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Editor-in-Chief

It's time to get to know AI

This month's cover story on artificial intelligence (AI) and machine learning provides a glimpse into the future of medical care. The article's title, "An FP's guide to AI-enabled clinical decision support" points to the fact that practical and useful applications of AI and machine learning are making inroads into medicine. However, other industries are far ahead of medicine when it comes to AI.

For example, I met with a financial advisor last week, and our discussion included a display of the likelihood that my wife and I would have sufficient funds in our retirement account based on a Monte Carlo simulation using 500 trials! In other words, our advisor used a huge database of financial information, analyzed that data with a sophisticated statistical technique, and applied the results to our personal situation.

Artificial intelligence will be widely deployed in clinical tools that improve our diagnostic accuracy and provide better personalized data to inform shared decision making.

(No, we won't run out of money—with 99% certainty.)

So as physicians, how can we further increase our certainty in the diagnoses we make and the guidance we offer our patients?

Halamka and Cerrato provide some insights. They discuss 2 clinical applications of AI and machine learning that are ready to use in primary care: screening for diabetic retinopathy and risk assessment for colon cancer. The first is an example of using AI for diagnosis and the second for risk assessment; both are core functions of primary care clinicians. These tools were developed with very sophisticated computer programs, but they are not unlike a plethora of clinical decision aids already widely used in primary care for diagnosis and risk assessment, such as the Ottawa Ankle Rules, the Gail Model for breast cancer risk, the FRAX tool for osteoporosis-related fracture risk, the ASCVD Risk Calculator for cardiovascular risk, and the CHA₂DS₂-VASc score for prediction of thrombosis and bleeding risk from anticoagulation therapy.

Some express concern that sophisticated AI could eventually replace primary care clinicians, similar to how automation reduces the need for routine labor in manufacturing. I think this is highly unlikely, but I do think AI will be widely deployed in clinical tools that improve our diagnostic accuracy and provide better personalized data to inform shared decision making. For example, the colon cancer risk calculator may actually help some patients decide NOT to be screened because their personal risk is so low.

It's incumbent upon us, then, to familiarize ourselves with the potential that these AI tools offer. It's time to get to know AI.

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