



Methodological Assessment of Public Health Surveillance Systems in South Africa: A Focus on Clinical Outcomes Assessment

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Abstract

Public health surveillance systems in South Africa are critical for monitoring and responding to infectious diseases and other public health threats. A systematic literature review was conducted using databases such as PubMed and Web of Science. Studies were screened based on predefined inclusion criteria related to clinical outcome assessments in South Africa's public health surveillance systems. The analysis revealed a significant variation ($p < 0.05$) in the sensitivity of different surveillance methods for detecting influenza outbreaks, with some approaches having a higher detection rate than others. While current surveillance practices are effective overall, there is room for improvement in terms of methodological consistency and clinical outcome measurement accuracy. Standardised protocols should be developed to enhance the reliability and comparability of clinical outcomes assessments across different public health surveillance systems. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, surveillance, validity, reliability, triangulation, intervention, evaluation*

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