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Methodological Evaluation of Public Health Surveillance Systems in Kenya: Quasi-Experimental Design for Yield Improvement Analysis

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Abstract

Public health surveillance systems are critical for monitoring infectious diseases in Kenya. However, their effectiveness can be influenced by methodological aspects. A quasi-experimental design was employed to assess the impact of surveillance system improvements on disease detection and reporting. Data from two consecutive years were analysed, with robust standard errors accounting for potential confounders. The analysis revealed a 20% increase in reported infectious diseases after implementing methodological enhancements compared to baseline data. This quasi-experimental design successfully quantified the yield improvement attributable to enhanced surveillance methods in Kenya's public health systems. Further studies should explore scalability and sustainability of these findings across different regions in Kenya. Public Health Surveillance, Quasi-Experimental Design, Yield Improvement Analysis Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, Geographic, Quasi-Experimental, Evaluation, Methodology, Surveillance, Public Health*

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