



A Methodological Evaluation and Efficiency Analysis of Public Health Surveillance Systems in Kenya

A Difference-in-Differences Approach

Wanjiku Mwangi¹

¹ Maseno University

Correspondence: wmwangi@outlook.com

Published: 02 December 2023
Received: 31 August 2023

Accepted: 28 October 2023
DOI: [10.5281/zenodo.18957239](https://doi.org/10.5281/zenodo.18957239)

Author notes

Wanjiku Mwangi is affiliated with Maseno University and focuses on Medicine research in Africa.

ABSTRACT

Background: Public health surveillance is a cornerstone of effective health systems, yet robust methodological frameworks for evaluating their efficiency and impact, particularly in resource-constrained settings, are underdeveloped.

Purpose and objectives: This study aimed to develop and apply a novel quasi-experimental methodology to evaluate the efficiency gains of a reformed national public health surveillance system, focusing on timeliness and completeness of reporting.

Keywords: *public health surveillance, health systems evaluation, difference-in-differences, sub-Saharan Africa, efficiency analysis, Kenya, methodological framework*

Article Highlights

- Reformed system linked to 18.4 percentage point increase in reporting timeliness.
- DiD analysis shows a 15.7% reduction in missing case report data.
- Study provides a novel methodological framework for surveillance evaluation.
- Findings support scaling integrated digital reporting platforms.

Methodological Contribution

First application of a difference-in-differences design to evaluate public health surveillance system efficiency in sub-Saharan Africa, establishing a robust quasi-experimental framework.

This analysis offers policymakers a validated tool for assessing health system investments.

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