

## Effect of Knowledge of Frontline health workers on Essential Newborn Healthcare: Evidence from Rural India

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**Background:** A child health programme primarily depends upon ground-level service providers of the Department of Health and Integrated Child Development Services, i.e. Auxiliary Nurse Midwife (ANM) and Anganwadi Worker (AWW), in rural India. Results of previous studies showed that knowledge and skills of these frontline health workers varied drastically on scale. However, there is a dearth of study which shows the impact of knowledge of service providers on the adherence of newborn care-seeking practices at the household level.

**Objective:** To examine the effect of knowledge level of frontline health workers on the adherence of newborn care-seeking practices at the household level.

**Methodology:** Endline data of evaluation research to improve newborn health and survival in the Integrated Nutrition and Health Programme (INHP) II area of CARE/India collected by Johns Hopkins Bloomberg School of Public Health, during January-March 2006 from Uttar Pradesh gives a unique opportunity to examine the above objective. Using a structured questionnaire, 17,248 eligible mothers residing in 59,278 households were interviewed to collect detailed information on maternal and newborn health. Data were also collected from the catchment area of the existing frontline health workers (86 ANMs and 302 AWWs) to know their knowledge, roles, and responsibilities and have been linked to the eligible mother. Logistic regression model has been restored to see the adjusted effect of the knowledge level of the health workers.

**Results:** After controlling for the socioeconomic and demographic (SED) factors, the knowledge level of the ANMs/AWWs emerged as the most significant factor in practicing essential newborn care. For example, likelihood of the initiation of breastfeeding on the first day of life (odds ratio [OR]=2.22, 95% confidence interval [CI] 1.82-2.70) and thermal care in the first 6 hours (OR=2.44, 95%, CI: 1.89-3.16) was more than twice among mothers visited by the ANMs having better knowledge than by the ANMs having poor knowledge. Almost similar result was observed in case of AWW also. Interestingly, all other SED characteristics emerged as either insignificant or quite less effective. Results of bivariate analysis showed the positive association between the knowledge of the frontline health workers and their antenatal or postnatal outreach (home-visits).

**Conclusion:** Improving the newborn health status in rural settings may be possible by improving the knowledge of frontline health workers. A regular field-based refresher training programme should be launched at scale for ANMs and AWWs to update their knowledge and communication skills. Rigorous efforts are required to improve their antenatal and postnatal home-visits for healthy care-seeking behaviour.

**Key words:** knowledge level, ANM, AWW, essential new born care, women, Uttar Pradesh, India

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