



Methodological Assessment of Maternal Care Facilities Systems in Kenya Using Difference-in-Differences for Clinical Outcomes Measurement

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Abstract

Maternal care facilities in Kenya play a critical role in improving maternal health outcomes. However, there is ongoing debate about the efficacy and efficiency of these systems. A difference-in-differences model will be applied to assess changes in clinical outcomes before and after implementing improvements in maternal care facilities. Data from two periods: pre-intervention and post-intervention, will be compared to determine the impact of facility improvements on health outcomes. The preliminary analysis suggests that there is a significant improvement in neonatal mortality rates following the implementation of enhanced maternal care services, with reductions observed across all evaluated sites. This study provides evidence supporting the effectiveness of improved maternal care facilities in reducing adverse birth outcomes. The DiD model's robustness and applicability to clinical settings are highlighted as key contributions. Health policymakers should prioritise funding for further improvements in maternal care facilities, based on this study's findings. Maternal Care Facilities, Difference-in-Differences, Clinical Outcomes, Neonatal Mortality 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: Kenya, Maternal Health, Methodology, Difference-in-Differences, Evaluation, Clinical Outcomes, Geographic Analysis

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