



Evaluating the Impact of the "Last Ten Kilometers" Supply Chain Project on Oxytocin Availability for Postpartum Haemorrhage in Amhara Region Health Posts: A Research Protocol

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Abstract

Postpartum haemorrhage is a leading cause of maternal mortality in sub-Saharan Africa. Oxytocin is the first-line uterotonic for its management, but its availability at peripheral health facilities is frequently limited by supply chain weaknesses. The 'Last Ten Kilometers' project is an intervention designed to strengthen the end-stage supply chain for essential medicines in the Amhara Region of Senegal. This protocol describes a study to evaluate the impact of the 'Last Ten Kilometers' project on oxytocin availability in health posts. The primary objective is to assess changes in stock-out rates and average monthly stock levels. Secondary objectives include evaluating health worker knowledge and perceptions of the supply system. A mixed-methods, controlled before-and-after study will be conducted. Quantitative stock data will be collected from health post records in intervention and comparable control districts. Qualitative data will be gathered through focus group discussions with health extension workers to explore their experiences with the supply chain. This is a research protocol; no empirical findings are available. The study is designed to measure the direction and magnitude of change in oxytocin availability. The study will generate evidence on the effectiveness of a targeted supply chain intervention in improving the availability of a critical maternal health commodity at the primary care level. Findings will inform regional health authorities and partners on the potential scalability of the 'Last Ten Kilometers' model. Recommendations will focus on practical supply chain strengthening and relevant policy adjustments. postpartum haemorrhage, oxytocin, supply chain, health systems, maternal health, Senegal, implementation research This protocol provides a structured evaluation framework for assessing a practical intervention aimed at reducing stock-outs of a lifesaving medicine at the community level.

Keywords: *Postpartum haemorrhage, Oxytocin, Supply chain evaluation, Maternal health, Sub-Saharan Africa, Implementation research, Health systems strengthening*

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