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

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Abstract

Rural clinics in Kenya face challenges in maintaining high-quality healthcare services due to limited resources and infrastructure. A DiD model was applied to analyse clinical outcome data from rural clinics across Kenya. The study employed robust standard errors for uncertainty estimation. The DiD analysis revealed that the intervention improved patient recovery rates by approximately 15% over a one-year period, with an estimated confidence interval of ±3 percentage points. This method provides a reliable framework to measure and evaluate the impact of system improvements in rural clinics in Kenya. Continued monitoring and periodic review of clinic systems are recommended to sustain these gains and address emerging challenges. Rural clinics, DiD model, clinical outcomes, resource evaluation Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Kenya, Rural Clinics, Methodology, Difference-in-Differences, Public Health, Clinical Outcomes, Evaluation*

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