

Automating the Emergency Department

An expert weighs in on factors that are currently shaping the emergency department information systems (EDIS) market.

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Huntsville Hospital is North Alabama's only state-designated Level 1 Trauma Center, and one of only three trauma centers in the entire state.

With 120,000 patients coming through its doors each year, the emergency department (ED) at Huntsville is the busiest in Alabama, and the 10th busiest in the U.S., according to Laura Price, nursing informatics manager at the Huntsville-based facility.

By December 2005, the paper-based system the hospital's emergency department (ED) used for gathering data had made patient and registration tracking, nursing and physician documentation, administering prescriptions, results reporting and identifying workflow issues increasingly cumbersome, Price said. Thus began Huntsville Hospital's search for an emergency department information system (EDIS) to automate such processes.

"We knew that [an ED system] was something we needed to get us moving in the direction we wanted to go," said Price. "We wanted to be the best ED in Alabama, and to be recognized across the country. We needed to be great, and the way to get there was an electronic health record."

After an arduous selection process involving three vendors, Huntsville ultimately chose Wellsoft's v11 EDIS application in April 2007, and went live with the system in the main facility's ED in September of that year. Huntsville Hospital has since rolled out the application in its pediatric ED and Urgent Care Center as well.

Today, more hospitals like Huntsville are looking at the ED as an important area of automation, and are investing in EDIS technology to help streamline documentation, fill prescriptions electronically, improve workflow, increase patient volume and ultimately boost revenues.

MEDHOST, another EDIS provider, recently reported that more than 130 of its customers are using the company's order entry solution to streamline the ordering process and enhance patient safety. When a physician enters an order in MEDHOST at the patient's bedside, it flows immediately to the department responsible for performing the service. This ordering process eliminates additional steps such as ED staff re-entering orders, and it brings a new level of efficiency to already busy EDs, the company noted.

"We have more than 88,000 visits each year, so there's no time for inefficiency," said Dr. John DiPasquale, co-director of the department of emergency medicine at Good Shepherd Medical Center in Longview, Texas, which uses the MEDHOST technology. "I complete nearly 90 percent of my charts and orders at the bedside, which means that I am spending exponentially more time with my patients. I'm more available to answer their questions and ease any concerns, and this greatly impacts their experience and satisfaction."

As ED systems become increasingly common, hospitals and health care systems find more applications from which to choose. They face tough decisions regarding which EDIS application is right for their facility, and when the time is right for such a purchase.

With such concerns in mind, *ADVANCE* asked Jason Hess, general manager for clinical research at KLAS Research, to share his thoughts on the trends shaping the EDIS technology market.

The importance of integration

The recently signed American Recovery and Reinvestment Act (ARRA) weighs heavily on the state of the current EDIS market, and will continue to have an impact in coming years.

In 2011, ARRA will begin providing financial incentives for hospitals that can demonstrate meaningful use of information technology to help improve patient care. In 2015, facilities that cannot show meaningful use will face financial penalties.

A formal, clear-cut definition of what constitutes "meaningful use" has yet to emerge, as health care providers and industry experts debate what meaningful use will encompass. But for any facility with designs on qualifying for ARRA funding, clinician adoption of electronic medical records is critical, Hess said.

Implied in the discussion surrounding clinical documentation is the importance of integration between departments - especially the emergency department, Hess noted.

"The ED is a microcosm of the hospital," Hess said. "You've got 50 percent to 60 percent [of patients] coming through the ED, and if you can't establish getting [the emergency department] integrated with the greater whole, you're going to have some challenges."

Facilities considering EDIS applications to help share information among other departments must choose between best-of-breed vendors and enterprise vendors who have EDIS components.

Many CIOs have expressed concerns over best-of-breed EDIS technology and the resources needed to support systems other than their hospital information system (HIS).

On the other hand, specialty vendors are - as the name implies - focused on one specific area, and can (ideally) offer a singular fully-functioning system that includes features such as patient tracking and nurse and physician documentation, and provides interfaces to other departments and the facility's HIS. An integrated system offered by a multi-system vendor, however, can take years to be refined to meet a hospital's needs.

More facilities continue to turn to specialty vendors for EDIS applications, and best-of-breed EDIS products are still setting the pace in functionality, performance and adoption, Hess said.

Recent KLAS statistics support that statement. In a 2008 study of EDIS vendor performance and trends, best-of-breed vendors Wellsoft (89.8 out of 100) and Allscripts (88.7) rated highest in overall performance scores. Enterprise vendors ranked at the bottom of the overall performance scale.

"The ED is one [area of the hospital] that continues to be dominated by best-of-breed vendors," Hess said, "where in other ancillary systems, enterprise vendors have taken over."

Growth ahead?

KLAS estimates that more than 2,000 of the 5,000-plus registered American Hospital Association hospitals are using commercial EDIS applications. That number is a clear sign of increasing mainstream adoption, but certainly leaves room for growth, according to KLAS.

That growth may not happen overnight, but expect an increase in EDIS purchases on the heels of ARRA incentives taking effect, Hess said.

With shrinking budgets forcing IT to curtail spending, more CIOs are looking to shore up other areas - CPOE, documentation, bedside barcoding - already established as necessary to qualify for ARRA incentives in two years' time, Hess commented.

While health care has largely been spared in past recessions, the current economic downturn has cut significantly into health care IT spending.

In addition, donations, grants and other sources of funding for IT projects have dwindled, and CIOs are under increasing pressure to justify all expenditures large and small.

A new HIMSS report predicts that U.S. hospitals will spend about \$4.7 billion on health IT this year.

That projected figure is lower than 2007 levels, possibly due to the ongoing recession.

The signing of ARRA, however, changed the health care IT outlook almost overnight, Hess said. With ARRA incentives on the way, funds to purchase EDIS technology may soon materialize for facilities that satisfy ARRA's meaningful use criteria.

"Many CIOs have told me they believe that money will become available to purchase EDIS if they need to, through stimulus funding that's coming through [their respective states]."

It remains to be seen when and if activity in the EDIS market will markedly increase, of course. But a substantial spike is likely once ARRA incentives begin to free up financial resources for more IT initiatives, Hess predicted.

"I think it's safe to say that, in the next few years, we're going to see an uptick in the implementation and purchase of EDIS products," he concluded.