

Editorial

Prospect and Challenges of Artificial Intelligence Application in African Emergency Medicine

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Artificial intelligence (AI) is a computer system that can execute sophisticated tasks that simulate human cognition, such as thinking, decision-making, or problem-solving (1). In Africa, general healthcare and emergency medicine suffer resource and infrastructure-related challenges, such as qualified personnel (2), which are brought on by increased incidence of infectious diseases, trauma, and non-communicable illnesses (3). This discrepancy underlines the pressing need for innovative and practical approaches to improve the delivery of emergency care (1). Artificial Intelligence has emerged as a cutting-edge technology that can fill some gaps in African emergency medicine (1).

Implementing AI in African emergency medicine may encounter multiple challenges despite its potential. One of the significant issues is a palpable need for more trained healthcare workforce professionals in both emergency medicine and AI technologies. Financial limitations are another critical barrier that prevents many African countries from investing in innovative healthcare technologies. In low-resource contexts, funding AI initiatives in emergency medicine can take much work to secure. Furthermore, as AI systems highly rely on quality data, health data in many African nations tends to be insufficient or poorly organized, which is a significant obstacle to the efficient use of AI in emergency medicine. Lastly, the application of AI in healthcare involves questions about patient privacy, permission, and accountability, as are ethical and legal considerations. Also, access to stable internet and electrical infrastructure is necessary, making it difficult to realize the full potential of AI in improving emergency care across the continent (4, 5).

Artificial intelligence can significantly enhance emergency department operations, early condition and outcome identification, triage and disposition procedures, and therapeutic intervention. AI may also be utilized in intensive care units and emergency medical dispatch since it can analyze patterns and outcomes through predictive analysis. Artificial Intelligence can potentially enhance resource allocation and logistical management by predicting surges during epidemics or mass casualty events. Artificial Intelligence can improve telemedicine services by providing remote medical practitioners with quicker decision aid. Artificial Intelligence-driven training offers immersive experiences that emergency doctors can use. Finally, AI platforms can advance best practices in emergency care by fostering collaboration and knowledge sharing across African healthcare professionals (5).

In summary, the application of AI in emergency medicine in Africa has the potential to significantly improve the health of millions of people by addressing the majority of struggles facing the healthcare system. Even though there are many challenges to be solved, the integration of AI and its applicability depends on the fulfillment of infrastructure, data quality, training, and legal and ethical standards. High-quality empirical research with an African focus is suggested to advance the topic and improve its applicability to emergency care in Africa, as most of the literature reviewed is theoretical.

Authors Contribution

I contributed to the work's conception or design, and analysis, and critical revision for intellectual content. I approved the version to be published and agreed to be accountable for all aspects of the work.

Conflict of interest

The author declares that there is no conflict of interest about this work.

Funding

No funding has been granted for this editorial manuscript.

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