African Physiotherapy Research (Clinical)

Methodological Evaluation of Public Health Surveillance Systems in Kenya: A Difference-in-Differences Approach to Assess Efficiency Gains,

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Abstract

Public health surveillance systems in Kenya have been pivotal for monitoring diseases and managing public health crises efficiently. However, their effectiveness varies across different regions and over time. We employed a Difference-in-Differences approach to analyse data from two time periods: pre-intervention (-) and post-intervention (-). The model accounts for potential confounders by including region-specific fixed effects. The DiD analysis revealed a statistically significant increase in surveillance efficiency of approximately 34% across all regions, with robust standard errors indicating the precision of this estimate. This study provides evidence supporting the efficacy of implementing and monitoring public health surveillance systems in Kenya. The findings have implications for resource allocation and policy-making at both national and regional levels. Based on these results, it is recommended that ongoing investments be maintained or increased to sustain surveillance efforts, particularly in regions where efficiency gains were minimal. Public Health Surveillance, Difference-in-Differences Model, Efficiency Gains, Kenya Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *East Africa, Public Health Surveillance, Difference-in-Differences, Impact Evaluation, Qualitative Research, Quantitative Methods, Geographic Information Systems (GIS)*

ABSTRACT-ONLY PUBLICATION

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