



Methodological Evaluation of Community Health Centre Systems in Ghana: A Randomized Field Trial on Cost-Effectiveness

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Abstract

Community health centres in Ghana face challenges in service delivery and cost management. A randomized field trial was conducted across ten randomly selected community health centres. Data were collected using standardised surveys and financial records to measure service delivery efficiency and economic outcomes. The trial revealed that the implementation of cost-saving measures led to a reduction in operational costs by approximately 20% without compromising on patient care quality, with a confidence interval for this finding at $\pm 5\%$. This study provides empirical evidence supporting the effectiveness of targeted cost-reduction strategies within Ghana's community health centre systems. Health authorities should consider replicating these findings and further refine implementation protocols to maximise savings while ensuring service quality. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X$, and uncertainty reported using confidence-interval based inference.

Keywords: Sub-Saharan, African, Networks, SocialInfrastructure, Epidemiology, HealthEconomics, Randomization

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