



# Methodological Evaluation of Public Health Surveillance Systems in Ghana Using Quasi-Experimental Designs

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## Abstract

Public health surveillance systems are critical for monitoring infectious diseases in Ghana. However, their effectiveness varies widely across different regions and time periods. The study employed a mixed-methods approach combining quantitative data from surveillance records with qualitative interviews to assess system performance and identify areas for enhancement. Quasi-experimental analyses revealed significant improvements ( $p < 0.05$ ) in disease detection rates post-intervention, suggesting enhanced surveillance capabilities. The quasi-experimental design provided robust evidence supporting the efficacy of current surveillance systems in Ghana, with notable yield improvement observed. Future research should prioritise systematic reviews and standardised reporting guidelines to ensure consistent evaluation methodologies across different regions. Public Health Surveillance, Quasi-Experimental Design, Yield Improvement, Epidemiology, Ghana Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, Ghanaian, surveillance, evaluation, methodology, impact, analysis*

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