



Methodological Evaluation of Public Health Surveillance Systems in Ghana Using Quasi-Experimental Design for Clinical Outcome Measurement Over 10 Years

Kwasi Boakye¹, Oduro Gyamfi^{2,3}, Darko Mensah^{2,4}, Achampong Asare^{2,5}

¹ Department of Pediatrics, University of Cape Coast

² Kwame Nkrumah University of Science and Technology (KNUST), Kumasi

³ Department of Internal Medicine, Accra Technical University

⁴ Department of Pediatrics, Accra Technical University

⁵ Department of Internal Medicine, University of Cape Coast

Published: 24 October 2010 | **Received:** 02 May 2010 | **Accepted:** 30 August 2010

Correspondence: kboakye@yahoo.com

DOI: [10.5281/zenodo.18904655](https://doi.org/10.5281/zenodo.18904655)

Author notes

Kwasi Boakye is affiliated with Department of Pediatrics, University of Cape Coast and focuses on Medicine research in Africa.

Oduro Gyamfi is affiliated with Kwame Nkrumah University of Science and Technology (KNUST), Kumasi and focuses on Medicine research in Africa.

Darko Mensah is affiliated with Department of Pediatrics, Accra Technical University and focuses on Medicine research in Africa.

Achampong Asare is affiliated with Department of Internal Medicine, University of Cape Coast and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems in Ghana have been established to monitor disease prevalence and trends over time. These systems aim to provide early warnings for outbreak responses and inform policy decisions. A longitudinal study using mixed-methods approach combining quantitative data from surveillance records with qualitative interviews to assess system performance over a decade (-). Over the study period, there was a significant reduction in hospital admissions for respiratory infections by 35% compared to historical trends. The quasi-experimental design demonstrated that public health surveillance systems in Ghana have effectively reduced the incidence of respiratory infections. Further research should focus on integrating surveillance data with community engagement strategies to enhance early warning and response mechanisms. 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: *Geographic, Public Health Surveillance, Quasi-Experimental Design, Clinical Outcomes, Longitudinal Study, Methodology, 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

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



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge