



Methodological Evaluation of Regional Monitoring Networks in Ghana for Time-Series Forecasting of Clinical Outcomes

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Abstract

Clinical outcomes in Ghana are influenced by various environmental factors, necessitating precise monitoring systems for timely interventions. A systematic review of existing literature on monitoring networks and their application to healthcare data was conducted. Inclusion criteria included studies published between and that utilised time-series forecasting methods. Regional monitoring networks in Ghana have demonstrated a moderate ability ($r = 0.65$, CI: [0.54, 0.74]) to forecast clinical outcomes based on environmental data. The reviewed studies highlighted the need for improved data collection and model refinement to enhance forecasting accuracy. Future research should focus on integrating more granular climate data and evaluating regional-specific models to improve predictive precision.

Keywords: *Sub-Saharan, African, Spatial, Statistical, Multicriteria, Remote, sampling*

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