers to avoid too early or too rigid toilet training, as this has been found to be detrimental to the child.

Apart from these specific problems the nurse or midwife working with mothers and children can, if mental health has been an integral part of her training, be of great help in dealing with the minor everyday problems of child upbringing.

The role of the nurse in children's hospitals needs no stressing, and a knowledge of the psychological management of the patient should be an essential part of the training of all members of the nursing profession.

The role of the school nurse is not less important. As a member of the parent-teachers associations and of the health societies at schools, as well as on an individual basis, she can find ways of meeting the mental health problems of the parents and the child.

In the training of a nurse in the principles of mental health it is not how much the nurse knows which is most important, but her ability to develop the attitude which inspires confidence, gives comfort, and helps troubled mothers to confide in her. To do this she needs first to come to better terms with herself, to be freed from undue anxieties and to feel reasonably

confident and secure; for in the field of mental health it is attitudes and not words which count.

The training of general practitioners and paediatricians in mental health is completely lacking in many countries in the Region. The psychology of inter-familial relationships and the psychological aspects of child development should be an integral part of medical undergraduate training. The principles of psychosomatic medicine as applied to paediatrics and the psychological aspects of physical illness should be important items in the training of paediatricians. After all, maternal and child health is the responsibility of the medically qualified practitioner, and whatever the nurse or midwife does in the field of mental health, it should be undertaken under his direct supervision.

Though the many physical problems of child health in this Region have priority at present, it must be kept in mind that the rapidly increasing industrialization of some of the countries will bring in its wake some of the mental health aspects of the problems of maternal and child health, and these will have to be faced. It would be wise to make certain now that the training of maternal and child health personnel equips them to recognize and deal effectively with these problems, if and when they arise.

Environmental sanitation and the family's health

The main problems of child health in this Region—gastro-enteritis, malnutrition and communicable eye diseases—are all concerned either directly or indirectly with the problem of environmental sanitation. Maternal and child health personnel have many opportunities for co-operating with the sanitarian in the solution of these problems. There is considerable evidence that the diminished incidence of excremental and water-borne diseases, resulting from improvements in environmental sanitation, is accompanied by a marked decrease in morbidity from other diseases, not directly related to either excreta or contaminated water supplies.

The entire public health team—sanitary engineer, sanitarians and sanitary assistants, the doctor, nurse, nurse assistants, health education workers and other allied specialized health personnel—must work as a team, bringing sanitation to the family and protecting it from ill-health. It is not sufficient that sanitary facilities be provided; they must be used and personal habits must be changed; and this is only possible through the unified action of all the "educators" of the family. Education is the key that lets the family open the door to better health.

A country may want better sanitation for its families but have no organization responsible for doing this job; or, where organizations exist, these may operate quite independently, creating confusion with several separate projects. Every country should have a master plan for its public health services and for the programme covering every service to meet the country's

needs. All such services must work together through health and sanitation committees at village level and a health council or board at national level. Also, by means of a co-ordinating body which will incorporate all projects carried out by international organizations into the general health plan of the country overlapping, confusion and wasted effort will be avoided and the maximum results achieved.

Personal cleanliness is the keystone of the family's health programme. The family can do much to protect itself simply by keeping clean and keeping its living quarters clean. Water must be conveniently placed in the house, in sufficient supply, so that bathing and washing of clothes takes place at home, and rivers and canals are not polluted. It has been shown that it is the only when water has been supplied in the *home* that it is possible to lower the infant mortality rate substantially.

The use of latrines reduces river, canal and soil pollution and fly-borne diseases. Insecticides must not be relied on in the eradication of flies; it is the eradication of fly-breeding places which will help. The family can, at the same time, protect itself from flies, mosquitos and other insects by keeping the home clean, making it less attractive to insects, and by using screening and netting. Thus some countries have succeeded in reducing infant mortality in spite of a high fly index.

Food protection in the family is more of an individual effort, and the health education efforts of the whole health team must be unanimous on this subject. Milk must be boiled as near the time of consumption as possible, until the time comes when the purchase of safe forms of milk and milk products is possible. The family must be taught and helped to keep all foodstuffs protected from flies and other insects. Towards this end sanitary workers should co-operate with maternal and child health teams in an education programme for the whole community, including the schools and reaching all members of the family. It is more useful and satisfactory to have different specialized workers co-operating for the benefit of the family than to rely on the multi-purpose worker, who is usually ineffective and useless.

It must be remembered that without certain minimum sanitary facilities, health education finds poor soil in which to take root. The fundamental needs of the family—such as water supply which is safe, ample and convenient, and a latrine or other means for the safe disposal of excreta—must first be met, and then the family can move forward in many ways to protect itself from disease. The family should also be given a chance to help in the community effort through the contribution of labour or supplies, etc., within its economic resources.

Diarrhoeal diseases

The following is a brief account of the mass treatment of diarrhoeas among Palestine Arab refugee children in Jordan, as carried out by the

Health Division of the United Nations Relief and Works Agency (UNRWA). It deals with the management (preventive and curative) of diarrhoeas in clinics, infant health centres, infant feeding centres, and especially in the homes. Treatment in hospitals is not described.

The two main aspects of the mass treatment are the electrolyte and fluid balance and the dietary treatment.

Dehydration is prevented and treated *orally* from the clinic, except in the severe cases needing hospitalization. Along with the medicinal treatment at the clinic, packets of salts, containing the necessary quantities of potassium, sodium and glucose, are given to the mother to be dissolved and given by sips for a period of ten days at home. The number of packets given to cover the daily requirement varies with the age and weight of the child, and with the adequacy of breast feeding. In weaned children it varies only with the age and weight. This special mixture in solution is given by mouth even if the child has moderate vomiting. If it is given at home in small quantities, by spoon, a certain amount is absorbed.

For babies under six months who are adequately breast fed, this salt mixture is unnecessary, and as soon as the starvation period is over the baby goes back to breast feeding. The breast milk has all the fluid and electrolytes the baby needs.

In the absence of adequate home visiting and supervision, the dietary treatment has been planned to ensure that the instructions will be followed as closely as possible. It therefore depends on the available resources and on the beliefs and traditions of the refugees. During the starvation period of 12-24 hours, the child must have fluids and salts and some sugar. Refugees are familiar with rice-water and with tea. During this short period, sodium salts are sufficient and it is not necessary to give potassium; consequently ordinary salt is added to the rice-water at the centre, and some sugar is added to the tea.

In order to prevent a recurrence, or chronicity and the development of complications, especially nutritional ones, it is important after the period of starvation of 12-24 hours to keep the child on a bland high-protein diet, with sufficient calorie requirement for several days, even after the diarrhoea has stopped. Apart from one meal of carrot purée, mashed banana and fish-oil capsule which is eaten at the infant feeding centre, the rest of the special diet taken at home consists of the familiar "labaneh", olive oil and in some cases a small portion of bread.

Labaneh is made from reconstituted skim milk which is first made into "laban" or yoghourt and then strained in a cloth or bag to form a sort of cream cheese. Labaneh is a high-protein food, well tolerated by babies even before the diarrhoea has stopped. It does not spoil quickly in hot weather, is traditionally liked and accepted by the refugees and is less easily contaminated in the homes than milk or other special menus. It is

easy to prepare by the mother at home, which is important from the point of view of nutrition education in general. Unless the child is very ill and needs hospitalization, these special menus are given immediately after the period of starvation is over.

The number of meals of labaneh a day to be given by the mother at home depends on the adequacy of breast feeding and on the age of the baby, In breast-fed babies under the age of six months, no special menus are necessary, and after the starvation period of 12-24 hours, the baby goes back gradually to normal breast feeding, as the best diarrhoeal and post-diarrhoeal diet is breast milk. Above the age of six months the number of meals of the special menus to be given to the child depends on the adequacy of breast feeding. Above one year of age, four meals of labaneh are given per day.

The child takes the labaneh menus daily from the infant feeding centre for ten days. The special salt mixture which the child is taking in solution during the same period ensures an adequate fluid intake, as well as salts, and makes up for the insufficient amount of fluid in the concentrated labaneh.

The daily requirements of skim milk, olive oil, carrot, bananas, etc., and the calorie requirements have been worked out for every age-group.

Children discharged from hospital, who have been admitted for diarrhoea, dehydration or malnutrition or both, are also put on this diet and on the special salt packets. This follow-up reduces the number of cases returning to the hospital with the same complaint.

With this home treatment it has been possible to reduce the number of recurrences of diarrhoea, and most of the children who follow this régime regularly for ten consecutive days have put on weight.

Any success which this scheme may have had is felt to be due to the fact that the acceptability, and therefore the continuity of the treatment, has been increased by the use of familiar foods known to and liked by the people. Mass treatment to be carried out at home is unlikely to be followed, no matter how scientifically correct, unless it is within the resources and the comprehension of the people.

Discussion ranged mainly round the treatment of gastro-enteritis in the infant or weaned child, and procedures and techniques which had proved effective in hospitals in Cairo were described. The importance of the need for adequate rehabilitation of the child discharged from hospital after an attack of gastro-enteritis was emphasized—and the corresponding need for rehabilitation centres. Attention was drawn to the close relationship between mental and physical health in the child, and the value of admitting mothers into hospital with their children was again stressed; not only could the mother be taught to look after her child, but the "well-mothered" child usually recovered more quickly.

Eye diseases

A national plan for the protection of children's eyes and the prevention or rapid arrest of eye diseases in children was briefly described. The essence of the scheme was the registration of all births and the issue to the mother of a specially designed health card to be used on subsequent weekly inspection (ensured by legislation) of the child's eyes.

This regular care would enable the mother to receive instruction on the care of her child's eyes, and would make it possible for prompt attention to be given if the child showed any signs of incipient eye disease.

The successful operation of a project, in a controlled area, for the mass treatment of the common eye diseases by chlortetracycline ointment applied by the mother was also described. Another speaker drew attention to the use of weak boiled tea for washing the eyes in the case of acute conjunctivitis. Where this was a familiar household fluid and the boiling of water for therapeutic purposes an unfamiliar idea, and where adequate supervision was impossible, it was much safer to use the familiar fluid, and equally effective.

CHAPTER 4

THE ROLE OF THE MATERNAL AND CHILD HEALTH SERVICE IN THE HEALTH EDUCATION OF THE FAMILY

Two background papers were presented on this subject, which was also discussed in a plenary meeting.

One of the speakers who opened the discussion pointed out that the mother who brings her children to the maternal and child health centre comes from a village full of people who have been educating her, directly or indirectly, about life and health for as long as she can remember, and that these "health educators" belong to the world of traditional knowledge, while the "health educators" of the maternal and child health team—doctor, nurse and midwife—often feel more at home in the world of scientific knowledge than in the village and its thought and values.

If the maternal and child health team is going to be successful in its work, however, its members must somehow or other become once again an accepted part of village life, helping the mother to learn new ways and to give up doing some of the things she has already been taught to do. The fact that the mother is part of a family was recognized by the seminar to be of prime importance in this question of education, for unless the other members of the family, and indeed of the community, were also willing to change their ways, little progress could be expected.

The present scarcity of maternal and child health personnel makes it imperative that they use their influence and skills carefully, so as to get the maximum result with the minimum of wasted effort. Two aspects of this problem were discussed during the plenary meeting. One participant raised the question whether it was wise to train girls as midwives or nurse-midwives and then send them back to act as educators in the village from which they came. Most people agreed that experience seemed to show that the girls were more effective in villages other than their own. The other question concerned the wisdom of concentrating on the education of the mother, when she might not be the most influential person in the family. In Pakistan, the grandmother was frequently the person whose word was law, and whose permission for any innovation had to be sought. In Iraq and in Jordan, on the other hand, it had been found that the father can be a useful ally in encouraging the family to follow the nurse's advice if he is consulted and convinced.

Maternal and child health workers do not normally have much opportunity of talking to the fathers of the families in their care, unless they

make a special effort to do so. There are, however, other members of the health team who do meet and discuss health matters with the fathers—the doctor or dispenser in the hospital, the health assistant or the sanitary workers. If they know what the maternal and child health team is trying to achieve with regard to ante-natal care or child feeding, they can often enlist his support and co-operation, but frequently they have no means of knowing.

It was obvious that the question of ensuring unanimity was one which caused many of the participants a good deal of concern. They complained that not only the immediate members of the health team, but also other workers interested in the education of the family—nutritionists, home-economists, social or agricultural workers—frequently carry out their work independently, sometimes even contradicting each other, and certainly confusing the families.

Several speakers expressed the view that the nurse-midwife is the person whom the family trusts, and whose advice is likely to be followed. The seminar concluded that she was the most suitable person to convey the knowledge and advice of the various specialists to the family, and that the energies of the nutritionist and social worker and others should be directed to educating the doctors, nurses and midwives in the centre, rather than the family itself.

There was some discussion as to the role of the qualified health educator with reference to the education of the family regarding child health and care. A health educator who was present described his part as that of a catalyst which made the whole team more effective. During the visit to the Qalyub project, the seminar learned that the services and skills of the health educator are there used in the training of other members of the team for their educational work, and this was recognized as a satisfactory arrangement.

It was also agreed that the importance of the hospital as a centre of educational opportunities was often overlooked. There it was possible not only to teach the patients something about the avoidance of future illness and the basic facts of health, but also to train young doctors and nurses to regard themselves as educators and to carry out this task effectively. By example, and by experiencing different teaching methods, the students could learn the most acceptable approach to their future clients and the methods that are likely to prove most successful in helping people to learn new facts.

Here again, considerable dissatisfaction with the present-day training of maternal and child health personnel was expressed. Only too often student doctors and nurses finish their training with the firm conviction (fostered by example and experience) that didactic teaching and the hierarchical attitude are the only possible approaches to the education of others. It was urged that more instruction in the principles and methods

of education should be included in the training of all doctors and nurses, and particularly of those who are going to work in the maternal and child health services.

In the discussion of the different factors which combine to make any educational effort, and especially that of the maternal and child health worker, successful, everyone agreed that the most important is the personality of the doctor, nurse, or midwife. This agreement of the participants was corroborated by the lecturer on mental health, when he said, speaking of the role of the nurse and her training for work in this field, "... it is not how much the nurse knows which is most important, but her ability to develop the attitude which inspires confidence, gives comfort and helps troubled mothers to confide in her". Experience has in fact shown that if she demonstrates by her behaviour to the mothers in the centre and in the home that she understands their difficulties and that she is ready to help them by practical means—showing them how to prepare the child's food, or protect its eyes, or make its first shoes, rather than giving instructions and admonitions—she is much more likely to find that her advice is followed. If she is hurried, brusque, or dictatorial, she does not have much success.

Her knowledge of the facts was also considered important—not only the facts she wants to teach, but also the facts about the people she wants to help—their beliefs about health and child-rearing, about the diseases that affect themselves and their children, about the customary foods and their suitability during pregnancy and childhood. One participant made the point that she must be able to distinguish the habits which are likely to be easily changed from those which are deeply rooted in the whole way of life of the people, or those which are definitely harmful to the child, from those which merely seem unorthodox to the educated person. For instance, the application of "kohl" to the eyes of a baby pleases the mother and does no harm, though it is not specifically advocated in the manuals on child care.

Some traditional practices are based on a background of knowledge and belief that is entirely foreign to the trained maternal and child health worker, and are so interwoven with other aspects of village life and thought that they cannot be changed in isolation. One of the speakers gave as an example worm infestation, which is so common in children in many parts of the world that the parents assume that this complaint is an inevitable part of childhood. She described some of the different ideas which exist in different countries as to how to deal with the condition. In some places certain foods are avoided because they "cause" worms, in others because they "disturb" the worms. It would appear that this single and widespread menace to child health involves a whole series of beliefs or assumptions —about the nature of the child, about its anatomy and physiology, about the properties of certain foods, about "curative" and "preventive" medicine.

Some or all of these ideas would have to be changed before the mother could really *learn*—i.e., change her behaviour—about her child and its worms. Another speaker drew attention to the fact that the attitude towards this and other health matters is closely linked with the general level of education, and changes as that rises.

Another important element in successful education was recognized to be some knowledge of the way people learn. The participants acknowledged that as doctors and nurses they had learned difficult new ideas by being told, or by reading books, because they *wanted* to pass examinations and get on in the world, and because the new knowledge they received did not conflict violently with their own previous learning and experience. It was realized, however, that the mother may come to the maternal and child health centre for many reasons, among which a wish for better antenatal health or some instruction in diet might be only one. She is probably not at all convinced that the maternal and child health personnel are wiser than the grandmother who has been educating her and the rest of the family for years. And the advice given, unless carefully adapted to local beliefs, food habits and the economic or agricultural resources of the area, may seem too "foreign" to her own ideas, and too difficult to follow. A good example of how the home treatment of diarrhoeal diseases can be made more acceptable, and therefore more likely to be carried out, by using habitual foods and practices was given in another session. In general, the participants agreed that "instruction" was not always enough and some effort had to be made to find out what the people really wanted to learn, and were prepared to do.

Sometimes, an indirect approach is more effective in bringing about an improvement of health practices. In the Qalyub area, the peasant's only buffalo is stabled inside the house, along with the family. It is hoped that, through measures to improve and increase the stock, the villagers will be persuaded to stable their animals elsewhere and so improve the standard of cleanliness in the homes.

Opening the discussion on the use of visual aids in education, the speaker demonstrated how learning by listening to a talk or lecture is apt to end in misunderstanding or forgetting, unless some illustrations are used to clarify what is said. On another afternoon the participants enjoyed a visit to the Audio-Visual Aid Section of the Ministry of Education in Cairo, where they saw a great many different educational aids. The Director stressed, however, that these aids are only the tools of the educator and cannot replace the person who uses them. They can only help to arouse and maintain interest, to clarify and make more memorable the facts presented.

The senses being the paths to the mind, it is wise, he added, to use as many of them as possible when trying to bring home a particular bit of information. Educational aids which allow the learner to see and hear, to touch and handle, and try out for herself are, therefore, the most effective.

Moreover, it is generally true that the visual aid made on the spot with familiar materials is much more effective than the expensive, complicated and "foreign" variety. A great deal has still to be learned about the reactions of illiterate people to various kinds of illustrative material (posters, film-strips and films), and any unfamiliar visual aid should always be tested out before it is widely used. He reminded the seminar that the business and advertizing world uses and values visual education, and might teach the health worker much about the ways and means of selling the valuable "commodity", health, to the community.

Another point was raised by one of the speakers with some experience in health education—namely, that information or advice should always be detailed and specific, especially in the many communities accustomed to use precise and different words for different aspects of a familiar object or action. For example, the generic word "rice" is replaced, in some languages, by different words to denote "unhusked rice", "husked rice", "rice growing in the field", or "cooked rice". In such circumstances generalizations about "infant feeding" are likely to be less acceptable than specific advice about "feeding this particular baby".

Summing up, this speaker cited the results of work carried out in a "family service" near Durban, [1] as evidence of the effectiveness of the educational element in the total maternal and child health programme. Here full clinical and preventive services were supplied to two comparable groups of families—one with health education carried out by "specially trained health assistants directed by the medical officer in charge of the Health Centre practice", and the other without this form of health education. The infant mortality (expressed as a percentage of live-births for the years 1942-46) was as follows:

Families with intensive health education: 11.25 (standard error 1.17)
Families without this health education (but with "case" education during consultations): 24.20 (standard error. 2.70).

These figures seemed to her to represent not so much the value of "health educators" as the value of health education carried out with skill and patience by members of the health team who have received the necessary training.

That the seminar recognized the urgent need for this training was obvious during its discussions on different subjects during the two weeks, and in its recommendation that there should be a closer liaison between the university, responsible for training medical personnel, and the ministry of public health, responsible for meeting the health needs in any country.

[1] Kark, S.L. & Cassel, J. (1952) The Pholela Health Centre : a progress report, *S. Afr. med. J.*, **26**, 101, 131

CHAPTER 5

ADMINISTRATION OF MATERNAL AND CHILD HEALTH SERVICES

Two background papers were presented on this subject, which was also discussed in a plenary session and in the small groups.

The consultant who introduced this subject in the plenary session felt that many field workers today would welcome a detailed description of the possible functions of different aspects of a maternal and child health service. The scheme he outlined as a "blue-print" for those areas where little exists in the way of maternal and child health services, and where a comprehensive service can be visualized at the outset and planned accordingly, is therefore given here in full.

Outline scheme

There is general agreement to-day that paediatrics is not a specialized branch of medicine but the application of medicine as a whole to a particular period of life and that services designed to safeguard and improve the health of the mother, the child and the adolescent should always be considered as part of the general health protection of the family.

Medical science does not separate preventive protection from curative protection; nor can a woman be protected only during pregnancy, delivery and breast-feeding. The mother needs protection during the entire child-bearing period, between as well as during pregnancies, and as the cure of certain conditions will protect against possible future hazards to her health and the health of her child, this total care should be undertaken by one and the same person or service.

The organization and structure of maternal and child health services in any country must be in keeping with the level of social, economic and cultural development. Even in highly developed countries, people live in urban, rural and semi-rural communities. It is the degree of development of the community which decides the type of the health measures taken to safeguard the health of the population.

Frequently a country—especially if it is in the process of development —is divided into rural districts of which the administrative centre is in an urban, semi-urban or rural community. The villages in this district gravitate around the administrative chief-town not only in administrative,

cultural and educational matters, but also in health matters. The district chief-town is in effect the focus of activity for the surrounding villages and the source of specialized planned control of the activity of rural health centres.

Rural health centre

The rural health centre maintains usually only one medical officer, who is responsible for all matters connected with health. As a general practitioner, he gives, within the centre, consultations to mothers, children and adolescents. He also carries out a technically planned control over the sub-centres in the district villages. He supervises and assists the midwives and nurses working in the sub-centres, and guides them in their work. In addition, he attends the village patients. Special premises, for the purpose —preferably in keeping with the local architectural pattern—have to be provided to allow the work of the centre to be done efficiently; and living quarters for the nurse and midwife working in the district sub-centre must also be provided.

At the village level, it is the nurse-midwife who is in charge of the health protection of the population. With regular help from the medical officer, she carries out her numerous duties: systematic ante-natal examination of all women in the villages falling in the area served by the sub-centre; conduct of deliveries; supervision of the post-partum period; supervision of the growth and development of children and adolescents; vaccination and revaccination; nutrition; health education; home visiting; environmental sanitation; care of the rural population suffering from minor ailments; assistance to the village authorities in issuing birth and death certificates; etc.

All aspects of her work are recorded on health record forms, which should be regularly checked by the supervising staff of the rural district health centre.

Central (urban) services

Where the administrative centre of the rural maternal and child health services is in an urban community, the central services are usually more extensive. Under ideal conditions the central maternal and child health service includes at least three principal clinics: one for the mothers, one for infants, and one for school-age children, though these are not necessarily in separate buildings. The doctors, midwives and nurses should be able —through proper training—to undertake a methodical assessment of the characteristics of infantile morbidity and mortality, as well as to attend to their routine activities. The qualified personnel must therefore be conversant with all the modern methods of prophylaxis and treatment of illness.

The *clinic for women* must ensure therapeutic and prophylactic assistance to women during pregnancy, and during and after delivery, until the child-bearing age is past.

As the aims of such a clinic are both preventive and curative, the activities should include:

1. obstetrical and gynaecological examination of the women living within its sphere of activity;
2. regular home-visiting for supervision of the health of pregnant women, and women suffering from gynaecological diseases, and for post-natal care;
3. qualified assistance to women during delivery and a control after childbirth;
4. advice on family planning;
5. measures to combat abortion, sterility and cancer;
6. records of all pregnant women, all deliveries and all newborn children in the district;
7. the collection of data on morbidity and mortality among women and newborn children.

The clinic can also play a valuable role in the fight against venereal disease and tuberculosis in pregnant women, in health education among women and the whole population, and in providing a welfare and "citizens' advice" service for women, etc. The activities of the clinic should be co-ordinated with those of maternity hospitals and of the midwives and doctors in private practice, and with the infant clinics, supplying to the maternity services data on the evolution of pregnancies and receiving from them data on deliveries, which can also be transmitted to the infant clinics, and private practitioners. In this way the essential collaboration is established between the basic services which are fundamental to maternal and child health.

Administratively, it is essential that the closest collaboration should be maintained between the maternal and the child health services. The ideal solution would be a unified administration of these services; i.e., the doctors responsible for ante-natal care of the women should also conduct the delivery and look after the mother and the baby during the first weeks of its life. The records should be continuous and follow the child's life from the intra-uterine to the school-leaving stage. In this way both the child and its medical advisers would benefit, and the unification of preventive and curative medicine be established.

The children's clinic watches over the physical, mental and emotional development of the child. Its staff assumes the health protection of the infant which has, until then, been the responsibility of the obstetrician and midwife. Where the paediatrician and the clinic nurse have made contact with the future mother by being present at the last ante-natal examination,

and have collected from the obstetric clinic the necessary information regarding the pregnancy, continuity is more effectively maintained.

On the functional side, the activities of the clinic can be divided into preventive work and curative work. The preventive work should be strictly separated in space, and if possible in time, from the curative work, so that sick children do not mix with healthy children. This, in itself, is a valuable educational procedure. The record card for the child should be the same for both the preventive and the curative divisions of the clinic. The card should contain the complete record of all measures taken by the doctor and nurses to safeguard the health of the child and a summary of the information needed for the regular reports transmitted to headquarters.

The clinic should give advice on the feeding, care and education of children. It should organize and carry out systematically vaccination and re-vaccination and should deal with the epidemics which may assail children in nurseries or other institutions under its control. Each clinic should have a well-organized demonstration kitchen where mothers can be taught to prepare the different foods for infants, young children and pre-school children. The clinic must also have an active health educational programme.

In their curative capacity, the clinic doctors and nurses will visit sick children and organize the necessary treatment. Through home-visiting also, health education can be directed to improving the standards of home-making to co-ordinating the activities of various ancillary services such as rehabilitation centres, or to supplementary feeding.

The clinic in fact, supplies the link between the family and the hospital, and constitutes the principal factor in the evolution of infantile morbidity and mortality, and by governing the intake of sick children into hospital, determines the number of hospital beds necessary (under given conditions) for the district which it serves.

Apart from the services which the child receives at the clinic, the main link between the family and the clinic is the health visitor. Through her, the various amenities and services which derive from the clinic are conveyed to the family itself — thus maintaining its integrity and responsibility.

The clinic should include the following units and division:

(*a*) a consultation centre for infants, young children and pre-school children and possibly, schoolchildren;

(*b*) a nursing service (general consulting-rooms, including an isolation room, specialists' consulting-rooms, dental room, etc.);

(*c*) accommodation for the administrative, financial, economic and technical services.

Child health protection would be incomplete if it did not include protection of the school-age child and the adolescent. When the child goes to school, he does not stop growing nor does he cease to be a member of the

family unit. It is therefore undesirable that there should be a barrier between infant health services, child health services and school health services.

The basic health service for schoolchildren should undertake appropriate health measures and should take part in the organization and implementation of measures destined to safeguard and improve the mental and physical health of schoolchildren and adolescents.

This would not exclude the need for school-age children's clinics in developed communities, but would rather imply the need for a new approach to the training of a paediatrician whose field of study should be widened to include children of all ages. In other words, it would be better that a semi-rural or rural community should have two paediatricians charged with the health protection of children up to the end of their school years rather than one paediatrician and one "school doctor".

The school clinic will continue the analysis of the morbidity and mortality of schoolchildren, study the influence of school life and of teaching on the health of the child and discuss with the teachers the necessary measures to remedy any defect in these programmes. It will deal with vaccination and re-vaccination and take all necessary measures against infectious diseases. The clinic will also arrange for systematic medical examinations of schoolchildren, noting their development and their nutritional and general state of health in order to facilitate an early recognition of any aberrations which may need special measures for their correction.

Full health protection to school-age children also includes:

(*a*) determination of the causes of children's abstention from attending school;

(*b*) health education among educational workers, parents and pupils, including school feeding programmes, home economics, and the discussion of the physical, mental and emotional development of the children and the adolescents;

(*c*) assistance to the family in improving hygienic conditions in the pupils' homes;

(*d*) advice on school buildings and the hygiene and conditions of work in schools and other establishments for school-age children.

Through the clinic, sick children can be cared for at home or sent for treatment in other health establishments. Accurate records—a continuation of the infant and pre-school records—should be kept for each child.

Discussion

The discussions which followed, both in the plenary session and in the small groups, demonstrated the wide variety of administrative arrangements

which exist in the Region in accordance with the varying stages of development and the particular character of the countries concerned. It became evident that in most areas the administrative problems were those associated with the care of the health of mothers and their younger children. In some countries (e.g., Egypt) the supervision of the health of the schoolchild was the responsibility of the Department of Education, while in others it was being gradually welded into the administrative machinery of the maternal and child health service. Where various sources of child care were already established, the promotion of good co-operation between the different agencies was generally agreed to be one of the important tasks of the maternal and child health administrator.

In spite of differences in detail and nomenclature of the administrative arrangements, however, a few general principles emerged from the discussions.

1. It was stressed that an experienced social paediatrician was essential at the effective administrative level to guide and to be responsible for the execution of policy relating to matters of child health.

2. To ensure the continuity and coherence of maternal and child health protection, an advisory technical and planning council should exist at the national and other levels, and include the senior obstetrician, nurse and midwife, the paediatrician and representatives of the ministries or departments of education, social welfare and possibly agriculture.

3. Where voluntary organizations play a large part in the care of women and children, they should also be represented on this council.

The discussions in the small groups led to the conclusion that if the level of economic and cultural development of a country is low and the personnel limited, it is most practical for all services to be planned and administered from the top, at the national level.

As the level of development rises and sufficient well-trained personnel become available, better results are achieved if the regions have their own administrative machinery for meeting local needs within the framework of the general policy of the nation.

The seminar was in general agreement that, at present, administrative arrangements are greatly affected by the predominating need for curative activities in maternal and child health work. More than one participant pointed out that at this stage it was general for the State to undertake the major preventive work by establishing safe water supplies and sanitation and by the control of communicable diseases or the improvement of agriculture.

It was therefore stressed by many and agreed by all that, at the moment, it was essential for the maternal and child health services to carry out curative activities, and that the concept current in a number of the more highly developed countries of the exclusively "well-baby" clinic was both unpopular with the people and impracticable until the general level of child health

became higher. One participant from Lebanon gave a graphic description of how unpopular the complete separation of the services for the sick and well children had been. Once this separation had been abandoned—except in the actual supervision of the children at the centre—the service had become satisfactory to all.

Discussion in the small groups concluded that as the number of "well babies" increased, and good hospital facilities became available, the balance of curative and preventive work in the child health centres would even out, and that this would involve administrative adjustments.

In the actual maternal and child health centre in the field, the administrator has to maintain a balance between the provision of many different services and the training of personnel. After some discussion it was decided that this balance can only be worked out according to local conditions, but that there is a need for a constant review of all administrative procedures to ensure that they are, in fact, the best means possible of using valuable time and skills for the comprehensive protection of the health of the mother and child.

The groups concluded:

1. that the distribution of milk from maternal and child health centres should be carefully regulated, both in time and in emphasis, and should be regarded as a temporary measure to be dispensed with gradually as the mothers learn how to use local products for their own and their children's nourishment;

2. that methods of record-keeping should be scrutinized to ensure that the time spent on this activity is used to the best advantage, collecting data which are accurate, essential and purposeful; and

3. that every effort should be made to increase the time devoted to the education of the mothers in the clinic, in the home and also in the hospital. It was felt that this last was sometimes overlooked as an important centre for the teaching of both mothers and working staff. Well-organized follow-up activities could also provide an opportunity for the education of the family in child care in its normal surroundings.

CHAPTER 6

STAFFING AND TRAINING PROBLEMS IN MATERNAL AND CHILD HEALTH SERVICES

Three background papers were presented on this subject and discussed in a plenary session.

The discussion was opened by one of the vice-chairmen, who prefaced his description of the procedures found to be feasible and effective in Iraq by a short outline of the factors which determine the requirements in staffing the maternal and child health service. It is first of all necessary, he said, to decide the scope and nature of the services desired. These will vary, depending on the stage of development of the country, the size of various areas to be served and the kind of communications existing, the number of families to be served, and the social, cultural and educational conditions prevailing. They will also depend to some extent on the funds available, and on the value placed on this particular service by the officials responsible for planning and budgeting.

In some circumstances a full curative, preventive and obstetric service may be envisaged from the beginning. In the countries of this Region there is little resistance to the acceptance by the people of scientific midwifery skills, and, in fact, the trained midwife is the cornerstone of most maternal and child health services.

The various members of the maternal and child health team have to be specially trained for their work, and in most of the countries represented at the seminar qualified paediatricians, doctors, public health nurses or nurse-midwives and trained midwives are not yet available in sufficient numbers to meet the needs. In Iraq, this is particularly so in the case of nurses and midwives. Some form of auxiliary maternal and child health workers—"auxiliary nurse" or "community health visitor" or "assistant midwife"—has generally to be used to fill the gaps.

In some of the countries, universities and training schools already exist where doctors and nurses can receive general and public health training. Paediatric education is, however, a neglected field in most medical schools and teaching hospitals, and though post-graduate training in this field is available in Egypt and in the Lebanon, elsewhere it may have to be sought outside the country.

Where little exists in the way of training facilities, these have to be established before anything else can be done. In several countries in this

Region the training of nurses and midwives is now proceeding in various demonstration and training centres established by governments with the assistance of WHO and UNICEF. One speaker with considerable experience in this field described the principles and organization of these centres. Their success depended largely, he thought, on the availability and the wise selection of paediatricians, obstetricians, public health nurses, midwives and their national counterparts; on the selection of the area, and the willingness of the people in this area to co-operate with the aims of the project; and on the adaptation of the services and methods of training to local conditions and needs. The encouragement of the project personnel by material and moral support in their work was also important. The demonstration and training centres had this advantage, that the maternal and child health supervisor has the opportunity to judge whether particular trainees will be suitable for urban or rural work later on and to guide their experience accordingly.

The number of these centres in any one country depends on the needs and resources of the country. In Iraq, for example, where a special directorate of the Ministry of Health with particular duties in the organization of the training for the maternal and child health staff has been established, two training centres are already functioning and a third is planned.

Doctors

There was general agreement that the average medical training does not adequately equip a young doctor for maternal and child health work, nor for the social and preventive aspects of paediatrics, and some additional preparation is usually necessary, especially for work in rural communities. One of the participants described how, at the inauguration of the mobile maternal and child health service in Thessaly, selected qualified doctors, nurses and midwives were given a six months' course in social paediatrics and the principles of rural health work. In Iraq, orientation courses of 6-12 weeks for qualified personnel have been found a useful preparation for maternal and child health work in the field. The doctors and nurses spend these weeks in the demonstration and training centre, taking part in all its activities.

Definite dissatisfaction was expressed on many occasions, and with reference to practically all subjects discussed, with the present training of doctors in the universities and teaching hospitals. It was felt that until this training was orientated more towards public health and the social aspects of ill-health, and less towards the purely curative techniques, progress in maternal and child health would be unnecessarily slow. Special attention was drawn to the fact that the training of doctors was particularly important, because the doctor's attitude can affect the work of nurses

under his control. A "hospital-minded" doctor tends to discourage the nurses from regarding work (such as home visits) outside the hospital as being within their proper sphere.

It was recommended by the seminar that a closer liaison be sought between the university and the ministry of public health, so that the teaching of medical students could be adapted to present-day needs, especially in the field of social paediatrics.

Nurses

Qualified nurses can be given training in maternal and child health work in demonstration and training centres, where these exist, or in schools of public health in or outside the Region. It was generally agreed that, wherever possible, local training is preferable, as practical experience in the conditions of her future work is always more valuable than a theoretical training. In schools of nursing more emphasis on the principles of public health or maternal and child health work and paediatric nursing was considered necessary, and where maternal and child health services are already established, practical experience in home-visiting with the qualified maternal and child health nurses should be included in the nurse's basic training. One of the consultants described a rural area in Africa where the paediatric ward in the district hospital was the centre from which the rural maternal and child health services stemmed. There, the exchange of nurses (in service and during training) between the hospital and the rural centres had proved valuable both administratively and educationally.

Another speaker described the training facilities in the Sudan. Here midwifery training is regarded as basic, and further courses for literate girls are added—a general nursing course and an advanced course in either midwifery (for the staff midwives) or public health nursing for the health visitors. (The term "health visitor" refers here to the fully qualified public health nurse, not to the auxiliary.)

Auxiliaries

Where nursing is not popular as a profession for well-educated girls, or where educational standards are not highly advanced, auxiliary "community nurses" or "health" or "home" visitors are being trained. Usually these girls, after a basic education of 8-9 years, are given a training which lasts 18 months and covers the duties they will have to undertake in the care and education of the mothers. Opinions varied as to the wisdom of sending the trained auxiliary back to her own village. On the whole, it was thought that the best results are achieved when she works in a different village, but in the same region from which she came. In the Sudan, however,

it has been found that if the auxiliary is the daughter of the traditional midwife, she is welcomed in her own home and her own village.

After considerable argument, it was more or less accepted that there will be a certain wastage due to marriage during or immediately after training, or to the fact that if the girls come from a village to a town for training they frequently do not wish to return to village life. In Pakistan it has been found that this can be overcome if most of the training is carried out at sub-centres, with only a short period at the main urban centre, and if efforts are made to provide amenities in the way of living conditions, transport, and the companionship of other health and educational personnel working in the village. It was hoped that the integrated development of village communities, as demonstrated in the Egyptian "combined centre" and the Qalyub Project, would tend to make village life more attractive to all ranks of medical personnel, and that the enthusiasm of the young to serve their country would also be a valuable asset. The assumption that the difficulty of filling the nursing vacancies, especially in the rural areas, would gradually disappear with the spread of education for girls and the raising of the standards of village life seemed reasonable.

Midwives and assistant midwives

The training of these persons appears to follow the usual lines in most countries, with emphasis on the practical rather than the theoretical. Everywhere attempts are being made to enlist the co-operation of the traditional midwife, and to give her some training in the basic principles of obstetric hygiene and infant care. In Pakistan, the difficulty of bringing the traditional midwife to the centre for training has been overcome by taking the training to the midwife. A mobile training school goes to a village where the midwives from ten or twelve villages are gathered, and in a series of visits, conducts a simple course in their own environment.

In the Sudan, where 98% of the deliveries take place in the homes, successful training of illiterate village girls has been conducted for over twenty years. There it has been found that the daughter of the traditional midwife is the trainee of choice, and that good relations with the untrained midwife can be maintained by a friendly and co-operative approach. The training is simple, practical and largely by demonstration and practice. Simple symbols, which take the place of written messages and can be sent to the hospital, are used to indicate the particular complication for which the midwife needs assistance. The training lasts eight months. A further and more advanced course of 8-12 months for illiterate or semi-literate midwives equips them for staff positions in the hospital. If the supervising nurse finds that a practising midwife is in need of further training, she beguiles her with promises of new techniques and fresh knowledge to return

to hospital for the necessary refresher course. In Jordan "mother-craft nurses" are given a training of 18 months, which covers ante-natal care, midwifery, paediatric nursing, infant welfare and home visiting, in maternity and children's hospitals and maternal and child health training centres.

In-service training

The seminar fully supported the contention that in-service training could play a large part in maintaining efficiency and enthusiasm and in improving the standard of work of maternal and child health personnel. The seminar was interested to hear that where the service is highly integrated, as in Poland and Yugoslavia, a regular system of refresher periods is organized in the central hospital for the doctors and nurses working in the field. In Poland, courses for hospital and clinic servants, cooks and other employees are obligatory, and can lead to advancement in position and salary.

In Thessaly, local "seminars" held every few months and attended by all the staff of the mobile maternal and child health units, the local health personnel, doctors and midwives had proved useful in directing policy, smoothing out difficulties and educating the staff.

Where refresher courses are not yet possible it was thought that regular staff meetings should be encouraged as a valuable means of introducing new ideas and co-ordinating day-to-day activities.

CHAPTER 7

INTEGRATION OF THE PREVENTIVE SERVICES

Two background papers were presented on this subject, which was discussed in the plenary session and in small groups.

The following is an outline of the main points stressed by the two consultants who opened the discussion.

Two important and opposite trends are obvious in medicine during the present century — the division of medicine into a large number of highly specialized techniques, and the increasing realization of the need to treat the human being as a whole, and the family as a unit inseparable from its cultural, social and economic environment. To treat the disease and to disregard the whole man often creates fresh difficulties. To ignore the importance of a man's place within the community or within his family is to ignore life itself.

Maternal and child health services as they now exist show immense variation in philosophy, in organization and in efficiency. They originated in Europe and North America some 60 years ago, mainly as a result of voluntary effort. At that period, hospitals for the treatment of the sick and general practitioner services for care of families in homes and dispensaries already existed. Nevertheless, there were gaps, and voluntary workers tried to improve maternal and child health by giving advice and encouragement regarding domestic and personal hygiene, nutrition (and especially artificial feeding) and general child care, by means of home visits and the first "welfare centres". These centres were never planned to work in isolation or independently of the established and accepted curative services. They therefore undertook to provide only preventive services, while curative procedures remained in the hands of general practitioners and hospitals. It proved an effective arrangement in the prevailing conditions, but has now reached the stage where adjustments have to be made to meet present-day concepts and needs.

Unfortunately this pattern of separate preventive and curative work has been copied in other parts of the world where practically no general practitioner services or hospital treatment for children exist. In such circumstances this separation is undesirable and impracticable. To spend valuable time and personnel encouraging and advising with respect to "well-babies", while refusing attention to the sick, is a denial of all ethics— human and medical. It is incomprehensible to the community and can only result in misunderstanding and waste.

The increase in specialization has also had unfortunate results. The students in teaching hospitals come to regard medicine as a series of isolated techniques rather than as a system of service. Each specialty has, moreover, a tendency to build up its own" monstrous regiment'' rather than add its contribution to the common sources of medical care. It is often stated that maternal and child health centres need the services of a social worker, a nutritionist, a health educator or a psychiatric social worker. The discussions revealed a unanimous opinion that where these special skills are needed they should be used to give the required knowledge to the doctors, nurses and midwives who, along with general practitioners, should be the conveyors of knowledge and services useful to the family. Undergraduate and in-service training should equip them to act in this capacity.

It is found that as the health status of a people improves, so they become more in need of social and mental, and less in need of strictly somatic, medical care. If, in the industrialized countries, the health or "district'' nurse and midwife received more training in the existing social and mental health problems, they would be able to achieve more and earlier preventive action. The resources of the country would then be less likely to be dissipated in caring for the delinquent, the handicapped, the mentally and chronically ill, or in providing housing, transport, and the administrative facilities for a multiplicity of workers.

In developing countries, where there are great demands for expansion of services, and where doctors and nurses are in short supply, it is even more necessary to achieve the greatest possible degree of co-operation between the medical and socio-medical services, especially in the rural areas.

It was obvious from the discussions that the participants were fully aware of the need to find a solution to this problem of the integration of the different aspects of the total effort to reduce and prevent ill-health among the women and children in their countries. It was therefore particularly interesting to all to visit, during the seminar, some examples of an integrated medico-social approach to the solution of rural health problems in Egypt.

For this purpose Egypt has been divided into several zones with about 15 000-30 000 inhabitants in each. A "combined centre'' dealing with the health, economic, social and educational needs of the area will ultimately serve each zone. Many have already been built and are now functioning.

The medical services provided include a hospital (with laboratory and pharmacy) in the charge of a medical officer assisted by nurses and midwives; ante-natal and midwifery (domiciliary or hospital) care; medical supervision and treatment of children from birth to school-leaving age; medical supervision of adults with special reference to the endemic diseases. Health education is carried out by all the staff, including the teachers in the school which is part of the Centre. Local crafts, agricultural and domestic skills are taught in the school, and to the adults, as part of the

campaign for agricultural and economic improvement which is being carried out with the co-operation and participation of the villagers.

Another project, the Qalyub Demonstration and Training Centre, begun as a health project with the co-operation of WHO and later expanded to cover all aspects of village life, was also visited. This project began by a thorough survey of the area and the production of maps on which each house was identified and numbered, followed by special surveys of different health and social conditions and of the health services already available. It was decided to enlarge the hospital which already existed and to open six health centres, which became "centres of public service" serving 45 000 people and staffed by three doctors, a social worker, an agriculturist, a veterinarian, a sanitarian, two midwives and an education supervisor. Health sub-centres, already built in selected villages by village co-operatives, were then opened and staffed by an assistant midwife and a sanitary aide, who conducts basic health education. The assistant midwife is responsible for 300 families and for the supervision of maternal and child health in her area, assisted and supervised by a medical officer who visits twice weekly. A "family folder" supplied for all families after the initial census, contains the health record of the various members of that family. The school-teachers undergo four months' training in health education before starting work and later have two weeks' refresher courses every six months. After four years of work, two of which were largely preparatory, the infant mortality rate has dropped from 137 to 92 per 1000 in certain areas.

In Iran and Iraq, for example, it has been found that voluntary organizations (such as missions, Red Cross, Red Crescent, Red Lion and Red Sun) may be usefully integrated into a government programme, thus avoiding overlapping and redundancy of effort. They can sometimes provide funds for equipment and supplies, or help with the actual conduct of institutions and clinics. One of the consultants, with experience in other parts of the world, has found that, in countries where the young have little say, a respected voluntary worker accompanying the nurse on her home visits has proved useful.

In Iran representatives of government, national voluntary and international organizations have combined, under royal patronage, to form the UNICEF National Committee, which has co-ordinated the efforts of various organizations towards the improvement of maternal and child health. "Care centres" have been established in many parts of the country and personnel (midwives and health assistants) trained for work in these centres. Other activities such as the establishment of a pasteurization plant which provides a daily distribution of milk to 300 000 schoolchildren, and a daily meal programme have also been undertaken. A "children's high council", which includes representatives of the departments of health, education, agriculture, labour, justice and civil administration, has now

been set up. By means of corresponding subcommittees, this council studies the various problems associated with maternal and child health and makes recommendations for action to the State Council.

The discussion leaders insisted that integration of the maternal and child health service into the total health programme must take place at all levels. At the national level there should be an adviser or director of maternal and child health to promote the interests of mothers and children within the total medical and other services and to guide in the selection of priorities. At other levels, inter-departmental committees or councils are essential for the co-ordination of work and the elimination of overlapping.

It was also suggested that if no such councils already exist, the maternal and child health officer at each level, finding that he needs help from other specialists or departments in the solution of some problem related to child health, e.g., nutrition or the training of students, may initiate such co-operation.

Where private practitioners are already functioning as doctors, or as midwives, it is essential that they regard the personnel of the maternal and child health service as allies rather than rivals. Several suggestions were made as to how this is best achieved on the principle of offering them co-operation in ways which will help them—e.g., offering the facilities of the clinic to the private practitioner, or inviting him to see his own ante-natal cases in the clinic or deliver his patients in the hospital, or sending him full reports about any patient seen and treated.

It was reported by the participant from Greece that the physicians of the mobile maternal and child health teams in Thessaly spent considerable time at the outset contacting the local general practitioners and explaining the aims and intentions of the mobile service, and this later proved to have been a rewarding procedure.

In the Sudan it has been found that the midwife, especially the traditional midwife, can be a powerfully ally. When the approach is not condemnatory or her activities are not legally prohibited, she welcomes advice and help, and can become a useful unofficial member of the maternal and child health team.

In rural areas the basic unit is usually the midwife or nurse midwife. Here the integration of different aspects of maternal and child health work must be achieved in the person herself. It was felt that the training of the village midwife should include some knowledge of allied problems such as nutrition, child care, home economics, first aid and the technique of health education.

On this occasion, and also during the discussion on health education, it was emphasized that, where there was also a sanitary aide working in the villages, it was essential that he and the midwife agree about the facts which they wish to impart to the people, so that they can each reinforce and enlarge the effectiveness of the other's work.

Between the adviser at the national or provincial level and the community midwife and sanitarian at the village level lie a great many forms of health personnel and institutions.

Polyclinics do not exist everywhere, but in most countries there is some integration of the obstetric and infant or child care services. Experience in Poland had shown, it was stated, that the earlier the health nurse establishes contact with the family—whether during the ante-natal period or while the mother is still in hospital—the better the results. In that country if the birth occurs at home, the midwife has the responsibility of informing the health nurse immediately the baby is born. In urban areas, where the maternity hospital is separate from the maternal and child health centre, this information is given by the routine exchange of reports, or by posting a list of all births which have occurred during the previous 24 hours on the door of the maternity ward, or in some similar place where it can be noted by the health nurse.

Several of the participants mentioned that where the various services are separate in space or time, the use of "health books" or record cards facilitates continuity in the care of the mother and child. The "book" (or a reference number card) can be issued to the mother on leaving hospital with her baby, with sufficient explanation of its use, and emphasis on its importance to ensure its safekeeping. The same record should be available directly or through efficient cross-referencing, if the child later enters hospital or school.

The experience of one of the consultants had been that the standard of work and enthusiasm of the staff, and also the standard of services received by the families, improve if the hospital with a good paediatric ward acts as centre of the maternal and child health service.

This integrated service allows a regular exchange of doctors and nurses between field work and hospital, encourages a deeper understanding of the social problems of the families and preserves continuity between the preventive and curative aspects of the services provided. The work of the staff becomes more interesting and varied. The hospital improves its results because of better follow-up of cases, and the doctors have a more realistic approach to their patients' problems. It is unnecessary and impossible for the doctors to do a great deal in the way of domiciliary visits, but if they work in close co-operation with health nurses and midwives and occasionally visit the homes with them, the health teaching which they give in wards, out-patients departments and clinics becomes more realistic and rewarding, from both the medical and the socio-medical angles.

Needless to say, this form of integrated service will be more comprehensive if the doctors and midwives in private practice in the area can be persuaded to participate. Where this has been achieved, as in Thessaly, the general practitioner has found the health-nurse a welcome and useful ally in the follow-up and home-care of his patients.

In Jordan a "health council", which includes, along with the maternal and child health personnel, the sanitarian, the hospital doctor, the agriculturist, the local leaders, the religious leaders and any voluntary or social worker in the area, has proved an effective means of co-ordinating efforts to improve the health conditions of the people.

Considerable concern was expressed by several participants over the diverse and sometimes overlapping activities of the representatives of various international agencies who at present often work in unrelated projects in the same country. It was urged that the government of the country should establish some means whereby these efforts could be integrated into a comprehensive long-term plan for the improvement of different aspects of the life of the people and that no fresh enterprises should be initiated without reference to this plan.

CHAPTER 8

THE INTEGRATION OF OTHER RESOURCES

During a plenary meeting the seminar heard descriptions of the contribution which different voluntary organizations and some departments of the Egyptian Government are making towards the improvement of child health. A brief outline of the statements presented and of the discussion they stimulated follows.

It was regretted that the representatives of a number of the organizations invited could not attend and share the exchange of views in the informal atmosphere of the seminar.

UNICEF

In the economically under-developed countries, children form 40% of the population, and it is with the needs of these children that UNICEF is mainly concerned. Efforts to improve their chances of survival and of reasonably good health in later life usually take the form of the provision of essential imported supplies to implement government programmes for the control of mass diseases, for the setting up of rural child health services and for the training of the necessary staff. Nutrition improvement programmes are also supported.

At first, the main emphasis was laid on assistance in the control of the major communicable and endemic diseases, through the supply of equipment, drugs and transport. The problem of trachoma, widespread in this Region, still remains to be solved, though increasing support is being given to the campaigns now being carried out. These have shown that many forms of related eye infections can be cured with antibiotics, but that the problems of organization and supervision connected with such intensive treatment are considerable.

UNICEF's interest in and assistance to the maternal and child health services developed later, because in most countries it seemed logical to help with the control of the major epidemic diseases before trying to set up permanent rural services. In this field the range of UNICEF activities now covers both services and training, and depends on the scope of the programme in different countries. For a rural centre staffed by a nurse or midwife, UNICEF provides simple basic technical equipment, including baby and adult scales, instruments, sewing machines and utensils and also,

for a period of two years, specific modern drugs, powdered milk, fish-liver-oil capsules and soap. Supplies and equipment have reached, or are planned for, well over 13 000 centres in 70 different countries.

Where the staff of the centre includes a sanitarian, and carries out education in personal and environmental sanitation, UNICEF provides digging equipment for wells or latrines; water pipes for the tube wells, or for limited schemes for piping water into the villages from adjacent sources; hand-pumps; tools; and a limited amount of transport and cement.

Training courses for auxiliary personnel, and teaching aids and equipment for nursing schools and hospitals, where public health nurses and midwives are taught in the maternity and paediatric wards, are UNICEF's contribution to the training of maternal and child health personnel. In special circumstances, stipends for the local training of midwives and public health nurses are also provided.

A few countries are receiving assistance in specialized aspects of child care—e.g., the rehabilitation of handicapped children and the care of premature infants—in the form of specialized equipment, supplies and training fellowships.

The problems of hunger and malnutrition in the under-developed countries cannot, for many reasons, be met by the mass supplementary feeding programmes which were effective in post-war Europe. An effort has been made, therefore, to select and support programmes which seem to promise a lasting improvement of nutritional standards in a given community. This policy has guided the continuing distribution of United States surplus skim milk powder to various countries. In 1955, 69 000 000 pounds of this milk powder were allocated to school feeding programmes and for distribution to infants, pre-school children and mothers through the maternal and child health centres.

As this source of supply may not continue indefinitely, various other means of helping nutrition improvement programmes are being developed. Efforts are being made in several countries to build up a dairying industry, and UNICEF is assisting in the setting up of milk processing and drying plants by supplying essential equipment for pasteurizing, sterilizing, bottling, refrigeration and drying. The countries themselves supply buildings, auxiliary equipment and labour—usually exceeding several times the value of the international aid.

UNICEF is also working with WHO and FAO in the development of other safe protein-rich foods which can be locally produced, and are cheap and acceptable to the young child. This is especially important for areas where there is little prospect of developing a local milk supply of sufficient quantity.

It should always be remembered that UNICEF is essentially a supply agency, guided by WHO and FAO in its efforts to fulfil the requests of

governments. Care must be taken to ensure that the supply of facilities, such as transport, does not involve the country in future maintenance expenses beyond its powers.

International Children's Centre (ICC)

The ICC was founded in 1950 by UNICEF and the French Government as:

(*a*) a training centre for post-graduate professional people already working in the field;

(*b*) a research centre for the study of the major problems of child health;

(*c*) a documentation centre.

The training activities are the most important. Refresher courses lasting from six weeks to three months continue throughout the year, and include field work. The content varies according to the needs and interests of the students, but covers mainly the various aspects of social paediatrics. The courses are attended by physicians, social workers, psychologists, nurses, midwives and sanitarians from all over the world. As well as studying recent developments in health and social problems, the students have the opportunity of working as a team and of learning from the experience of different nationals. Fellowships are provided by Governments, WHO or UNICEF, to cover expenses, the training itself being provided free.

Seminars, limited to eighty participants, are also organized for highly qualified experts who meet to discuss a particular subject. Whooping cough, rheumatism, tuberculosis in children, and children's hospitals have been studied in such seminars.

Research projects on, for instance, various types of BCG vaccines, their potency and general standard of action; acute rheumatism in children; and the comparative study of growth and development of children have been undertaken in different countries. Others are planned to cover the social health of children and the problems which arise in different parts of the world due to various environmental factors.

The documentation service—abstracting and reviewing the published literature on maternal and child health—was initiated for the benefit of people working overseas who find it difficult to keep pace with recent publications. Abstracts and reviews are published in the *Courrier* (the official journal of the ICC) each month, and full documentation on any subject relating to child health can be supplied on request.

The extensive international contacts maintained by the Centre facilitate comparative studies of subjects such as perinatal mortality, mortality from tuberculosis, or the isolation of the important common factor (in different

situations) which is responsible for the low incidence of disease. The exchange of information and techniques possible through an international centre is in itself a valuable contribution to the solution of the problems of child health.

The lively interest aroused by this description of the work of the ICC was demonstrated not so much by discussion as by the numerous requests which followed later for further information and for the maintenance of regular contact with this organization through its publications.

School Health Services, Egypt

In Egypt the school health service contributes to the health and welfare of the child in three main ways:

1. The prophylactic activities include regular medical examination, vaccination, and the work of the school health visitor in spotting the early case which should be referred to the doctor for further investigation.

2. Therapeutic activities are carried out in out-patient clinics attached to the School Health Department or in minor ailment units in the smaller towns. The School Health Department also supports beds reserved for children in general hospitals, sanatoria and mental hospitals.

3. The social activities cover health education and the production of posters and pamphlets; the encouragement of "health societies" in the schools, and parent-teacher associations; the after-care of children in convalescent homes, or under the care of the school health visitor in their own homes. Infectious skin diseases are treated in four main clinics, and by 17 mobile units. The neuro-psychiatric clinic carries out the diagnosis and treatment of psychiatric disorders, the training of medical personnel and research in the field of child psychology.

Although there is no general health insurance for the population, there is a form of insurance for schoolchildren which begins after primary school age.

Premature units in Cairo

In Egypt, according to the university hospital statistics, about 8% of live-births are premature. The neo-natal death-rate forms 21% of the infant mortality rate, premature deaths forming a big proportion of neo-natal deaths.

The chief causes of prematurity are believed to be pre-natal complications such as toxaemias, placenta praevia, diabetes, accidents, multiple pregnancy, etc. Prematurity is higher in the lower income group and in the illegitimate.

As a measure against the high neo-natal mortality in the premature, two demonstration and training centres will be established in Cairo:

1. A premature centre in the Maternity Section of the University Hospital of Cairo, for babies whose weight is below 2000 g, and for those who need special care;

2. A Home Care Section at the Giza Maternal and Child Health Centre where doctors, qualified midwives, and assistant midwives will be trained in the home care of premature babies of above 2000 g. The centre will have cubicles for 10 premature babies and their mothers.

The Home Care Section will also run a service for the home-nursing of premature babies of over 2000 g delivered at home by the assistant midwives and not in need of special care. As well as being more economical, this will give an opportunity for the education of the family in the care of their own baby. If the conditions at home are very bad the baby can be transferred to the home unit at the maternal and child health centre. The doctor in charge of the mother will decide on the place of the delivery and care of the baby.

This home unit will be staffed by two doctors and three qualified midwives, all specially trained in this field. Special assistant midwives will be provided for premature deliveries taking place at the home of the mother.

Women's Health Improvement Association, Cairo

The work of this voluntary organization, founded in 1936 to help those suffering from tuberculosis and their families, was described by one of its members.

"Our work", she said, "is entirely social. We start by investigating the living conditions of the patient and help him accordingly. Approximately 3000 families are being looked after at present. We supply them with food and clothing, pay their house-rents, find jobs for the healthy workers and rehabilitate the patients who have recovered and left the sanatorium.

"Together with the School Health Department, we run a convalescent home for boy students, aged 10-20 years. There they spend about 6 months to regain their former health and energy. A chest specialist visits them periodically and a qualified nurse attends them.

"At the beginning of our work we found that whole families were eliminated as the result of contact with the patient, bad housing and poor nutrition. So in 1939 we started a preventorium in the centre of Cairo for children and a few mothers. In 1947 when our financial situation improved, we bought an old army camp near the Pyramids and transformed it into a city for children now known as the City of Health. About 500 children, whose ages vary from birth to 15 years, now live there.

Most of the children come from the poorest homes. They are free from tuberculosis, but usually suffer from various other diseases and mostly from malnutrition. They are given the same care as any child living under normal favourable conditions. A doctor comes weekly to the city and examines the children. A health record is kept for each child. When a child has a contagious illness, he is immediately isolated, and if an operation is needed, he is sent to hospital.

"In many cases the mother is allowed to live in the city and nurse her child and look after other children who are deprived of their own mothers' care. We have at present 50 mothers who work under the supervision of trained nurses. The mothers who do not live at the city are allowed to come and spend the day once a fortnight with their children. Moreover, the children are allowed to visit their homes once a month and spend the week-end with their families.

"When the children reach school age they attend a mixed preparatory school founded by the Association in the city. After finishing this course, the boys attend the school of crafts also founded in the city. Both schools are run by the Ministry of Education, which also provides hot meals for the schoolchildren. In the school of crafts, the boys learn carpentry, weaving or leather-work. The weaving company of Mehalla el Kobra has been kind enough to donate to the Association 50 electric looms that have helped to establish a small factory in the city where some of our boys work.

"Above all, I am proud to say that we have managed to create in our city a very pleasant homely atmosphere, which is encouraged by the presence and motherly affection of our excellent matron whom we all address as 'Mamma' and by the co-operation of the members of our association.

"All over Egypt ladies have responded to our call for more voluntary workers, and we have been able to found 17 branches throughout Egypt to carry on the same work on a smaller scale."

The speaker ended her talk by extending an invitation to the seminar to visit the City of Health, or the convalescent home, or the food distribution centre. Later the seminar members did visit the City of Health and were much impressed by the work being carried out there.

The discussion which followed showed the appreciation which all present felt for the work of voluntary organizations, which, as in Iran and Iraq, had frequently been the originators of care and services for mothers and children. In Iran especially they had for many years carried the brunt of all the services for health and social welfare. Recently a consultative council had been established to co-ordinate the work of these different organizations, as each usually tends to concentrate on one particular aspect of maternal and child health work.

Several examples were given of the benefit of good co-operation between government and voluntary agencies with the subsequent elimination of

overlapping and unnecessary new enterprises. The problem of the orphaned child is one which has frequently roused the sympathies and activity of voluntary organizations, but evidently in France, Iran and Iraq at the present time the eagerness of people to adopt a child has eliminated the need for organized voluntary effort to provide for these children. In Egypt, however, the foundling is cared for by a Government-supported programme of placement in foster-homes, with an adequate sum provided for maintenance.

In Lebanon it had been found necessary to set aside a special department for co-ordinating the work of voluntary organizations in the field of child health with that of the Government centres. It was generally agreed that for the preservation of good standards of child care, and the avoidance of confusion or duplication of effort and services, a recognized means of co-ordination with the ministry of health or the government child health departments should be established. By this means, funds could be allocated where required to help voluntary organizations doing useful work, and some supervision could, if necessary, be maintained.

In Yugoslavia the Red Cross, Red Crescent and other voluntary organizations are active in the field of child welfare. One aspect of their work—a two-year training course for village girls in home-making skills and mothercraft, with special emphasis on nutrition and practical agricultural improvements—has proved useful in raising the standards of child care in the villages.

Individual voluntary effort can apparently take many forms such as helping with the clerical work or with the treatment of minor ailments in maternal and child health centres, and with occupational therapy or school lessons for children in hospital. The participation of mothers in looking after their children in a nutrition rehabilitation centre was cited as a voluntary effort which had proved useful in teaching the mothers better nutritional practices and child care as well as helping to run the centre economically.

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There was also some discussion on the health supervision of the schoolchild. It was felt, on the whole, that there should be no division of authority with regard to the medical and social care of the young child and the schoolchild. Better continuity of care and services could be maintained if the paediatrician who was responsible for the care of the pre-school child also looked after the schoolchild. Where it was already established that the maternal and child health services under the Ministry of Public Health were responsible for the care of the infant and pre-school child, and the Department of Education assumed responsibility for the same child once it

entered school, it was essential that a close liaison be maintained between the two services at all levels. In some countries, the school health visitor, although under the control of the Education Department, carries out her duties from the maternal and child health centre, thus keeping in touch with the maternal and child health personnel responsible for the families of the schoolchild in her care, and with the records common to both the pre-school child and the schoolchild.

ANNEX I

LIST OF PARTICIPANTS

Dr Mohammed Abboud, Assistant Professor of Paediatrics, Faculty of Medicine, Cairo, Egypt
Dr Mahmour Zaki Abou-Steit, Director of Health Centres, Rural Health Administration, Cairo, Egypt
Dr (Mrs) Sadiqa Bano Agha, Officer-in-charge, Maternity and Child Health Centre, Karachi, Pakistan
Dr Youssef ben Abbas, Chief Medical Officer, Mogador Hospital, Ministry of Health, Morocco
Sister Hawa Ali el Bassir, Principal Matron, Ministry of Health, Khartoum, Sudan
Dr Etienne Berthet, Director-General, International Children's Centre, Paris, France
Dr A. H. Chahine, Director, Social Hygiene Department, Ministry of Health, Cairo, Egypt
Dr Mohammed Daftari, UNICEF Health Council; and Inspector General at Ministry of Health, Teheran, Iran
Mr Zaven N. Davidian, UNICEF Resident Representative, Cairo, Egypt
Mrs Marie Derani, Nurse-Midwife, Maternal and Child Health Department, Ministry of Health, Damascus, Syria
Dr Mostafa El Duwani, Professor of Paediatrics, Faculty of Medicine, Cairo, Egypt
Dr Oum El Kheir el Azem, Medical Officer, Maternal and Child Health, Ministry of Health, Damascus, Syria
Dr (Miss) J. A. Gemmel, Maternity Hospital and Child Welfare Centre, Aden
Dr Mohammed Gharib, Professor of Paediatrics, Faculty of Medicine, Teheran, Iran
Dr Munir Greiss, Director, Statistics Department, Ministry of Health, Cairo, Egypt
Dr Sabri Guirges, Neuropsychiatric Clinic, School Health Administration, Cairo, Egypt
Dr El-Sayed Hamdan, Preventive Medicine Department, Ministry of Health, Cairo, Egypt
Miss S. Hovivian, Senior Health Visitor, Nicosia, Cyprus
Dr Mahmoud Ismail, Professor and Director, Department of Gynaecology and Obstetrics, Cairo, Egypt
Dr Nafissa Hussein Issa, Inspector, Child Welfare Section, Cairo, Egypt
Dr H. Jalloul, Director of Maternal and Child Health Services, Beirut, Lebanon
Dr (Miss) Nezahat Keskintepe, Maternal and Child Health Clinic, Ankara, Turkey
Dr Ahmed Khalil Abdul Khalik, Professor and Director, Paediatric Department, Cairo, Egypt
Dr (Mrs) N. H. A. Khan, Officer on special duty, Maternal and Child Welfare, Health Directorate, Lahore, West Pakistan
Dr L. D. Khatri, Director-General of Health, Ministry of Health, Benghazi, Libya
Mrs Khodr, Midwife, Ministry of Health, Beirut, Lebanon
Dr Mahmoud Ibrahim Mu'allem, Director of International Health, Ministry of Health, Baghdad, Iraq
Dr Abolghassem Nafici, Adviser on Maternal and Child Health to Ministry of Health ; and Director, Khajenouri Health Centre, Teheran, Iran
Dr Ali Nozari, Director of Maternal and Child Health, Teheran, Iran
Dr Nuri Ben Othman, Director, Maternal and Child Health Demonstration and Training Centre, Libya

Dr Khalil Abdel Rahman, Medical Officer of Health, Khartoum Province, Sudan
Dr (Miss) Munwara Binte Rahman, Superintendent, Maternity and Child Welfare Services, Dacca, East Pakistan
Dr Mohammed Abdel Razzak, Director, Child Education Section, Cairo, Egypt
Dr M. Roumani, Chief, Maternal and Child Health Centre, Ministry of Health, Damascus, Syria
Dr Piero Russo, Chief, Maternity Section, G. Martino Hospital, Mogadiscio, Somalia
Dr C. Saroglou, Professeur agrégé, Athens University; Medical Director, PIPKA, Greece
Dr Ahmed Fouad Sherbini, Lecturer on Maternal and Child Health, High Institute of Public Health, Alexandria, Egypt
Dr Mohammed Sidky, Director, Child Welfare Section, Ministry of Health, Cairo, Egypt
Dr Tabet, Paediatrician, Ministry of Health, Beirut, Lebanon
Dr A. N. Tantawi, Director, Audio-visual Aid Section, Ministry of Education, Cairo, Egypt
Dr Asrat Woldeyes, Tschai Memorial Hospital, Addis Ababa, Ethiopia
Dr Laman Amin Zaki, Director of the Children's Hospital and of Sheikh Omar Maternal and Child Health Clinic, Iraq

Consultants

Dr Anne Burgess, formerly Deputy Director of the Central Council of Health Education, London, England
Dr Vukan Cupic, Adviser on Maternal and Child Health to the Federal Government of Yugoslavia; Associate Professor of Paediatrics, University of Belgrade. Yugoslavia
Dr Khuri-Otaqui, Senior Medical Officer, Maternal and Child Health, United Nations Relief and Works Agency for Palestine Refugees in the Near East
Dr Cicely Williams, formerly Maternal and Child Health Adviser, WHO Regional Office for South-East Asia

Secretariat

Dr A. H. Taba, Director, WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Dr Mohammed Farid Ali, Senior WHO Adviser, Cyrenaica, Libya
Miss G. Broeckman, WHO Public Health Nurse-Midwife, Jordan
Dr E. Connolly, Senior WHO Adviser, Iraq
Dr. P. Descoeudres, Public Health Administrator (Operations), WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Dr F. Farnsworth, Director of Health Services, WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Dr G. J. Glynn, Senior WHO Adviser, Iran
Mr Aziz Habashi Henein, WHO Adviser on Health Education, ASFEC, Sirs-el-Layyan, Egypt
Dr Otto Jaeger, Senior WHO Adviser, Gondar, Ethiopia
Dr G. Jallad, Senior WHO Adviser, Tripoli, Libya
Dr L. Kaprio, Public Health Administrator (Planning), WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Dr A. Mochi, Tuberculosis and BCG Adviser, WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Miss J. A. Pitcherella, Nursing Adviser, WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt
Mr H. Shipman, WHO Adviser and Sanitary Engineer, Demonstration and Training Centre, Qalyub, Egypt
Dr E. Wakil, Senior WHO Adviser, Jordan
Dr Wiktoria Winnicka, Chief, Maternal and Child Health Section, World Health Organization, Geneva, Switzerland

ANNEX II

LIST OF PAPERS PRESENTED AS LECTURES OR BACKGROUND MATERIAL

Dr Cicely Williams:
Integration of preventive services
Methods of assessing needs in maternal and child health services
Dr. A. N. Tantawi:
Audio-visual aids in the health education of the family
Dr Anne Burgess:
The role of the maternal and child health service in the health education of the family
Dr Vukan Cupic:
Administration of a maternal and child health service
Integration of prophylactic services
Miss G. Broeckman:
Administration of maternal and child health services from the nursing angle
Dr Mahmoud Ibrahim Mu'allem:
Staffing the maternal and child health services and training the staff
Dr G. Jallad:
Staffing the maternal and child health services and training the staff
Sister Hawa Ali el Bassir:
Staffing the maternal and child health services and training the staff
Mr H. Shipman:
The family's health and environmental sanitation
Dr Khuri-Otaqui:
Gastro-enteritis
Dr Sabri Guirges:
Mental health as related to maternal and child health
Dr Farid Massoud:
Eye diseases
Dr Nafissa Hussein Issa:
Premature units
Dr Mohammed Daftari:
Integration of maternal and child health services in Iran
Dr C. Saroglou:
Maternal and child health in Greece
Mr Zaven N. Davidian:
Activities and policies of UNICEF
Dr Etienne Berthet:
The contribution of ICC to the promotion of child health
Mrs M. Bayadi:
The work of the Women's Health Improvement Association, Cairo
Background papers were also presented by Dr Bojan Pirc, Dr C. Saroglou, Dr Poulton, Dr Bierman and Miss Campbell