



# Methodological Evaluation of District Hospitals Systems in Senegal Using Difference-in-Differences Approach

Moustapha Diop<sup>1</sup>, Seyni Dia<sup>2,3</sup>

<sup>1</sup> Cheikh Anta Diop University (UCAD), Dakar

<sup>2</sup> African Institute for Mathematical Sciences (AIMS) Senegal

<sup>3</sup> Department of Public Health, Cheikh Anta Diop University (UCAD), Dakar

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**Correspondence:** [mdiop@gmail.com](mailto:mdiop@gmail.com)

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## Author notes

*Moustapha Diop is affiliated with Cheikh Anta Diop University (UCAD), Dakar and focuses on Medicine research in Africa.*

*Seyni Dia is affiliated with African Institute for Mathematical Sciences (AIMS) Senegal and focuses on Medicine research in Africa.*

## Abstract

District hospitals in Senegal are faced with challenges related to service delivery and system reliability. A difference-in-differences model was applied to assess changes in service delivery metrics before and after implementing quality improvement initiatives. Data from two pre-defined time periods were compared: one year prior to the intervention (treatment group) and one year post-intervention (control group). There was a significant increase of 30% in patient satisfaction scores post-intervention, suggesting improved service delivery. The difference-in-differences approach demonstrated effectiveness in measuring system reliability within district hospitals in Senegal. Further research should investigate the long-term sustainability and scalability of these interventions across different regions of Senegal. District Hospitals, Difference-in-Differences, Quality Improvement, Service Delivery, Patient Satisfaction Treatment effect was estimated with  $\text{text} \{ \text{logit} \} (\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, healthcare systems, econometrics, service delivery, impact evaluation, randomized controls, intervention analysis*

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