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**EXPERT COMMITTEE ON
MATERNITY CARE**

**First Report
A Preliminary Survey**

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EXPERT COMMITTEE ON MATERNITY CARE

First Session

Geneva, 5-9 November 1951

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EXPERT COMMITTEE ON MATERNITY CARE

First Report : A Preliminary Survey¹

1. Introduction

The Third World Health Assembly, meeting in May 1950, approved the holding of a meeting of experts on maternity care.²

The Expert Committee on Maternity Care held its first session in Geneva from 5 to 9 November 1951. The session was opened by Dr. Dorolle, Deputy Director-General. Dr. N. J. Eastman was unanimously elected Chairman, Dr. S. Pandit, Vice-Chairman, and Professor W. C. W. Nixon, Rapporteur. The agenda submitted was approved and adopted.

The committee felt it was desirable in the first instance to define maternity care, as follows :

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

The committee emphasized the fact that child-bearing is essentially a physiological process. Accordingly, the main emphasis in maternity care

¹ This report deals with the general principles of the structure and organization of maternity-care services.

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

The Executive Board

1. NOTES the report of the Expert Committee on Maternity Care on its first session ;
2. THANKS the members of the committee for their work ;
3. NOTES that this is a preliminary report, and
4. AUTHORIZES its publication.

(Resolution EB9.R51, *Off. Rec. World Hlth Org.* 40, 17)

² Resolution WHA3.68, *Off. Rec. World Hlth Org.* 28, 40

should be on the maintenance of the normal. Nevertheless, abnormalities do occasionally occur, some of which may result in grave consequences, but these can often be prevented or minimized by adequate prenatal supervision. Prenatal care presents an unusual opportunity to apply public-health practices and the principles of health education. It also offers a good opportunity for the integration of curative and preventive medicine.

While some specific recommendations on the development of maternity care will apply to all the areas of the world, it was recognized that other recommendations, both in regard to urban and rural practices, would differ according to whether they are applied to the economically more-developed areas of the world or to areas economically less-developed with different cultural patterns and a strong community life.

2. Place of Maternity Care in the General Public-Health Programme

The care of expectant mothers and of children is closely interrelated, and therefore public-health programmes must include both groups in their planning. Services for these groups, usually termed maternal and child health services, affect a large proportion of any population, and in consequence should receive adequate consideration in any planning.

Because of the large size of this population group, as well as its importance, the committee wished to emphasize the desirability of the appointment of a maternal and child health administrative medical officer in public-health departments, and to refer to a recommendation made by the Expert Committee on Maternal and Child Health at its first session in January 1949, which reads as follows :

“... that governments should be urged to establish and finance an administrative division on maternal and child health, under the direction of a well-qualified and experienced specialist, where such a division is not already in existence, ...”³

In this connexion the committee found it gratifying to know that schools of public health have recognized the importance of this subject and are now giving more attention and devoting longer teaching time to this speciality than they did 10 or 20 years ago.

The Expert Committee on Maternity Care

RECOMMENDS that the World Health Organization should continue to stimulate national health administrations to implement the recommendation concerning the establishment of administrative divisions on maternal and child health made by the Expert Committee on Maternal and Child Health at its first session.

³ *Off. Rec. World Hlth Org.* 19, 43

The committee, furthermore, stressed the essential contribution which the development of basic public-health programmes makes to maternal and child health as exemplified by the general improvement in environmental sanitation and by the control of major diseases such as malaria, ankylostomiasis, and deficiency diseases. This is all the more important since pregnancy, labour, and the puerperium in themselves make the mother more vulnerable to many infectious processes which often harm the foetus as well as the mother, two individuals being thus exposed to the risk of disease.

The loss of any mother, especially those who have several children, is one of the greatest tragedies which can befall a family or a community. Despite this fact, in many countries no adequate provision is made for maternal care in the general public-health programme. Although this may be due to local economic circumstances, the committee expressed the hope that, in view of the importance of the maternity-care programme, governments would give careful consideration to setting aside for this purpose a reasonable proportion of the available public-health funds.

In most countries the development of maternity services has proceeded much more rapidly in urban than in rural areas. Where it is possible to collect statistics the advantages of improved maternity services in the urban areas are reflected in a lower maternal and perinatal mortality-rate. Not infrequently in the economically less-developed regions no services at all exist in rural areas. Where similar services have been made available as part of the general health services for these areas equally good results are obtained.

It is recognized that since maternity care, as a part of the total maternal and child health programme, is closely linked with existing social, labour, and education services, many of the services offered by these governmental agencies are needed to supplement a programme of maternity care. The committee therefore emphasized the importance of recognition by governments of the desirability of co-operation between such agencies at a national level.

3. Premarital Period

3.1 *Health education*

The broad pattern of health education includes the teaching of parent-craft, known in some countries as family-life education. Parent-craft deals with the physical, mental, and emotional needs of children, the importance of the good health of the parents and of good nutrition in all age-groups, the place and responsibilities of the father in the home, the place of the home in the community, and a knowledge of community

health problems and resources. How much of this should be included in any particular health education programme will depend upon the cultural background of the community. With modern limitations in family size in the economically more-developed countries, young people have not as much opportunity as they had formerly of growing up with younger brothers and sisters, and thus lack the emotional stimulus which the association with, and care of, those younger than themselves would have given them. The relative isolation of the family group in urban life still further accentuates this situation. In contrast, in the economically less-developed areas the family community pattern has in general maintained its integrity and influence. Under these circumstances the emphasis of the teaching must necessarily vary according to locale, the existing situation being used as a base on which to build. Teaching methods and materials must also differ according to the needs of the particular community.

Formal teaching on parent-craft should be preceded by the parents' giving simple and straightforward answers to the young child's questions. In the economically less-developed areas this teaching within the family at present assumes a much greater importance, and extends beyond the youngest age-period, taking the place of the more formal instruction which is given outside the family in some of the economically more-developed areas. It is regrettable, however, that in many of the economically more-developed areas no instruction of this kind is given either in the family or in the school.

The teaching of parent-craft will be ineffective unless the child has a sound if simple knowledge of human physiology, which should include the physiology of sex and should be given in school before puberty. This teaching of human physiology should form an integral part of the health education programme in the school. The section dealing with health education in the report on the first session of the Expert Committee on School Health Services⁴ shows how the principles of healthy living can easily be introduced into such a programme.

The committee was of the opinion that schools should provide opportunities of free approach to a medical adviser for consultations on these subjects for children who have reached the age of puberty. Advice should also be available at health centres to adolescents over school age. To those about to marry, still more detailed teaching and counselling should be given, as a preparation for marriage, on the relationships both emotional and physical which exist between husband and wife and between them and their children.

⁴ *World Hlth Org. techn. Rep. Ser.* 1951, 30, 16

The committee considered that the undue use of the term sex education tended to obscure the fact that it is essentially a part of health education from which it should not be divorced. Sex education as such may be considered to consist of two parts—factual instruction on the physiology of sex, and the development of responsible behaviour. The level of an individual's responsible behaviour in matters of sex is likely to be the same as he exhibits in other social relationships.

3.2 *Factors influencing the age of marriage*

In many countries the educational period has been prolonged, sometimes to 17 and 18 years of age or even beyond. Therefore many young people are economically dependent on their parents at a time when they would naturally wish to assume the responsibility of earning their own income and attaining their independence. This factor, along with economic reasons, may result in certain groups postponing marriage and child-bearing until after the age of 25. This fact has an important bearing on maternity care because the risks of child-bearing increase substantially after this age, and become still further accentuated after the age of 30. In addition, there is the special problem of late primiparity. The committee was of the opinion that some effort should be made to reduce the economic drawbacks associated with the marriage of young adults, either by the provision of adequate family allowances, or by the adjustment of taxes to bear less heavily on young married people. Finally, as far as girls under 15 years of age are concerned, although the risks of child-bearing need not be high if adequate obstetric attention is given, yet, in the committee's view, marriage at that age is undesirable as such young girls are not prepared to assume the social responsibilities of motherhood.

3.3 *Premarital examination*

The question of premarital medical examination was considered. It was felt that compulsory examination would not be effective where marriages are not recorded; the committee, therefore, advised as a first step that efforts should be made to have all marriages recorded. As a second step, where conditions permit, premarital examination should be encouraged and consideration given to the passing of legislation to implement this purpose.

4. Prenatal Care

The committee stressed the great importance of the prenatal period for the achievement of maternal health. It is at this time that many abnormalities can be prevented which affect not only the mother but the survival and future health of her infant.

4.1 *Standards for prenatal care*

Early and periodic appraisal of health is important if the goal of a successful outcome of a pregnancy is to be achieved. For this reason mothers should be given every encouragement to come for an early examination. The public-health nurse and the midwife can be of great assistance in ensuring that the mother receives early care.

The committee was unanimous in recommending the following optimum standards for prenatal care: The mother whose pregnancy is proceeding normally should be examined monthly from her first attendance until the 28th week, every two weeks between the 28th week and the 36th week, and weekly thereafter. On her first attendance a history will be taken and the family situation discussed. A general physical examination will be performed as well as a more detailed abdominal and pelvic examination. The urine will be tested, the blood pressure taken, and the weight recorded at each visit. The examination of the blood will include an estimation of the haemoglobin level and a serological test for syphilis. In certain countries roentgenological examination of the chest, examination for the Rhesus factor, examination of blood film for malaria, or other special procedures may be required. Care of the teeth should be included in prenatal supervision as an optimum. Arrangements for the examination of the mother should ensure privacy and the allocation of sufficient time to allow her to discuss her problems. Opportunity should be taken at each visit to instruct the mother in proper hygiene, nutrition, and in certain danger signals to be reported to the obstetrician who would attend in the event of their occurrence.

The committee considered the desirability of providing instruction in relaxation and prenatal exercises. Comparison was made between the ease with which many women in Eastern countries are able to deliver themselves and the difficulty which women in Western countries sometimes experience. It was felt that this complication was very often due to psychological factors. The hospital environment which deprives these women of the moral support and comfort which they received when delivered in their own homes is sometimes another contributing factor to long labour. In view of these various factors the committee was of the opinion that consideration should be given to the need for exercises in relaxation and instruction in the use of apparatus for analgesia. If these are considered desirable, they should be included in the prenatal advice.

The committee realized that the above scheme was idealistic, and appreciated that in many areas it was not attainable at present. It felt, however, that as a temporary expedient all areas which are in the process of developing their schemes for maternity care should strive to attain a minimum standard of six examinations, of which at least two should be

in the last month. These examinations should cover at least an initial history, and a general physical examination, including blood-pressure estimation, weight, pelvic appraisal, blood test for syphilis, urine analysis, and an estimation of the haemoglobin level. Abdominal examination, weight, urine analysis, and blood-pressure examination should be repeated at each visit. A smaller number of examinations than the minimum standard referred to above is, in the committee's opinion, inadequate for ensuring satisfactory prenatal care. Continuity of supervision by the physician and the midwife was considered to be of importance. Visits by the midwife, however, should not replace but supplement the work of the physician.

4.2 *Nutrition*

Close attention must be paid to nutrition even where food supplies are ample. In areas where food is in short supply the expectant and nursing mother and the child are the first groups in the community to suffer. In any scheme of food distribution priority should, therefore, be given to these groups. Maternal mortality and wastage of foetal life can be caused by malnutrition. For instance, in certain areas nutritional anaemia and other dietary deficiencies account for a very large proportion of maternal deaths and morbidity, and also contribute to faulty lactation. Severe protein deficiency and a high salt intake are also dietetic factors which contribute to disease in the expectant mother. The committee drew attention to, and approved of, the nutritional requirements during pregnancy which were agreed upon in the report of the Joint Committee on Child Nutrition set up by the Food and Agriculture Organization (FAO) and the Interim Commission of WHO to give technical advice to the United Nations International Children's Emergency Fund (UNICEF) concerning nutrition and feeding programmes.⁵ Such co-operation between health and food and agricultural agencies at the international level provides an example which the corresponding national agencies should follow.

As a means of putting theory into practice it should be possible to establish a food advice bureau in each prenatal clinic where instructions and demonstrations can be given to expectant mothers. They should be advised how to buy, what to buy, and how to prepare the food bought. Information should be made available as to the foodstuffs obtainable in local areas providing the best nutritional values, in accord with habits of the local people and within their reach economically.

⁵ Food and Agriculture Organization of the United Nations & World Health Organization Interim Commission, Joint Committee on Child Nutrition (1947) *Report on child nutrition, prepared for the United Nations International Children's Emergency Fund*, Lake Success., N.Y., p. 3

In view of the nutritional problems that prevail in some countries, it would be an advantage to have nutritional programmes established which would take into consideration the nutritional requirements of mothers and children.

The committee was glad to be informed of the particular interest which FAO, UNICEF, and WHO are giving to the question of nutrition of the pregnant woman, and of the proposed session of the Joint FAO/WHO Expert Committee on Nutrition in 1952 to discuss malnutrition in mothers, infants, and children. They look forward to the conclusions which will be reached at this meeting.

4.3 *Home situation*

Whether the mother is to be delivered in hospital or at home, an appraisal must be made of the home situation, suitability for domiciliary delivery where such is contemplated, and the preparations which are being made for the baby's reception either immediately after delivery or on discharge from hospital. This of course includes not only the specific preparations which must be made, but also the environment into which the child is to be received. The appraisal of the mental and emotional health of the expectant mother, the relationship between the father and mother, and the pleasure, indifference, or occasional hostility with which they view the prospect of the birth of the child are all of importance. The reactions and comments, favourable or otherwise, of other members of the family circle must not be forgotten.

The Expert Committee on Mental Health, at its second session in September 1950, recommended that the pregnant mother should be given information about the following matters :

“ physiology of gestation and childbirth,
body changes and changes of mood or attitude during pregnancy,
sexual relations during pregnancy,
explanation of the purpose of examination procedures,
preparation (both physical and psychological) for labour,
reassurance and explanation regarding unusual developments during the pregnancy,
information to siblings,
the care, both physical and psychological, of the infant.”⁶

In many of the economically more-developed countries classes have been organized for mothers and fathers, sometimes separately, sometimes together, where they can receive information and have an opportunity for discussion. The method of health education to be used during the prenatal stage will depend on the degree of literacy of the parents. The

⁶ *World Hlth Org. techn. Rep. Ser.* 1951, 31, 8

great difficulty is to ensure that what has been heard, read, seen, or discussed has been really understood, and not given an incorrect interpretation. Herein lies one of the important values of the direct interview which should give the mother an opportunity to discuss her particular problem.

Emotional problems are probably not so important at present in the economically less-developed areas where community and family patterns are very strong, but are of considerable importance in the economically more-developed areas. In these latter areas the emotional problems of the pregnant woman are probably more related to her anxiety about the outcome of her pregnancy. This fear may be increased through faulty psychological handling during the prenatal period. On the other hand, in the economically less-developed areas the emotional problem is not so directly related to the outcome of pregnancy but is very much conditioned by the strangeness which hospital environment as well as medical and nursing procedures present to the pregnant woman. This apprehension may be minimized or aggravated by the way in which the pregnant woman is approached at her prenatal examination, whether at the hospital, the health centre, or at home.

The expectant mother in the economically more-developed areas is likely to receive advice from the physician, the midwife, and possibly the public-health nurse. It is, therefore, important that these attendants should receive more-adequate instruction than they have had up to the present time about the emotional aspects of pregnancy and the stresses which may appear in the family group as a result. Similarly, in the economically less-developed areas the importance of suitable instruction in the needs peculiar to these areas should not be lost sight of in planning schemes of training.

4.4 *Prevention of complications*

One of the main objects of prenatal care is to prevent complications during pregnancy, the delivery, and the puerperium. One of the most important of these is toxæmia, which may have grave implications for mother and child. Others to be included are hæmorrhage, anaemia, premature labour, and spontaneous or criminal abortion. In the economically more-developed areas increasing attention has been given to the incidence of prematurity as a major cause of perinatal mortality. It has been noted that the incidence of prematurity is dependent on the economic status and nutritional level of the mother, but can also be influenced by the quality of the prenatal care which she receives. There seems to be strong evidence that the employment of women outside their own homes during pregnancy increases the incidence of premature births and other complications, unless proper safeguards are instituted. This fact

should be taken into consideration in regard to the employment of pregnant women outside their own homes.

With regard to the problem of prematurity, the committee wishes to refer to the conclusions contained in the report of the Expert Group on Prematurity.⁷

When complications arise, their early recognition and treatment will help to eliminate or minimize the ill-effects. These call for the reservation of an adequate number of hospital beds. In the past, hospital beds have been used mainly for labour and the puerperium, and the fact that a substantial number of beds might be required for women suffering from prenatal complications was not fully appreciated. In the economically less-developed countries the need for prenatal beds is even greater because of so much pre-existing disease in the mother. Experience has shown in some areas that it does not necessarily follow that a woman requiring prenatal hospitalization for complications of pregnancy also requires to be delivered there. She may be able to return to her own home for delivery. As a result of the discussion, the committee came to the conclusion that the proportion of prenatal beds to the total maternity-bed capacity should be not less than 15%, but that the optimum would be of the order of 25%.

4.5 *Problem of maternity care of the unmarried mother*

The committee was glad to learn that studies by the Department of Social Affairs of the United Nations⁸ have revealed a steady progress in improvement of legislation concerning children born out of wedlock. This gives increasing assurance that health services normally available to expectant mothers and infants are also becoming available to the unmarried mother and her infant. The higher infant death-rate among these children, although not making a substantial contribution to the total infant death-rate, is unnecessary as it has been demonstrated that, given proper prenatal care and supervision, the chance of these infants surviving until the end of the first year is just as good as that of other infants. Sympathetic understanding of the expectant mother in this situation is essential, not only for her own physical and mental well-being but also for that of her child. This is too often not appreciated by those associated with her at this time, whether in hospital or in her own domestic surroundings. Recognizing that many important investigations of the social and psychological factors

⁷ *World Hlth Org. techn. Rep. Ser.* 1950, 27

⁸ United Nations, Department of Social Affairs (1950) *Legislative and Administrative Series. Child and youth welfare*, Lake Success, N.Y. (Document ST/SOA/SER.E/1); United Nations, Department of Social Affairs (1951) *Annual report on child and youth welfare. Summaries of annual reports from governments for the year 1948-1949*, New York (Document ST/SOA/SER.D/1)

associated with this problem have already been carried out, the committee was of the opinion that, because of rapidly changing social conditions and important variations in the situation from country to country, national governments should be encouraged to carry on continuing studies of causal factors associated with this problem. The committee welcomed the proposed study of the United Nations on this subject and hoped that due consideration would be paid to the psychological factors involved.

4.6 *Labour legislation and maternity protection*

The committee was informed of the great progress which has been made in many countries in the past in the development of labour legislation relating to pregnant women and the extension of the provision of maternity benefits to all pregnant women in various countries. The committee recognized that the Maternity Protection Convention, 1919,⁹ established by the International Labour Organisation (ILO), had made a substantial contribution to the improvement of these conditions. The committee was glad to be informed that in order still further to improve legislation on this subject ILO was considering a revision of the existing Convention and the adoption of Recommendations at its forthcoming General Conference, and that WHO had been asked to comment on the health implications of this Convention.

The committee approved of the recommendations made by WHO on this subject to ILO,¹⁰ and expressed the hope that ILO would include these standards in its new Convention and Recommendations and would subsequently continue to stimulate all governments to implement the new Convention.

5. Labour and Delivery Period

The proportion of hospital and home deliveries varies from country to country and is influenced by a number of factors :

(1) The number of hospital beds available, whether they can be staffed, and their accessibility to the population including the means of transport for the mother and her relations.

(2) The desire of the mother for institutional delivery and the custom of the country.

(3) The proper appreciation by the medical and midwifery professions of the type of case which should be admitted to hospital.

⁹ International Labour Office (1949) *International Labour Conference, Conventions and Recommendations, 1919-1949*, Geneva, p. 12 (Convention 3)

¹⁰ Unpublished working document WHO/MCH/38

- (4) The arrangements which are available for looking after :
 - (a) the children in the absence of the mother ;
 - (b) the household.
- (5) The economic cost as compared with domiciliary delivery.

5.1 *Relative importance of home and hospital delivery*

The economically less-developed areas sometimes feel that they ought to follow the example of many economically more-developed countries and put heavy capital investment into institutions at the expense of improved domiciliary care. On the other hand, in some economically more-developed countries an emphasis is at present being placed on home delivery.

In a situation where the provision of maternity beds is inadequate, mothers with abnormalities would necessarily have priority for admission, while the relative claims of social cases, the primigravida, and the grande multipara would have to be considered in the light of the existing situation in each area. For the same reasons, where hospital prenatal clinics are limited in number, these should be used primarily for mothers with complications, and clinics for the supervision of those women whose pregnancies are proceeding normally should be held at health centres.

Whilst it was the unanimous opinion of the committee that all abnormal cases should be delivered in hospital, there was some diversity of opinion as to whether hospital or domiciliary delivery should be encouraged for normal cases. It was considered that the safety of home deliveries depends upon the suitability of the home situation, the access to hospital facilities, the availability of a mobile unit (flying squad), and on other factors such as the availability of physicians adequately trained in obstetric care and of midwives and/or nurses. Given favourable circumstances, home delivery offers a high degree of safety and presents several advantages from an emotional and psychological viewpoint. Therefore, in areas where hospital beds are insufficient to accommodate normal cases, home delivery, with the provisions mentioned, may be depended upon as a completely satisfactory form of maternity care. Although it was felt that the fully staffed and equipped maternity hospital could implement more readily the measures necessary to combat sudden emergencies, and so offer the very optimum in physical safety, yet it was also recognized that it is more difficult in hospitals to satisfy the emotional and psychological needs of the woman during that period. In those countries with few hospital facilities, the organization of proper domiciliary services, as outlined, could very well make it possible for the hospital to take care of more selected cases, whilst still satisfying the general needs of the country.

The personnel of a mobile unit should consist of an obstetrician, a trained midwife, and, if necessary, an anaesthetist, together with equipment for blood transfusion, resuscitation, and other operative procedures. Apart from any diversity of opinion as to whether hospital or domiciliary delivery should be encouraged for normal delivery, the committee recognized that hospitals which serve as training centres for doctors and midwives need to admit a reasonable proportion of normal patients. In no sense should there be competition between hospital and domiciliary services. Each has a contribution to make to the well-being of mothers and children.

5.2 *Standards for hospital care*

In every country the public-health authority should set standards for maternity-hospital design, equipment, staffing, and practice. Inspection of all maternity homes and hospitals should also include a review of the adequacy of medical and nursing personnel. The committee was of the opinion that all maternity homes and hospitals should be under the direction of a responsible physician skilled in obstetrics, and that this should be one of the standards set by the health authority.

The large specialized maternity-hospital units should be staffed by obstetrical specialists, nurse-midwives, nurses well trained in obstetrics, and a paediatrician responsible for the care of the new-born infants. On the other hand, the simple units may well be staffed by physicians whose experience is less extensive. These units, however, should be under specialist supervision and have access to competent consulting personnel.

5.3 *Location of maternity units*

The location of a maternity unit was also discussed. Although for economic reasons it may often be desirable to place it in the grounds of a general hospital, yet it should be an autonomous unit as far as medical care and specialist nursing procedures are concerned. In certain areas the attachment of a limited number of beds to a health centre may be used as a temporary expedient.

6. **Postnatal Care**

6.1 *Standards for postnatal care*

The postnatal nursing care of a mother and infant in home deliveries may be undertaken by the midwife or the public-health nurse. Although the committee realizes that continuity of medical and nursing care is very desirable throughout the whole period, and in particular during the delivery and puerperium, it also realizes that skilled personnel are in short supply, and that this ideal may be difficult to attain. However, in no circumstances

should postnatal care be entrusted to unskilled personnel, and should abnormality occur the services of a physician well trained in obstetrics should be obtained. The mother should receive her first postnatal examination during the second week and her second postnatal examination some time between the fourth and sixth weeks after delivery. The second postnatal examination should include an abdominal, pelvic, and speculum examination, as well as an examination of the breasts, urine analysis, estimation of haemoglobin level and blood pressure, and the recording of weight.

When an adequate number of beds is available, the duration of hospital stay for mothers should be approximately ten days, the advantage being that the mother is able to get her strength back, becomes better acquainted with her baby, and lactation is likely to be better established. However, in areas where for local reasons facilities for home delivery are decidedly inferior and hospital beds are limited, it may be advantageous for the mother to be admitted to hospital even though her stay may have to be limited to five days. Any stay of less than five days is considered undesirable and should only be contemplated under conditions of serious emergency. When mothers are discharged from hospital earlier than the tenth day, they should be visited daily by a public-health nurse or midwife when possible. If this is not practicable special attention should be paid to those mothers appearing to require more intensive care. After the tenth day all mothers should receive visits at regular intervals from the public-health nurse.

Graded physical activity, including breathing exercises under medical supervision, beginning between 12 and 48 hours post partum and consisting of ambulation for increasing periods over the early days of the puerperium, was advised by the committee. It is realized that there is a difference of opinion on this matter; yet it was considered that the benefits to be derived outweigh any possible disadvantages.

Although in large parts of the world there has never been any separation of mother and infant during the lying-in period, in some countries over a period of years the practice of separating the new-born infant from the mother has become generalized. This has been recently reconsidered and every encouragement is now being given to the development of the practice of keeping the infant close to the mother during the stay in hospital. This is best achieved when the baby's bassinet is at the mother's bed-side. With such an arrangement it would be necessary to provide small nurseries for the occasional baby whose mother is ill, or the baby who is restless at night. In planning maternity hospitals a design adapted to these purposes should be worked out. Even more important, nurses and doctors, who are not always sympathetic to this arrangement, need to acquire a more thorough understanding of the intimate bodily and spiritual bond which

exists between the mother and her baby and which should be fostered by close contact. Moreover, it is just as important that fathers should be allowed to pay daily visits, even although the visits of other people are limited. Physical and structural characteristics of some hospitals may make it difficult to provide these facilities. However, every effort should be made to adapt such hospitals according to these principles. In any case, infant nurseries should be small in size and should never be crowded. The infant should always be brought to his mother for feeding, and even during the night should be fed by his mother rather than given artificial feeding.

6.2 *Breast feeding*

In many countries throughout the world breast feeding is universal, but in certain countries it has markedly declined. In these latter countries, the importance of breast feeding appears to have become less obvious with the improvement in methods and safety of artificial feeding which has gone hand in hand with a fall in infant mortality-rates. This decline in breast feeding would seem to result from an apparent inability of many women to breast-feed, either because of physical inability or psychological inhibition amounting even occasionally to repugnance. In this connexion the father's attitude to breast feeding also has an influence. Excessive exhortation, far from improving the situation, may produce a condition of such mental tension as in fact to have the opposite effect. With a view to understanding and, if possible, minimizing the anxiety that many women experience towards motherhood, including breast feeding, it is necessary to study this problem in relation to the pattern of life which has developed in the community, and its influence on the early years of the individual. Economic considerations are also factors which influence the success of breast feeding, and because of this employers should provide facilities for working mothers to continue to breast-feed their infants. Another factor which contributes to breast-feeding difficulties is the early discharge of those women who have been delivered in hospital.

In some countries a rigid routine of infant feeding has been followed in recent decades. Better understanding of the physiological and emotional needs of the infant has resulted in the adoption in a number of these countries of a more flexible pattern. This tendency is recognized as a significant advance.

6.3 *Ancillary aids*

If the mother requires domestic assistance during her pregnancy, labour, or puerperium, the services of a home help should be made available. Placement of other children of the family in a residential nursery at this

time should be avoided, and even day-time nursery care is less satisfactory than the provision of a home help. The committee was glad to note that in recent years there has been an increasing tendency in many countries to utilize the services of a home help rather than resort to the placement of children in such institutions.

6.4 *Family limitation*

In areas in which some degree of family limitation is considered desirable because of population policies, or because the well-being of the mother and the child is being affected by excessive child-bearing, or because of social or economic reasons, the giving of appropriate advice should be included in maternity-care programmes. The best time for offering such advice and instruction is during the postnatal period, due consideration being given to the family's religious and cultural background and the mother's wishes.

7. **Role of Physician, Midwife, Nurse, and Home Help**

In hospital practice the committee considers that the obstetric specialist should be in full charge of the maternity unit. As a general principle it is not considered desirable that the family physician should have responsibility for maternity beds, but every encouragement should be given to him to observe the practice of the hospital in general, and to have access to his own patients in particular. However, as in many areas of the world the number of obstetric specialists is inadequate, special attention must be given to the training of family physicians who may be working in isolated areas, single-handed, and remote from specialist help. In domiciliary midwifery the physician who answers midwives' calls is at present often inadequately trained in obstetrics. The committee is of the opinion that immediate attention should be given to remedying this defect if he is to continue to assume these responsibilities.

In so far as is possible, a physician with special interest and experience in paediatrics should be available to participate in programmes of prenatal and postnatal care. The paediatrician can then be called into consultation, when complications of pregnancy arise, in order to share the responsibility with the obstetrician for decisions which affect the health of both mother and foetus. The services of specialists in obstetrics and paediatrics should be used mainly for supervision, consultation, and teaching.

In considering the role of the public-health nurse and the midwife in relation to their functions in maternity care, attention must be given to

the variations in need in different countries and the pattern of services that has already been established. The committee, however, believes that in areas where public-health programmes, of which maternity care is a part, are still in the initial stages of development, the public-health nurse is the appropriate member of the health team for assisting the family in all matters of health, and on whom the family may rely for health teaching, health supervision, and for assistance in solving social and economic problems related to the well-being of the family.

With special reference to her work in domiciliary maternity care, the public-health nurse will, in some areas, have the collaboration of the trained midwife. She can give prenatal supervision, the actual midwifery care, and the care during the postnatal period. The midwife must, and will, be able to take her part as a member of the public-health team. In areas where the training of the midwife is not of such a high standard, the supervisory role of the public-health nurse is most important. In these cases the public-health nurse should also be a trained midwife.

In areas where large proportions of births are still being attended by untrained or partially trained midwives (e.g., dais, dukyuns, curiosas¹¹), the public-health nurse-midwife, or a trained midwife, should be responsible for teaching simple rules of asepsis and the recognition of symptoms which indicate the need for calling in the assistance of the trained midwife.

In areas where normal deliveries in hospital are made by medical personnel, a nurse well trained in obstetrics should be responsible for the nursing service. In other areas, the responsibility for the nursing service and for the delivery of normal cases in hospital should be entrusted to a well-qualified and experienced nurse-midwife, and as high a proportion of the staff as possible should be nurse-midwives. Further, if the hospital is a teaching unit all the midwifery staff should be qualified as nurse-midwives and preferably have some understanding of public health. The nursing care of the new-born infants in such a teaching unit should be the responsibility of a qualified paediatric nurse.

In some areas there are trained "home helps" who make an effective contribution to the maternity-care programme. During the mother's confinement the home help assumes the duties of the mother in the home. Her contribution is most effective when she is also a member of the health team and works under the supervision of the public-health nurse or the midwife.

¹¹ A dai is an indigenous midwife in India, with or without training; a dukyun is an indigenous midwife in Indonesia; a curiosa is an indigenous midwife in Latin America.

8. Training of Personnel

8.1 *General principles*

In the implementation of a programme of maternity care, expenditure for adequate training of personnel should take precedence over other expenditures if, in fact, a choice has to be made. The training programme should cover all physical and mental aspects of maternity care. In relation to the latter aspects, the committee supports the views expressed by the Expert Committee on Mental Health at its second session that the basic principles underlying the mental hygiene training of all public-health workers is to provide them with "an adequate knowledge of personality structure and development, and aid them in understanding and modifying human behaviour". In this committee's view "Mental hygiene training should aim at giving the public-health worker a broad understanding of human behaviour and should not consist of a formal course in psychiatry". The second point is made that "such material as is presented will be more effective if it is integrated into the various established courses in the curriculum rather than given as a separate course".¹²

8.2 *Medical student*

The modern concept that the undergraduate medical student should have his mind directed throughout the whole of his training to the preventive and social aspects of the conditions which he is studying, and their implications for the individual patient, would seem to have a peculiar aptness in relation to maternity care. In view of the fact that the family physician should have a full appreciation of the emotional problems which may arise in the family situation, emphasis should be given to those subjects in the training of the medical student in maternity care. The committee also considers that training of medical students in obstetrics should include experience in domiciliary deliveries and attendance at district prenatal and postnatal clinics as well as similar clinics attached to hospitals. Medical students are often insufficiently trained in the care of the newborn infant, in part because of the difficulties arising from segregation of young infants in nurseries. Plans must be made to ensure the provision of such training.

8.3 *Family physician*

The committee was of the opinion that a family physician practising obstetrics should have a period of six months' postgraduate training in

¹² *World Hlth Org. techn. Rep. Ser.* 1951, 31, 41, 42

an obstetric department. A physician so trained would be considered competent to answer midwives' calls for medical aid in domiciliary practice. Such physicians should subsequently be given facilities to attend refresher courses held at obstetric centres at regular intervals.

8.4 *Obstetric specialist*

The committee considers that a physician, in order to be recognized as an obstetric specialist, should have had concomitant experience in gynaecology, including major gynaecological surgery. There is variation as to the length of time required for special training in various countries, conditioned in a number of cases by the fact that great shortage of specialist personnel made adequate staffing of the midwifery services difficult. It was the view of the committee that a minimum period of three years of specialized resident training at hospitals approved for this purpose was the least which should be accepted during any period of transition.

8.5 *Nursing personnel*

The Expert Committee on Nursing has already considered the training of nurses.¹³ It has also given some attention to the training of midwifery personnel.

The Expert Committee on Maternity Care

RECOMMENDS to the World Health Organization that a joint expert committee composed of members of the Expert Advisory Panels on Nursing and on Maternal and Child Health be convened at the appropriate time to give further consideration to the training of midwifery personnel at all levels. This committee should include midwife teachers among its members. It is hoped that the proposed committee will consider midwifery training requirements for the areas where maternity care is more highly developed as well as for those in which it is less well-developed. It is suggested that, before the convening of such a joint committee, necessary information regarding the present patterns of maternity service and the training of personnel be collected from various countries.

The committee realizes that in many areas, if any early improvement is to be effected in maternity care, it will be necessary to recognize the role of the untrained or partially trained indigenous midwives (e.g., dais, dukyuns, and curiosas¹⁴) so as to make better use of their services. The training of this personnel will have to be designed to meet the needs of the

¹³ *World Hlth Org. techn. Rep. Ser.* 1950, **24**, 11; see also *World Hlth Org. techn. Rep. Ser.* 1952, **49**.

¹⁴ See footnote 11, page 19.

country concerned. The training of the indigenous midwife should be considered only as a temporary measure and the long-term programme of eventual replacement of the indigenous midwife by well-trained midwifery personnel should also be initiated, so that in a prescribed number of years there will be a sufficient number qualified for the actual midwifery service and for its supervision. In any area where training is being planned, provision must be made for control and supervision of midwifery practice through proper legislation and administration.

8.6 *Place of training*

The various types of training which have been discussed should, in the committee's opinion, preferably be given in the individual's own country. When facilities are inadequate for this purpose, the strengthening of teaching facilities should take precedence over the increase of service facilities. Facilities for visiting foreign countries should in the main be given only to those who have already spent considerable time in postgraduate training or working in their speciality in their own country or region. The committee was glad to learn that the policy of WHO had gradually changed and that the Organization was now more and more considering fellowships as part of a co-ordinated plan for the improvement of a particular phase of health services in a country. The principle is particularly applicable in the field of maternity care.

9. Evaluation of Maternity-Care Programmes

The committee considered that one of the first essentials in the evaluation of a maternity-care programme is that there should be accurate and complete registration and recording of vital statistical data, and in particular of marriages, live births, foetal and neonatal deaths, and maternal deaths by cause. The committee appreciates the need for uniformity in the compilation of data, and to this end recognized the definitions of live birth and foetal death as defined by the Subcommittee on the Definition of Stillbirth and Abortion of the Expert Committee on Health Statistics,¹⁵ and accepted as a standard of terminology the Sixth Revision of the International Lists of Diseases and Causes of Death,¹⁶ adopted in 1948 by the international conference called to consider the revision of the International Lists of Diseases and Causes of Death. On the basis of such carefully recorded data, statistical studies of maternal and child health services should be carried out periodically by national departments in

¹⁵ See *World Hlth Org. techn. Rep. Ser.* 1950, 25, 11, 12.

¹⁶ World Health Organization (1948-9) *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, Geneva, 2 vol. (*Bull. World Hlth Org.*, Suppl. 1)

co-operation with statistical experts who should be brought in at the planning stage.

In addition to statistical studies the committee recommends that local and regional studies of maternal deaths, foetal deaths, and neonatal deaths should be systematically carried out. These studies should be undertaken by committees of competent clinical specialists, pathologists, and maternity and child welfare administrative medical officers in an effort to determine not only the immediate cause of death but whether in fact the death was avoidable. From such studies means of prevention may be proposed.

The classification of the causes of maternal and neonatal death according to associated circumstances, e.g., age, parity, antecedent disease in mother, varies greatly at the present time from country to country, and it is recommended that appropriate bodies should study the formulation of a uniform classification and uniform records for worldwide use.

10. Conclusion

Throughout the course of its deliberations the committee has endeavoured, so far as the information was available, to keep clearly before it the differing stages of economic development in various parts of the world, and the differing needs of maternity care as well as of other aspects of public health. The committee appreciates that it is not possible to lay down a comprehensive plan which would be applicable to all countries, yet members were in agreement to recommend certain standards of maternity care for implementation in stages, and over a period of time, in those countries where there has been as yet little development. At the same time the committee considered that in certain directions the development of maternity care in the economically more-developed countries has not always proceeded on the soundest lines. It is its hope that the recommendations made in this report will serve as a guide to governments in instituting this service which has such an important bearing on the health and well-being of the community. In common with the Expert Committee on Nursing¹⁷ it has been impressed with the need for fundamental research to determine basic health needs.

The Expert Committee on Maternity Care

RECOMMENDS that the World Health Organization undertake fundamental research to determine the real health needs of peoples, and study in this connexion the need for maternity care and the way in which this may best be satisfied.

¹⁷ See *World Hlth Org. techn. Rep. Ser.* 1950, 24; 1952, 49.

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