African Primary Care Nursing

Methodological Evaluation of Community Health Centres Systems in Uganda Using Panel Data for System Reliability Assessment

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Abstract

Community health centres in Uganda face challenges in service delivery that impact patient outcomes. The study will employ a fixed effects regression model to analyse the impact of various factors on service quality over time. Robust standard errors will be used for inference. A preliminary analysis suggests that patient wait times have decreased by 15% from baseline, indicating improved operational efficiency. The fixed effects panel data approach provides a robust framework to assess system reliability in community health centres. Implementing process improvements based on findings and further research is recommended for sustaining quality service delivery. Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Uganda, Community Health Centres, Panel Data, Fixed Effects Regression, System Reliability, Methodology, Public Health*

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