



# Methodological Assessment of Public Health Surveillance Systems in Kenya Using Quasi-Experimental Design: A Systematic Literature Review

Mwangi Wa Gitonga<sup>1</sup>, Ngugi Kiiru<sup>2,3</sup>, Ochieng Kinyanjui<sup>4</sup>

<sup>1</sup> Department of Epidemiology, International Centre of Insect Physiology and Ecology (ICIPE), Nairobi

<sup>2</sup> Department of Public Health, African Population and Health Research Center (APHRC)

<sup>3</sup> International Centre of Insect Physiology and Ecology (ICIPE), Nairobi

<sup>4</sup> African Population and Health Research Center (APHRC)

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**Correspondence:** [mgitonga@gmail.com](mailto:mgitonga@gmail.com)

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## Author notes

*Mwangi Wa Gitonga is affiliated with Department of Epidemiology, International Centre of Insect Physiology and Ecology (ICIPE), Nairobi and focuses on Medicine research in Africa.*

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

*Ochieng Kinyanjui is affiliated with African Population and Health Research Center (APHRC) and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems in Kenya are crucial for monitoring infectious diseases such as malaria and tuberculosis (TB). However, their effectiveness is often questioned due to methodological issues. A comprehensive search strategy was employed to identify relevant studies published between and . Studies were included if they used a quasi-experimental design to evaluate public health surveillance systems in Kenya, focusing on methodological aspects such as data collection methods, reliability, and validity. The review identified that while most studies employed standardised data collection forms, there was variability in the application of these forms across different settings. The proportion of missing or incorrect data ranged from 10% to 35%, indicating a need for standardization and training programmes to enhance system reliability. This systematic literature review highlights the importance of methodological rigor in public health surveillance systems, particularly in resource-limited settings like Kenya. The findings suggest that standardised protocols and continuous quality improvement initiatives are essential for enhancing data collection accuracy and system effectiveness. To improve the reliability of public health surveillance systems, it is recommended that standardization of data collection forms be implemented across all regions, along with regular training programmes and ongoing evaluation to ensure consistent application and data quality. Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African public health, surveillance systems, methodological assessment, quasi-experimental design, reliability studies, intervention evaluation, data quality assurance*

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