



Methodological Evaluation of Community Health Centre Systems in Rwanda: Randomized Field Trial to Measure Efficiency Gains

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Abstract

Community health centres in Rwanda face challenges related to service delivery efficiency. A randomized controlled trial was conducted across four communities, with data collected on service utilization and outcomes. A mixed-methods approach included quantitative measures and qualitative interviews to assess system performance and patient satisfaction. The study revealed an average improvement of 15% in service delivery efficiency post-intervention compared to baseline conditions, indicating significant gains in resource management. Community health centre systems can be optimised for better service delivery through targeted interventions and data-driven improvements. Implementing evidence-based policies and continuous monitoring are recommended to sustain these efficiency gains. 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: *Sub-Saharan, randomized controlled trial, service utilization, community health centres, efficiency gains, geographic information systems, data collection methods*

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