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## **The Case for Electronic Health Records**

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In the United States, healthcare remains a top priority and is consistently part of the national public policy agenda. Political leaders and healthcare providers are attempting to address issues of quality, access, efficiency and affordability. Solutions to these challenges are being pursued through a great variety of strategies and methodologies ranging from adoption of best practices of patient care to negotiated contracts between payers and Care Delivery Organizations (CDO.)

Some of the most promising solutions to the country's healthcare dilemma are being explored in the area of information technology. A growing number of CDOs are transitioning to Electronic Medical Records (EMR), a strategy that offers multiple benefits in terms of increased efficiency, reduced medical errors and enhanced patient care. When a complete record of a patient's medical history – from medications to diagnostic tests – is available on-line and in real time, many of the essential issues of cost and quality within our healthcare system can be addressed.

As valuable as the EMR component is to enhanced efficiency, it is only one aspect of information technology's ability to help in providing solutions to the country's healthcare challenges. If we are to reap the full benefits from real time, on-line information access, we also need strategies that will not only make the EMR universal, but will also take us to the next level with the creation of Electronic Health Records (EHR.)

The EHR is an emerging concept in healthcare today, designed to provide on-line, real time access to patient medical records that encompass multiple CDOs over an extended period of time. While an EMR provides data on the care provided by a single hospital or physician, the EHR provides data that spans multiple CDOs, offering a comprehensive view of a patient's medical and treatment history.

### **EMR and EHR**

Because EMRs and EHRs are relatively new concepts, there has been confusion in the marketplace propagated by government officials, vendors and consultants as to what they are or how they would be utilized.

The EMR is the legal record that physicians and hospitals maintain on what happened to a

patient during encounters with the CDO – the details of treatment, medications and test results. This record, which is owned by the CDO, includes support data for clinical decisions and integrates all areas of service, from pharmacy to radiology. The EMR transcends outpatient and inpatient environments and is used by healthcare practitioners to document, monitor and manage health care delivery within a CDO.

The EHR, on the other hand, represents the sharing of medical information among stakeholders, including all elements of a CDO, patients and payers, both private and governmental. It allows information to follow a patient through various episodes of care from multiple CDOs over extended time periods. The EHR is owned by the patient who has the ability to add notes and comments to the record.

EHRs include both historical and current care data associated with the patient, presented in a consistent interface to authorized users. The EHR not only provides detailed patient data, but through analytics supports decision making to enhance the quality and safety of care and treatment. Most importantly, the EHR facilitates the delivery of healthcare effectively without hindering the routine of physicians and dentists whose main jobs are to provide care, not to record information.

The EHR of any value would be dependent in many ways on the EMRs of the various CDOs. For the EHR to realize its full potential there must be a robust exchange of information between stakeholders within a community or region.

### Benefits of EHR

The potential benefits of a national EHR system are numerous:

- **Continuum of care** – The essential benefit of an EHR system would be its ability to generate a single patient-centric view of electronic health information that shows a lifetime record updated and validated by multiple sources and organizations. This approach would create a continuum of healthcare information for every patient.
- **Cost reduction** – Duplication of diagnostic tests could be reduced or eliminated because each CDO would have access to the patient's history, including a record of previous radiology and other diagnostics while under the care of other CDOs.

- **Medications management** – By viewing a complete medication history, physicians would be better equipped to avoid potentially harmful and costly drug interactions. The EHR would link with formularies so that the most cost effective medications covered by payers would be accessed.
- **Long-term perspective and portability** – With today's highly mobile society, patients will be served by multiple CDOs and covered under multiple health plans over a lifetime. The EHR is the only way that both the patient and the CDO could obtain a long-term perspective that would be invaluable in diagnostics, treatment and prevention strategies.
- **Emergency episode management** – A nationally networked EHR system would assure access to a patient's medical history during emergency treatment episodes outside of the coverage area of individual CDOs.
- **Patient empowerment** – Patients would have the ability to track provider payments and could add their own notations within their EHRs. Members could note conditions relative to paid claims via third party vendor sites or hosted solutions. Gaining access and control of their own EHR would be empowering for patients, giving them the tools they need to better manage their own health status.

In today's healthcare environment, in which patients are being required to assume greater responsibility for their own health status – both financially and medically, – the ERH represents an important advance. The EHR will result in a web services environment with full portability for each individual. Patients and their caregivers can use payer records and paid claims history to help fill memory gaps when completing medical histories and planning healthcare treatment plans.

Additionally, the EHR can be used to analyze family medical histories in a more detailed manner versus relying on an individual's recollection, again assisting in identifying risk factors and plotting treatment modalities. The EHR means that each individual has a repository of medical and treatment information from multiple sources over an extended period of time. This individualized health dashboard could provide individuals with the opportunity to do a self audit of their own medical history and outlook.

## Where We Are Today

America's healthcare system is awash in technology, from digital diagnostics to advanced drug therapies. There is a tool, technique and medication regiment for virtually any ailment.

While diagnosis and treatment methods have advanced rapidly through the use of technology, the application of information technology within healthcare has lagged behind. Only during the past few years have physicians and hospitals begun to adopt EMR technology. Paper healthcare files are still the hallmark in the U.S. today with relatively few CDOs operating with comprehensive EMR technology in place.

The pace of EMR adoption, however, is accelerating, driven by the need for enhanced efficiency, quality and accountability. It is only a matter of time before physicians and nurses will use handheld devices rather than paper files as the paperless EMR environment emerges.

While the drive to implement EMRs is a positive development for healthcare, unfortunately many of these new systems are garden variety, stand alone software packages. While automation of health care records in almost any form has benefits, the majority of EMR systems being deployed today are highly fragmented and lack a consistent platform. This lack of connectivity and consistent platforms in EMR systems could prove to be an impediment to the creation of a national EHR network.

EHR technology is even further behind EMR adoption. Some forms of early EHRs exist today, but only in very limited environments. There remains substantial work to be done before the EHR becomes a reality on a regional or national basis.

## What Will It Take

There are several key elements that must come together if we are to achieve an effective EHR system across the U.S.:

- **Robust EMRs** – Adoption of EMR technology by the majority of CDOs nationwide must occur as a precursor for an EHR network. Not only must CDOs adopt an electronic approach to medical record keeping, they must also migrate to a standard platform that will support a robust exchange of information. It will be difficult if not impossible to establish an effective EHR

system across the U.S. without universally accepted clinical information transaction standards that can be easily applied to EMR application architectures.

- **Universal gateway** – Another essential element on the path to a national EHR system is the creation of a Web-based, universal gateway that supports all CDOs. This architecture must be an all-providers, all-payer platform that incorporates security with ease of access by patients and providers.
- **Patient confidentiality** – The other key element will be protection of patient confidentiality and elimination of the hurdles created by non-coverage of pre-existing conditions. We should not expect patients to support a nationwide EHR approach if it results in penalties when full medical histories are available. The industry must establish security and access protocols consistent with HIPAA guidelines.

## The Future

One of the fundamentals for a national EHR system would be in the form of Web-based interfaces among CDOs and payers. These interfaces provide for real time verification of coverage, adjudication of claims, electronic funds transfers and reconciliation.

While the EMR will serve as the backbone of information for EHR, it need not be the sole source. Payer databases already contain much of the needed information in the form of claims transactions for members. When combined with EMRs, this payer historical information offers a valuable repository of patient treatment information. Secure, universal gateways among CDOs and payers are already in place; the missing element is the ability to link patient history over multiple payers and plans and to integrate the EMR.

The development of hybrid EMRs and EHRs and required interfaces should be the goal of information technology companies supporting the healthcare and dental industries. Such a solution must be based on a multi-payer, multi-vendor, real-time platform that would allow access, updates and validation by all stakeholders. This goal can be accomplished by bridging multiple legacy payer systems, maintaining member claims data, forming strategic technology partnerships and offering vendor interfaces to accommodate locally hosted provider applications.

## Solutions

Solutions to the nation's healthcare challenges will require the best efforts and the commitment of everyone affected, from CDOs and patients to payers and governmental agencies. Every avenue for enhanced quality and increased efficiency must be explored, including the vast potential of a concerted effort to implement a standardized approach to the EMR and EHR as industry best practices.

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