



## A Quasi-Experimental Evaluation of District Hospital Systems and Their Impact on Clinical Outcomes in Kenya

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### Author notes

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### ABSTRACT

**Background:** District hospitals are critical nodes in Kenya's healthcare system, yet systematic evaluations of their operational systems' impact on patient outcomes are scarce. Existing assessments often lack methodological rigour in attributing outcomes to specific systemic interventions.

**Purpose and objectives:** This study aimed to quantify the causal effect of a structured hospital systems intervention—comprising standardised triage, laboratory turnaround protocols, and essential drug supply chains—on key clinical outcomes in a Kenyan district hospital setting.

**Keywords:** District Hospitals, Clinical Outcomes, Quasi-Experimental Design, Health Systems Evaluation, Sub-Saharan Africa

#### Article Highlights

- Intervention linked to 38% lower odds of avoidable clinical deterioration.
- Integrated systems approach outperforms single-component inputs.
- Study employs rigorous quasi-experimental, difference-in-differences design.
- Findings support policy shift toward structured operational interventions.

#### Methodological Note

Analysis used a generalized linear mixed model with hospital-level random effects and clustered standard errors to estimate the causal effect of the systems intervention.

*This study provides robust evidence for health systems strengthening in resource-limited settings.*

## 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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