

A Mobile Phone Application to Collect Real-Time Live Witnessed Birth Data for Rapid Provider Debriefing to Drive Quality Improvement for Maternal and Newborn Health in Bihar, India

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INTRODUCTION

The state of Bihar in India has an estimated maternal mortality ratio of 208 deaths per 100,000 live births. UCSF and PRONTO International are using simulation and team training to improve obstetric and neonatal emergency care in Bihar. The aim is to improve maternal and neonatal health outcomes through midwife mentoring as a component of a quality improvement initiative being led by CARE India.



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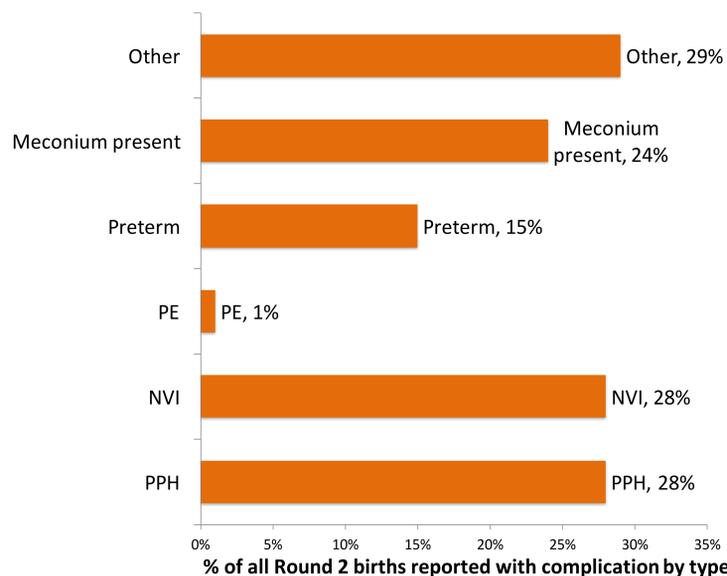
METHODOLOGY

UCSF and PRONTO International trained 120 midwife mentors on how to facilitate rapid debriefs after each observed live delivery with clinical staff at 320 primary health clinics and provided mentors with a debrief facilitation tool. In the first 9 month wave of the intervention, 50 mentors piloted a paper-based version of the debrief facilitation tool answering five broad categories of questions:

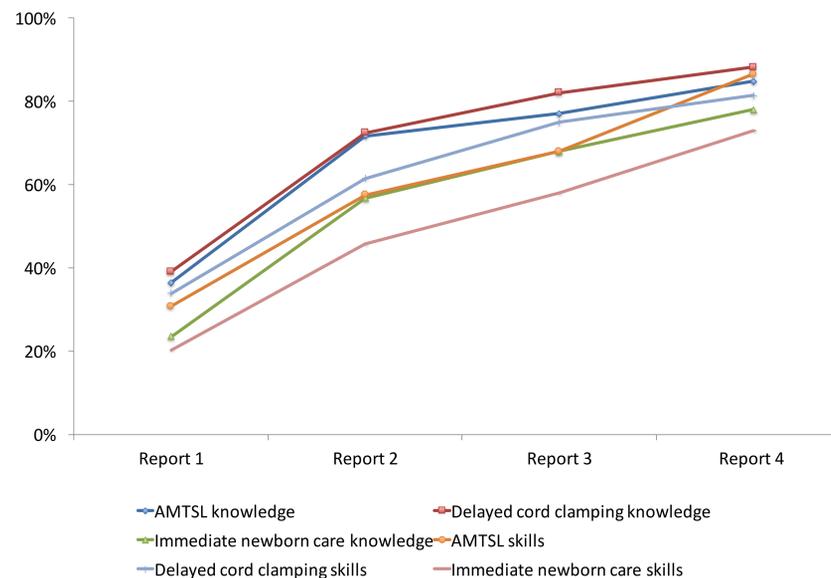
1. What went well?
2. What did not go well?
3. What should be done differently next time?
4. Supply availability?
5. Patient chart data.

After the pilot, the tool was transformed into a mobile smartphone app that now is being used by 65 midwife mentors during the second 9-month round of the project and to be implemented in the 3rd and 4th rounds as well.

Complications Reported by Type, All Round 2 Reported Deliveries Entered into the App

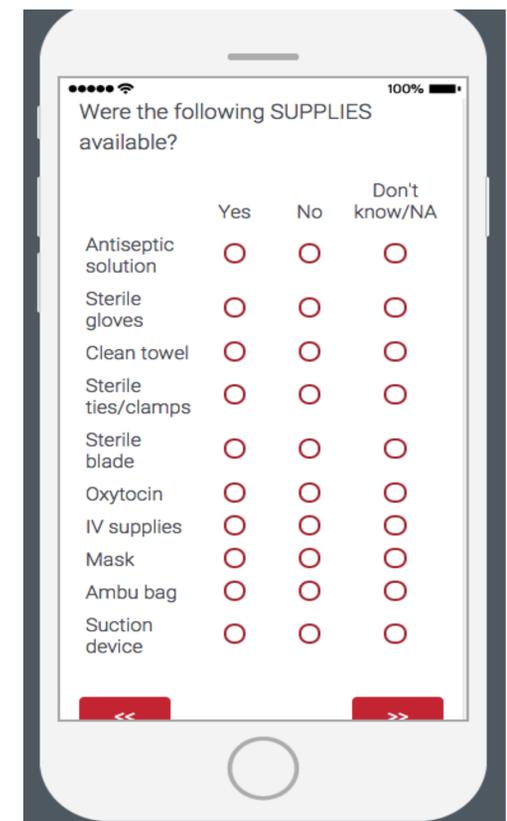


Trends in what WENT WELL, All Round 2 Reported Deliveries Entered into the App



EVALUATION

Following a live witnessed birth, midwife mentors respond to a series of question prompts in the app. The responses are fed back in real-time to the mentor in a guided format to help facilitate a rapid debrief with clinic staff. At an aggregate level, the data provide an evidence base for quality improvement by enabling UCSF to analyze data to monitor trends in teamwork/communication as well as use of evidence-based clinical practices. UCSF uses these aggregate results to provide real-time feedback to midwife mentors in the field as well as CARE India management staff who can use the data to identify supply shortages. Over the course of the program we anticipate collecting data from 4000+ observed live births.



CONCLUSION

Going forward, mobile phone application data provides real-time results that are an effective tool used to guide the feedback loop with midwife mentors at primary health clinics for maternal and neonatal care quality improvement in Bihar, India.

ACKNOWLEDGEMENTS

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Contact: Hilary.Spindler@ucsf.edu for any questions.