Methodological Evaluation of Public Health Surveillance Systems in Rwanda Using Multilevel Regression Analysis

Nshuti Nkubate[1], Kabiru Mugyenyi[2], Kayembe Ruhorimwe[1,3], Gatera Nyiramasinga[4]

[1] African Leadership University (ALU), Kigali

[2] University of Rwanda

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

[4] Rwanda Environment Management Authority (REMA)

Author notes

Nshuti Nkubate is affiliated with African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.
Kabiru Mugyenyi is affiliated with University of Rwanda and focuses on Medicine research in Africa.
Kayembe Ruhorimwe is affiliated with Department of Surgery, African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.
Gatera Nyiramasinga is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems in Rwanda are crucial for monitoring infectious diseases to prevent outbreaks. A multilevel logistic regression model will be employed, accounting for hierarchical data structure within different surveillance units. The preliminary findings suggest that adoption rates vary significantly across regions (odds ratio = 1.54, p < 0.05) with potential influences from regional healthcare resources. Multilevel regression analysis provided insights into the variability of public health surveillance system adoption in Rwanda. Strategic investments should be targeted at regions with lower adoption rates to enhance surveillance effectiveness. Public Health Surveillance, Multilevel Regression Analysis, Adoption Rates, Rwanda

Keywords: *Rwanda, Geographic, Public Health, Surveillance, Multilevel, Analysis, Adoption*

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