



Evaluation of Public Health Surveillance Systems in Kenya: A Randomized Field Trial on System Reliability

Ngugi Gitonga¹, Mwangi Kinyanjui²

¹ Department of Surgery, African Population and Health Research Center (APHRC)

² Strathmore University

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Correspondence: ngitonga@aol.com

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Author notes

Ngugi Gitonga is affiliated with Department of Surgery, African Population and Health Research Center (APHRC) and focuses on Medicine research in Africa.

Mwangi Kinyanjui is affiliated with Strathmore University and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are crucial for monitoring disease outbreaks in Kenya. However, their reliability and effectiveness vary widely. A randomized field trial was conducted in two districts across Kenya. System reliability was evaluated using a logistic regression model with robust standard errors. The system demonstrated an accuracy rate of 85% in detecting outbreaks, indicating moderate effectiveness overall. The findings suggest that improving training and resource allocation could enhance the reliability of public health surveillance systems in Kenya. Public health officials should prioritise investing in staff training and enhancing infrastructure to improve system performance. public health surveillance, Kenya, randomized field trial, reliability

Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, surveillance systems, methodological evaluation, reliability assessment, randomized trials, public health, outbreak monitoring*

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