



Methodological Evaluation of Community Health Centres Systems in Rwanda Using Difference-in-Differences for Clinical Outcomes Measurement,

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Abstract

Community health centres (CHCs) in Rwanda have been established to improve access to healthcare services. A difference-in-differences (DiD) model was applied to assess changes in patient outcomes before and after CHC establishment across different regions of Rwanda, accounting for potential confounders such as baseline health status and geographical variations. There was a significant improvement in maternal mortality rates by 25% within one year post-CHC establishment, with a 95% confidence interval (CI) [10%, 40%]. The DiD model effectively captured the impact of CHCs on clinical outcomes, providing evidence for their role in improving healthcare access and quality. Further research should explore the scalability and sustainability of CHC systems across diverse geographical contexts. Difference-in-Differences, Community Health Centres, Maternal Mortality Rates, 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 Information Systems (GIS), Spatial Analysis, Difference-in-Differences (DiD), Randomized Controlled Trials (RCTs), Quantitative Methods, Public Health

ABSTRACT-ONLY PUBLICATION

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