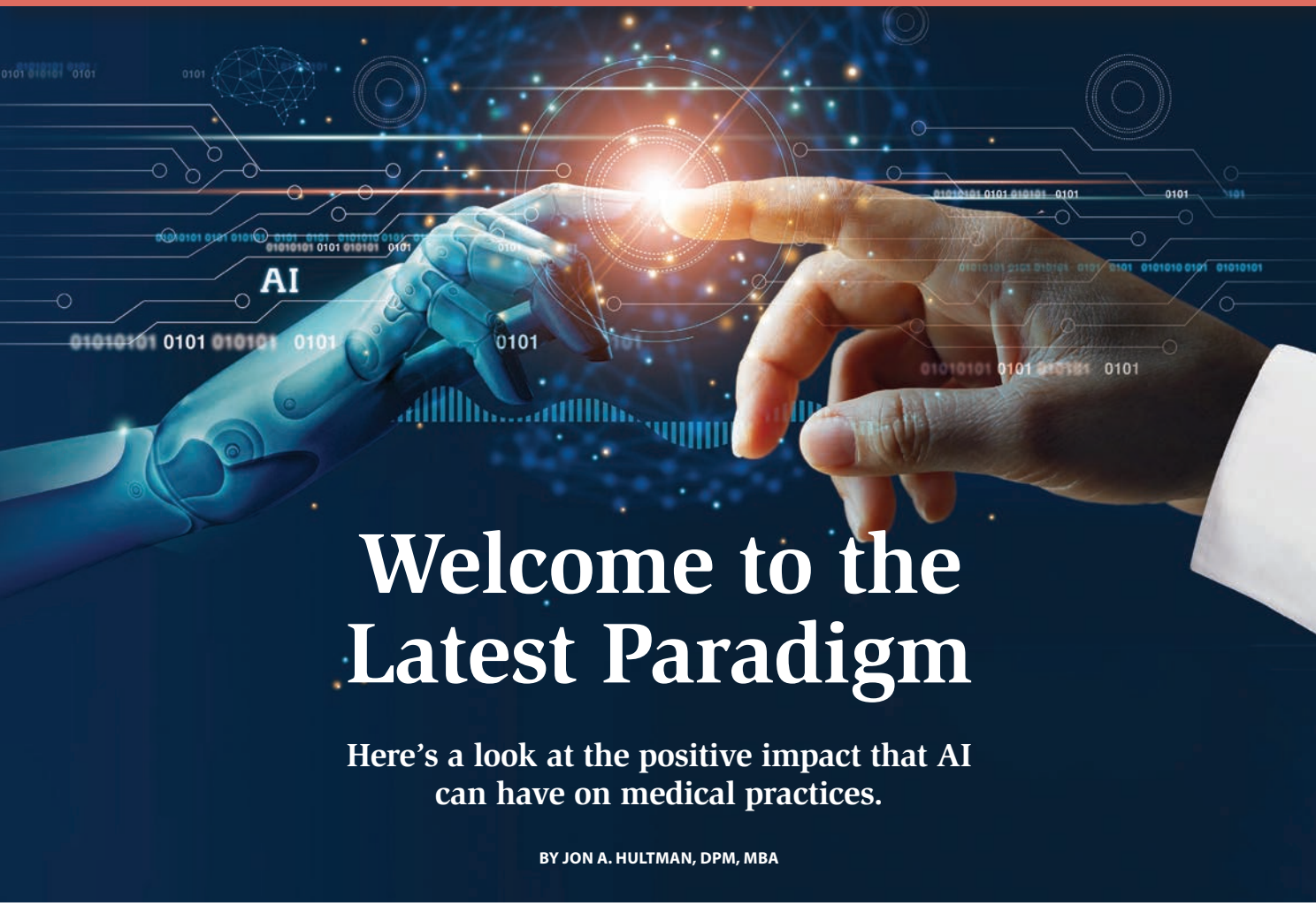

Welcome to the Latest Paradigm

Here's a look at the positive impact that AI can have on medical practices.

BY JON A. HULTMAN, DPM, MBA

Artificial intelligence (AI) has transitioned from a "futuristic concept" to being an integral component of contemporary medical practice. For podiatric specialists, especially those seeking to balance high-quality care with operational efficiency, AI offers a wide range of assistance. Its uses include enhanced clinical decision-making, streamlined administrative tasks, and improved patient outcomes. In a healthcare landscape strained by workforce shortages and growing patient demand, AI has the potential to help physicians become more productive and satisfied. It can provide them with more time to focus on what matters most—direct patient care.

When determining which AI applications to consider incorporating into your practice, it is important to avoid the types of mistakes that doctors made when they first incorporated computer technology into their practices. While computer technology had the capability of increasing quality, lowering costs, and improving efficiency, most implementations that were launched resulted in quite the reverse. Why is this? Steven R. Covey stated as his "Habit 2" in his book *The 7 Habits of Highly Effective People*, "Begin with the end in mind." This habit is particularly pertinent to adopting any new tools or processes in ways that will make measurable differences in quality, costs, and profitability. The tools offered by AI are no exception.

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To make a measurable impact on the quality, costs, and profitability of a medical practice, AI implementation needs to be targeted on the following *end goals*: (1) an increase in quality, (2) an increase in physician productivity, (3) streamlined administrative workflow, (4) strengthened data security and compliance, and (5) an increase in patient satisfaction. This discussion will be limited to AI tools that address these five areas, many of which overlap and can enhance one another.

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Increasing Quality

AI-assisted imaging and analysis are among the most exciting developments that can be utilized by podiatric practitioners to increase the quality of their treatment. Machine-learned algorithms can be trained to recognize subtle abnormalities in x-rays, MRIs, and gait analyses. This will help podiatric physicians detect early signs of conditions such as stress fractures, osteoarthritis, diabetic foot complications, and circulatory or neuropathic changes. Biomechanical exams can be augmented through the integration of data from wearables and smart insoles that track step count, pressure points, and gait patterns. These are all capable of providing real-time feedback which can be used to support custom orthotic designs and rehabilitation programs.

These systems do not replace clinical judgment; rather, they act as digital consultants that can be used to enhance precision and confidence in medical decision-making. They offer DPMs an additional layer of scrutiny to help diagnose and plan treatment programs both faster and more accurately. In clinical practice, such tools can serve as diagnostic adjuncts, highlighting potential areas of concern that warrant closer evaluation. This capability not only accelerates the diagnostic process but also leads to more precise diagnoses and improved patient outcomes. AI can accomplish these tasks because of its capability to quickly analyze large sets of patient data and draw attention to the relevant few that matter most while providing evidence-based prompts at points of care which aid in ensuring adherence to best practices without slowing workflow.

AI-powered chatbots and virtual assistants can also be used to enhance doctor/patient communication between visits. They can answer common questions, provide pre- and post- appointment instructions, and guide patients through intake forms. Personalized messaging driven by AI analytics can help patients stay compliant with care plans and medication schedules. It can also lead to a reduction in the number of missed appointments. All of these capabilities lead to improved outcomes and overall better quality.

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Increasing Physician Productivity

Anything that frees up a physician's time will increase his/her productivity. When integrated with electronic health records, AI's ability to transcribe clinical notes in real time offers the most significant impact on physician productivity. This application is similar to employing a scribe, but without the cost. Currently, many practitioners choose to not employ scribes because of the cost, but there is no question that physicians could treat more patients if they were able to capture much of the time they spend imputing data into their electronic health records. Even if a physician does not desire to increase his/her number of patient visits, with clinical note transcription, AI can reduce the many hours the doctor spends at home after work charting patient notes. This should have a positive impact on physician burnout rates and improve a doctor's work-life balance.

A medical assistant who works directly with the physician in the clinical area of practice can also have a significant impact on physician productivity. As billing and administrative tasks became more complex, there was a gradual shifting of these clinical medical assistants to the business areas of practices. Using AI to help streamline administrative workflow in the business areas will allow a reverse flow of some of these medical assistants back into the clinical areas where they can provide services that free up more of the doctor's time.

AI's ability to integrate data into the clinical record allows DPMs to offer more personalized treatment and preventive strategies, potentially reducing the incidence of ulceration, injuries, and other complications. This facilitates a shift from reactive to proactive care and aligns with the broader goals of value-based medicine.

Streamlining Administrative Workflow

Clinical practices often struggle with administrative burdens that take valuable time away from patient care. AI can relieve some of this pressure by automating appointment scheduling and providing appointment reminders which reduce no-shows. It can also be used to assist in the processing of billing and claims, checking insurance eligibility, obtaining prior authorizations, and filing claims with improved accuracy—the latter of which results in quicker reimbursements and fewer claim denials.

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Perhaps the most important outcome to be achieved as a result of AI's streamlined workflow is the resultant reduction of errors and omissions. An analysis that I conducted for a large billing service found that 40% of its staff's time was spent correcting errors and calling offices multiple times to obtain missing patient and insurance

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information. Not only did this add to unnecessary expense (requiring a larger than necessary staff to work in the billing operation), but these errors and omissions increased the number of days that their charges remained in receivables. This led to a lower than optimum collection ratio. Anything such as this that increases costs while lowering collections has a magnified negative impact on profit.

An axiom of economics is that an employer should not eliminate any employee without first eliminating the tasks that employee performs. Streamlining administrative workflow does eliminate tasks. This could provide options to either (1) reduce staff size or (2) utilize those who have newly freed-up time to spend that time engaging with patients. This additional "engagement" might well enhance patient satisfaction and, hence, practice growth.

Strengthening Data Security and Compliance

Protection of healthcare data is critical. Many malpractice carriers offer cyber-security insurance, but even with insurance, a security breach can still be stressful and costly, and the costs are not solely financial. A security breach can require a substantial amount of physician and staff time. AI can bolster cybersecurity through use of intelligent monitoring tools which detect suspicious access patterns and prevent data breaches in real time. It can detect such things as phishing attempts that target clinicians and ransomware behavior before encryption occurs. AI's ability to assist in early detection of security breaches can dramatically reduce their impact as well as any recovery costs.

AI-based compliance systems can also help ensure a practice's adherence to HIPAA and other regulatory requirements by automatically identifying and flagging potential documentation issues before they become regulatory ones. AI security features can reduce a significant amount of compliance risk for private practices by automatically redacting personal health information (PHI) in non-clinical settings and preventing the copying of PHI into unsecured channels such as email.

AI tools are capable not only of monitoring documentation for regulatory compliance but of flagging missing or inconsistent information in electronic health records (EHRs) and helping identify patients at high risk for complications. Such proactive intervention can lead to a reduction in liability. AI can also detect abnormal patterns in EHR access, such as any staff person accessing records outside his/her role or unusual after-hours access.

Increasing Patient Satisfaction

Patient satisfaction is the key driver of practice growth. It increases referrals from both patients and physicians. Streamlining administrative tasks through the use of AI provides staff with additional time to communicate with patients—time that they once spent performing lengthy clerical tasks. They now have more time to listen to and address patient needs. As previously noted, AI's decision support tools and note-taking capabilities also provide physicians with more time to listen and address patient needs. The time that both staff and physicians now have to address patient needs should significantly impact their satisfaction.

AI tools such as automated scheduling, faster follow-up messaging, and automated reminders that flag patients when they need follow-up care can serve to increase patient access and reduce their waiting times when they arrive at a practice—two of the factors that most impact patient satisfaction. AI-enabled telemedicine can also increase access by providing timely care to patients who face difficulty visiting the office in person. AI's platforms can triage patient concerns, recommend initial treatments, and even analyze images of foot conditions submitted by patients. These tools will become ever more important given the expected future shortage of physicians.

Patient satisfaction is further augmented by AI-powered chatbots and virtual assistants able to answer common questions. These features provide patients with immediate access, at any time of day, to a practice when they have questions or concerns. Prior to implementation of AI in practices, patients had to surf the Internet to research medical questions, and the responses they received in that format were not specific to a particular practice's philosophy of care or to the specific services it provided.

Artificial intelligence is not about replacing physician or staff expertise; it is about augmenting their expertise. For private medical practices, AI offers a toolkit to operate more efficiently, reduce physician and staff burnout, and deliver to patients more personalized, proactive care. As technology continues to evolve, practices that strategically embrace AI will be better positioned to meet the future expectations of patients and the challenges of a competitive healthcare environment. A strategy to consider prior to implementation of AI into your practice is explored in my "Last Word in Practice Economics" article on page 105. **PM**

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Dr. Hultman is the president of Medical Business Advisors, specializing in practice evaluations, practice valuations, and mergers. He is the author of *Reengineering the Medical Practice* and *Medical Practitioner's Survival Handbook.*