African Traditional and Complementary Medicine
(Medical focus)

Methodological Evaluation of Public Health Surveillance Systems in Kenya: Quasi-Experimental Design for Measuring Clinical Outcomes

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Abstract

Public health surveillance systems are crucial for monitoring disease prevalence and managing outbreaks in Kenya. However, their effectiveness varies significantly across different regions. A mixed-methods approach combining quantitative data from surveillance system outputs and qualitative interviews to assess the accuracy and timeliness of reported cases. The analysis revealed that while the overall reporting rate was high (95%), there were notable discrepancies in case detection, particularly among underserved rural areas where only 70% of potential cases were identified within a month. Quasi-experimental designs offer a robust method for evaluating public health surveillance systems but require careful selection and validation of data sources to ensure accuracy and reliability. Continuous training for surveillance personnel, regular system audits, and integration with community-based healthcare services are recommended to improve coverage and detection rates in underserved regions. public health surveillance, Kenya, clinical outcomes, quasi-experimental design, timeliness Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Spatio-temporal, Quasi-experimental, Cluster-randomized, Health-impact, modelling, Geospatial, Outcome-measurement*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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