



# Methodological Evaluation of Public Health Surveillance Systems in Nigeria: Quasi-Experimental Design for Yield Improvement Assessment

Fidelis Olayiwola<sup>1</sup>

<sup>1</sup> Department of Pediatrics, University of Maiduguri

**Published:** 09 October 2013 | **Received:** 07 May 2013 | **Accepted:** 31 August 2013

**Correspondence:** [folayiwola@hotmail.com](mailto:folayiwola@hotmail.com)

**DOI:** [10.5281/zenodo.18991454](https://doi.org/10.5281/zenodo.18991454)

## Author notes

*Fidelis Olayiwola is affiliated with Department of Pediatrics, University of Maiduguri and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems in Nigeria are crucial for monitoring infectious diseases such as malaria and tuberculosis (TB). However, their effectiveness varies across different regions. A mixed-method approach was employed, including both quantitative data analysis and qualitative interviews with stakeholders. The study utilised a difference-in-differences (DiD) regression model for evaluating the impact of system improvements over time. The DiD model revealed a significant increase in reported cases following system enhancements, particularly in urban areas where TB surveillance saw a 20% reduction in reporting errors compared to rural regions. This study provides robust evidence supporting the efficacy of systematic interventions in improving public health surveillance outcomes. The findings can inform policy makers on best practices for enhancing disease monitoring systems. Implementing standardised training programmes and regular system audits are recommended to sustain improved reporting accuracy and ensure consistent performance across different regions. 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, African, Surveillance, Systems, Epidemiology, Qualitative, Yield □□

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge