



Methodological Evaluation of Community Health Centre Systems in Kenya: A Randomized Field Trial on Efficiency Gains

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Abstract

Community health centres in Kenya play a crucial role in providing primary healthcare services to underserved populations. However, there is limited empirical evidence on their operational efficiency and potential for improvement. A mixed-method approach was employed, combining quantitative data from operational metrics and qualitative insights from healthcare providers. A cluster-randomized design with baseline and post-intervention assessments was used to measure changes in service quality and cost-effectiveness. In the randomized field trial, a significant proportion (45%) of community health centres showed improvement in patient satisfaction scores after implementing targeted efficiency enhancements, indicating potential for systemic improvements. This study provides empirical evidence on the effectiveness of specific interventions to improve operational efficiency within Kenya's community health centre systems. Based on the findings, it is recommended that further research be conducted to validate these results and explore scalability of proposed strategies across different regions in Kenya. Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, randomized controlled trial, health system evaluation, community healthcare, performance measurement, resource utilization, intervention effectiveness*

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