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Methodological Evaluation of Public Health Surveillance Systems in Rwanda Using Panel Data Analysis for Adoption Rate Measurement,

Harenzi Buhendwa[1,2], **Kizito Nkubili**[3,4], **Kabire Mukaso**[3]

[1] Department of Epidemiology, Rwanda Environment Management Authority (REMA)

[2] African Leadership University (ALU), Kigali

[3] University of Rwanda

[4] Department of Public Health, Rwanda Environment Management Authority (REMA)

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Correspondence: hbuhendwa@hotmail.com

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Author notes

Harenzi Buhendwa is affiliated with Department of Epidemiology, Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Kizito Nkubili is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Kabire Mukaso is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are essential for monitoring disease trends in Rwanda. However, their effectiveness varies across different regions and over time. The study employs a comprehensive search strategy to identify relevant studies. Panel data analysis is utilised to estimate the effect of various factors on adoption rates over time, providing insights into system performance. A significant proportion (35%) of surveillance systems showed high variability in adopting recommended practices across different regions, with some areas showing non-compliance levels exceeding 20%. The review highlights the need for standardised methodologies and continuous improvement strategies to enhance public health surveillance system effectiveness in Rwanda. Policy makers should focus on developing uniform guidelines and increasing training programmes to ensure consistent adoption of best practices across all regions. Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, Panel, Epidemiology, Surveillance, Quantitative, Methodology, Evaluation*

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