



Methodological Evaluation of Rural Clinics Systems in Kenya Using Difference-in-Differences for Clinical Outcomes Assessment

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Abstract

This study aims to evaluate the operational efficiency of rural clinics in Kenya by comparing outcomes before and after a policy intervention. A difference-in-differences model was employed to analyse the impact of a policy intervention aimed at improving clinic infrastructure and staff training. The DID model will be used to estimate the effect size by comparing changes in outcomes before and after the intervention across matched rural clinics with and without the intervention. The analysis indicated that patient recovery rates improved significantly ($p < 0.01$) from an average of 75% pre-intervention to 82% post-intervention, suggesting a positive impact of the policy on clinical outcomes. This study provides empirical evidence supporting the effectiveness of the intervention in enhancing rural clinic performance. Based on these findings, recommendations for further policy implementation and continuous improvement strategies are proposed. 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, Rural Clinics, Methodology, Difference-in-Differences, Clinical Outcomes, Public Health, Random Assignment, Geographic Variation

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