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Methodological Evaluation of Emergency Care Units Systems in Kenya Using Panel Data for Clinical Outcome Assessment

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Abstract

Emergency care units (ECUs) in Kenya are critical for providing timely medical attention to patients with acute conditions. However, their effectiveness varies significantly across different regions and over time. Panel data from multiple ECUs were collected over a period of five years, with measurements taken at baseline and follow-up. A mixed-effects regression model was used to analyse changes in patient outcomes (e.g., survival rates) across different regions. The analysis revealed significant variability in clinical outcomes among ECUs, with some units showing improvement while others did not see improvements over the study period. This research provides evidence that panel data can be effectively used to evaluate the performance of ECUs and highlight areas requiring intervention. Based on the findings, targeted interventions should be implemented in ECUs with poor outcomes to improve patient care. Emergency Care Units, Clinical Outcomes, Panel Data Analysis, Mixed-Effects Regression Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\ p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, panel data, econometric methods, clinical outcomes, healthcare system evaluation, resource allocation, quality assessment*

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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