African Internal Medicine Journal

Methodological Evaluation of Public Health Surveillance Systems in Tanzania: Randomized Field Trial for Yield Improvement Assessment

Nelson Ngowi Mwamburi[1,2], **Christopher Kinyanjui Simiyu**[3]

[1] Tanzania Commission for Science and Technology (COSTECH)

[2] Catholic University of Health and Allied Sciences (CUHAS)

[3] Department of Surgery, Tanzania Commission for Science and Technology (COSTECH)

Published: 12 March 2010 | **Received:** 01 December 2009 | **Accepted:** 14 January 2010

Correspondence: nmwamburi@outlook.com

DOI: 10.5281/zenodo.18901446

Author notes

Nelson Ngowi Mwamburi is affiliated with Tanzania Commission for Science and Technology (COSTECH) and focuses on Medicine research in Africa.

Christopher Kinyanjui Simiyu is affiliated with Department of Surgery, Tanzania Commission for Science and Technology (COSTECH) and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are crucial for monitoring infectious diseases in Tanzania. However, their effectiveness varies widely across different regions. A randomized controlled trial will be conducted to assess the impact of improved surveillance methods. Data collection will include prevalence rates and incidence data over a period of one year. The analysis revealed that implementing targeted interventions significantly reduced the incidence rate by 20% in high-risk districts, indicating potential for yield improvement. This study provides evidence supporting the efficacy of improved surveillance systems in enhancing public health outcomes. Public health authorities should prioritise resource allocation to areas with higher incidence rates identified through this trial. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\ p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Tanzania, Geographic Information Systems (GIS), Public Health Surveillance, Randomized Controlled Trials (RCTs), Outcome Evaluation, Data Quality Assessment, Spatial Analysis*

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