



All in

ON AI?



Responsible Use of Artificial Intelligence in Health Care Settings

By Mark Harris

The age of artificial intelligence has arrived. As a field of computer science, artificial intelligence (AI) has been a focus of research for decades. But only in the last few has the promise of this potentially transformational technology begun to appreciably affect society and the ways we live and work.

With the introduction in late 2022 of ChatGPT, a chatbot developed by OpenAI researchers that uses machine learning and natural language processing (NLP) technology to generate humanlike responses, popular interest in AI has increased con-

siderably.¹

But ChatGPT is only one expression of the AI trend. In business and society, new AI tools and resources are poised to significantly affect the global economy and work culture in the coming years.²

The exponential rise of AI technology also influences the medical field. Indeed, the use of AI products is expanding into nearly all facets of the health care system, with applications in both clinical and administrative areas. Globally, some estimations predict AI health care technology will amount to a \$188 billion industry by the year 2030.³

In Spades

Health care leaders and organizations are taking notice. For instance, last fall the American Academy of Family Physicians announced it is undertaking a large-scale study of the best ways to integrate AI into primary care medicine.⁴ The study seeks to examine the ways AI technology can reduce administrative burdens and improve physician well-being and patient care.⁴

The American Medical Association

(AMA) has also adopted a series of principles to guide the use of AI technology in medicine.⁵ The AMA recognizes both AI's potential to enhance patient care along with the need to ensure that patient privacy, security, and other concerns are addressed as new technology is developed and adopted.

The use of AI tools and products in health care is at present more pronounced in the administrative arena, says a report from Medscape and the Healthcare Information and Management Systems Society.⁶ AI tools are now used for tasks such as patient note transcription, review of electronic health records (EHRs), coding, and other aspects of recordkeeping. AI is also used to create routine patient communications, develop online chatbots for patient interactions, manage staff schedules, and improve the function of patient appointment systems.⁶

Elsewhere, clinical AI tools are being adopted for use in analyzing X-rays, CT scans, and other images; in diagnostic testing; in designing treatment plans; and for other uses.⁶

The Hand Being Dealt

What exactly is AI? IBM, a major technology and industrial research corporation, defines AI as follows: "AI is technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision-making, creativity and autonomy."⁷

AI technology also involves some key

related concepts or categories. These include machine learning, generative AI (gen AI), NLP, and predictive analytics.⁸

Machine learning involves AI software applications that are capable of learning by identifying patterns in large sets of data. In medicine, this capability among other uses can improve the evaluations of how a disease is likely to progress or its outcome.

Gen AI describes technology that makes

AI Priorities: MGMA

The Medical Group Management Association outlines their advocacy priorities concerning the use of AI:

- Medical groups should be able to easily understand the use and function of AI products. ...
- Policies should be aligned across agencies to avoid establishing competing and confusing standards. ...
- The deployment of AI should avoid the unintentional exacerbation of current administrative hurdles. Federal and private payers should not use AI to amplify burdens associated with prior authorization and intensify denials of critical patient care.
- Payers must be transparent and provide ample disclosures about their use of AI for utilization management, claims processing, and coverage limitations. ...
- Patient privacy should remain a priority first. ...
- All attempts should be made to mitigate discrimination and bias in the development and utilization of AI to ensure these systems do not perpetuate harmful healthcare inequities.
- Medical groups ... should be appropriately protected from liability associated with AI as it pertains to the conditions of the technology developed outside of the practice.¹⁸

it possible to create content, including text, images, and video. ChatGPT is one example of gen AI. This generative capability is built on what IBM describes as “deep learning models” that generate content known as “statistically probable outputs” from raw data.⁹

NLP involves the technological capacity to understand and generate human language. This allows computers to interpret both written and spoken human language. An example is found in automated phone systems that enable calls to be routed in response to the human voice.

Finally, **predictive analytics** refers to AI’s use as a forecasting tool, capable of anticipating future health trends, patterns, and patient needs based on an analysis of large data sets.

Play Your Cards Right

As new AI-driven tools and technology products are used, the promise of improved organizational performance and other benefits must be balanced with the challenge of ensuring AI tools are used responsibly. Ideally, AI integration should improve patient care delivery while also easing administrative burdens for the workforce. While the extent to which today’s nascent AI technology will serve these larger improvement goals over time perhaps remains to be determined, health industry leaders are generally optimistic about AI’s potential benefits.

“Overall, I think our attitude toward AI should be one of excitement and an openness to adopt,” says Andrew Swanson, MPA, FACMPE, chief revenue officer of Medical Group Management Association (MGMA). “Health care has long struggled with needing to hurl more ‘bots’ [AI-powered software], in particular, at administrative problems. This technology is intelligent enough now to be able to discern the nuance and complication of the administrative side of our health care system. Where we rely on highly skilled coders or highly skilled billing and management people to ferret through codes and complicated prior authorizations and denials, the machines can now do that.”

Notably, a MGMA Stat poll in October 2024 found that more than 4 out of 10 medical groups (43%) had added or expanded their use of AI-driven tools during the year.

This represented a sharp increase in AI use compared to 2023, when only 1 in 5 groups (21%) reported adding or expanding AI technology.¹⁰

Reflective of the industry trend, MGMA now offers AI-driven practice management tools to assist medical practices in their revenue and operational responsibilities. “The MGMA Analytics tool is our version of a practice improvement suite that leverages AI, particularly machine learning, to understand where billing challenges and operational workflow challenges are occurring between provider and patient and the billing cycle,” explains Swanson. “Like other AI applications, what’s brilliant about this tool is that before you would need to do things like time and motion studies—or you would need to review dozens of denials per particular payers. The time it would take to get through that analysis can now be done in literally seconds.

“The billing manager now doesn’t need to review why, for example, 20 Aetna claims for a type of case or procedure seemingly get denied every time or every other time. Now the system immediately flags it and says to pay attention to this type of code or this type of case and educate the provider on whatever it is that prevents the denied claim from moving forward. And here’s how it would suggest handling these 20 denials immediately. The efficiency, training, and insight these tools provide to providers and staff up front is invaluable. The efficiency it gains you is wildly advantageous for the practice.”

Wild Cards

Instead of the term *artificial intelligence*, the AMA prefers to use the term *augmented intelligence* to describe AI’s use in medicine.¹¹ This terminology is meant to convey an emphasis on AI’s assistive role in clinical care. AI technology should be designed to enhance—not replace—the intelligence, training, and skills clinicians bring to their patient care responsibilities. In other words, human beings—physicians and other care providers—remain in charge.

Swanson understands the AMA’s concerns, although he prefers to use the terms that industry experts are using. “The differentiation here is between [gen AI] and

AI Priorities: The American College of Physicians

“[The American College of Physicians] believes that the development, testing, and use of AI in health care must be aligned with principles of medical ethics, serving to enhance patient care, clinical decision making, the patient-physician relationship, and health care equity and justice.”¹⁷

the ChatGPT area and what has come to be known as machine learning or NLP,” he observes. “These are more industry recognized terms, and it behooves us to educate our staff to understand the differentiation in these technologies.

“For example, there isn’t a medical practice on the planet now that doesn’t have a call or decision tree [automated telephone routing system]. That is now ubiquitous technology. This is a basic reactive machine that we have taught what to say and how to drive a decision tree for the customer. There has been an evolution in this technology as [NLP] has gotten better. The technology is evolving to be more user-friendly. That [new] technology now is relatively as cost comparative as the older decision tree. So why not replace an existing technology with a new and improved technology at slightly more cost to improve your patient experience?”

The challenge, observes Swanson, is in how to leverage NLP to benefit quality patient care or how to leverage machine learning as a “smart technological helper” to expedite patient visits and ensure timely and seamless documentation of visits in the EHR. The goal of smarter technology should hopefully lead to a better patient experience.

“I heard somebody say recently we should be focused on AI in a back-office capacity,” says Swanson. “Yes, but their point

was to exclude its [interactions] with patients [on behalf of staff]. But I think most people were pretty happy when Phreesia [software that automates patient check-in and other administrative functions¹²] became available. Now when we go to the doctor’s office, we don’t have to fill out the same paperwork every time. When the technology is conducive to improving people’s experience, patients are usually happy engaging with technology as long as it expedites their process into care and gives them what they want, which is usually more time with the provider.”

Of course, the fact that AI technology makes it possible to automate various administrative tasks does raise concerns about the long-term impact on the health care workforce. “[Gen AI] has the potential to complement millions of workers’ skills, enabling them to be more productive, creative, informed, efficient, and accurate,” notes a recent Brookings Institute report. “On the other hand, employers may choose to automate some, or even all, of their employees’ work, leading to possible job losses and weakened demand for previously sought-after skills.”¹³

Ideally, AI technology and software should enhance staff efficiency and performance. In turn, this could lead to improved job satisfaction. In fact, one possible benefit of enhanced automation is that it could allow

providers and staff more time to interact directly with patients.

But perhaps technology is only as beneficial or harmful as the intentions that inform its goals and applications. AI software can help medical practices to better analyze patterns of claims denials, toward the goal of reducing denials. Yet unregulated AI could also be used by insurance companies to find more effective ways to facilitate denial of beneficiary claims.¹⁴ In this context, the long-term impact of AI technology on the health care workforce is an aspect of a larger story still being written.

Up the Ante

Certainly, health care providers, managers, and staff must learn to use AI resources appropriately and responsibly, guided by their own experience and staff education and training. For health care leaders and managers, this responsibility might begin with verifying the reliability of the AI tools or products the group or practice is looking to adopt in its operations.

“You should make sure that whatever software the practice is using as an AI tool or resource is accurately pulling the information that you want,” says David J. Zetter, PHR, SHRM-CP, CHCC, senior health care consultant with Zetter Healthcare Management Consultants in Mechanicsburg, Pennsylvania. “That’s the first thing. Before utilizing a new AI tool, you want to vet it. What are your colleagues or others saying about tools or products the practice is considering using or buying? See what others [such as trusted review sources] are recommending. Are there online reviews? Are there LISTSERVs you’re affiliated with that have product recommendations? It’s really no different than purchasing a new practice management billing system or an EHR. You will want to kind of kick the tires on it, so to speak. So, get involved, ask questions, and vet the products.”

With gen AI-type products, the practice should also exercise care in how these new tools are introduced, suggests Zetter. “You can’t always just accept what any AI-generated search would come up with and just assume it’s correct, especially if it’s just pulling everything out of whatever

“Medical practices need to be cautious and take a careful look at what they are using AI products for. Is there anything with AI that is going to be of risk to either providers or patients? If so, how will you mitigate that risk? If you purchase an AI tool from a company, who is gathering or collecting that data? Who gets to see it? Is it pulling information on patients? HIPAA [The Health Insurance Portability and Accountability Act of 1996] has very strict policies on who can have access to patient information. When you’re buying products off the shelf or from a company, I think you really need to understand where this information is going and who has access to it.”

—David J. Zetter, PHR, SHRM-CP, CHCC

AI Priorities: AMA

Toward the goal of responsible AI usage, the AMA has published commitments they pledge to follow as AI develops:

- Develop AI principles for the use of AI in health care. ...
- Support the development of state and federal policies that ensure the appropriate oversight and continued innovation in AI. ...
- Collaborate with health and technology leaders to research AI's applications and ensure that physicians have a leading voice in shaping AI's role in medicine. ...
- Prepare and inform physicians by providing high value insights and actionable resources.¹⁹

Health care practices might look to the AMA—and similar organizations—for ideas to model their own AI principles after.

internet resources it accesses.”

Other experts agree oversight is necessary. “We have to make sure we’re getting the end results that we need,” says Sharon Easterling, MHA, RHIA, CCS, the CEO of Upskillz, a health care management consulting group in Charlotte, North Carolina. “You can’t just create something and forget about it. There needs to be ongoing testing. That’s actually a role you could have someone do within your organization. Assign someone who is looking at those functions [in which] you’ve implemented AI. You want someone who is able to make sure you’re getting the right results, who can report and do the analysis.”

To clarify, using gen AI to create or communicate general information, such as public announcements, clinic updates to patient mailing lists, and similar tasks involves different applications than AI tools use to analyze already verified data in the practice’s EHR or practice management system. The cautions to verify or vet AI

results is more an issue with the former tasks.

Interestingly, some medical practices are also finding ways to adapt or customize AI technology to suit particular issues in their organizations. “One practice I worked with built a tool that can search their practice management system to pull the data they need for a prior authorization,” reports Zetter. “As they work with each insurer, they can now find all the different data points they need to obtain, which can be different for each payer depending on the service or the prior authorization. They hired a programmer to program their software to automatically populate all that data in the prior authorization forms. Now their staff doesn’t have to spend time trying to pull that data out of the system. This is a task they took upon themselves to do.”

Hold All the Cards

For medical office staff, AI tools can introduce new levels of ease and efficiency into their work, says Allyson Valentine, CMA (AAMA), the care coordinator for Pulmonary Medical Associates in Newton, New Jersey. In early 2024, the clinic began using a new AI-powered software application (Medical Brain¹⁵) to manage patient scheduling and related responsibilities. The app is an AI-generated clinical decision support platform that allows patients to manage appointments, receive updates and reminders, and otherwise connect with providers at any time. The software also offers a library of evidence-based clinical modules.¹⁵

“Our AI app can read the patient’s chart and know when they last had a mammogram or colonoscopy, for example, and when they’re due for a follow-up,” reports Valentine. “The app can message the patient

to let them know it’s time to check their diabetes [laboratory tests]. It can remind them of an upcoming appointment or that it’s time to schedule a new appointment. The patient can then message our office to confirm an appointment or to reschedule. If we have to reschedule, we can do so without even picking up the phone.”

Valentine shares some recent patient encounters using the AI platform: “I recently got a message from Medical Brain that a patient was due for a follow-up appointment, based on the last chart note that the doctor had wanted to see the patient back in December. It did not appear this patient had scheduled, so the app was letting me know. My job then was to message the patient and ask if I could help them schedule that appointment.

“In another instance, I had a patient message us using the app to say she was sick with a sore, swollen throat and fever. I immediately sent a text message to the doctor, who was at the hospital at the time, letting him know this patient was sick. He was able to quickly get back to me with a prescription to send in for the patient. I was then able to contact the patient to tell them the doctor was prescribing a Z-Pack [antibiotic] to be sent to their pharmacy. I then took care of the medication order.”

Patient enrollment information for the AI-supported service is made available to all patients, says Valentine. “The patient can download the Medical Brain app and once enrolled, it connects to our office and they can just open it up and send us a message, like they’re text messaging us,” she explains.

Valentine first learned about the product at an event for Atlantic Health System’s accountable care organization. She brought the app to the attention of the physician she works for, who made the decision to

Avoid Getting Lost in the Shuffle

“To mitigate the negative impact of AI on the health care workforce, it is essential to focus on [the] collaboration between health care professionals and AI systems, ensuring that AI complements human expertise rather than ... [replaces] it. Health care organizations should invest in training and upskilling programs to prepare a workforce for the integration of AI into health care delivery. Policymakers and health care leaders must address the ethical and legal implications of AI in health care to ensure its responsible and equitable implementation.”²⁰

introduce it into the practice. For staff, the app is not difficult to learn to use, she adds, and the sponsoring company also provides training and ongoing support.

“If you use it correctly, the app can really make your job so much easier,” she says. “In my experience, it’s one of the most amazing things I’ve come across. But for this kind of tool to really work, I think everybody in the office has to know how to use it. That’s the key to its effectiveness. You’ve also got to remember these tools are for the patients to help the patients. If you can’t think of it in that way, since it’s something new to learn, it might be more of a nuisance for you.”

A Winning Hand

Of course, what any AI technology product can or cannot do for the practice will also depend on the effort staff are willing to put into learning new tools. At this early stage of AI adoption, staff education on AI is likely still somewhat uneven or preliminary.

“I think right now a lot of us in health care are just trying to figure out how to implement AI into our organizations,” acknowledges Easterling. “And because we’re not so sure of some of that, we’ve been hesitant. But I would say managers should definitely start familiarizing staff with the terminology related to AI. We know AI is already embedded in a lot of software products that health teams are or will be using. They’re going to be getting prompts from the software. They are going to be able to write prompts to the software. It’s important at this stage for staff to start to understand the mechanisms behind AI and what it is doing.”

As the influence of AI tools and resources expands, medical practices will also need to stay vigilant with how they manage privacy and security responsibilities. “Certainly, privacy is always a concern, especially with health care data,” concludes Easterling. “In fact, some health care providers and organizations may be reluctant to use AI services due to concerns [about protecting] the privacy of health care data. They may be reluctant to use [online] cloud services such as Microsoft Azure [computing platform] or an Amazon or Google workstation because that’s putting information out there on the

cloud. But those services are HIPAA [Health Insurance Portability and Accountability Act of 1996] compliant. There are safeguards put in place. And then also you have to make sure that you are addressing cybersecurity within your organization.”

While ensuring AI is used responsibly, Easterling also encourages providers and staff to be AI innovators by exploring new ways to use these tools to save time or create solutions in their day-to-day practice operations. The more they can learn, the more AI resources can be tailored to make their work easier and better and improve patient care services.

The growing influence of AI in the health care system represents a new world of opportunity, innovation, and change. For health care professionals, navigating this world requires an open mind and a willingness to learn, grow, and adapt to an ever-evolving technological landscape. ♦

The CE test for this article can be found on page 28.



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