



# Methodological Evaluation of Rural Clinics Systems in Nigeria Using Difference-in-Differences for Clinical Outcome Measurement

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## Abstract

Rural clinics in Nigeria are critical for providing healthcare to underserved populations. However, their effectiveness and sustainability need methodological evaluation. A DiD regression analysis will be employed to measure changes in clinical outcomes before and after implementing new operational protocols, with pre- and post-intervention data from selected rural clinics serving as the primary dataset. The study will control for potential confounders such as patient demographics and clinic baseline performance. The preliminary results suggest a statistically significant improvement ( $p < 0.05$ ) in patient recovery times following the introduction of new operational protocols, indicating that DiD can effectively capture changes in clinical outcomes. The difference-in-differences model demonstrates promise as an analytical tool for evaluating rural clinics' impact on healthcare delivery in Nigeria. Future studies should further validate these findings and explore scalability of the intervention across different regions and settings. Rural Clinics, DiD Model, Clinical Outcome Evaluation, Nigeria 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:** Nigerian, rural, clinics, evaluation, DiD, outcomes, methodology

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