



# Methodological Assessment of Public Health Surveillance Systems in Ethiopia: A Randomized Field Trial

Mulugeta Berhanu<sup>1</sup>

<sup>1</sup> Department of Epidemiology, Gondar University

**Published:** 28 July 2013 | **Received:** 22 May 2013 | **Accepted:** 22 June 2013

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

**DOI:** [10.5281/zenodo.18979864](https://doi.org/10.5281/zenodo.18979864)

## Author notes

*Mulugeta Berhanu is affiliated with Department of Epidemiology, Gondar University and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems play a crucial role in monitoring infectious diseases and other public health threats efficiently. A randomized field trial was conducted to evaluate the performance of public health surveillance systems across different regions of Ethiopia. Data were collected using standardised tools and analysed using logistic regression models to assess predictive accuracy. The analysis revealed a significant improvement in the detection rate of infectious diseases when compared to baseline data, with an increase of 20% in positive case notifications from the intervention group. This study provides robust evidence that targeted interventions can enhance the functionality and efficiency of public health surveillance systems in Ethiopia. Public health authorities should prioritise ongoing system improvements based on this research to better protect public health outcomes. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_1$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Ethiopia, Geographic Information Systems, Data Quality Assessment, Sentinel Surveillance Sites, Randomized Controlled Trials, Public Health Metrics, Outcome Evaluation*

## 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