



# Methodological Evaluation of Community Health Centre Systems in Rwanda: Quasi-Experimental Design for Yield Improvement

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## Abstract

Community health centres (CHCs) in Rwanda play a crucial role in providing primary healthcare services to underserved populations. Despite their importance, there is variability in their effectiveness and efficiency across different regions. The review employs a comprehensive search strategy using databases such as PubMed and Web of Science. Studies published between and are included. Methodological rigor is assessed through thematic analysis of key methodological aspects including sample size, data collection methods, and analytical techniques. A notable finding was the use of mixed-methods designs where quantitative yield improvements were complemented by qualitative insights into service delivery issues. The review highlights inconsistencies in study design across different regions, suggesting a need for standardised approaches to ensure comparability and reliability of results. Standardised quasi-experimental designs should be encouraged with clear guidelines on data collection methods and analytical techniques to enhance the quality and consistency of yield improvement studies. 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:** *African geography, community health centers, quasi-experimental design, healthcare delivery, outcome measurement, resource allocation, population health*

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