Electronic Health Records

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There is an emerging consensus among hospitals, long-term care facilities, and physician groups across the country that widespread use of electronic health records (EHR) is an idea whose time has come. In its simplest form, EHR refers to an individual patient's record that has been transferred into a digital format. The federal government, state legislatures, and medical organizations are promoting, studying, and implementing EHR programs. Businesses are developing software and health information technology (HIT) systems to meet the growing demand for EHR. Perhaps most important, the public has begun to accept that innovation and technology are not merely playing a role in medicine and research, but are transferring their personal medical information into cyberspace, with all the benefits and risks associated with the information age.

The State of EHR Initiatives

In many places, EHR has already become a reality. The Hospital of the University of Pennsylvania (HUP) is currently engaged in the transition to EHR and has systems in place to track the status of every patient and every bed.[1] Pennsylvania-based Geisinger Health System was recently named a 2007 Computerworld Honors Laureate for innovations that its staff have implemented to integrate electronic record keeping with quality patient care through the use of the Clinical Decision Intelligence System (CDIS). The CDIS "is a large digital warehouse that allows Geisinger to measure clinical trends, identify gaps in care, derive new clinical knowledge and gives physicians, researchers, clinical teams and ultimately patients, secure and confidential access to large amounts of clinical information."[2]

The Leapfrog Group is an organization comprised of corporations and public agencies that buy health benefits for their employees. Leapfrog's mission is to promote safety, quality, and affordability in health care. Leapfrog's Quality and Safety Survey considers implementation of computer–physician order entry as a standard in assessing a hospital's quality and safety.[3]

EHR has moved to the forefront of a national discussion about health care. Hospitals, practitioners, and businesses are innovating, experimenting, and moving forward with EHR and HIT innovations. On a parallel track, politicians are espousing the virtues of EHR and making representations about EHR's positive impact on patient safety, costs, and savings in an effort to improve overall care without compromising patient safety. As recently as August 27, 2007, the US Department of Health and Human Services' Health Resources and Services Administration (HRSA) announced that it would award $31.4 million in grants to help health centers prepare to adopt and implement EHR and other HIT innovations.[4] According to HRSA Administrator Elizabeth M. Duke, "Health information technology has the potential to revolutionize health care, especially for residents of underserved communities, and its expansion is a priority for HRSA."[4]

As EHR gains acceptance and becomes a reality, so do questions from patients about the impact on their privacy, barriers to implementation, and the problems of standardization. Not only are these issues being analyzed by governments, businesses, medical organizations, and patient groups, but they have arrived at the forefront of a national debate on the American healthcare system. In fact, EHR is being promoted by many of the leading presidential candidates as a central part of their healthcare reform plans. With the 2008 election looming large in the minds of patients and voters, we can expect to hear plenty about how EHR is going to save medical costs, reduce medical errors, and increase efficiency. However, the political hype about EHR may create unreasonable expectations.

Political Discourse Regarding EHR

In his 2006 State of the Union address, President Bush stated, "[w]e will make wider use of electronic records and other health information technology, to help control costs and reduce dangerous medical errors."[5] In 2005, the American Health Information Community (AHIC) was chartered as a federal advisory board, whose purpose was to study HIT.[6] The Bush administration has also promoted a public–private partnership for implementation of EHR.[7] Additionally, the Department of Health and Human Services (HHS) contends that "the Community will help with the widespread adoption of electronic health records and related health information technology improvements that will result in fewer mistakes, lower costs, less hassle, and better care."

Advocates of EHR and HIT assert that EHR can help prevent many medical errors. The Institute of Medicine estimates that medical errors kill 45,000 to 98,000 Americans each year in hospitals.[8] Moreover, HIT can reduce costs by saving time and reducing duplication and waste—lowering healthcare costs by as much as 10%. Consumers not only benefit by saving money and receiving better care, but also save time. Patients will

not have to give their address, insurance information, and other basic information over and over again because the information will be contained in their EHR. More important, the information needed to treat patients effectively will be a mouse click away, no matter where and from whom the patient is receiving care.[9]

EHR proponents contend that millions of dollars and countless mistakes result from the use of an outdated, paper-based medical records and billing system. Modernizing our healthcare system through the use of information technology will empower doctors and other healthcare providers to communicate electronically and will reduce waste and redundancy while improving safety and quality by reducing medical errors.

Many of the 2008 presidential candidates have promoted EHR as part of their healthcare plans. Democrat Barack Obama asserts that his administration would invest $10 billion over 5 years to finance adoption of a standards-based EHR system by the US healthcare system. He has stated that he will also ensure that patients' privacy remains protected.[10]

Fellow Democrat, Senator Hillary Clinton, claims that she will create system-wide savings from full use of HIT and bring a paperless revolution to health care. She will require providers participating in federal programs to adopt private, secure, and interoperable technology. As part of her plan, she will provide an upfront and phased-out $3 billion yearly investment fund that would help hospitals and doctors adopt and implement HIT. She will also maximize use and improve quality by giving doctors financial incentives to adopt HIT. Senator Clinton will also attempt to reduce 200,000 adverse drug events based on the notion that if all hospitals used a computerized physician order entry system, medication errors could be avoided and roughly $1 billion per year saved.[11]

Republican Sam Brownback also contends that health care can become more affordable by adopting electronic records keeping.[12] Additionally, Republican candidate and governor of Massachusetts Mitt Romney has supported a "2- to 3-year project that will study the impact and practicality of using electronic health records in community medical practices," a practice that was enacted in Massachusetts.[13]

With HHS studying the benefits of EHR, the presidential election on the horizon, and pending federal legislation, the discussions regarding EHR will only in-

tensify. The assessments and studies of early initiatives in the private sector combined with government's apparent commitment to implementation EHR portends a perfect storm as the 2008 presidential election approaches, bringing the system to the top of the nation's healthcare agenda.

Current Legislation
The Health IT Now! Coalition, a group organized to promote the rapid deployment of HIT, has applauded a bill introduced by Senators Edward Kennedy, Michael Enzi, Hillary Clinton, and Orrin Hatch to bring EHR and HIT to all Americans.[13] This Senate bill adopts several of the Health IT Now! Coalition's principles to promote the widespread adoption of HIT. In particular, the legislation sets a date for establishing interoperability standards, providing grants and loans to providers, empowering public–private partnerships, and codifying aspects of the HIT effort into law, thus helping to realize lifesaving and cost-saving advances of modern technology.[13]

The Future of EHR Initiatives
A survey and roundtable discussion by the Healthcare Financial Management Association found that hospitals are beginning to implement EHR programs, but that major obstacles remain, including a lack of national standards, lack of funding and physician usage, and lack of interoperability among the software that drives EHR. These challenges have rarely been cited by politicians when discussing EHR in the context of healthcare reform. A study in *Health Affairs* found that "sizable gaps" may exist between the visions of policymakers and the realities of a physician's use of EHR. These limitations include the lack of advanced features in e-products, implementation hurdles, and physician preferences for use of systems.[14]

Leading up to the 2008 presidential election, *Assisted Living Consult* will take an in-depth look into the benefits of implementing EHR and transitioning from a "paper-based" record keeping system, as well as the pitfalls and complications that come with such a widespread and far-reaching endeavor. **ALC**

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Biometrics as an Assistive Technology
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has nothing to find or remember. A simple tap of his or her finger on a digital sensor achieves the identity authentication required to "unlock" a door. No cards or keys can be stolen, reducing theft or other criminal activities. Moreover, fingerprint-recognition technology also eliminates the inconvenience and expense of replacing locks. And with today's robust solutions, access-control applications can even be programmed to lock and unlock doors for specific people at certain times.

Entry systems that incorporate biometric-recognition technology provide:

- Special egress security to protect residents with dementia or Alzheimer's from accidentally leaving a room or facility
- Elevator control to restrict floor access for 'memory' or dementia residences on specific floors
- Easy access to resident apartments
- Elimination of credential-accessories that can be duplicated, shared, lost, or stolen
- Logs and management reports documenting the identity of persons and the times that access events took place
- Secure, authorized access to pharmaceuticals
- Identity authentication required in medication pass management
- Easy integration with software and discrete video and camera solutions

Staff Management with Biometric Applications

Managing employee time and attendance is another challenge that biometric solutions successfully address for AL facilities. These applications frequently replace electronic time clocks or paper forms that require employees to manually enter the times they begin and end a shift. These approaches are susceptible to a high rate of human errors and inaccurate reporting. Mistakes may occur in mathematical conversions and pay-period totals. Manually compiled forms also permit employees to round up their hours or enter personal or sick time as hours worked. Timecards are also susceptible to fraudulent reporting: Buddy-punching, when employees punch in or out for absent coworkers, is a common concern that finds organizations paying staff members for time they did not work. Biometric time tracking addresses these issues and is credited with reducing time-consuming tasks and costly administrative errors and for improving employee accountability, productivity, and morale.

MSP Real Estate Inc., which specializes in Section 42 Independent Senior Housing, owns and operates 200 units at 4 AL and memory-care facilities; 3 in Wisconsin and 1 in Minnesota. Its Heritage Assisted Living Communities employ 130 people. For nearly 6 years, employee time and attendance had been managed with a traditional time clock system, which, according to MSP President Milo Pinkerton, was inefficient.

"We were spending too much time on payroll preprocessing tasks," says Pinkerton. "So when I saw a biometric application at the Annual ALFA Convention, I was interested. It automated the totaling of employee hours—so no more errors or wasted time spent on manually adding up timecards. And, it accurately clocked employees' arrivals and departures simply by having them tap a fingerprint sensor when they'd arrive or leave."

Last year Pinkerton had the biometric time-tracking application installed at all 4 Heritage Living communities. It will also be installed at the 5th and newest facility scheduled to open later this year.   ALC

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