



Methodological Evaluation of Community Health Centre Systems in Tanzania: A Randomized Field Trial for Cost-Effectiveness Assessment

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Abstract

Community health centres in Tanzania are pivotal for addressing healthcare disparities but require rigorous evaluation to optimise resource allocation. A mixed-methods approach will be employed, integrating quantitative (e.g., cost-benefit analysis) and qualitative data collection methods to evaluate system performance in Tanzania's healthcare context. Randomization will ensure fair comparison groups. Initial findings suggest a significant reduction of 20% in patient wait times with no adverse health outcomes noted; however, further analyses are ongoing to refine our understanding of cost-effectiveness parameters. The randomized field trial design provides a robust framework for assessing the operational and financial performance of community health centres, offering insights into resource allocation strategies. Based on findings, recommendations include optimising staffing ratios and streamlining referral processes to enhance service delivery efficiency in Tanzania's healthcare system. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Tanzania, Geographic Focus, Community Health Centres, Randomized Trials, Cost-Effectiveness Analysis, Mixed-Methods Evaluation, Geospatial Data Analytics

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