

Artificial intelligence in medicine , will we be ready when it comes ?

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Artificial Intelligence (AI) is a encompasses a broad branch of computer science involved with the development of smart machines that are capable of performing tasks that normally require human intelligence.¹ Compared to other sectors like banking and finance, AI in medicine is still in its early stages. One of the reasons being so is that data in other sectors are mostly quantitative and easier to develop into algorithms whereas medical data are often vague and qualitative in nature.² The principle AI system relies on the use of a large data base which is used to develop machine generated algorithm which then solves a well-defined medical problem.¹

AI has already been used in various aspect of medical science such as recognising lesions in dermatology, radiology, pathology as well as managing medical data, health monitoring, surgical treatment etc. We should however also be cautious and be careful about the short comings of AI systems which also involves loss of human touch, empathy, emotional intelligence.³ Also most the AI systems developed have not been subjected to randomised control trials thus lacking evidence based medical information.²

For successful implementation of AI in medicine, health care providers and data scientists should work together for development of AI system. One of the first step in the development of AI system is data collection. Thus comes the importance of health care providers in collection of a large quantities of high quality unbiased representative data.¹

The data generated from other countries, regions or ethnicity may not be representative of our population and AI system prepared based on another population will not be accurate as we would like it to be. Our country needs to get a large amount of high quality data through large scale community based and institution based studies so that the AI systems developed will be reflective of our own population.

We need to prepare for the future AI technology in medicine or suffer the consequences of being left behind.

REFERENCES

1. Basu K, Sinha R, Ong A, Basu T. Artificial Intelligence: How is It Changing Medical Sciences and Its Future? *Indian J Dermatol*. 2020 Sep-Oct;65(5):365-370. doi: [10.4103/ijd.IJD_421_20](https://doi.org/10.4103/ijd.IJD_421_20). PMID: 33165420; PMCID: PMC7640807.
2. Sahni NR, Carrus B. Artificial Intelligence in U.S. Health Care Delivery. *N Engl J Med*. 2023 Jul 27;389(4):348-358. doi: [10.1056/NEJMra2204673](https://doi.org/10.1056/NEJMra2204673). PMID: 37494486.
3. Amisha, Malik P, Pathania M, Rathaur VK. Overview of artificial intelligence in medicine. *J Family Med Prim Care*. 2019 Jul;8(7):2328-2331. doi: [10.4103/jfmpc.jfmpc_440_19](https://doi.org/10.4103/jfmpc.jfmpc_440_19). PMID: 31463251; PMCID: PMC6691444.

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