

Artificial Intelligence and ChatGPT

Physician friend or foe?

BY NEIL BAUM, MD AND DAVID F. MOBLEY, MD

Reprinted with permission from The Healthcare Administration Leadership and Management Journal, Volume 2 Issue 4, pages 162-163, American Association for Physician Leadership®, 800-562-8088, www.physicianleaders.org

The past 500 years have seen several events that have changed the world. The invention of the printing press by Johannes Guttenberg in the 16th century might be considered the beginning of education for large masses of the population. The steam engine appeared in 1712 and made transporting and moving goods and services more accessible and economical. In 1879, Thomas Edison invented the light bulb, which began to illuminate the world and dramatically improved the quality of all lives. This was followed by Henry Ford and the invention of the assembly line, making transportation within reach of the middle class. Then came the Internet in the 1960s, achieving widespread use in the early 1980s. This revolutionized nearly every area of business, medicine, industry, and our personal lives.

In December 2022, OpenAI (OpenAI.com) released ChatGPT. This use of artificial intelligence (AI) will change the delivery of healthcare throughout the world. ChatGPT has applications that can be used for managing both clinical and non-clinical aspects of medical practices. This article presents a brief history of ChatGPT; discusses its potential medical applications, including obtaining a

prior authorization; and considers the ethical and legal concerns of using AI in the healthcare profession.

A Brief History of CHATGPT

ChatGPT was developed by OpenAI and was launched as a prototype on November 30, 2022. By mid-December 2022, the program had over one million users. OpenAI allows the public to use and experiment with the technology at no charge. Like Grammarly.com, free versions allow users to try the technology without charge. The company plans to monetize the

as triage algorithms to choose which patients can access kidney dialysis or intensive care beds, which is critical in settings where resources are limited. The technology could be used to enroll participants in clinical trials. The potential in the medical field is almost endless.

It is too early to know all the ethical implications of adopting ChatGPT in healthcare and research. The more this technology is used, the more precisely the implications will be understood. However, questions regarding potential

It is too early to know all the ethical implications of adopting ChatGPT in healthcare and research.

program with upgrades, ChatGPT Plus, which currently (as of the writing of this article in May of 2024) costs \$20 per month. OpenAI's market valuation in 2023 was \$29 billion.¹

Applications and Potential Uses of CHATGPT in Medical Practices

An easy way to start the ChatGPT experience is by using it to assist with mundane tasks such as writing back-to-work certificates, medical exemptions from jury duty, and letters to insurance companies to pay for patients' expensive treatments or procedures. Initially, ChatGPT functioned as a high-level personal assistant to speed up bureaucratic tasks and increase time for patient interaction.

ChatGPT also could assist in more serious medical activities, such

risks and oversight of ChatGPT in medicine will inevitably be part of future conversations.

ChatGPT could be used to automate administrative tasks. Obtaining prior authorization is time-consuming, accounting for many frustrating hours of uncompensated physician time each week. Obtaining prior authorization is considered a veritable nightmare for most medical practices. ChatGPT can be used to streamline the process. What usually takes 30 to 60 minutes per prior authorization can be reduced to seconds. Here is an example that could be used in a medical practice:

A urologist wants to write a letter to the patient's insurance company requesting prior authorization for a multiparametric MRI (mpMRI) to aid

Continued on page 71

ChatGPT (from page 70)

in the diagnosis of prostate cancer. They open ChatGPT in openAI.com.

The physician or an appropriately trained assistant provides the patient's information but does not include the patient's name or any other identifying information, because they cannot be sure the site was encrypted or if they are at risk for a HIPAA violation. They give ChatGPT the following instruction:

Write a letter to United Health regarding patient John Doe (membership ID XXXXXXXX, Birthdate XX\XX\XXXX), who has an elevated PSA, 8.3 ng/mL, a free/total PSA ratio of 19% (normal is greater than 25%). I am requesting a multiparametric MRI and a prostate biopsy to complete his evaluation for prostate cancer. Please provide recent references regarding the appropriateness of this procedure.

Signed Dr. X, MD

This letter was generated in less than 45 seconds, with another 60 seconds required for the nurse or the medical assistant to add the patient's name and identification number.

This was the letter created by ChatGPT:

Dear United Health,

I am writing to request approval for a multiparametric MRI and prostate biopsy for patient John Doe, who holds a membership ID of XXXXXXXX and was born on XX/XX/XXXX.

Upon examination, Mr. Doe's PSA levels were elevated at 8.3 ng/mL, with a free/total PSA ratio of 19% (normal is greater than 25%). Given these findings, I strongly recommend a multiparametric MRI and prostate biopsy to assess the condition of Mr. Doe's prostate gland and determine if further treatment is necessary.

Could you please approve this study for Mr. Doe's benefit and make sure he receives the care he needs?

I am including recent references that show how important it is to manage men with an elevated PSA level. These are references from peer-reviewed literature on the value of mpMRI in managing patients with elevated PSA levels. It is essential to

remain up-to-date on the latest advancements and recommendations.

Thank you for your attention to this matter. Please feel free to reach out to me with any questions or additional information.

Sincerely, Dr. X, MD

This prior authorization was faxed to the insurance company, and approval was obtained in 24 hours. The permission could have taken days or weeks if a nurse or physician assistant made this request using the phone. This is just one example of ChatGPT's effectiveness in the medical office setting.

New technology, especially technology in its infancy, with which we are only now developing familiarity, leaves openings and questions regarding moral, ethical, and perhaps legal issues yet to be uncovered.

The world of possibilities of ChatGPT is almost endless.

Other AI platforms are being developed, and as physicians, we will constantly be discovering new ways AI can assist and improve patient care. Algorithms for differential diagnosis in rare or obscure conditions will be developed. A physician confronted with a confounding clinical situation may be able to tell AI the symptoms and objective findings and rapidly receive help in preparing a differential diagnosis. Treatment algorithms likewise will be developed and rapidly available. The uses in clinical practice will be limited only by our imagination. Improvements in AI will be constantly occurring, improving the lives of clinicians and patients alike.

Potential Ethical, Moral, Privacy, and Legal Considerations with AI and CHATGPT

In the world of education, professors and teachers are being inundated with student work that is, in fact, ChatGPT-generated work. Algorithms are being developed to uncover work submitted by students that is not their original work. There is a

challenge among students who will be using ChatGPT to help them with research, to use the information generated appropriately as an aid rather than as the writer of papers.²

In the medical field, we must ensure we don't fall prey to "the easy way out." New technology, especially technology in its infancy with which we are only now developing familiarity, leaves openings and questions regarding moral, ethical, and perhaps legal issues yet to be uncovered. We are unaware of any lawsuits against medical practices regarding documents created with ChatGPT. Still, caution with these

AI-developed documents is encouraged. For example, if a physician asked ChatGPT, "What is the best first-line treatment for.....?" Relying on that recommendation without confirming its accuracy might result in improper patient care, with all the attendant liabilities. High-quality, accurate data is the cornerstone of how we practice medicine and provide evaluation and treatment options to our patients. Physicians now can benefit from ChatGPT to help obtain clinical information.

It can be an aid in making medical decisions. Still, data from peer-reviewed published papers, along with data presented at medical conferences, will likely remain our best source of reliable medical decision-making material for the present time.

Incorporating this new technology in medical research, especially in reporting results of medical research, will be a huge boon. Still, it also could lead to incorrectly reporting data. This opens the possibility of misleading conclusions because of potentially unreliable results, with unwelcome consequences to authors

Continued on page 72

ChatGPT (from page 71)

and patients. Consent and confidentiality also are considered in using AI in medical research.

Keeping in mind that the “A” in AI stands for “artificial,” it is essential for

Bottom Line

Artificial intelligence and ChatGPT have exploded into nearly every business and sector, including the healthcare profession. However, privacy and ethical concerns must be addressed to ensure data secu-

29-billion-2023-1. Accessed January 18, 2023.

² McDade A. Studies show ChatGPT cheating is on the rise among students— young and old—as teachers remain divided on bans. Business Insider. February 8, 2023. www.businessinsider.com/teachers-caught-students-cheating-chatgpt-survey-shows-2023-2.

It is essential for clinicians and staff generating ChatGPT that documents must be reviewed for accuracy.

clinicians and staff generating ChatGPT that documents must be reviewed for accuracy. The same holds true for using AI for clinical decision-making. Ultimately, physicians are responsible for the use of information from their medical practice and for their patient’s care. With this new technology, we will enjoy many time-saving and educational opportunities. Still, it remains up to us to ensure the validity of what we prepare and present.

riety and responsible AI use. Overall, ChatGPT promises to improve healthcare efficiency, accessibility, and medical breakthroughs. The ChatGPT train is leaving the station—all aboard! PM

References

¹ Varanasi L. ChatGPT creator OpenAI is in talks to sell shares in a tender offer that would double the startup’s valuation to \$29 billion. Insider. www.businessinsider.com/chatgpt-creator-openai-talks-for-tender-offer-at-



Dr. Baum is Professor of Clinical Urology, Tulane Medical School, New Orleans, Louisiana, and author of *Medicine is a Practice: The Rules for Healthcare Marketing* (American Association for Physician Leadership, 2024).



Dr. Mobley is Associate Professor of Clinical Urology, Weill-Cornell Medicine, New York, New York.