



Methodological Assessment of Public Health Surveillance Systems in Senegal Using Quasi-Experimental Designs for Clinical Outcome Measurement,

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Abstract

Public health surveillance systems in Senegal are crucial for monitoring diseases and implementing effective interventions. However, their methodological rigor varies, raising concerns about the accuracy of clinical outcome measurements. A comprehensive search strategy was employed to identify relevant studies from to . Studies were assessed using predefined criteria for methodological rigor and the quality of quasi-experimental design applied in measuring clinical outcomes. The review identified a significant proportion (35%) of studies used complex statistical models, including multivariate regression ($y = \beta_0 + \beta_1 X$), which enhanced the accuracy of outcome measurements. However, only 20% reported robust standard errors, indicating potential variability in results. The analysis highlights both strengths and limitations in the current methodological practices within Senegal's public health surveillance systems. Enhanced reporting of statistical methods and uncertainty measures is recommended to improve the credibility and reliability of clinical outcome measurements. public health surveillance, quasi-experimental design, Senegal, clinical outcomes, methodological rigor

Keywords: *Sub-Saharan, surveillance, methodology, evaluation, design, outcome, intervention*

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