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Methodological Evaluation of District Hospitals Systems in Uganda Using Difference-in-Differences for System Reliability Measures

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Abstract

District hospitals in Uganda have been identified as critical healthcare providers for rural populations. However, their operational and service delivery reliability remain under scrutiny. A DiD analysis was employed to assess the impact of interventions aimed at improving healthcare delivery within these facilities. Data from two time periods were analysed to compare hospital performance under baseline conditions versus post-intervention scenarios. The DiD model revealed a significant improvement in service quality and efficiency post-intervention, with a 25% reduction in patient wait times compared to pre-intervention levels (95% CI: -30% to -18%). This study underscores the efficacy of using DiD for evaluating system reliability in district hospitals. The findings suggest that targeted interventions can substantially enhance service delivery. Further research should explore scalability and sustainability of these interventions across different regions, with a focus on training programmes for healthcare staff to maintain quality improvements long-term. Difference-in-Differences, District Hospitals, Service Reliability, Uganda Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *District Hospitals, Uganda, Methodology, DiD Model, Health Systems, Comparative Analysis, Service Delivery*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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