African Perioperative Nursing

# Methodological Evaluation of Urban Primary Care Networks in Senegal Using Difference-in-Differences for Clinical Outcome Assessment

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## Abstract

Urban primary care networks (UPCNs) have been implemented in Senegal to improve access to healthcare services and reduce health disparities among urban populations. A DiD regression analysis was conducted to compare pre-implementation and post-implementation periods across different urban areas within Senegal. The study included data from 50 primary care clinics randomly selected for the intervention. Patient satisfaction scores increased by an average of 15% in the intervention group compared to a slight decrease of 5% in the control group, with a 95% confidence interval (CI) around the DiD estimate indicating statistical significance. The difference-in-differences model demonstrated strong internal validity. The DiD approach provided robust evidence for the positive impact of urban primary care networks on patient satisfaction in Senegal's urban settings. Further longitudinal studies and cost-effectiveness analyses should be conducted to explore long-term impacts and resource utilization, respectively. Urban Primary Care Networks, Difference-in-Differences, Clinical Outcomes, Patient Satisfaction, Senegal Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

**Keywords:** *Urbanization, Primary care, Senegal, DiD, Health inequality, Methodology, Evaluation, Geographic analysis*

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