The future of AI in medicine and what it means for physicians and practices with Tom Lawry

AMA Update covers a range of health care topics affecting the lives of physicians, residents, medical students and patients. From private practice and health system leaders to scientists and public health officials, hear from the experts in medicine on COVID-19, medical education, advocacy issues, burnout, vaccines and more.

Featured topic and speakers

In today’s AMA Update, leading AI transformation advisor and author of Hacking Health Care Tom Lawry joins us to discuss what the future of AI in medicine looks like and what it means for physicians and their practices. AMA Chief Experience Officer Todd Unger hosts.

- Access the AMA Recovery Plan for America’s Physicians.
- Find out more about Tom’s book Hacking Healthcare: How AI and the Intelligence Revolution Will Reboot an Ailing System.
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Speaker

- Tom Lawry, managing director, Second Century Tech, LLC

Transcript

Unger: Hello and welcome to the AMA Update video and podcast. Artificial intelligence, or AI, continues to be one of the hottest topics in health care. And today, we’re continuing that conversation with a leading AI transformation advisor to health and medical leaders around the world, Tom Lawry. Tom is the managing director of Second Century Tech, bestselling author of Hacking Health and the former national director for artificial intelligence at Microsoft, joining us from Seattle. I’m Todd Unger, AMA’s chief experience officer in Chicago. Tom, we’re so glad to have you. Welcome.
Lawry: Hey, it's great to be with you. Thanks for having me.

Unger: Well, since the launch of ChatGPT, so much of the conversation around AI in health care has focused on one aspect and that's been generative AI. But the term AI, obviously, encompasses so much more than that. I'm a big fan of the definition that you used when you visited the AMA a couple of months ago. And I thought it would just make sense for the audience out there if they heard how you think about it. What do you mean when you talk about AI?

Lawry: Well, great question. Generative AI is the latest flavor of many flavors of what's known as artificial intelligence. So I like keeping things simple. So to your point, let's assume AI is really relating to IT systems, the sense, comprehend, act and learn. Probably, more importantly, it's intelligence demonstrated by software with the ability to depict or mimic human brain functions. And I want to emphasize mimic human brain functions, not replace.

Unger: So in your book, you talk about how AI can solve some of the biggest problems in health care, which is very good news because we do need that help. I'd like to focus on a couple of the most pressing problems for physicians, starting with obstacles like prior authorization and paperwork, in general. How can AI lessen the administrative burdens on physicians? And when is that going to be a reality?

Lawry: Well, I think the answer is it's starting now. It's only, hopefully, going to get better. But to your point, for every physician that's listening, what was the intrinsic reason you went to medical school? It probably wasn't to become a data entry clerk, which is what many physicians I talk to feel like we've turned them into.

So the ability to take those highly repetitive, low-value activities and automate it through the use of AI is one of the key areas that we all should be focusing on. There are the good examples now for what's known as ambient intelligence, where, as a physician is doing a consult, instead of going to the EMR and the corner of that room and hunting and pecking, of having natural conversations and in the background ambient intelligence is recording all of that, is putting together those triage notes to allow you, essentially, to spend more time being a doctor and less time being a data entry clerk. So we're already seeing it. It's only going to get better.

Unger: Well, speaking of that, let's talk about another one of the big concerns for physicians, not unrelated to what we just talked about, and that is physician burnout. So they're already asked to do so much, so fast and for so many people. And unlike when we think about EHRs, how do we ensure that AI is used to reduce physicians' burnout and not just increase their workload?

Lawry: Well, once again, AI as a tool and a vehicle, if properly used, gives us the ability to augment the skills and the work of physicians. So I would address that quickly by saying there are two burdens that AI, done correctly, will help address. The first is what we've already talked about, which is the
A study by Stanford shows many physicians spend more time in the EMR than they do seeing patients. That's just not right. A colleague of mine, Dr. Eric Topol, who's the head of Scripps Research, very popular author himself, coined the term "keyboard liberation". I'm here to say AI can help all physicians with keyboard liberation. We should start the keyboard liberation league today.

The second thing, quickly, that I don't think is getting the kind of attention it should is what I call cognitive burden that is being placed on physicians by the exponential growth of medical data. So a newly trained physician in 1950 would go their entire practice before medical knowledge doubled. Today, it's doubling every 72 days. So even the best, smartest physicians are having a hard time keeping up with all that information to help them make the right decisions. AI has great opportunity when it comes to helping tame that data explosion.

Unger: First off, #keyboardliberation. Write that down. Second, to your point, in terms of the exploding knowledge about medical information, it's also applying to AI itself. The pace of change with this particular technology is just incredible. How does a physician, any practice, no matter what the size, keep up with this?

Lawry: Well, it's a great question and probably the longer answer is not something we're going to do in this podcast. But essentially, the world normally works, particularly health and medicine, on what economists call linear change in growth, which is incremental change produced by technology. Then adoption takes place and the little gaps between technology and adoption and adoption and regulatory. We're in a point where economists also talk about exponential growth curve.

So the biggest challenge for everyone right now is not what the technology can do, but it's the velocity of change that it's driving. So I think any practice, any health care organization is being challenged right now because everything that is set up for leadership for management is based on that linear growth. And exponential growth creates that hockey stick when it comes to change. So it brings us down to—if we're going to be in this for a while, which I believe we are, everyone has to rethink how they manage, how they lead, how they practice.

Unger: On that subject, your book also talks about the qualities that leaders have to help their organizations adapt and thrive in this big revolution in health care. What do you think some of those key qualities of AI leaders are going to look like?

Lawry: Well, I think, first of all, many of the leadership qualities that have gotten leaders to where they are today remain intact, remain important. But when you look at the changes being driven by digital and transformation, I believe there are new set of skills that are desperately going to be needed. And it's not just my opinion. But research by McKinsey and others like Gartner are saying, leaders with the skills they've been successful with in the past will not necessarily be successful in the new world of
digital and AI.

And so we're looking at things like new hard skills, like leaders needing to know AI, which is not to say they need to know how to code it. But they at least need to understand what it is and what it can do when it comes to the practice of medicine. There are also a lot of other things, such as soft skills, when it comes to design thinking. More than anything, the thing I coach leaders on is the importance of thinking differently. And a lot of that has to do with the number one impediment I see when I'm advising big health care organizations about driving value at scale with AI is basically the need to digitally upskill everyone in the organization, starting with leadership.

Unger: That's no small challenge. How do you do that?

Lawry: Well, it starts with leadership. It starts with the acknowledgment that the way you're going to manage and lead in the world of AI is going to be different. And there's a whole new science emerging around things like decisions about decisions, where, in the past, every decision in the health care organization was made by a human and a brain.

And there are many of those things that are being automated. So there are some things, like the practice of medicine, dealing with patients, where humans, physicians, have to be in the loop. But there are many other things we can automate and the humans don't necessarily have to be in the loop. But it's that whole science around decisions about decisions that leaders must understand and then bring forward systems actually apply that in the practice of medicine and in the practice of running these big health organizations.

Unger: So my final question—I'd like to look ahead a bit and imagine that it's 10 years in the future, 2033. In what way do you think that health care will have changed the most as a result of AI?

Lawry: Well, with any luck and done right, while there's so much chatter today about the threats and the issues, and even the existential threat to humankind, I believe the narrative is going to be very different in health care done right. I believe we have the ability to create a health renaissance, where all of the issues we just talked about, when it comes to the things we burdened physicians with, many of those things are going to go away or be dramatically reduced to allow physicians to practice at the highest level, not just for the quality of care but help them intrinsically pursue the reasons they became physicians in the first place.

I see the ability for us to go so much farther when it comes to this relationship with consumers, including consumers having a big play in the management of their health in collaboration with physicians. Beyond that, I see things that are already happening in other parts of the world where we have the ability to truly take this thing called population health and deliver much greater measurable value at scale by the monitoring and management of things like chronic conditions, courtesy of AI coming in behind physicians and support of what they do.
Unger: Well, Tom, I'm going to put that into our little time capsule. And then I'm going to see you in 2033.

Lawry: Add me back—

Unger: We'll see how—

Lawry: —in 10 years, Todd.

Unger: —that goes.

Lawry: Yes.

Unger: Thank you so much for joining us. It really is a pleasure to talk to you. AI isn't the only thing driving change in health care. And along with what we talked about earlier with Tom, we are leading the charge to address those burdens, like prior authorization, burnout and more as part of the AMA Recovery Plan for America's Physicians. You can learn all about our latest wins and our efforts at ama-assn.org/recovery. We'll be back soon with another AMA Update. In the meantime, you can find all our videos and podcasts at ama-assn.org/podcasts. Thanks for joining us today. Please take care.

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