AI
& Your Practice

3 Things You Should Know

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In the technology world, once in a decade – sometimes only once in several – a new technology comes along that changes the way we live, work, and do business. The Internet, now a ubiquitous part of our interconnected world, started as a defense emergency communication system, then slowly moved into research applications before bursting into the mainstream once the technology infrastructure matured to support it for the average person.

What seemed to come out of nowhere was actually a technology on a decades-long journey that refined and honed it to become the worldwide disruptive network we all rely on today. It's also important to note that honing the Internet in the early days included eliminating many of the fantastic things it was envisioned to do that never materialized.

We are now on the cusp of the next once-in-a-few-decades technology disruption that is destined to change our lives as profoundly as the Internet has. Like the Internet, it has been through several iterations and improvements in the background since serious work began on it more than a decade ago. Now, Artificial Intelligence (AI) is seemingly bursting into our lives 'out of nowhere' and promising to shake up nearly everything we do.

These disruptions always raise a lot of questions, as well as a healthy amount of fear about the impacts to our lives,

and particularly our livelihoods. AI is in that early 'honing' phase of discovering what it will actually disrupt and replace, and what is futuristic visioning that may or may not materialize in the foreseeable future.

For you as an independent medical practitioner, it's important to keep your eye on the ball and be prepared for the positive disruptions you'll want to stay on top of that can radically improve your practice of medicine, while at the same time not being distracted – either emotionally or financially – with AI tech dreams.

With that in mind, we've put together this short guide to give you a lay of the current AI landscape, what you can do now to stay current with the technology flow, and what to plan for longer term.

To keep it simple, we've boiled it down to the three things you should know and keep top of mind.
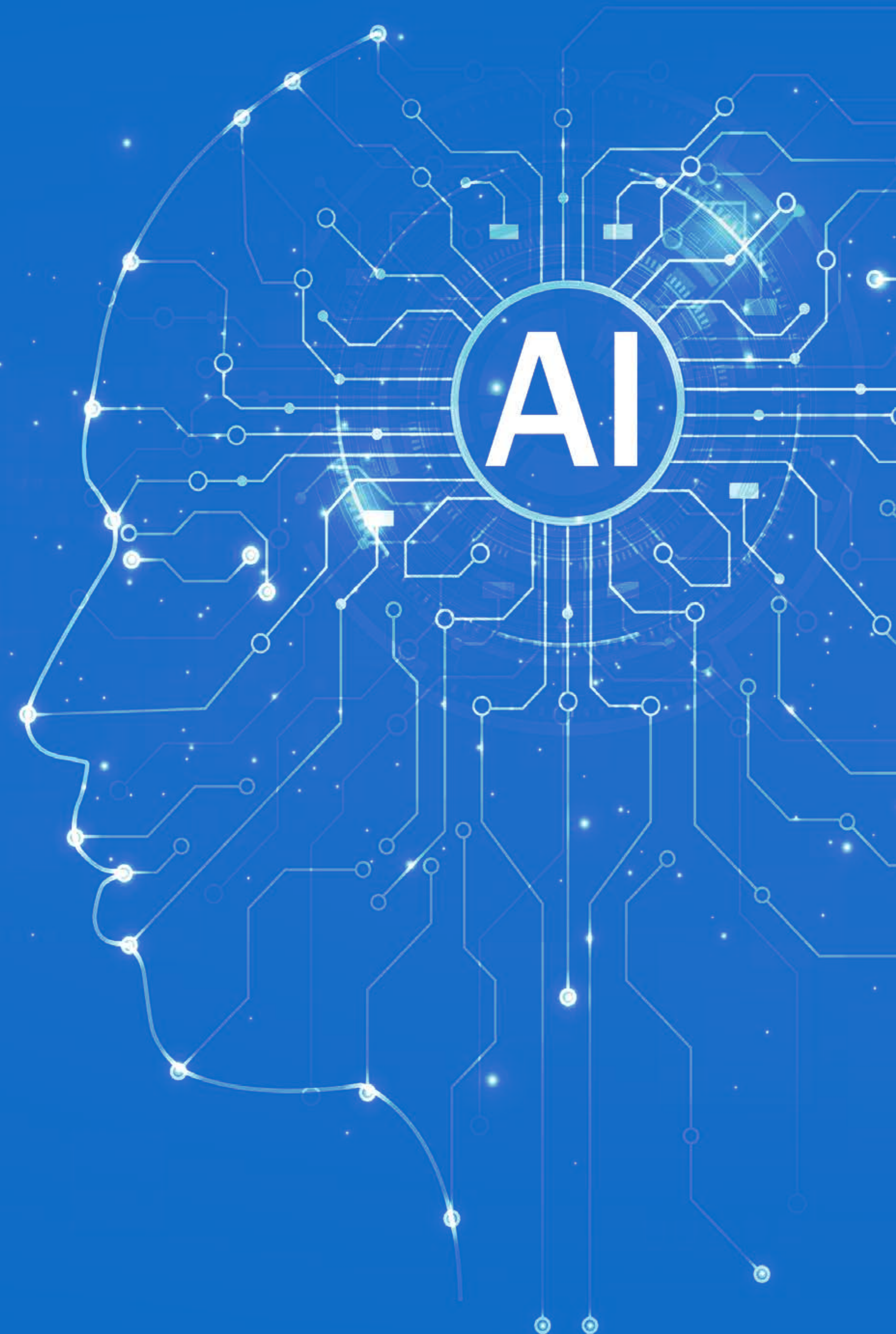
1. AI Will **Help** You, Not Replace **You** or **Your Staff**

"Recent advancements in AI...are already proving they can make a real impact on the practice of medicine by automating many of the administrative tasks that dominate their day."
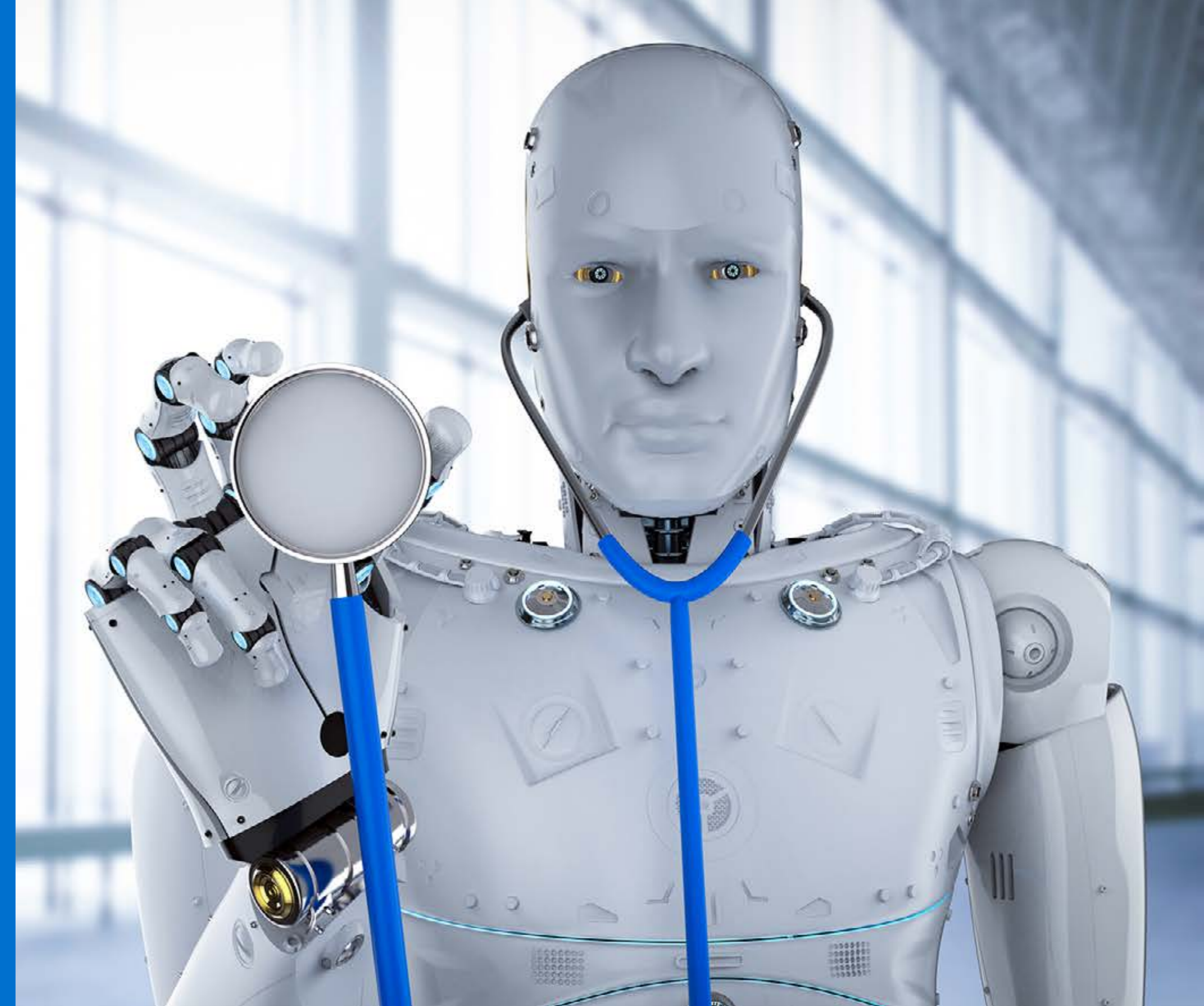
For all the talk about AI replacing vast numbers of workers and even professionals, you can relax: AI won't replace you any time soon. But it could make your practice life easier very soon.

With a few exceptions, today's popular Large Language Model (LLM e.g. ChatGPT) AI[1] isn't diagnostic/clinical grade. More focused applications will evolve over time starting with large enterprise systems. (see #2 to follow).

For now, outside of purpose-built systems for large organizations, many 'assistant' type applications are being investigated. These will take medical practice automation to a higher level, bringing systems one step closer to practitioners' dreams of tools that speed and simplify their work rather than get in the way. Automating more mundane, repetitive tasks will continue to free providers up for more quality time with each patient. One provider puts it this way:

"Recent advancements in AI...are already proving they can make a real impact on the practice of medicine by automating many of the administrative tasks that dominate their day. Suddenly, every clinician has the ability to have an autonomous resident over their shoulder – one that bears the brunt of their many distractions and empowers them to provide the type of care they were trained to provide."[2]

How AI Can Help Independent Practices Now

Several practical general-purpose AI approaches are available now or are being adapted to specific independent clinics' needs utilizing available AI technologies today.

For example, the EHR provided by AdvancedMD offers a feature called Acronyms. A clinician starts typing a note using a few characters, and the system auto populates a basic note based on previous experience in similar encounters for that provider or clinic. The note is then customized by

the provider with the details of that visit, but the bulk of the repetitive portions were intelligently suggested by the system. The time savings over a day of similar visits can be significant.

Solutions based on currently available LLM systems like ChatGPT are being pioneered by practices on a number of fronts. Leading ideas focus on streamlining non-clinical, non-diagnostic activities that can benefit from robust AI 'assistant' type capability. Examples include:[3]

1. Elevating user interactivity in healthcare consultations.

2. Bridging accessibility gaps for individuals with visual impairments, reading difficulties, image recognition challenges, etc.

3. Language translation.

4. Assisting diagnostics and creative problem solving.

2. Clinical/Medical-Grade Technology
An Enterprise Play

> "Medical-grade AI is ready, today, built upon the latest technologies, and has hundreds of use cases in clinical medicine, research, administration, and health insurance."

Unless your EHR has been purpose-built on medical AI from the ground up (referred to as 'medical grade' AI), it won't work to 'bolt on' a general-purpose LLM-type AI system (e.g. ChatGPT) for clinical and diagnostic applications because of the unique nature of medical notation.

For many years, practitioners and vendors pinned their hopes for massive automation gains on Natural Language Processing (NLP) technology. However, because of the unique nature of medical text shorthand and abbreviations, these efforts consistently fell short of the accuracy levels required for every-day clinical use.

As early LLM AI technology burst on the scene, it was touted as the medical automation breakthrough NLP was never able to deliver. However, deeper analysis soon revealed that the modeling biases built into

general-purpose LLM AI systems prevented them from mastering the unique, often arcane world of medical notation.

To address these drawbacks, technologists have resorted to development of 'medical-grade' AI systems built from the ground up specifically for clinical use. These systems, often based on a new type of deep learning algorithm called 'transformers', are starting to unlock the clinical value buried within unstructured medical text."[4] These massive, costly projects are undertaken by large enterprise technology vendors for major healthcare systems and organizations.

These systems are now being tested in large-scale applications as they are further refined and improved. According to a leading medical-grade AI expert:

"Medical-grade AI is ready, today, built upon the latest technologies, and has hundreds of use cases in clinical medicine, research, administration, and health insurance. Users should be wary of general-purpose generative AI models masquerading as medical-grade AI, and should work with enterprise software vendors who have built products from the ground up."[5]

These purpose-built technologies will work their way into mainstream clinical use over time as they are refined and adapted for independent practice applications. In the meantime, exploring non-clinical uses as outlined in point #1 is a great first step for independent practices to stay abreast of AI progress.

3. Don't Panic & Switch Systems to Chase the Latest AI

> "AI technology is exciting and revolutionary in many respects, in practice even revolutionary breakthroughs are most often evolutionary in their implementation."

With the many changes and advances in medical office software for independent practices over the past couple of decades, one simple strategy has proven to provide the greatest stability and opportunity for improvement in productivity, quality, and profitability.

Much like the time-tested superiority of a Warren Buffett-style 'buy-and-hold' investment strategy, in medical office automation technology a 'pick-and-stick' approach is almost always best in the long run.

This involves picking a quality vendor with a proven track record of success in your area of practice, and with a demonstrable commitment to innovation and leadership in developing and rolling out new products and technologies. Odds are high that a vendor of this quality will continue to stay ahead of the technology curve and bring the latest improvements to their client clinics.

When technology breezes blow and challenges arise, sticking with a quality vendor will almost always prove more advantageous in the long run than jumping from vendor to vendor. This is especially true of transformative technologies like AI. When the stock market fluctuates up and down, savvy buy-and-hold investors stay the course and reap the rewards of long-term positive gains. So too do savvy pick-and-stick practice decision makers.

AI Evolution

While AI technology is exciting and revolutionary in many respects, in practice even revolutionary breakthroughs are most often evolutionary in their implementation. Quality technology vendors have been in the game a long time because they have the perspective, accumulated wisdom, and financial staying power to know how to navigate the fast-paced world of innovation and change. As with other new technologies, they will adapt and enhance AI capabilities to bring the greatest value to their customers in a timely way.

To identify quality vendors in this respect, check out their track record over the past decade or two. Have they been on the leading edge of important changes and innovations — like integrated EHR/PM, EHR dashboards, cloud-based infrastructure, meaningful use improvements and tracking, and telemedicine? Or have they lagged the market and brought out buggy, difficult-to-use updates?

Pick and stick. A simple, powerful approach for navigating the exciting future of AI in independent medical practice.

Conclusion

Except for enterprise-level systems built on medical-grade AI from the ground up, current AI solutions aren't diagnostic/clinically capable. However, private practices can potentially benefit from productivity-enhancing features of commercially-available LLM AI (e.g. ChatGPT) type technology.

Private practitioners should be patient and work with quality medical office software vendors who will bring them relevant AI technology over time. Jumping ship to chase the latest AI enhancements is rarely a sound approach.

Take a measured approach to AI integration. Partner with trusted medical office software vendors committed to delivering relevant AI advancements.

Schedule a free, live, and personal demo so you can instantly see all of the benefits of AdvancedMD healthcare software today.

References

[1] Often also referred to as Generative AI | [2] https://www.kevinmd.com/2023/10/why-i-left-medicine-and-why-ai-might-convince-me-to-return.html | [3] https://www.kevinmd.com/2023/10/chatgpt-charting-the-future-of-health-care-with-visionary-ai.html | [4] https://www.kevinmd.com/2023/10/the-clinical-ai-revolution-3-things-to-know.html | [5] https://www.kevinmd.com/2023/10/the-clinical-ai-revolution-3-things-to-know.html

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