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Keeping It Simple

By Andrew Hurd



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Estimates vary, but a recent study from the Massachusetts General Hospital Institute for Health Policy and George Washington University found that only 4 percent to 24 percent of hospitals have adopted computerized physician entry order entry (CPOE), the best proxy for estimating inpatient EMR utilization.

Also, only about one in four physicians use any type of EMR, and fewer than one in 10 employs these records as part of an easily accessed, single-view system that displays patient information/history and test results, helps physicians follow best practices and allows health care providers to document prescriptions and medical orders.

Bringing Order to Chaos

Hospitals are seeking commonality in order to strategically select investments and allocate resources. Many have decided to use innovative, cost-effective systems and processes that support clinical, administrative and service excellence. This approach can lead to sophisticated IT infrastructure, comprising best-of-breed information systems from various vendors. It can be an optimal strategy because it equips end-users with the specialized tools and functions that they require--but only if information is truly available when needed.

Hospitals have become overwhelmed with a vast array of disparate applications that, while essential to enhancing care delivery, can present steep learning curves for those who use them. On average, physicians, nurses and other health care professionals need to interface with up to 12 discrete applications as they diagnose disease and devise treatment plans for any given patient. In addition, they can spend up to a third of their day switching between applications looking for lab results, clinical documentation and medication orders.

The burden is greater for physicians who support multiple hospitals in large health care systems because each hospital may require different identity management tools and processes. This situation has forced many clinicians to share IDs and passwords or use generic group IDs to avoid the problem of logging in and out of systems. But these strategies violate HIPAA regulations, which stipulate that users must have a "unique identifier" when authenticating to systems that store protected health information (PHI) or patient data.

These administrative hurdles impact efficient care delivery in many ways, potentially leading to inaccurate and incomplete patient histories, superfluous testing, unnecessary and invasive procedures, erroneous diagnoses or treatment protocols and inadequate reimbursements. Hospitals now are seeking solutions that deliver timely and simplified access to accurate patient information and remove the obstacles to optimal care.

Platform Decision Influences Buy-In

Hospitals have deployed several strategies to eliminate workflow redundancies, streamline the clinician log-in process and reduce time spent hunting for patient information in various applications. Many hospitals have made investments in single sign-on (SSO) solutions. However, while this is a smart and necessary step, SSO is effective only for streamlining the clinicians' log-in process. Alone, SSO solutions do

not address clinicians' need to navigate multiple applications to render a complete view of a patient's clinical record.

A new challenge for hospital IT departments is making disparate applications interface to ensure that clinicians have access to *all* the information they need to make the most informed care decisions. As today's IT staff consider integration platforms, they must choose between an open or closed system.

An open platform works with a hospital's existing technology infrastructure (applications, operating system and hardware) and can be deployed in a matter of months in a non-disruptive manner. Closed, or proprietary, solutions may require pulling out existing systems and replacing them with compatible components from a single vendor to ensure seamless interoperability. While starting over with a new slate of fully integrated and homogeneous applications might seem ideal, the process itself can be impractical due to the lengthy implementation time and costs associated with large-scale technology investments and subsequent upgrades.

From a navigation perspective, clinicians prefer solutions that do not fundamentally change how they work or require extensive training; otherwise, they are less likely to actually use them.

Aggregation Fights Aggravation

Vital patient information must be available at the point of care, regardless of the application or database in which it is stored. This is where information aggregation becomes an important consideration.

Existing software and infrastructure components can be used to enhance active decision support by clinicians. In a typical setting, a clinician working at a computer screen wants to view relevant information on a given patient contained within distinct, networked applications. The clinician's initial log-on can be leveraged to recognize him or her as an identified user with an associated role or set of rules. These are used to establish a foundation (via trusted relationships) between applications to allow seamless viewing of all of the relevant data points, such as notes from the last office check-up, lab results or X-ray images.

This is accomplished regardless of application architecture, presentation vehicle or delivery method. The clinician gains an efficient tool to analyze all relevant data points before making a therapeutic or protocol decision. The solution removes the need for the clinician to launch each application, seek specific patient identifiers via roster, census or search tools, and specifically repeat this process as often as necessary to aggregate all of the critical data points from these redundant queries.

Hospitals use three main information aggregation tools to streamline sign-on procedures, simplify access to real-time patient data, and ensure security, patient privacy and compliance with regulations. They are:

- **Single sign-on:** Allows clinicians to sign in to all relevant and authorized applications with a single user name and password.

- **Context management:** Provides a means for non-integrated, non-interoperable applications to link information at the user interface level so they appear to act like a single system. In so doing, the applications operate in a context-aware environment, allowing users to access and review all relevant patient data in a unified view regardless of where the data are actually stored.

- **Compliance management:** Automatically tracks each access of patient information for security, privacy and regulatory compliance purposes.

Collectively, the components of a patient information aggregation platform extend the value of an SSO solution by providing simplified, real-time and integrated access to a selected patient's clinical information, wherever it may reside, and deliver a paper trail to ensure compliance with regulations.

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