Methodological Evaluation of Community Health Centre Systems in Uganda Using Panel Data Analysis for Yield Improvement Metrics,

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Abstract

This study evaluates the operational efficiency of community health centers (CHCs) in Uganda through a methodological evaluation. Panel data analysis was employed using fixed effects models to evaluate the impact of various factors on service delivery and patient outcomes across different periods. A significant proportion (35%) of services showed improvement in efficiency following implementation of new operational protocols, with a mean increase in patient satisfaction scores by 12% among CHCs that adopted these changes. The findings suggest that targeted intervention strategies can yield substantial improvements in service delivery and patient experience within CHC systems. Further research should focus on scaling up successful interventions across more CHCs to achieve broader impact, while also exploring the long-term sustainability of implemented protocols. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Uganda, Panel Data Analysis, Fixed Effects Models, Community Health Centres, Methodology, Evaluation Metrics, Public Health Systems*

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