



Methodological Evaluation of District Hospitals in Senegal Using Difference-in-Differences for Yield Improvement Analysis

Toumani Sène^{1,2}, Madiama Diouf^{1,3}

¹ Université Alioune Diop de Bambey (UADB)

² Department of Public Health, Cheikh Anta Diop University (UCAD), Dakar

³ Cheikh Anta Diop University (UCAD), Dakar

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Correspondence: tsne@yahoo.com

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Author notes

Toumani Sène is affiliated with Université Alioune Diop de Bambey (UADB) and focuses on Medicine research in Africa. Madiama Diouf is affiliated with Cheikh Anta Diop University (UCAD), Dakar and focuses on Medicine research in Africa.

Abstract

District hospitals in Senegal face challenges in improving service delivery efficiency. A difference-in-differences model was applied to assess changes in service delivery efficiency before and after implementing quality improvement measures at selected district hospitals. The study utilised pre- and post-intervention data from a sample of hospitals across Senegal. Data analysis revealed significant improvements in patient throughput and resource utilization rates, with an overall increase of 20% in hospital yield compared to baseline levels. The DiD model demonstrated effectiveness in measuring yield improvement in district hospitals, providing a robust framework for future quality assurance initiatives. Further research should explore the scalability of these findings and potential cost-effectiveness measures. Implementation strategies should be tailored to local contexts to maximise benefits. District Hospitals, Difference-in-Differences (DiD), Yield Improvement, Quality Assurance, Senegal Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^* p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, district hospitals, yield improvement, difference-in-differences, econometrics, health services, randomized evaluation*

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