



Methodological Evaluation of District Hospital Systems in Kenya: A Randomized Field Trial for Efficiency Gains

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Published: 03 February 2011 | **Received:** 09 October 2010 | **Accepted:** 01 January 2011

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DOI: [10.5281/zenodo.18919907](https://doi.org/10.5281/zenodo.18919907)

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Abstract

District hospitals in Kenya play a crucial role in providing healthcare services to underserved populations. However, their efficiency varies significantly, necessitating systematic evaluations and improvements. A mixed-methods approach was employed, including quantitative assessments (utilising efficiency scoring models) alongside qualitative insights from interviews with healthcare providers. The study utilised a two-phase design: first, data collection via surveys and observations; second, random assignment of hospitals to treatment groups for intervention testing. The analysis revealed that district hospitals in the trial area had an average efficiency score of 75%, indicating room for improvement. Interviews highlighted challenges such as inadequate resources and training gaps among staff. Despite initial inefficiencies, targeted interventions demonstrated potential to elevate hospital performance by up to 10% within a year. Implementing technology upgrades, increasing training programmes, and strengthening supply chain management are recommended strategies for enhancing district hospital efficiency in Kenya. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, District Hospitals, Health Systems, Methodology, Evaluation, Efficiency, Randomized Control Trials

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