



# Methodological Evaluation of Public Health Surveillance Systems in South Africa Using Quasi-Experimental Design for Cost-Effectiveness Assessment

Nomzwa Mkhize<sup>1</sup>

<sup>1</sup> Department of Epidemiology, University of the Witwatersrand

**Published:** 22 September 2009 | **Received:** 06 June 2009 | **Accepted:** 05 August 2009

**Correspondence:** [nmkhize@aol.com](mailto:nmkhize@aol.com)

**DOI:** [10.5281/zenodo.18882703](https://doi.org/10.5281/zenodo.18882703)

## Author notes

*Nomzwa Mkhize is affiliated with Department of Epidemiology, University of the Witwatersrand and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems in South Africa are critical for monitoring disease outbreaks and managing healthcare resources efficiently. A systematic literature review was conducted to assess the methodologies employed in evaluating these systems, including their application of quasi-experimental designs for measuring cost-effectiveness. Findings indicate that while many studies use quasi-experimental designs, there is a lack of standardised protocols and robust statistical models across different research contexts. The review highlights the need for standardising methodologies to ensure consistency in evaluating public health surveillance systems' effectiveness. Recommendation for future research includes the adoption of consistent quasi-experimental design frameworks with appropriate statistical modelling to enhance comparability and robustness of cost-effectiveness assessments. 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:** *Sub-Saharan, surveillance, methodology, cost-effectiveness, evaluation, geographic, analysis*

## 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