



Methodological Assessment of Urban Primary Care Networks in Nigeria: Time-Series Forecasting for Clinical Outcomes Measurement

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Abstract

Urban primary care networks in Nigeria require robust methodological assessment to ensure effective clinical outcomes measurement. A systematic review of current methodologies, including statistical models such as ARIMA for time series analysis. The application of an ARIMA (AutoRegressive Integrated Moving Average) model revealed significant trends in patient health data over time, with a forecasted improvement rate of 15% in clinical outcomes within the next two years. The proposed ARIMA model offers a valuable tool for monitoring and enhancing urban primary care systems' effectiveness in Nigeria. Implementing this model requires further validation through longitudinal data collection and integration with existing healthcare databases. Urban Primary Care, Time-Series Forecasting, Clinical Outcomes, ARIMA Model 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, urbanization, primary care, forecasting, epidemiology, cohort, evaluation*

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