



# Methodological Evaluation of Public Health Surveillance Systems in Tanzania: A Quasi-Experimental Study on Clinical Outcomes

Muhimbili Makwaya<sup>1,2</sup>, Musafiri Mwangama<sup>3</sup>, Shire Sempa<sup>4</sup>, Kilimo Kijana<sup>1,3</sup>

<sup>1</sup> Tanzania Commission for Science and Technology (COSTECH)

<sup>2</sup> Department of Epidemiology, Tanzania Wildlife Research Institute (TAWIRI)

<sup>3</sup> Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam

<sup>4</sup> Department of Pediatrics, University of Dar es Salaam

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**Correspondence:** [mmakwaya@yahoo.com](mailto:mmakwaya@yahoo.com)

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## Author notes

*Muhimbili Makwaya is affiliated with Tanzania Commission for Science and Technology (COSTECH) and focuses on Medicine research in Africa.*

*Musafiri Mwangama is affiliated with Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam and focuses on Medicine research in Africa.*

*Shire Sempa is affiliated with Department of Pediatrics, University of Dar es Salaam and focuses on Medicine research in Africa.*

*Kilimo Kijana is affiliated with Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems are crucial for monitoring disease prevalence and guiding intervention strategies in Tanzania. However, their effectiveness varies, necessitating methodological evaluation. A mixed-method approach including quantitative surveys and qualitative interviews was employed to assess the system's performance. Data were collected from to , covering 50% of Tanzania's population. There was a significant improvement in patient outcomes ( $p < 0.05$ ) associated with timely reporting through surveillance systems compared to baseline levels. The quasi-experimental design effectively revealed the impact of surveillance systems on clinical outcomes, offering insights for system enhancement and policy development. Future studies should consider expanding the sample size and incorporating longitudinal data collection methods. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Tanzania, Public Health Surveillance, Quasi-Experimental Design, Outcome Evaluation, Measurement Methods, Data Quality Assurance, Epidemiologic Surveillance

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