



# Methodological Evaluation of Community Health Centre Systems in Uganda Using Quasi-Experimental Design for Yield Improvement Analysis

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## Abstract

This study addresses a current research gap in Medicine concerning Methodological evaluation of community health centres systems in Uganda: quasi-experimental design for measuring yield improvement in Uganda. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Methodological evaluation of community health centres systems in Uganda: quasi-experimental design for measuring yield improvement, Uganda, Africa, Medicine, brief report This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, quasi-experimental design, yield analysis, community health systems, impact evaluation, public health metrics, outcome measurement*

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