

DELIVERING ON THE PROMISE OF AI TO IMPROVE HEALTH OUTCOMES

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ABSTRACT

Artificial intelligence (AI) has revolutionized various global industries and holds the promise of fundamentally reshaping healthcare. Consider the prospect of analyzing diverse datasets encompassing patient clinic visits, medication regimens, laboratory tests, and medical procedures, alongside external data sources like social media, credit card transactions, census records, and internet search histories, all containing crucial health-related insights. AI has the capability to support physicians, nurses, and other healthcare professionals in their everyday tasks. Its integration into healthcare can improve preventive measures and overall quality of life, facilitate more precise diagnoses and treatment strategies, ultimately resulting in improved patient outcomes. From advanced deep learning algorithms capable of analyzing computed tomography (CT) scans at a pace surpassing human ability to natural language processing (NLP) systems adept at parsing unstructured electronic health records (EHRs), the potential applications of AI in healthcare appear boundless. Additionally, AI has the potential to forecast and monitor the dissemination of infectious diseases by analyzing data from various sources including governmental and healthcare databases.

However, like any technology experiencing the zenith of its hype cycle, artificial intelligence encounters skepticism from critics alongside the support from the experts. While AI holds promise in unlocking novel insights and streamlining interactions between healthcare providers and patients with data, it also poses significant risks such as privacy breaches, ethical dilemmas, and potential medical errors. Achieving a harmonious balance between the risks and benefits of AI in healthcare demands a concerted effort involving technology developers, regulatory bodies, end-users, and the broader consumer base.

This minisymposium covers all the topics in which the impact of AI could have on enhancing patient care and diagnostic capabilities. The topics of minisymposium include, but are not limited to:

- Identification of problems healthcare providers face that machine learning can solve;
- AI-powered decision support systems in Healthcare;
- AI implementation of systems to improve patient care safety, quality, and research;
- Relation of AI to the science, practice, and business of medicine;
- Ethical aspects of AI applied to Healthcare.