The Affordable Care Act and Electronic Health Care Records

Does today's technology support the vision of a paperless health care system?

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The Affordable Care Act (ACA) promotes the continuing development of electronic health records (EHRs) to decrease costs and improve the quality of health care. Unlike other aspects of the ACA that we have previously reviewed, support for health information technology (HIT) is not contained in one specific section of the law. Rather, it is a necessary and sufficient condition for many of the ACA's initiatives.

On the cost reduction side, for example, increased access to digital records will decrease costs, duplication and claim processing time by allowing multiple providers to rely upon one laboratory finding; by facilitating data mining to detect fraudulent billing practices; and by advancing per capita comparisons between communities with similar patients but disparate utilization rates.

The evidence that EHRs will be essential and effective in enabling the improvement of health care quality is neither conclusive nor straightforward. Many people in the medical community doubt whether digital information benefits the quality of care at all.

To begin, it is important to note that EHRs predate the ACA by decades. In 2001, the Institute of Medicine (IOM) described the significance of digitalizing health care:

The committee believes IT must play a central role in the redesign of the health care system if a substantial improvement in health care quality is to be achieved during the coming decade.[1]

In the 1990s, the country was rapidly recognizing the possibilities for computers and digital information throughout society; the share of households with Internet access increased 58 percent between December 1998 and August 2000.[1]

With communication, news, research and shopping covered, health care was the obvious next sector for implementing information technology. That transition, as we now know, proved to be cumbersome. As medicine involved thousands of individual businesses, a centralized, efficient acquisition process (such as was witnessed by the monolithic Veterans Administration system) clearly would not be possible.

For the majority of physicians — who practiced in solo or very small group practices — the cost would be prohibitive. Furthermore, the ensuing chaos of vendors vying to outsell one another and meet the demand for in-office technology resulted in software programs that literally did not talk to one another.

Privacy matters

Perhaps most significantly, privacy concerns — represented by 50 state laws addressing patient confidentiality and the Privacy Act of 1974 — were compounded by the HIPAA Privacy Rule (effective April 14, 2003) and only furthered the idea that HIT was a distant dream. Yet the vision of a ″paperless health care system″ has not been lost through decades of difficulties and recalcitrant adopters. Even the most casual analyses of multiple private and public initiatives over the years, including the ACA, would find frequent mentions of this distant utopia.

To understand the resiliency of this yearning for technology to create a healthier country, we must briefly review the original intention for medical records.

In the fifth century B.C., medical reporting was highly influenced by Hippocrates. He advocated that the medical record serve two goals: it should accurately reflect the course of disease, and it should indicate the possible causes of disease.[2]

Patient records date back to ancient civilization. Traditionally, the record was for the benefit of the physician; in its purest form, the record told the medical story of a patient, enabling the doctor to remember details that would otherwise be lost to memory. As specialization diversified health care, so too did the need for records in order to facilitate cohesive care.

Various practitioners involved in one patient's treatment needed to communicate their findings, thoughts and interventions to one another. It became increasingly important for an organized chart to be shared among parties involved in a patient's care as institutional providers, such as hospitals and skilled nursing facilities, developed in the 19th and 20th centuries. Although these records served the necessity of patient care, they also aided in the transformation of medicine to the science that Hippocrates envisioned.
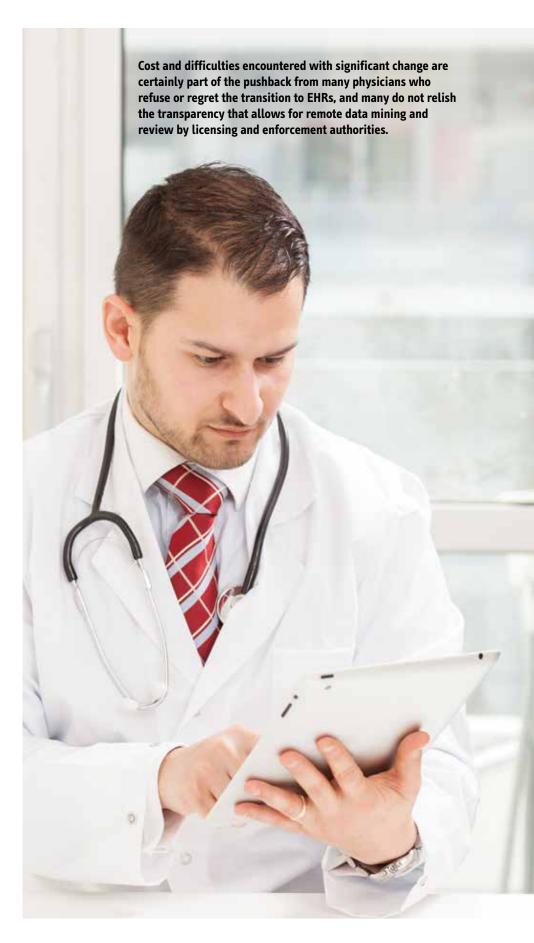
Medical records took on entirely new functions in the latter part of the 20th century. As the country became more litigious, a patient's record became the focal point of a plaintiff's claim that the physician failed to meet the standard of care, or conversely, key evidence for the physician's decision-making process.

The dreaded axiom, "If it wasn't documented, it didn't happen," refers to the patient's chart. With the development of private insurance and the advent of Medicare and Medicaid, billing and charting became intimately connected. In more recent decades, the record became an integral part of the investigation and prosecution of fraudulent billing practices.

Finally, medical review boards have become increasingly interested in records as a means to police the quality of care that licensed practitioners provide. Hippocrates' simple, private reminder system for individual physicians had, by the 1990s, gained significant legal and regulatory implications.

As information technology advanced, it became more unreasonable to maintain important information on the inherently fragile and precarious medium of paper. The risk was underscored dramatically in the devastation wrought by Hurricane Katrina.

In a matter of hours, 400,000 medical records were reduced to pulp [at the] Medical Center of Louisiana

Cost and difficulties encountered with significant change are certainly part of the pushback from many physicians who refuse or regret the transition to EHRs, and many do not relish the transparency that allows for remote data mining and review by licensing and enforcement authorities.

in New Orleans…. Every paper record was destroyed.[3]

Overnight thousands of Louisiana residents lost their medical history forever, which was a blow to their own health care and to their future generations seeking genetic information and accounts of family health patterns.

Ironically, patients were actually quite late in recognizing the significance of being able to retrieve their own health information. Only in the past few decades have state laws gradually recognized a patient's right of access to their own records, though to this day, many still dictate that a medical chart is the personal property of the provider who creates it. The HIPAA Privacy Rule was the first time that a uniform, federal right of access to a patient's personal medical record was established.

This brief history of medical records reinforces the arguments for EHRs as a quality-enhancing technology. If the record serves as a reminder for the individual physician, HIT allows that same physician to have a documentation vehicle that can assist him or her with their decision-making through immediate interaction with prescribing information, contraindication warnings and easier access to the patient's past medical history.

The EHR may put an end to jokes about doctors' handwriting, for a legible record has actual value for other providers trying to understand the context of their own treatment interventions. A remotely accessible chart can quickly guide physicians and nurses in urgent care facilities throughout our increasingly transient population. The integrity of patient information is also protected, as digital information is not likely to be lost through misfiling or environmental forces.

Because medical malpractice is ultimately a judgment upon whether a standard of care has been met, digitized data collection assists those practitioners who want to establish a more standardized patient care protocol for specific conditions or diseases. Data mining of electronic records and billing greatly assists enforcement of fraud and abuse, as the investigator can identify fraudulent practices without ever crossing an office's threshold. Similarly, licensing bodies have far greater opportunities for scrutiny through remote access to records that may reveal quality of care issues for an individual physician.

An online, patient portal best exemplifies the boon of EHRs for patients, for it grants secure, 24/7 access to an individual's personal chart. No longer is there a need for a signed release, waiting days or weeks, or potential fees in order to get a paper copy of a record. Now, patients who are awake in the middle of the night can peruse their own laboratory reports and anxiously read between any (perceived) lines in their physician's notes from the day's office visit.

IT taking hold

For all of these reasons, EHR adoption has begun to take hold among physicians; this rate has accelerated significantly with the financial assistance offered through the "meaningful use" program under the the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009.

A recent survey found that about 70 percent of doctors now use electronic health records in some form, which many experts see as a tipping point.[4]

As implementation of the ACA brings transparency, population research and telemedicine to new levels, HIT will be integrally involved. The potential of transparency through EHRs is a seismic change from paper charts.

Specific data about outcomes can now be gleaned and shared from the level of an individual physician to a multi state health care organization. With an electronic record, the patient's entire transition through life and treatment becomes available far beyond that patient and their encounters with the health care system. With proper protections of identifying information, astounding volumes of data are available for significant study of the most nettlesome chronic diseases.

"Comparative effectiveness" becomes a reality, as thousands upon thousands of similar cases can be easily, scientifically compared. The possibility of actually curing the common cold is far more significant than making an old idiom obsolete. Public health agencies have the potential to detect disease outbreaks long before they occur, and science can modify therapies to demographic changes in real time.

Perhaps the most dramatic extension of health care facilitated by HIT is the expected explosion in telehealth, where patients living in the most remote and underserved regions of our country can gain access to primary care through a face-to-face encounter with a practitioner who may be thousands of miles away.

In light of those significant opportunities and advancements for the overall quality of our nation's health care, it might be difficult for an outside observer to understand why HIT is not enthusiastically embraced by all sectors of the health care system, particularly physicians. The reason for that contradiction lies in the day-to-day realities of EHR technology for the people actually using them as part of delivering patient care.

Dr. David J. Brailer [the first national coordinator for health information technology], said: "The current information tools are still difficult to set up. They are hard to use. They fit only parts of what doctors do, and not the rest."[5]

Cost and difficulties encountered with significant change are certainly part of the pushback from many physicians who refuse or regret

the transition to EHRs, and many do not relish the transparency that allows for remote data mining and review by licensing and enforcement authorities. Physicians used to shielding their patients' records from view are uncomfortable with the prospect of unlimited patient access through online portals, and there are large sectors of the medical community that dismiss comparative effectiveness as "cookbook medicine."[6]

However, opposition to EHRs generally does not stem from disagreement over the vision of a paperless health care system, rather naysayers oppose the current idiosyncrasies of EHRs. Users commonly complain that EHRs take significantly longer than paper charts to complete. Familiarity takes some of the blame here (anecdotally it has been reported that it can take up to two years to achieve fluency with EHR software), however, the chief culprit is usually the software code.

Computer experts may have created a great vehicle with multiple levels of security, but when the end user has dozens of mouse clicks involved in a simple entry, the level of irritation is understandable. Pop-up notices and contraindication warnings are numerous and often set at such a low level that physicians are frequently interrupted with unnecessary, extraneous information.

The net effect is similar to "alarm fatigue" encountered in ICUs with patients on respirators, when alarms are turned off, or — even if activated — are no longer heard by the nurses. It is the medical equivalent of car alarms in our broader society.

More than any technical issues, physicians most vehemently complain that EHRs are no better than those who use them. The prevalence of templates allows everyone to document far, far more than they ever did with pen and ink. These templates can increase both efficiency and the level of documentation of patient care,

but — in actual usage — they are a vehicle allowing physicians and other providers to create profuse notes on every patient encounter.

The drive for excessive documentation is not zeal for documenting for the patient's benefit or the advancement of medical science; it is billing. Templates allow physicians to increase their income as billing is immediately connected to the activities that were charted. Moreover, because the templates are digital and not human, they produce identical text for each use.

The enormous, unintended consequence of EHRs is voluminous records overflowing with irrelevant information. The greatest concern about EHRs is also their greatest irony: the digital record that was supposed to increase communication among parties involved in a patient's care has actually resulted in millions of computer-generated pages that no one reads.

Laws, policies and regulations have attempted for decades to transform the American health care system by simultaneously preserving the excellence of individual patient care, improving the population's overall health and decreasing costs. The ACA brings all three motivations together.

This laudable goal is dependent, in many ways, on the implementation of a national, robust and integrated electronic record system. All of the data collection, analysis, efficiencies and enforcement mandated by the ACA require global acceptance of EHRs, yet adoption of EHRs still lags behind while the law's date for full implementation draws ever closer.

No one can make an intelligible argument to return to our old system of incomplete, inaccessible and easily destroyed paper patient records, but the vision of a paperless health care system is still a hazy future. Proponents of the ACA can only hope that technology designed to reform does not instead impede those very efforts.

Physicians may be faulted for being resistant to change, but there are legitimate concerns in the medical community. Counterproductive frustrations inherent in current EHR technology and the unintended consequence of financially driven, overuse of templates undermine the very record that was supposed to advance the coordination and integration of care.

Of the core functions of a medical record detailed earlier, arguably the only one in which EHRs have demonstrated benefits to date is in the collection of large amounts of demographic data that advances medical science. Ironically, that is the function of records envisioned by Hippocrates in 400 B.C.

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