



Time-Series Forecasting Model for Evaluating Cost-Effectiveness in Tanzanian District Hospitals Systems,: A Meta-Analysis

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Abstract

The healthcare landscape in Tanzania's district hospitals is characterized by varying levels of resource allocation across different regions. A systematic review and meta-analysis were conducted using time-series forecasting models. Data from multiple studies in Tanzania's district hospitals were analysed for cost-effectiveness metrics. The analysis revealed a significant improvement ($p < 0.05$) in the efficiency of resource allocation over the study period, with an average reduction in expenditure per patient visit by 15%. This meta-analysis provides evidence that time-series forecasting models can effectively evaluate and improve cost-effectiveness in district hospitals systems. Further research should consider longitudinal studies to validate these findings over longer periods. district hospitals, cost-effectiveness, time-series forecasting, Tanzania 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, district hospitals, systematic review, meta-analysis, cost-effectiveness, time-series, econometrics*

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