

Maternal & Child Health

The Problem

India figures amongst the highest prevalence of neonatal mortality in the world, with about 0.75 million neonates dying every year. Additionally, more than 659,000 new-born babies die every year in India. India also accounts for twenty percent of all maternal deaths worldwide, with more than 150 women dying each day due to preventable causes related to pregnancy and childbirth.

The Million Death Study (MDS) based on data from the Sample Registration System (SRS) estimates that 14.3 percent of all Infant Mortality Rates (IMR) is caused by low birth weight (2015) and 55 percent of all neonatal deaths. Three causes — prematurity or low birthweight, neonatal infections, and birth asphyxia or trauma — accounted for more than three-quarters of neonatal deaths in India. To meet the 2030 Sustainable Development Goals for child mortality, India will need to maintain the current trajectory of 1–59-month mortality and accelerate declines in neonatal mortality (to >5% annually) from 2015 onwards. There is evidence to show that promotion of breastfeeding practices, ANC care and child immunization have positive relationship in terms of reduced IMR.

As per NFHS-4, percentage of mothers who had antenatal check-up in first trimester increased in India from 43.9% in 2005-06 (NFHS-3) to 58.6% in 2015-16. Between 2005-06 and 2015-16 survey data indicate that Andhra Pradesh's infant mortality fell from 54 to 35 deaths per 1000 live births (NFHS 3, NFHS 4). Maternal mortality rate fell from 134 per 100,000 live births in 2008, to 92 in 2012 (NFHS 4). In AP 70% women exclusively breastfeed, 76% of women had at least 4 antenatal care (ANC) visits during pregnancy, and only 65% of children are fully vaccinated (NFHS 4).

Government of Andhra Pradesh has taken several steps to ensure the improvement of maternal and child health like the Community Managed Health & Nutrition project, Community Managed Health and Nutrition (CMH&N) intervention, Talli-Bidda Express scheme etc..

Solutions

Interventions	BCR	Benefit (INR crores)	Cost (INR crores)
Promotion, incentivization and supply of immunization in lagging districts	37	385	10
Mass media promotion and intensive counseling of breastfeeding	8	5,757	749
Conditional cash transfer for ANC visits	6	950	163

Total costs & benefits are discounted at 5%

The full research paper by **Abusaleh Shariff**, Chief Scholar of the US-India Policy Institute is available on www.appriorities.com/health-systems-maternal-and-child-health.

Mass Media Promotion and intensive counselling of breastfeeding

The Problem

Currently 30% of women in the state do not exclusively breastfeed and 52% of women do not continually breastfeed up to 23 months (NFHS-4, IHD2).

The Solution

This intervention seeks promotion of breastfeeding via TV advertisements, counselling of mothers via dedicated staff and providing printed fliers/pamphlets which contain the communication material to mothers regarding the importance of breastfeeding. Analysis on India's last-born children (both dead and alive at the time of survey) suggests that likelihood of a child being alive increases by almost 9.43 time higher for the children who are breast-fed for 19-24 months than the children who were not breastfed at all.

Costs

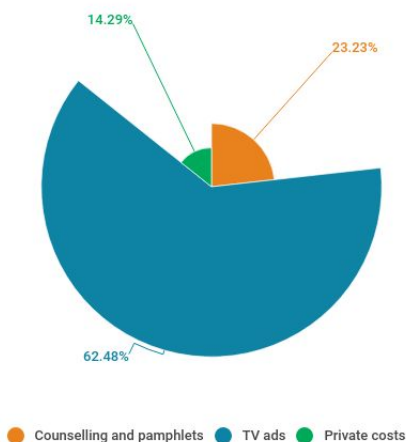
Annual cost to promote various components of breastfeeding practices in AP is estimated at Rs. 749 crores per year.

This comprises of extra staff cost for intensive counselling on breastfeeding and the cost of printing communication material and pamphlets for distribution which adds up to INR 174 crores per year and saturation of TV advertisements on 30 ads of 30 seconds length will be broadcast two days per week on 10 national and regional TV channels at INR 468 crores per year. The final set of costs are private costs such as caregivers time, transport and food when availing the 17 counselling services. This is estimated at INR 107 crores per year. It is assumed that all the pregnant women are provided breastfeeding counselling and each pregnant woman needs to be counselled 17 times during pregnancy and post pregnancy period.

Benefits

As a result of the intervention it is assumed that rates of exclusive breastfeeding will reach 93% and extended breastfeeding will reach 88%. This implies an additional 1.9 lakh children more who will be exclusively breastfed, and 3.22 lakh who will be breastfed between 6-23 months. The intervention will avoid 5,982 child deaths and 39,851 Years Lived with Disability (YLDs) per year. The total benefit is therefore INR 5,757 crores at a 5% discount rate. The benefit to cost ratio is 8.

Promotion of breastfeeding costs

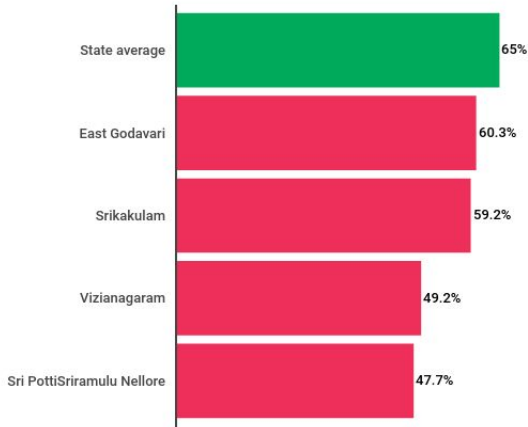


Promotion, incentivization and supply of immunization in lagging districts

The Problem

Immunization is a process of administering vaccine with the objective of providing immunity/resistance to an individual against infectious diseases. The current system of providing immunization in AP via Anganwadi centres, primary health care centres and private providers, however, is insufficient. Only 65% of children are fully immunized across AP however there is inter-district variation also for example East Godavari, Sri PottiSriramulu Nellore, Srikakulam and Vizianagaram districts have an average rate of immunization 55% this intervention specifically targets the lagging districts. This intervention targets these districts where 2.2 lakh children are born every year.

Immunization rates in lagging district



The Solution

This intervention proposes promotion and provision of immunization camps for remote areas, that incentivizes mothers to bring children for immunization with in-kind transfers (lentils and meals) worth Rs 685.

Costs

Total cost per annum for immunization camps plus incentives in AP is INR 10 crores (Rs. 7.4 crore of which are the incentives and Rs 2.1 crore is the fixed cost of the camp). This includes an assumed 70% substitution away from the existing system, for those who would have been vaccinated anyway.

Benefits

Benefits include rise in the level of fully immunized children in the districts to state average 65%, saving 219 children per year and avoiding 5,946 YLDs. This is valued at INR 378 crores per year at 5% discount rate. Also included is the value of the incentives, INR 7.4 crore as a benefit. At 5 percent discount rate the Benefit-Cost ratio is 37.

Conditional Cash Transfer for ANC Visits

The Problem

In the case of Andhra Pradesh, the proportion of women receiving 4 ANC visit is already high at 76% (the Indian average is 51.2%, NFHS4). It is assumed

that this intervention would lead to increase in uptake of ANC to 92%.

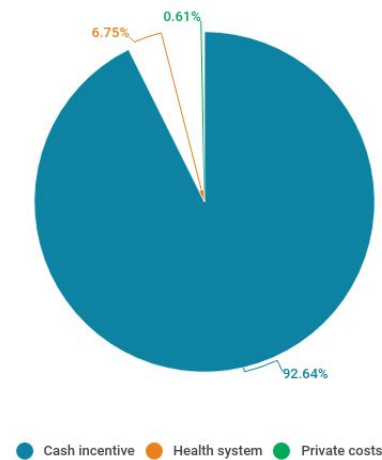
The Solution

The objective of this intervention is to provide conditional cash transfer of Rs. 2000 for accessing 4 Antenatal check-up (ANC) visits during pregnancy.

Costs

The total cost of this intervention is 163 crores, which is a sum of INR 151 crores for the cash incentives, and 12 crores for health system and private costs of mothers making new ANC visits.

ANC visit cash transfer costs



Costs in crore rupees per year. Including cost of cash incentives to women who would otherwise receive 4 ANC visits. Source: Authors calculations.

Benefits

Benefits estimated include reduction in neonatal mortality of 6 per 1000 live births. This will save 804 infant lives per year and avert 6,062 YLDs. The health benefit is valued at INR 575 crores and with the incentive benefit of INR 151 crores, the total benefit is therefore 950 crores (5% discount). The benefit cost ratio is 6.