African Family Medicine

Methodological Evaluation of Ghanaian District Hospital Systems: A Randomized Field Trial on Cost-Effectiveness,

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Abstract

This study evaluates the efficiency of district hospital systems in Ghana through a randomized field trial aimed at cost-effectiveness. A stratified random sampling method was employed to select districts for intervention. Hospitals were randomly assigned to either receive enhanced healthcare services or serve as controls. Key performance indicators (KPIs) such as cost per case treated and patient satisfaction scores were measured at baseline, mid-term, and end of the study period. Data analysis revealed a significant reduction in operational costs by approximately 15% for hospitals that received enhanced services compared to control groups. There was also an observed improvement in patient satisfaction levels by 20%, indicating better service delivery and resource utilization. The results suggest that the implementation of targeted healthcare interventions can substantially improve cost-effectiveness without compromising patient care quality. District health authorities should consider replicating this model to optimise hospital resources and enhance overall healthcare outcomes in Ghanaian settings. district hospitals, cost-effectiveness, randomized field trial, resource allocation, patient satisfaction Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, district health systems, randomized trials, cost-effectiveness analysis, stratified sampling, outcome evaluation, statistical methods*

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