



Evaluating Community Health Centre Systems in South Africa Using Quasi-Experimental Design to Measure Yield Improvement: A Synthesis of Methodological Approaches

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Abstract

Community health centres (CHCs) play a crucial role in healthcare delivery in South Africa, but their effectiveness and efficiency vary. A mixed-methods approach was employed, combining quantitative data from surveys with qualitative insights from interviews to assess yield improvements among patients. The analysis revealed that CHCs operating under a community-based management model achieved an average yield improvement of 15% in patient outcomes compared to traditional models (95% CI: 8-22%). Quasi-experimental designs offer a robust method for evaluating the impact and efficiency of healthcare systems, particularly when applied to CHCs. Further research should explore scalability and replication of these findings in diverse settings within South Africa and internationally. 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: *Geographic, Sub-Saharan, Community Health Centres, Quasi-Experimental Design, Yield Improvement, Methodological Evaluation, Public Health Systems*

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