



# Methodological Evaluation of District Hospitals Systems in Senegal Using Quasi-Experimental Design to Measure Yield Improvement

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## Abstract

District hospitals in Senegal play a crucial role in healthcare delivery but face challenges such as resource allocation inefficiencies and patient yield discrepancies. A mixed-method approach combining quantitative data analysis with qualitative interviews to assess system performance in terms of patient referral patterns and resource utilization. District hospitals showed an average improvement of 15% in patient yield after implementing targeted interventions, particularly in reducing waiting times for non-urgent cases ( $p < 0.05$ ). The quasi-experimental design provided robust evidence to support the effectiveness of targeted interventions in enhancing hospital operational efficiency. Further research should explore scalability and sustainability of identified improvements across different districts and healthcare settings in Senegal. District hospitals, Quasi-Experimental Design, Patient Yield Improvement, Resource Allocation, Healthcare Systems 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, district health systems, quasi-experimental design, resource allocation, yield measurement, evaluation methods, healthcare delivery, impact assessment*

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