



Methodological Evaluation of Rural Clinics Systems in Kenya Using Difference-in-Differences Approach to Assess Clinical Outcomes

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Abstract

Rural clinics in Kenya face challenges related to infrastructure, resources, and professional training that affect patient outcomes. A difference-in-differences model was employed to compare pre- and post-intervention clinical outcomes, accounting for potential confounders such as patient demographics and time trends. The DiD analysis revealed a significant improvement in treatment success rates ($p < 0.05$), suggesting the effectiveness of system enhancements implemented over two years. This study provides evidence supporting the efficacy of rural clinic improvements, offering insights for policy makers and healthcare administrators. Future research should consider broader implementation across different regions to validate these findings and explore additional factors influencing outcomes. Rural clinics, Kenya, Difference-in-Differences (DiD), Clinical Outcomes, Policy Impact Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, Rural Clinics, Methodological Evaluation, Difference-in-Differences, Clinical Outcomes, Public Health, Randomized Controlled Trials

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