



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

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Abstract

Community health centers (CHCs) play a crucial role in Rwanda's healthcare system, aiming to provide accessible and affordable care within their catchment areas. A randomized controlled trial was conducted in four randomly selected CHCs, with baseline data collected on patient demographics, service use patterns, and treatment efficacy measures. CHCs showed a significant improvement in patient adherence rates to prescribed medications (95% confidence interval: [0.82, 1.13]) compared to pre-intervention levels. The randomized trial demonstrated that investing in CHC infrastructure and training can lead to improved healthcare outcomes with cost savings. Rwanda should prioritise expanding CHC networks by increasing funding for staff development and resource allocation, particularly in underserved regions. Community Health Centres, Cost-Effectiveness, Randomized Field Trial, Healthcare Access, Rwanda 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: Rwanda, Geographic Dispersion, Community Health Centres, Randomized Controlled Trials, Cost-Benefit Analysis, Outcome Measures, Geospatial Mapping

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