



Methodological Evaluation of Community Health Centre Systems in Ethiopia: A Randomized Field Trial on Efficiency Gains

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Abstract

Community health centers (CHCs) play a crucial role in healthcare delivery in Ethiopia, yet their operational efficiency is not well understood. A mixed-methods approach was employed, including quantitative data collection via surveys and qualitative insights from focus group discussions. Randomized field trials were conducted to assess operational metrics such as patient flow and resource utilization. Patient flow analysis indicated a 15% improvement in the randomized trial compared to control CHCs ($p < 0.05$). The study confirms that intervention strategies can lead to significant efficiency gains, particularly in resource allocation and patient management. Further research is recommended to explore long-term impacts and scalability of identified interventions. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, community health centers, randomized trials, evaluation methods, healthcare systems, efficiency metrics, resource allocation*

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