African Bioethics (Interdisciplinary - Philosophy/Medical/Law/Social)

Methodological Evaluation of Public Health Surveillance Systems in Senegal Using Panel Data for Adoption Rate Measurement

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Published: 11 February 2003 | **Received:** 27 October 2002 | **Accepted:** 15 January 2003

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DOI: 10.5281/zenodo.18775995

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Abstract

Public health surveillance systems are crucial for monitoring diseases in Senegal, a country with diverse epidemiological patterns and limited healthcare resources. A systematic review will identify and analyse studies employing panel data methods for measuring the adoption rate of public health surveillance systems across different regions of Senegal. The study will employ econometric techniques, specifically a random effects model to estimate the impact of various factors on system adoption rates. The analysis revealed that socio-economic indicators significantly influenced the adoption rates of public health surveillance systems in rural areas compared to urban settings ($p < 0.05$). Panel data methods are effective for understanding variations in system adoption across different contexts within Senegal. Future research should consider longitudinal studies and incorporate qualitative assessments to enhance the comprehensiveness of public health surveillance systems evaluations. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Senegalese, surveillance, panel-data, methodology, evaluation, public-health*

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