

Evaluating Health Systems Performance in Tanzania

A Difference-in-Differences Analysis of District Hospital Yield Improvement

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ABSTRACT

Background: District hospitals in sub-Saharan Africa face persistent challenges in service delivery and output measurement. Robust quantitative methods to evaluate systemic performance improvements, particularly yield—defined as the volume of key clinical services delivered per unit of resource input—are lacking.

Purpose and objectives: This study aimed to develop and apply a quasi-experimental difference-in-differences (DiD) model to rigorously assess the impact of a national health system strengthening initiative on district hospital yield in Tanzania.

Keywords: *Health systems performance, sub-Saharan Africa, district hospitals, difference-in-differences, service delivery, Tanzania*

Article Highlights

- Quasi-experimental DiD model quantifies a significant 18.4% increase in hospital service yield.
- Findings demonstrate the effectiveness of a national health system strengthening initiative.
- The yield metric offers a novel framework for tracking output efficiency in district hospitals.
- Methodology provides a template for rigorous, routine programme evaluation in similar contexts.

Methodological Contribution

This study pioneers the application of a difference-in-differences framework to measure district hospital yield—service volume per resource input—using routine health system data.

This analysis provides policymakers with a validated tool for quantifying health system performance improvements.

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