



Field Trial Evaluation of District Hospitals Systems in Kenya: Methodological Assessment of System Reliability

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Abstract

The reliability of district hospitals in Kenya is a critical concern for healthcare delivery, with potential implications for patient outcomes and resource allocation. A randomized field trial was conducted across three districts. Data were collected using structured forms and analysed with a linear regression model to assess system reliability, accounting for uncertainty with robust standard errors. The average response time for patient referrals from primary care to district hospital services was reduced by 15% post-intervention, indicating improved system efficiency. This study provides insights into the methodological challenges and solutions for evaluating district hospital systems in Kenya. Further research should explore scalability of these findings across different healthcare settings and integrate feedback mechanisms to enhance patient care processes. Treatment effect was estimated with $\text{text}\{ \logit \}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, District Hospitals, Reliability Assessment, Randomized Trials, Data Quality, System Performance, Evaluation Metrics

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