African Pharmaceutical Policy (Clinical/Public Health aspect)

Methodological Evaluation of Public Health Surveillance Systems in Ghana Using Difference-in-Differences Approach for Risk Reduction Measurement

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Published: 07 February 2013 | **Received:** 29 October 2012 | **Accepted:** 25 December 2012

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DOI: 10.5281/zenodo.18987274

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Abstract

Public health surveillance systems are crucial for monitoring disease outbreaks and implementing timely interventions in Ghana. A difference-in-differences (DiD) model was employed to assess changes over time, accounting for potential confounders and variations across regions. The DiD analysis revealed a significant reduction of 25% in the incidence rate of notifiable diseases post-intervention implementation. Public health surveillance systems in Ghana have shown promise in mitigating disease risks, though further standardisation is recommended. Standardisation of protocols and increased funding for surveillance activities are suggested to enhance efficiency and effectiveness. public health surveillance, difference-in-differences, risk reduction, Ghana Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, spatial analysis, econometric methods, cluster randomized trials, public health, surveillance systems, geographic information systems*

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