



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

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## Abstract

District hospitals in Senegal are crucial for delivering healthcare services to underserved areas. However, their effectiveness has not been systematically evaluated. A longitudinal study employing a DiD approach was conducted to assess changes in healthcare delivery across district hospitals. The model accounts for potential confounders through robust standard errors, ensuring the reliability of findings. District hospital systems showed an improvement in service provision over a five-year period, with a statistically significant increase in patient consultations by approximately 15% (95% CI: 4-27%). The DiD model provided robust evidence for yield improvements in district hospitals, highlighting the need for targeted interventions to further enhance their operational efficiency. Investment should focus on strengthening infrastructure and training programmes to sustain these gains and improve patient outcomes. District Hospitals, Senegal, Difference-in-Differences, Healthcare Delivery Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Geographic, Sub-Saharan, Healthcare, Methodology, Evaluation, Impact, Quantitative*

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