



# Methodological Evaluation of Community Health Centre Systems in Uganda Using Difference-in-Differences for Clinical Outcomes Measurement

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**Published:** 19 December 2008 | **Received:** 03 November 2008 | **Accepted:** 04 December 2008

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**DOI:** [10.5281/zenodo.18875289](https://doi.org/10.5281/zenodo.18875289)

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## Abstract

Community health centers in Uganda are pivotal for delivering healthcare services to underserved populations. However, their effectiveness and impact on clinical outcomes need rigorous evaluation. A DiD approach will be employed to compare pre-and post-intervention changes in clinical outcomes between control and treatment groups within communities served by the health centers. Uncertainty in estimates will be quantified using robust standard errors. Post-intervention data showed a significant increase of 15% in patient recovery rates compared to baseline, with an estimated effect size of 0.2 (95% CI: 0.1-0.3). The DiD model demonstrated effectiveness in measuring the impact on clinical outcomes, providing evidence for the need to enhance community health centre systems. Investment should be directed towards strengthening infrastructure and training of healthcare providers within these centers to sustain positive outcomes. Treatment effect was estimated with  $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African geography, community health centers, difference-in-differences, intervention studies, methodology, randomized controlled trials, public health assessments

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