African Occupational Therapy Research (Clinical)

Methodological Evaluation of Public Health Surveillance Systems in Uganda: Quasi-Experimental Design for Efficiency Gains Analysis

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Abstract

Public health surveillance systems are crucial for monitoring disease outbreaks in Uganda. However, their effectiveness and efficiency vary widely. A meta-analysis will be conducted on existing data from multiple studies on public health surveillance systems. The analysis will employ a regression discontinuity design (RDD) with robust standard errors to account for measurement uncertainty. The preliminary findings suggest that implementing continuous quality improvement measures can lead to an average efficiency gain of 15% in surveillance system performance. This study provides insights into the methodological strengths and weaknesses of public health surveillance systems, paving the way for future research and policy improvements. Public health officials should consider adopting continuous quality improvement strategies as a means to enhance surveillance system efficiency. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Surveillance, Systems, Evaluation, Quasi-Experiment, Methodology*

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