



# Methodological Assessment of Emergency Care Unit Systems in Kenya: A Quasi-Experimental Meta-Analysis in Africa,

Oscar Kinyanjui<sup>1</sup>, Chirua Mutua<sup>1</sup>, Nyauwa Ochieng<sup>2</sup>, Kamau Gitonga<sup>1</sup>

<sup>1</sup> African Population and Health Research Center (APHRC)

<sup>2</sup> Department of Clinical Research, Maseno University

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**Correspondence:** [okinyanjui@gmail.com](mailto:okinyanjui@gmail.com)

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## Author notes

Oscar Kinyanjui is affiliated with African Population and Health Research Center (APHRC) and focuses on Medicine research in Africa.

Chirua Mutua is affiliated with African Population and Health Research Center (APHRC) and focuses on Medicine research in Africa.

Nyauwa Ochieng is affiliated with Department of Clinical Research, Maseno University and focuses on Medicine research in Africa.

Kamau Gitonga is affiliated with African Population and Health Research Center (APHRC) and focuses on Medicine research in Africa.

## Abstract

Emergency care units (ECUs) in Kenya are pivotal for providing timely medical attention to patients with acute health issues. Despite their importance, there is a need for rigorous methodological assessment and evaluation of these systems. The study employed a mixed-methods approach, combining quantitative data from existing case studies with qualitative insights. A multivariate regression model was used to analyse the impact of various factors on patient outcomes within ECUs in Kenya. A significant proportion (35%) of patients reported delays exceeding two hours before reaching their designated ECU, highlighting a critical area for improvement in emergency response times. The quasi-experimental design allowed for the identification of key factors influencing patient outcomes within ECUs, providing actionable insights for policymakers and healthcare administrators. Enhanced training programmes for first responders and improved communication protocols are recommended to mitigate delays and improve service delivery in emergency care units. Treatment effect was estimated with  $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta^{-1} p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African geography, emergency care, meta-analysis, systematic review, clinical effectiveness, quasi-experimental design, outcome measures

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