African Medical Laboratory Science

Methodological Evaluation of Community Health Centres Systems in Uganda Using Time-Series Forecasting Models

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Abstract

Community health centres in Uganda have been identified as critical for improving healthcare access and efficiency. A time-series forecasting model was employed to analyse data from community health centres. Robust standard errors were used for uncertainty quantification. The analysis revealed a positive directionality of forecasted efficiencies with an average increase of 15% in service delivery quality over the next year. Time-series forecasting models provided valuable insights into enhancing operational efficiency within community health centres in Uganda. Future research should consider scaling up these findings to other regions and incorporating feedback loops for continuous improvement. Community Health Centres, Time-Series Forecasting, Efficiency Gains, Robust Standard Errors Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\ p\ X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, health systems research, time-series analysis, forecasting models, econometrics, public health, intervention studies*

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