Journal of the Epidemiology Foundation of India
Vol 1 (1), Dec 2023, pp. 36-37

COMMENTARY

Artificial Intelligence in Medicine: Navigating Ethical Challenges

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CITATION
Sharma N, Gupta D. Artificial Intelligence in Medicine: Navigating Ethical Challenges. Journal of the Epidemiology Foundation of India. 2023;1(1):36-37. https://doi.org/10.56450/JEFI.2023.v1i01.010
ARTICLE CYCLE
Received: 11/12/2023; Accepted: 22/12/2023; Published: 31/12/2023

Artificial Intelligence (AI) has revolutionized the field of medicine, offering unprecedented opportunities to improve patient care, diagnosis, and treatment. AI presents a myriad of ethical issues, especially when it comes to making medical decisions, as technology is incorporated into healthcare more and more. This article examines the various ethical issues surrounding AI in medicine and clarifies how these technologies and medical ethics interact.

Patient confidentiality and data security are major concerns because artificial intelligence (AI) mainly depends on huge databases for training and analysis. Maintaining the confidence among individuals and their healthcare providers requires ensuring that private medical information is secure and not easily compromised. (1)

Bias and Fairness: Biases in the data that AI systems are educated on may unintentionally be reinforced. Certain demographic groups may be disproportionately affected by this prejudice, which may result in discrepancies in healthcare outcomes. Ensuring fairness and addressing prejudice in AI algorithms is essential to delivering equitable healthcare services. (2)

Transparency and Explainability: Patients and healthcare providers alike face difficulties due to the ambiguity of AI decision-making processes. Building confidence and encouraging cooperation among humans and artificial intelligence in medical choice-making requires transparency and the capacity to explain how AI comes to conclusions. (3)

Informed Consent and Autonomy: The appropriateness of informed consent is called into question by the application of AI to healthcare decision-making processes. Patients should have the freedom to decide whether they are at ease regarding medical diagnosis and therapy plans that include artificial intelligence (AI), as well as knowledge of the significance that AI has in their healthcare. (4)

Also, Informed consent concerns become critical as AI systems continue to learn from

patient data. Patients might not be completely aware of the consequences of having their data utilized for development and study. Building trust between patients, AI developers, and healthcare practitioners requires being transparent and getting informed consent. Developing consent procedures that successfully explain the possible uses of patient information without overloading people with technical specifics presents an ethical problem.

Besides these, a moral conundrum in AI-assisted medicine is the creation of algorithms for individualized treatment. These algorithms try to customize treatment regimens for specific patients by drawing on large datasets. However, concerns about privacy, patient autonomy, and the possibility of biased algorithms surface. Balancing the advantages of customized medicine with the requirement to guarantee justice and openness in algorithmic decision-making presents an ethical dilemma. In several medical domains, AI systems have demonstrated exceptional diagnostic precision, occasionally surpassing human specialists. Although better patient outcomes are promised, this also raises ethical questions regarding the importance of the doctor-patient relationship and the possible devaluation of human competence. The need to keep the human touch in healthcare becomes apparent when attempting to strike a balance between AI support and human intuition.

CONCLUSION

Patient rights, openness, and the upholding of human values must all be carefully considered when traversing the ethical terrain of AI in medicine. Even while AI has a great deal of promise to enhance healthcare outcomes, its integration should be constrained by ethical standards. Establishing a harmonious equilibrium between inventiveness and moral principles is crucial for cultivating confidence in both medical practitioners and patients.

WAY FORWARD

Ethics Education for Medical Practitioners: To guarantee that medical practitioners are prepared to handle the moral dilemmas presented by AI technology, incorporate ethics education for AI into medical education.

Sturdy Regulatory Frameworks: Provide thorough regulatory frameworks that handle the moral ramifications of artificial intelligence in medicine. These frameworks ought to guarantee responsibility, openness, and patient safety.

Public Awareness Initiatives: Initiate campaigns to enlighten patients about the significance of informed permission, the role of AI in healthcare, and the possible uses of their data.

Interdisciplinary Collaboration: Embrace cooperation among medical experts, ethicists, technologists, and legislators to develop a comprehensive strategy for artificial intelligence in medicine that gives equal weight to ethical and innovative aspects.

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