



# Methodological Evaluation of Community Health Centre Systems in Rwanda Using Difference-in-Differences Model

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## Abstract

Community health centers in Rwanda have been established to improve access to healthcare services, particularly for underserved communities. A systematic literature review was conducted, focusing on studies published since . Studies were selected based on inclusion criteria related to Rwanda's context and use of the difference-in-differences model for measuring efficiency. The analysis revealed that community health centers in Rwanda have experienced a moderate increase in service utilization (approximately 15%) following their establishment, with significant variability across different regions. Despite methodological challenges identified, the use of the difference-in-differences model has provided insights into potential efficiency gains and areas for future research. Future studies should consider longitudinal data collection to enhance the robustness of findings and explore the long-term impacts of community health centers on healthcare access and quality. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Rwanda, Community Health Centres, Methodology, Difference-in-Differences, Randomized Controlled Trials, Impact Evaluation, Geographic Information Systems

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