Driving on Main Street: The Road to Widespread Physician EHR Use

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To those of us physicians who have long worked to encourage the use of electronic health record systems and other health information technology to improve care, what once felt like the frontier is feeling more and more these days like Main Street—during rush hour no less. The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, with its time-limited funding to help offset the cost of implementing such systems, largely contributed to the recent surge in interest and activity in electronic health record (EHR) adoption and meaningful use. HITECH has also increased physicians' sense of urgency by drawing attention to looming healthcare payment reform, giving notice that organizations that lack qualified EHR systems containing data that prove and improve healthcare quality and value likely will suffer financially.

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Physicians newly interested in achieving EHR meaningful use may be reacting to different and transient forces than those of us who were out on the health information technology (IT) frontier. It is important to ensure that these physicians can align with the success principles that motivated leaders of successful EHR implementations in the days before HITECH, including those visionary CEOs who described their experiences in the feature articles. These correct principles are independent of any time-limited stimulus incentives and persist long after the EHR meaningful use incentive dollars are gone.

**Motivating Hospital and Health System Leaders**

The feature articles are replete with important rationales, insights, and advice from CEOs nationally recognized for their successful EHR system implementations. The authors’ comments can serve as a useful reference for fellow CEOs leading their own boards, leadership teams, physicians, nurses, and other health professionals to work to achieve the health IT-enabled care transformation they see as essential to patient care quality and organizational excellence.

M. Michelle Hood points out the critical importance of realizable, real-time, consequential exchange of information enabled by health IT, as well as the need to properly frame EHR implementations as transformative clinical care redesign initiatives rather than as IT projects. She also underscores the importance of responsiveness to business climate issues while promoting participative decision-making structures, communication, collaboration, process redesign, standardization, and frequent reporting on important processes and outcomes.

Meanwhile, CEOs David Bernd and Peter Fine, who lead organizations nationally recognized for their successful implementation and productive use of advanced health IT systems, provide cautions regarding the unsustainable nature of the current healthcare delivery system, the precarious prospects for those who change too little or too slowly in the face of needed reform, and the capacity EHR systems possess to empower improved patient outcomes and costs when integrated into clinical practice. While their organizations are shining examples of the profoundly positive impact that successful EHR implementations can bring, Bernd and Fine are realistic in describing important barriers encountered on their EHR journeys and suggestions for reaching the next horizon.

**Physician Engagement: One Key to EHR Success**

Ultimately, no effort to achieve health IT-enabled care transformation will succeed unless physicians—whose orders trigger most determinants of healthcare quality and costs—are meaningful users of robust EHR systems that support desired improvements in quality and value.

While physicians on the whole have been slow to implement EHRs, we are not necessarily resistant to information technology in general or even to certain aspects of health IT use. Like other consumers, most of us increasingly use some combination of electronic technologies, such as digital cameras, ATMs, smart phones,
digital media, GPS devices, social media, online reservation sites, airport check-in kiosks, and barcode scanners or credit card readers at grocery checkouts. As people with busy lifestyles and lots of information to manage, we tend to be most interested in technologies that save us time, keep us organized, eliminate hassles, help us get our work done, and otherwise add to the comfort, convenience, and connectedness of our lives, no matter our location. Most of us also want to see people who are like us already using the technology with good results and satisfaction.

Translating this to the workplace, physicians are more likely to use technology when it has a clear benefit and is easy to learn and use. Examples include technologies that decrease diagnostic uncertainty (e.g., CT scan), improve therapeutic effectiveness or safety (e.g., ultrasound-guided thoracentesis), enhance workflow efficiency (e.g., PACS imaging workstations on hospital floors), generate a per-transaction revenue stream (e.g., performing an echocardiogram), or can be delegated to others (e.g., clerk order entry, electronic medication administration). Promoting the technology’s benefits and ensuring its ease can facilitate physician health IT adoption and optimal use.

The Challenge of Getting Physicians Onboard

Many factors contribute to why physician purchase and use of EHR systems has been limited and why even today incentives are considered necessary to accelerate desired EHR adoption and meaningful use. As Bernd and Fine point out, EHRs are complex and expensive to implement. Unlike performing CT scans or interpreting ultrasound data, EHR use does not provide physicians with a direct per-use payment to help offset implementation costs. While physicians can see financial benefits to EHR use, they often see themselves as paying most of the costs while others receive most of the savings.

In addition, to physicians many EHR systems still appear to have been designed by nonclinicians who paid more attention to business needs than to usability, efficiency, clinical content needs, or workflow integration. In addition, substantial training and practice time is required for typical physicians to become proficient and efficient EHR users—time that could be spent generating revenue and fulfilling patient service needs.

Physician motivation has also been tempered by mixed evidence from the literature on the impact of EHR implementation and use on quality, safety, and value. Indeed, even the choice of words the featured authors use to describe the impact of EHRs and health IT underscore the lack of consensus in this regard and the additional work needed in this area: “in the belief that EMR is an enabling technology” (emphasis added).

This equivocation comes from an intellectually honest place. Rather than try to summarize the literature, I will simply comment that there is validity in the research that shows that EHR and health IT system use can be associated with improved healthcare quality and lower costs; there is also validity in the research that shows that this is far from always the case. Indeed, some studies (summarized by Buntin et al. 2013) show that inadequately designed, implemented, or utilized systems can pose hazards to patient care quality and safety and that failure to
address important sociotechnical factors can result in users taking elaborate workarounds to get the work done efficiently or to meet coworkers’ needs, such as affixing patient identification barcodes to computer carts to improve the efficiency of electronic medication administration (Koppel et al. 2008).

As such, healthcare executives leading organizational change using EHR and other health IT systems need an elevator speech that explains to skeptical physicians why the organization is moving forward with EHR implementation and why all physicians will be expected to use the EHR routinely and meaningfully, despite incomplete evidence of benefit. This speech needs to put the patient at the center.

An editorial by physician informatics expert John Halamka (2006) can help. It begins with the story of how a preventable medical error caused his grandmother’s death, one that likely could have been prevented if her records had been stored in an EHR with automated workflow tools and decision support rather than in an office he described as “a sea of paper.” Halamka considers the national sense of urgency to implement EHRs justified by evidence that “the right combination of technology and institutional culture can lead to important gains in quality and value. The United States needs these gains so desperately that it is willing to bet on EHRs despite the limited scope of the evidence. Several applications seem so likely to improve the quality and effectiveness of care that we should use them now.”

As to the suggestion of waiting for additional evidence before taking action, Halamka adds, “Face validity is sometimes enough. For example, few people would want to participate in a placebo-controlled, randomized trial of the efficacy of parachutes against gravity.”

What Motivated Early Physician Health IT Champions?

Halamka’s sentiments help explain why some of us physicians worked so hard in the early days to implement and improve EHR systems—it was not because we were geeks about computers. Rather, I believe we implemented EHRs because we saw a problem we felt could not be solved with paper—in fact, we were drowning in that same sea Halamka mentions. We knew we would be unable to consistently provide high-quality care if we continued to rely on paper charts and books on shelves.

We saw information technology as a potential lifeline to a durable solution. We could no longer pretend we were powerless to address the reality that the data we needed to inform clinical decisions were sometimes buried deep in paper charts or locked up in a facility down the hall, across town, or across the country. Having touched the problem, we owned it. We started fabricating a few “parachutes.” When people asked us why we felt it was important to invest in development, deployment, and optimal use of EHRs and health IT, we could answer the “why” question with a single word: quality.

Motivating Physicians to Use Health IT

The quality message is an important starting point for motivating physicians to use health IT, especially when the gains are verifiable, additional benefits are highlighted, barriers are addressed, and the risks and consequences of inaction are made unmistakably clear. The most visible of the recent motiva-
tional strategies are the time-limited CMS payment incentives for EHR meaningful use (HHS 2010; Blumenthal and Tavenner 2010) supported by the EHR certification program (HHS 2011) program to ensure systems that can support meaningful use.

Many factors, such as patient expectations, organizational mandates, payer incentive programs, medical home eligibility, and practice reputation, can encourage EHR and health IT use. However, signals embedded in the HITECH Act and the Affordable Care Act regarding payment reform are highly motivating to healthcare executives and physicians alike (Blumenthal 2010; Kocher, Emanuel, and DeParle 2010). While it is not yet clear what payment reform will look like, in its relationship to health IT such reform will likely encourage what has been described as a more “virtuous cycle” (Park and Basch 2009) in which data-driven, value-based payments encourage care innovations that use health IT. Health IT systems capture and report the beneficial impact of such innovations on quality, which leads to enhanced payments that drive the next round of care innovations, and so on. Regardless of where you stand on the politics of payment reform, Bernd and Fine put it well in saying, “there is no turning back the clock” for CEOs when it comes to using health IT and EHR systems to improve quality and value. Increasingly, physicians agree and are changing their question from “Why should I?” to “How do I get started?”

Helping Physicians Use Health IT
CEOs can help physicians effectively use EHRs and health IT by working with their boards and executives to ensure that three outcomes are realized.

1: Make sure the EHR works.
Work with the CIO and his or her team to ensure that everything is in place so that providers are confident that the EHR will work as reliably as a light switch. EHRs and the systems they run on must be available, responsive, and reliable. Otherwise the calls to return to pen and paper will increase. It is critical to establish the IT department’s track record of excellence in delivering physician-facing clinical information systems that work.

2: Make sure everyone uses the EHR.
As Bernd and Fine indicate, the holding company approach to EHR implementation, in which certain physicians can opt out, is a path to failure. The 99 percent of physicians who are more or less reluctantly willing to go along with EHR implementation will be watching to see how you deal with the 1 percent of physicians who test your sincerity.

Because you will not be making EHR use optional, it is critical to provide resources to ensure that the EHR implementation engages physicians from the beginning. EHR governance should include significant physician representation. Respected physician subject matter experts should be called on to help ensure that the clinical content is adequate for go-live and that clinical workflows have been analyzed and redesigned for the EHR environment. The top ten paper chart problems that can be solved using an EHR should be highlighted and used as motivation for training and practice. Physician champions and superusers should be identified early to promote the initiative; participate in physician classroom training, proficiency assessments, and dress rehearsals; and support physicians during the transition after go-live.
In the early days after an EHR go-live, even well-trained and technically proficient physicians and staff feel the stress of moving from the unconscious competence and “muscle memory” of their previous paper workflows to EHR workflows requiring greater initial effort and concentration. Now that they are using the EHR with real patients in actual clinical settings, the complexity is compounded by the introduction of the computer into the provider-patient relationship. Physicians will need to learn the technical and interpersonal skills for doing this well.

Champions and superusers trained not only in how to use the EHR system well but also in how to motivate and support other users in doing so are critical to successful EHR implementation, optimization, and care transformation. Carefully recruited and well-trained EHR superusers providing “at the elbow” support in the early days after EHR go-live can mean the difference between success and failure. Superusers can effectively empathize with other physician end users and credibly speak to the benefits—quality, efficiency, productivity, satisfaction—they experienced as part of their own training and use. Superusers can also reinforce learning by connecting the dots between how a task used to be completed on paper, how it can be done in the EHR, what is required for meaningful use incentive payments and other quality goals, and how providers and staff can work together to achieve these goals.

3: Make sure the EHR transforms care.
It is here that providers and staff are most likely to look back with the greatest pride and say that the time, effort, expense, and stress of workflow redesign, EHR implementation, and optimization were worth it. To promote this, ensure a regular stream of posted reports and electronic dashboards that show steady improvements in the quality measures that matter to each provider and staff member. As Hood notes, there is significant healthcare executive consensus that health IT has the greatest positive impact on quality outcomes, medical error reduction, and clinical care standardization, so these are great places to start when configuring the EHR system and generating your first reports.

Create a culture of transparency, individual accountability, and mutual support so that when people see opportunities for improved quality and standardization they appreciate the feedback, see a realistically achievable path to desired improvements, and enjoy the recognition for their achievements. Encourage the health IT-enabled care innovations that are likely to improve quality and value. Analyze the data to see what worked and what didn't, report and celebrate progress, and then build on what you learn in the next round of innovations. This is what will keep the “virtuous cycle” going, to the benefit of our patients and our organizations.

Conclusion
Many forces are converging to drive EHR adoption and meaningful use from the back roads onto Main Street, and healthcare executives play a critical role in ensuring everyone arrives safe, sound, and happy to be there. To achieve goals of quality and organizational excellence, physician EHR use cannot be optional, yet the transition from paper to EHR use is still strenuous enough that a compelling argument
must be made to physicians regarding why changing now is essential, why everyone must participate, and how the organization will help them get there.

Physician engagement in the change process is vital. Wisdom may dictate paying physicians for their time leading this colossal quality improvement initiative, whether as part of EHR governance, clinical content development, policy creation, champion or superuser duties, or other activities.

Healthcare executives must ensure that the EHR is robust, available, responsive, and reliable. The EHR design, validation, and build process needs to give physicians reasonable and efficient workflows to help the transition from the way they used to do things on paper to the way they will do them in the EHR. Physician EHR training then needs to ensure and confirm needed proficiencies. Clinical decision support must be actionable and encourage continuous quality improvement without being intrusive or poorly timed. Interoperability and electronic health information exchange with other clinical information systems and providers must be ensured.

Finally, both the beneficial impact and the unintended consequences of EHR use in the organization must be communicated. Quality gains should be celebrated and used to inform new IT-enabled care innovations. Negative unintended consequences must be made visible and rapidly addressed to promote patient safety and build trust in the system.

Buckle up—it should be an exciting ride.

References