# Nothing but 'Net

**A nonprofit hospital system's first CIO leads the transition from disparate, server-based clinical and financial information systems to a streamlined ASP hosted approach.**

*By Phil Reynolds, Managing Editor*

When a hospital system hires its first CIO, the information technology assessment and changes that inevitably follow should come as no surprise to anyone. Getting the most bang for the buck while improving patient care is standard operating procedure for most healthcare organizations (HCOs), but it is crucial for community-based nonprofits, which cannot afford to make poor spending decisions without risking serious ramifications.

One of the HCO's options for saving budgetary dollars is to move toward utilizing Internet-based applications and enlisting the services of application service providers (ASPs), or vendors that allow clients to use their software on off-site servers. By paying a subscription or per-user fee to ASPs, HCOs can control their IT workflow while reducing the need to purchase and maintain clinical and financial applications.

Cynthia Adgate Davis, who became DeKalb Medical Center's vice president of information technology and first CIO in June 2002, supported an ASP strategy for the organization. "We made a very specific decision that we didn't want to be in the programming business, but the process improvement business instead," she says. "We believe patient safety has to come first to provide our community with the best care possible."

**The Appeal of Immediacy**
DeKalb Medical Center is a nonprofit hospital system in Georgia that includes two Decatur-based inpatient facilities of 525 beds and 102 beds, with additional plans to open a 100-bed all-digital hospital in Hillandale in July. With about 800 physicians, the hospital system annually provides more than $40 million in free care, including emergency and trauma services, surgery, diagnostic imaging and gynecology, to approximately 500,000 patients.

The organization's IT Executive Governance Group decided that the first step in making clinical information available to physicians via the Internet was to deploy Healthvision's physician portal, which allows the authorized user anytime, anywhere access to the organization's physician Web site by entering his user ID and password. In the first six months since implementing the portal in April, the hospital system saw more than half of its physicians and their staff sign up to use it. "It's an example of physicians' hunger for clinical applications. Now they can get lab, radiology and transcription results via the Internet," Davis says. "Physicians love how easy it is to get on board and use the system, and how efficient it is. If they don't have the information they need

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and we don't make it easy for them to obtain it, then they have to call different departments for someone to get the information for them."

Of course, DeKalb Medical Center had to do more than just provide Internet access to its clinical applications: It needed to adopt a select group of Web-enabled information systems that would consolidate patient data efficiently and provide a better workflow for its physicians.

**The Beat Goes On**
Following a 14-month installation period, DeKalb Medical Center went live in July with Eclipsys' Sunrise Clinical Manager, which permits authorized users to enter orders and access many of the hospital system's clinical applications, including transcription, laboratory and radiology information systems, by entering their user ID and password once. Users still have to logon to the organization's PACS system separately, though. However, since Sunrise Clinical Manager is not Internet-based, DeKalb Medical Center is waiting for a Web-enabled version of the physician software to make it accessible via the Internet in 2006.

What's more, the Internet-based version of DeKalb Medical Center's document imaging program, CGI-AMS' Sovera for medical records and patient financial services, is available via an upgrade, which the health system plans to implement. This will allow the application to be integrated with the physician software and let the organization eliminate an additional login.

Sunrise Clinical Manager also is DeKalb Medical Center's foundation for creating an electronic medical record (EMR) system. In the spring, the organization will begin a physician order entry pilot, and this summer it plans to introduce clinical documentation with computerized physician order entry (CPOE) at the new Hillandale facility. The CPOE pilot, which will be limited to a specific medical unit, is being driven by a small group of physicians who have already spent almost two years developing the EMR system for improved clinical outcomes and patient safety. "The EMR journey is going to be five to six years long—it's not going to be a short one," Davis says.

DeKalb Medical Center had been using a highly customized version of Siemens' INVISION healthcare information system (HIS) since 1986 for order entry and patient accounting. However, Davis envisioned an integration challenge when trying to use it with Sunrise Clinical Manager, so the health system's IT staff worked with Siemens representatives to convert the organization's patient accounting, demographics and master patient index to a newer, browser-based version of INVISION.
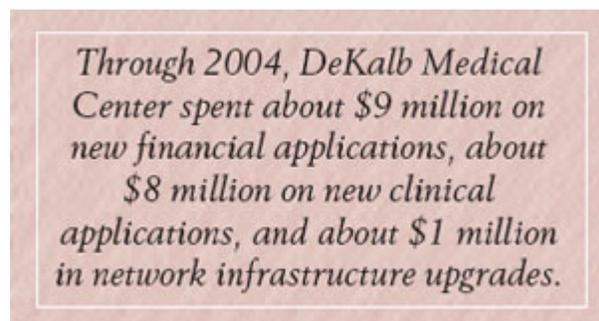
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After taking down the old version of INVISION and setting up an "ADT command center" to enter admissions/discharge/transfer information into Sunrise Clinical Manager and all the ancillary systems, DeKalb Medical Center went live 36 hours later in July with the new HIS. About 1,400 nurses, unit secretaries, registration clerks and business office personnel now perform ADT with INVISION, which sends the ADT information to Sunrise Clinical Manager and other applications via Quovadx's Cloverleaf engine.

**ERP the Internet Way**
On the nonclinical side of the operation, DeKalb Medical Center went live in February 2004 with Lawson Software's Financials and Healthcare Supply Chain Management suites following a 10-month implementation period. The organization's authorized users login to these Lawson-hosted applications via the Internet and a user ID and password that differ from the ones they might have for accessing clinical systems. The business software should be rolled out to the health system's clinical areas by spring. "We chose to run the software remotely because of the database support requirements," Davis says.

The business software allows DeKalb Medical Center to automate the materials management process, from procurement and real-time discrepancy alerts to on-demand reports and accounts payable and financial reporting. "Our buyers use it to receive purchase order numbers and submit their transactions, which go to the finance department and produce financial statements for the organization. There used to be stand-alone systems for materials management, financial systems and so on, but we can't properly pay vendors if accounts payable does not have the correct information," Davis says. The software also assists the health system in maintaining strong financial controls, including compliance with the Sarbanes-Oxley Act of 2002.

**Managed Growth**
DeKalb Medical Center employs 74 IT people for technical and application services—twice the number of IT staff that existed when Davis came on board. "When you have more clinical applications, you have to have a greater infrastructure support and head count, so we had to increase the number of IT people," she says. "We now have customer liaisons who work with specific departments to meet their needs."

The help desk staff also increased, from two full-time employees to nine FTEs. "We needed to have more people available when dealing with more physicians—they aren't going to wait on the phone for an answer," Davis says.

Despite the doubling of IT staff, it's still less than Davis anticipates would have been needed if DeKalb Medical Center were not moving toward ASPs. "It's more efficient with hosted systems," she says. "Typically, an organization using INVISION when we started using it would have hired 80 to 90 people, so we would have had to add more staff anyway, just to get up to that level."

Through 2004, DeKalb Medical Center spent about $9 million on new financial applications, about $8 million on new clinical applications, and about $1 million in network infrastructure upgrades—including moving from a token ring LAN to an Ethernet LAN and adding a WLAN and more servers—according to Davis. She projects that the hospital system's ASP initiative will have a full return on investment in three years.

The organization's IT Executive Governance Group has no plans to implement other Internet-based applications, although it is considering adopting single sign-on authentication to decrease the number of times a physician must login during a session, such as for the PACS and document imaging systems.