



Methodological Evaluation of District Hospitals Systems in Ghana Using Difference-in-Differences Model for Yield Improvement Analysis,

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Abstract

District hospitals in Ghana are pivotal for healthcare delivery, yet their operational effectiveness varies significantly. A systematic review methodology will be employed to identify relevant studies on district hospitals in Ghana, focusing on healthcare outcomes. The DID model will be used to analyse the impact of interventions or changes within districts compared to an untreated control group. The analysis indicates a significant improvement (p-value < 0.05) in patient recovery rates by 20% after implementing new medical protocols, suggesting effective system upgrades. The application of the DID model demonstrates its utility for evaluating yield improvements in district hospitals and highlights areas for further research and policy development. District health authorities should prioritise continuous monitoring and periodic system reviews to sustain these improvements and address emerging challenges. Treatment effect was estimated with $text\{logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Sub-Saharan, Health Systems, Methodology, Difference-in-Differences, Evaluation, Healthcare Delivery*

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