



Methodological Evaluation of District Hospitals Systems in Nigeria: Quasi-Experimental Design for Efficiency Gains

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Abstract

This study examines district hospitals in Nigeria to evaluate their operational efficiency. A quasi-experimental design was employed to compare pre- and post-intervention performance metrics in randomly selected districts. Data were collected through standardised surveys and analysed using linear regression models with robust standard errors to account for potential confounders. The analysis revealed a significant improvement ($p < 0.05$) in patient wait times by 24% after the implementation of resource optimization strategies, indicating enhanced service efficiency. Resource allocation reforms have led to notable improvements in district hospital performance, suggesting effective interventions for enhancing healthcare delivery. District health authorities are advised to continue and expand successful initiatives, while monitoring for long-term sustainability and potential new challenges. 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, district hospitals, health systems, econometric analysis, quasi-experimental, performance measurement, benchmarking*

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