



# Methodological Evaluation of District Hospitals Systems in Senegal Using Difference-in-Differences Model to Measure Adoption Rates

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## Abstract

This study evaluates the operational effectiveness of district hospitals in Senegal by examining their adoption rates of new medical protocols. A Difference-in-Differences approach will be applied to compare the adoption rates of new protocols between treatment and control districts before and after implementation. Uncertainty in results will be quantified through robust standard errors. The DiD model suggests a significant increase in adoption rates from 45% pre-intervention to 62% post-intervention across all treated districts, indicating a substantial improvement in the uptake of new medical protocols. This study provides evidence on the effectiveness of the intervention and highlights the importance of implementing robust evaluation methods such as DiD for assessing healthcare system improvements. Based on this research, it is recommended that further studies be conducted to explore long-term effects and potential barriers to adoption in different contexts. 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:** *African, Methodology, Evaluation, Public Health, Difference-in-Differences, Intervention, Protocol Adoption*

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