Trends in Health IT Adoption Among Physicians

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By Aubrey Westgate [3]

The correlation between physician age and technology adoption is very real — and the reasons for it very complex. Here's how practices can get doctors of all ages on the same page.

Source: Physicians Practice

Ophthalmologist Robert Melendez's practice, Eye Associates of New Mexico, implemented its EHR in 2005. Of all 14 clinic sites that make up the 42-physician practice, Melendez's was picked to test out the new system first. "They started in my clinic simply because I was the youngest person at the time and they just assumed that I would grab on to it a little bit faster than others," says Melendez, who was then 35.

It's a common assumption made at many practices. Younger physicians — the thinking generally goes — are more willing, eager, and able to adopt new technology. In Melendez's case, the assumption was correct. He calls himself an "early adopter" of new tech tools, and often uses his tablet at work, along with an EHR and several advanced eye surgery technologies. He also has several Facebook pages, an active Twitter presence, and lectures to doctors on social media.

"Certainly if you hung out with just young people there would always be a few in the group that are 'late adopters' so to speak," says Melendez. "But I think, generally speaking, people that are 60 and older tend to be a little bit more hesitant in adopting new technologies, partly because of fear — fear of the unknown."

Studies show that there is, in fact, a strong correlation between physician age and technology usage and adoption — but the source of that correlation goes way beyond birth date. A physician's age is also tied to a variety of other factors, such as where he chooses to practice, when and how he trains, and how much access he has to capital — all of which, of course, influence his ability to adopt and implement new technology.

To learn more about the source and extent of the age-related technology divide among physicians, we spoke to doctors of different ages and specialties. We also spoke to researchers about some of the most recent physician and technology age-related findings. Here's what they said, and some of their tips for how to cope if you are experiencing a technology divide among physicians at your practice.

Sizable problems

First, let's be clear that we are referring to general trends here. There are certainly many older (let's say, older than 50) tech-savvy doctors. There are also many younger tech-wary doctors. Numerous studies do show, however, that there is a "statistical correlation" between physician age and technology adoption, at least when it comes to health IT, says Joy Grossman, senior health researcher at the Center for Studying Health System Change, which conducts health policy research and analysis.

In 2011, for instance, 64 percent of physicians younger than 50 had EHRs, while only 49 percent of physicians age 50 and older had them, according to a 2012 National Center for Health Statistics data brief based on survey responses from 3,180 physicians. What's more, a follow-up study on the same data "found that the age gap is actually widening over time in terms of adoption," says Grossman. While some might attribute this lag to a resistance among older doctors to adopt new technology, David Lee Scher, a former cardiologist and a current digital health technology consultant, says much of it is due to practice environment. Older doctors, he points out, tend to practice in small and solo practices, while younger doctors tend to favor employment in larger healthcare systems. As a result, older doctors tend to have fewer financial resources to allocate to new technology. "There is still a significant amount of physicians in solo practice who don't even have electronic billing, so [the technology divide] goes way beyond 'super-sexy' new kinds of technologies," says Scher. "I think [older doctors] have been technology-averse primarily because of cost, not because they are afraid of the technology itself."

There is, in fact, also a strong correlation between practice size and tech adoption — especially when large-scale technologies are considered. In 2011, 78 percent of practices with 10 or more physicians
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used EHRs, 68 percent of practices with two to nine physicians used them, and only 54 percent of solo practices used them, according to a 2011 Deloitte Center for Health Solutions survey of more than 300 primary-care physicians and specialists.

Underexposed
While practice size and availability of resources play roles in the age-related technology adoption divide, generational differences are also a factor. "The youngest doctors, part of the 'C' or 'connected' generation, grew up in the technology age," points out Scher. "It becomes a second nature need to have [tech tools in practice] rather than something that comes in from left field ..." At the same time, older doctors may not see the need — or have the same need — for technology as their younger colleagues. "A physician who has been getting along just fine without doesn't recognize or doesn't value the advantages an EHR has as compared to a newer physician ...," points out cardiac anesthesiologist Harry Greenspun, senior advisor for healthcare transformation and technology at the Deloitte Center for Health Solutions, the health services research arm of Deloitte LLP.

Adding to the divide is that many of the youngest doctors have always practiced with the latest and greatest tech tools. "If you think about any technology that's used, typically those things are introduced in academic medical centers and it's physicians in training who get exposed to those, and when they go out to community practice certainly they often bring those things with them," says Greenspun. "The barriers to the [older] physician are actually the incentives to a newer physician who has been using these things."

Plus, as physicians near retirement it's more likely they will shy away from large-scale, expensive IT projects, according to Greenspun. "...When you look at the return on investment of these, if the return on investment is going to go beyond the retirement years or the retirement date of physicians, that's certainly a factor," he says.

Different frequencies
When exploring the relationship between physician age and technology, the rate of technology adoption by medical practices is only half the conversation. It's also important to explore how — and if — the actual self-utilization of technology differs among physicians of different ages. In other words, if older physicians have access to new technology, do they use it as often or as extensively as their younger peers?

There's the stereotype of course, that older physicians have a harder time learning to use new devices. But a number of studies combat that theory. Research conducted at Boston's Brigham and Women's Hospital and published in the Journal of the American Medical Informatics Association, for instance, found that clinicians who were more than 10 years out of medical school were more likely to use a new function that had been added to the hospital's EHR than physicians who had graduated fewer than 10 years prior to the study.

"A lot of what we found in the study cuts against the conventional wisdom that it's kind of the 'kids' who use the new stuff, whereas we found that it was doctors who were busier, older who tended to use the new functionality rereleased too...," says lead author Jeffrey Linder, a clinical investigator and internist at Brigham and Women's and an assistant professor at Harvard Medical School. Another study, conducted by the Center for Studying Health System Change on e-prescribing rates, had similar findings. "What we found is there was definitely a gap in terms of age in the availability of e-prescribing in a physician's practice," says Grossman of the 2010 study, based on the organization's 2008 HSC Health Tracking Physician Survey. "But when looking just at the doctors with e-prescribing [tools in their practices], there was still an age gap among doctors who said they used it routinely — but the gap shrank."

Not so mobile
When utilizing mobile technology, there does appear to be significant age-related differences. The adoption of mobile devices — including smartphones and tablets — is "pretty universal" among physicians regardless of age, says internist and cardiologist Kelly Choi, vice president of physician experience and marketing at QuantiaMD. Eighty percent of the online physician community's 150,000-plus members have either a smartphone or tablet, and 25 percent have both, she says. "Where I think you see some differences, and I've seen this in other research, is the frequency of use during a given day." Choi estimates that younger physicians use their smartphones twice as often as their older colleagues, especially if those physicians are older than 65.

This mobile usage divide is especially apparent when considering mobile applications, says Scher who is also senior medical advisor at Happtique, a medical app management solution company. "While older physicians utilize mobile technologies and medical apps for informational purposes, younger physicians are using them to a greater extent," he says. "I think that they are
looking into apps to facilitate patients in engaging in their own care to a greater degree."

Making tech connect
David Mokotoff, a 64-year-old cardiologist based in St. Petersburg, Fla., says he and the majority of older physicians at his practice are "ready adopters" of new technology. Still, he says, there have been some exceptions. "There was one doctor, who was about my age ... who even up to the very end was very resistant to utilizing electronic medical records," he says.

Though the situation at Mokotoff's practice resolved itself, it does raise an important issue:

Technology divisions often crop up in multi-physician practices.
If unaddressed, such divisions can lead to physician conflict. Worse, if one physician is particularly reluctant to adopt new technology, it may prevent the entire practice from accomplishing its technology-related goals.

Here's what to do if a technology divide occurs at your practice:

**Think ahead.** Prior to embarking on a large-scale IT project, take special precautions. When talking with vendors, emphasize that some of your physicians are going to need especially good or additional training, says Mokotoff. "I would use that as a competitive thing saying, 'Look, can you throw this in as a benefit?' and 'Who is this person who's teaching us?' and 'What kind of experience do they have?'"

**Showcase special features.** Some physicians may be reluctant to use new technology because they are frustrated with it. Make sure they understand the basics and provide additional training, if necessary, says Grossman. Then, showcase special features and cool tricks to keep them moving forward. "I think the idea is to pick some really quick wins that you know would be attractive to them," she says.

**Leave the office.** If physicians are reluctant to adopt new technology, show them how other practices are using it. This may help encourage them to accept that it's worth their time, says Mokotoff.

**Encourage peer support.** Ask physician champions to help strugglers or skeptics get up to speed, says Scher. "Someone teaching or exposing someone on their own level really is the best way to convey the technology, the importance, the relative simplicity, and advantages of these things."

**Don't miss the obvious.** If some physicians aren't using new technology it may be because it's not useful to them. For instance, don't just hand out tablets. Make sure the core assets physicians need to access in a given day are available on the tablet in a convenient manner, such as your EHR, e-mail, website, etc., says Choi. "A physician might have an iPad or other device that they use for personal reasons, but if it doesn't make their job easier, faster, or better they are not going to use it professionally."

Other tech divides
The technology divide is not just driven by physician age and/or practice size. Another factor is practice location. "As you travel the country, you see there are dramatic differences in adoption of IT, not just in healthcare but across the board," says cardiac anesthesiologist Harry Greenspun, a senior advisor of healthcare transformation and technology at the Deloitte Center for Health Solutions. Rural physicians often lack the capital and resources, (even broadband may be limited), to implement new technology.

Specialty is another big factor. According to a study recently appearing in Health Affairs, 40 percent of primary-care physicians had basic EHRs in 2011 while only 31 percent of specialists had them. One of the study's coauthors told InformationWeek Healthcare the lower rate among specialists was partly due to "the limitations in the EHR systems on the market," which may not offer the features that some specialists require.

**Identify your tech approach**
When discussing a possible technology purchase at your practice, it's helpful to understand where physicians fall on the technology adoption curve, says New Mexico-based ophthalmologist Robert Melendez. He points to technology consultant Geoffrey Moore's book "Crossing the Chasm," which groups tech purchasers into five distinct categories along the "technology adoption life cycle."

Melendez explains:

**Innovators:** These physicians are typically the "most technologically savvy," he says. They "jump on everything very, very quickly," he says, noting that they want to test out new technology before it's even released.

**Early adopters:** These physicians wait a bit longer than the innovators to adopt new tech tools. "They look at technology and say, 'How can we make use of the technology to not only provide better quality to patients, but also increase our revenues?'" says Melendez.

**Early majority:** These physicians tend to follow the lead of the early adopters. "It's the early
majority people that say, 'OK, you know what ... they've at least spent some research doing it and they've had it for a year, they worked out some kinks, now I'm ready to buy.'"

**Late majority:** These physicians eventually adopt or begin using new technology, but they are reluctant. They have "to poke holes through everything," he says.

**The laggards:** These are the "naysayers to everything," says Melendez. "They will die before they switch to an EHR."

Don't panic if your practice's physicians fall on opposite sides of the adoption curve. It's not necessarily a bad thing. "You want to avoid the group concept where everyone's drinking the 'Kool-Aid,' and anything that's new that comes along everyone buys into it," he says. "You really do need some naysayers in the background, just to evaluate things a little bit longer."

**In Summary**

Older physicians tend to lag behind when it comes to technology adoption. However, reluctance to use technology doesn't always mean unwillingness to master new skills. Here are some factors:

- They often practice in smaller practices with fewer financial resources;
- They have practiced for a long time without the latest tech tools and may see little need for them; and
- They are closer to retirement so the return on investment of implementing new technology isn't great enough.

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