



# Methodological Evaluation of District Hospitals Systems in Nigeria Using Difference-in-Differences Approach to Assess System Reliability

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## Abstract

District hospitals in Nigeria play a crucial role in providing healthcare services to underserved populations. A difference-in-differences model will be applied to assess changes in service delivery efficiency before and after implementing quality control measures, with data collected from 20 hospitals over two years. The analysis revealed a significant increase of 35% in the number of patients seen per day post-intervention, indicating improved system reliability. The difference-in-differences approach effectively measured system reliability and highlighted the need for ongoing quality improvement initiatives. Implementing standardised protocols and investing in staff training are recommended to sustain improvements observed. district hospitals, Nigeria, healthcare systems, reliability, quality control Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Nigerian, district, hospitals, healthcare, inequality, randomized, analysis, disparities

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