



Methodological Assessment of District Hospital Systems in Kenya: A Randomized Field Trial on Efficiency Gains

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Abstract

District hospitals in Kenya face significant challenges in delivering efficient healthcare services due to resource constraints and operational inefficiencies. A rigorous randomized field trial was conducted across selected districts in Kenya. The intervention included data collection on resource allocation and service delivery metrics, analysed using statistical models to estimate treatment effects and their uncertainties. The analysis revealed that a specific district hospital system implemented improvements resulted in an average efficiency gain of 15% in patient care processes, with significant reductions in wait times for diagnostic tests. This randomized field trial provided robust evidence on the effectiveness of targeted interventions to enhance operational efficiency in Kenyan district hospitals. Based on the findings, policymakers are recommended to prioritise resource allocation and implement standardised protocols to improve service delivery and reduce waiting times. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, District Hospitals, Efficiency Measurement, Randomized Controlled Trial, Methodology, Resource Allocation, Performance Metrics

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