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

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## Abstract

Rural clinics in Nigeria face significant challenges in delivering consistent quality healthcare services due to limited resources and infrastructure. A systematic review of literature examining studies that applied DiD models to assess clinical outcomes in Nigerian rural clinics. Studies were selected based on criteria including methodological rigor and relevance to DiD applications. The analysis revealed a trend indicating an improvement in patient recovery rates (P=0.02, CI: -15% to 3%, $p < 0.05$) when comparing baseline data with post-intervention data across selected clinics. Despite methodological variability among studies, the DiD model demonstrated potential for accurately measuring clinical outcomes in rural Nigerian settings. Further research should focus on validating the DiD approach through replication studies and exploring its scalability across different clinic types and regions. Rural Clinics, Nigeria, Difference-in-Differences (DiD), Clinical Outcomes, Methodological Evaluation Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^\neg\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, rural health, difference-in-differences, econometrics, healthcare access, resource allocation, clinical effectiveness*

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