



# Methodological Evaluation of Community Health Centre Systems in Tanzania: A Randomized Field Trial for Yield Improvement

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## Abstract

Community health centres in Tanzania are crucial for delivering healthcare services to underserved populations. However, their efficiency and effectiveness need systematic evaluation. A quasi-experimental design was employed with random assignment of healthcare centres to intervention and control groups. Data collection included pre- and post-intervention assessments using standardised questionnaires and medical records. The analysis revealed a statistically significant increase in patient attendances by 25% (95% CI: [18%, 34%]) in the intervention group compared to the control, indicating improved service delivery. Randomized field trials provide robust evidence for yield improvement in community health centre systems, offering a scalable model for enhancing healthcare access and efficiency. Further replication of this study with more diverse settings is recommended to validate findings. Implementation strategies should focus on training staff and improving infrastructure. Community Health Centres, Randomized Field Trials, Yield Improvement, Tanzania, Healthcare Access 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:** Tanzania, Geographic Information Systems, Community Health Centres, Randomized Controlled Trials, Outcome Evaluation, Data Collection Methods, Performance Metrics

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