Editorial

ARTIFICIAL INTELLIGENCE IN HEALTHCARE: IS IT BENEFICIAL?

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We are facing a dangerous shortage in healthcare providers. The shortage in healthcare professionals leads to alternate innovative solutions. With increase consumer demands, increase life expectancy, increase patient caseloads, and more complex disease processes artificial intelligence (AI) is thought to bridge the gap for this expected shortage. However, there are concerns AI doctors will replace human physicians. As we continue testing, implementing, and integrating AI into healthcare, it is believed AI can assist with streamlining time consuming routine tasks such as electronic healthcare record (EHR) documentation and administrative reporting allowing the healthcare provider time to focus on more complex patients.[1]

AI collects data from multiple healthcare databases in the EHR and combines with medical algorithms, which provides useful clinical guidance for healthcare providers.[2] There are two categories of data that comprise AI, national language processing (NLP) and machine learning (ML). NLP is information captured from provider's narrative documentation such as clinical laboratory reports, operative reports, and discharge summaries.[1,2] ML accounts information from the database from patient traits such as age, gender, disease history, and disease specific diagnostics (x-ray, computed tomography, and magnetic resonance imaging).[1,2] The enhancement in patient outcome with utilization of AI is believed to extend life expectancy worldwide, as all countries will reap the healthcare benefit and reduce disparities.[3]

Healthcare providers state the EHR consumes a large portion of patient care expressing less face-to-face interaction with the patient and their families. Medical software companies have adopted and implemented aspects of AI into their software. AI is currently implemented to reduce manual labor utilizing computers to create a better, faster, and safer approach.[4] Healthcare providers and patients express concerns with accuracy, protection of medical information, and consumer privacy. Despite the concerns, hospital administrators are preparing for the new wave in healthcare as AI is in its infancy.[3]

World health problem databases are not as sophisticated thus limiting AI. Another limitation is lack of good quality digital data. According to Jiang et al,[2] less than 20% of the world's medical data is available in AI ML algorithm. Ethic standardization and philosophical involvement is much needed to tease out the ethical dilemmas in sharing private health information in order to precisely predict treatment therapies and target optimal outcomes. The goal with AI is to teach and expand this knowledge worldwide, which can lead to improved treatments and better healthcare outcomes.[3] It seems there is a fear of the unknown, as AI is not fully developed in healthcare. There are definitely some pros and cons, and I am hopeful we will figure out an algorithm of success for both healthcare providers and consumers.

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REFERENCES

1. Bresnick J. Arguing the pros and cons of artificial intelligence in healthcare. Health IT Analytics; 2017. https://healthitanalytics.com/news/arguing-the-pros-and-cons-of-artificial-intelligence-in-healthcare. Accessed November 2, 2018.
2. Jiang F, Jiang Y, Zhi H, et al. Artificial intelligence in healthcare: Past, present, and future. Stroke Vasc Neurol 2017;2:230-43.
3. Chen AF, Zoga AC, Vaccaro AR. Point/counterpoint: Artificial intelligence in healthcare. Healthc Transform 2017;2:84-92.
4. Gregory J. 5 top issues for the healthcare industry in 2018. Health Executive; 2017. https://www.healthexec.com/topics/care-delivery/5-top-issues-healthcare-industry-2018. Accessed November 2, 2018.