



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

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## Abstract

Community health centres in Ghana have been established to improve access to healthcare services, particularly for underserved populations. However, there is limited evidence on their effectiveness and adoption rates over time. A DiD analysis was used to assess changes in the use of community health centres before and after their establishment. The study employed data from administrative records, including patient visit logs and health centre registration numbers, collected over a five-year period. In one rural district, there was an initial increase followed by a steady decline in the number of patients visiting community health centres post-establishment, suggesting a partial adoption rate that varied over time. The DiD model provided insights into the temporal dynamics of community health centre usage but did not fully capture all complex factors influencing healthcare access and utilisation. Future research should consider additional variables such as socio-economic conditions and awareness campaigns to enhance the understanding of adoption rates. 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:** *Geography, Africa, Healthcare, Systems, Evaluation, Difference-in-Differences, Qualitative-Methods*

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