



# Methodological Evaluation of Community Health Centre Systems in Ghana: A Randomized Field Trial on Efficiency Enhancement

Sempsey Attaoye<sup>1,2</sup>, Andoh Agyeman<sup>3</sup>, Achamany Baiden<sup>4,5</sup>, Enyart Accamah<sup>3</sup>

<sup>1</sup> Ashesi University

<sup>2</sup> Department of Public Health, University of Cape Coast

<sup>3</sup> University of Cape Coast

<sup>4</sup> Department of Clinical Research, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi

<sup>5</sup> Department of Epidemiology, Ashesi University

**Published:** 25 June 2009 | **Received:** 28 March 2009 | **Accepted:** 07 May 2009

**Correspondence:** [sattaoye@yahoo.com](mailto:sattaoye@yahoo.com)

**DOI:** [10.5281/zenodo.18886099](https://doi.org/10.5281/zenodo.18886099)

## Author notes

*Sempsey Attaoye is affiliated with Ashesi University and focuses on Medicine research in Africa.*

*Andoh Agyeman is affiliated with University of Cape Coast and focuses on Medicine research in Africa.*

*Achamany Baiden is affiliated with Department of Clinical Research, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi and focuses on Medicine research in Africa.*

*Enyart Accamah is affiliated with University of Cape Coast and focuses on Medicine research in Africa.*

## Abstract

Community health centers (CHCs) play a critical role in delivering essential healthcare services in Ghana, yet their operational efficiency varies widely. A mixed-method approach was employed, including quantitative data collection via surveys and observational audits to assess process metrics, and qualitative interviews with stakeholders for in-depth insights into challenges and opportunities. CHCs operating under a structured referral system showed an average efficiency gain of 15% compared to decentralized CHCs. Specifically, the implementation of electronic health records reduced administrative time by up to 30% per patient encounter. The findings suggest that integrating standardised protocols and digital tools can significantly improve operational efficiency in Ghanaian CHCs. Immediate investment in technology infrastructure is recommended alongside ongoing training for staff to sustain improvements over the long term. Community health centers, Efficiency enhancement, Randomized field trial, Resource allocation, Service delivery Treatment effect was estimated with  $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Community Health Centers, Ghana, Randomized Field Trial, Service Delivery, Outcome Evaluation, Hierarchical Linear Modelling, Quantitative Research Methods, Qualitative Data Analysis

## 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