

The broad objectives of the programme through the software is to reduce infant mortality rate (IMR), to improve the nutritional level of the child, to ensure completion of immunisation in children by tracking the proper growth of the individual child, and to reduce mother mortality rate (MMR) and reduce total fertility rate (TFR).



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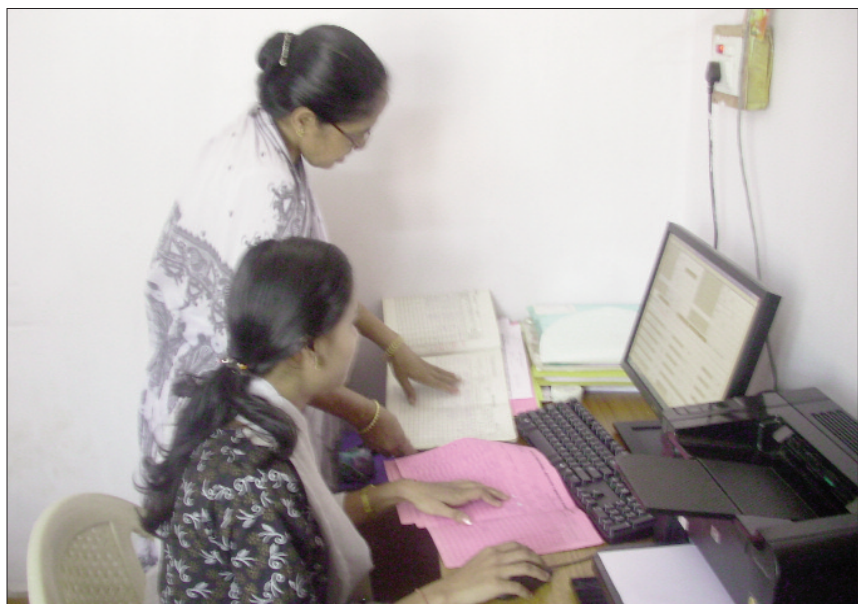
Mother & Child Tracking System

The health of women and children has been an abiding development concern in India right since Independence. It is estimated that around 60 thousand women in the country die every year due to complications associated with pregnancy and delivery while many more suffer from pregnancy and birth related ill-health. It is also estimated that every year around 1.25 million new born fail to survive up to their first birth day.

Most of these premature deaths can be prevented. The available medical technology has the potential of preventing more than 95 per cent of all maternal deaths and infant deaths. The most common reason why this potential could not be realised is that the health care delivery system is not able to deliv-

er even the low cost appropriate medical technology to all pregnant women and children. It is argued that if the efficiency of the health care delivery system is improved in terms of ensuring universal access to all pregnant women and children to maternal and child health services, reduction in maternal, infant and child mortality can be accelerated significantly.

Mother and Child Tracking System (MCTS) is an IT enabled application (<http://nrhm-mcts.nic.in>) which will facilitate monitoring of universal access to maternal and child health services by all pregnant women and children. The system is developed jointly by the Ministry of Health and Family Welfare and National Informatics Centre and it was launched by the Government of India in December 2009 in collaboration with States/UTs. It is an innovative application of the information technology directed



towards improving the efficiency of maternal and child health services. MCTS is designed to capture and track all pregnant women right from conception up to 42 days post partum and all new born up to five years of age to ensure that the pregnant woman and children receive 'full' set of medical services thereby contributing to the reduction of maternal, infant and child mortality and achieving the goals laid down in the National Rural Health Mission as well as Millennium Development Goals.

MCTS serves two purposes. It facilitates the service provider at the grass roots level in delivering services to women and children according to their specific needs. At the same time, MCTS supports health and family welfare managers and policy makers in measuring and monitoring the efficiency of the maternal and child health services in terms of needs, effectiveness and capacity, efficiency and evaluating up to what extent the increase in efficiency in the delivery of maternal and child health services has contributed to the decrease in maternal, infant and child mortality. In this way, MCTS facilitates justification of investments in the public health and family welfare services delivery system.

MAIN FEATURES OF THE APPLICATION:

MCTS relies heavily on information technology tools and techniques. Innovative application of information technology tools and techniques makes it possible for the grass roots level health care providers to track every pregnant woman during pregnancy and every new born during first five years of life so that basic maternal and child health services can be delivered to them.

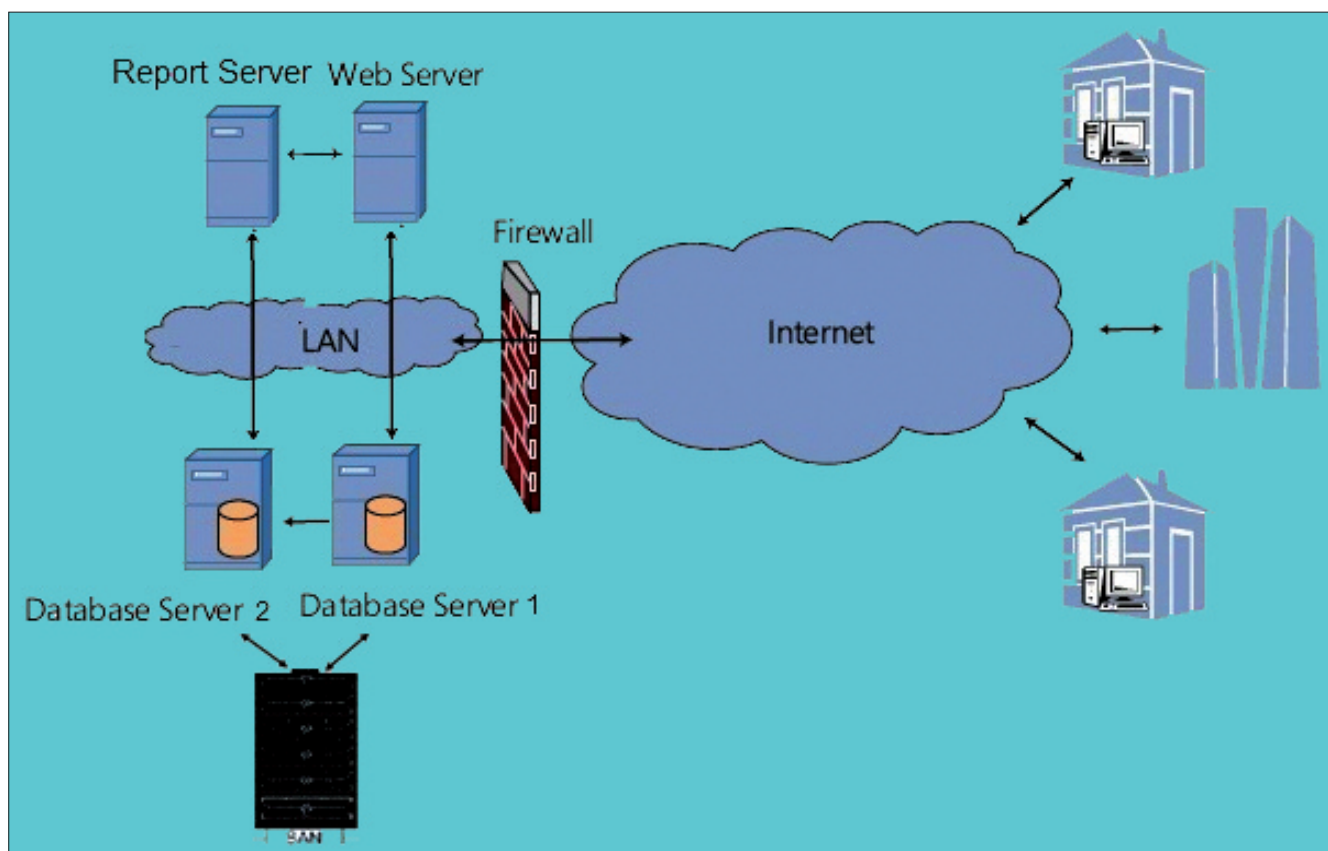
Perhaps the most significant feature of MCTS is that it promotes use of information technology by grass roots level health and family welfare service providers and even by the



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The Mother and Child tracking System (MCTS) is a name based tracking system, launched by the Government of India as an innovative application of information technology directed towards improving the health care service delivery system and strengthening the monitoring mechanism. MCTS is designed to capture and track all pregnant women and children so that they receive 'full' maternal and child health services and thereby contributes to the reduction in maternal, infant and child morbidity and mortality which is one of the goals of National Rural Health Mission.

The Mother and Child Tracking System may therefore be perceived as an important intervention towards the realization of the goals and objectives of the National Population Policy and the National Health Policy and the Millennium Development Goals. It is envisioned that the Mother and Child Tracking System will facilitate reaching each and every pregnant woman and Child in the country so that appropriate action can be taken at the right time for making the pregnancy and delivery safe and for securing the survival of the mother and the new born by preventing premature death of women and children. Ultimately, the Mother and Child Tracking System will contribute towards enhancing the effectiveness of the public health care delivery system in accelerating the pace of decline in maternal, infant and child mortality and thus will facilitate the process of social and economic development of the country.



Application Architecture

beneficiaries at large. In this way, MCTS also contributes to reduction of the digital divide.

The core of the MCTS is the web-based database application tool which permits real time entry of the information related to pregnant women and children including services provided to them either by the health care services provider or services received by them at any health care facility – public or private. This tool also facilitates generation of the work plan for the grass roots level service providers in terms of the identification of pregnant women and children who are in need of specific maternal and child health services.

MCTS employs, innovatively, the mobile-based SMS technology to communicate with grass roots level health care services providers as well as health and family welfare policy makers, health managers and health

administrators at different tiers of the health care delivery system. Mobile-based SMS technology is also used to alert beneficiaries about the services that are due to them or services that have become overdue. This alert provides an impetus to the beneficiaries or parents of children to avail services specific during pregnancy /early childhood.

MCTS has 'pull' features also that makes it a very user friendly. A pregnant woman registered in MCTS can use the MCTS interface to know which of the maternal care services she requires and which of the scheduled services she has received. Similarly, parents of a child can get information about the vaccinations due to their child and the details of vaccinations, the child has already received. On the other hand, a health care services provider can easily generate the work plan or the delivery of services using the information stored

in the MCTS database. In this way MCTS allows effective use of information technology by the common man and the grass roots level service providers. This greatly helps not only in the delivery of services to beneficiaries but also in the utilisation of services by the beneficiaries.

Initiatives taken by Government of India for its effective operationalisation:

- Call Centre established in MoHFW for verification of data entered in MCTS. Another Call Centre is being established at NIFHW, New Delhi.
- Facility of communicating monthly Work Plan to ANMs/ASHAs through SMS in English and Hindi has been operationalised. SMS alerts to beneficiaries about services due have also been started.
- SMS related to mother and child registration status and telephonic verification status are sent daily to

senior officials like State Health Secretary, MD NRHM, Regional Director, State Coordinators, District Collector, District Program Manager etc.

- States/UTs have been asked to constitute State and District e-Mission Teams to regularly monitor the progress of implementation.
- States/UTs have been asked to nominate the District and Block Programme Manager (NRHM) as the Nodal Officer for MCTS at district and block levels.
- Working groups on Technology Options and Business Processes Reengineering constituted to assess field difficulties along with the proposed solutions.

STATUS OF IMPLEMENTATION

MCTS is currently being implemented throughout the country with active involvement of States/UTs. More than 1.77 crore pregnant women and 1.20 crore children have been registered in the system since its inception. During the current year more than 1.26 crore pregnant women and almost 88 lakh children have been registered in the system so far and there has been an improvement in the registration rate.

Different States/UTs are at different stages of the operationalisation of MCTS. In terms of registration of pregnant women, Tamil Nadu tops the list with a registration rate of 96 per cent followed closely by Lakshadweep, Goa, Chandigarh and Orissa. Similarly, in terms of registration of children, Chandigarh tops the list with a registration rate of very close to 100 per cent. Operationalisation of MCTS is generally lagging in all the north-eastern States/UTs. In Tripura and Mizoram, there appears little progress in the operationalisation of MCTS.

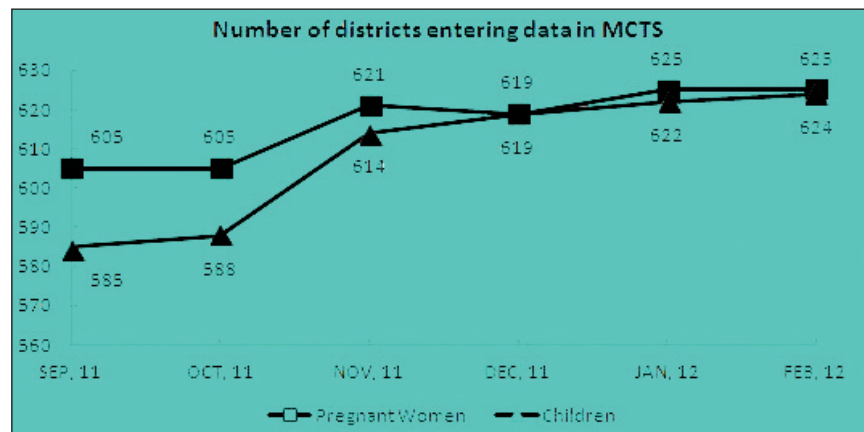
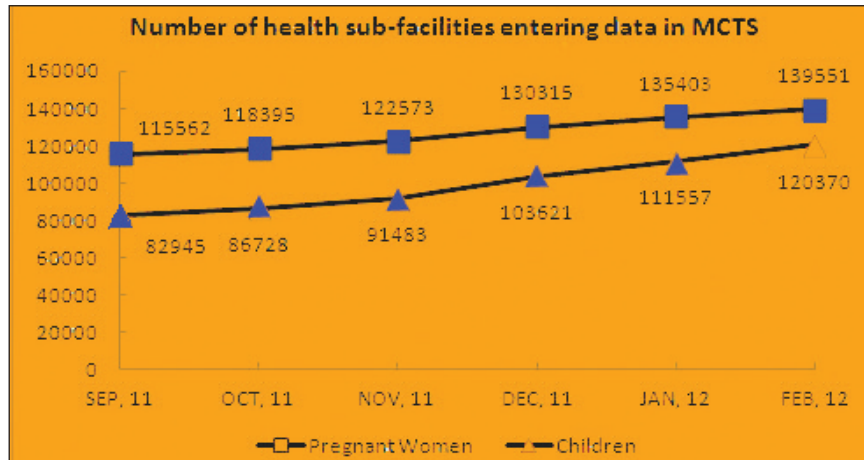
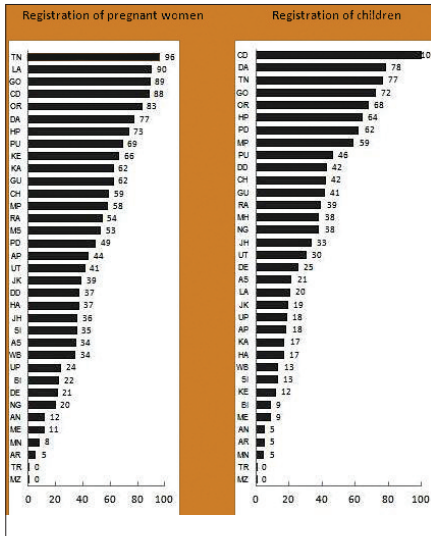
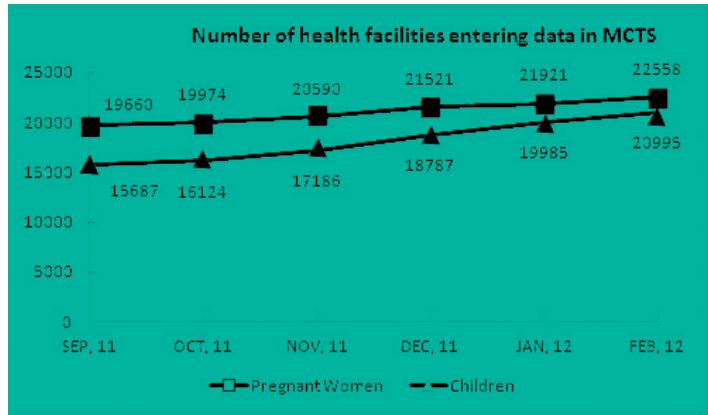
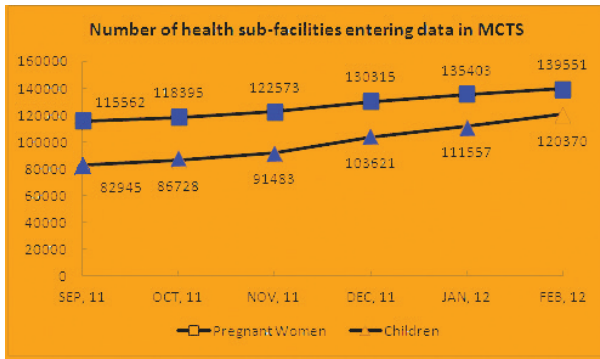
Information related to pregnant women is being entered in MCTS from 139551 (84 %) sub-centers, 22,558 (79 %) health facilities (other



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Information Technology has immense potential to transform delivery of healthcare services. Mother and Child Tracking System (MCTS) is an initiative of Ministry of Health & Family Welfare to leverage information technology for ensuring delivery of full spectrum of healthcare and immunization services to pregnant women and children up to 5 years of age. It is an innovative, web-based application to facilitate and monitor service delivery as well as to establish a two way communication between the service providers and beneficiaries. Generation of work plans of ANMs, sending regular alerts to the service providers as well as beneficiaries about the services due and a user-friendly dash board for health managers at various levels to monitor delivery of services will go a long way in ensuring quality service delivery, micro birth planning, ensuring universal immunization and will have positive impact on important health indicators like Infant Mortality Rate and Maternal Mortality Ratio. It will also help in evidence based planning and continuous assessment of service delivery to pregnant women and children.

Lead Story



than SCs), 5597 (92 %) health blocks and 625 (97.5 %) districts of the country. Similarly, information related to children is being entered from 120370 (73%) sub-centers, 20995 (73 %) health facilities (other than SCs), 5380 (88.5 %) health blocks and 624 (97.4 %) districts. Efforts are being made to ensure that MCTS covers all habitations (rural as well as urban) and all health care delivery institutions - public as well as private - in the country. When fully operational, MCTS will cover the entire country.

Verification of the data entered in MCTS is a major issue in its successful implementation. For validating the data entered in MCTS, SMS based approach has been evolved in addition to establishing Call Centres at the national and State/UT levels. Messages are sent to both beneficiaries and service providers to verify their identity as entered in MCTS.

Registration of pregnant women
Registration of children

OUTCOMES AND EXPECTATIONS

MCTS is expected to contribute significantly towards universal access of all pregnant women and children to maternal and child health services thereby facilitating and accelerating reduction in maternal, infant and child mortality.

MCTS is being implemented all

over the country. Once fully scaled up, MCTS will be accessible throughout the country. It will be accessible to the entire population of the country, irrespective of the region, caste, living status, etc.

For further information

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