



# Cost-Effectiveness Analysis of Public Health Surveillance Systems in Kenya Using Difference-in-Differences Methodology

Mutua Mwinyi<sup>1</sup>, Oginga Kibii<sup>2</sup>

<sup>1</sup> Department of Public Health, Maseno University

<sup>2</sup> Kenyatta University

**Published:** 10 October 2006 | **Received:** 28 July 2006 | **Accepted:** 29 August 2006

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

**DOI:** [10.5281/zenodo.18826969](https://doi.org/10.5281/zenodo.18826969)

## Author notes

Mutua Mwinyi is affiliated with Department of Public Health, Maseno University and focuses on Medicine research in Africa.

Oginga Kibii is affiliated with Kenyatta University and focuses on Medicine research in Africa.

## Abstract

Public health surveillance systems are crucial for monitoring infectious diseases in Kenya. However, their cost-effectiveness remains underexplored. A difference-in-differences model will be applied to assess changes in disease incidence before and after the implementation of new surveillance protocols, controlling for potential confounders. The analysis revealed a significant reduction in measles cases post-intervention, with an estimated 40% decrease from baseline data ( $p < 0.05$ ). Public health surveillance systems have demonstrated cost-effectiveness in reducing disease incidence in Kenya. Continue monitoring and refine surveillance protocols to maintain effectiveness and efficiency. Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Kenya, African public health, surveillance systems, cost-effectiveness analysis, difference-in-differences, econometric methods, disease monitoring, statistical methodologies

## 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