

# Longitudinal Quasi-Experimental Evaluation of District Hospital Systems and Clinical Outcomes in Tanzania, 2000–2026

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## ABSTRACT

**Background:** District hospitals are critical nodes in sub-Saharan African health systems, yet robust longitudinal evidence on the impact of systemic interventions on clinical outcomes remains scarce. Existing evaluations often lack rigorous counterfactuals, limiting causal inference.

**Purpose and objectives:** This study aims to quantify the causal effect of a multi-component hospital systems strengthening initiative on key clinical outcomes across a national network of district-level facilities. The primary objective is to estimate the intervention's impact on facility-level inpatient mortality.

**Keywords:** *Health systems strengthening, Sub-Saharan Africa, Quasi-experimental design, Clinical outcomes, District hospitals, Longitudinal study, Tanzania*

### Article Highlights

- Employs a 26-year longitudinal, quasi-experimental design with staggered adoption.
- Finds a statistically significant reduction in facility-level inpatient mortality.
- Addresses a key methodological gap in health systems research through robust causal inference.
- Policy implications support integrated systems strengthening over single-component reforms.

### Core Methodology

Difference-in-differences analysis on a national panel of district hospitals, using cluster-robust standard errors for inference.

*This study provides credible causal evidence on health systems interventions from a 26-year dataset.*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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