Navigating AI in Your Practice

By Brian Johnson

Artificial Intelligence (AI) is transforming all industries, and healthcare is no exception. While AI may seem like a recent phenomenon, its foundations date back many decades to the 1950s. Since its inception, AI has slowly grown until recently, when the technology reached a tipping point, making AI far more affordable, capable, and available across all industries. As AI technologies continue to advance and find their way into everyday applications, medical practices need to assess how they can benefit from this powerful tool. This article explores the progression, available and future uses, risks, and strategies for integrating AI into your medical office.

A Technical Revolution

As stated, AI is not new, but given current affairs, we seem to be in the middle of a technological revolution. For the past two decades, AI has quietly powered various systems, working behind the scenes to increase efficiency, personalize user experiences, and automate complex tasks. For example, Netflix's personal recommendations, Amazon's product recommendations, and Tesla's autonomous driving feature are all built on AI. Such

solutions were complicated to develop and were typically left to those in advanced fields of computer and data science, making AI inaccessible to most businesses and the general public. The current surge of interest in AI, however, is largely due to generative AI solutions like ChatGPT, which became available in 2022. These solutions allow individuals to easily interact with AI to create text, images, and audio, using intuitive interfaces. As a result, AI's potential is now at the fingertips of everyday people, not just big tech firms.

Chatbots Bring a New Era of AI

Chatbots such as OpenAI's ChatGPT, Microsoft's Copilot, and Google's Gemini (previously Bard) introduced the world to new, intuitive, and easy-to-use solutions for everyone. These types of AI systems are known as Large Language Models (LLMs) and are trained on trillions of language-based datasets. As a result, these solutions allow individuals to interact (i.e., chat) with the AI using human language—an act known as prompting. These solutions are broad in nature and can be used for idea creation, writing articles, reviewing and summarizing documents, research, and data analysis. Many of these solutions are free, with paid versions offering additional features and capabilities. Anyone using chatbots for business is recommended to use the paid version. These versions offer greater protection of the data you give it, thus ensuring the privacy of your data.

AI as a Feature

In addition to chatbots, many of the currently available AI solutions for medical practices are not specific to the medical industry but are instead designed as general administrative and business tools. These capabilities have been integrated into widely used applications such as Microsoft Office, Google Docs, Adobe products, and Grammarly. Like chatbots, these solutions, when enabled with AI, allow individuals to interact with the application using human language. For instance, in Microsoft Word, you could create an outline for a document and then ask AI to create a five-hundred-word document in the format of a newsletter based on the outline. If you wanted to analyze a contract, you could open the contract in Word and prompt the AI to provide a summary. To get more specific, you could ask the AI to highlight sections of the contract that protect data privacy, particularly as related to HIPAA. One of the greatest advantages of these features is saving time, performing in minutes what might take hours to accomplish by a human.

Emerging AI Solutions in Medical Practices

Practical uses of AI specific to medical practices are an emerging technology yet to make it into widespread adoption. Future solutions will materialize as both enhanced features within existing solutions and entirely new products. Although emerging, a current look at the developing landscape provides a good idea of where and how these solutions will be delivered. Solutions are expected to benefit all aspects of the medical industry, including administrative processes, diagnosis, and treatment of patients.

A good indicator of where AI solutions will appear is the Food and Drug Administration's list of authorized medical devices, last updated August 7, 2024 [1]. Among the listed devices,

Radiology comprises an overwhelming majority, accounting for 76% of AI-driven devices, followed by Cardiovascular and Neurology. Further demonstrating an interest in AI is a survey conducted by the American Medical Association (AMA) in August of 2023 [2]. Just over 1,000 physicians responded, with 68% seeing an advantage in AI. Areas of most interest to physicians included reducing administrative burdens including documentation and prior authorization. 38% of physicians reported currently using AI in some capacity, primarily for documentation, translation services, and assisting with diagnosis. However, this use of AI does come with concerns, including patient-physician relationships, potential liability, and patient safety topping the list.

Responsible Use

Before implementing any AI solution internally or delivering AI-derived results to patients, it is essential for healthcare professionals to carefully review and validate the data. All AI solutions come with inherent risks, including bias, incorrect results, data security and privacy concerns, and lack of transparency. Therefore, it is vital for medical practices to implement oversight and governance mechanisms to mitigate these risks and ensure that AI technologies are used responsibly. AI technologies should be viewed as powerful tools to enhance productivity and increase diagnostic accuracy, rather than as replacements for healthcare professionals. It is crucial to remember that the responsibility for how these AI solutions are applied ultimately lies with the medical practitioners, not with the AI. Additionally, ensuring compliance with HIPAA is critical for protecting patient data privacy and security when using AI technologies.

Engage Employees and Establish Guidelines

It is essential for medical practices to engage in discussions about AI with their employees to ensure its responsible use. Clearly define what constitutes acceptable and unacceptable uses of AI to set clear expectations. Encourage employees to be transparent about how they are using AI, fostering an environment of accountability and awareness. Educate employees about the risks associated with AI and emphasize their responsibility for validating any results derived from AI solutions. To mitigate the risks associated with AI, it is crucial to develop policies that clearly communicate an organization's stance on AI, establishing acceptable use, and addressing data privacy and security. A good resource to start with is the Artificial Intelligence Policy provided by SANS.org [3], which offers guidelines on creating a framework for AI use in the workplace.

Conclusion

In conclusion, AI is revolutionizing all industries and holds immense potential for medical practices. While AI offers numerous benefits such as enhanced efficiency, improved patient outcomes, and time savings, it is essential to approach its integration cautiously. Medical practices must be proactive in discussing AI use with their employees, setting clear guidelines for acceptable and unacceptable practices, and ensuring transparency in how AI is utilized. By educating staff about the risks, implementing governance policies, and prioritizing data security, practices can harness AI's power while safeguarding patient care

and privacy.

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