



# Multilevel Regression Analysis of Urban Primary Care Networks in Kenya: An Evaluation of Clinical Outcomes in African Context

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## Abstract

Urban primary care networks (UPCNs) in Kenya are critical for providing accessible healthcare services to underserved populations. However, their impact on clinical outcomes remains underexplored. A mixed-methods approach was employed, including surveys and interviews with healthcare providers and patients to gather data. Multilevel logistic regression models were used to analyse the impact of UPCNs on patient satisfaction and adherence to treatment protocols. Analysis revealed a significant positive association between the implementation of UPCNs and improved patient satisfaction (OR = 1.5, CI: [1.2, 1.8]) but no statistically significant difference in medication adherence rates among patients. Despite challenges related to resource allocation and staff training, urban primary care networks can contribute positively to improving patient outcomes in Kenya. Further research should focus on enhancing the sustainability of UPCNs through better resource management and professional development programmes for healthcare providers. Primary Care Networks, Clinical Outcomes, Multilevel Regression Analysis, Urban Healthcare Systems

**Keywords:** *Urban, Sub-Saharan, Networks, Multilevel, Regression, Epidemiology, Health Systems*

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