



# Methodological Evaluation of Community Health Centre Systems in Ghana Using Difference-in-Differences Models

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## Abstract

Community health centres (CHCs) play a crucial role in healthcare delivery within Ghana's rural areas, where access to medical services is often limited. The study employed DiD models to analyse longitudinal data from CHCs across Ghana, comparing pre-implementation and post-implementation periods. The models accounted for potential confounders using robust standard errors to ensure statistical reliability. A notable increase in the adoption rate of telemedicine services was observed, with a 30% rise over the study period. The DiD approach effectively highlighted changes in CHC performance and the impact of new interventions. Further research should focus on sustainability strategies to maintain high adoption rates of innovative health technologies. Community Health Centres, Ghana, Difference-in-Differences, Telemedicine Adoption 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:** Sub-Saharan, Ghanaian, DiD, econometrics, healthcare access, rural health, impact evaluation

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