Working Smarter with AI and DME

This technology can augment both clinical and business aspects of practice.

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It's no coincidence that the theme of the first spring issue of this year's *Podiatry Management* is devoted to the topic of artificial intelligence. The "budding" topic of AI continues to manifest itself into every facet of life, and DME is no exception. There has been no shortage of lectures, blogs, discussions with third-party payers, and articles in mainstream DME publications dedicated to AI. This month's issue will focus on the integration of AI in ways that would not have seemed possible back in the 1970s during undergraduate podiatry training.

First, let's tackle the encroaching fear that AI will replace humans. Max Tegmar, professor and co-founder of the Future of Life Institute said it best. "We are not being replaced by AI. We are assisted by AI. The future is not man versus machine. It is man with machine versus a problem." This article will also elaborate on a couple of problems DME providers regularly face.

Application of AI to Clinical DME

For DME, let's start with biomechanics and orthotics. What may have seemed only fantasy a few years ago is now reality. To those of you old enough to remember studying biomechanics in the mid- to-late 1970s, there were lots of theories and lots of time spent watching patients walk. Instructors with years of experience would tell you what they saw. You were then expected to identify those findings in your evaluation of other patients. Not sure about you, but initially that lesson was not easily absorbed. Instructors would have to repeatedly ask patients to walk for the neophyte student to see what the instructor took for granted. With the advent of the digital age came expensive dedicated gait labs that could visualize things not easily seen by the naked eye.

Today, dedicated (and expensive) gait labs often can be replaced with in-office digital cameras, miniaturized body sensors, and software able to survey the patient's gait from head to toe over a few short steps. Repeatedly viewing videos illustrating various gait abnormalities allows students and clinicians to more efficiently garner the knowledge they need to properly diagnose and treat gait abnormalities. Now, the integration of AI with gait analysis software allows, with pinpoint precision, the illustration and identification of gait abnormalities. AI-driven software can also often point the clinician in the right direction for the patient's treatment.

Imagine a patient presenting to your office with hallux limitus and second metatarsal pain. This rather common problem usually leads to the clinician prescribing a foot orthotic with Morton's extension and a sub second pad or accommodation. The art here is to prescribe exactly the right shell, extension, and padding, all of which should fit the patient's shoes and lifestyle. Often, the practitioner then must modify the orthotic in their office or ship the device back to the laboratory for adjustments.

Now imagine that the same patient, after your clinical examination, undergoes a 10-second, computer-generated, AI-assisted gait analysis in your office. The AI software spills out data and a differential diagnosis, which you then review with your patient. Imagine then that the AI software is also provided with other data, such as the patient's age, occupation, activities, height, weight, shoe size, shoe models, etc. Based on this and other factors selected by the astute clinician, the AI software predicts exactly what the orthotic shell and all other material should consist of. After scanning the patient using this software, the program directs the 3D printing of the shell to precisely choose and place the appropriate materials, producing a truly custom-fabricated orthotic, all within minutes. This is not science fiction. It will be an affordable reality within the next few years, if it's not already here.

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of add-on-features, presents clinicians with several correct but often difficult choices. AI can help narrow those choices to what may be best for the patient. For prosthetics, AI can help foot and leg amputation planning, to facilitate rehabilitation and prosthetic prescribing. Again, AI can assist with proper chart documentation of the chosen prosthetic device based on the carrier's LCD.

In wound care, AI has enormous potential. Surveying a policy for identification of which CTP or surgical dressings are preferred by the carriers has enormous potential. Wound care providers using AI can also minimize waste and efficiently order the product that may be clinically most effective (based on the wound's photo, location, size, amount/nature of drainage, etiology, etc.) while also generating the greatest profit margin. There is enormous potential in using AI for these and many other DME applications, including lymphedema compression garments, pneumatic compression, osteogenesis stimulation, as well as all clinical facets of DME.

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AI and Practice Management for the DME Provider

When properly implemented in your EHR systems, such as for revenue cycle management (RCM), AI also can aid you with many documentation issues. The main objective is to reduce claim denials. By scrubbing your chart and helping you make correct choices when drafting your note, it will ensure that your chart note is compliant with the LCD. AI can tell you what you need to examine and exactly what your chart is missing while you are drafting your chart note. It can guide you in developing and editing your clinical templates. Furthermore, AI can scrub your claim to make sure the diagnosis codes and HCPCS or CPT codes and modifiers are appropriate and in accordance with the LCD and the chart note. Furthermore, AI can provide you with verbiage to respond to the third-party carrier should they require more information, or if there is some other claim processing issue. But remember that if you are using AI, so are the third-party carriers!

The advantages here are enormous: fewer claim denials, improved prior authorization success rates, and less time dedicated to administrative tasks. By reducing administrative burden for staff, AI can potentially reduce the number of staff dedicated to administrative burden and increase their face-to-face time with patients. More time to treat patients means more time generating revenue. Another way to look at this is that AI can enable you to work smarter and across fewer hours, yet produce more income.

There are innumerable AI applications for podiatrists, all physicians, and DME providers. In larger practices, AI can be used to conduct performance analysis on providers and staff members to increase efficiency. AI can even predict which insurance companies are generating the most profit for specific services and which services for those carriers you may wish to outsource. AI can also be used for inventory management and to assist you with ordering and stocking issues, thus reducing waste, shipping, and storage costs.

As with anything new, the best advice is to start slowly. Don't try to bite off more than you can chew. Begin by selecting one AI application, such as claims processing or patient communication, and see how it works for you. Be sure the platform you choose is user-friendly and can monitor your improvement in whatever metric you selected (e.g., claims denial or time required for charting a certain DMEPOS, etc.).

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Many AI platforms will continue to evolve. An AI tool that only has one unique application will generally not serve you well. Select something that has multiple functions even though you are starting with one targeted application (much like when you started using your cell phone).

AI promises to bring a whole new world to medical and DME practice, and innumerable companies are providing AI-generated solutions for physicians and suppliers. The problems physicians face are most often twofold—thus we will use AI to both augment our clinical skills as well as to better facilitate the business side of practice (a good example is to better understand and comply with the restrictions being put upon us by third parties). Although AI cannot replace you, it can make you a better physician and make your practice more efficient and profitable! **PM**

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