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Quality of obstetric care in India's *Janani Suraksha Yojana* cash transfer program to promote facility births: Studies from Madhya Pradesh province

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ABSTRACT

Background: Improving maternal health remains a challenge in most of the developing countries. In-facility births are an accepted strategy to reduce maternal mortality. India, which accounts for 17% of global maternal deaths, had a high proportion of home births- 65.5% in 2005.With encouraging evidence in the early 2000, cash transfer programs are increasingly gaining popularity as measures to increase utilization of health services. In 2005, India, under its National Rural Health Mission (NRHM), launched the JananiSurakshaYojana (JSY) cash transfer program that pays cash for women on delivering in health facilities. The underlying assumption was that birth in a facility would provide women access to skilled birth attendance (SBA) and emergency obstetric care (EmOC), thus reducing maternal mortality. Along with the JSY, the NRHM also undertook initiatives to improve services, including training staff in skilled birth attendance, the provision of emergency transportation services, and facility infrastructure upgrades. The JSY, which has had over 80 million beneficiaries, has been successful in raising the proportion of facility births to 74.4% in 2013.However, the steep rise in facility births has not translated into a commensurate decline in maternal mortality ratio. Quality of care in the JSY program, although crucial to improved outcomes, has remained less researched.

Aims and objectives: This thesis studied the quality of obstetric care provided at facilities implementing the JSY cash transfer program in Madhya Pradesh (MP) province, India by way of (i) assessing the competence of nurse midwives in providing first line EmOC (I), (ii) assessing the quality of obstetric referrals (II), (iii) determining the implementation fidelity of partograph use for monitoring labour (III), and (iv) assessing the quality of routine intra-partum care (IV). Methods: The studies employed both quantitative (I, II, III) and qualitative (III, IV) methods. Data collection methods used were written case vignettes administered to nurse-midwives (n=233) (I, III), cross-sectional survey of post-partum women in health facilities (n=1182), maternal death record review (n=124) (II), case record review (n= 1466) (III), interviews with providers (n=11, 10) (III, IV) and observations of vaginal deliveries (n=18). Quantitative data were analysed using descriptive statistics (I, II, III), and conditional logistic regression to study the association between maternal referral and adverse birth outcomes at term delivery in the matched case control design (II), while spatial data for referrals was analysed using buffer analysis in Geographical Information System (II). The thematic framework approach was used for analysis of qualitative data (III, IV).

Results: The competence of nurse-midwives in providing first line EmOC was low- 75% of participants scored below 35% of the full score. Overall, 14% of participants in the vignette survey were competent in assessment, 58% were competent at making a correct clinical diagnosis, and 20% were competent at providing first-line care. Referral patterns in paper II showed secondary level facilities received few referrals, while referrals were made directly to district hospitals. Prolonged labour was the commonest reason for referral (39%). Adjusted odds for adverse birth outcomes were twice among those referred than those not referred (AOR 2.6, 95% CI 1.1-6.6) (II). Spatial analysis of transfer time from sending to the receiving CEmOC facility among in-facility maternal deaths showed 98% of the deceased mothers were referred from facilities within the

desired 2 hour transfer time, indicating a high number of maternal deaths despite good geographic access (II). Of the 1466 records reviewed, only 6 % had a filled partograph. Competence at plotting a partograph was poor - 75% participants scored below 15% of the full score. Analysis of the data from interviews regarding partograph use revealed partographs were used rarely and retrospectively, training does not support the correct use of the partographs, and partographs can be useful but are not feasible (III). Observations in paper IV revealed unfavorable delivery environment such as delivery rooms were not conducive to safe, women-friendly care provision, and coordination between providers was poor. Staff does not provide skilled care routinely as known from observations that monitoring was limited to assessment of cervical dilatation, lack of readiness to provide key elements of care, and the execution of harmful/ unnecessary practices coupled with poor techniques. Care provision was characterized by dominant staff and passive recipients - staff sometimes threatened, abused, or ignored women during delivery; women were passive and accepted dominance and disrespect. The interviews revealed a providers' awareness of the compromised quality of care, but they were constrained by structural problems. Positive practices were also observed, including companionship during childbirth and women mobilizing in the early stages of labour. Conclusions: Findings from studies conducted in MP province indicate that the quality of care in the JSY program requires improvement. A key opportunity to translate large gains in coverage of in-facility births achieved through the JSY cash transfer program into reductions in maternal mortality are currently lost owing to deficiencies in the quality of care provided. Quality of care can be improved by addressing problems with training, supervision and ensuring a conducive environment for the quality care provision. Cash transfer programs aiming to raise demand for services should ensure the services provided are of good quality in order to achieve intended outcomes.

Key words: Quality of care, cash transfer program, maternal mortality, skilled birth attendance, midwifery

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