

# EMR | White Paper



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## Executive Summary

The consensus among healthcare professionals is that while the last two decades have produced significant technological advances, the majority of United States-based healthcare providers and facilities remain ‘behind the mark’ in achieving their full potential for delivering informed and expedient treatment.

In the complex and intricate world of healthcare there exists a myriad of solutions that promise to help these organizations to reach the goal of optimized service. Among these, the appropriate and enhanced use of advanced and integrated information technology is one universally accepted course of action. The transition from paper-based processes to electronic, automated systems and solutions is viewed as one of the key methods for bringing healthcare facilities to a new level of efficiency and standardization that will benefit staff and the quality and timeliness of patient care and service.

President George W. Bush captured the call to action succinctly in his 2004 State of the Union Address: “By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care.” The Healthcare Information and Management Systems Society (HIMSS) states on its website that its leadership and members are, “collaboratively working together to achieve the goal of EHRs [Electronic Health Records] in use in 80 percent of healthcare organizations and 50 percent of physician practices by 2010.”

The first component in transforming healthcare into true computerization is known as the Electronic Medical Record (EMR), which refers to both the digitized clinical documentation and the overarching systems that serve as a channel for transmission of patient data used to support clinical decisions and administrative functions. When implemented successfully, EMR leads to significant advantages over paper-based systems, including decreased printing and storage costs, elevated productivity, and a faster and more informed decision-making process that benefits patients and the bottom line.

**“THE KEY TO REMEMBER WITH THIS TRANSFORMATION AND IMPLEMENTATION ACROSS A CONTINUUM OF CARE IS THAT THE CHANGE HAS TO BE EVENTUALLY ADOPTED ACROSS ALL SYSTEMS,”**

says Nani Sadowski-Alvarez, PMP, a Senior Health Sector Consultant with CSC.

**“THIS OVERHAUL CAN BE EXTENSIVE. HOWEVER, WHEN APPROACHED STEP-BY-STEP IT IS MANAGEABLE AND CAN RESULT IN INCREASED PATIENT SATISFACTION**

**AND SAFETY, ALONG WITH A NOTICEABLE REDUCTION IN EXCESS OVERHEAD COSTS.**

**THIS STANDARDIZATION AND STREAMLINING ENHANCES THE FOCUS TOWARDS THE 5 PATIENT RIGHTS AND MOVES THE ATTENTION MORE TOWARDS OVERALL QUALITY OF CARE.”**

Eventually, the widespread adoption of EMR promises to enable a more comprehensive, National Health Information Network (NHIN) that safely connects consumers and providers to improve the quality of care nationwide.

In its 2008 survey of 700 hospital IT leaders, HIMSS found that just 44 percent of hospitals had fully implemented EMR systems. However, outside this sample group the deployment of EMR and Electronic Health Records (EHR) is even lower. According to a 2008 study that appeared in the New England Journal of Medicine, just 4 percent of U.S. physicians have access to a fully functional EHR system and only 13 percent are using even a basic one.

There are numerous factors to explain this low adoption of EMR, including the cost and difficulty of piecing together disparate technologies to create a cohesively functioning system, as well as challenges of educating and motivating end users to embrace change.

To overcome these obstacles and realize the true benefits of EMR, healthcare providers must enact a proactive plan to put the right elements in place at the right times. To fully meet the Joint Commission’s National Patient Safety Goals to “improve the accuracy of [patient] identification” as well as to “improve the effectiveness of communication among caregivers,” hospitals should consider implementing a forms automation system early in the process.

This can provide benefits such as improving information sharing between departments, reducing storage and supply costs and speeding patient-focused and business processes by facilitating instant access to electronic documents. With its flagship Patient Flow System (PFS), Evolution and supporting products, Access meets this need and opens a door to the future of healthcare.

## Defining the Playing Field

The idea of using computer systems to store healthcare information and automate paper-based processes isn't new – proposals have existed for decades. In 1991, the Institute of Medicine issued

**“A STRONG CALL FOR NATIONWIDE IMPLEMENTATION OF COMPUTER-BASED PATIENT RECORDS.”**

Despite initiatives by the US Government, industry organizations such as HIMSS and the Joint Commission and healthcare technology advances, many healthcare providers have been held back by conflicting information, competing products and limited IT budgets.

To maintain focus, it is important to distinguish EMR from various concurrent initiatives to bring healthcare information into the electronic age. At least two other related terms – Legal Health Record (LHR) and Electronic Health Record (EHR) – have also been widely adopted, and despite some misinformation to the contrary, these terms are not interchangeable with EMR. Though the precise parameters of each term are debatable, for the purposes of this paper:

**An Electronic Medical Record (EMR)** encompasses the medical history – tests, diagnoses, treatments and other elements – of a single patient specific to a particular facility. The record is owned by the provider. EMRs may be used to achieve a more efficient exchange of information within the facility and to guide clinical decision-making. Likewise, an EMR system describes the local provider's computerized environment that makes these records possible.

**A Legal Health Record (LHR)** is similar to an EMR in that it comprises a patient's information from a single care provider, but carries with it a more binding and unalterable structure. According to the American Health Information Management Association (AHIMA), the LHR serves as the hospital's permanent business record and would be released upon request if the appropriate patient consent was on file.

**An Electronic Health Record (EHR)** ideally includes a patient's complete medical history, spanning multiple providers and geographies. A comprehensive EHR requires compilation of data from various EMRs. In the case of personal health records such as those provided by Microsoft HealthVault® or MyHealthRecord®, the patient owns the record, but most EHRs are owned by a facility, insurance company or insurance consortium. The EHR is the type of record proposed to reside on a shared National Health Information Network.

When it comes to the daily challenges caused by paper-based processes on the floors of every hospital in America, the EMR represents the first step in the computerization solution, and thus is the focus of this document.



## The Benefits of EMR

A well designed EMR system can enable many notable improvements in the efficiency and effectiveness of healthcare facilities. Some of the most common benefits are:

Easier access to well-organized patient information, helping clinicians and administrative staff make more informed decisions in less time.

Improved accuracy of patient data, achieved by eliminating handwritten documents that are often illegible or misinterpreted and limiting manual data entry (as outlined in the first part of The Joint Commission's National Patient Safety Goals report).

Increased productivity, as documents are instantly accessed and distributed via electronic workflow (in keeping with the Joint Commission's second goal to "Improve the effectiveness of communication among caregivers").

Liberation of floor space once used to store paperwork.

Increased security through electronic encryption, to support compliance with HIPAA, JCAHO and other mandates and entities.

Lower printing and supply costs.

Faster, less-labor intensive audits, as documents are retrieved from electronic repositories instead of from file cabinets. Each component of the EMR has an audit trail that shows internal and external auditors when documents were accessed, by whom and what actions were taken.

Strengthened disaster planning. Retaining hard copies of medical records makes them vulnerable to fire, tornadoes, hurricanes, floods and other natural disasters. With a complete EMR system in place, business continuity, and more importantly, patient care and service, is ensured.

Enhanced business process management, as reports on all aspects of patient-focused and administrative can be performed on any record/s in the EMR system.

Greater accountability for staff, as their actions are tracked more easily than when using paper records.

Improve the accuracy of physician's surgery and

pharmacy orders to help ensure that patients receive the right treatment and drugs every time.

Reduce the time and costs of fulfilling release of information requests from patients, legal offices, insurance companies and other parties.

## Barriers to Adoption

The healthcare community— including technology vendors, insurance companies, professional associations and others – are equally responsible for finding viable technology solutions. Until now, however, few offerings have proven to overcome the recurring challenges of implementing EMR. Access has sought to address each of these concerns, as explained below:

**Costs:** Lack of financial resources is the number one barrier to implementing IT at U.S. hospitals, according to HIMSS. And, however important, EMR represents a significant investment to be weighed against other spending priorities. Access's competitive initial price point, education of users to completely own their forms automation solution and scalability contribute to a low total cost of ownership.

**Interoperability issues:** A complete EMR system is not just one application, but many working together, which might include the HIS, document management system, data entry tools and other components. Many hospitals will continue to use various systems, so it's important that each new application purchased offers flexible integration options with existing technology, providing interoperability within the organization. Access's product family is proven to integrate with virtually any hardware and software system, and can both pull data from and send data to existing applications via HL7 and other industry standard mediums. This helps ensure consistent and current patient and business data is available from all applications.

**Conversion of historical documents:** Moving to EMR involves more than a new format for newly created documents – it also requires conversion of historical records, in a process sometimes referred to as chart abstraction or migration. Without the right tools in place, this process can be costly and time-consuming. Access helps organizations implement an efficient conversion of paper forms and its Image Portals import electronic forms directly into HIS and document management system repositories without printing or scanning.

**Privacy/security concerns:** As paper records are converted to electronic data, many believe the information becomes more vulnerable to system failures or the prying eyes of tech-savvy outsiders. Hospitals must put ample security measures in place if the benefits of EMR are to outweigh the risks. Systems such as Access Evolution and PFS enable

administrators to restrict forms access and editing to only authorized staff members, via multiple-level user privileges. This protects patient and staff privacy and supports compliance with the requirements of JHACO, HIPAA and other compliance standards.

**End user adaptation:** Most clinical and administrative staff members are pressed for time and may be reluctant to embrace any significant changes to their daily work habits. Products that are easy to use, such as Access's PFS and Evolution suites, allow users of all skill levels to quickly adopt electronic forms automation. And intuitive forms and workflow designers make administering Access products easy.

For all of these reasons, the onus falls to technology vendors to develop high quality EMR solutions that include products offering enterprise-wide scalability, integration with existing systems and delivery of early and lasting return on investment at a low total lifetime cost.

**“WITH A CURRENT AVERAGE OF APPROXIMATELY 30 CENTS OF EVERY HEALTHCARE DOLLAR BEING SPENT ON ADMINISTRATIVE COSTS EVOLVING FROM THE ARRAY OF PUBLIC AND PRIVATE ENTITIES INVOLVED IN FINANCING CARE AND THE OVERALL PROCESSING OF EACH INDIVIDUAL PATIENT RECORD, IT HAS BECOME NECESSARY TO DETERMINE MORE LEAN TACTICS,”**

says Sadowski-Alvarez.

**“THOSE VENDORS THAT ALLOW FLEXIBILITY IN THE IMPLEMENTATION OF THEIR PRODUCTS PROVIDE NOT ONLY MINIMAL INTERRUPTION TO PATIENT CARE BUT ALSO ALLOW FOR EASIER ADOPTION TO THE END USERS.”**

## Forms Automation

There are many steps involved to arrive at a complete, optimized EMR system, and one of the most important is forms automation. The ability to create electronic forms, manage them in a secure electronic repository and route them efficiently throughout the hospital via automated workflow enables a smoother transition to EMR by eliminating the time and cost inefficiencies of paper-based forms processing.

Access's PFS and Evolution combine to offer a forms automation solution designed with EMR in mind. The PFS enables hospitals to easily design customized forms in-house, reducing the need for pre-printed forms. These electronic forms can be auto-populated with patient information, and distributed electronically directly to the point-of-need for printing, faxing, e-mailing, archiving and porting directly into document management systems or other software applications. As file cabinets are replaced with an online forms repository, users have immediate access to current and authorized forms, from anywhere in the building or healthcare network. Forms automation can also play a key role in the process of outputting an EMR into an LHR for litigation or other purposes, by providing authorized forms that contain accurate and current patient information.

The Access solution offers numerous benefits, including:

**Streamlined workflow:** PFS relieves staff from time-consuming manual tasks. Instead of workers searching through file cabinets and then manually entering data on each form, PFS automatically retrieves patient information from the HIS and populates it on all corresponding forms. Electronic routing of forms and their attachments eliminates delivery delays. Andy Franz, application analyst at Yakima Valley Memorial Hospital, says, "The elegance of the Access system is its simplicity. It allows our people to do the same jobs they were doing before, but in far fewer steps."

**Reduced printing and storage costs:** Many hospitals rely on in-house print-shops and/or external forms vendors to produce pre-printed forms, which are stored in supply rooms or at off-site facilities. Forms automation with the Access solution reduces the need for printing and storage, cutting supply costs and saving the hospital valuable real estate. For example, one Access customer, Providence Hospital, reported \$124,300 first year cost savings.

**Increased data accuracy:** Through automation, the Access system removes human error by prompting users to complete all required information and eliminating illegible handwriting. The risk of using outdated or unauthorized forms is also reduced, as the Access e-Forms Repository provides a single, central home for patient data that can only be accessed by authorized users. This helps hospitals meet the first of The Joint Commission's National Patient Safety Goals –

**"IMPROVE THE ACCURACY OF [PATIENT] IDENTIFICATION."**

Terri Lee, HIM director at Tanner Health System, explains the impact of Access solutions in this area:

**"SINCE ACCESS FORMS AUTO-INDEX IN THE IMAGING SYSTEM, WE SEE ABOUT A 75 PERCENT PRODUCTIVITY IMPROVEMENT OVER DOING IT THE OLD WAY. AND YOU VIRTUALLY ELIMINATE THE RISK OF MISMATCHING FORMS WITH THE WRONG PATIENTS."**

To be truly useful on the path to EMR, a forms automation system must interface with other technologies that will form the complete EMR solution. Access answers this call for interoperability. PFS and supporting products offer seamless interfaces with a wide range of HIS platforms, ERP systems, data entry devices, and document imaging systems, including technology from Lawson and Meditech and Access's partner Siemens. Such compatibility unlocks several other important workflow benefits for hospitals, including the reduction of manual scanning and indexing of patient data. With the ability to import electronic forms data directly into the imaging system and index information automatically, the Access application takes the burden off HIM personnel.

## Conclusion

Regardless of where a healthcare provider resides on the road to implementing a complete EMR solution, the Access product family offers the time and financial savings of forms automation at a low lifetime cost. Whether a medical facility does not have an automated forms management system, has the desire to move away from a homegrown application, or has third-party technology in place that creates more headaches than it cures, the flexible, rapidly-deployed Access solution is capable of eliminating the inefficiencies of inadequate forms processing. In doing so, it enhances the other elements of EMR already in place.

**“THE ACCESS PRODUCT SUITE IS A VITAL PART OF OUR EMR SOLUTION,”**

says Ron Olsen, systems analyst at Mercy Regional Health Center.

**“IT HAS INCREASED PATIENT SAFETY AND SATISFACTION, REDUCED COSTS AND BOOSTED PRODUCTIVITY.”**

Hospitals with limited budgets can choose to implement Access products in a single department, and grow the solution as increased finances become available. Other providers prefer to introduce a customized Access solution to administrative and patient-focused areas across the hospital from the get go.

Through a more efficient workflow and more accurate and accessible data that forms automation technology provides, hospitals can improve patient care and service and enhance financial performance.

To learn more about how your hospital can discover the lasting benefits that automated forms management and workflow enhancement offer, please contact an Access representative at 888.448.1811 or at [info@accesseforms.com](mailto:info@accesseforms.com).