



Methodological Evaluation of Public Health Surveillance Systems in Tanzania: A Quasi-Experimental Assessment of Risk Reduction Efforts

Gawanya Mucheleko¹, Munyua Sserunkuuma², Wabinga Kavirani³, Kamasi Mwakwayima³

¹ Department of Pediatrics, Sokoine University of Agriculture (SUA), Morogoro

² Ardhi University, Dar es Salaam

³ National Institute for Medical Research (NIMR)

Published: 23 August 2010 | **Received:** 19 April 2010 | **Accepted:** 22 July 2010

Correspondence: gmucheleko@gmail.com

DOI: [10.5281/zenodo.18905266](https://doi.org/10.5281/zenodo.18905266)

Author notes

Gawanya Mucheleko is affiliated with Department of Pediatrics, Sokoine University of Agriculture (SUA), Morogoro and focuses on Medicine research in Africa.

Munyua Sserunkuuma is affiliated with Ardhi University, Dar es Salaam and focuses on Medicine research in Africa.

Wabinga Kavirani is affiliated with National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Kamasi Mwakwayima is affiliated with National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are critical for monitoring infectious diseases in Tanzania. However, their effectiveness can be enhanced through methodological improvements. A mixed-method approach was employed, combining quantitative data analysis with qualitative interviews to assess the performance of surveillance systems. A multivariate logistic regression model was used to estimate the probability of disease outbreak notifications (OR = 1.25; CI: 0.98-1.61). The quasi-experimental design revealed a significant improvement in notification rates for certain diseases, with a 15% reduction in false negatives. This study provides evidence of the effectiveness of methodological improvements in public health surveillance systems and offers recommendations for further enhancement. Public health authorities should prioritise training and resource allocation to enhance surveillance system performance and reduce operational errors.

Keywords: *Tanzania, Public Health Surveillance, Epidemiology, Sampling Methods, Data Quality Control, Quasi-Experimental Design, Outcome Assessment*

ABSTRACT-ONLY PUBLICATION

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

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge