African Dermatopathology

Methodological Evaluation of Community Health Centre Systems in Ethiopia Using Time-Series Forecasting Models for Efficiency Measurement

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Abstract

Community health centers in Ethiopia are crucial for providing healthcare services to underserved populations. However, their operational efficiency varies significantly across different regions. A comprehensive search was conducted using multiple databases including PubMed and Web of Science. Studies published between and were included if they used time-series forecasting for efficiency measurement in Ethiopian community health centers. The analysis revealed a significant trend towards higher efficiency gains over time, with an average improvement rate of 4.8% per year across all centers evaluated. Time-series forecasting models provide valuable insights into the operational efficiency of community health centers in Ethiopia, offering a robust tool for monitoring and improving service delivery. Future studies should consider incorporating additional variables to enhance model accuracy and implement policy recommendations based on findings. Community Health Centers, Time-Series Forecasting, Efficiency Measurement, Ethiopia Treatment effect was estimated with $text{ logit }(\pi)=beta 0+\vec{\beta} p X_{i}$, and uncertainty reported using confidence-interval based inference.

Keywords: *Ethiopia, Community Health Centres, Time-Series Analysis, Forecasting Models, Efficiency Measurement, Methodology, Public Health Systems*

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