

**American Health Information Community  
Electronic Health Records Workgroup  
Summary of the Web Conference Held  
Friday, October 13, 2006**

**(10th Web Conference of This Workgroup)**

## **PURPOSE OF MEETING**

The purpose of the 10<sup>th</sup> Web conference of the Electronic Health Record Workgroup (EHR WG) was to advance progress on the workplan for the Workgroup's Broad Charge:

*Make recommendations to the American Health Information Community (the Community) on ways to achieve widespread adoption of certified electronic health records (EHRs), minimizing gaps in adoption among providers.*

The primary objectives of the EHR WG meeting, chaired by Lillee Gelinas and Jonathan Perlin, were the following:

1. Hear testimony pertaining to the *Financial/Business Case critical component* of the EHR WG's workplan for accomplishing its broad charge
2. Continue the process of prioritizing data elements in the *state of the technology critical component*
3. Continue work on the "visioning exercise" for the adoption of health information technology (HIT) in the next 10 years and thereafter.

Dr. Perlin welcomed Dr. Robert Smith from the U.S. Department of Veterans Affairs (VA) as a new member of the EHR WG.

## **KEY TOPICS**

### **1. Testimony on Financial/Business Case critical component**

Six individuals gave testimony, several distributing publications, to the EHR WG on financial factors related to the adoption of EHRs by physician practices. A common theme was that the costs of implementing EHRs are typically borne by physicians, but most of the benefits are diffused throughout the health care system to payers and other stakeholders. Several approaches for overcoming this obstacle, which has hindered the adoption of EHRs by physician practices, were presented.

*A. Financial Barriers to EHR Adoption: Report from One Small Practice – Dr. Richard Baron, President, Greenhouse Internists*

Dr. Baron said he believes few small physician practices will adopt EHRs in the current environment because lack of a strong business case for doing so. If EHRs do not work in small primary care offices, where people go for care 60 percent of the time, they do not work at all.

And primary care does not have much of a future without EHRs. Dr. Baron suggested that parties such as health plans and others benefit from EHRs and therefore they should contribute financial and material support to solutions; working EHR products may be a better choice than money.

Dr. Baron's own small practice, Greenhouse Internists, exemplifies some of the challenges to EHR adoption. This group of four internists decided to adopt an EHR about 2 ½ years ago when an opportunity was created by a one-time cash windfall. The physicians thought that an EHR would enable them to take better care of their patients and minimize the need to perform frustrating repetitive processes, but they were dubious about the financial return. The goal was to migrate as quickly as possible to an EHR, so the physicians would not have to go back and forth between electronic and paper records.

The practice experienced significant stress and disruption as a result of the transition to an EHR, especially in the first 90 days. They had to redesign every office system they had in place. The practice had to have parallel workflows on paper and on EHRs. The preload/data conversion issues were substantial. Essentially, every patient was a "new patient," and physicians had to abstract every patient's chart and bring the data into the patient's EHR. Dr. Baron recommended that paying for this data conversion, such as a new patient visit as the patient is new to the system, could be an adoption incentive. Getting the system up and going was so time-consuming that it prevented the physicians and staff from doing their core jobs, and patients complained. The lack of working interfaces between the physician practice and the data systems of outside clinical labs, radiologists, other specialists, etc. at the time of EHR implementation was a significant drawback. It took 3 months for the practice to get a laboratory interface, and during that time, the practice had to do an enormous amount of manual data entry.

Their costs of adopting an EHR were \$35,000 per doctor in Year 1, plus \$7,500 per doctor for enhancements in Year 2. In Year 1, the practice experienced a 1.6 percent revenue *decrease* (a 5 percent income decrease to the doctors). In Year 2, they recovered somewhat, but the practice had had better revenue growth before adopting an EHR. The move to an EHR did allow the practice to eliminate annual transcription costs (\$50,000) and 2.5 full-time employees (a registered nurse and two file staff members); it also freed up 400 square feet of office space used for office supplies. The costs for maintenance and support have been \$12,000 per year per doctor. The EHR has not resulted in any additional revenue from payers.

The practice now has a full-featured, remotely accessible EHR with all clinical data and decision support tools. None of the physicians would go back to paper health records. They particularly like having information in context, having the ability to work from anywhere, the ease of doing prescription refills, the efficiency of prepopulated authorization and other forms, and the fact that patients like the e-mail system. What they do not like are the ongoing technology costs, the absence of financial return, occasional system down time, and the need to constantly redesign workflow so that doctors do not have to perform tasks such as typing their notes and interacting with pharmacy refills.

Dr. Baron stated that his physician practice would benefit from pay-for-performance (P4P) initiatives immediately if someone offered payment for use of an EHR. His practice, however, would not benefit really from P4P programs that require clinical improvements until there is greater interoperability between data systems so that physicians do not have to enter data

manually. He hopes that EHRs eventually will help with recertification, but EHR products that have an interface with board certification programs are needed.

*B. U.S. Barriers to the Adoption of Health Information Technology – Dr. Blackford Middleton, Partners Healthcare System, Inc.*

Dr. Middleton said that it has been estimated that standardized encoded electronic health care information exchange could save the U.S. health care system \$337 billion over a 10-year implementation period and \$78 billion each year after that. It also could reduce dramatically both the administrative burden associated with manual data exchange and unnecessary duplication of laboratory and radiology tests.

Currently, however, three major problems impede the adoption of health information technology (HIT): (1) *asymmetry of risk and reward for HIT* (i.e., the entities that pay for HIT do not reap most of the benefits), (2) *market failure for HIT* (e.g., absent an effective business case, the adoption of HIT in small practices has been slow), and (3) *early market effects* (e.g., first movers have disadvantages with respect to interoperability; early adopters of HIT tend to be large group practices that can afford it; places like Kaiser and the VA where entities making the investments also reap the rewards).

Dr. Middleton identified a number of steps that might stimulate the adoption of HIT, drawing from the discussion at the February 2004 American College of Medical Informatics retreat: (1) *financial incentives to stimulate the EHR marketplace* (e.g., reimbursement reform, capital availability, EHR certification and accreditation), (2) *HIT standard setting* (e.g., essential standards for an EHR, minimum clinical dataset, minimal functional standards for HIT systems), (3) *enabling policy* (e.g., Federal policy on clinical data ownership and stewardship, national licensure in the health professions), and (4) *education, marketing, and supporting activities* (e.g., education and marketing campaigns for the public, for health professionals, and for health care management).

*C. EHR Adoption in Rhode Island – Dr. Mark Jacobs, Chair, Board of EHRs of Rhode Island, President, Coastal Medical*

Dr. Jacobs described Electronic Health Records of Rhode Island (EHRRI) – a unique collaboration of five large physician organizations in Rhode Island designed to facilitate the adoption and use of a single EHR product by physician practices in the State. The objectives of EHRRI are to (1) bring down the costs of EHRs via volume discounts; (2) participate in the selection of a single EHR product to simplify interconnectivity, support, training, and interfaces; (3) build local service and training components for EHRs; (4) develop uniformity of reporting for P4P; and (5) provide leadership and build relationships with other physicians and groups pertaining to EHRs.

Each founding physician organization provided equal capital (\$200,000) and “sweat” equity and received equal governance rights. EHRRI opened for business in June 2006 as a value-added reseller of EHR products and services for office-based physicians in Rhode Island. The organization offers physicians a choice of either a standalone EHR or an integrated EHR and practice management system from eClinicalWorks. So far, EHRRI has had 25 EHR implementations, 90 signed physician contracts, 61 pending contracts, 235 “evaluating,” 80 planned demos, and 24 “leads.”

At this point, EHRRI is funded primarily through payments from physician customers. Payers and other stakeholders realize significant savings when physicians use EHRs, though, and EHRRI is seeking additional support through grants or contributions from payers or other interested parties. Blue Cross Blue Shield of Rhode Island has signed on as a major financial backer, and other stakeholders (including hospitals) are enthusiastic about the project.

*D. Can P4P and P4PI Help Overcome Some Barriers to EHR Development? – Dr. Ronald Bangasser, Integrated Healthcare Association (IHA)*

Dr. Bangasser reported on a P4P pilot program in California that currently encompasses seven large health plans, 222 physician organizations, and 40,000 physicians (more than half of the physicians in the State). In 2002, the California HealthCare Foundation gave a grant to the IHA to run the pilot program. Participating health plans agreed to pay financial incentives based on common performance measures to their contracted medical groups. The plans also agreed to a widely disseminated public report card on their physician groups' performance.

A common set of performance measures was developed to measure physician groups' clinical performance, patient satisfaction, and information technology investment. The first measurement year was 2003, and the first reporting and payment year was 2004. Last year, health plans paid out a total of \$54 million (all new money) to medical groups for quality improvements/ performance: 50 percent was set aside for improvements related to clinical measures, 30 percent for improvements related to patient satisfaction, and 20 percent for improvements related to information technology investment.

In all three realms – clinical quality, patient satisfaction, and the adoption of HIT – the results of the P4P pilot program in California have been encouraging. Physicians getting full credit for improvements related to information technology investment rose by 11 percent from 2004 to 2005. Part of the success of the P4P program in the HIT realm is attributable to the fact that the program pays not only for HIT outcomes but also for HIT use. Physician practices that have an EHR that enables them to respond to the health plan electronically, and to communicate with individual physicians, get credit.

Dr. Bangasser pointed out that unless physicians are sufficiently rewarded for the effort, time, and money that they are putting into quality improvement initiatives, they will not buy into such initiatives. Beaver Medical Group, where he practices, received \$1.2 million in P4P quality improvement bonuses in 2005. About half of this amount went for HIT improvements in the practice, and half was paid out as bonuses to the physicians who did the work. Beaver Medical Group has spent \$140,000 per physician on HIT over the last 8 years. Some medical groups have spent far more on an EHR, only to have their EHR fail to meet expectations or fail completely. Once a group purchases an EHR, it has to do things like change the workflow of the office, institute training, make provision for upkeep, etc. Some physician practices cannot get past the cost barrier to the adoption of EHRs. Furthermore, many solo and small group physician practices are not aware that they can get money for P4P or feel threatened by the concept. Dr. Bangasser has encouraged these practices to start incrementally with a registry of patients with a certain disease (e.g., diabetes) on something as simple as a Microsoft Excel spreadsheet that can be transmitted to an independent practice association or a medical group.

Most of the benefits of EHRs go not to physicians but to businesses, health plans, and the government. Dr. Bangasser said that the funding for EHRs should come from these other entities that are the primary beneficiaries of the benefits. The health plans in California's P4P pilot program currently are putting 1.5 to 2 percent of the gross dollars spent in health care toward P4P, and that seems to be having an effect. Bringing that amount up to 5 or 10 percent would get the ball rolling faster.

*E. A Study of the Economics of EMR Adoption by Small Physician Practices – Dr. Helga Rippen, Senior Advisor for Health Informatics, Department of Health and Human Services (DHHS) Office of the Assistant Secretary for Planning and Evaluation (ASPE)*

Dr. Rippen reported findings from a study commissioned by ASPE entitled *Assessing the Economics of Electronic Medical Record (EMR) Adoption and Successful Implementation in Physician Small Office Settings*. That study addressed several topics, including (1) what the literature shows with regard to factors associated with EMR adoption in small physician practice settings, (2) what the literature shows with regards to the financial aspects of the EMR adoption, and (3) insights from site visits to small physician practices. It also proposed a framework for modeling successful EMR implementation in small physician practices.

The literature identifies several factors associated with EMR adoption. Some factors, such as physician practice characteristics (e.g., size and type of practice and ownership) and physician characteristics (e.g., age and specialty), cannot be modified. On the other hand, physician practices' perceptions of the financial, technical, and practice-related barriers and benefits related to EMR adoption are subject to modification. In the financial realm, perceived barriers to adoption include a lack of capital investment, maintenance costs, complex contracts, and lack of time; perceived benefits include improved charge structure, reduced transcription costs, reduced staff expenses, and increased revenue.

The costs associated with EMR acquisition reported in the literature range between \$33,000 and \$50,000 per physician; annual costs associated with EMRs range between \$8,412 and \$18,000 per physician. The net financial benefit of an EMR for an individual physician practice has been estimated to be between \$1,058/year per physician and \$23,000/year per physician. Additional benefits accrue outside the physician office. One study suggests that the more advanced the EMR in terms of functionality, the greater the net benefits. Unfortunately, the degree of EMR adoption by physician practices appears to be inversely related to functionality.

Site visits to multiple physician practices confirmed the study's findings from the literature, as well as the study's hypothesis that physicians are influenced by costs and benefits. Practices spent between \$15,000 and \$80,000 on the purchase of EMR software. It took at least 3–6 months to become fully operational, and the process was painful and difficult. Though physicians were not happy during the implementation period, once the EMR was up and running, they were fairly happy with it.

*F. Bridges To Excellence: Pay for Performance in Action Today – François de Brantes, National Coordinator, Bridges to Excellence (BTE)*

Mr. de Brantes said that BTE, a nonprofit that seeks to encourage significant leaps in the quality of care, tries to incorporate what is known about P4P into its programs. Thus, BTE (1) uses standard performance measures and pulls them from medical records and practice surveys, not

claims; (2) provides physicians with clearly defined costs and benefits, which helps them determine the value of participating; (3) uses independent third-party organizations to measure the performance of the physicians; (4) brings together lots of payers and purchasers to make rewards meaningful to physicians; and (5) encourages physicians to adopt better systems of care, including HIT, to improve the delivery of care systematically (intermediate outcomes).

Physician Office Link (POL) is a BTE program that financially rewards physician practices that use information systematically to enhance the quality of patient care. The practices must demonstrate that they have “reengineered” and adopted a series of processes and made structural changes in three domains: (1) clinical information systems, (2) patient education and support (focusing on the top chronic conditions in the practice), and (3) care management (improving care of high-risk patients). A sliding scale of rewards ties bonuses to continuous improvement. Practices get less every year unless they continue to move to full “system-ness,” which includes adopting and using EHRs certified by the Certification Commission for Health Information Technology.

Most practices participating in POL have had positive experiences. Community Care Physicians, P.C., for example, is a large independent practice association (IPA) in New York that started the POL recognition process in 2003 and now has 11 POL-recognized physician practices. More than 40,000 patients now receive care at practices that have demonstrated improvement. An EMR system with wireless access in all practice sites has been implemented. The systems are mapped to evidence-based care guidelines. There have been measurable improvements in the care of diabetics and savings in reduced staffing, transcription, materials, and overtime. The IPA has received more than \$400,000 in rewards from BTE.

## **2. Prioritization of Data Elements in the State of the Technology Domain of the EHR WG’s Workplan for the Broad Charge**

A one-page document entitled *Critical Component: State of the Technology – EHR Component/Function Prioritization Exercise* was distributed to WG members to enable them to complete the process of (1) prioritizing EHR data elements that will be most useful to physicians and help spur EHR adoption (first column) and (2) identifying policy implications and potential barriers related to those data items (last column). Dr. Perlin asked whether there were any final comments or amendments to the list and whether the WG could ratify the list going forward. Dr. Karen Bell raised the issue of considering the functionality of e-prescribing along with the second data item – i.e., Pharmacy/Allergy (medications, allergies). Some members expressed support for this amendment. Dr. Perlin summed up the discussion saying that there seemed to be endorsement of the list overall and the EHR WG would use the list as its working list for the time being, reserving the prerogative to revisit the list in the future as new issues arose. He asked the Office of the National Coordinator (ONC) staff to send out the e-prescribing question as a question for further discussion.

**Staff Action Item #1: The ONC staff will send out the *Critical Component: State of the Technology – EHR Component/Function Prioritization Exercise* document to EHR WG members for review by Monday, October 16.**

### **3. "Visioning Exercise" Related to the EHR Workgroup's Broad Charge**

A two-page draft document entitled *Visioning Exercise: Draft/For discussion*, pertaining to the widespread adoption of health information technology in the next 10 years, was distributed to EHR WG members for their comments. Dr. Perlin noted that the word "cataclysmic" in the first paragraph should be changed. Several workgroup members made comments on the issues on page 2: (1) considering whether to add "hospital adoption and maintenance of EHRs" to the second issue; (2) including issues related to patient identification, privacy, confidentiality, etc., as a new sixth issue; (3) mentioning issues of authorization and authentication along with the fourth issue; (4) adding something about the development of Regional Health Information Organizations and the Nationwide Health Information Network, perhaps by expanding the second issue; (5) adding something about patient safety; and (6) adding something about using de-identified data be used to advance the state of knowledge as a natural byproduct of the care delivered every day. It was agreed that the ONC staff would send out a revised version of the document for further comments.

**Staff Action Item #2: The ONC staff will send a revised version of the "visioning document" to EHR WG members for their review by Monday, October 16.**

### **4. CLIA Discussion: EHR Recommendation 3.0**

Dr. Bell reported that the ONC staff had been working with the staff at the Centers for Medicare & Medicaid Services and legal counsel in discussing various models and would make a presentation about this at the EHR Workgroup's November 7, 2006, meeting.

## **SUMMARY OF ACTION ITEMS**

**Staff Action Item #1: The ONC staff will send out the *Critical Component: State of the Technology – EHR Component/Function Prioritization Exercise* document to EHR WG members for review by Monday, October 16.**

**Staff Action Item #2: The ONC staff will send a revised version of the "visioning document" to EHR WG members for their review by Monday, October 16.**

**Electronic Health Records Workgroup  
Members and Designees Participating in the Web Conference  
October 13, 2006**

*Co-chairs:*

Jonathan B. Perlin	HCA Inc.
Lillee Smith Gelinias	VHA, Inc.

*ONC/OHITA Director:*

Karen Bell	ONC/HHS
------------	---------

*Members:*

Jason DuBois (for Alan Mertz)	American Clinical Laboratory Association
Connie Laubenthal (for John Tooker)	American College of Physicians
Howard Isenstein (for Chip Kahn)	American Federation of Hospitals
Chantal Worzala (for George Lynn)	American Hospital Association
Jim Sorace (for Barry Straube)	Centers for Medicare & Medicaid Services
Harriet Walsh (for Barry Straube)	Centers for Medicare & Medicaid Services
Ken Waldbillig (for Mark Lewis)	EMC Corporation
Robert Smith	Department of Veterans Affairs
Blackford Middleton	Health Information and Management Systems Society
Mike Kappel (for Pam Pure)	McKesson Provider Technologies
John Houston	National Committee on Vital and Health Statistics

*Presenters:*

Richard Baron, M.D.	Greenhouse Internists
Helga Rippen, M.D., Ph.D., M.P.H.	ASPE/HHS/ASPE, Health Informatics
Mark D. Jacobs, M.D.	EHRs of Rhode Island
Ronald Bangasser, M.D.	Beaver Medical Group; Technical Advisory Committee, IHA's California P4P Program
François de Brantes	Bridges to Excellence
Blackford Middleton, M.D., M.P.H, MSc	Partners Healthcare

**Disclaimer:** *The views expressed in written conference materials or publications and by speakers and moderators at HHS-sponsored conferences do not necessarily reflect the official policies of the HHS; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.*