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Medicine's Digital Age Has Only Just Begun

Even after a messy start, we simply don't have the tools to envision what the digitization of health care will look like in 10 years, says thought leader Robert Wachter at the Health Forum Leadership Summit.

July 20, 2016

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SAN DIEGO — Initially, Robert Wachter wanted to embrace the digitization of health care.

"How could you not be enthusiastic about getting rid of doctors' handwriting?" the celebrated thought leader and physician executive asked during his keynote address at the Health Forum-American Hospital Association Leadership Summit.

But his feelings changed when a year of research on the subject had him questioning "side effects no one was talking about." As one early electronic health record adopter and primary care doctor told Wachter, "The staff came to work one day and nobody knew how to do their jobs."

Another familiar complaint: today, emergency department physicians spend more than 40 percent of their time entering data into EHRs, which Wachter believes correlates to the rise in physician burnout. "We feel like we have become very, very expensive data entry grunts," he said.

In addition to the burden of data entry, Wachter cited fading social connection among hospital staffs as another casualty of the field's (albiet overdue) entry into the digital age. He used the radiology field as an example, which switched from using film for X-rays (that once necessitated face-to-face interaction between physicians and radiologists) to digital files as early as 2000. Although this saved time and money, it eliminated radiologists' connections to clinical care and, completely unanticipated by the field, caused the social relationships between the radiology lab and other departments to wither.

When you break the charts illustrating the numbers of burned out physicians by specialty, "radiology comes out quite high," Wachter said. "The field of radiology is very angsty because they have lost that connection to clinical care."

As Wachter sees it, the rest of health care is next, and it is subject to even further and more radical transformation. "We're going to see the disruption we saw in radiology now in the rest of medicine," he said, and we've only reached the tip of the iceberg in visualizing what that disruption will look like.

"We're still approaching [health care] problems in relatively standard ways," Wachter said. "The history of digitization shows that those standard approaches will be ultimately disrupted by new approaches that we can't even imagine today."

Already, digitization has changed what Wachter calls "the geography of the work," often eliminating the need for physicians and nurses to gather communally in wards: a death knell for some of the collaborative efforts toward which the health care field has worked so hard. While these side effects have been difficult to predict, "We have to be aware of [them] and figure out ways of mitigating [them]," he said.

Although it's been messy for health care, this stage of the digital learning curve is typical, Wachter said. Wachter mentioned a "productivity paradox," a term coined by an MIT scientist in the 90s, which proposed that in any industry, new technology would eventually "be great," "but a few years would go by and nothing would happen."

"The productivity paradox is ultimately resolved and there are two keys to resolving it, but the bad news is that it takes an average of 10 years to resolve," Wachter said.

What we can do, Wachter said, in addition to the essential work of mobilizing and engaging our work force, is to reimagine the work we have ahead of us.

"We're not smart enough to have [anticipated all potential problems] in real time; that's why it typically takes five or 10 years," he explained. "As you're thinking about building capacity in your [hospital], you need to ensure that you have the people who can do this transformation work, and have the clinicians who have the mindset to say 'I understand quality improvement and patient safety, and the organization will support me if I come up with a new and better way of doing this work.' "