The heartburn of meaningful use

It is a rule of health economics that when billions of dollars are being spent the outcome is invariably something "transformative" or "revolutionary."

Electronic medical records (EMRs) were, of course, no exception. When US President Barack Obama announced that the government would spend US$27 billion over 10 years to nudge American physicians and hospitals into the electronic age — complete with "meaningful use" provisions that would compel them to use the gadgets in clinically relevant ways in exchange for hard cash — it was billed as the ticket to better health care, fewer medical errors and lower costs.

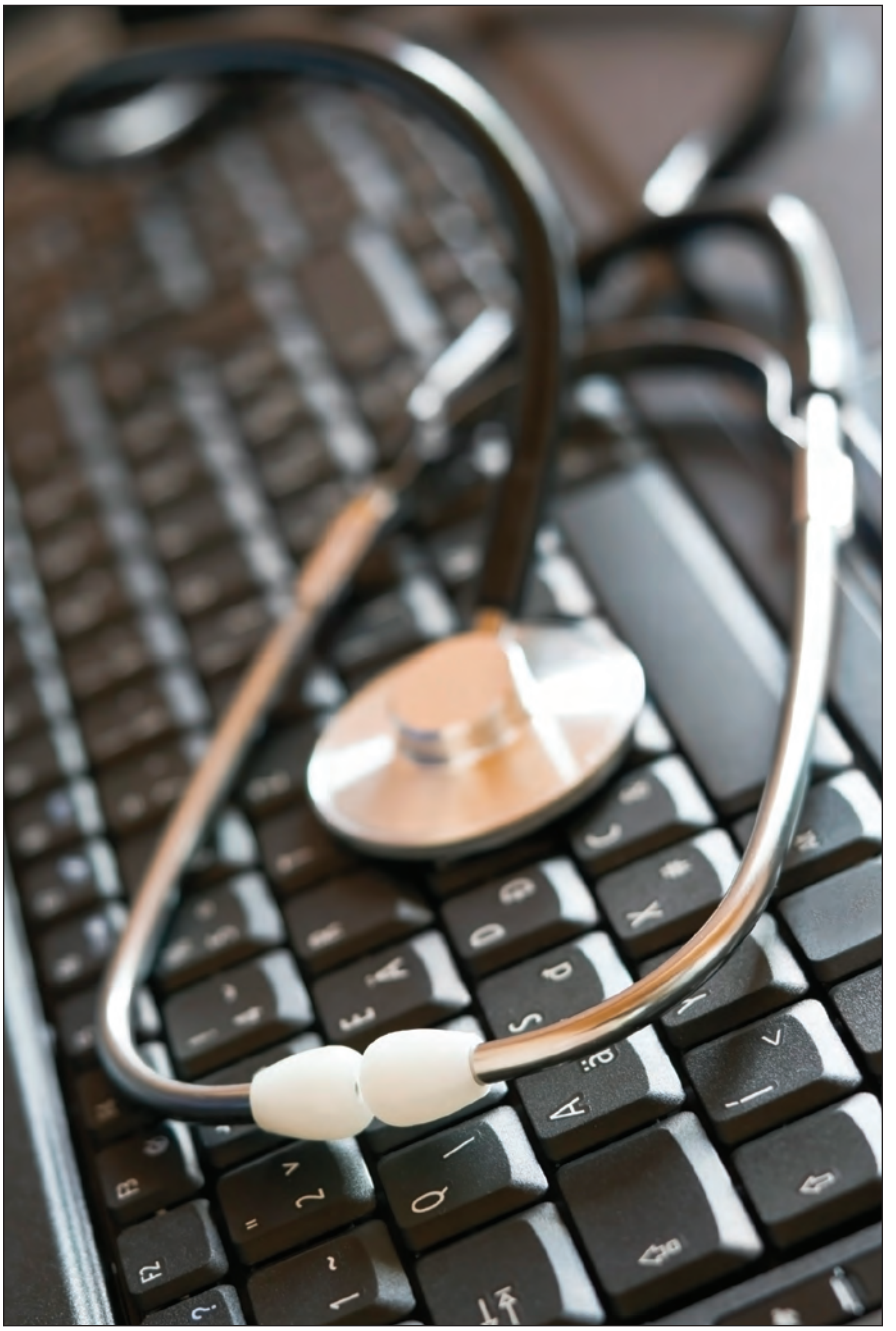
But has America's plunge into the world of EMRs done more than just line the pockets of the health software industry and actually altered clinical practice?

Not yet, but hopefully it will, according to the American Medical Association (AMA) and delegates to its 2012 annual meeting in Chicago, Illinois.

"It's not yet been compellingly shown that this particular approach will, in fact, necessarily get the full benefits of efficiency, quality and safety that we hope," says Dr. Steven Stack, chair of the AMA Board of Trustees. "On the other hand, there are bits of evidence here and there that certain elements of electronic health information technology will have benefits in certain settings, so physician order entry can, in fact, help to reduce certain types of medical errors. Medication reconciliation can, in fact, help to reduce certain types of medical errors."

"But when taken as a whole, and as constructed in this meaningful-use paradigm proposed by the federal government, there isn't a robust or sophisticated analysis yet that can demonstrate, compellingly, whether it's been a success or not," Stack adds.

For now, physicians are still scrambling to meet Stage 1 requirements of the meaningful use of EMRs initiative (www.cmaj.ca/cgi/doi/10.1503/cmaj.109-3361), while the AMA is frantically pressing for changes to Stage 2 requirements that will compel physicians to demonstrate in even more detail whether they're using EMRs to do more than just dump patient records in a computer (www.ama-assn.org/resources/doc/washington/ehr-stage-2-certification-sign-on-letter-07may2012.pdf).



Many physicians transition to an electronic medical record system to help bring medicine into the wired state that has become the modus operandi of modern industry, but questions remain about if it is improving the efficiency, quality or safety of patient care.

At the physician level, the value of implementing EMRs appears entirely promissory, for now.

"It's really an unanswered question: Are we achieving a benefit from EMR systems?" asks Dr. David Fleeger, an Austin, Texas–based colorectal surgeon who along with six colleagues implemented an EMR system in their joint practice three years ago.

Many physicians transition to an EMR system because they believe there is a need to bring medicine into the wired state that has become the modus operandi of modern industry, Fleeger says. "But has it improved quality? Has it improved patient care? Those are big questions and not well answered at this point in time. There's also the burden of taking on an EMR system, the education of your employees, [capital] costs, and transferring all those records from paper to electronic form."

For now, notes Dr. Joseph Heyman, former chair of the AMA and an obstetrician–gynecologist with a solo practice in Amesbury, Massachusetts, who implemented an EMR system in his office 11 years ago, "the primary consequence is that people are adopting technology faster than they might have adopted it before."

"I think it's too early to say whether it's impacting clinical practice," he adds. "There are some parts of it that are silly and other parts that are good. … The real value will be when everyone is connected" and patient records can be easily exchanged.

Fleeger, part of a Texas delegation that asked the AMA to conduct an analysis of whether or not a quality improvement, or a financial benefit or loss, accrues from implementing an EMR, is equally convinced EMRs will ultimately prove their worth.

"In order to achieve higher quality in the care of your patients, you have to know what you are doing right now," he says. "And I can tell you that most physicians in private practice really have no idea how they're doing right now on a particularly quality issue. But if you're supposed to do something for 100% of your patients and you want to figure out exactly how many of them you are actually doing it for, we don't have that data because it takes having another employee, having to go back through 1000 charts to figure it out and nobody has the time or energy or money to do that. But with these systems, if you want to look at how many women have gotten a mammogram, it's a field on your EMR. If just 75% of your patients who should have had one, you can say, I need to improve that. Ultimately, there is some benefit from that standpoint."

"The other is just being able to transfer that information from my office to someone I've referred a patient to, or vice versa. And being able to transfer to the hospital and back, being able to transfer to the labs," is invaluable, Fleeger adds.

But therein lies another conundrum. Are the benefits of implementing EMRs simply a function of going electronic or are they, or will they be, attained only by using them in the prescribed fashion of the meaningful use initiative?

"That is a topic very much open to debate," Stack wryly notes. "It has certainly spurred a rapid uptick in adoption. The program itself, though, has caused heartburn to many for its details and complexity."

Under the meaningful use initiative, EMR participation is technically voluntary for doctors and hospitals, although facilities that do not meet meaningful use requirements by 2014 will face a series of escalating penalties, commencing with a 1% reduction in their Medicare and Medicaid payments (for treating the elderly and the poor, respectively) in 2015, rising to 2% in 2016 and 3% in 2017.

To get a Stage 1 incentive payment, doctors and hospitals have to demonstrate that over the course of a continuous 90-day period within a calendar year they are achieving 15 mandatory objectives, such as "recording clinical summaries within three business days for more than 50% of all office visits" (www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EP-MU-TOC.pdf). They also have to demonstrate that they are achieving 5 of 10 other objectives, such as performing drug formulary checks or creating lists of patients with a specific condition.

Over the course of five years, the initiative can generate US$44 000 in incentive payments under either Medicare, or US$63 750 under Medicaid, for any doctor who implements EMRs and meets the meaningful use provisions.

According to the Centers for Medicare and Medicaid Services, roughly US$2.5 billion was shelled out in incentive payments in 2011 (www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/EHRIncentivePrograms/56_DataAndReports.asp).

With payments made per clinician, it can quickly add up to big bucks for hospitals and large practices. But for solo or small group practitioners, "it certainly does not pay for the system or the costs of the transition. But it's a carrot," Fleeger notes.

As a consequence, the extent of EMR implementation across the country varies significantly by size of practice. According to US Department of Health and Human Services data, 57% of office-based physicians in America were using EMRs in 2011, but the majority of those were not doing so in a fashion that met meaningful use requirements (www.cdc.gov/nchs/data/databriefs/DB79.pdf). Usage percentages drop to less than 20% for solo practices or very small group practices, which Fleeger says often buy systems that allow them to do little more than e-prescribe.

The high cost of implementing EMRs is held out as one of the reasons that many solo and small group practitioners are being driven into larger forms of networked or hospital practice (www.cmaj.ca/cgi/doi/10.1503/cmaj.109-3245).

But Heyman argues the advent of cloud-based EMR systems will rapidly reduce the cost of implementing EMRs for solo practitioners and they'll soon discover the benefits. Buying an EMR "has saved me a fortune because I don't have to hire people to pull charts and sort them and do all that stuff. And I can find anything instantaneously."

Such advances may allay the problems that many physicians discovered in adopting EMRs, i.e., that many health software companies weren't really ready to provide systems that were useful.

"There are hundreds of companies"

that produce EMR systems, Fleeger notes. "Some are great. Some are not. A lot of them really don't work to physician work flow very well. They haven't gotten into how we are used to doing things and making the system fit that. We find that we have to change how we do things to fit the computer system. That's a little frustrating."

Standardization of EMR systems is slowly "coming about as a result of meaningful use," he adds. "But right now, it's pretty rudimentary. That will grow with time. So you buy one and if physicians, especially the small groups, find it doesn't work for them, they have to transfer the data and it just doesn't want to happen, they have start all over and have all of those costs all over again."

From that perspective, Heyman says, one of the benefits of the meaningful use requirements is that they are forcing "vendors to make their products in a way that helps to improve outcomes more than it might have been. Previously, most of the EMRs were for transcribing what happens in an office setting. They weren't really for producing data that could be used for producing quality improvement, measurement and that kind of stuff. Most of them competed with each other when it came to communications amongst different vendor products. With meaningful use, they are being pushed into having to interrelate electronically." — Wayne Kondro, *CMAJ*

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