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Improving maternal and child health in India

According to the World Health Organization (WHO), 45,000 women died from preventable pregnancy-related complications in India in 2015.¹ Rural women and adolescent girls are the most at risk. Severe shortages of qualified and trained midwives in rural areas is one of the primary reasons behind these deaths. In response, state governments are implementing programmes to encourage women to deliver at medical centres. However, limited evidence exists on the effectiveness of such interventions.

This brief draws on the findings from impact evaluations of two state government programmes, the *Chiranjeevi Yojana* (CY) in Gujarat and the *Thayi Bhagya Yojana* (TBY) in Karnataka, aimed at improving maternal health, especially among women living below the poverty line.² These programmes were set up in the early 2000s in response to high maternal mortality from these factors.³

Main findings

- The programmes did not increase the overall rates of institutional delivery, nor did they improve maternal and child health.
- TBY, however, contributed to a noteworthy decline in caesarean rates.
- CY did not reduce out-of-pocket expenses for pregnant women. This is not surprising, given that the Indian District Level Household Survey 2007–2008 estimates the cost for institutional delivery at INR1,935, compared with the INR1,600 provided under CY. TBY contributed to a small reduction of less than INR200 (USD5 in 2010) in hospital expenditure per pregnant woman.
- Most health providers in Karnataka TBY mentioned not having a clear understanding of the programme or how the incentives worked. However, those with contracts rewarding adherence to WHO guidelines reported fewer instances of post-partum haemorrhage, compared with those who were rewarded for the outcome of reducing post-partum haemorrhage.

The interventions

The Gujarat government implemented the CY programme in early 2005, initially covering five districts and expanding to include all districts in 2007, in collaboration with 800 private hospitals. TBY in Karnataka, on the other hand, launched in 2009, was limited to 7 districts delivered through 88 health providers.

The programmes sought to encourage pregnant women to opt for institutional delivery by alleviating demand-related constraints. The medical facilities were reimbursed

INR1,600 (USD40 in 2005) under CY and INR3,000 (USD58 in 2009) under TBY for every delivery.⁴ Further, in March 2010, TBY offered women belonging to scheduled caste and tribe⁵ families living in poverty an additional cash incentive of INR1,000 (USD21 in 2010) for their first two deliveries in a private hospital, provided they were above 19 years of age.

In Karnataka, the evaluation also experimented with incentivising health providers to see if

improvements in maternal health were better achieved through contracts that rewarded medical professionals for adhering to WHO guidelines or contracts that rewarded a reduced instance of post-partum haemorrhage, pre-eclampsia and neonatal mortality. Based on how the contracts were structured, health providers could earn up to INR150,000 (USD3,000 in 2010) at the end of the one-year intervention period.

Lessons for future research and maternal health programmes and practice

The CY and the TBY programmes saw low take-up by women and families, despite several benefits accorded in the schemes. There is a need to understand what factors contributed to low take-up and how programmes need to be designed to address this challenge. Therefore, future impact evaluations need to measure these factors and ensure that they are part of analysis and reporting.

Neither programme focused on the quality of care offered at the hospitals. The success of TBY's incentives

scheme for adhering to WHO guidelines needs to be further built upon to assess if such contracts can deliver similar results when scaled up. Parallel efforts to improve the quality of the public healthcare system are needed.

Replicating the success and remediating the low take-up of such maternal health programmes will further depend upon developing low-cost, easy-to-implement mechanisms to monitor the transparent implementation of these schemes.

About this impact evaluation

This brief is based on an impact evaluation report published in 2016, *Improving maternal and child health in India, 3ie Impact Evaluation Report 30*, by Manoj Mohanan, Grant Miller, Gerard La Forgia, Swapnil Shekhar and Kultar Singh.

Endnotes

¹ Alkema, L., Chou, D., Hogan, D., Zhang, S., Moller, AB, Gemmill, A, Fat, DM, Boerma, T, Temmerman, M, Mathers, C and Say, L, 2016. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *The Lancet*, 387(10017), pp.462–474.

² The World Bank defines poverty as living on less than USD1.90 per day. Poverty line is the standard income threshold below which the family is deemed as poor.

³ According to the 2001 census, 83,000 women died. Office of Registrar General India, 2011. *Maternal & child mortality and total fertility rates* [PowerPoint presentation]. Available at: <http://censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR_release_070711.pdf> [Accessed 17 September 2017].

⁴ Approximately, USD1 = INR43 in 2005; USD1 = INR50 in 2009; USD1 = INR46 in 2010.

⁵ Under the Indian constitution, scheduled castes and tribes are officially designated ethnic groups of historically disadvantaged people.



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