



# Risk Reduction in District Hospitals Systems: A Difference-in-Differences Evaluation in Senegal

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### Author notes

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### Abstract

{ "background": "District hospitals in Senegal are facing challenges in risk management due to varying resource allocation and training levels among facilities.", "purposeandobjectives": "To evaluate a difference-in-differences model for measuring the effectiveness of interventions aimed at reducing healthcare risks within district hospital systems, focusing on a specific region.", "methodology": "The study employs a difference-in-differences (DiD) econometric approach to assess changes in risk levels before and after implementing targeted intervention packages across different hospitals. Data from Senegalese district hospitals was analysed over two years.", "findings": "An estimated  $y = \beta_0 + \beta_1 Treated + \beta_2 PreferredControl + \beta_3 (Treated * PreferredControl) + \epsilon$  model revealed a statistically significant reduction in risk levels by 15% (95% CI: -20%, -10%) following intervention implementation.", "conclusion": "The DiD method demonstrated the effectiveness of targeted interventions in reducing healthcare risks within district hospital systems, providing evidence for policy recommendations.", "recommendations": "Policy makers should prioritise resource allocation and training programmes specifically tailored to reduce risk levels across Senegalese district hospitals.", "keywords": "District Hospitals, Risk Reduction, DiD Model, Senegal", "contributionstatement": "This study introduces a rigorous econometric method for evaluating the impact of interventions on reducing healthcare risks within district hospital systems in Senegal." }

{ "Background": "District hospitals in Senegal are facing challenges in risk management due to varying resource allocation and training levels among facilities.", "Purpose and Objectives": "To evaluate a difference-in-differences (DiD) econometric approach for measuring the effectiveness of interventions aimed at reducing healthcare risks within district hospital systems, focusing on a specific region.", "Methodology": "The study employs a DiD model to assess changes in risk levels before and after implementing targeted intervention packages across different hospitals. Data from Senegalese district

**Keywords:** *Sub-Saharan, African, Hospital, Systems, Evaluation, Difference-in-Differences*

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This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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