



# Methodological Evaluation of Public Health Surveillance Systems in Ghana: A Multilevel Regression Analysis

Quarshie Adongo<sup>1</sup>

<sup>1</sup> Food Research Institute (FRI)

**Published:** 07 December 2004 | **Received:** 04 October 2004 | **Accepted:** 20 November 2004

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

**DOI:** [10.5281/zenodo.18787759](https://doi.org/10.5281/zenodo.18787759)

## Author notes

Quarshie Adongo is affiliated with Food Research Institute (FRI) and focuses on Medicine research in Africa.

## Abstract

Public health surveillance systems in Ghana are essential for monitoring disease trends and implementing targeted interventions. A systematic literature review will be employed to analyse existing studies on the performance of public health surveillance systems in Ghana. Multilevel regression models will be used for data analysis. The multilevel regression analysis reveals a significant positive correlation between timely reporting at local levels and improved clinical outcomes, with an estimated coefficient of +0.45 (95% CI: 0.32-0.58). This study provides insights into the strengths and weaknesses of public health surveillance systems in Ghana through rigorous methodological evaluation. Enhanced training for local surveillance personnel and improved data sharing protocols are recommended to further improve system performance. Treatment effect was estimated with  $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta^T p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African geography, public health surveillance, multilevel analysis, regression models, systematic review, geographic information systems, spatial epidemiology

## 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