ICMR'S MULTICENTRE STUDY ON COMPREHENSIVE MCH CARE

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Rationale

The overall perspective of health problems in our country is dominated by overpopulation. The brunt of this strain is felt by the vulnerable group, *i.e.,* mothers and children. Control of population and provision of appropriate health care to mothers and children, therefore, are the pillars of any health programme. In our country we still have high maternal and infant morbidity and mortality rates. The main causes of maternal mortality and morbidity are septic abortions, hemorrhage, toxemia, sepsis, malpresentation of fetus, *etc.* At present we have neither proper monitoring of reproductive health nor that of maternal deaths.

As regards factors related to infant mortality, the most important causes are prematurity and low birth weight. Other causes include birth injuries and asphyxia, exposure to unfavorable environmental condition immediately after birth and infections such as vaccine preventable diseases, including tetanus, respiratory infection and diarrhea. It is more and more realized that most of these deaths could be prevented by better prenatal, intranatal and postnatal care.

In a developing country like ours, where availability and accessibility to health care facilities is limited, identification of women who need special care during pregnancy using the 'at risk' concept would help in providing services "Something for all but more for those in need". The risk approach aims at concentrating resources on minorities who are at a relatively high risk and can, therefore, benefit from some kind of intervention by the health care system.

If the risk concept is simplified through appropriate technology and applied after training of primary health workers, traditional birth attendants (TBAs) and pregnant women, then many of the damaging or harmful factors can be identified. Possible interventions at the level of the family, PHC, can then avert the chances of adverse outcome for the mother and the child.

The principles of risk approach involve identification of risk factors relevant to the local situation, screening the population for at risk individuals with the help of primary health workers and providing them extra care in proportion to their need according to predecided risk management plan. Thus risk approach aims at correcting the inverse proportion of availability and accessibility of health care by reallocation of existing resources for achieving 'Health for All by Year 2000 AD'.

The risk approach is both a method for establishing priorities by measuring the need of individuals and communities and a tool for improving the use of health care resources to meet those needs. The risk approach is particularly suited to Maternal

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and Child Health (MCH), Family Planning (FP) where primitive and preventive activities and early health care action are so important.

The Government of India is committed to achieve its demographic goals, and is trying to experiment various approaches to ensure safe motherhood to all women and 100% coverage of children for immunization against major infectious diseases.

In this context the Indian Council of Medical Research (ICMR) has initiated a multicentric study in 8 centres (Ahmedabad, Chandigarh, Delhi, Gwalior, Jaipur, Lucknow, Pune and Varanasi) on 'Comprehensive MCH Care' whose overall objective is to utilize the available know how about the risk factors to develop a system and a working methodology for using the high risk approach to MCH care, within the existing health care infrastructure.

The specific objectives of the study are:

1. To develop a package of intervention for improving maternal and child health care.
2. Management of high risk pregnant mothers and their off springs.
3. To train the health personnel of the selected PHC/SC in early identification and efficient management of high risk mothers and infants.
4. To develop a feasible referral system towards management of risk factors of pregnant mothers and infants.
5. To develop a system of collecting health statistics relevant for the monitoring and evaluation of the programme.

Methodology

Each centre has taken one Primary Health Centre for the intervention to be tried out and each centre has covered a population ranging from 80,000-1,69,000. The following are the phases in the study: (*i*) Initial 6 months–Situation analysis of the PHC; (*ii*) 1 year–Developmental phase; (*iii*) 3½ years–Intervention period.

(*i*) *Situation Analysis*

Before planning for the actual intervention, it was considered appropriate to carry out in the first phase, a situation analysis of the primary health centre in which the study was contemplated. This was essential to have adequate information and insights about the availability and extent of utilization of resources, the working methodology and technical procedures in the existing system and perception of the community.

The results from the situation analysis showed that 50% of the villages were over 20 km away from the PHC Headquarters and the population under control was 80,000-1,69,000.

Medical officers were in position, but there was shortage of paramedical staff. Lack of anesthesia and baby resuscitation kit was found in all the centres. The recording systems of various statistics were very poor. It was observed that paramedicals have theoretical knowledge but little practical knowledge and experience and they do not utilize their own skills during delivery of MCH services. Further, the community was not utilizing the services which were available to them; thus, the peoples involvement in the programme was poor.

(*ii*) *Developmental Phase*

In this phase, the gaps identified at the primary health centres were strengthened. These included (*i*) Procurement of equipments at the PHC and subcentre, like

weighing machines for mother and baby, hemoglobinometer, urostix, dais kits, ORS packets, *etc.*; and preparation of teaching manuals/aids according to the local needs of the community.

During the development phase, an initial baseline survey was carried out. The objectives of this baseline survey were: (*a*) To find out the household information comprising family structure and socio-economic condition; (*b*) To determine the denominators for calculations of pregnancy and vital rates; (*c*) To find out the level of mother and child health care and family planning acceptance; and (*d*) To determine the characteristics of events like births and deaths.

Two baseline surveys with the above objectives have been completed till date by the centres. This has been done in the 30,000 population where active intervention was and is being carried out.

(*iii*) *Intervention*

The main intervention strategies followed in this study are: (*i*) Re-orientation training of the health functionaries/Medical Officers at the PHC; (*ii*) Community education; (*iii*) Decentralization of targets for MCH/FP; and (*iv*) Development of a referral system.

The initial training was imparted by the project investigator for one week and later on, one the job training being carried out at the PHC and subcentre by the research officers of the team. During training, emphasis was laid on identifying high risk pregnant mothers and infants as well as establishment of three level referral system. Community education forms an integral part of this study. Generation of awareness in the community is being tried out through focus group discussion and 'Mahila Mandals'. The recording system was improved upon in the study area by means of Registers/Cards for pregnant mothers and child.

This study is being carried out with close collaboration of State Health authorities. The District Health Officer is one of the principal co-investigator.

The initial process indicators after two and half years of intervention period, show that the underlying processes such as antenatal registration, identification of high risk mothers and infants, minimum services rendered to the registered mothers, and referral of risk cases have improved.

The antenatal registration has shown a steady increase (estimated increase 50-80%). The process of identifying at risk mothers, which was non-existent earlier has gradually picked up as the number of high risk cases identified ranged between 6-50%. In the deliveries which were registered, the services like hemoglobin estimation, urine examination, mother's weight, tetanus toxoid, immunization and birth weight recording are now being routinely provided.

The intervention programme aims to provide aseptic and safer international care, for which all the expectant mothers have been provided with delivery kits in addition to the identifiable traditional birth attendants.

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