



Methodological Evaluation of District Hospitals Systems in Uganda Using Time-Series Forecasting for Cost-Effectiveness Analysis

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Abstract

District hospitals in Uganda face challenges in maintaining cost-effectiveness due to variable resource availability and patient flow. A meta-analysis was conducted comparing multiple studies from -. Time-series forecasting models were applied to historical cost data. Forecasting models indicated a need for at least 6 months of historical data for accurate predictions, with significant variations in costs across different regions. Future studies should prioritise collecting comprehensive and consistent time-series data from multiple hospitals. Develop standardised forecasting methods to enhance reliability and consistency in cost-effectiveness analyses. District Hospitals, Cost-Effectiveness, Time-Series Forecasting, Meta-Analysis Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, healthcare systems, meta-analysis, time-series, forecasting, cost-effectiveness, econometric models*

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