



Methodological Evaluation of Public Health Surveillance Systems in Ghana: A Randomized Field Trial on Cost-Effectiveness Assessment

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Abstract

Public health surveillance systems are crucial for monitoring infectious diseases in Ghana, where effective control measures can prevent outbreaks and reduce morbidity. A mixed-method approach combining quantitative data analysis with qualitative interviews was employed. The study utilised a *2imes2* contingency table to assess system performance across different scenarios. The findings indicated that the current surveillance systems were moderately effective in identifying outbreaks, with an accuracy rate of approximately 75%. Despite some limitations, the results suggest that improvements are necessary for enhancing the efficiency and cost-effectiveness of public health surveillance in Ghana. Investment should be prioritised to upgrade infrastructure and training programmes within the current system, with a focus on early warning systems.

Keywords: *Sub-Saharan, surveillance, epidemiology, cluster-randomization, cost-benefit analysis, outcome measurement, blinding*

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