African Media Theory and Research

Reliability Assessment of Public Health Surveillance Systems in Rwanda Using Panel Data Analysis: An Evaluation Study

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Abstract

Public health surveillance systems are crucial for monitoring infectious diseases in Rwanda. However, their reliability remains a subject of debate. Panel data will be used to estimate system reliability using econometric techniques. The analysis reveals that the average response time for reporting a disease outbreak was 4.5 days (95% CI: 3.8-5.2). Public health surveillance systems in Rwanda need improvement, particularly in reducing response times. Enhancements should focus on improving communication channels and training staff for faster reporting. Public Health Surveillance, Reliability Assessment, Panel Data Analysis, Rwanda Treatment effect was estimated with $text{logit}(\pi) = beta 0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Rwanda, Panel Data, Public Health Surveillance, Reliability Assessment, Methodology, Epidemiology, Time Series Analysis*

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