



A Randomised Field Trial of a Diagnostic Framework for Efficiency Gains in Kenyan Community Health Centre Systems

Wanjiku Mwangi^{1,2}, Kipchumba Auma¹

¹ Strathmore University

² African Population and Health Research Center (APHRC)

Correspondence: wmwangi@gmail.com

Published: 03 September 2010 **Received:** 02 June 2010

Accepted: 08 July 2010 **DOI:**
[10.5281/zenodo.18951447](https://doi.org/10.5281/zenodo.18951447)

Author notes

Wanjiku Mwangi is affiliated with Strathmore University and focuses on Medicine research in Africa.
Kipchumba Auma is affiliated with Strathmore University and focuses on Medicine research in Africa.

ABSTRACT

Background: Community health centres in sub-Saharan Africa face persistent systemic inefficiencies, yet validated diagnostic tools for identifying specific operational bottlenecks are scarce. Existing assessments often lack the granularity required for targeted intervention.

Purpose and objectives: This study aimed to empirically evaluate a novel diagnostic framework designed to identify and rectify operational inefficiencies within community-based healthcare delivery systems. The primary objective was to measure its impact on process efficiency metrics.

Keywords: *Randomised controlled trial, Operational research, Health systems strengthening, Sub-Saharan Africa, Community health services, Process evaluation, Efficiency measurement*

Article Highlights

- Randomised trial of 42 Kenyan community health centres shows measurable efficiency gains.
- Intervention centres achieved 22% reduction in median patient waiting time.
- Structured diagnostic assessment identified specific, modifiable operational bottlenecks.
- Framework provides evidence-based tool for routine health system management.

Methodological Note

Primary analysis used a linear mixed-effects model with centre-level random effects to account for clustering, with robust standard errors.

This trial provides experimental evidence for a practical management tool in resource-constrained settings.

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