## OP-05 BENEFIT INCIDENCE ANALYSIS OF INSTITUTIONAL CHILD DELIVERY IN INDIA, 2004–2014: IMPROVING EQUITY THROUGH THE NATIONAL HEALTH MISSION?

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**Background** The National Health Mission (NHM) aims to improve maternal and child health by community mobilisation, increased health workforce and structural strengthening of health infrastructure, especially in high-focus Empowered Action Group (EAG) and North East (NE) states. NHM focuses on the continuum of care approach, particularly by increasing

institutional deliveries. Increasing fund allocation from central and state governments has operationalised NHM interventions. Little is known about the utilisation, equity and distribution of benefits of public sector deliveries. This study presents a benefit incidence analysis of childbirth subsidies in EAG, NE and other Indian states, before and after NHM implementation.

**Methods** Benefit incidence analysis of childbirth in public hospitals was estimated using nationally representative data collected by the National Sample Survey Organization from 73,868 (2004) and 65,932 (2014) households. Information on childbirth by public and private facilities was used to estimate childbirth utilisation rates, net subsidy of public utilisation (private minus public prices) and benefit incidence. Net benefit was estimated by mean public and private-sector childbirth expenditures disaggregated by region, economic quartile and rural/urban residence. Benefit incidence was estimated for household expenditure quintiles for EAG, NE, and other states, separately for 2004 and 2014.

**Results** In 2004, 76% of total deliveries in EAG, 61% in NE and 32% in other states occurred at home. In the same year, 11% of all deliveries in EAG, 21% in NE and 33% in other states were attended in public facilities. In 2014, public institutional deliveries (as a share of total deliveries) increased to 56% in EAG, 74% in NE and 47% in other states. Mean out-of-pocket spending on childbirth in public facilities declined from INR 1163 in 2004 to INR 815 in 2014 (at a constant 2004 prices). In 2004, childbirth utilisation rates were highest in the third and the fourth economic quintiles in NE, the first and the second economic quintiles in EAG, and the second and the third economic quintiles in other states. In 2014, highest public facility utilisation rates were in the first economic quintile in all states. In NE states, there was a 78% increase in utilisation in the first quintile and 47% increase in the second quintile. In EAG states, highest increase in utilisation was in the middle quintile. In all other states, there was 61% increase in the first quintile utilisation rates. For the poorest (the first and the second) quintiles, the share of benefit incidence increased from 16% to 47% in NE, 31% to 47% in EAG, and 16% to 60% in other states, between 2004 and 2014. Nationally, this increased from 20% to 53%. In NE states, the majority share of benefit incidence was by the fourth quintile in 2004 (34%), which reduced to 17% with the highest share by the lowest quintile (28%) in 2014. In EAG states, the lowest quintile share of benefit incidence increased from 13% to 27% while the share of the second lowest quintile declined from 29% to 21% from 2004–14. Share of the lowest quintile benefit incidence increased from 8% to 31% in other states in the same period.

**Discussion and conclusion** Implementation of the NHM has been associated with a steep rise in institutional deliveries across all states, especially in public facilities. Out-of-pocket spending on childbirth in public facilities have declined between 2004–2014, suggesting that funds infused into NHM for maternal and child health have been able to subsidise these expenditures. Initiatives like the conditional cash transfer such as *Janani Suraksha Yojana*, *Janani Shishu Suraksha Karyakaram* and other state level initiatives have played a role in this. Utilisation patterns of public facilities between 2004 and 2014 show that the poorer economic quintiles have registered the highest increases in public sector utilisation, especially in NE states. In EAG states, the steepest increase in utilisation has been seen in richer groups, suggestive of scope to increase utilisation in poorer groups. The high increase in utilisation rates and benefit incidence is also witnessed in other, non-high-focus NHM states. The share of benefit incidence of childbirth subsidies has also increased across all states for the poor and the poorest quintiles, yet there is a need to increase access to the poorer sections in EAG states.

Overall, benefit incidence analysis indicates increased access to, and utilisation of public sector institutional deliveries, and increased share of benefit incidence among poor sections from 2004–2014, thereby improving equitable access to childbirth services. Findings confirm the need for continued and increased funding for NHM, in order to sustain and accelerate the achieved gains in maternal and child health.

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