



Methodological Assessment of Public Health Surveillance Systems in Ghana: A Panel Data Approach to Evaluating Efficiency Gains in Context

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Published: 11 August 2001 | **Received:** 25 April 2001 | **Accepted:** 29 June 2001

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DOI: [10.5281/zenodo.18726107](https://doi.org/10.5281/zenodo.18726107)

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Abstract

Public health surveillance systems in Ghana are crucial for monitoring diseases such as hepatitis B and C, yet their effectiveness can vary significantly. A meta-analysis approach was employed to analyse surveillance system performance from to . Panel data methods were used to estimate the impact of various factors on surveillance effectiveness, with robust standard errors accounting for within-group correlations. Analysis revealed significant variations in the efficiency scores across different regions, suggesting that targeted interventions are needed to improve surveillance systems' performance. The study underscores the importance of regular evaluation and adaptation of public health surveillance systems in Ghana to ensure effective disease monitoring and control. Public health officials should prioritise resource allocation towards improving surveillance infrastructure in underserved areas, based on our findings. Treatment effect was estimated with $\text{text} \{ \text{logit} \} (\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Public Health, Surveillance Systems, Ghana, Efficiency, Panel Data, Econometrics*

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