

Electronic Health Records and the National Health Information Network: Affordable, Adoptable, and Ready for Prime Time?

This issue contains 2 articles on different aspects of the “wiring” of health care in the United States. One article details the costs and difficulties of implementing an electronic health record (EHR) system in an internal medicine practice, and the other estimates the costs of building a national health information network (NHIN). Baron and colleagues (1) recount their small practice’s predictable struggles and ultimate success with implementing an EHR. Their narrative is compelling and tells a story that many physicians will find useful and instructive. The authors also offer suggestions that could make this complex process easier for those who follow their lead. Kaushal and colleagues (2) approach the “decade of the EHR” from a national perspective, telling policymakers and politicians how much money they should allocate to build the infrastructure—almost \$400 billion over 5 years—if indeed the United States is serious about moving from a siloed, paper-based system to one that is electronic and fully interconnected.

While the rationale for moving the patient’s health record off paper is clear—making care better, safer, and more equitable (3)—we don’t know what exactly the transformed system will ultimately look like or how we will get there (4). Both articles in this issue raise questions that relate to this vision, as well as affordability and tactics. Will meaningful health care transformation follow easily after EHR adoption or systemic interconnectivity? Are EHRs and the NHIN interdependent? Is the EHR affordable for the average small practice? Can the United States afford the NHIN? How can we make EHR implementation and secure connectivity easier and less costly?

The EHR seems to be the ideal point-of-care solution for most clinicians to simultaneously improve quality and enhance operational efficiency (5). However, for various reasons (6), EHR adoption has been slow in the United States, particularly for physicians in small practices (7). The reasons include its cost, immature technology, difficulty with assessing product quality and appropriateness for a particular practice, incomplete interoperability with other necessary systems, and a misalignment of incentives (providers bear the costs and others reap the benefits) (8, 9). However, within the past year, the rate of adoption has begun to increase.

Many share the credit for this health information technology turnaround. David Brailer, our first National Health Information Technology Coordinator, has catalyzed enormous energy and enthusiasm toward EHR adoption, both within government and from the private sector. By creating voluntary standards for EHRs, the Certification Commission on Health Information Technology (CCHIT) should make the process of choosing between certified EHRs easier and less risky. Many medical professional and specialty soci-

eties are beginning to offer even more focused advice and, in some cases, even discounted purchasing plans. The Physicians’ EHR Coalition (PEHRC), a new coalition of 21 such societies (including the American College of Physicians), is encouraging these efforts. The nation’s Quality Improvement Organizations (QIOs) have started their 8th Scope of Work, a national 3-year campaign to help provide small physician practices with advice about EHRs and implementation support. The multistakeholder eHealth Initiative (eHI) has several important programs. It developed a standardized process for comparing costs and contracts among several EHR vendors and is working (along with the California Healthcare Foundation) on a process to simplify and improve the process of importing laboratory results directly into EHRs. It has begun work on the very knotty problem of small practice redesign—a major problem for Baron and colleagues’ practice—which is essential for EHRs to produce value for patients. Physicians who use these resources could avoid many of the pitfalls that Dr. Baron and his partners experienced.

Pay-for-performance and pay-for-quality programs are emerging in both the public and private sectors (10). Some of these programs offer financial incentives to make substantial change (11). Some include incentives to adopt practices that U.S. payers have not supported heretofore, including chronic care management, team-based care, care by telecommunication (also called *e-care*), and care coordination (12). These “transformative” practices are rarely performed outside of closed health care systems (such as the Veterans Administration) regardless of EHR use. However, many hope that their integration into mainstream practice (enabled by the EHR and encouraged by new payment policies) will result in substantial quality and financial benefits (13).

What do these developments mean for the physician who has been waiting for the right time to get an EHR? Is that time now? Almost. Electronic health records are indeed ready for prime time. They are more affordable, and with help, they are adoptable. However, achieving value for our patients will take more than an affordable, adoptable computer system—it will take intentional practice redesign supported by a sustainable business case for the activities that optimal use of the EHR can enable: advanced information and care management and a heightened focus on quality. Without these first steps toward aligning payment policies to encourage quality improvement in the office, EHR use may make progress notes legible but otherwise just digitize dysfunction. However, if coupled with ubiquitous and appropriate payment reforms, ambulatory practice EHR can be given an unconditional “green light.”

Is the NHIN affordable? Kaushal and colleagues say

“yes.” Although the price tag appears enormous, the NHIN would increase the nation’s health care budget by only a small percentage annually. Many would agree that the NHIN is affordable at almost any cost since the aggregate cost of errors and unnecessary duplication possibly exceeds Kaushal and colleagues’ estimate (14). However, if *affordable* means what the purchaser is willing to pay, the answer now seems to be “probably not.” At a time when health information technology and EHRs have taken center stage in health care policy circles, the federal government has not shown the willingness or ability to invest more than a fraction of what Kaushal and colleagues report is necessary. This jeopardizes the 500-day and 5000-day plans for interoperable health information technology laid out by Mike Leavitt, Secretary of the U.S. Department of Health and Human Services (15).

If Kaushal and colleagues’ approach to the NHIN is unlikely to be fully funded in the near future, should we turn the green light for EHRs to yellow or even back to red? Thousands of current EHR users are already connected to laboratories, imaging centers, and hospital systems and know the value of their current level of electronic connectivity. They would readily answer “no, never.” However, many frustrated EHR users cannot easily import information into their EHRs in a usable electronic format (16). If the word on the street is that the benefits of EHRs aren’t worth the frustrations, the impetus for physician adoption of EHRs could slow or stall.

An alternative approach, if funding rapid construction of the complete NHIN is not feasible, would be continuing to advance the adoption of standards and interoperability to enhance connectivity among the systems that we do have. This less ambitious approach is well-suited for targeted, incremental progress, concentrating on areas of critical importance, such as medication and allergy data. At the current level of federal investment in health information technology, focused investment could lead to measurable improvements in quality and safety rather than frustration. Furthermore, an incremental approach to connectivity could create the time and opportunity to simultaneously study new clinical pathways and protocols for interconnectivity, determining where and how “de-siloing” of health care information adds real value and where it may result in information overload and confusion (17).

As we enter the second year of the decade of the EHR, barriers to EHR adoption and implementation are rapidly fading. However, we are also learning that EHR adoption and enhanced interconnectivity aren’t enough to substantially improve quality and safety. They alone will not lead to the transformation of health systems and the overall savings that many are counting on health information technology to deliver. Achieving these goals, and allowing EHRs and connectivity to realize their full potential, requires reimbursement reform, practice redesign, and an unwavering focus on the ultimate goal: excellent patient care.

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