

Innovative approaches in maternal and newborn care health essay

[Health & Medicine](#)



It is heartening that the Maternal Mortality Ratio of India has declined from 254 in 2004-2006 to 212 in 2007-2009 (SRS). Still an estimated 56, 000 maternal deaths occur each year[i]. In order to improve the figure, India needs both systemic and innovative health system approaches. Although overall India has made slow progress in reducing maternal mortality, progress in the state of Tamil Nadu has been rapid[ii]. In terms of basic health indicators (NFHS 3), Tamil Nadu is one of the progressive states in India. Located in the southern part of the country, the State's health system is considered to be the best in the country. Comparison of some major health indicators of Tamil Nadu with all-India figures shows that the state has made impressive progress. Tamil Nadu has shown, over the last two decades, faster reduction in the population growth rate as compared to all other states except Kerala. The annual population growth rate during 1981-91 was 2. 14 per cent for all India, while it was 1. 43 per cent for Tamil Nadu, second only to Kerala (1. 34 per cent)[iii]. As per recently concluded census 2011 (provisional figures) the decadal growth rate (for 2001-2010 period) for India is 17. 64% however in Tamil Nadu it is 15. 60%. The Total Fertility Rate (TFR) for Tamil Nadu showed a sharp decline from 3. 9 in 1971 to 2. 0 in 1997 (SRS). The most recent National Family Health Survey (NFHS-3) 2005-06 shows a further decline, with Tamil Nadu's TFR to be 1. 8, the lowest in the country, surpassing Kerala (1. 9 - NFHS-3)." Tamil Nadu has always felt that it is very important to focus on health issues and that is one reason why we are doing much better than the rest of the country. The political will to look at health as a priority area has gone back to nearly at least 20-30 years and that has reflected in our better indicators and our vital rates have always

been better than the country"-Ms. Girija Vaidyanathan, I. A. S., Principal Secretary, Department of Health & Family Welfare, Government of Tamil Nadu October 2011, Chennai, Tamil Nadu India Figure : India and Tamil Nadu comparison based on NFHS 3 (2005 - 06) data This case study highlights the various innovative initiatives carried out by the state for improving maternal health that resulted in the reduction in the maternal mortality ratio (MMR) from 380 in 1993[iv] to 79 in 2008-09 (State HMIS-2008-09)[v]. It has been a long journey for the state of Tamil Nadu to reach these encouraging figures. During these years the Tamil Nadu health system has innovated in different ways and many of the innovations have later been adopted by the Government of India and other states in the country. In this case study we are going to highlight the following aspects of the Tamil Nadu Health system: Systematic changes made by the state of Tamil Nadu to strengthen their health system State funded innovations - highlighting some key innovations What it takes to create a platform for innovative ideas to grow - The Tamil Nadu Experience

Methodology/Approach:

In order to develop this case study, a detailed desk review of relevant literature was conducted. In addition a visit were made to the State for collecting information on innovations through in-depth interviews with the policy makers, directors and officials at the health department and implementers. Visits were made to some sites and views of the beneficiaries were documented as well.

STRONG COMMITMENT AT ALL LEVELS

A conceptual framework for the health system to be more innovative in its approaches is given in the figure below:

Figure 2: A Framework for Health System to be Innovative

Section 1: Pillars/Mechanism of Health System Strengths – Tamil Nadu

How has the state of Tamil Nadu come up with several innovations in the health sector in the last two or three decades? What has led the state to come up with these innovations? In this section we will try to answer these questions by highlighting some systemic changes that have been the driving force for the state. Without these, innovations could not achieve their desired outcomes. Dedicated Public Health Cadre under the Directorate of Public Health -The Health Department in Tamil Nadu has three key directorates which are organizationally have an equal under the Health Secretary - the Directorates of Public Health, of Medical Services and of Medical Education[vi]. The Directorate of Public Health has trained public health managers, who are promoted to the Directorate after years of experience in planning and overseeing public health services in both rural and urban areas. This ensures that the Directorate of Public Health is run by highly experienced staff with a deep understanding of how to run these services[vii]." The concept of a public health cadre is something we have lived with. I have been working here for 30 years; so you get to accept it as a part of the way of working; only when you go to the other states of the country you actually realize the advantages that you have because of this cadre. The advantage is that you have somebody who is trained in

administration as well as public health and what was originally started to look at epidemic control and certain communicable diseases has now expanded its role to look at maternal and child health and their related issues, so it has been easy for us to do and take up maternal and child health work when it came into the country. If you look at the early 80s, this was when the rest of the country also adopted many of the multi-purpose health workers scheme, expansions of PHCs but since we already had a public health cadre, it was easy for us to make this work much better than the rest . So I think that this is one of the reasons why we have done so well"

- Ms. Girija Vaidyanathan, I. A. S., Principal Secretary, Department of Health & Family Welfare, Government of Tamil Nadu

One of the reasons why Tamil Nadu is able to achieve good health statistics due to its implementation strength which is reinforced by a dedicated public health workforce that are appropriately trained and have relevant experience. Greater budgetary allocation for health- Health Financing is a major challenge in low- and middle-income countries. The challenge is twofold: to mobilize sufficient funds for operating the health system and to apply those funds well. Hence Health financing is considered to be one of the main pillars of an effective health system[viii]. It can impact the mobilization of resources and achieve outcomes without compromising on quality. Utilization patterns of the allocated health budget may be indicative of the strength of a health system. Among low focus states under the National Rural Health Mission (NRHM) Tamil Nadu is the highest spender (94%) of the allocated NRHM budget (NRHM, State Plan Approval and State Wise NRHM Progress - A Snapshot. Figures pertain to FY 2008-09)[ix]. A strong health system focuses more on

primary, preventive and promotive public health care. Along these lines, Tamil Nadu gives focused attention to the Directorate of Public Health and allocates a dedicated budget to it. The amount allocated to the Directorate of Public Health is large as compared to spending on secondary/tertiary medical care and medical education. The following tables show a comparison of the health allocations among the three Directorates in Tamil Nadu: Table 18. 1: Health Spending (by Directorate), Tamil Nadu Health Department vi

Directorates

FY 2000-01

FY 2008-09

Compound Annual Growth Rate (Nominal)

Rs. Million % Share Rs. Million % Share

%

Public Health

457143. 4893938. 88. 7

Medical Services

236122. 4530323. 110. 6

Medical Education

359534. 2877538. 111. 8

Total

1057100. 023017100. 010. 3

* Source – Budget Documents

Table 18. 2: Staff Costs (by Directorate), Tamil Nadu Health Department vi

Directorates

FY 2000-01

FY 2008-09

Compound Annual Growth Rate (Nominal)

Rs. Million% ShareRs. Million% Share

%

Public Health

364346. 9649744. 27. 8

Medical Services

171822. 1296120. 27. 0

Medical Education

241231. 0523235. 610. 2

Total

7773100. 014690100. 08. 2

* Source – Budget Documents

" the budget is very important for any state and the state budget for the health in this year is around 4761 crores; which is around 841 crores more than the previous year. It is around 20 percent more than the previous year budget. Since the Government allots more funds for the health sector itself, we are able to do more work in the PHCs, even in the hospitals and in the the <https://assignbuster.com/innovative-approaches-in-maternal-and-newborn-care-health-essay/>

medical college. The budget is definitely more when comparing other states to TN".

Dr. Porkaipandiyan, Director of Public Health,

October, 2011, Chennai, Tamil Nadu, India

A good example of prioritized budgetary allocation is Muthulakshmi Reddy Maternity Assistance Scheme. In India most of the states are providing JSY (central sponsored scheme) money to the mothers who deliver in a health facility. In Tamil Nadu the state has launched a separate state funded scheme of conditional cash transfer for institutional delivery i. e., Muthulakshmi Reddy Maternity Assistance Scheme. This is described in detail below: Conditional Cash Transfer - Muthulakshmi Reddy Maternity Assistance Scheme- Muthulakshmi Reddy Maternity Benefit Fund scheme was introduced in 1989. It started by offering a cash incentive 500 rupees to pregnant woman. The scheme was initially run by the Social Welfare Department and subsequently handed over to the Health Department. This particular amount was meant to compensate pregnant woman for wage loss during pregnancy. Subsequently the amount increased was to Rs. 2, 000, then Rs. 6, 000. This amount was raised recently to Rs. 12, 000 per pregnancy and is paid by the government for the first two live births. Apart from wage loss compensation, another purpose of giving the money is to provide for additional nutrition to the mother to prevent anaemia and low-birth weight babies. This scheme is only meant for below poverty line families' ii. This conditional cash transfer scheme to improve institutional delivery was introduced into the health system of Tamil Nadu much before introduction of Janani Suraksha Yojana (JSY) into the health system (introduced in the year October 2007). It is a safe motherhood

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intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the pregnant women. JSY integrates cash assistance with antenatal, intranatal & postnatal care.

Prioritizing health - a political perspective - Tamil Nadu has a history of social revolution. The insight and commitment of government leaders in Tamil Nadu have made a significant contribution to the health gains in the state. Even though political leaders and parties in power have changed over the years, two aspects of government's approach to strengthening the public health system have remained consistent since the early 1980's. First, health policies and government spending on health have emphasized improving primary care services, especially in rural, poor and disadvantaged communities. Second, political leaders have been committed to implementing innovative interventions, (some of which are common across all states and funded by the central government), efficiently and effectively. [x]Tamil Nadu's neighbour, Kerala, has been long celebrated for its success with healthcare, education and other social sector programmes. In comparison, Tamil Nadu has received attention only recently in the literature. One reason for this is that the most impressive expansion of public services happened in the state only after the 1970s. There has been some literature since then analyzing the provision of public services. Three prominent explanations of Tamil Nadu's commitment have been: populist leadership, the success of backward caste groups in securing political power, and extensive public action at the grassroots for public services. The first two focus on leadership and the third looks at the grassroots action. The

extension of public services is seen as the result of the political styles of certain leaders who seek to create mass appeal using an anti-elite rhetoric, thus creating a base of common people as voters in order to secure power. The achievement of power is consolidated by the extension of public services to the non-elite[xi]. This political attention to the health care system over last three decades has helped it to improve and grow. Public Health Act - Public health service provision in Tamil Nadu is greatly facilitated by the fact that it has a Public Health Act. Such an Act enables proactive measures to avert health threats. A pioneering Act was introduced in 1939, steered by the great scholar and Minister for Health Dr. T. S. S. Rajan, which became the first state law for public health enacted in the country. The Tamil Nadu Public Health Act 1939 remains as a model till today for the entire country; amendments were made in 1941, 1944 and 1958. The Act was modified in 1970 and it was translated into Tamil in 1986. A few key features of this act are given below: Powers of the Police Officers to arrest offenders Powers of the Executive Officers and Public Health Staff to arrest offenders. Act to override other Enactments; " Public Health Act" is supreme Power to the Government to remove difficulties in implementation of the Act as and when they appear. Powers of the Government and of the Director of Public Health and his Staff to advise local authorities The Act specifies the legal and administrative structures under which a public health system functions, assigns responsibilities and powers to different levels of government and agencies, and specifies their source of funding for carrying out these duties. Under the Act, health officers are empowered to detect nuisances/malpractices following a complaint from a citizen, or by using their

powers for entry and inspection. The Act also provides the legislative basis for all the planning and policy implementation work of the Directorate of Public Health. The most crucial advantage of the Public Health Act in Tamil Nadu over other available legislation with public health implications is that it includes a very broad definition of a public health " nuisance". This includes any situation that poses a credible public health threat, a few examples of which are premises or animals kept in unhealthy conditions, stagnant water or ill-maintained drains, accumulation of refuse, and factories that are poorly designed or maintained. This means that the private sector which primarily doesn't work in preventive health also falls under this act.

Strong Infrastructure - A strong primary health care infrastructure is also a prerequisite of a strong health system. The Central government launched an initiative to expand the number of Primary Health Centres (PHCs) and Health Sub-Centres (HSCs) in rural areas. Tamil Nadu embraced the concept wholeheartedly and built the facilities much faster than almost all other states. The rate of expansion was remarkable. In the early 1980's there were only about 400 PHCs and 4, 000 HSCs across rural areas of the state. By 1990 nearly 1, 400 PHCs and about 8, 000 HSCs had been opened and Tamil Nadu was very close to achieving the national target of one PHC per 30, 000 people and one HSC per 5, 000 people. Since then, these achievements have more or less been sustained. In 2005, Tamil Nadu had approximately 1, 500 PHCs (one for every 33, 000 people) and 8, 680 HSCs (each covering a population of 5, 100). Very few states have reached this high level of coverage through the primary health care system^{viii}. This strong

infrastructure has been used as a platform to promote various preventive health services in rural areas.

The infrastructure described above lays the groundwork for a strong health system, but in order to ensure a strong health system many other structures are also required. A few such innovative structures/frameworks are presented in the next section.

Section 2: Health System Innovations

Tamil Nadu Medical Service Corporation (TNMSC) - A major initiative taken by the state government was to set up a government company in 1995, the Tamil Nadu Medical Service Corporation (TNMSC), with the primary objective of ensuring ready availability of all essential drugs and medicines in all the government health facilities, by adopting a streamlined procedure for their procurement, storage and distribution. According to Satyabrata Sahoo, Managing Director, TNMSC - " The basic idea behind creating this TNMSC is to make the drugs, equipment, and surgical sutures, all available through a centralized procurement system so that in the entire health system, there is no gap between the availability, maintenance and other related issues. The medical system is so huge, it starts at the public health level, we reach in each and every village, then there is a secondary medical sector and then the tertiary medical sector; everywhere there is so many requirements of drugs, medicines, sutures, surgical, equipment, maintenance. To provide this through a centralized agency, this was thought of and it started during the year 1994. Through this system, we have been very much able to remove the middle man and delays". The first step taken by TNMSC was to finalize the list of essential drugs to be procured. Keeping in view the WHO's Model <https://assignbuster.com/innovative-approaches-in-maternal-and-newborn-care-health-essay/>

List of essential drugs; the existing list of nearly 900 drugs was reduced to a list of 240 drugs. Now, TNMSC has 271 items of drugs and medicines on its list, accounting for around 90 percent of the budget outlay for the purpose, leaving other drugs of smaller quantities to be purchased locally by the institutions from out of the remaining 10 percent of the budget. This innovation of the Government of Tamil Nadu in drug procurement and management has improved availability of drugs in nearly 2, 000 government medical institutions throughout the state. The competitive procurement system has resulted in savings in the outlay on drugs to the extent of 36 percent[xii]of the allocation. Apart from better budgetary control on drug consumption, medical institutions have become more cost conscious." The accountability of the doctors, nurses, has improved; this is big achievement of the maternal death review. The second important thing is the findings of the maternal death review give inputs to do advocacy with the political bosses and the bureaucrats. We have evidence in paper to show them. This improved the situation/allocation for health sector; additional nurses, additional specialists, mobilization of the specialists to the primary health centres; all these things happened"

Dr. Padmanabhan, Advisor, NHSRC

Maternal Death Review (MDR) - It is an important strategy to improve the quality of obstetric care and reduce maternal mortality and morbidity.

Maternal Death Review[1](MDR) as a strategy has been spelt out clearly in the RCH -II National Programme Implementation Plan document. The importance of MDR lies in the fact that it provides detailed information on various factors at facility, district, community, regional and national level

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that are needed to be addressed to reduce maternal deaths. Analysis of these deaths can identify the delays that contribute to maternal deaths at various levels and the information can be used to adopt measures to fill the gaps in service. Maternal Death Review is contemplated to be implemented in two forms - Facility Based Maternal Death Review and Community Based Maternal Death Review. To identify the reasons behind maternal deaths, Tamil Nadu started compulsory audit of all maternal deaths occurring in the state since 1994. Sensitization workshops were organized among the health functionaries on the importance of maternal death reporting. The system became fully established when the Government of Tamil Nadu issued an order in 2004, stating that all maternal deaths should be audited." Almost 30-35% of the institutional deliveries are conducted in the PHCs in Tamil Nadu. This has happened due to the provision of services, good infrastructure and the availability of buildings, electricity, toilets, and computer stations. This was the first step; followed by (under RCH1 programme), three staff nurses model for the PHCs; a qualified staff nurse has been made available in 8 hours shift. Hence three nurses are available on rotation shift so that made the PHC to be open for 24 hours. So the 24 hour concept with the three staff nurses model, it was really made successful. This helps the women can walk in any time, in the day or night, to the PHC for services". - Dr. Padmanabhan, Advisor, NHRCThe reporting itself of the maternal death is the most important step, for as we have seen, many times people do not report maternal death cases. The State mandates that each maternal death be reported to the Maternal and Child Health Commissioner within 24 hours of occurrence through telegram or fax,

irrespective of place of death—public facility or private nursing home or during the time of transit. Multiple sources reporting are encouraged. Maternal deaths are reported by auxiliary nurse midwives (ANMs), the medical officer posted at the periphery, from the First Referral Unit or non-government hospitals, district public-health nurse, and Deputy Director of Health Services. Investigations of maternal deaths are carried out through community-based maternal review (verbal autopsy) and facility-based maternal death reviews/clinical audits. Three staff nurse model - 24*7 functional PHCs: 99.8 percent[xiii]of all deliveries in the state are conducted in institutions by qualified and trained personnel. Tamil Nadu has been able to achieve such encouraging figures due to various policy initiatives which were introduced between 2001-06, one being the 24 hours delivery care service in the PHCs. Tamil Nadu is the first state in the country which introduced the three staff nurse model in the PHCs to make them functional 24*7. This innovation ensures safe delivery services in a PHC to the pregnant women at the onset of labour pains at any point of the day or night.

In the next section of this case study we will be describing a few innovative technical initiatives undertaken by Tamil Nadu state. It has been recognized that Tamil Nadu has a strong health system which helps it to undertake innovative initiatives. Many models initiated or innovated by Tamil Nadu were later scaled up across the country. These two innovations are selected based on their potential for scale up across the country in days to come.

Section 3: Technological innovations

Iron Sucrose Injections- Anaemia is estimated to affect nearly two thirds of pregnant women in developing countries. Iron deficiency anaemia (IDA) is responsible for 95 percent of anaemia during pregnancy. Over the past years, various oral, intramuscular and intravenous preparations of iron have been used for correction of IDA in the pregnant mothers. However, they are associated with significant side effects and it is not possible to achieve the target rise in haemoglobin (Hb) level in a limited time-period when the mother is approaching term. Iron sucrose injection was approved by United States of America Food and Drug Administration (FDA) in November 2000. Iron sucrose is an iron hydroxide sucrose complex in water. It is administered by intravenous injection or infusion. The recommended schedule is to administer 100 mg intravenously over 5 minutes, once to thrice weekly until 1, 000 mg has been administered. The rate of administration should not exceed 20 mg per minute. A test dose is also not required and is at the physician's discretion[xiv]. feels that " NASG is one part of the full strategy for reduction of postpartum or antepartum hemorrhage and cannot operate in isolation. In order to manage PPH, the Government of Tamil Nadu initiated training on active management of third stage of labor, followed by <https://assignbuster.com/innovative-approaches-in-maternal-and-newborn-care-health-essay/>

availability of safe blood and NASG. The State Government realizes that the results of interventions directed towards reduction of PPH can take up to a few years but it is essential to invest in such innovations". Dr Vaidyanathan, Principal Secretary (Health) for Government of Tamil Nadu October 2011, Chennai, Tamil Nadu, India Iron sucrose complex (ISC) is a relatively new drug; it has been able to raise the Hb to a satisfactory level when used in severely anaemic iron deficient pregnant women. Few state governments in India are conducting initial research on it. The state governments of Bihar, Uttar Pradesh, Karnataka, Tamil Nadu, Maharashtra and Chhattisgarh have allocated resources in their Programme Implementation Plans (PIP) for procurement of iron sucrose for making it available in primary health care settings. The decision to include it has been based on evidence obtained from very small observational studies and on the experience of clinicians who have been using it. Of the above mentioned states Tamil Nadu has implemented the administration of IV iron sucrose in primary health care settings since 2009.[xv] Non-Pneumatic Anti-Shock garment (NASG) - Worldwide the most common cause of maternal mortality is haemorrhage, but the proportion of deaths due to each different cause varies between regions. Maternal mortality rate in India are estimated at 254 per 100,000[xvi] live births and postpartum haemorrhage (PPH) accounts for 35-56 percent of these deaths (Kodkany et al, 2004). One of the ways that this can be prevented is by application of Non-Pneumatic Anti-Shock Garments (NASG) as the immediate first aid treatment for reversing hypovolumic shock in pregnant women suffering from PPH during transportation. NASG is made of stretchy, lightweight neoprene resembling the bottom half of a wet suit,

the garment applies pressure to the lower limbs, pelvis and abdomen via its five Velcro closures. The NASG is fairly simple and easy to use by any medical or non-medical person with one hour training in applying it. Each garment costs only \$160 and can be reused up to 50 times. The NASG is safer than traditional anti-shock garments. Because the NASG uses lower pressure, it does not cause compartment syndrome or ischemia. Pathfinder International initiated the Raksha project in Bihar, Rajasthan and Tamil Nadu to implement the Continuum of Care philosophy, and within that introduced NASG. The way NASG has been scaled up in Tamil Nadu is different to the way Pathfinder International has scaled it up in Bihar and Rajasthan. Pathfinder International has signed an MOU with the Government of Tamil Nadu and is committed to providing technical training on the usage of NASG as well as providing a number of garments to the state government. The Government of Tamil Nadu has incorporated the use of NASG into its protocols for active management of third stage of labour and routinely trains staff at all levels for its use. NASG is now also being kept in all 108 (EMRI) ambulances in Tamil Nadu.