

Can a National Healthcare Information Network Work?

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Can a National Healthcare Information Network Work?

A central medical records database could yield economic and social benefits. However, the network will only succeed if it is designed for all healthcare system stakeholders.

It's been five years since scientists mapped the human genome — and nearly 40 years since doctors completed the first successful heart transplant — but in the realm of information technology, healthcare's miracles are limited. Even as so many other industries have shown that handling information electronically is cheaper, faster, and more accurate than using written records, hospitals and doctors have stuck with their paper trails. A recent study by the U.S. Department of Health and Human Services' Centers for Disease Control and Prevention found that only 31 percent of hospital emergency departments, 29 percent of outpatient departments, and 17 percent of doctors' offices use electronic medical records.

Now that the healthcare sector is 15 percent of the gross domestic product and growing, many healthcare experts and policymakers are saying such paper filing systems are as outdated as the house call. Not only should medical records be digi-

tized, they say, but data should also be collected in such a way that researchers can use the aggregate information to monitor the health of the country as a whole. For example, researchers could conceivably use the data to discover previously undetectable patterns — such as the

at the University of Pennsylvania's Wharton School who now serves as the national coordinator for health information technology in the Department of Health and Human Services, noted in a recent speech that President Bush spoke about health information technology 50

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start of an epidemic or geographically scattered outbreaks of illness due to a bioterrorist act.

In Washington, policymakers view the creation of a national healthcare information network as a top priority. Already the government has spent \$139 million to support regional healthcare information networks. Dr. David Brailer, a former healthcare systems professor

times last year and has earmarked \$50 million for health IT projects in this year's budget.

IT and healthcare systems experts at Booz Allen Hamilton and the Wharton School are generally positive about the idea of a universal digital medical records system, and agree that it could yield economic and social benefits. However, they caution that the initiative will suc-

ceed only if the focus is kept narrow and includes incentives for all the system's stakeholders to participate.

The Case for Electronic Records

Improving patient safety is a primary motivator for creating a universal database. Brailer cited one study showing that essential clinical information is often not available in primary care situations. Such data is a major source of medical errors that could be prevented by having accessible and accurate electronic patient records. "This adds to the substantial evidence that health IT — such as computer-physician order entry, ePrescribing, preventative reminders, and bar code scanning — improves care, reduces wasteful and redundant treatments, and prevents medical errors," he said. "When used as intended, health IT saves lives and saves money."

Gary Ahlquist, Chicago-based senior vice president and managing partner of Booz Allen Hamilton's health and insurance group, sees the opportunity to use IT in innovative ways to achieve system-wide improvements. "If we think of this as a utility or a backbone for information flow in the healthcare industry, I think it provides the platform for meeting long-overdue needs for consumers, for providers, for everybody who touches the system."

Mark Pauly, a professor of healthcare systems at Wharton, is a little less optimistic about the overall effect. "It does have the potential to improve quality and lower costs, and will probably do more good than harm. Having said that, I don't think it's the panacea that's going to make healthcare cheap." He estimates that such a system could reduce 10 percent of administrative costs, or about

2 percent of the whole healthcare bill. "Out of \$1.6 trillion, that's not chicken feed," he says, "but it's not going to make healthcare as cheap as it was 20 years ago."

Recent information submitted to the Department of Health and Human Services by the American Health Information Management Association included an estimate that digitizing health information could save as much as \$300 billion in unnecessary expenses. Yet Pauly points out that digitizing clinical and patient records wouldn't significantly reduce administrative costs, which account for approximately 20 cents of every healthcare dollar. "That's because most of the administrative costs of insurers don't come from paying claims, which is what this would be for. It comes from the selling of insurance, the commissions, and the billing costs to the consumers," he says.

Pauly also notes that, even with the most advanced technology, there's no way to get rid of the

duplication of services, such as the repetition of tests. But Pauly notes that many tests are duplicated for a reason. "Many tests need to be repeated," he says. For example, a test done six months ago may need to be updated, or the doctor may not trust the results of a particular lab.

The Privacy Problem

Arnold J. Rosoff, a professor of legal studies and healthcare systems at Wharton, says the ability to monitor the entire country's health would also create a huge challenge for society. "There are very important things we can do in terms of the spread of disease ... but it can also make it possible to invade everybody's privacy," Rosoff says.

Although HIPAA (Health Insurance Portability and Accountability Act of 1996) guarantees strict handling of sensitive personal information, such clinical uses could present new ethical difficulties for policymakers. While data can be stripped of personal identifiers before

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administrative part of healthcare altogether. "People and even physicians get upset about this, but the truth is that although healthcare is about the laying on of hands, a large part of it is transmission and interpretation of data," he says.

Proponents say electronic records could reduce clinical errors by creating a central repository for patient information, leading to less

being passed on to a national database, "[w]hat happens if a researcher finds a patient at risk for a particular condition?" asks Rosoff. Should the patient be warned, even though it violates their privacy rights? And who should make that decision? "Who do we trust? And under what circumstance do we reconnect the name with that record?"

Maintaining confidential per-

sonal information in an age when files can be sent to the other side of the world in a few seconds is tough. The February 2005 disclosure by ChoicePoint, a consumer data broker based in Alpharetta, Ga., that thieves stole the Social Security numbers and credit reports of at least 145,000 people is just the latest in a string of cases that has the public

the quality of their care are particularly problematic. For instance, under the Department of Health and Human Services' 2000 rule that supplemented the 1996 HIPPA act, some commentators argued that healthcare providers would not be able to send patients general newsletters about their conditions because that could be construed as

a clear value proposition and economic benefit from collaboration. It was crystal clear, scale sensitive, and with heavy fixed costs," she says.

While Vanderlinde-Kopper says she can see the advantage such a system might have for the federal government and for consumers, she argues that the business value of incorporating all those records into a single system is less apparent for other players. "If I'm a leading national insurer, I already have my own good claims databases, and I can get a lot out of those databases. It's not clear yet what else I get from certain pieces of clinical data, although I'll buy in theory that it's a good thing for the patient."

It may be an easier task to get insurance companies to eventually agree to participate in a national system than it is to convert the nation's physicians to a new way of working. "Physicians are not used to new things, and in contrast to some other kinds of workers they think they should have the power over this," Pauly says. "So a lot of the challenge here is going to be to offer sufficient incentives of one kind or another to physicians to get them to go with the program."

The government is emphasizing various carrots to promote the creation of an electronic system, but Pauly says that Medicare might have enough market power to convert many physicians to a single protocol. A mandate from Medicare "would probably not bring in every

Aggregated data could be collected in such a way that researchers could monitor the health of the whole country.

worried about compromised security. It's also the kind of scenario that has encouraged Congress to pass laws guaranteeing privacy protection for everything from financial transactions to video rental records. Certainly, healthcare records belong on that list, too. "Of all the data that people might not want flying around out there in the ether, their medical records might be number one. I don't know whether you should worry more about your credit records or your medical records," says Rosoff.

Despite the risks, privacy rules for electronic health records have been slow to develop. According to an August 14, 2002, Federal Register legislative summary, rules that protect consumers from having their personal information used for marketing without compromising

marketing. Such lines are difficult to draw. Is a reminder to refill a prescription an act of marketing when it's a telephone call from the pharmacist? How about when it's a postcard from the pharmaceutical company that made the drug?

Stakeholder Incentives

What are the incentives for all of the industry's players to bring their records online? Some proponents of the network cite financial services as a good model of the potential gains when an entire industry bands together to build a common base of information technology. But Cindy Vanderlinde-Kopper, principal in Booz Allen Hamilton's health and insurance group in Chicago, says that she doesn't think the analogy quite works. "In that case, there was

doctor — the pediatricians wouldn't care — but it would have a big impact if the word was, 'Unless you do this, Medicare won't pay you.'"

After all, it's worked before: Pauly points out that pharmacies joined an electronic system for just that reason. "They're all hooked into computers, using more or less uniform standards to process pay-

the features that make a project sound great in a speech can also make it extremely difficult to execute. "The more ambitious the idea is, the lower the probability it's going to happen." Given all the stakeholders in the system, he says, adding a single piece of information probably increases the complexity of the task not arithmetically, but geo-

any industry has been able to better automate its internal operations," he notes, the excess falls away and "people get dis-intermediated."

Ahlquist concurs with this and sees increasing information transparency through electronic record-keeping causing major realignments within the healthcare system, beginning with insurance companies. "Their role would be different," says Ahlquist. He suggests two possibilities. One is that doctors and insurers may work more closely as economic partners. Insurers may also be able to take advantage of their position as a kind of nexus of the healthcare information, serving more as "informediaries" than as channels for billing and payment.

For consumers, Ahlquist believes the envisioned system "creates a much stronger pull for real consumer-oriented information" — not just for pricing but also for assessing doctors' expertise. Data from such a system could conceivably be used to make it easier for consumers to compare the success rates of doctors when choosing a treatment, the way they are able to compare the quality of other kinds of services now. "I believe there is a multitude of business opportunities that will come out of it," Ahlquist predicts.

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ment for drug insurance. It was in their interest to be able to get insurance payments for the drugs they were dispensing," he says.

Less Is More

Barry Jaruzelski, a New York-based vice president and managing partner of Booz Allen Hamilton's technology practice, argues that the experience of creating industry-wide information networks in other sectors, including financial services, does provide some hints about setting up such a system.

"Less is more," Jaruzelski advises. "Often, particularly when it gets into the political realm, which this one does, people come up with very ambitious visions of information architecture, of all the things we can do," he says. But many of

metrically. Plus, given the lack of money in most parts of the healthcare system, "if too many players needed to throw out 80 percent of their infrastructure to create the network, it's not going to happen."

Simpler structures also make changes easier to manage over time, Jaruzelski says. "The more you get into these lofty capabilities, the more you potentially lock in this system or that system." Instead, he suggests focusing efforts on trying to put a core set of information online. "Over time, you can evolve."

Consumer Orientation

Assuming that David Brailer's team is successful, and in 10 or 20 years such a universal system is running, Jaruzelski predicts a natural streamlining and rationalizing. "[When]

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