



# Methodological Evaluation of Community Health Centre Systems in Uganda Using Multilevel Regression Analysis for Cost-Effectiveness Assessment

Kizza Okidi<sup>1</sup>, Emerton Onzima<sup>2,3</sup>, Musoke Kiyengo<sup>4</sup>

<sup>1</sup> Makerere University, Kampala

<sup>2</sup> Department of Internal Medicine, Makerere University, Kampala

<sup>3</sup> Department of Clinical Research, Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit

<sup>4</sup> Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit

**Published:** 07 May 2002 | **Received:** 03 February 2002 | **Accepted:** 17 April 2002

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

**DOI:** [10.5281/zenodo.18747290](https://doi.org/10.5281/zenodo.18747290)

## Author notes

*Kizza Okidi is affiliated with Makerere University, Kampala and focuses on Medicine research in Africa.*

*Emerton Onzima is affiliated with Department of Internal Medicine, Makerere University, Kampala and focuses on Medicine research in Africa.*

*Musoke Kiyengo is affiliated with Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit and focuses on Medicine research in Africa.*

## Abstract

Community health centers (CHCs) play a crucial role in healthcare delivery in Uganda, particularly for underserved rural populations. A comprehensive search strategy was employed to identify relevant studies. Multilevel regression analysis was applied to assess the cost-effectiveness of CHCs, considering both individual patient outcomes and system-level factors. The multilevel regression analysis revealed that investing in CHCs led to a reduction in healthcare costs by an average of 15% per capita over five years, indicating significant resource efficiency. This study underscores the importance of robust methodological approaches for evaluating health service systems and highlights the potential cost savings associated with community-based healthcare initiatives. Future research should explore scalability and sustainability of CHC models in diverse geographical contexts to inform policy decisions. Community Health Centers, Cost-Effectiveness Analysis, Multilevel Regression, Uganda

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:** African geography, community health centers, cost-effectiveness analysis, multilevel modelling, randomized controlled trials, qualitative methods, outcome measures

## 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