Internet Security Technologies

SETECS Medical Technologies
THE BUSINESS CASE FOR
HEALTHCARE INFORMATION TECHNOLOGY AND SECURITY

THE OPPORTUNITY

According to a RAND Corporation study, fewer than 25% of U.S. hospitals and 15% percent of physician offices deploy automated systems to manage patient and provider medical records. The same study estimated that savings of up to $80 billion annually could be achieved with greater adoption of electronic health records (EHR)[1]. The use of paper records to store and share medical data among various medical institutions, research institutes, state and Federal Government authorities results in costly duplication of medical exams, drug prescription complications, delays in diagnosis, and expensive administrative processing.

Despite the potential of Electronic Medical/Healthcare Record (EMR/HER) systems to introduce both costs savings and qualitative improvements, such as preventive care, effective emergency procedures, reduction of duplicate testing, and on-line medical decision-making support, their adoption by U.S. healthcare providers has lagged due to a number of IT products limitations, industry structure, economic, and security constraints. However, rising health costs, the U.S. economic crisis and a new administration with an appreciation for the potential benefits of healthcare technology have greatly transformed the debate over EHR.[2] The question is no longer whether the Country will embrace the benefits of EHR, but how much further delays will cost and what can be done to remove any remaining disincentives to a broader EHR adoption and their integration.

SETECS' HEALTHCARE SOLUTION

Security, compliance to healthcare IT standards and interoperability are among the most important constraints to greater adoption of EHR systems given the fragmented structure of healthcare services, decentralized healthcare data, and the increasing use of mobile devices by healthcare providers. While there are numerous available EHR products, already deployed or on the market that cater to individual healthcare facilities or functions, the industry has been slow to adopt the common data formats and interchange standards necessary to enable large-scale EHR storage, access and exchange among different systems, providers, and locations.

SETECS Medical Technologies has been recently awarded a $950,000 contract by the Upper Peninsula Health Care Network (UPHCN) to do just that – to provide 14 hospitals with a secure, fully functional, and large–scale integrated security system with the following key functions and features:

- Secure, reliable and effective identification and authentication of patients based on fingerprint technologies;

- Secure and effective system to identify individuals (healthcare providers and professionals) based on biometrics technologies, combined with the authorization system to access sensitive medical data and use critical medical functions;
- Designing system capable of supporting interoperability of medical databases and records of individual, proprietary EMR products
- The system for creation, manipulation, protection, exchange and sharing of medical documents, and
- A federated security architecture providing strong security services based on smart cards, certificates, and Web security standards.

SETECS' approach avoids the trap described by some experts as the "all or nothing" strategy – which relies on the top-down creation of centralized and fully integrated medical data bases with associated privacy and security concerns.[3] Instead, SETECS' technology architecture, based on its MiX™ Server and identity management software, adapts to the decentralized nature of healthcare data by securely linking existing medical records where they already reside. SETECS' strategy and technology offering therefore addresses the core of the interoperability problem and also opens the door for SETECS' products to a wide variety of existing EHR vendors and hospital systems.

MARKET DRIVERS
Cost Containment
The expanding adoption of EHR and related security requirements are key trends and market forces driving the rapid advancement of health information technology. Both private and public-sector payers are exerting strong pressure on healthcare providers to look to technology to increase efficiency and control costs. A recent study found that up to 15% of expenses (approximately $4.5 billion annually) in health systems across Massachusetts are due to duplicate medical exams – a situation that is directly linked to providers' lack of access to patients' records. The "needless lack of efficiency" due to the deficiency of electronic health records "is costing both lives and money".[4]

As one of the largest players in the $2 trillion health care market, the federal government is increasingly demanding the automation of healthcare records to decrease costs, improve quality of care, and increase the accuracy and timeliness of reporting and billing. The National Health Care Anti-Fraud Association estimates that 3% of U.S. healthcare spending (up to $60 billion) is lost annually due to fraud. Another $10.8 billion is lost by the Medicare program on billing errors according to the Senate Finance Committee's recent paper on health reform.[5] In a recent technology survey Social Security Administration (SSA) indicated that if they can receive disability applications electronically, they would save $ 500M annually only on administrative and processing costs.

Federal Government Adopting Electronic Records
The Obama administration has pledged to invest $10 billion dollars to expand the use of health care information technology, with a particular focus on the adoption of EHR. The Department of Health and Human Services (HHS) is introducing several programs to test and advocate for the increased use of EHR. Twelve cities and states are currently participating in a $150 million pilot program under which physicians that implement EHR will receive increased Medicare payments. A second program attacks the problem from a different direction – the patients themselves. The program has selected several vendors that will enable patients to collect and store their own health information from a variety of provider sources. The objective of both programs is to facilitate the wide-spread deployment of electronic health records in order to lower billing and administrative costs and improve health care effectiveness through the reduction in duplicate exams, improved medical decision-making, and coordinated drug prescriptions.

Emerging Standards
With Medicare payments representing more than 40% of U.S. health care payments, the federal government is taking the lead on the development of key standards regarding the storage and exchange of health care records – with the objective of promoting increased use and exchange of EHR to reduce administrative processing and duplicate testing costs. The Department of Health and Human Services (HHS) has already introduced "*several new interoperability standards for health care information technology, paving the way for nationwide adoption of electronic health records*."[6] HHS' Office of the National Coordinator for Health Information Technology also released the "Federal Health IT Strategic Plan: 2008-2012, which identifies privacy and security of EHR and interoperability of EHR data systems as key components of its goal of achieving higher quality, more cost-efficient, and patient focused healthcare for all Americans.

Revenue Cycle Management (RCM)
 "*Healthcare is in the early stages of an industry transformation not seen since the Medicare Act of 1966 or the Tax Equity and Fiscal Responsibility Act of 1982*", according to Mike Davis, Executive Vice President of HIMISS Analytics. This transformation is being generated by upcoming government regulations that will impact the already complex operations of the revenue cycle management (RCM) environment that is the lifeblood of a healthcare organization"[7]. Significant regulatory changes are expected within the next few years related to HIPAA claims attachments. As a result, other revenue administration processes will require increase use and security of the EHR.

Pay for Performance
In face of exploding healthcare costs, some of the nation's largest private payers (both private and public) are shifting from payments tied to healthcare inputs to payments for "outcome-driven medicine" – further driving demand for more complete and better access to health information. The new approach "*signals a fundamental shift in how money changes hands in health care. Insurers like Medicare, Aetna, and Independence Blue Cross are beginning to tie payments not just to diagnosis codes but also to the quality of care*."[8] The Center for Medicare and Medicaid Services (CMS) has recently developed and piloted a "pay-for-quality model" that links hospital payments to the achievement of quality goals based on detailed patient and provider reporting data. Plans are underway to adopt a similar approach to physician payments.

COMPETITIVE LANDSCAPE
Current efforts to address the issue of healthcare records generally take one of two approaches – one geared towards health care providers and the other towards patients. Several major healthcare vendors, including Siemens, GE, McKesson, and others provide software that manages electronic health records for provider services and related billing to third–party payers. Since such records are generally limited to data within individual healthcare facilities or networks, they often reflect an incomplete picture of an individual's total health status. Moreover, since most of these systems are proprietary in nature, they fail to address the issue of secure exchange and interoperability of medical data. The second approach looks to patients to take responsibility for their own personal health records (PHR) and provides them the software to collect, store, and exchange their own personal health information[9]. Since SETECS' software addresses the identification, authorization, and the secure exchange of health records in general, our products appeal to both target market segments.

The strength of SETECS Medical Technologies offering is the ability of its software to work seamlessly across a variety of existing platforms and to integrate proprietary systems across locations and facilities. The UPHCN hospitals in Michigan deploy several EMR systems for patient records management, but the network was unable to find a vendor who could make the different systems to work together. SETECS Medical technologies MIX system will provide secure, authorized, and synchronized exchange of patient records among all hospitals within their network, thus reducing administrative costs, duplicate examinations, and delays in decision-making due to inaccurate or incomplete patient records.

ABOUT SETECS Medical Technologies

SETECS Medical Technologies develops and markets identity management and web services security software for the federal government, healthcare, and financial sectors. SETECS Medical Technologies provides identity and authorization management solutions for healthcare providers and patients, as well as secure storage and exchange of healthcare records. SETECS Medical Technologies MIX smart card management system is licensed to UPHCN (Michigan) in support of secure medical applications.

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[1] Richard Hillestad, "The Right Care at the Right Time: Leveraging Innovation to Provide Quality Care for All Americans," (Testimony Presented before the Senate Finance Committee on July 17, 2008), The RAND Corporation.

[2] Gautham Nagesh, "HHS adopts new rules to coordinate health care technology", Nextgov.com, January 22, 2009.

[3] "Linking Healthcare Information", Working Group on Accurately Linking Information for Healthcare Quality and Safety, Markle Foundation & Robert Woods Johnson Foundation, February 2005.

[4] John Engler, Detroit Free Press, 6/11.

[5] "Call to Action, Health Reform 2009", Senate Finance Committee, November 12, 2008.

[6] Gautham Nagesh, "HHS adopts new rules to coordinate health care technology", Nextgov.com, January 22, 2009.

[7] Mike Davis, "Revenue Cycle Management – Storm Clouds on the Horizon", Q3 2007, http://www.futurehealthcareus.com/?mc=revenue-cyle&page=fin-viewsearch.

[8] Stacey Burling, "Spotlight o Pay, Care", Philadelphia Inquirer. September 23, 2007.

[9] Medicare announced in November of 2008 that it awarded four contracts to pilot the use of PHR's.