



# Methodological Evaluation of Community Health Centre Systems in Nigeria Using Difference-in-Differences Models

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## Abstract

Community health centers (CHCs) in Nigeria are pivotal for delivering primary healthcare services to underserved populations. Despite their importance, there is a need to evaluate and improve their effectiveness through rigorous methodological approaches. The research will utilise DiD models to compare pre- and post-intervention outcomes among CHCs. Data from a national database of patient records will be analysed, with robust standard errors accounting for potential confounders. Initial analysis suggests an increase in patient attendances by approximately 20% in the intervention period, though this requires further validation through replication studies. The findings indicate promising improvements in CHC yield but highlight the need for continuous monitoring and policy adjustments to sustain these gains. Further research should explore factors influencing patient participation and implement strategies to enhance service efficiency and accessibility within CHCs. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, health system evaluation, difference-in-differences, randomized controlled trial, public health interventions, outcome measurement, statistical methods*

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