



A Quasi-Experimental Cost-Effectiveness Analysis of District Hospital Systems in Nigeria

A Methodological Case Study

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ABSTRACT

Background: Evaluating the cost-effectiveness of district hospital systems in low-resource settings is critical for health systems strengthening, yet robust methodological approaches are scarce. Existing analyses often lack counterfactual comparisons, limiting causal inference for policy.

Purpose and objectives: This case study presents a methodological framework for conducting a quasi-experimental cost-effectiveness analysis of district hospital systems. It aims to detail the design, implementation, and analytical challenges encountered in a real-world evaluation context.

Keywords: *Health Systems Strengthening, Cost-Effectiveness Analysis, Quasi-Experimental Design, District Hospitals, Sub-Saharan Africa, Nigeria, Low-Resource Settings*

Article Highlights

- A difference-in-differences design compared intervention and control districts before and after a systems-strengthening initiative.
- The analysis revealed the intervention was associated with a reduction in cost per DALY averted, though with considerable statistical uncertainty.
- Securing comparable control districts emerged as a critical challenge, requiring extensive propensity score matching.
- The study provides detailed procedural insights on harmonising cost data from disparate hospital accounting systems.

Analytical Framework

Primary analysis estimated the average treatment effect using a two-way fixed effects model with robust standard errors clustered at the district level.

This case study details the design, implementation, and analytical challenges of a real-world evaluation.

ABSTRACT-ONLY PUBLICATION

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