



Methodological Evaluation of District Hospitals Systems in Senegal: A Quasi-Experimental Assessment of Clinical Outcomes

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Abstract

District hospitals in Senegal play a critical role in healthcare delivery, particularly in underserved regions. However, their performance and efficiency are not well understood, leading to potential gaps in service quality. A mixed-methods approach was employed, combining quantitative data from hospital records (e.g., patient discharge summaries) and qualitative interviews with healthcare providers. The study utilised a regression discontinuity design to assess the impact of district-level interventions on clinical outcomes within hospitals. Analysis revealed that the implementation of standardised care protocols led to a statistically significant decrease in readmission rates by 15% (95% confidence interval: -20% to -10%) among patients with chronic conditions, indicating improved system efficiency. This study provides robust evidence on the effectiveness of district hospital systems and highlights the importance of standardised care protocols in enhancing clinical outcomes. The findings underscore the need for further research to scale up these interventions across Senegal's healthcare landscape. District health authorities should prioritise the adoption of standardised treatment guidelines, alongside ongoing quality improvement initiatives. Additionally, regular performance evaluations are recommended to ensure sustained improvements in service delivery. district hospitals, clinical outcomes, regression discontinuity design, healthcare system evaluation Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, health systems, randomized control trial, outcomes measurement, primary care, data analysis, regression studies*

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