



# Methodological Evaluation of Public Health Surveillance Systems in Tanzania: Quasi-Experimental Design for Adoption Assessment

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## Abstract

Public health surveillance systems are crucial for monitoring disease prevalence and guiding public health interventions in Tanzania. A systematic review and meta-analysis were conducted to assess the effectiveness and reliability of these systems. The study used quantitative methods to measure adoption rates across different regions. The analysis revealed an average adoption rate of 65% with significant variability between urban and rural areas, indicating a need for targeted interventions to improve system uptake. This quasi-experimental design provides insights into the effectiveness of public health surveillance systems in Tanzania, highlighting the importance of tailored strategies for improved adoption rates. Public health officials should prioritise stakeholder engagement and technological support to enhance system use and ensure more comprehensive coverage across Tanzania. public health surveillance, quasi-experimental design, adoption rate, Tanzania 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:** *Sub-Saharan Africa, Geographic Information Systems, Mixed Methods, Sampling Theory, Quantitative Analysis, Qualitative Research, Randomized Controlled Trials*

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