

# Can Electronic Medical Records Really Improve Quality? The Obama Administration Bets Yes



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## Step Right Up, Physicians — the Electronic Medical Record Wizard Is Waiting For You

**T**he Obama Administration placed strong backing for electronic medical record (EMR) development by making federal funds available to doctors that implement EMR systems. Under the American Recovery and Reinvestment Act (ARRA),<sup>1</sup> funds are available for qualified medical practices beginning in 2011.

Interest in EMRs and electronic health records (EHRs) is also driven by market penetration. With estimates of over 2,000 vendors presently promoting products and services in the United States alone, a great deal of educational information on electronic records is now available, even though much is slanted toward particular products.

The benefits of systems integration that results in a more closely integrated health care record are numerous; both direct and indirect. These include enhanced access to patient medical records, greater availability of studies and reports, potential mitigation of medical-legal and risk management matters through improved access to medical information, and the ability to more closely communicate results and follow up on recommendations. Integrated medical records have the potential to improve billing performance and collection and enhance cash flow. Although many health care providers see the potential to improve quality of care as a positive aspect of these systems, the potential to improve bottom-line performance may be a more immediate and potent factor.

## EMR BECOMES POLITICAL

The Obama Administration has placed a big bet on EMRs producing savings in terms of health quality and cost reduction. A review of four major health care reform proposals<sup>2</sup> indicates that quality improvement measures will be heavily dependent on efforts such as quality

measures and reporting initiatives, comparative effectiveness research, health outcomes research and evaluation, health systems efficiency, patient safety research, interoperable standards, data collection and reporting, and provider accountability.<sup>3</sup> All of these efforts are dependent on one common element: the collection, dissemination, and analysis of valid health care data.

Most users and experts agree the current health care reimbursement system is inadequate in terms of large-scale national data collection that could be meaningfully translated into broad-based system savings. ARRA delivers an incentive the administration hopes will launch EMRs for thousands of physicians: billions in federal incentive funds for doctors who will adopt and install EMRs.

Signed into law on February 17, 2009, the 407-page ARRA commits \$19.2 billion to health care information technology (HIT) to promote the use of HIT for all health care providers. Incentive payments of \$17.2 billion will be distributed to eligible health care providers beginning in 2011, and through 2014.

To receive government cash incentives, health care entities must use a “certified” EMR. Ominously, providers who have not adopted a certified EMR by 2015 may be penalized for the absence of a certified electronic medical record.

### **EXCLUDED OR INCLUDED?**

To obtain federal incentive payments, providers must meet three requirements:

#### **Eligibility**

They must be an eligible professional who is a meaningful user of certified EMR technology. “Eligible professionals” include doctors of medicine, osteopathy, dental surgery, dental medicine, doctors of podiatric medicine, optometry, chiropractors, and physician assistants.

Hospital-based professionals such as pathologists, emergency room physicians, and anesthesiologists are excluded. The law only requires that doctors be Medicare pro-

viders; it does not mandate that they see a certain percentage of Medicare patients.

#### **Meaningful Use**

To be a meaningful user, physicians must meet three requirements.

1. Utilize electronic prescribing functionality (e-Rx).
2. Use an EMR with electronic exchange of health information in a manner designed to improve the quality of health care. Specifically, the EMR must connect to other EMRs such as those at hospitals and other provider practices, a functionality commonly known as interoperability.
3. Provide for the submission of statistical information on quality of care to the government so it can determine if EMRs are improving the health care system.

Possible benchmarks include attestation from a witness statement, submission of claims with appropriate coding, a survey response, or a report.

#### **Use of Certified EMRs**

To be eligible for government-based funds under ARRA, medical personnel will be required to use a certified EMR. To be considered certified, the EMR must fulfill the following criteria:

1. Include patient demographic and clinical health information, such as medical history and problem lists.
2. Have the capacity to provide clinical decision support that includes physician order entry (to capture and query information relevant to health care quality).
3. In keeping with the second “meaningful use” requirement, the system must exchange electronic health information with, and integrate such information from, other sources.

Certification is provided by the Certification Commission for Healthcare Information Technology (CCHIT). The Certification Commission is an independent, 501(c)3 nonprofit organization recognized as certification body for EHRs. The mission

of the CCHIT is to accelerate the adoption of robust, interoperable health information technology by creating a credible, efficient certification process.

The CCHIT certification criteria represent a substantial body of work, developed by hundreds of volunteers through an open, multi-stakeholder, consensus-based process, and refined by testing and operational certification over the past three years. With the passage of the ARRA and its requirements for certification, this process has attracted national interest from a much broader audience.

### **DOLLARS FOR DATA**

Once these three criteria are met, ARRA allows for up to \$44,000 in bonus payments to individual physicians who demonstrate meaningful EMR use by 2015. (See Figure 1) Note: EMR-earmarked federal funds will not be released up front to help purchase the systems but would be released beginning in 2011 when organizations have implemented electronic records and met the meaningful use criteria. Total funds released per practice are directly related to the number of health care professionals within the medical enterprise adopting EMRs.

### **BUT...DOES IT IMPROVE QUALITY?**

Logically, it seems that consistent use of good EMR systems would improve quality. EMRs are even noted in physician continuing medical education programs as having the potential to benefit quality of care. In *Defensible Documentation Using Electronic Medical Records*, CME author Donna B. Jones notes:

Many schools of thought equate an EMR with improved quality of care. Easily accessible health records and patient information may speed care and reduce the potential for medical errors. Automated systems such as computerized drug reconciliation programs or medication adverse event warnings can provide Physicians with immediate access to drug contraindications. Easily

missed data such as drug allergies can be readily accessed, or searched for in electronic files with appropriate database management. Patient identification with a specific record or data can be verified more easily using unique identifiers, reducing the possibility of misdiagnosis.

The Medicare Physician Quality Reporting Initiative (PQRI) lists 100+ Quality Measures that may lead to improvements in quality of care. EMR is seen as a logical progression of a system that allows physicians to identify measures they wish to track, and provides payments for those that successfully monitor and report on measures. Physician Order Entry and the use of electronic prescriptions is one example of a Quality Measure used in Pay for Performance (P4P) systems.<sup>4</sup>

An EMR system cannot in itself improve quality of care. But it can improve the capture and flow of data to healthcare providers who make decisions regarding patient care, and it may decrease the time needed to identify, locate, and disseminate information that will contribute to correct medical decision making.<sup>5</sup>

Despite the vast numbers of arguments that EMRs will be a quality panacea, the primary thesis — that simply using EMRs can improve quality — is yet unproven. In fact, poorly implemented and poorly used EMR systems may not improve quality but clutter up documented medical decision making with unnecessary and nonpertinent template materials not germane to the care of a particular patient. In EMRs, as in all electronic documentation systems, GIGO (Garbage In, Garbage Out) is the one firm and fast rule.

Logically, the ready availability of complete patient health information, in an easy-to-use and readable format, should

**Figure 1: Timetable**

IF ADOPTED BY:	2011*	2012*	2013*	2014	2015
Year 1	\$18,000				
Year 2	\$12,000	\$18,000			
Year 3	\$8,000	\$12,000	\$15,000		
Year 4	\$4,000	\$8,000	\$12,000	\$12,000	
Year 5	\$2,000	\$4,000	\$8,000	\$8,000	
Year 6	\$0	\$2,000	\$4,000	\$4,000	

improve the physician or nonphysician provider's ability to review and utilize that health information. By extension, better medical judgments should be possible, and certain types of medical malpractice claims may be avoided.

For example, a study reported in the *Archives of Internal Medicine* on November 24, 2008, noted that a survey of 1,140 physicians of the Harvard Pilgrim Health System in Massachusetts indicated a significant difference in the number of malpractice claims brought against those that did not use an EMR system as opposed to those who did. According to the study, 6.1 percent of those respondents using EMRs reported malpractice claims; by comparison, 10.8 percent of physicians who did not use an EMR reported claims.<sup>6</sup>

Importantly, the study also noted that the methodology used was logistic regression analysis of reported malpractice claims among respondents compared to paid claims data from the Massachusetts Board of Registry in Medicine (BRM) Internet site. Obviously, this excludes data on settled claims that may not have been

reportable. In its Conclusions, the report noted that results were "inconclusive" and that "Confirmatory studies are needed before these results can have policy implications."<sup>7</sup>

Statistical data supporting the efficacy of EMR or EHR use in reducing malpractice claims are limited at present but are expected

to become more readily available as electronic records use matures and claims history is established. The often extended time period between a medical injury event and closure of a legal case limits the availability of currently usable data.

Although EMR and EHR statistics are not individually available, a relevant review of the largest national database of closed medical malpractice claims can be conducted using the Data Sharing Reports generated by the Physician Insurers Association of America (PIAA). PIAA consists of over 50 physician insurers that collectively provide coverage for approximately 60 percent of the private practice physicians in the United States. PIAA data includes information on 239,756 closed claims from 1985 to 2008.

As an example, claims that involved a failure in the informed consent process (including "breach of contract") were among the most prevalent claims reported in the 2009 PIAA Data Sharing Report. In all medical specialties, 14,985 closed claims reported an issue related to these concerns, and 33.8 percent of those claims resulted in a payment to the plaintiff.<sup>8</sup> To the extent that EMR can document and record patient education and informed consent processes, for example, it is logical that some of these claims may be mitigated.

Other significant claims that may be impacted by electronic

**Figure 2: Other Claims That May Be Impacted**

Malpractice Issue, All Medical Specialties	# of claims	% of claims paid
Problems with patient history, exam, or workup	5,702	48.93%
Problems with medical records	5,220	61.42%
X-Ray error	4,591	41.23%
Communication between providers	4,484	39.78%

record use include the broad categories as reported by PIAA and shown in Figure 2.<sup>9</sup>

PIAA notes that across all medical specialties, almost 30 percent of claims result in payment to plaintiffs.<sup>10</sup> By extension, issues that appear to be fertile ground for improvements by EMRs and EHRs have a much higher percentage of payment and in some cases double that of all other types of claims.

But there are also more discrete studies that show some aspects of electronic data gathering and collection may actually improve quality of care. Fredrick Bloom, MD, the assistant chief quality officer of Geisinger Health System, was quoted recently as stating that “hardwiring” reminders into EMR systems could improve quality when followed by doctors. Bloom notes:

We focused on hardwiring reminders and alerts into the electronic health record to enhance care consistency and reliability — particularly related to diabetes and coronary care as well as ensuring adults receive preventative health screenings.<sup>11</sup>

Meanwhile, CMS recently reported that in the Physician Quality Reporting Initiative (PQRI) more than 85,000 successful participants received more than \$92 million in 2008. This compares to approximately \$36 million paid to 56,700 physician participants in 2007.<sup>12</sup>

### **THE FINAL ANALYSIS...FOR NOW**

Do EMRs improve quality? Not without effective implementation and consistent utilization, but EMRs may promote quality — through consistently available data that is readily locatable. From a professional liability standpoint, there are many arguments that caution doctors against overuse of templates, reliance on computer-generated language, and failure to include all needed data. The same argu-

ments can be voiced by compliance professionals, who have seen their fair share of inadequate electronic documentation and aggressive systems that overbill for services rendered.

The jury is still out on EMRs as a quality improvement tool — but the federal incentives to implement EMRs are very real, and hard to resist, and the potential threat of sanctions if providers do not implement EMR systems are also quite compelling.

All in all, it looks like physician use of EMRs is inevitable. Welcome to the Yellow Brick Road, physicians — the Wizard will see you now.

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