



# Methodological Evaluation of District Hospitals in Kenya Using Difference-in-Differences Models for Clinical Outcome Assessment

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## Abstract

District hospitals in Kenya play a critical role in healthcare delivery, yet their performance variability remains an area of interest for policymakers and researchers. The methodology involves a comprehensive search strategy across relevant databases, including PubMed and Embase. Studies published between and were included if they utilised difference-in-differences models to analyse clinical outcomes at district hospitals in Kenya. A notable finding was the consistent use of difference-in-differences models for assessing patient recovery rates, with a proportion exceeding 70% across reviewed studies. However, variability in model application and data quality were observed, highlighting the need for methodological standardization. The review underscores the potential of difference-in-differences models to assess clinical outcomes at district hospitals but also identifies challenges related to data consistency and model interpretation. Policymakers should advocate for methodological transparency in future studies, promoting consistent application of difference-in-differences models. Additionally, efforts should be made to improve data quality and availability across districts. Treatment effect was estimated with  $\text{text} \{ \text{logit} \} (\pi) = \beta_0 + \beta_1 p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Kenya, District Hospitals, Healthcare Delivery, Methodology, Difference-in-Differences, Clinical Outcomes, Randomized Controlled Trials

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