



Artificial Intelligence Enhancements in Electronic Medical Records at Kenyan Tertiary Care Hospitals: A Case Study

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Abstract

Electronic medical records (EMRs) have become essential in modern healthcare systems to improve patient outcomes and clinical efficiency. In Kenya, tertiary care hospitals are implementing advanced technologies to enhance their EMR systems, particularly leveraging artificial intelligence (AI). A mixed-methods approach was employed, including qualitative interviews with healthcare professionals and quantitative analysis of EMR system performance metrics across selected hospitals. Data were collected over a period of one year. AI-driven algorithms demonstrated an improvement in patient record accuracy by up to 20%, leading to a reduction in medication errors from 15% to 3%. The integration of AI into EMRs at Kenyan tertiary care hospitals has shown promise in enhancing clinical workflows and patient safety. Further implementation should include comprehensive training programmes for healthcare staff, continuous monitoring of system performance, and regular updates based on user feedback. Treatment effect was estimated with $\text{text}\{\logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, Electronic Medical Records (EMRs), Artificial Intelligence (AI), Machine Learning, Data Analytics, Precision Medicine, Telehealth

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