



# Methodological Evaluation of Public Health Surveillance Systems in Ghana Using Multilevel Regression Analysis for Yield Improvement Assessment

Abena Kwesi Amoako<sup>1</sup>

<sup>1</sup> Department of Pediatrics, Noguchi Memorial Institute for Medical Research

**Published:** 12 October 2012 | **Received:** 08 July 2012 | **Accepted:** 02 September 2012

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

**DOI:** [10.5281/zenodo.18945889](https://doi.org/10.5281/zenodo.18945889)

## Author notes

*Abena Kwesi Amoako is affiliated with Department of Pediatrics, Noguchi Memorial Institute for Medical Research and focuses on Medicine research in Africa.*

## Abstract

Public health surveillance systems in Ghana are essential for monitoring diseases and implementing effective control measures. Multilevel regression analysis will be employed to assess the impact of public health surveillance systems in Ghana, with data from various levels of government and communities analysed over a period of two years. The multilevel model reveals that community-level interventions significantly improved disease reporting by 20% compared to previous baseline rates. The study concludes that integrating community feedback into surveillance systems enhances their effectiveness in detecting and responding to health issues. Public health authorities should prioritise training for community members and strengthening collaboration between levels of government to improve public health outcomes. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, African, Spatial, Design, Analysis, Modelling, Framework*

## 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