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MATERNITY AND CHILD WELFARE SERVICES IN INDIA

The services for mothers and children aim at meeting the specific needs of these vulnerable groups of population. The services are provided within the framework of the family and the community and form an integral part of the health services of the country.

In order to ascertain that money, skill and efforts devoted to the development of health programmes for mothers and children are best utilised and to evaluate the work done, it is necessary to review the services during the last sixty years or so. A glance at the past developments indicate that (i) during the early years, the voluntary organisations played a valuable role in initiating and in maintaining the services for mothers and children; (ii) the year 1938 marks the beginning of a scientific approach to maternity and child welfare services; (iii) there is a period of transition when the Union and the State Governments assumed responsibility in respect of these services; and (iv) the present trend is to provide the services as a part of the over-all health services of the area.

Early Developments

The maternity and child welfare work in this country dates as far back as 1902 when efforts were first made to improve maternity services and thus reduce maternal deaths and the havoc of child birth. The programmes then instituted included training schemes for rural midwives known as "dais". The idea of having separate hospitals for women, however, originated still earlier in 1886 when a voluntary organisation, "The Association of Medical Aid to Women of India by Women" was formed for the purpose. Women's hospitals were established in several places and were staffed by women to enable those women to attend hospitals who on account of social and other reasons did not like to attend general hospitals and dispensaries staffed by men physicians.

It was soon realised that the practice of the dais so trained should be supervised; as a result, training of "midwifery supervisor" and health visitor was instituted and the Lady Reading Health School, Delhi was established in 1918.

The child welfare work was initiated a little later by another voluntary organisation, "The Lady Chelmsford League for Maternity and Child Welfare work in India", constituted in 1921. The child welfare movement in India corresponds to the period when the services for mothers and children were intensified in England and the Child Welfare Act was passed (1918). The League collected funds and with the income from the funds it assisted different local committees in the States to establish nuclei of services for children. In 1931, the entire work for maternity and child welfare was co-ordinated by establishing a

maternity and child welfare bureau under the Indian Red Cross Society, with a Director in charge who functioned as technical adviser to all voluntary and official organisations undertaking maternity and child welfare work, including the Armed Forces. The Indian Red Cross Society was thus an important voluntary organisation to promote maternity and child welfare services and administered all funds of the two Committees, the Victoria Memorial Scholarship Fund and the Lady Chelmsford League.

The Central Board of Health appointed a special committee in 1937 to report on maternity and child welfare services in India. Later, the Health Survey and Development Committee appointed by the Government of India made a review of the services in 1946. These committees have made valuable recommendations for promoting the health services for mothers and children and for giving priority to the health programmes relating to the health and welfare of mothers and children.

It is only since 1948 that the Government of India have assumed responsibility for providing technical aid to the States in developing health programmes for mothers and children. During the last 12 years, the State Governments have assumed considerable responsibility in respect of maternity and child welfare services.

Since Independence, rapid developments have taken place in various fields. The health programmes have also expanded simultaneously. Under India's rural development programmes, the "Community Projects" have been established which have primary health centres. The health services for mothers and children received special attention under India's Five Year Plans. They form an integral and an important part of rural health services. The international aid has been most useful in developing programmes for mothers and children and in establishing training schemes to train the staff required to man the services. A study of the progress made in the last two decades will give some idea of the general trends in the promotion of health services for mothers and children, and the improvements made in their administration and organisation and in the training of health personnel required to man the services.

Services for Mothers and Children in 1938

The year 1938 marks the beginning of a new era in the health services for mothers and children and a detailed review of the services as existed during that year would give some indication of the trends in their subsequent development.

(a) *Extent and scope of services:* It will be seen that the earlier work was mainly voluntary and the services functioned as isolated health programmes for mothers and children. With a total number of approximately 12 million births annually in India and a high maternal mortality, the need for maternity services in urban and rural areas was recognised. Attention was, therefore, paid to maternal care and to meet the demand for midwifery services.

In 1938, there were 800 maternity and child welfare centres scattered over the country. The institutional services were largely

in the cities and provided 9500 midwifery beds. If judged from the standard of 1 bed per 100 births, the number of maternity beds in some of the urban areas were more than 1 bed for 100 births (1.3 beds for 100 births), but for the country as a whole the services were most inadequate (.09 beds per 100 births).

The paediatric services existed in some of the important cities, for example, the J.J. Hospital, Bombay, the Children's Units at the Presidency General and the Chittaranjan Seva Sadan Hospitals, Calcutta, the newly constructed Children's Units at the Ghosha Hospital (Kasturba Hospital), Madras. Some of the large women's and general hospitals maintained a few beds for children.

(b) *Working of maternity and child welfare centres:* The staff of the centres consisted of part-time doctors (mostly licentiates) at some centres in urban areas, one or more health visitors and midwives and trained dais. The population served by the centre was 10 to 20,000 in urban or rural area. The activities of the centre were medical examination and advice for expectant and nursing mothers and for infants and children, home delivery service and supervision of dais' practice, and health education of the parents and the family on subjects which would help the family in improving the home and the care of the new-born. In some of the centres, milk was provided for nursing and expectant mothers and children. Facilities for bathing of children were also provided. The centres were poorly equipped and only one-third were adequately staffed. There were no arrangements for regular supply of drugs and diet supplements. There was no liaison with the nearby hospitals and very little supervision and technical guidance for the staff.

(c) *Training of health personnel:* The training programmes were also limited. Instructions in paediatrics, apart from medicine, were almost non-existent. Bombay's J.J. Hospital was the first to introduce lectures in children's diseases in 1928.

The teaching of obstetrics was good and regulated by the Indian Medical Council. The arrangements for instructions and experience in obstetrics were limited in some of the medical colleges where women preferred to be attended by women. Instructions in domiciliary midwifery work was not provided.

The Countess of Dufferin's Fund co-operated with the Government of India in 1933 in establishing a department of maternity and child welfare at the All-India Institute of Hygiene and Public Health, Calcutta, to enable the Institute to include instructions in maternity and child welfare in the D.P.H. courses and to establish D.M.C.W. courses for doctors desirous of taking maternity and child welfare work. Later, in 1939, the Department was financed by the Government of India.

Training of Nursing Personnel, Professional and Ancillary

In order to staff maternity and child welfare centres, training courses were organised for health visitors (midwifery and public health) in some of the States. In 1938, there were seven schools for the purpose, with an annual training capacity of 100 health visitors, but only half the number of health visitors were trained annually.

A large number of candidates underwent 18 months' courses in midwifery at the different midwifery schools. With a view to improve midwifery services in rural areas, the scheme for training of dais under the Victoria Memorial Schemes continued.

(d) *Research in maternal and child health subjects:* In 1936, the Indian Council of Medical Research appointed the "Maternity and Child Welfare Advisory Committee" to deal with research in various aspects of maternity and child health. The council financed studies into the causes of maternal deaths in the cities of Calcutta (1936-37) and Bombay (1937-38). Some of the findings of these investigations still hold good. Investigations into the causes of anaemia were conducted in the city of Calcutta (1938) as an outcome of the two reports.

(e) *Administration:* The State Governments assumed very little responsibility in respect of health services for mothers and children. The Government of Madras was the only one which had provided for administration of maternity and child welfare services in 1931 and appointed an Assistant Director of Public Health in the office of the Director of Public Health. The Indian Red Cross Society continued to assist and provide technical guidance to its State Branches and other voluntary organisations. The Corporations and Municipal authorities provided very limited services for mothers and children. Some of the Corporations maintained a few maternity and child welfare centres and maternity homes. The numbers were far too few as compared to the size of the cities and the number of births. The services were largely maternal care and provided for one-third of the births even in the progressive Corporations.

The Central Board of Health appointed a special committee in 1937 to report on maternity and child welfare. The Committee went into great detail and made very useful recommendations on administration, provision of technical guidance and on training of health personnel to man the services.

It will thus be seen that by 1938 there was awakening to the need for organised health programmes for mothers and children and preliminary steps in this direction were in progress.

Maternity and Child Welfare Services from 1938 to 1947

The services more or less remained the same as in 1938 with very little improvements and expansion. During this period, the States of Bengal, Orissa and Punjab established posts of Superintendent, Maternity and Child Welfare in the State Health/Public Health Directorates. In certain States, the Government made grants in aid to the State branches of the Indian Red Cross Society to undertake maternity and child welfare services. In States where there was good direction and arrangements for technical guidance at State level were available, the services offered by the maternity and child welfare centres improved and the number of centres increased.

As a result of high cost of commodities, the cost of services went up during the years of war and the local Committees found it difficult to maintain the services. Due to import restrictions and increased prices the new centres were not properly equipped.

The need for services for mothers and children was, however, increasingly recognised and the existing services were popular. In 1943, the Health Survey and Development Committee appointed by the Government of India again went into the health programmes for mothers and children and made very useful recommendations for giving priority to these services and to develop them as an integral part of the health services of the rural areas. The Committee also made recommendations on the training of personnel to man the services for mothers and children.

Thus greater urge was created during this decade and the Union and the State Governments were prepared to accept the responsibility in respect of health services for mothers and children more readily.

During the period under review, voluntary efforts began to increase and two important organisations, the Kasturba Gandhi Memorial Trust and the Indian Council of Child Welfare, came into being. Both organisations function on an all-India basis and have State branches. The former is engaged in promotion of education and services for mothers and children in rural areas. The services include medical and midwifery services, care of children and other educational activities.

The Indian Council of Child Welfare has a Children's Bureau at its headquarters, which assists the State branches in establishing services for children. The services are largely recreational, cultural and educational.

Progress of Maternity and Child Welfare Services since Independence

In 1948, the Union Government focussed the attention of the States on the need for services for mothers and children. The Ministry of Health, Government of India, established the post of Adviser, Maternity and Child Welfare in the Office of the Directorate General of Health Services. The WHO and UNICEF assistance came forward at the same time and has been valuable in enabling the States to improve and expand these services. In the initial stages of development, the existing services were improved and attention was paid to training of health workers to man the services. In order to ensure that the health programmes for mothers and children do not lag behind, the general development programme, comprehensive maternity and child welfare projects were undertaken with UNICEF and WHO assistance in 12 States. These projects aimed at (i) improved and increased training of health personnel; (ii) establishment of model health services; and (iii) strengthening of administration of maternity and child welfare services at State and local levels. The UNICEF provided equipment to training institutions and for some of existing schemes as well as for new programmes established by the State as model services. The State Governments provided national staff at the State level to direct the services, to expand training schemes and to provide technical assistance. The WHO provided technical personnel to assist the national staff in developing the services and the training of health personnel.

Each State project was planned jointly by representatives of the Government of India, the WHO and the UNICEF in consultation

with the State authorities. The projects were so planned as to meet the immediate requirements of the State taking into account the resources of the State in the way of services, personnel, funds and future expansion.

Much progress was made in the States under these projects. The main achievements may be listed as follows:

(1) *Maternity and child welfare bureaux:* The States undertook the programmes and established maternity and child welfare bureaux and placed them under doctors with training and experience in maternity and child welfare work, designated as Assistant Director of Health Services or Assistant Director, Public Health (in States where Medical and Public Health services were separate). The States began to assume greater responsibility in respect of maternity and child welfare services and adequate budget provision was made for financing the schemes.

(2) *Expansion of services:* Meanwhile, the development programme under the First Five Year Plan began to take shape and central assistance was provided to the States for expanding maternity and child welfare services in the backward areas. A sum of Rs. 50 lakhs was provided for this purpose. A sum of Rs. 15 lakhs was provided for expanding the training schemes for health visitors and midwives to staff the proposed primary health centres and maternity and child welfare centres in the States. Funds were provided for expanding the department of maternity and child welfare at the All-India Institute of Hygiene and Public Health, Calcutta.

The assistance of UNICEF and WHO under the State Maternity and Child Welfare projects was utilised to enable the States to take maximum advantage of the provisions under the First Five Year Plan in promoting maternity and child welfare services and in implementing the State health programmes under the State M.C.H. projects.

The State Government expanded maternity and child welfare services in the States and improved the existing centres in the way of buildings, staff and services. The UNICEF provided equipment for the existing as well as the new centres. The WHO technical experts, medical and nursing, worked with the Assistant Director of Health Services (MCH) and assisted her and the other staff, both medical and nursing, in developing the services.

Under Central assistance, the State Governments established 200 maternity and child welfare units and 700 existing maternity and child welfare centres received UNICEF equipment. A total of 1069 maternity and child welfare centres were established by the States and received UNICEF aid under the State M.C.H. projects.

(3) *Expansion and improvement in the training of health personnel:* Assistance was provided by the Union Ministry of Health to the States for improving and expanding the health schools and a sum of Rs. 7.50 lakhs under the First Plan and Rs. 26.50 lakhs under the Second Plan were earmarked for the purpose. The existing nine health schools were improved and further expanded. The

UNICEF provided teaching equipment and in some States the WHO provided necessary technical staff to assist the national staff to develop the training as one of the activities under the State M.C.H. project. The Central Government and the States provided funds for additional cost of buildings, services of staff and stipends for trainees.

The health visitors' course was changed into a 2½-year-course to include instructions in elementary nursing, midwifery and public health instead of 18 months' training in public health for qualified midwives. In these States where adequate number of nurses were available, 3 months' short orientation courses in public health were conducted for nurses (States of Bombay and Madras) and the assistance under the health school was utilised for these courses. During the First and Second Five Year Plans, 1754 health visitors were trained and 343 nurses had public health orientation at the 21 health schools.

Training of midwives was substantially extended and improved. A 2-year Auxiliary Nurse Midwifery course was introduced and is to gradually replace the 18 months' midwifery training. 2400 midwives were trained during the First Plan. During the Second Plan, 2600 midwives and 800 Auxiliary Nurse Midwives are being trained annually. The State M.C.H. projects provided for improved standard of teaching.

With a view to provide improved facilities for training doctors and nurses in child care, the paediatric services in the hospital were improved and expanded. Similarly, the obstetric units and facilities for the care of the new-born were improved and arrangements were made for field training. The budget allocations of the States were substantially increased and the State Government took active interest in promoting health services for mothers and children.

By the end of First Plan, the States had maternity and child welfare bureaux in charge of Assistant Director, Health Services or Public Health and good progress had been made in each State.

The experience gained in implementing the health programmes for mothers and children in the States and in expanding the training programmes was most useful in formulating schemes for the Second Plan and in utilising international assistance during the Second Plan.

Health Services for Mothers and Children under Second Five Year Plan

Under the Second Plan, the maternity and child welfare services became an integral part of the overall health services in the rural areas. The services established under the maternity and child welfare State M.C.H. projects and under Central assistance are now gradually absorbed in the primary health centres. The training schemes for health personnel were further expanded and improved and Central assistance was provided for the purpose. The M.C.H. State projects were replaced by Public Health projects.

Maternity and Child Welfare Services in Rural Areas

By the end of the Second Five Year Plan, it is expected that 2692 primary health centres will be established. Maternity and child welfare services are developed as an integral part of these primary health centres. The population served by each centre is 60,000 to 80,000 and corresponds to a Development Block. The States receive Central assistance and UNICEF and WHO assistance under the State Public Health project. The services for mothers and children include the following:

(a) *Improved maternity services:* Each primary health centre has a main centre and 3 or 4 sub-centres. Each of the four sub-centres have midwives/auxiliary nurse midwives. At the main centre, there is a medical officer and a health visitor/public health nurse who assists the midwives in developing their work at the sub-centre. The main centre and sub-centres receive M.C.H. equipment under UNICEF aid for primary health centres.

Health visitor/public health nurse/the midwife organises ante-natal examination of cases, follows them in the homes along with the dais of the particular village. She also conducts post-natal clinics and visits the mothers in the home during the lying-in period and advises them on health and hygiene and on the care of the new-born.

The health visitor and midwife conduct training of dais working in the area of the sub-centre and thus ensure that the dais know simple techniques of asepsis and delivery and can be entrusted to render midwifery service. On completion of their training, the midwife continues to assist them and thus keeps in touch with them. She imparts simple advice on diet during pregnancy and nursing period, on hygiene and care of the new-born. Thus, the midwife has the role of midwife supervisor and health educator at the village level.

The midwifery services of the primary health centre are supplemented by the services provided by the Social Welfare Board. The State Boards provide maternity services as an activity of the welfare programmes for mothers and children. Each project corresponds to the Community Block and provides social welfare activities. The maternity work under the project includes provision of a trained dai who is employed on a salary and is required to attend at confinements in approximately 5 villages. The work of trained dai is supervised by the health visitor of the primary health centre and the midwife of the sub-centre.

It has been our experience that unless midwifery demands of the area are met it is difficult to establish services for the child. The First and Second Five Year Plans have, therefore, paid much attention to maternal care.

Most of the primary health centres have few beds. Two to six beds are set aside for midwifery cases. The number of beds at the primary health centre varies in different States. If judged on the

standard of one bed for 100 births the present provision of beds is most inadequate.

The midwives of the primary health centre, along with the assistance of trained dais and the dais in employment under Social Welfare Board, can give a reasonable standard of maternity services.

(b) *Child welfare services*: Very limited direct, health programme for children can be expected with the present staffing pattern of primary health centres. Children have the benefit of improved environmental health and disease control measures. Medical aid is provided for mothers and children.

The health visitor at the primary health centre provides services for children in a limited area around the centre and holds infant and children's clinics along with the ante-natal and post-natal clinics and refers cases requiring medical aid to the doctor. She arranges for vaccination at the main centre and at the sub-centres for children under the care of the centre. She also conducts mothercraft classes and other health education programmes. She is, however, able to follow a small number of new-borns for close health supervision and advises the mothers and families. The population covered by intensive services is 8,000 to 10,000 (or 300 births).

(c) The maternity and child welfare services help in getting more accurate data on births and deaths.

(d) The services for mothers and children are popular and help to contact the families and act as the pivot on which the other health services for the family rotate.

There are 759 primary health centres which have full staff, and UNICEF assistance has been provided to these centres. It is envisaged that when the target of nearly 5000 (4938) centres is reached, a frame-work of services as stated above will cover the entire country. The future health programmes will be based on them to provide a comprehensive health service for mothers and children as well as to ensure full opportunity for their complete mental, physical and social growth.

Besides the services provided under the primary health centres, there are maternity and child welfare centres in urban and rural areas. There are approximately 4000 maternity and child welfare centres, each serving a population of 10,000 to 25,000. One-third of the centres are located in urban areas and two-third in rural areas and provide services for mothers and children in the rural areas. It is estimated that 20% of the births in the rural areas are covered by these services and 5% of the children receive close health supervision.

Midwifery and Paediatric Services

(a) *Midwifery*: As stated earlier, the institutional services are largely concentrated in urban areas. In rural areas, they are established in association with the primary health centres. There has been considerable increase in institutional midwifery and paediatric beds since 1948.

TOTAL MATERNITY BEDS (INDIA)

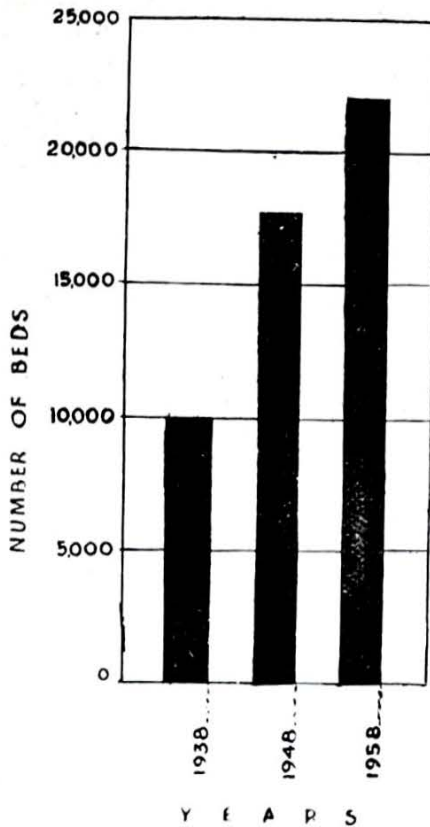


CHART I

There are at present 22,000 maternity beds in large maternity hospitals, hospitals associated for teaching of obstetrics at the 57 medical colleges, in the district hospitals and maternity homes and at the primary health centres in the rural areas. During the last 20 years or so, the maternity beds have more than doubled. However, if judged on the basis of 1 bed per 100 births, the existing beds in the country are far too few, as the ratio works out to .34 beds per 100 births. Some of the large cities, however, have adequate provision and the ratio is more than 1 bed for every 100 births (12 beds for 100 births) (*vide table 1*).

TABLE I
ADEQUACY OF BEDS
per 100 births

	<i>Urban</i>	<i>Rural</i>	<i>Urban & Rural</i>
1938	0.1	0.09	0.11
1948	—	—	0.26
1958	1.2	0.06	0.34

(—not available)

In large cities, the demand for maternity beds has considerably increased, as 90% of mothers in the important cities deliver in institutions. In the town, approximately 50% of the births take place in hospitals and 70% have skilled care (institutional and domiciliary). The demand for domiciliary midwifery services in urban areas is getting less owing to lack of proper housing and lack of assistance in the home as well as due to people being more hospital-minded. As a result, the maternity hospitals in the large cities are over-crowded and mothers are discharged from the hospital as early as the third day of confinement.

In rural areas, there is still a demand for home delivery, and domiciliary midwifery services are rendered by the midwifery staff of the primary health centres and maternity child welfare centres. More than 90% of the births take place in the homes. The staff of the primary health centres and maternity and child welfare centres cover approximately 20% of the total births in the rural areas.

TABLE 2

PERCENTAGE OF BIRTHS THAT RECEIVED SKILLED CARE

	<i>Cities</i>	<i>Urban areas</i>	<i>Rural areas</i>
Skilled maternity care for Births	90%	70%	20%

Ante-natal and Post-natal Services

A large number of maternal deaths are preventible [1938 Report on Maternal Mortality, 98% avoidable factor—70% in 1954 (Bombay Report)]. Much attention is, therefore, paid to ante-natal care. In large teaching hospitals, 10% of the maternity beds are earmarked for ante-natal care. Complications of pregnancy requiring hospital treatment are cases of hypermnesia, toxæmia, anaemia, ante partem, hæmorrhage, threatened abortion and others. The maternity institutions in urban areas have ante-natal clinics and are well-attended. The maternity and child welfare centres in urban and rural areas and the primary health centres provide facilities for ante-natal examination at the centres and the health staff visit the homes and maintain contacts with the mothers. Ante-natal advice and mother-craft teaching is done both at the centre and in the homes. Drugs and diet supplements are provided for treatment and to prevent certain nutritional conditions during pregnancy.

Owing to increased demand for beds, the mothers and new-borns are discharged early (third to fifth day). The mothers receive post-natal examination at the time of discharge. Only a few of the hospitals have well-organised post-natal clinics where the mother and the new-born are examined systematically.

The maternity and child welfare centres have post-natal clinics often combined with infant clinics. The mother receives examination and advice on diet and care of the new-born. The mothers

receive diet supplements, milk, iron and vitamins. Only a small percentage of mothers receive good post-natal care which includes general examination of the mother and child, pelvic examination of the mother, determination of haemoglobin, blood pressure, albumin in the urine and continued health supervision. The family planning advice and the infant welfare work can best be promoted through well-organised post-natal clinics.

Paediatric Services

The development of paediatric services is recent. In order to equip medical men in child care, provision was made under the Second Five Year Plan to improve paediatric services at the hospitals attached to medical colleges and provide improved facilities for the teaching of paediatrics. A provision of Rs. 45 lakhs was made for the purpose. Central assistance has been provided to five medical colleges for developing paediatric services and to improve training of doctors and nurses. Under this assistance, paediatric training schemes are in progress at the Medical Colleges in Madras (Upgraded Department of Paediatrics), Bombay, Hyderabad, Trivandrum, Agra, Darbhanga and Dibrugarh. Assistance is also provided for equipment and for recurring expenses. The grants are on a matching basis. The State Government is required to maintain minimum standards in respect of staff, equipment and services. The assistance from the UNICEF and WHO has been valuable in developing the paediatric services and the teaching programmes for doctors and nurses. The UNICEF have provided equipment and scholarships, whereas WHO have provided paediatricians and nurses to assist the National staff. The upgraded department of paediatrics, Madras gives post-graduate courses, and the Government of India and UNICEF provide scholarships to deserving students undertaking the course. The paediatric departments at other medical colleges provide facilities for under-graduate training and some offer DCH and MD courses.

In order to arrange experience for medical students and nurses in paediatrics and to enable them to observe the growth and development of children, peripheral paediatric clinics have been established in association with the existing maternity and child welfare centres located near these hospitals.

Earlier, improvement in paediatric services was included in the State maternity and child welfare projects implemented in the States under the State M.C.H. programmes. Paediatric services were improved and expanded at Lucknow, Rajkot, Jamnagar, Bhavnagar, Nagpur, Trivandrum, Hyderabad, Darbhanga, Dibrugarh, Poona and Delhi. The improved facilities were utilised for teaching of doctors, health visitors and midwives.

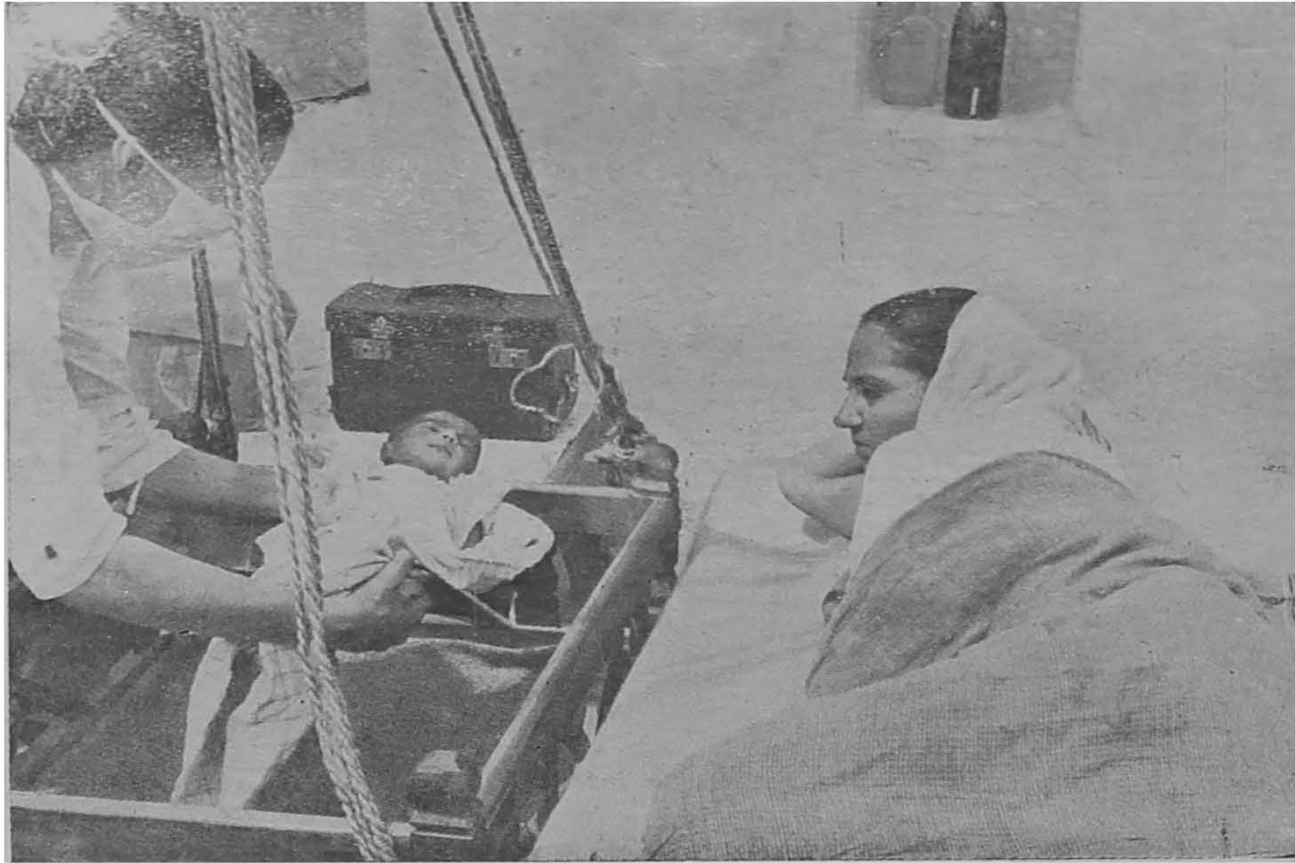
Special provision was made for the care of the prematures. It is estimated that in India 20% of the births are prematures (Bombay) and that prematurity is the major cause of deaths in the neonatal groups. Premature units have been established in Bombay, Nagpur, Madras, Trivandrum, Hyderabad and other places in association with the paediatric and obstetric units.



Examination of child at a Welfare Centre



Mother helping the child to take solid food



Post-natal care at home.



Preparation for delivery at home

The care of new-borns in the hospitals has also improved in the maternity blocks of hospitals. The voluntary organizations have also played a valuable role in providing paediatric services. The Child Health Institute, Calcutta and the units attached to Vellore and Ludhiana Medical Colleges are all efforts of voluntary organisations. The units at Vellore and Ludhiana are associated with the medical colleges.

The Central and the State Governments have also financed certain paediatric services, viz., the improvement at the Chittaranjan Seva Sadan Hospital, the Medical College Hospitals at Patiala, Amritsar, Indore and Patna. Azad Medical College, Delhi and other medical college hospitals have paediatric units. The Kalavati Saran Hospital in Delhi is associated with the Lady Hardinge Medical College.

There has thus been considerable expansion in paediatric services during the last few years. There are nearly 4000 paediatric beds in the country located in the large hospitals and in some of the women and children's hospitals of the country.

In a country with high mortality and morbidity among children due to ignorance, malnutrition and disease, the existing beds do not meet the requirements of the country. Once the importance of paediatric service and paediatric training have sufficient recognition the services are bound to expand and improve.

School Health

Only a small proportion of children receive health supervision during school age. Some of the local bodies in urban areas maintain school health services. It is estimated that 50% of school-age children are covered by these services in areas where school health services have been established. The Government of India have provided assistance to the States to establish school health services as pilot projects in certain districts. Under this assistance, States have undertaken to provide school health services in rural areas in association with the primary health centres.

The staff of the primary health centres are required to provide school health services in certain States. In some States, the medical officer receives additional remuneration for this work. With the multifarious duties of the doctor and the pressing demands for medical aid, it is difficult for him to devote the necessary time to school health work.

A large-scale school feeding programme is in progress under UNICEF assistance and about one million children of school-age are covered by that programme.

Pilot schemes for school health services included in the State maternity and child welfare projects of Bengal, Delhi and Hyderabad are in progress.

Some of the district hospitals and primary health centres have dental clinics which provide dental care for mothers and children.

Child Guidance Clinics are attached to some paediatric and other teaching units. Funds are provided under the Second Five Year Plan to provide facilities for teaching child psychology and at the same time provide facilities for treatment of children with behaviour problems. Thirteen Child Guidance Clinics were established in association with the teaching institutions. There are 18 Child Guidance Clinics located in important urban areas, thirteen of which were established under Central assistance.

Services for Handicapped Children

In some States, voluntary organisations formed Societies for the Rehabilitation of Crippled Children. In Bombay, the Society has been instrumental in establishing the Children's Orthopaedic Hospital with 50 beds. The hospital has a large physiotherapy department. The hospital is financed by the Bombay Corporation. The Government of India have established the All-India Institute of Physical Medicine and Rehabilitation to which UNICEF has given assistance. The Artificial Limb Centre in Poona under the Armed Forces also provides services for orthopaedically handicapped children.

The orthopaedic department of large hospitals provide surgical and physiotherapy treatment for crippled children.

Certain voluntary societies, namely, the Children's Aid Society, Bombay and the Budh Pet in Calcutta provide services for the mentally handicapped children.

At present, there is no provision for medical rehabilitation of other groups of handicapped children, besides the services at the government hospitals. Some Eye departments organise Eye camps and have educational programme for prevention of blindness.

Maternity Mortality and Morbidity

India is still among those countries which have a very high maternal mortality rate. As a result of improved provisions for maternal care there is some reduction in maternal mortality and morbidity. The maternal mortality has reduced by 50%. It was 20 per 1000 live births in 1938 for the country as a whole. It is now 10 per 1000 live births for the rural areas (estimated) and 12.4 for the country as a whole (urban and rural). In large urban areas it is much less, 2.5 per 1000 live births. The deaths and illness on account of sepsis have considerably reduced—2.8% of all maternal deaths due to sepsis (1958) as compared to 32% in 1938. There is general reduction in the incidence of severe cases of anaemia in areas where ante-natal services are well established. Malnutrition, specially due to deficiency of protein, is still an important factor. Deaths

due to haemorrhages have increased. Of all maternal deaths, 17% in 1954 were due to haemorrhage (Bombay) as compared to 9.4 in 1937 (Bombay) (Chart II).

MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS

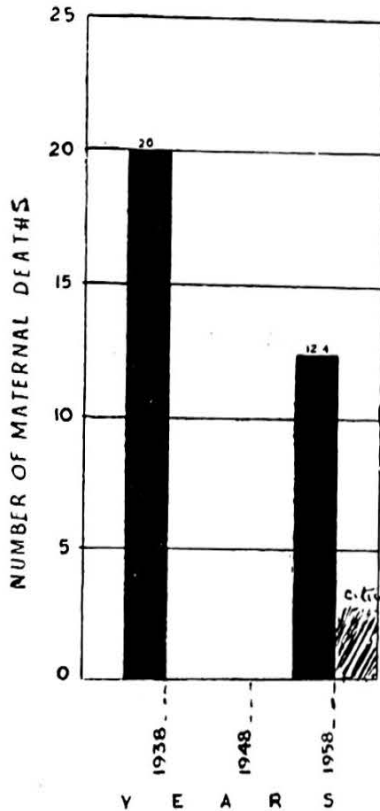


CHART II

Infant and Child Mortality and Morbidity

There is a steady decline in infant mortality since 1920, indicating that the direct programmes have been helpful. Over the last 40 years, there is more than 50% reduction in infant mortality rate. The decline is more rapid since 1940 and is much more marked during the years 1950-58. It is likely that the infant mortality is higher than the recorded rate, but there is definite decline during the last few years (Chart III).

INFANT MORTALITY PER THOUSAND LIVE BIRTHS

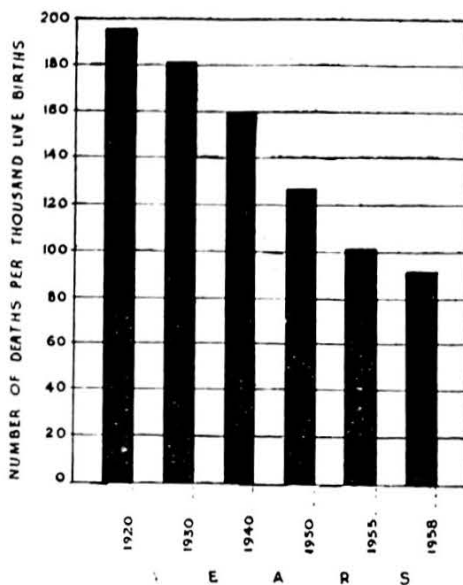


CHART III

In 1938, infant deaths were almost a quarter of the total deaths of the country, whereas in 1958 they formed 18.8% of the total deaths, indicating that in 1958 one out of every six deaths was that of an infant as compared to one out of four deaths in 1938 (Chart IV). Infant death percentage of total live births is shown in Chart V.

PERCENTAGE OF INFANT DEATHS OUT OF TOTAL DEATHS (INDIA)

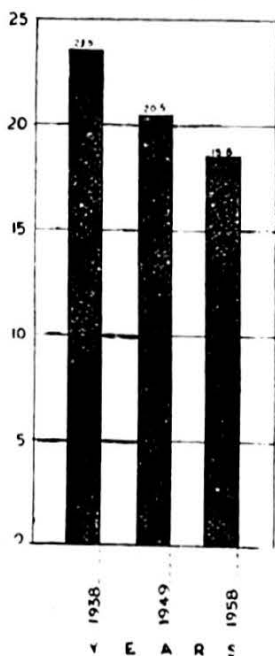


CHART IV

INFANT DEATHS EXPRESSED AS PERCENTAGE OF TOTAL NUMBER OF LIVE BIRTHS

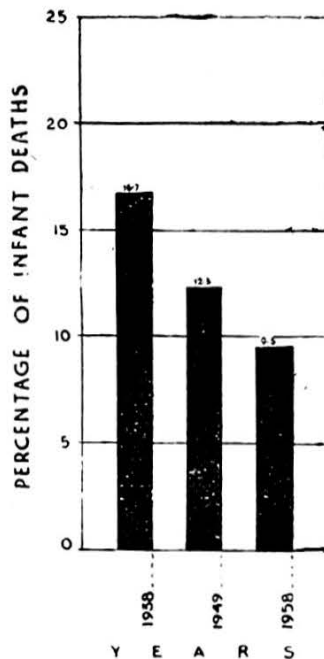


CHART V

Special investigations into the incidence and causes of infant mortality were undertaken in Madras in accordance with a memorandum drawn up by the I.C.M.R. in a rural area covered by the Poonamallee Health Unit. The findings of this enquiry (1953) show that neo-natal deaths form 32·5% of the total infant deaths as compared to the 1938 findings, when it was much higher (40%). The chief cause of death during the first month is prematurity. The premature form nearly 20% of the live births if calculated on a birth weight of 5 lbs. less (Bombay). The chief causes of deaths in the age-group of 1 to 12 months were: gastro-intestinal diseases (25% of the deaths) communicable diseases (7·48% of the deaths) and malnutrition (15·4% of the deaths).

There is a definite downward trend in the mortality rates of mothers and children. The reduction in infant mortality is much more marked in the age-group one to twelve months. There is decline in mortality in the age-group one to four years. The chief causes of deaths are digestive, communicable and respiratory diseases. Malnutrition is a predominant factor in the age-group one to two years. Although data are not available, it appears that tuberculous meningitis in children is on an increase, as judged from the admissions to the paediatric wards of the hospitals.

The mortality is least in the age-group 1 to 6 months and is more in the age-group 0 to 1 month and 12 to 18 months. The latter is due to poor management during weaning and ignorance of feeding and care of children.

Training of Health Personnel to man Maternity and Child Welfare Services

1. *Training in maternity and child welfare for doctors:* The Department of Maternity and Child Welfare at the All-India Institute of Hygiene and Public Health, Calcutta, first established in 1933, was expanded in 1950 to enlarge the scope of training. International assistance was most valuable in expanding and in improving the facilities for teaching. The paediatric section of the Chittaranjan Seva Sadan Hospital was developed to provide facilities for experience in paediatrics for the D.M.C.W. students as well as to provide D.C.H. course in paediatrics. The Government of India and UNICEF provided scholarship for doctors undertaking the D.M.C.W. course on the basis of fifty-fifty and admission to the course were raised to 30 a year. By 1938, only a few (23) doctors had taken the training. Since 1953, a much larger number of candidates are taking advantage of the training. A total of 123 doctors have taken the D.M.C.W. course. The course is of one academic year and equips doctors in general public health and in maternal and child health with special reference to prevention of disease and promotion of health. Instructions include maternal care and child care, including psychology, obstetrics and paediatrics, health education and such subjects which would be helpful in promoting the health of mothers and children and in reducing preventible diseases and deaths. The students gain practical experience in urban areas of Chetla and the rural areas of Singhur which have been specially developed for this purpose. The D.P.H. and the D.M.C.W. courses are conducted at the same time and certain subjects are common to both the groups.

Orientation Courses

(1) The State Government sponsors staff of primary health centres for short orientation of 2 months' duration in public health at one of the three centres, Najafgarh (near Delhi), Singhur (near Calcutta) and Poonamallee (near Madras), which have been developed for the purpose. Maternity and child welfare is included in the instructions and maternity and child welfare staff is also deputed for the purpose.

(2) The Government of India have arranged special orientation courses for different subjects for doctors and nurses.

Orientation courses in maternity and child welfare were arranged at Calcutta (1957) and Hyderabad (1959) for women doctors working in maternity and child welfare programmes. The duration of the course was 2 months. Similarly, courses are arranged for nurses in paediatric nursing and for midwifery tutors.

(3) The State Government have established orientation training centre for orienting the existing staff in public health and in maternity and child welfare. Some of the training fields were developed in association with the State MCH projects. The State of Maharashtra (former Bombay State), Andhra Pradesh (former Hyderabad State) and Kerala State have done outstanding work.

Seminars

(i) A seminar was arranged for the Assistant Directors, Health Services (MCW) and other MCH officers from the different States at the A.I.I.B. and P.H., Calcutta in 1956. The duration of the Seminar was one month. 16 officers attended and discussed various aspects of the services and gave some thought to their development in the future.

(ii) A joint seminar of State MCH officer and paediatricians was held at the Institute in Calcutta during 1960 to enable them to exchange their views on measures for the promotion of services for children and to bring about greater co-operation in the field and institutional services.

Teaching of Obstetrics

The teaching in obstetrics for the medical graduates is in accordance with the recommendations of the Indian Medical Council. The medical students at the 57 medical colleges receive instructions and clinical experience for a period of six months in the wards. Each student is required to conduct 20 cases of confinement during one month's clerkship which is compulsory. Most of the experience is in the hospital and training in domiciliary practice is not arranged at most of the medical colleges. In addition to this, the students are required to work in maternity and gynaecology department of recognised hospitals for a period of 3 months during one year's internship.

Post-graduate courses in obstetrics and gynaecology are conducted at several medical colleges. Experience in domiciliary work is not

included even in post-graduate training. The D.G.O. course is offered at 12 institutions where M.S. or M.D. courses are given at 10 institutions.

Lately, domiciliary midwifery experience has been arranged for students taking the 2 years' auxiliary nurse midwifery course and for other midwifery students. Post-certificate course for midwifery tutors is conducted at the College of Nursing, New Delhi.

Teaching of Paediatrics

At present, the students are required to have one month's clinical experience in paediatrics. Paediatrics is considered a part of medicine and there is no separate paper on the subject for the M.B.B.S. examination.

The Committee on Medical Education recommended that instructions in paediatrics should be of 3 months' duration and clinical experience should be arranged in the wards and outpatients' departments and at maternity and child welfare centres. These recommendations have been implemented in some of the medical colleges by mutual arrangement with other professors.

Post-graduate training in paediatrics is arranged at some of the colleges and institutions.

Diploma courses of 1 year DCH are conducted at 12 Medical Colleges and Child Health Institute, Calcutta. Only some of the colleges (4) conduct M.D. courses. The arrangements for field training and experience for post-graduate training has greatly improved in Madras.

Special courses in paediatric nursing are conducted for training nurses.

Health Visitors' Training

The health visitors' training is conducted at 21 health schools. The course is of 2½ years' duration. The training is regulated by the Nursing Councils of the State and the Indian Nursing Council. Nine existing health schools were expanded and six new schools were established under Central assistance.

Training in Child Psychology

Instructions in psychology are included in the different courses for doctors, nurses and health visitors.

A special section has been added to the All-India Institute of Hygiene and Public Health, Calcutta to provide instructions in psychological medicine.

Post-graduate courses are provided at the All-India Institute of Mental Health, Bangalore.

Some of the Universities have a special department of psychology and give post-graduate courses in psychology.

Training of Ancillary Workers

(1) For physiotherapists a two years' course is conducted in Bombay at the Children's Orthopaedic Hospital and at the K.E.M. Hospital.

(2) In India, a dai (indigenous midwife) plays a valuable role in midwifery services in the rural areas. The Government of India have launched a scheme for their training. Simple instructions lasting six months or more are given by the staff of the primary health centres. The instructions are practical and the dais are remunerated for taking advantage of the instructions. The Second Plan target is to train 36,000 dais so as to cover the area systematically and train all the dais practising in the area served by the primary health centres. The dais are given simple equipment for their use. They are awarded certificates on their completion of the training and are recognised as trained dais.

Higher Training in Maternity and Child Welfare in Paediatrics

Under the fellowship programme, two to four doctors are deputed each year for higher training in maternity and child welfare and in paediatrics. Officers who are associated with the development of programmes are given preference. The Assistant Director, Health Services, Maternity and Child Welfare, is ordinarily deputed for a course in Public Health for D.P.H. in England or for the M.P.H. in U.S.A. followed by two or three months' observation visits. The paediatricians are sent for a year's experience in paediatrics in England, USA or for short observation visits in two or three countries where paediatrics is well-developed.

Research

As already stated, the Indian Council of Medical Research is responsible for all medical research work and has an Advisory Committee for maternity and child welfare. The Committee drew up plans for research under the First and Second Five Year Plans. The important research work undertaken by the Council are as follows:

(1) All available data and findings on certain aspects of maternity and child welfare were compiled.

(i) A review was made on anaemia in pregnancy and on toxaeimias of pregnancy;

(ii) The findings of investigations into the causes of maternal mortality in India were summarised for information of the local bodies;

(iii) A review was made of the work done on infant mortality in India and in other countries.

(2) A memorandum was prepared on establishment of maternity and child welfare advisory committees in each of the Corporations.

(3) Memoranda were prepared for conduct of enquiry into maternal and infant mortalities.

(4) The Committee financed several research projects and growth studies.

The enquiry into the bearing of premature and immature deaths on infant mortality, anaemias of pregnancy, toxæmias of pregnancy, infant mortality, foetal mortality, cirrhosis of liver, diarrhoea in children, birth weight of new-borns and several other studies which are helpful in promoting child welfare programmes were undertaken.

The Assistant Director, Health Services (Maternity and Child Welfare) from the States are invited to attend the I.C.M.R. meetings. They present reports of the work done in the States. They thus bring their field experience and keep the Committee informed of the pressing problems in maternal and child welfare and nutrition which require to be studied. The officers have opportunity in keeping in touch with the recent findings on the subject. A Joint Committee of nutrition and maternity and child welfare workers is arranged by the I.C.M.R. where certain nutrition problems in mothers and children are discussed.

Legislation

The Public Health Act of 1956 has made provisions for maternity and child welfare services.

There are other acts which indirectly help maternity and child welfare services. They are the Births and Deaths Registration Act, the Vaccination Act, the Maternity Benefit Act, the Creche Act, the Children's Act, and the Act for registration and licencing of institution for women and children.

Administration of Maternity and child Welfare Services

As already mentioned, the Union Ministry of Health created the post of Adviser, Maternity and Child Welfare in the office of the Director General of Health Services in the year 1948. Since health is a State subject, responsibility for the health services lies with the States and the functions of the Centre are advisory. The work of the Adviser, Maternity and Child Welfare included:

(1) Technical advice to the States in schemes for the promotion of health services for mothers and children and technical guidance to the State Assistant Director, Health Services (M.C.W.) to promote and expand activities of the State Maternity and Child Welfare Bureaux in respect of planning, direction, services and training of maternity and child welfare workers.

(2) Preparation of Central schemes for maternity and child welfare and for training of health personnel and recommendation of grants-in-aid for schemes undertaken by the States under the First and Second Five Year Plans.

(3) Technical advice to other Ministries:

(a) Ministry of Labour in respect of Maternity and Child Welfare services in industries and mines and maternity benefits; and

(b) Ministry of Education as member of some of the committees dealing with child welfare.

(4) Advice to the State for adopting measures to improve supervision and technical advice at District level and to the staff of primary health centres.

(5) Assistance to States to co-ordinate various activities for maternity and child welfare.

(6) Contacts with major voluntary organisations and with maternity and child welfare activities in the country.

(7) Technical advice to local bodies in respect of maternity and child welfare services undertaken by them.

(8) Seminars, orientation courses for doctors working in maternity and child welfare.

(9) Assistance to States in formulating requests for UNICEF and WHO assistance and in implementing the programmes undertaken by them.

Recently (1959), the Government of India appointed a Co-ordination Committee for Child Welfare with Cabinet Secretary as the Chairman and Secretaries of various Ministries dealing with child welfare as members of the Committee. The functions of the Committee are:

- (a) to take the initiative in seeing that the appropriate authorities prepare the needed programmes;
- (b) to take steps to avoid duplication of effort; and
- (c) to see that the subject "Child Welfare" as a whole receives adequate attention.

In order to provide for better supervision, Regional Maternity and Child Welfare officers have been appointed.

Much progress has been made by establishing Maternity and Child Welfare Bureaux in the States and thus making provision for administration and technical advice for health programmes for mothers and children in the States. Maternity and child welfare bureaux have been established in 13 out of 15 States and are placed in charge of Assistant Directors, Health Services/Public Health (MCW). Only in the State of Mysore, the designation is Superintendent. Two out of the six Union Territories have staff of equivalent positions. The post in Jammu & Kashmir has not been filled and in the newly-formed State of Gujerat, the post has not been created yet.

Quite a few of the Assistant Directors have had good experience and training in India and abroad and have been pioneers in initiating and organising the services. Although much progress has been made in improving the administration of maternity and child wel-

fare during the last few years, much remains to be done. The present deficiencies are:

(i) The link between the staff of the primary health centres and the Assistant Director, Health Services, (Maternity and Child Welfare) is weak.

(ii) The functions of the Assistant Director are confined to field-work, namely, primary health centres and maternity and child welfare centres; her role is advisory in respect of primary health centres and technical advice to the Director of Health Services or the Assistant Director in charge of rural health programmes.

(iii) Although the field and institutional services are interdependent and are complement to each other, the officer at State level is not associated with the planning of institutional services or is required to keep in touch with institutional services in the State.

(iv) Technical advice of MCH officers is not availed for training programmes for training higher categories of health workers for maternity and child welfare services. Such technical advice would help to adopt the training to the requirements of services;

(v) For an effective administration, all services concerning mothers and children should be closely linked and, as far as possible, under one administration so as to avoid overlapping in administration and duplication of staff for technical guidance and service. There are separate officers in these States for family planning, M.C.W. and school health. The school health programme is thus not a continuity of the child health services for the pre-school child.

(vi) M.C.W. officers are not closely associated with voluntary organisations conducting schemes for health and welfare of children.

Proposed Improvements and Expansion

1. The present schemes are largely devoted to rural midwifery services. It is proposed to link the services of primary health centres with the District hospitals. The midwifery and paediatric staff of the hospital will act as technical advisers for the staff of the primary health centres. It is proposed to have an officer with maternity and child welfare training at the district level to assist the District Medical Officer in organising and in promoting services for mothers and children. The district level obstetrician, paediatrician and the M.C.H. officers and the public health nurse will function as a team for promoting maternity and child welfare services. The hospital will function as referral hospital. Short orientation will be arranged at the District hospital for the staff of the primary health centres.

2. It is proposed to have at state level Honorary Consultants in obstetrics and paediatrics for the Assistant Director of Health Services (MCH).

3. It is proposed to provide services for the handicapped children in the Third Plan. The orthopedically handicapped and children with defective hearing and vision will be dealt first. The rehabilitation centres for these three groups will be attached to the teaching

departments of the hospitals for these subjects and will be closely associated with the paediatric units.

4. Schemes for health education of school children will be introduced in the schools.

5. The mothers and children in the cities and in semi-urban areas urgently require our attention and the local authorities require expert advice and assistance to help them to develop comprehensive programmes for the urban children. In view of the hazards to city children on account of poor environment, over-crowding and high cost of living, the services for children in the urban areas require reorganisation. It is necessary to establish good co-operation in the services rendered by the State hospitals and the institutions provided by the city health departments. The city health services also require necessary health personnel. The cities have the resources but require technical assistance and advice to utilise the available facilities fully and to extend the services in an organised manner to give maximum benefit to the children.

6. The scope of maternity and child welfare services requires to be enlarged and the health schemes which have direct bearing on the health and welfare of mothers and children should be so directed as to give maximum benefit to them and reduce mortality and morbidity among them.

7. The field for research into conditions adversely affecting the health and welfare of children should be enlarged and special studies should be undertaken on subjects which have direct bearing on the health of mothers and children. The findings of the research should be utilised in planning future services and for improving techniques in child care.

Conclusion

The last few years of rapid progress in maternity and child welfare services in this country gives hope for the future when sound health programmes for mothers and children will be built on the framework that is being laid under India's Five Year Plans and the international assistance. There is a wide field which requires to be covered in respect of health services for all mothers and for all children of the country to ensure for each child full opportunity for normal physical, mental and social development. There is much room for improvement in our present schemes and these improvements will come as we progress and learn from our experience in promoting the rural health services and in the training of health personnel to man these services.

ISSUED BY CENTRAL HEALTH EDUCATION BUREAU, DIRECTORATE GENERAL OF
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