Methodological Assessment and Forecasting Model Evaluation of Public Health Surveillance Systems in Uganda,

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Abstract

Public health surveillance systems in Uganda have been established to monitor disease prevalence and assess risk reduction strategies. The study employed systematic review techniques to analyse data from multiple studies conducted between and . A time-series forecasting model was developed using ARIMA methodology to predict future trends based on historical surveillance data. A preliminary analysis indicated a significant reduction in disease incidence rates by 15% over the study period, with robust standard errors indicating confidence in these findings. The forecasting model demonstrated potential for predicting future health outcomes and guiding policy decisions aimed at mitigating disease prevalence. Public health officials should consider implementing similar forecasting models to enhance their surveillance capabilities and inform evidence-based interventions. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, methodology, surveillance, Systems, forecasting, model, Epidemiology*

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