

# Evaluating Health System Efficiency Gains in Uganda

*A Difference-in-Differences Analysis of Community Health Centres*

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## ABSTRACT

**Background:** Community health centres are a cornerstone of primary care delivery in many low-resource settings, yet rigorous quantitative evaluations of their systemic efficiency gains are limited. Existing assessments often lack robust counterfactuals, making causal attribution challenging.

**Purpose and objectives:** This case study aimed to develop and apply a quasi-experimental methodology to isolate and quantify the causal effect of a national community health centre strengthening programme on health system efficiency in Uganda.

**Keywords:** *Sub-Saharan Africa, Primary Health Care, Health Systems Strengthening, Difference-in-Differences, Efficiency Measurement, Community Health Centres, Uganda*

### Article Highlights

- Difference-in-differences analysis reveals an 18.2% reduction in outpatient cost per visit.
- Efficiency gains driven by improved supply chain management and task-shifting.
- Quasi-experimental design provides robust causal evidence for policy.
- Study compares 127 treatment facilities with 127 matched controls.

### Methodological Insight

The analysis employs a difference-in-differences model to isolate the causal effect of the health centre programme, comparing efficiency indicators before and after implementation between treatment and control groups.

*This study provides causal evidence for the efficiency of health system strengthening in a low-resource setting.*

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