## Mentoring of Health Professionals to Ensure Better Child-Birth and Newborn Care in Bihar, India: An Intervention Study

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Abstract: AMANAT is an initiative, taken in collaboration with the Government of Bihar, aimed at improving the Quality of Maternal and Neonatal care services at Bihar's public health facilities - those offering either the Basic Emergency Obstetric and Neonatal care (BEMONC) or Comprehensive Emergency Obstetric and Neonatal care (CEMONC) services. The effectiveness of this program is evaluated by conducting cross-sectional assessments at the concerned facilities prior to (baseline) and following completion (endline) of intervention. Direct Observation of Delivery (DOD) methodology is employed for carrying out the baseline and endline assessments - through which key obstetric and neonatal care practices among the Health Care Providers (especially the nurses) are assessed quantitatively by specially trained nursing professionals. Assessment of vitals prior to delivery improved during all three phases of BEMONC and all four phases of CEMONC training with statistically significant improvement noted in: i) pulse measurement in BEmONC phase 2 (9% to 68%), 3 (4% to 57%) & 4 (14% to 59%) and CEMONC phase 2 (7% to 72%) and 3 (0% to 64%); ii) blood pressure measurement in BEMONC phase 2 (27% to 84%), 3 (21% to 76%) & 4 (36% to 71%) and CEMONC phase 2 (23% to 76%) and 3 (2% to 70%); iii) fetal heart rate measurement in BEMONC phase 2 (10% to 72%), 3 (11% to 77%) & 4 (13% to 64%) and CEMONC phase 1 (24% to 38%), 2 (14% to 82%) and 3 (1% to 73%); and iv) abdominal examination in BEMONC phase 2 (14% to 59%), 3 (3% to 59%) & 4 (6% to 56%) and CEmONC phase 1 (0% to 24%), 2 (7% to 62%) & 3 (0% to 62%). Regarding infection control, wearing of apron, mask and cap by the delivery conductors improved significantly in all BEMONC phases. Similarly, the practice of handwashing improved in all BEMONC and CEMONC phases. Even on disaggregation, the handwashing showed significant improvement in all phases but CEmONC phase-4. Not only the positive practices related to handwashing improved but also negative practices such as turning off the tap with bare hands declined significantly in the aforementioned phases. Significant decline was also noted in negative maternal care practices such as application of fundal pressure for hastening the delivery process and administration of oxytocin prior to delivery. One of the notable achievement of AMANAT is an improvement in active management of the third stage of labor (AMTSL). The overall AMTSL (including administration of oxytocin or other uterotonics uterotonic in proper dose, route and time along with controlled cord traction and uterine massage) improved in all phases of BEMONC and CEMONC mentoring. Another key area of improvement, across phases, was in proper cutting/clamping of the umbilical cord. AMANAT mentoring also led to improvement in important immediate newborn care practices such as initiation of skin-to-skin care and timely initiation of breastfeeding. The next phase of the mentoring program seeks to institutionalize mentoring across the state that could potentially perpetuate improvement with minimal external intervention.

Keywords: capacity building, nurse-mentoring, quality of care, pregnancy, newborn care

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