Saving the Patient-Doctor Relationship

How electronic health records, bureaucracy, and endless regulations increasingly strain physicians' relationships with their patients, and how we can fix it

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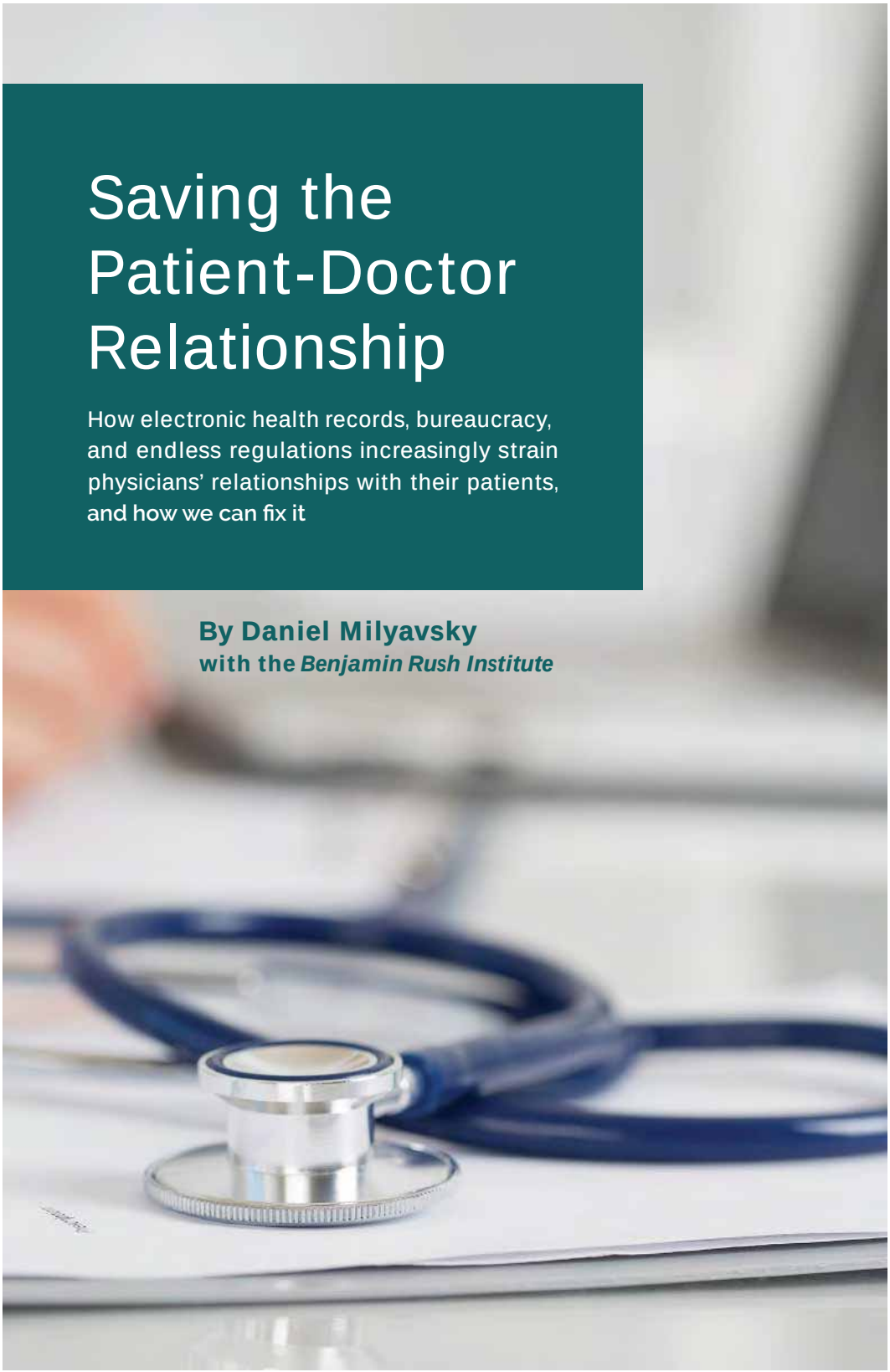
with the *Benjamin Rush Institute*



ABOUT
the Benjamin Rush Institute

The Benjamin Rush Institute (BRI) is a 501(c)(3) working with medical students and professionals to protect the doctor-patient relationship and preserve healthcare freedom. BRI accomplishes this mission through establishing chapters and affiliates at medical schools across the country, and increasingly around the world. BRI chapters and affiliates host educational debates, lectures, events, and provide resources that emphasize the essential role of the doctor-patient relationship and free enterprise for ensuring optimal patient outcomes at affordable prices. Through participating in BRI activities, students and physicians enter a supportive network of medical colleagues and learn how to be advocates for their profession.

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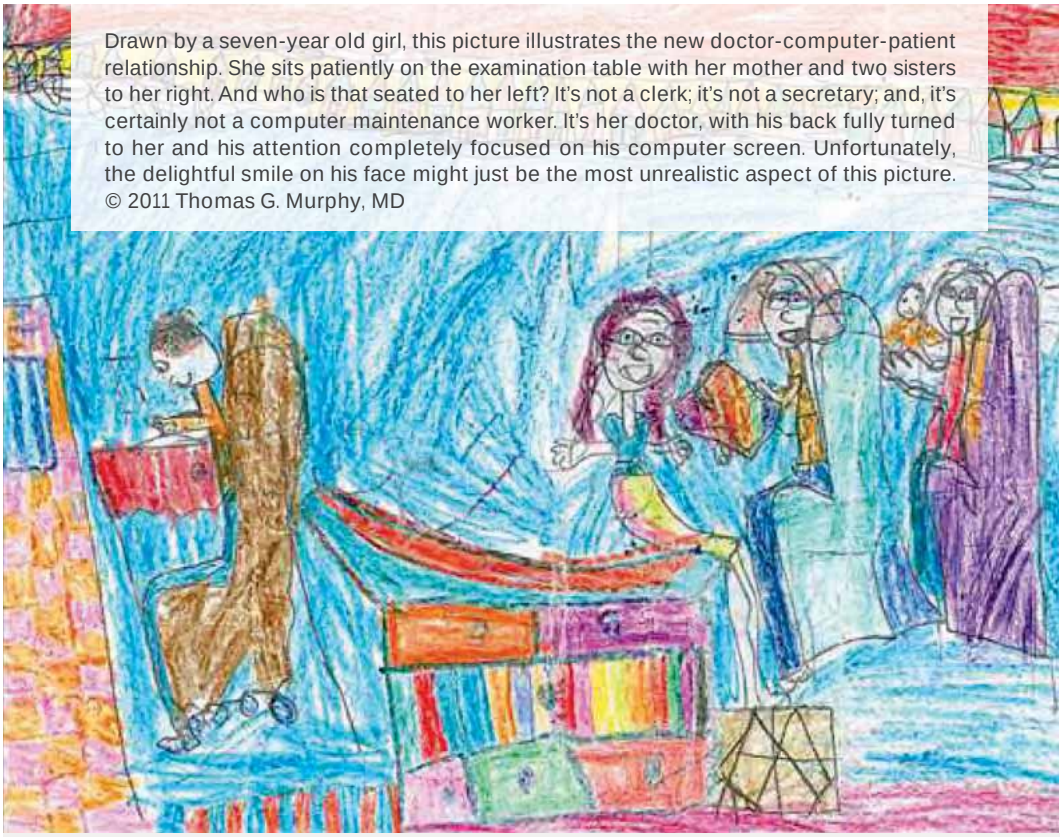

Drawn by a seven-year old girl, this picture illustrates the new doctor-computer-patient relationship. She sits patiently on the examination table with her mother and two sisters to her right. And who is that seated to her left? It's not a clerk; it's not a secretary; and, it's certainly not a computer maintenance worker. It's her doctor, with his back fully turned to her and his attention completely focused on his computer screen. Unfortunately, the delightful smile on his face might just be the most unrealistic aspect of this picture.

In a humorous turn of phrase, two doctors referred to this depressing phenomenon—doctors literally turning their backs on their patients in order to enter mandated coding—as "EHR-acquired Attention Deficit Disorder."[1] Andrew Buelt, DO, and Joe Weatherly, DO, write about how from the very first question, "What brings you into the office today?" doctors are focused on fitting the patients' answers into Meaningful Use requirements. "One question into the exam, and I have failed my patient."

Research by the RAND Corporation found that today's electronic health record (EHR) significantly undermines physicians' professional satisfaction for multiple reasons, including "poor usability, time-consuming data entry, interference with face-to-face patient care, inefficient and less fulfilling work content, inability to exchange health information, and degradation of clinical documentation."[2]

Here, we analyze HITECH and HIPAA's history, MU-compliant EHRs' negative impacts on medical practice, how MACRA—designed to replace MU—is not necessarily better, and provide some possible solutions.

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Part 1: What's the controversy?

What is Meaningful Use?

Meaningful Use (MU) is a series of federal regulatory requirements[3] for EHR software that healthcare providers must meet in order to receive incentive payments and avoid payment penalties for claims submitted to Medicare. The Center for Medicare & Medicaid Services (CMS) sets these requirements, imposing constraints on both software developers and healthcare providers. If a provider fails to achieve adequate "meaningful use," she forfeits the incentive payments originally established to offset her EHR adoption costs. On top of that, Medicare reduces her reimbursement rate for patient care, resulting in a double financial penalty.

Where did Meaningful Use come from?

The 2009 Stimulus (officially named the American Reinvestment and Recovery Act) included the Health Information Technology for Economic and Clinical Health (HITECH) Act, which allocated $36 billion to incentivize healthcare providers to adopt and use EHRs. Prior to these laws, doctors and hospitals had already been gradually switching to electronic records[4] designed primarily to improve patient care and delivery efficiency.

Before HITECH, vendors created EHR systems that were satisfying doctors' and hospitals' clinical and business needs. After HITECH, vendors shifted to building software geared toward qualifying for federal government incentive payments. Consequently, emphasis shifted from patient care to billing and collecting government-mandated quality criteria.

The specifications for meeting government EHR criteria are known as "Meaningful Use" (MU). Between January 2011 and February 2015, the government dispersed a total of $5.4 billion in incentive payments. Of this, participating hospitals received an average of $1.37 million, while physicians received an average of $18,000. Unfortunately, physician payments failed to cover the typical first year cost of successfully implementing and complying with MU-EHR (average cost: $21,525), which meant a net loss for most practices. Doctors either accepted the personal income loss or passed the cost on to their patients.[5]

Complying with MU: Stage 1

MU was designed to be implemented in three stages[6] through 2017. To meet Stage 1 requirements,

a) 80% of a provider's patient records must be digitally maintained in certified EHR software,

b) Physicians must complete 15 "core objectives" (Figure 1), and

c) Physicians must complete six "clinical quality measures."

A few of the 15 core objectives, like E-prescribing or "record and chart changes in vital signs," are aimed at improving patient care. Most, such as, "report ambulatory clinical quality measures to CMS/States," and "implement one clinical decision support rule," serve bureaucratic purposes more than patients.

Hospitals have similar compliance requirements.

Figure 1. Meaningful Use: Core Objectives from http: / / www.cms.gov / EHRIncentivePrograms /

Stage 2 and Beyond

Up until 2014, incentive pay qualification only involved compliance with Phase 1 of MU. Providers who started the process in 2011 were required to start on Stage 2 in 2014. Stage 2 focuses on interoperability and exchanging patient information. Many Stage 2 requirements involve using patient portals. To successfully complete Stage 2, at least 5% of patients needed to use an online portal to access their health information. Despite the significant regulatory emphasis placed on these patient portals, there is scant evidence that they improve patient care (discussed later). Additionally, this single requirement led to significant problems for EHR software designers as they tried to update systems to comply. With MU Stage 2, the number of providers able to qualify for incentive payments fell nearly 70 percent in 2014, while the number of qualifying hospitals fell 15 percent.[7]

MU initially had three stages; but because so few physicians could achieve even Stage 2, CMS cancelled Stage 3.

Bundled with incentive payment "carrots," CMS also instituted financial penalty "sticks." Providers not MU compliant by 2015 experienced a 1% cut in Medicare reimbursement.[8] This was supposed to increase to 2% in 2016 and 3% in 2017, but now it looks like the MU program is being phased out.

Did HITECH make things better?

Government's desire to incentivize EHR adoption was understandable. Healthcare lagged behind many other industries in digitizing records. Paper charts caused genuine problems in the sharing of medical records.

However, many of the reasons physicians were slow to adopt EHRs had to do with existing government regulations. HIPAA (discussed next) is a major reason that healthcare is one of the last bastions for fax machines.

Transitioning to EHRs was inevitable, and the HITECH Act was an attempt to expedite this evolution. The law subsidized EHR adoption, while simultaneously threatening to cut Medicare reimbursements to stubborn holdouts. However, these incentives caused the transition to EHRs to be more abrupt, painful, and economically inefficient than it otherwise would have been.

Proponents of HITECH credit the Act with the rapid adoption of EHRs nationwide since the law's passage in 2009. EHR use in hospitals has increased from 12.2% in 2009 to 83.8% in 2015. However, the overriding issue currently is not the quantity of EHR adoption but rather the quality of it.

To capitalize on time-sensitive federal incentives and penalties, hospitals and physicians rushed into EHR adoption. Additionally, the systems were designed to meet federal requirements for data collection, quality oversight and billing – not for improving work flow or actual clinical care.

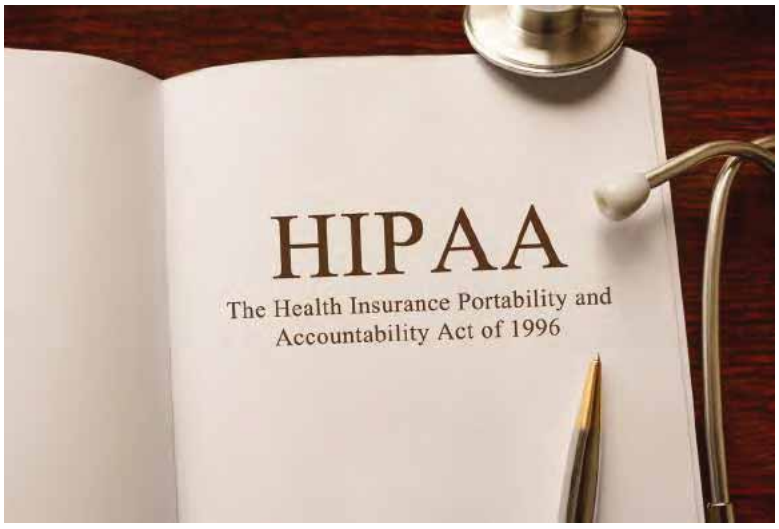
The EHR marketplace is now dominated by a handful of corporations whose products enjoy large market share despite being inadequate works in progress. The high cost converting to a new system (and lack of federal subsidies) makes it very difficult for new companies and products to penetrate the market.

Without additional reform, the EHR marketplace will remain an oligopoly hampering future innovation and progress.

HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 was one of the legal obstacles to developing convenient, affordable electronic medical records. HIPAA's stated purposes are broad and far reaching: "[To] improve portability and continuity of health insurance coverage in the group and individual markets, to combat waste, fraud, and abuse in health insurance and health care delivery, to promote the use of medical savings accounts, to improve access to long-term care services and coverage, [and] to simplify the administration of health insurance…" Subsequently, the Department of Health and Human Services (HHS) codified rules governing patient information privacy and security in 2002 and 2003. These were broadly written to cover all "individually identifiable health information," which originated from, or were received by, a "health care provider, health plan, employer, or health care clearinghouse."

HIPAA violations can incur very expensive civil and criminal penalties. A willful violation of HIPAA rules typically incurs a $50,000 fine. Violating an identical provision in the same year results in a $1.5 million fine.[10] The HITECH Act further expanded HIPAA rules in 2009. One way it did this was—in the government's own words—by "striking the previous bar on the imposition of penalties if the covered entity did not know and with the exercise of reasonable diligence would not have known of the violation (such violations are now punishable under the lowest tier of penalties)."[11] In other words, even if a doctor was unaware of the rules and/or unintentionally violated them, penalties would still be enforced.



Problems with HIPAA

Due to the expense of the very high security standards EHR software must meet, HIPAA played a significant role in discouraging the development of EHRs. MU incentive payments were used to overcome this unintended consequence.

Another problem with HIPAA is its uniform privacy standard, regardless of patient preferences. As Kapushion (2003) writes: "Even with all patients choosing to sign authorization and consent forms, the hospital would not escape the administrative and operative burdens that HIPAA imposes. The federal regulations mandate that the hospital jump through every compliance hoop, regardless of consumer preferences. The patients end up bearing the financial costs of a system that offers them little or no substantial benefit."[12] HIPAA allows little freedom to opt out of the restrictions for more convenient, even if less secure, ways of communicating with their doctors.

The burden HIPAA creates is greater for smaller, independent businesses. This gives larger insurance companies and medical providers (e.g. large physician practices and hospitals) a financial competitive advantage. While the rules for compliance were the same for every healthcare entity, implementation costs varied between different organizations. For small organizations, HIPAA compliance consumes a greater proportion of their budgets. This has contributed to the accelerating dominance of large healthcare insurers, a frequent consequence of most regulatory requirements.

Conclusion

In passing the HITECH Act and implementing MU, the federal government attempted to fix what it saw as a market failure in healthcare. What the government failed to take into account, however, was that its own laws and regulations made adopting EHRs that much more difficult in the first place. HIPAA, just like the HITECH Act, arose from good intentions. However, the law's actual results slowed progress in improving medical record keeping, because its requirements increased costs and reduced patient preference.

Just as HIPAA caused unintended consequences, so has the MU program. In the next section, we will look at several of those consequences and analyze how the government's efforts to rush EHR adoption has harmed American healthcare in ways that the HITECH architects did not foresee.

Part 2: Unintended consequences

As currently incentivized under MU rules, in order to assess whether EHR brings more benefit than harm, we need to examine MU's effects on physician productivity, medical education and training, patient care, and cost. The effects are far from universally positive.

Impact on Physician Productivity

The sad irony of EHR is that, unlike in other industries, computerization in healthcare has actually decreased productivity. A 2013 study evaluated the productivity of community hospital emergency room physicians who were using EHR.[13] Sixteen attending physicians, ER residents, and mid-level providers were tracked for 30 hours, and all their activities were time-tracked into five categories. Physicians using electronic medical records spent 44% of their time on data entry, 28% in direct patient care, 12% reviewing test results, 13% discussing with colleagues, and 3% on other activities. One particularly interesting aspect of this study was the quantity of mouse clicks for an individual EHR task. Ordering a 325-mg aspirin required a modest six clicks, whereas documenting a physical examination of back pain required 47. Completing the EHR requirements from start to finish for an outpatient patient with right upper quadrant abdominal pain required a staggering 227 clicks. With these quantities, documentation can take significantly longer than the actual exam.

Figure 2. Quantity of mouse clicks for selected EMR tasks

Order a 325-mg aspirin	6
Order chest x-ray: PA and lateral	8
View a test result in old records	11
Write and print discharge instructions	15
Create and print discharge instructions	20
Document physical exam: hand & wrist injury	40
Document physical: back pain	47
Completed EMR palpitations (discharged)	181
Completed EMR chest pain (admitted)	187
Completed EMR right upper quandrant abdominal (discharged)	227
Average over selected cases and chief complaints	160

In another study, Patel el al. (2012) compared EHR to paper charts and found that electronic charting currently takes on average 30% longer than paper.[14] As a consequence of government-incentivized EHR, some medical practices have had to hire scribes just to maintain productivity levels at pre-EHR levels.[15] These additional EHR documentation requirements take time and resources away from patient care.

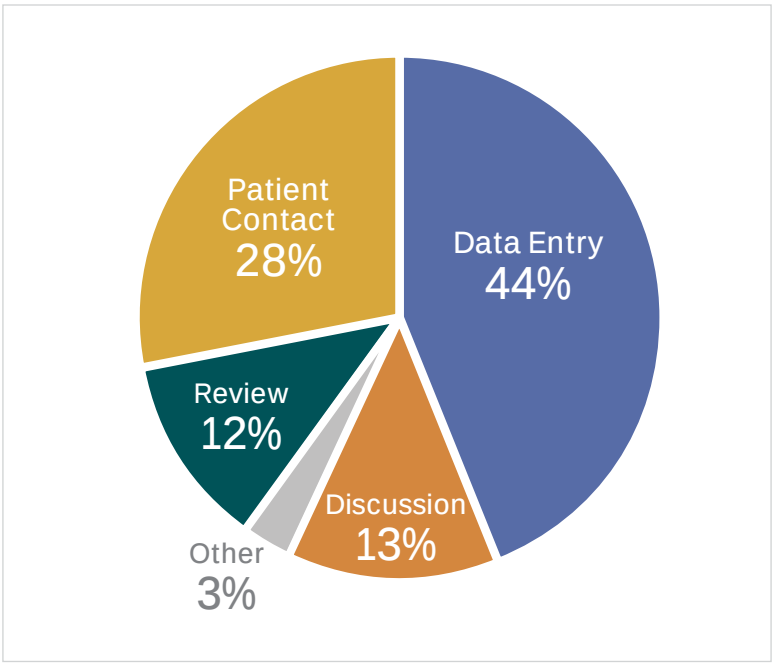


Figure 2. Emergency department practitioner time allocation.

Impact on
Patient Care

Park *et al.* analyzed how impacted resources affected patient care. Because completing an EHR chart takes significantly longer than paper charts, ER physicians often took notes on paper, and then later transferred these notes to the EHR. According to the authors:

> *"The main goal of ED doctors is to make quick medical decisions and record them concisely for multiple patients…ED doctors have to move around constantly to obtain all the necessary information for them to make these decisions. Since each patient has a different history and a different patient care process, it is very difficult for doctors to commit all of the details to memory. The use of the computer system does not support the multiple patient care process and the mobile nature of ED work – hence the use of paper notes as an information repository."*

Because physicians complete their charts in the relative quiet of the charting room, another consequence of EHR is less time spent interacting face-to-face with patients and nurses. When physicians used paper records, they would often do much of their charting in an isolated room as well. However, now that charting takes so much longer, this has more of a negative effect.

Impact on
Patient Satisfaction

One study published in JAMA found that "high computer use by clinicians in safety-net clinics was associated with lower patient satisfaction and observable communication differences." Clinicians with high computer use were rated excellent only 48% of the time, whereas those with low computer use were rated excellent 83% of the time.[16]

A patient survey completed in 2016 by The Physicians Foundation found that patients still have a high level of trust in their doctors. Nine out of ten adults in the United States noted "high levels of satisfaction with their primary care physician." However, many "patients cite increasing concern and frustration with their ability to manage rising healthcare costs and medical debt, with many indicating that they have avoided treatment plans, routine or specialty check-ups, or prescriptions as a result." While rising healthcare costs are a complex phenomenon with multiple causes, government-incentivized EHR has contributed strongly to patients sometimes choosing to forego care they may actually need.[17]

Impact on
Resident Education

Longer electronic charting times also impact physician training. In 2012, Park *et al*. studied the effects of EHR at a large teaching hospital emergency department. This study compared charting time and effectiveness before, after and during the transition from paper records to EHR.[18] The authors found that with paper charting, residents and attendings each had their own section in the notes, allowing them to have clearly defined duties. After the rollout of EHR, resident documentation time increased.

One interviewed resident said: "From the patient care perspective, the (EHR) system has lots of advantages, but from residents' perspective, it just slows us down... It takes probably three to four times longer than paper charts ... and the other thing is it takes so much time that I'm not even able to chart. A lot of times actually I just have to save 10 notes to the end of my shift and actually stay extra hours to chart."

Managing incomplete notes was easier with EHR than it was under the paper system. However, note completion had previously been the responsibility of the attendings. With EHR, residents are expected to stay after work hours to complete the charts. The overall consequence of these changes on medical training is still unknown.

Impact on
Financial Cost

As of February 2014, the federal government spent over $19 billion on MU incentives. Due to the ease of "up-coding," both the federal government and private insurance have spent more money per patient following the switch to EHR.[19] According to the New York Times' analysis of Medicare data, "hospitals received $1 billion more in Medicare reimbursements in 2010 than they did five years earlier, at least in part by changing the billing codes they assign to patients in emergency rooms." Physician office visit billing practices have similarly changed, increasing costs by billions of dollars. Settle (2015) calculated that the gap between incentive payments under MU and the actual costs to providers was $347 million—a cost that ended up being passed on to healthcare consumers, namely patients.[20]

The Rand report by Friedberg et al. quotes a primary care physician overwhelmed with the cost of EHR:

"[The EHR] is not just a one-time investment. It is a hugely expensive, ongoing, every freaking day investment. So over the years, I have … spent probably three quarters of a million dollars since [adopting our] electronic medical record, because every year, you pay 20 percent of the value of it. And there's sometimes between 8 and 15,000 dollars a year in support fees. There's new computers. I think we have 16 computers, and every year we probably have to replace at least three to five of them. The printers. The IT support to come get everything connected. When we moved [to our new office], we bought a new server. A year later, with "meaningful use," my vendor said "Guess what? Your server doesn't work with that. Now you have to buy another 12,000 dollar server." … Because we're small, we don't really have an IT person. [The IT person], scarily, is me, and I'm like the least qualified person in the room to be the IT person. And then if you want to get somebody who is that qualified IT person, you're looking at several thousand dollars a month. Well, a practice this size can't really justify somebody that's 2,000 dollars a month for IT support…"

Impact on
Physician Job Satisfaction

Many doctors have become frustrated and disenchanted with medicine. The reasons for this are complex and far-reaching, but EHR has been a key component for many. One physician said that all of the time he spent putting information into the EHR made him feel like a "data-entry specialist" instead of the highly-trained professional whose time was singularly responsible for the revenue of his business. Friedberg *et al.* acknowledged frustration with EHR as a leading cause of physician dissatisfaction, and summed up the problems they discovered as follows: "EHR usability, however, represents a unique and vexing challenge to physician professional satisfaction. Few other service industries are exposed to universal and substantial incentives to adopt such a specific, highly regulated form of technology, one that our findings suggest has not yet matured."

Friedberg *et al.* quote a primary care doctor who said that the EHR made him feel like a much more junior employee:

"What's really happened is since going on [the EHR] is that I've really taken on the responsibility of transcription as well as billing, in addition to the other things…It's given me more mundane clerk-like duties to do. The derogatory term, I guess, in residency, was "scutwork." And that's what [the EHR] has done."

One surgeon even had less trust in medical records because of the EHR:

"So here's what's happened with the EHR. I mean I get it, I understand it, but it has been a step backwards, I think—and as big a step backwards as it is forwards. The step backwards is the problem of templated information. … There's templated information in the review of systems. [I think:] "Really? You asked all those questions?" Not really. "Well, what percent? 80?… 70?… 60?… 30?… Did you ask any questions, really?"

Impact on
Security Requirements and Patient Convenience

Dr. Josh Umbehr, a family physician with a cash-based direct primary care practice, created his own EHR. Unencumbered by government money, the AtlasMD software does not have to meet MU security requirements. Umbehr claims that all of the government portal's security features make the interface very complicated and unnecessarily difficult for patients to navigate. In his experience, patients would prefer to contact their physician through the familiar communication technologies they use on a daily basis, like email and text message. However, HIPAA security rules, reinforced by the HITECH Act make this impossible. Dr. Umbehr's patients can sign a waiver acknowledging the security risks, and then have the convenience of their receiving their medical information via text and email.

HIPAA privacy requirements also interfere with patient care and make

> *"[S]ites require that the EHR system logs out after a relatively few minutes of inactivity. On a typical 25-visit outpatient day…I have to log back in dozens of times. This repetitive activity sometimes makes me feel like I am developing OCD."* [21]

Increasing patient portal use was one of the ways the government encouraged adopting these additional security features. In theory, the idea was a good one: patients would be able to see their records, their medication history, and even communicate with their physician through the portal. The results, however, fell short of this intention. According to a review of 26 studies published by the Journal of Medical Internet Research, "very few studies associated use of the patient portal, or its features, to improved outcomes."[22]

Conclusion

Many of the problems created by the transition to electronic health records may be temporary, and some of them may have been unavoidable, as this is a sea change in the way that many healthcare practices operate. However, the rules and regulations that MU spelled out have contributed to the disruption. The effects this has had on both patient care and physician satisfaction cannot be easily discounted.