Methodological Evaluation of Emergency Care Units in Nigeria Using Difference-in-Differences for Clinical Outcome Assessment

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Abstract

Emergency care units (ECUs) in Nigeria are crucial for managing patients with acute medical conditions. However, their effectiveness varies significantly across different regions and facilities. The study employed a DiD approach to compare pre- and post-intervention changes in patient outcomes for those treated at ECUs versus other care settings. Data from multiple hospitals were analysed, with robust standard errors applied to ensure statistical validity. There was a statistically significant improvement ($p < 0.05$) in the mortality rate among patients treated within ECU facilities compared to non-ECU settings post-intervention. The DiD model effectively highlighted differences in patient outcomes, providing valuable insights for improving emergency care systems in Nigeria. Further research should focus on implementing standardised protocols and training programmes to enhance the quality of care provided within ECUs. Emergency Care Units, Clinical Outcomes, Difference-in-Differences (DiD), Nigeria Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\cdot\cdot}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Nigerian, Emergency Care Units, Difference-in-Differences, Quantitative Methods, Public Health, Clinical Outcomes, Geographic Variation*

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