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'Test and listen': Microsoft's Jim Weinstein on healthcare tech

In this podcast excerpt, Microsoft Healthcare's head of innovation shares his thoughts on what technology can and can't do in the healthcare space.

In light of his years of experience as a doctor and a leader of a health system, it's perhaps not surprising that Jim Weinstein has a tempered enthusiasm when it comes to healthcare technology. He is excited about its promises yet clear-eyed about its pitfalls. Weinstein is senior vice president and head of innovation and health equity for Microsoft Healthcare. Prior to joining Microsoft in 2018, he was president and CEO of regional health system Dartmouth-Hitchcock Health, which serves a population of almost two million in the northeastern United States. A respected spine surgeon, he is credited with developing the classification system for treatment of spine cancers. He is a coauthor of the book *Unraveled: Prescriptions to Repair a Broken Health Care System* (CreateSpace Independent Publishing Platform, February 2016).

Weinstein recently spoke with McKinsey's Pooja Kumar as a guest on the *McKinsey on Healthcare* podcast. An edited excerpt of the conversation follows.

McKinsey: How do you see the next few years shaping up for Microsoft and other tech players that want to make a difference in achieving greater healthcare productivity? Do you see technology companies as natural partners to healthcare systems and other stakeholders?

Jim Weinstein: Microsoft certainly wants to be a partner. We're doing interesting things all around the world—like bringing medical supplies and technology to communities where there are

no hospitals, or bringing healthcare to rural areas through remote technology—and we're very interested in helping the workforce become both more efficient and more effective. I'm excited about some of the product lines that Microsoft has announced that I think will truly help improve the physician–patient encounter.

An example is EmpowerMD, which uses natural-language processing so that the doctor doesn't have to sit there typing notes on his computer with his back to the patient, not looking at the patient.[1] These types of solutions will help revolutionize the interchange between the physician and the patient.

Another example is our health bot. Chatbots can be helpful on the administrative side of a hospital. If a patient is calling in to ask questions, you can probably set up a chatbot to deal with a lot of that effectively.

But I also would be cautious about how fast these things will happen. As I well know—both as a physician and as somebody who led a health system—doctors can be very slow to adopt new things, despite how wonderful those new things might be. At Microsoft, we're conscious of that, so our way of rolling things out is that we test, we listen, then we test some more, and listen some more. We try to create partnerships with both traditional and nontraditional players—such as tech companies and retail stores—to achieve that transformation without overwhelming a system with new technologies.

As for the notion that technology is going to help doctors and hospitals save time, I'm not sure. I'm just not sure yet because I haven't seen it. I think we have to be careful not to overpromise.

Technology is interesting, but we have to be careful about how it misses some of the largest parts of the population. We need to be sensitive to solutions for all, not just for some. Microsoft, like other companies, has done tremendous work with using artificial intelligence (AI) for retinal eye examinations, especially in India, where we've been looking for diabetic retinopathy among hundreds of thousands of patients. We then could train an AI model, an algorithm, to read images from eye exams with AUC [area under the curve] numbers better than a human can read them. But what if the patient is an African-American female and the AI model didn't account for that? We could end up overdiagnosing or underdiagnosing in exponentially greater numbers than we are now.

Not everything is an AI problem. And there are risks in AI; people can corrupt networks, and you, as a human, might not perceive it. So, yes, I'm excited about the future and the possibilities of technology, but I think a word of caution is in order.

McKinsey: Do you see technology and automation taking over administrative tasks, especially in light of the waste that we know is inherent in the healthcare system?

Jim Weinstein: Many things could be done in an automated way. People are fearful about tech [taking away jobs] but I think it will be the opposite. Let's use radiology as an example. What is a future radiologist's work going to be? If a chest X-ray can be read better by a machine, we don't

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[1] According to Microsoft.com, Microsoft partnered with Nuance Communications, a provider of conversational AI technologies, in October 2019 to develop solutions that "power the exam room of the future, where clinical documentation writes itself" through the use of ambient clinical intelligence.

need to have somebody sit there all day reading chest X-rays. A machine will read most of these "normal" images, so we don't need as many radiologists to read those. But we do need radiologists to do quality checks on certain images to make sure that there's agreement, validity, and safety, with total accountability. Might we use such tools and information to define high quality, and as a way to improve the training of future radiologists?

We have to start training people differently for a different workforce future. But we're not designed as a system, as a country, to do that. It's going to take a unique medical school and unique community that says [to technology companies], "We're going to start thinking about the future together."

Pooja Kumar, a partner in McKinsey's Boston office, conducted this interview.

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