



# Methodological Evaluation of Community Health Centre Systems in Ethiopia: A Randomized Field Trial for Cost-Effectiveness Assessment

Mekuria Haile<sup>1</sup>, Gimadu Abera<sup>1,2</sup>, Negusse Teklehagos<sup>1,3</sup>

<sup>1</sup> Jimma University

<sup>2</sup> Department of Epidemiology, Haramaya University

<sup>3</sup> Department of Surgery, Addis Ababa University

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**Correspondence:** [mhaile@aol.com](mailto:mhaile@aol.com)

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## Author notes

*Mekuria Haile is affiliated with Jimma University and focuses on Medicine research in Africa.*

*Gimadu Abera is affiliated with Jimma University and focuses on Medicine research in Africa.*

*Negusse Teklehagos is affiliated with Jimma University and focuses on Medicine research in Africa.*

## Abstract

Community health centers play a critical role in healthcare delivery in Ethiopia, especially in underserved areas. However, their cost-effectiveness remains under-researched. A mixed-methods approach combining quantitative data collection via surveys and qualitative insights from focus group discussions will be employed. Randomization will ensure unbiased allocation to treatment arms, with cost analysis using regression models. Community health centers reported an average savings of 15% in healthcare expenditure compared to traditional hospital settings, indicating significant cost-effectiveness. The randomized field trial demonstrated that community health centre systems can be a viable and efficient alternative for delivering primary healthcare services in Ethiopia. Policy makers should consider expanding the coverage of these centers while also investing in infrastructure and training to enhance their operational effectiveness. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African geography, randomized trials, health economics, community-based interventions, cost-benefit analysis, outcome measurement, mixed-methods research

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