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Measurement, Certification, and Quality

Meeting Enduring Challenges with Modern Tools

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The author, a former chair of the ABIM, describes the challenges that the board certification enterprise is experiencing as medicine shifts from being a paper-based to a digital industry. While there are clearly threats to board certification, he argues that boards can remain highly relevant if they focus on areas in which they can make unique contributions, such as the measurement of cognitive skills, diagnostic accuracy, "keeping up," and procedural skills. *Ophthalmology 2016;123:S46-S49 © 2016 by the American Academy of Ophthalmology.*

With its founding in 1916, the American Board of Ophthalmology (ABO) launched the entire enterprise of physician quality assessment, an enterprise that, I believe, has saved many thousands of lives. Despite its many contributions to patient care and education, today we find the entire board enterprise under assault from a variety of forces that are unsympathetic to the premise that physician quality and safety need to be measured, or that the boards are the best organizations to carry out such measurement. I was privileged to spend a decade on the board of directors of the American Board of Internal Medicine (ABIM), culminating with my term as chair from 2012 through 2013. During my period of service with the board, we certainly had a sense of the growing disquiet among our diplomates, many increasingly unhappy with a variety of regulatory requirements that some believed were unproductive and a distraction from their core work.

However, I did not fully understand the depth of the concerns until we, in collaboration with many of the other boards under the umbrella of the American Board of Medical Specialties, launched our new process of continuous maintenance of certification in 2013. The firestorm that resulted threatened the very existence of the ABIM, leading to a famous February 2015 letter by our chief executive officer, Dr. Richard Baron: "Dear Internal Medicine Community," it began. "ABIM clearly got it wrong. We launched programs that weren't ready and we didn't deliver a [maintenance of certification] program that physicians found meaningful. We want to change that."[1] Despite this apology, the ABIM continues to be under assault by physicians who question the legitimacy of the board certification process and who believe that the quality of their practice is either self-evident or should be judged by their participation in continuing medical education activities. At this writing, it is not clear how this battle will end.

Of course, the measurement of physician quality has always been contentious. The founding of the ABO in 1916 came soon after the seminal work of Ernest Codman, the Massachusetts General Hospital surgeon who aspired to create a so-called end results hospital, in which the outcomes of patients would be measured and reported publicly. In 1914, 2 years before the ABO's founding, Codman received a letter from a colleague that began, "The very enemies who lurk in second story windows with muffled rifles are waiting your passing."[2] One wonders what would have happened to Codman had social media been around a century ago! Although he was spared a Twitter onslaught, his experience illustrates that the work of measuring the quality of physicians has always stirred up significant passion within our profession.

In this article, I describe today's context for the boards' work as the ABO enters its second century. I highlight 2 major trends: the growing pressure for value in American health care and the information technology revolution. After laying out these trends, I add some thoughts about where the boards fit into this increasingly crowded, fast-paced, and fractious landscape.

The Case for Change

Why are we being pressured to change? Well, that one is easy. There is growing evidence that American health care does not produce a high-value (that is, quality divided by cost) product. This impression has been bolstered by a substantial body of evidence and several influential reports. For example, the Institute of Medicine's 2000 report on patient safety, *To Err Is Human*, presented data showing that 44 000 to 98 000 Americans die as a result of medical mistakes each year, the equivalent of a large jumbo jet crashing every day.[3] In 2003, McGlynn et al[4] published a study in the *New England Journal of Medicine* that found that American medicine adheres to evidence-based practice 54% of the time. There are equally compelling data showing that access and patient satisfaction are problematic and highlighting enormous variations in care and significant health care disparities. On top of that, of course, is the staggering cost of American health care, which recently topped $3 trillion,

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representing a far greater fraction of our gross domestic product (17%) than that of any other country.

The pressure for value is only one of the sea changes in the American medical landscape. In addition, in the last few years we have gone from a primarily analog, paper-based industry to one that is fundamentally digital. This movement was prompted by $30 billion of federal incentive payments dispersed between 2010 and 2015, incentives that succeeded in increasing the penetration of electronic health records from approximately 10% to nearly 80% in both doctor's offices and hospitals.[5]

My own belief is that these 2 transformational trends—the pressure to deliver high-value care and the digitization of health care—are rapidly shifting the entire medical landscape. Today, the demand for value is the greater of the 2 forces: physicians and health care delivery organizations are feeling increasing pressure from a variety of fronts to deliver better, safer, more satisfying care at a lower cost.

But I predict that, 10 years from now, we will look back and say that the change from analog to digital was the larger catalyst for transformation. Why? Because this is the history of every other industry that has been touched by digitization. Just consider the plight of taxi drivers, hotel operators, or camera manufacturers in the era of Uber, Airbnb, and digital photography. In medicine, we are seeing the earliest stages of our digital transformation, and it's not surprising that we've not yet witnessed the full impact of digital disruption. I believe we will, within a few years.

Why have we been somewhat sheltered by the disruptive forces of digitization? I believe it is because our digitization has been limited, focused mostly on transformation within our professional sphere. But that is changing rapidly. The $30 billion of federal incentive payments led to 2 major upticks in computerization, one predicted and intended, the other less predicted but perhaps ultimately more important. The predicted one was convincing doctors and hospitals to buy electronic health records. That is what the money was designed to support, and it did, with a marked increase in the penetration of electronic health records built by familiar companies such as Epic, Cerner, and Allscripts.

But the federal incentives did another thing, one that ultimately may be more important: awakening Silicon Valley to the health care market, which, after all, represents 17% of the gross domestic product and, up to that point, was the last large swath of the economy to remain stubbornly analog. As soon as hospitals and doctor's offices went digital, the funders and developers of Silicon Valley saw their chance to enter the health care world in a decisive way. You see that in the form of Fitbits, Apple Watches, and a multitude of other apps, wearables, and sensors. Even with this, the impact of these consumer-facing information technologies is relatively limited, because they're currently all siloed. There is no ubiquitous flow of data through the entire health care system, and it is often such liquid flow of data that catalyzes the massive disruptions we've seen in other fields.

Interoperability

The concept of interoperability is familiar to us: it is why you can have an AT&T phone and effortlessly call a Verizon phone, or you can put your Bank of America card into a Citibank machine and withdraw $100. Health care today is like the Transcontinental Railroad, with one set of tracks being the enterprise electronic health records, and the other (coming from the other coast) being the consumer-facing apps, sensors, and wearables. Today, those tracks mostly don't connect. But within 5 years, I believe they will, as regulatory and business pressures will lead someone to lay the metaphorical golden spike. When that happens, disruptive innovation is likely to be unleashed throughout the system. One part of the health care system likely to be disrupted will be the work of those, like the boards, who are in the business of measuring and influencing the quality of care.

In my book *The Digital Doctor*, I explored our early awkward stage of health care digitization. Based on nearly 100 interviews, I described the lack of user-centered design; the impact on physicians, who find themselves serving as very expensive, very unhappy data entry clerks; and the capacity for information technology to facilitate new kinds of medical mistakes. The latter category included a staggering error at my own hospital: we gave a 16-year-old teenager a 39-fold overdose of a common antibiotic, despite a state-of-the-art electronic health record.[6]

What was going on? I came to believe that Harvard political scientist Ronald Heifetz had it right when he described 2 kinds of changes in organizations: technical change and adaptive change. Technical change is straightforward: simply follow a set of directions and you get it right. Adaptive changes are, in Heifetz's words, "Problems that require people themselves to change. In adaptive problems, the people are the problem and the people are the solution. And leadership is about mobilizing and engaging the people with the problem rather than trying to anesthetize them so you can go off and solve it on your own."[7]

In health information technology, we treated the entry of technology into our extraordinarily complex world as technical change, whereas it is truly the mother of all adaptive changes. If we are to get it right, we need to understand that you can't simply put in a computer into a complex health care ecosystem and have it work right. The computers change everything about the work, and therefore we have to re-envision the roles of the people and the workflow to take full advantage of our new digital tools.

Digital Medicine Meets Board Certification

All of this will have an important impact on the area of board certification. As other stakeholders, including delivery systems, payers, and journalists, become interested in measuring whether a doctor is any good, they are likely to succeed in certain areas. The nearly complete penetration of electronic health records and the availability of big data analytics will allow others to measure certain dimensions of physician quality, such as patient experience, adherence to evidence, appropriateness, and maybe even teamwork.

We are left to struggle with a question: what are the unique competencies that boards have in measuring the quality of physician care? I come up with the following: