



Methodological Evaluation of District Hospital Systems in Kenya Using Difference-in-Differences Approach: A Longitudinal Study

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Abstract

District hospital systems in Kenya have been subject to methodological evaluation for their effectiveness in delivering healthcare services. A longitudinal study will employ a Difference-in-Differences approach, comparing pre- and post-intervention periods across multiple districts in Kenya. Data from health records will be analysed to evaluate the system's impact on reducing mortality rates by at least 15% within two years. The analysis reveals an overall reduction in mortality rates of approximately 12%, with notable improvements in neonatal and maternal healthcare outcomes. This study provides robust evidence supporting the effectiveness of district hospital systems in enhancing healthcare service delivery and patient safety. Policy recommendations include expanding resources to underserved areas, training more healthcare professionals, and implementing community health education programmes. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^* p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, District Health Systems, Longitudinal Study, Difference-in-Differences, Randomized Controlled Trials, Public Health Metrics, Outcome Evaluation

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