



Methodological Evaluation of Maternal Care Facilities Systems in Rwanda: A Randomized Field Trial for Clinical Outcomes Assessment

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Abstract

Maternal care facilities in Rwanda are crucial for ensuring optimal health outcomes for mothers and newborns. However, there is a need to evaluate the effectiveness of these systems through rigorous methodological approaches. A randomized field trial design was employed, where participants were randomly allocated to different levels of maternal care systems. Clinical outcomes data (e.g., postpartum hemorrhage rates) were collected and analysed using generalized linear models with robust standard errors to account for potential confounders. The analysis revealed a significant reduction in postpartum hemorrhage rates among participants who received higher quality maternal care compared to those in the control group ($p < 0.05$, CI: -38% to -12%). This randomized field trial provides evidence that improved maternal care facilities can lead to better clinical outcomes for mothers and newborns. Based on these findings, it is recommended that Rwanda invest in upgrading its maternal care facilities to ensure higher quality services and improve health outcomes. Maternal Care, Clinical Outcomes, Randomized Field Trial, Rwanda Treatment effect was estimated with $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, SocialDeterminants, QualitativeResearch, RandomizedControlledTrial, HealthSystemsReform, Epidemiology*

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