



Methodological Evaluation of Community Health Centre Systems in Rwanda: A Randomized Field Trial for Efficiency Gains

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Abstract

Community health centers in Rwanda face challenges in delivering efficient healthcare services. A randomized field trial was conducted with a sample of 100 community health centers across Rwanda. Data collected included patient wait times, resource utilization, and staff productivity metrics using mixed-methods analysis. The study revealed that reducing patient wait times by 25% through targeted interventions led to an increase in patient satisfaction scores from 60% to 78%. This randomized trial provides evidence for the effectiveness of specific efficiency-improvement strategies, enhancing service delivery within community health centers. Implementing these findings should result in more equitable and efficient healthcare access across Rwanda's underserved regions. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, randomized controlled trial, health systems performance, community health centers, outcome evaluation, resource allocation, quality improvement*

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