

The Advantages of an EHR for Homecare and Hospice Providers

In 2004, the U.S. government called for a nationwide move to establish an electronic health record system (EHR). President Obama has reinforced and stressed his support for this initiative by setting a goal for the adoption of feasible EHRs for all Americans by 2014. This project may prove to be a challenge.

For its part, the Centers for Medicare & Medicaid Services (CMS) is working to support that goal as part of its overarching objective to improve the quality of care delivery. The core of CMS' initiative is to develop an EHR that will provide a complete patient medical record and care plan in one database that is accessible to the entire authorized care team.¹

According to the Department of Health and Human Services, the benefits inherent in an EHR for patients and care providers includes fewer medical errors, reduced data redundancy, faster identification of health issues and diagnoses, more effective illness treatment and better communication across the continuum of care.

Government agencies are not alone in recognizing the potential benefits for healthcare delivery and patient outcomes. A survey conducted by *Wall Street Journal Online*/Harris Interactive indicates that 75% of adults believe that making access to shared information easier for the entire care team could result in improved patient care. More than half, 63%, believe such access would decrease medical errors and reduce healthcare costs.²

Improving patient care is at the core of the EHR. But what about the advantages an EHR could provide homecare and hospice providers? By becoming early adopters of EHR technology, homecare and hospice organizations will achieve brand and competitive advantages in an environment in which every asset is essential. Financially, EHR technology will help decrease the cost of auditing and support thorough pay-for-performance readiness. Additionally, implementing an EHR will help the organization achieve and maintain standard cutting-edge practices that will establish it as a leader in the industry.

Electronic Health Record System

According to HIMSS, an electronic health record is a secure, real-time, point-of-care, patient-centric information source for clinicians. A true EHR fully automates workflow, provides access to complete patient

¹ Steven Evans and Charles Stemple, "Electronic Health Records and the Value of Health IT," Supplement, *Journal of Managed Care Pharmacy* 14, no. 6 (August 2008): S-c, http://www.amcp.org/data/jmcp/Aug%20suppl%20C_S16-S18.pdf (accessed December 15, 2008).

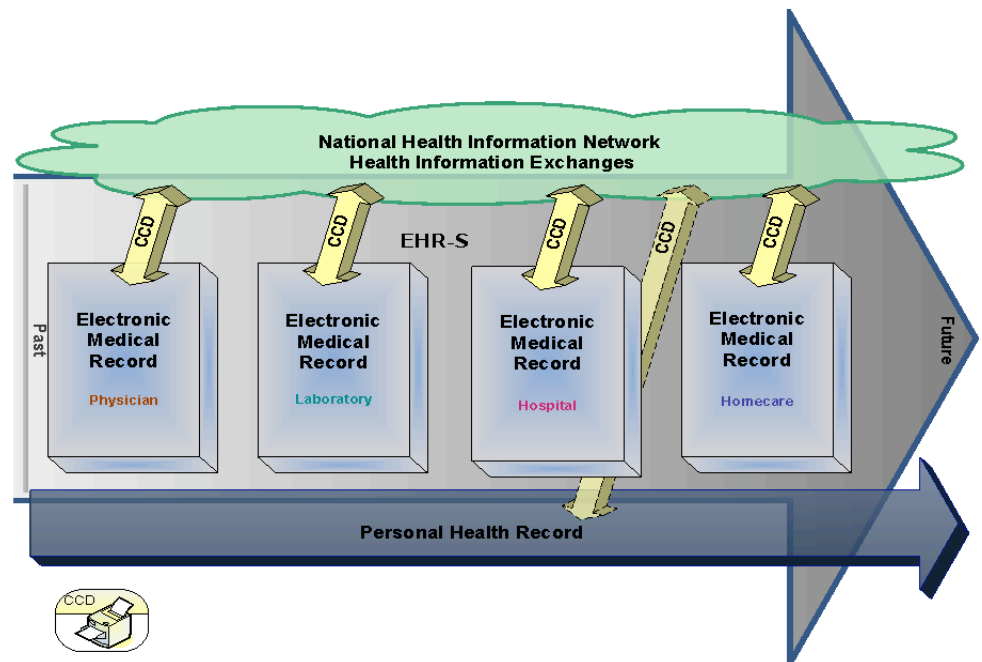
² Beckey Bright, "Benefits of Electronic Health Records Seen as Outweighing Privacy Risks," *Wall Street Journal Online*, November 29, 2007, http://online.wsj.com/public/article_print/SB119565244262500549.html (accessed December 15, 2008).

³ Michael H. Zaroukian, "EMR Cost-Benefit Analysis," PowerPoint presentation, www.himss.org/asp/ContentRedirector.asp?ContentID=66071 (accessed December 15, 2008).

information for the entire care team when and where it is required, and improves communication for enhanced care delivery.⁴ The term electronic health record should not be, but often is, used interchangeably with the term electronic medical record (EMR). EMRs are already in common use. They generally are focused on a specific care setting, such as the homecare or hospice provider or the physician's office. An EHR is much larger in scope and encompasses EMRs from various settings to create an inclusive record.

Another term that is likely to be misunderstood when discussing the EHR is health information exchange (HIE), which is defined as "the ability to electronically move clinical information between points of care in a community or a region."⁵ An HIE functions as "push technology," meaning it automatically delivers information to the EHR. An optimal HIE allows the health entity to tailor data delivery and types of results. Delivery of data via the HIE enhances timely distribution of patient clinical data and reduces the chaos and cost of paper or fax record creation and delivery.⁶

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This model of the electronic health record system (EHR-S) illustrates the concept of health information exchanges (HIE) as the repository/hub for shared data in the National Health Information Network (NHIN), which is the overarching network of HIEs across the United States.

⁴ HIMSS Electronic Health Record Committee, "EHR Definition, Attributes and Essential Requirements Version 1.0," HIMSS, December 6, 2003, <http://www.himss.org/content/files/ehrrattributes070703.pdf> (accessed December 12, 2008).

⁵ Evans and Stemple, "Electronic Health Records."

⁶ Stephanie Massengill, "From Portals to HIE: Can Portals Deliver for Hospitals and Health Systems?" *ADVANCE for Health Information Executives*, March 11, 2009, <http://health-care-it.advanceweb.com/Editorial/Content/PrintFriendly.aspx?CC=195508> (accessed April 20, 2009).

On the patient side of the EHR is the personal health record (PHR). A PHR is, ideally, an electronic health record that is accessed and maintained by the patient and continually updated with the patient's current medical information. It is believed that these records could help improve care delivery, reduce medical errors and even lower the cost of healthcare.⁷

Building Blocks of an EHR: Continual Clinical Access

The primary function of an EHR is to provide reliable, consistent and secure access to every patient's healthcare record. What does this objective mean? The EHR must provide clinicians access to patient information 99.9% of the time and meet acceptable response rates for task completion. This measure is achieved by ensuring that the functionality is available at all times in every care setting – whether it is the homecare office or the patient's home – and providing seamless clinical workflow. The system must meet or exceed Health Insurance Portability and Accountability Act (HIPAA) requirements by providing tools that ensure the confidentiality and security of patient information.

Reliable Interoperability

A true EHR has a high degree of interoperability. Interoperable software provides the ability to communicate and exchange data between information technology systems, applications and networks accurately, effectively and securely. This definition is fairly vague. Organizations such as the Certification Commission for Healthcare Information Technology (CCHIT) are working to define the criteria that will establish standards for interoperability. At this time, interoperability is generally agreed to mean that a system captures and allows the healthcare provider to manage episodic and longitudinal patient information. The EHR must accept data from external systems and devices, including in-home patient monitors, across the continuum of care. To meet this requirement efficiently, the system should support government-endorsed message and content standards: i.e., Health Level 7 (HL7).

HL7 established the definition of EHR system interoperability, summarizing it into three basic categories: technical (physical conveyance of information), semantic (communication of consistent meaning), and process (integration to an actual work setting assuring the system's usability and usefulness).⁸

⁷ Walecia Konrad, "Some Caveats about Keeping Your Own Electronic Health Records," *New York Times Online*, April 18, 2009, http://www.nytimes.com/2009/04/18/health/18patient.html?_r=1&hp=&pagewanted=print (accessed April 20, 2009).

⁸ Pat Gibbons et al., "Coming to Terms: Defining Interoperability for Health Care," PowerPoint presentation to HL7 EHR Interoperability Work Group, February 7, 2007, http://healthitgov.wik.is/Health_Level_7/Coming_to_Terms:_Scoping_Interoperability_for_Healthcare (accessed December 12, 2008).

All three categories are necessary for consistent, timely achievement of best practices, according to HL7. The organization states that the ability to use exchanged information means healthcare systems are able to communicate and employ shared terminology and definitions. This requirement places the burden on software vendors to make the information systems useable across distributed clinical settings.⁹

Further, interoperability calls for integrating data from a range of external systems extending across the continuum of care. This integration allows a high degree of care team documentation (patient observations and results, orders, interventions, problems, care delivered and patient outcomes) to be performed directly using the system. By facilitating efficient data entry and documentation by clinicians, the EHR system enhances workflow and supports clinical decision-making and rationale. Additionally, a true EHR system differentiates between historical and episodic information. It also supports copying data forward, which encourages improved continuity of care and accuracy to foster a high degree of patient and clinician satisfaction.¹

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Software Maturity by Type of Interoperability

	Technical	Semantic	Process
Low (Now)	Reliable, secure connectivity, transmission	Shared message syntax (e.g., HL7 v2.0)	Varies by organization; with regulation PRN
Medium (n=Near term)	Specific shared standard(s) for exchange of data and programs	Shared data model (e.g., HL7 v3 RIM) + domain-specific, cross-referenced	Selected constraints on common model(s)
High (f=Future)	Dynamic shared services	Dynamic data models, ontologies; shared standards and vocabularies	Collaborative design; engineered processes

Source: Pat Gibbons et al., "Coming to Terms: Defining Interoperability for Health Care," PowerPoint Presentation to HL7 EHR Interoperability Work Group, February 7, 2007, http://healthitgov.wik.is/Health_Level_7/Coming_to_Terms:_Scoping_Interoperability_for_Healthcare (accessed December 12, 2008).

⁹ Diana Manos, "Research Teams Unveil 'Next-Generation' Personal Health Records," *Healthcare IT News*, September 19, 2008, <http://www.healthcareitnews.com/news/research-teams-unveil-next-generation-personal-health-records> (accessed June 9, 2009).

¹⁰ HIMSS Electronic Health Record Committee, "EHR Definition, Attributes and Essential Requirements Version 1.0," HIMSS, December 6, 2003, <http://www.himss.org/content/files/ehrattributes070703.pdf> (accessed December 12, 2008).

Care Content

The EHR should function as the clinician's primary information resource during care delivery, breaking the clinician's and the agency's dependence on paper-based charts and documentation during patient interactions. The system should provide complete patient information for the delivery of care – including integrated patient data views, discipline-specific forms and outlier flagging – in any setting, including the patient's home. The EHR should provide patient data displays that reflect the role of the end user, ideally providing problem-, disease- and situation-specific integrated patient views that include progress, nurse, visit note and patient functional status information.

Care Management

In the context of an EHR, care management means much the same thing as everywhere else in healthcare: efficient and effective planning and delivery of evidence-based care. Specifically, the provisioning of evidence-based care applies to supporting interdisciplinary care planning, delivery and monitoring time-based plans, and patient outcomes — care plans and disease management. In order to achieve this goal, the EHR must provide the tools that the clinician needs, including patient, task and task completion lists. It also should provide quick notification to the clinician of changes in patient status and the existence of potential adverse events.

The EHR must provide basic decision-support tools, including order sets, interdisciplinary treatment plans and rules-based documentation templates. It also should provide complex tools, such as care paths, the ability to reduce practice variance in the care delivery process, and documentation of patient outcomes related to treatment and care delivery processes.¹¹

Quality Improvement and Performance Management

Because of its integrated nature, an EHR enables enhanced quality improvement and performance management. It provides a single source for the organization to assess, measure and manage both quality initiatives and safety programs. The system supports intensive and highly detailed reporting that enables thorough evaluation of processes, outcomes and care standard compliance. At the same time, it integrates health and financial data with other information, including patient satisfaction statistics and comparative industry data, for comprehensive analysis of processes and performance.

¹¹ HIMSS Electronic Health Record Committee, "EHR Definition, Attributes and Essential Requirements Version 1.0," HIMSS, December 6, 2003, <http://www.himss.org/content/files/ehrattributes070703.pdf> (accessed December 12, 2008).

Perhaps more importantly, an EHR should provide online displays of pertinent information for groups of patients within the patient populations for identification of quality, staffing and risk-management issues.

Support for Regulatory Compliance

The electronic health record's integrated data should automatically trigger transmission of charge transactions as a product of online interaction, as well as retrieve information to verify medical necessity and coverage. This functionality helps ensure clinical teams perform no extra tasks exclusively for medical record coding and reimbursement.

Lingering concerns exist about legal liabilities related to controlling access to and privacy of patient medical information.

Support for Clinical Research and Reporting

Access to data is the hallmark of an EHR. This data helps physicians provide superior care and enables agencies to demonstrate effectiveness and efficiency. The data also provides systemwide, masked information that supports clinical research, public health reporting and population health initiatives. This data is available in an EHR for health management and reporting without the need for additional data entry. The data also helps the organization target segments of its patient population who might benefit from health management initiatives, education, outreach and care. The EHR also supports mandatory reporting, state health guidelines, product liability reporting and social welfare reporting.¹²

Challenges of Implementing an EHR

The past five years have seen a surge in the use of EHR in developing nations, usually in relation to disease management, such as HIV and drug-resistant tuberculosis. However, the adoption of EHR technology has not grown as rapidly in the industrialized nations like the United States.¹³

This reticence to implement the EHR has primarily been financial in nature. Lingering concerns exist about legal liabilities related to controlling access to and privacy of patient medical information. On a health delivery level, staff is concerned about integrating technology into clinical workflow, providing training and support, and transitioning from paper to electronic records.¹⁴

¹² Committee on Data Standards for Patient Safety, "Key Capabilities of an Electronic Health Record System," Institute of Medicine of the National Academies, National Academies Press, Washington, D.C. 2003, www.iom.edu/?id=14391&redirect=0 (accessed June 6, 2009).

¹³ Rockefeller Foundation, "Electronic Health Records: An Overview," <http://www.ehealth-connection.org/content/electronic-health-records-overview> (accessed December 12, 2008).

¹⁴ Evans and Stemple, "Electronic Health Records."

The *Wall Street Journal Online*/Harris Interactive Poll indicates that privacy related to EHR is a concern to patients. Half of those polled said using an EHR made it more difficult to ensure patients' privacy, but nearly two-thirds believe the benefits of EHR outweigh the possible loss of privacy.¹⁵

Certification Commission for Healthcare Information Technology

CCHIT is a private nonprofit group formed by three leading health IT associations. The group was formed to provide analysis and certification of electronic health records and, by extension, the vendors who produce EHR software systems. Government leaders believe this certification process will accelerate EHR adoption and improve interoperability.¹⁶

While the CCHIT's certification compliance criteria for electronic health records in all care settings have not been formally defined at this time, they will be soon. The criteria will be based on real-life medical scenarios designed to test products rigorously against the clinical needs of providers and the quality and safety needs of patients and payors. The criteria for CCHIT certification will rest on three areas: functionality, security and interoperability.¹⁷

Functionality

The first set of criteria for CCHIT certification requirements will focus primarily on functionality. The commission stakeholders, including physicians, medical societies, vendors and payors, are working to identify the functionality of the electronic health record as its ability to carry out specific tasks.

Privacy and Security

The EHR must protect the patient's information while providing secure and reliable access to the care provider. To ensure data privacy and prevent data loss, CCHIT requires EHR to meet 48 criteria in four security categories (access control, audit, authentication and technical services).

According to one study, 70% of serious privacy infringement episodes are perpetrated internally.¹⁸ CCHIT certification focuses on data security by stipulating many requirements for the EHR. These requirements include the administrative definition of role-based and context-based access to information and extensive auditing capabilities.¹⁹

¹⁵ Bright, "Benefits of Electronic Health Records."

¹⁶ Ken Terry, "What Is EHR Certification," *Medical Economics*, August 4, 2006, <http://medicaleconomics.modernmedicine.com/memag/article/articleDetail.jsp?id=361457>.

¹⁷ Suzanne Denzine, "How CCHIT Makes EMR Selection Easy," www.gehrkelaw.com/2007/02/how_cchit_makes.html (accessed October 22, 2008).

¹⁸ Molly Merrill, "Protecting Privacy Is about Managing Vulnerabilities," *Healthcare IT News*, April 16, 2009, <http://www.healthcareitnews.com/news/protecting-privacy-about-managing-vulnerabilities> (accessed April 20, 2009).

Interoperability

CCHIT defined 27 certification criteria related to interoperability, or a system's ability to exchange (receive and transmit) information with other systems:

1. Medication
2. Clinical documentation
3. Administrative and financial data
4. Immunizations
5. Laboratory and imaging
6. Secondary uses of clinical data²⁰

CCHIT and Your EHR Selection

CCHIT is playing a central role in defining EHR functionality and standards. The organization has helped define how an EHR should communicate across care settings and how it should protect patient information.²¹ According to a survey conducted by HIMSS, a majority of respondents who plan to implement an EHR indicated that they will only purchase a system that is certified by CCHIT.²²

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CCHIT and Homecare & Hospice

Homecare and hospice have recently been added to the CCHIT group, Long-term Care Workgroup, which was then renamed the Long-term Care Spectrum Workgroup. Development of CCHIT certification criteria is to occur in 2009, with a proposed launch in 2010.

McKesson understands the importance of CCHIT certification and has established a goal that all our solutions will be certified in the first wave of availability. Toward that effort:

- *The workgroups are determining specific aspects of certification, such as interoperability, PHRs, eRX (e-prescribing), privacy, security and more, which are applicable for most care settings, including homecare. McKesson has representation on workgroups and plays an active role.*
- *In development plans for Horizon Homecare™, McKesson is referencing/using the Health Level & HL7 functional framework, which is a primary component used for CCHIT certifications in general. This effort will better prepare us to meet the certification profile for homecare once it is selected.*

¹⁹ Mariann Yeager, "The Certification Committee for Healthcare Information Technology," PowerPoint Presentation, CCHIT Security and Reliability Workgroup, www.vahimss.org/presentations/CCHIT2005VAHIMSS.ppt (accessed March 20, 2009).

²⁰ Suzanne Denzine, "How CCHIT Makes EMR Selection Easy."

²¹ Don Fornes, "Should CCHIT Influence Your EHR Selection? Software Advice," <http://www.softwareadvice.com/articles/medical/should-cchit-influence-your-ehr-selection/> (accessed October 22, 2008).

²² HIMSS, "Electronic Medical Records: Slow but Steady Growth in Ambulatory Care," www.himss.org/ASP/topics_News_item.asp?cid=68530&tid=10 (accessed December 12, 2008).

Conclusion

According to Frost & Sullivan, the evolution toward the integrated EHR is a certainty that will affect all clinical care settings. While the formal standards for certification are still being debated, it can be said that the EHR will result in fewer medical errors, reduced data redundancy, faster identification of health issues and diagnoses, more effective illness treatment and better communication across the continuum of care. However, to ensure success and appropriate adoption, the full breadth of the EHR components must be well-conceived and comprehensively implemented with thorough user education and consideration for business line processes. Though the speed of adoption is difficult to predict, it almost certainly will unfold over the next five to 10 years.²³

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