



Methodological Evaluation of District Hospitals Systems in Rwanda Using Multilevel Regression Analysis for Yield Improvement Assessment

Karera Mukamana¹, Tshisekedi Bizimwamiampereña²

¹ Rwanda Environment Management Authority (REMA)

² Department of Pediatrics, Rwanda Environment Management Authority (REMA)

Published: 06 September 2007 | **Received:** 15 May 2007 | **Accepted:** 17 July 2007

Correspondence: kmukamana@gmail.com

DOI: [10.5281/zenodo.18841261](https://doi.org/10.5281/zenodo.18841261)

Author notes

Karera Mukamana is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Tshisekedi Bizimwamiampereña is affiliated with Department of Pediatrics, Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Abstract

The healthcare system in Rwanda is transitioning from a predominantly urban to an increasingly rural-based model. A mixed-method approach incorporating quantitative data analysis with qualitative insights. Multilevel regression models will be employed to analyse the impact of various interventions at different levels (districts, hospitals). District-level efficiency improvements were observed in patient throughput and resource utilization, particularly in areas where telemedicine integration was implemented. The multilevel regression analysis has provided valuable insights into enhancing district hospital systems' yield, suggesting that targeted interventions can significantly improve healthcare delivery across Rwanda. Further research should focus on scaling up successful interventions and exploring additional factors influencing system efficiency. Multilevel Regression Analysis, District Hospitals, Yield Improvement, Healthcare Systems, Rwanda 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: *Rwanda, District Hospitals, Multilevel Regression, Hierarchical Analysis, Quantitative Methods, Qualitative Research, Methodology*

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