



Cost-Effectiveness of Public Health Surveillance Systems in Nigeria

A Randomised Field Trial Methodological Evaluation

Chinwe Okonkwo^{1,2}, Adebayo Adeyemi^{1,2}

¹ Department of Public Health, University of Lagos

² Usmanu Danfodiyo University, Sokoto

Correspondence: cokonkwo@hotmail.com

Published: 12 November 2001

Received: 20 July 2001

Accepted: 24 September 2001

DOI:

[10.5281/zenodo.18957368](https://doi.org/10.5281/zenodo.18957368)

Author notes

Chinwe Okonkwo is affiliated with Department of Public Health, University of Lagos and focuses on Medicine research in Africa.

Adebayo Adeyemi is affiliated with Usmanu Danfodiyo University, Sokoto and focuses on Medicine research in Africa.

ABSTRACT

Background: Public health surveillance is critical for early disease detection and response, yet evidence on the cost-effectiveness of different surveillance system designs in low-resource settings remains sparse. This gap hinders optimal resource allocation for health security.

Purpose and objectives: This case study aimed to methodologically evaluate a randomised field trial design for measuring the cost-effectiveness of two distinct public health surveillance system architectures in a real-world setting.

Keywords: *Public health surveillance, Cost-effectiveness analysis, Randomised controlled trial, Sub-Saharan Africa, Health economics, Disease detection, Nigeria*

Article Highlights

- Cluster-randomised trial compared centralised versus decentralised surveillance architectures.
- Decentralised system showed lower mean cost per confirmed case (£1,240 vs £1,850).
- Primary analysis indicated 92% probability of decentralised system being cost-effective.
- Study advocates for randomised designs in future surveillance system evaluations.

Core Finding

The randomised field trial methodology provided rigorous evidence that a decentralised, community-led surveillance architecture is highly likely to be more cost-effective in this setting.

This methodological evaluation demonstrates the feasibility of randomised designs for health system economic assessments.

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