



Methodological Assessment and Regression Analysis of Emergency Care Systems in Rwanda

Kabuga Musindiko^{1,2}, Mukakawo Bizimana^{3,4}

¹ University of Rwanda

² African Leadership University (ALU), Kigali

³ Department of Surgery, African Leadership University (ALU), Kigali

⁴ Department of Pediatrics, University of Rwanda

Published: 08 August 2006 | **Received:** 18 May 2006 | **Accepted:** 13 July 2006

Correspondence: kmusindiko@aol.com

DOI: [10.5281/zenodo.18830559](https://doi.org/10.5281/zenodo.18830559)

Author notes

Kabuga Musindiko is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Mukakawo Bizimana is affiliated with Department of Surgery, African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.

Abstract

Emergency care systems in Rwanda are crucial for managing acute health events efficiently. However, their effectiveness and efficiency have not been systematically evaluated. A mixed-method approach was employed, combining qualitative interviews with quantitative data from ECU performance metrics. Multilevel regression models were used to analyse variance at different levels (individual patient, unit, and system). The multilevel regression analysis revealed a significant interaction effect between individual patient characteristics and unit-level interventions on clinical outcomes. This study provides evidence for the importance of integrating both micro-level (patient-specific) and macro-level (systemic) factors in evaluating emergency care systems. Future research should focus on implementing targeted improvement strategies based on identified system weaknesses. Emergency Care Systems, Rwanda, Multilevel Regression Analysis, Clinical Outcomes Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Rwandan, Multilevel, Regression, Evaluation, Healthcare, Community, Outcome

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