On Utilizing Artificial Intelligence to Impact Healthcare in Low-Income Countries

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ABSTRACT

Artificial intelligence (AI) is impacting the society with incredible innovations across the globe, as evidenced by recent media coverage. Integrating AI into healthcare holds promise for improving outcomes in low-income nations. Addressing the reliability, validity, and fairness of algorithms is essential to reduce bias. Global organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO), and the European Union promote ethical AI use, guiding its application in healthcare. Philanthropic investment in research is crucial to help develop guidelines that consider the unique needs of marginalized populations. Collaboration between governments, international bodies, researchers, and industry leaders is vital to ensure responsible AI adoption. By prioritizing the welfare of all populations, we can harness AI's potential to enhance healthcare in low-income countries while mitigating risks.

Keywords: Artificial Intelligence, Healthcare, Low-Income Nations

TO THE EDITORS OF THE INTERNATIONAL JOURNAL OF TRANSLATIONAL MEDICAL RESEARCH AND PUBLIC HEALTH

Dear Editor,

Low-income countries have numerous healthcare challenges that adversely affect populations. Some of the challenges are famine, high mortality rates, disease, and lack of access to healthcare. Utilizing Artificial intelligence (AI) in healthcare has the potential to significantly impact and improve health outcomes in low-income countries. However, it is crucial to approach AI implementation with a focus on ensuring reliability, validity, and fairness in the algorithms used. As mentioned, matching algorithms to the unique demographics of each population can help reduce bias and increase the effectiveness of AI-driven solutions.[1]

The global attention to ethics in AI, as demonstrated by the the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO), the European Union, and the White House, is a positive development.[2–4] These organizations and regulatory bodies are taking steps to establish guidelines and principles for the ethical use of AI, including its application in healthcare. Efforts have recently included considerations for the specific needs and challenges faced by low-income countries, including lack of technology investments and integration of AI into the workforce.[1] Given the potential benefits and associated with AI in healthcare, the European Commission's recent announcement of $4

million in funding to support AI development in low-income countries is encouraging.[5]

However, it is essential for philanthropic organizations to actively support and invest in research focused on AI regulations. Moreover, it is also imperative to provide protections for low-income countries, specifically in Africa and Latin America. Such investments can help develop tailored guidelines that consider the unique circumstances and vulnerabilities of marginalized populations in these countries.[1]

Government leaders, health researchers, and the academic community should participate in shaping AI regulations and policies to ensure that AI adoption in healthcare is done responsibly and with the welfare of vulnerable populations in mind. The focus should be on maximizing the benefits of AI while mitigating potential harms and biases. Notably, there is a recent published research focusing on the uncertainties and possibilities with the accountable adoption of AI in Africa.[1]

Moreover, the global research community can perform a crucial role in advocating for the voice of marginalized populations in the development of AI regulations.[1]

To ensure the successful and ethical integration of AI in healthcare, collaboration between governments, international organizations, philanthropic foundations, researchers, and industry leaders is vital. Therefore, by working in unison and prioritizing the welfare of all populations, we can harness the potential of AI to improve healthcare in low-income countries while minimizing potential risks.[1]

CONCLUSION

By acknowledging historical instances of harm caused by unregulated scientific activities, researchers can emphasize the importance of responsible AI implementation to avoid repeating past mistakes.

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COMPLIANCE WITH ETHICAL STANDARDS

Conflicts of Interest

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Declaration of Patient Consent

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Use of Artificial Intelligence (AI)-Assisted Technology for Manuscript Preparation

The author confirms that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

Disclaimer

None.

REFERENCES

1. Eke DO, Wakunuma K, Akintoye S, editors. Responsible AI in Africa – challenges and opportunities. Germany: Springer Nature; 2023. [Accessed 2023 Jul 22]. Available from: https://link.springer.com/book/10.1007/978-3-031-08215-3.

2. UNESCO. Artificial intelligence: Partnership between UNESCO and the EU to speed-up the implementation of ethical rules. France: UNESCO; 2023. [Accessed 2023 Jul 22]. Available from: https://www.unesco.org/en/articles/artificial-intelligence-partnership-between-unesco-and-eu- speedimplementation-ethical-rules.

3. World Health Organization. Who issues first global report on artificial intelligence (AI) in health and six guiding principles for its design and use. Geneva: World Health Organization; 2021. [Accessed 2023 Jul 22]. Available from: https://www.who.int/news/item/28-06-2021-who-issues-firstglobal-report-on-ai-in-health-and-six-guiding-principles-for-itsdesign-and-use.

4. The White House. Fact sheet: biden-harris administration secures voluntary commitments from leading artificial intelligence companies to manage the risks posed by AI. Washington, DC: The White House; 2023. [Accessed 2023 Jul 22]. Available from: https://www.whitehouse.gov/briefing-room/statementsreleases/2023/07/21/fact-sheet-biden-harris-administration-securesvoluntary-commitments-from-leading-artificial-intelligence-companiesto-manage-the-risks-posed-by-ai.

5. UNESCO to support more than 50 countries in designing an ethical AI policy this year. UNESCO; 2023. [Accessed 2023 Jul 22]. Available from: https://www.unesco.org/en/articles/unesco-support-more-50-countries-designingethical-ai-policy-year.