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Review Article

Challenges in the reduction of infant mortality in India: have we reached a plateau

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ABSTRACT

The infant mortality rate is one of the major indicators of a country's overall health and development. From time to time, many new initiatives were launched by the government of India to bring down the IMR of the country. Many of the initiatives launched in the early phases were able to substantially reduce the IMR to 26/100 live births by 2023. However, the decline has not been uniform and the IMR seems to have reached a plateau. Beyond this it will need some major changes at the health policy level to bring the IMR to a level which is compatible with the developed countries. This article attempts to highlight the trajectory of India towards reduction of Infant mortality, the various initiatives launched from time to time and the challenges in bringing it down further from the present plateau stage.

Keywords: Infant, Mortality, Challenges, Government

INTRODUCTION

The infant mortality rate is one of the major indicators of a country's overall health and development. In 2000, when the UN adopted the millennium development goals, India had also laid down targets for reduction of infant and child mortality. The national health policy 2002, the national population policy 2000, the national health mission, all of these had laid down specific targets for reduction of the country's Infant mortality which was more than 25 times than developed countries. Then came the sustainable development goals (2016-2030) where one of the targets is to reduce the under-5 mortality to 25/1000 live births by 2030. Infant mortality accounts for over 80% of under-5 mortality rate. Despite formulating so many targets and strategies, the Infant mortality decline is not the way as it was expected to happen with wide disparities across states in India. This article attempts to highlight the trajectory of India towards reduction of Infant mortality, the various initiatives launched from time to time and the challenges in bringing it down further from the present plateau stage.[1]

LITERATURE REVIEW

The present article describes the trends in infant mortality rates in India by comparing with various study reports, policy and program documents published by the ministry of health and family welfare, GoI from time to time as well as reports and data from the WHO and UNICEF. Also, several studies published in journals on the Infant mortality trends and its preventive strategies were consulted in writing this article which has been duly mentioned in the reference section. Data bases like Embase, MEDLINE, PubMed, Scopus and Web of science were searched using appropriate key words without any date restrictions to look for the relevant articles.

DISCUSSION

India was one of the major contributors to the global infant mortality rates with figures as high as 2.3 million and infant mortality rate at 88.3/1000 live births in 1990. The first program which was introduced for targeting this

issue was the child survival and safe motherhood program launched in 1992.[2] Again in 1997, the govt of India launched the reproductive and child health (RCH) program to reduce infant, child and maternal mortality. In the year 2000, India was a signatory to the millennium development goal which had reduction of child mortality as its fourth goal.[3] India could achieve only a 17% reduction in neonatal mortality from 1.35 million to 1.12 million from 1990 to 2000. The IMR reduced from 88/1000 live births to 68/1000 from the year 1990 to 2000.[4]

The RCH phase II began from 1st April, 2005. Under the RCH I and II, several initiatives were launched with focus on reduction of infant mortality. The major thrust areas in RCH I and II were: Universal immunization for all vaccine preventable diseases. Essential newborn care which includes resuscitation of new borns with asphyxia, prevention of hypothermia and infections and prompt referral of sick newborns. Facility based newborn care by equipping the facilities to handle sick newborns referred from the periphery. Setting up of new born care corner in labour room and OT of all health facilities and special newborn care units at district levels. IMNCI which encompasses a range of interventions to prevent and manage the common childhood illness.[5,6]

The programs which were launched with focus on reduction on infant mortality are:

Home based newborn care

The main objective is to provide essential new born care to all newborns with special care for pre term and sick newborns, early identification of complications and provide support and education to the family regarding newborn care practices. As per this strategy, the ASHA will make visits to all newborns (six visits in case of institutional delivery and seven visits in case of home delivery) upto 42 days of life.[7]

Navjat shishu suraksha karyakram

This program aims to train health personnel in basic newborn care and resuscitation so as to address common problems at birth like prevention of hypothermia, prevention of infection and the basic newborn resuscitation.[8]

Integrated management of neonatal and childhood illness

IMNCI is the one of the key pillars of child health interventions under RCH II strategy. The Indian version has made several adaptations the key highlights of which are inclusion of care of child 0-7 days, incorporation of National guidelines on malaria, anaemia, Vitamin A supplementation and immunization schedule, focus on skill-based training of health personnel for sick new borns up to 2 months.[9]

Janani Shishu Suraksha Karyakram

To facilitate zero out of pocket expenditure for maternal and infant health services through free health care and referral transport entitlements. The package benefits extended to all children upto the age of 1 years.[10]

Rashtriya bal swasthya karyakram

This was a new initiative launched in 2013.The major focus was on child health screening and early intervention services to cover 30 identified health conditions for early detection, free treatment and management. [11]

In June, 2012 an important summit on "global child survival call to action: a promise to keep" was conducted in Washington DC to fuel the global fight for reduction of child mortality. India was also one of the countries to pledge for reduction of child mortality to <20/1000 live births by 2035. As a call for action in the year 2013, the govt of India launched a strategic approach to reproductive, maternal, newborn, child and adolescent health (RMNCH+A). Since then, it has become a part of India's flagship public health program. This program is based on provision of comprehensive care through five thematic areas with five high impact cross cutting interventions. The new born interventions are basically the same as in RCH namely home-based newborn care, essential newborn care and newborn resuscitation services at all delivery points and special new born care units.[12]

With these herculean efforts, however there was a substantial reduction in neonatal mortality by 33% in 2013 as compared to 2000. The IMR also showed a significant decline from 68/1000 live births to 40/1000 in the year 2013. India's national health policy 2017 had the target of reducing the infant mortality rate in the country to 28/1000 live births by the year 2019.[13] However, the trends in decline of infant mortality have not been uniform from 1981 to the present. The annual percentage decrease in the infant mortality was highest during 1988 to 1991 but decreased significantly from 1991 to 1999. The decline in infant mortality therefore has not been uniform. India has not able to keep up the momentum of rapid decline of infant mortality as it did during the launch of UIP. This was mainly due to changes in the focus towards prevention of maternal mortality through emergency obstetric care. The major focus of the government shifted to reducing maternal mortality through emergency and comprehensive obstetric care. The child survival interventions had a setback though it was projected that strengthening of obstetric services would also contribute to reduction of neonatal and infant deaths, but in reality, this did not happen.[14] As per the NFHS III, the full immunization coverage rate increased by just 1.5% points from 1995-96.[15]

The IMR in the year 2014 was 39 /1000 live births. (SRS) key thrust was given during this period on setting up sick

newborn care units, new born stabilization units, New born care corners and stabilization units and initiatives like navjat shishu suraksha karyakram. Also there has been a vast discrepancy in IMR across states. It has been shown to vary from 12 in Kerela to 52 in Madhya Pradesh and 10 in Goa to 46 in Meghalaya.[16] The infant mortality rate for India in 2020 was 29.848 deaths per 1000 live births, a 3.48% decline from 2019.[17]As per the sample registration system (SRS) bulletin of registrar general of India (RGI), the Infant Mortality Rate (IMR) has reduced from 37 per 1000 live births in 2015 to 30 per 1,000 live births in 2019 at national level.[18] The infant mortality rate for India in 2021 was 28.771/1000 live births, a 3.61% decline from 2020. In 2022, this came down to 27.695/1000 with a 3.74% decline and in 2023 the IMR stands at 26.619/1000 live births with a 3.89% decline from 2022. It has been observed that the trend in decline is indeed slow and it seems to have reached a plateau where a further drastic decline would require changes in strategy as well as approaches to the delivery of child health care.[19]

The slow and non-uniform decline and vast discrepancy across states can be attributed to the following factors:

Differences in income and education across states. Population composition with states/UTs having more tribal and under privileged populations having higher rates. This causes discrepancies in access to health care services.

Utilization of health care services by population which is grossly uneven across the country. Lower social, cultural and health status of women still exist in many parts of our country. Eliminating gender differences in mortality rates will significantly reduce overall infant mortality.[16]

There has been a direct relationship of infant mortality with two most crucial indicators: gestational age of the infant and birth weight with infants having much higher risk of dying with early gestational age (less than 37 weeks) and low birth weight (less than 2500 gm). These can have a significant impact on infant mortality. Despite much advocacy work, it has been observed that the percentage of infants born pre term or low birth weight has continued to rise. Research has shown that a portion of increase in pre term or low birth weight can also be due to multiple births which can be attributed to the use of assisted reproductive technologies. Increase in medical interventions like caesarean section and induction of labour may also have an effect on the rate of increase in pre term births.[20]

A combined public health as well as risk-based approach is required for bringing down the stagnant IMR in India. The public health approach is basically community based focussing on overall health and well being of the infant in terms of universal immunization, management of common illness, breast feeding interventions which are crucial for child survival. The risk based approach focusses on institutionalized care targeting high risk infants for providing critical care services. Too much focus on the risk based approach can lead to decline in health and well being of infants whereas too much focus on community based approach can lead to lack of care in critical high risk situations.[21] Therefore for effective reduction of infant mortality a balance has to be struck in these two approaches. Thus, along with facility based care, establishment of new born stabilization units etc., equal focus should also be given to home based new born care and community based interventions. Preventive interventions like MAA (Mothers absolute affection) which encourages exclusive breast feeding for first six months, social awareness and actions to neutralize pneumonia successfully (SAANS, defeat diarrhoea (D2) initiative implemented for promoting ORS and zinc, RBSK can to a great extent contribute to the reduction of infant mortality. Another critical factor is the successful implementation of these interventions. If country needs to make a dent to plateau in infant mortality, government has to ensure that these interventions have to reach out to masses, be made accessible to them and affordable to them. Also, mechanisms for delivery for these services needs to be simple and as per felt needs of community.[22] Each state needs to devise a simple service delivery mechanism based on local geographical terrains, knowledge and prevailing customs of people. Adequate man power needs to be deployed in poor performing/ difficult terrain states as the ones working are already overburdened by work load of managing many parallel programs. Reporting and referral mechanism needs to be less complex and well outlined. A strong referral linkage system needs to be built into health care system.[23] Infant mortality needs to been given a major focus in health policies and programmes if we are to fulfil goals set by our leaders at national and international levels.

CONCLUSION

The present article stresses on the fact that though there has been a drastic decline in the Infant Mortality rates in India in the last decade but somehow the decline in recent years is very slow and seems to have reached a plateau. A strategic combination of public health approaches along with facility-based care specifically targeted to high-risk infants can go a long way in addressing the gaps in care of this vulnerable age group. Issues of accessibility, availability of quality care, affordability and accountability needs to be addressed if the country has to make a dent in the slow decline of Infant Mortality rates.

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