information edge

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CEO Outlook 2006

EXECUTIVE SUMMARY

In the January Information Edge we ask healthcare CEOs to identify their top IT-enabled strategies for the coming year. This year's issue blends geography and size, urban and suburban, large and small health systems in a snapshot that reveals how far we've traveled along Scottsdale Institute's IT journey. Specifically, CPOE and PACS, two major IT investments that providers might have considered rolls of the dice not long ago, have started to reach maturation among leading health systems.

PACS, once the province of large, well-heeled radiology departments, has demonstrated an ROI so compelling that it is being extended to smaller hospitals within the enterprise. In the case of CPOE, so effective in eliminating medication errors and improving quality that it has changed the way physicians practice medicine, hospitals have learned the difficult lesson of getting physicians involved before rollout—or delaying rollout until they're sure of physician buy-in.

CEOs are also increasingly committed to leading their enterprises in disciplined process-improvement methodologies, ranging from Six Sigma and Toyota Lean Production techniques to pursuit of the Malcolm Baldrige Quality Award and CMS core measures. Finally, regional health information organizations (RHIOs), also called health information exchanges (HIEs), are a new but increasingly common item on the CEO plate. While the jury is still out on these efforts, CEOs who ignore the need for shared data networks linking all stakeholders in their communities and regions—including competitors—do so at their own peril.

Al Aviles, President and CEO New York City Health and Hospitals Corporation New York

HHC NEW YORK CITY HEALTH AND HOSPITALS CORPORATION

How NYC takes care of its own.

Al Aviles, president and CEO, New York City Health and Hospitals Corporation, NYC

With eleven acute-care and five long-term-care facilities, six large diagnostic-and-treatment centers, and more than 80 ambulatory care satellite clinics, the New York City Health and Hospitals Corporation is the country's largest municipal health system. NYCHHC also operates a Medicaid managed care plan with 240,000 lives, has 215,000 inpatient discharges, 5 million ambulatory care encounters and 1 million ED visits each year. Anyway you cut it, it's daunting: a whopping fifth of all inpatient discharges in New York, more than a third of hospital-based clinical visits and more than a third of its ED visits.

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IT has been and will continue to be a key tool for this sprawling organization.

"We've been a leader in IT across our system," says Aviles. "We began implementing electronic patient records in 1994 and CPOE has been installed in all eleven acute-care facilities for the last five years," he says. So strategies for 2006 will involve leveraging and enhancing this IT infrastructure to improve patient safety and coordination of care, strengthen relations with community physicians and better manage chronic disease.

To enhance patient safety in 2006, NYCHHC will extend its bedside electronic medication administration record—in place at five of its hospitals—to its remaining six hospitals. Besides implementing CPOE for medication orders, the organization has automated medication dispensing in its large pharmacies using robotics, including an interface with electronic ordering, motorized dispensing and assembly lines and digital photography of dispensed pills to allow pharmacists to visually validate dispensed prescriptions.

"Our goal is to have the full spectrum of IT-enabled ordering, dispensing and administration everywhere," says Aviles.

Chronic disease management, especially for diabetes, is a major area of emphasis. "In New York, we've seen diabetes increase at a rate outrunning the rest of the country." [The New York Times did a groundbreaking series on the diabetes epidemic in New York City beginning with the January 9, 2006 issue.] "Our system is so large we have 52,000 adult diabetics in regular care and another 18,000 come to us through the ED. So in recent years we've begun to use patient registries to focus physicians on evidence-based practices and to better track patients who are outliers," says Aviles.

That will continue through 2006. "We've found registries to be extremely useful tools to help physicians focus" on those patients within their populations who need to be better engaged in the management of their chronic disease. The registries also provide reports on the performance of peers, pointing toward best practices, he says.

Patient-registry lists were previously assembled manually. Now they're stored in a special data warehouse populated via the NYCHHC's electronic patient record and are available to providers on NYCHHC's intranet website. Nearly 20,000 of its diabetic patients are currently tracked on the electronic registry and the goal is to bring all 52,000 on by the end of 2006.

Also this year, NYCHHC will extend electronic registry capability to CHF asthma and depression. "Depression is a major impediment to effective patient self-management" and results in poor compliance with medications and diet and other necessary lifestyle changes, says Aviles.

NYCHHC is in the middle of a major initiative to better engage community physicians. "We've traditionally been self-reliant" with our employed or contracted physicians, he says; however, in recent years linkages to community physicians have become increasingly important as the NYCHHC looks to expand its primary and specialty care capacity in a cost-effective manner and with the need for capital investment. Moreover, NYCHHC is looking to enlist community physicians in its chronic disease management efforts and wants to set the stage for joint management of care under the global capitation arrangements made possible under its own Medicaid managed care plan.

Specifically, NYCHHC wants to expand throughout its system a successful program, piloted in its Queens hospitals, that has enlisted several hundred community

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UHC is interested in working with SI and its members on innovative technology-driven quality improvement initiatives.

Welcome Lewis Sandy, MD, United Clinical Advancement division, Steven Mueller, CIO, Healthcare Networks and Nick Hilger, senior VP, Strategic Development.

physicians with a home-grown and easy-to-use web-based software application that is both a referral and scheduling system as well as a conduit for the exchange of patient medical information. "That has been a great enabler of partnerships with community physicians," says Aviles.

The need to bolster bonds with community doctors also stems from "our acknowledging the reality of serving an extraordinarily diverse population marked by a rising tide of new immigrants." Hispanic patients often seek Spanish-speaking physicians in their community; Koreans, Chinese, Caribbean and other immigrants seek community doctors who speak their languages.

Finally, NYCHHC is involved in several initiatives to develop RHIOs, spurred by the State of New York's multimillion-dollar "HEAL New York" program. One proposal is to expand a home-grown initiative using smart cards with embedded chips that can download portions of an electronic patient record.

The smart card strategy has two purposes, the first of which is to provide patients a portable list of current prescriptions, diagnoses, allergies, EKG results and other recent lab values so if they arrive at an ED they have a baseline data available to expedite care. "We're issuing smart cards to adult patients in select primary and specialty clinics and now have 20,000 in our Queens network," notes Aviles. This past year the organization issued smart-card readers—at only $20 each, they're inexpensive—to virtually all the private hospitals in the county which can connect them via any PC's USB port.

A second benefit to smart cards, representing the next phase of development, is their potential use to access a secure Internet portal that carries patients' longitudinal medical records, encouraging them to become custodians of their own medical records—and therefore become better managers of their own health. Given the lack of interoperability in healthcare, Aviles says smart cards can be a cost-effective way to create interfaces among disparate sources of patient data.

Rich Hastings, President and CEO Saint Luke's Health System Kansas City, Mo.

Rich Hastings, president and CEO, Saint Luke's Health System, Kansas City, Mo.

For the past decade, Saint Luke's Health System has used the Malcolm Baldrige Quality Award criteria as a management tool to better integrate and align the health system. That effort paid off in 2003 when its 600-bed flagship Saint Luke's Hospital became only the second healthcare organization to have won the prestigious Baldrige, which makes the hospital one of the only facilities in the country with both Baldrige and Magnet status, nursing's highest accolade.

"Our goal is to be the most integrated system in the country," says Hastings, whose centerpiece initiative for 2006 will be this month's opening of Saint Luke's East-Lee's Summit, a new all-digital hospital in the suburbs. Built for 200 beds as the organization's 10th hospital, East will provide a prototype for the rest of the health system in terms clinical protocols and IT-enabled nursing standards, he says.

After testing these protocols and processes for the first half of this year, Saint Luke's will begin rolling them out at its other hospitals over the next four years. The initiative "ties into our EMR strategy. As a system we are integrating medical services

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February 7
Opening the Digital Hospital
- Steve Pelton, CIO, central region, Ministry Healthcare, Weston, Wis.

February 8
THR's Safety Action Learning Tool (SALT)
- Tony Keller, director, Enterprise Data Management, Texas Health Resources, Arlington, Texas
- Faye Sheppard, director, Risk Management, Texas Health Resources, Arlington, Texas

February 21
A Business Case for TeleHealth
- Keith J. Kaplan, MD, attending pathologist, Evanston Northwestern Healthcare and assistant professor of pathology, Northwestern University, Feinberg School of Medicine, Chicago

February 23
Smart Card Implementation: Benefits and Lessons Learned
- Chris Young, CIO, Saint Thomas Hospital, Nashville, Tenn.

March 2
CPOE Outlook
- Adam Gale, KLAS, Orem, Utah

March 15
Integrating the Enterprise: A University Hospitals and Health System Case Study

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Upcoming Events continued

March 16
The Connected Health Imperative
- Joseph C. Kvedar, MD, director, Partners Telemedicine, Partners Healthcare, Boston
- Khinlei Myint-U, corporate director, Partners Healthcare, Boston
- Douglas McClure, corporate director, Partners Healthcare, Boston

March 20
Improving ED Patient Flow at Provena Health
- Kathleen Mikos, Chief Nursing Officer, Provena Saint Joseph's Medical Center, Joliet, Ill.
- Jeffrey Brickman, CEO, Provena Saint Joseph's Medical Center, Joliet, Ill.

March 21
Clinician and Physician Portals Update
- Scott Holbrook, KLAS, Orem, Utah

March 23
Bar Coding and Smart Pumps Impact Safety at Partners Healthcare
- Patrick Harding, project manager and lead analyst, eMAR IS, Brigham and Women's Hospital, Boston
- Cindy Spurr, MBA, RN, BC, FHIMSS, corporate director, Clinical Systems Management, Partners Healthcare System, Boston
- Anne Bane, RN, MSN, BWH, project manager, eMAR , clinical business owner, Brigham and Women's Hospital, Boston
- Debra Thomas, corporate manager, Partners Healthcare System, Boston

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by product line, like cardiovascular services. IT is a key to that," Hastings says.

"My vision of the future is that we have to become more productive. There will be fewer and fewer people to take care of more people as Baby Boomers retire. We'll have to become fully digitized," he says. In that vein, last year Saint Luke's invested in an electronic ICU, which allows intensivists at centralized sites to more efficiently and effectively care for ICU patients.

Hastings wants to extend that model to other specialties. For example, in cardiology, "Right now we have a single cardiologist who can get an over-read, instant consult, lab or test results from any other facility," he says. It's a strategy that makes sense given that Saint Luke's Hospital sits in the center of a ring of community hospitals in the Kansas City metro area.

Saint Luke's is also emphasizing IT outside its walls this year as one of three collaborating organizations—the others are Blue Cross of Kansas City and Commerce Bank—in developing a Kansas City RHIO. Saint Luke's will perform all the billing, payments and affirmation of benefits. Everyone should win: the bank will get a fee for each transaction, the health system will get paid faster and the health insurer will get information in real time.

Bob Clarke, President and CEO, Memorial Health System Springfield, Ill.

Memorial Health System entered 2006 on the heels of a spectacularly good 2005. In addition to having its best financial year ever, Memorial won two national quality awards, a supply-chain management award and the Lincoln Silver Award, an Illinois-wide performance-excellence model based on Baldrige-like criteria. Also at all-time highs: the organization's market share as well as important measures of physician and patient satisfaction.

Bob Clarke, president and CEO, Memorial Health System, Springfield, Ill.

"Of course, you're never satisfied," says Clarke, who notes that "the electronic health record (EHR) continues to be the major capital commitment of our organization." The first priority in this area: ensure business resumption capability, aka IT redundancy and disaster recovery. "We just absolutely cannot afford to have downtime. The more we get into the EHR, the more damaging downtime is to quality and safety. The EHR is a magnificent improvement as long as it's up and running," he says.

Another IT priority is to provide Memorial's nearly 600 physicians with continuous access to the EHR via PDAs and other portable computing devices. "We're trying to leverage IT capacity across the entire enterprise," says Clarke, including extending PACS to two small rural hospitals and some physician clinics. "Too often you end up putting PACS in your flagship facility and not in the other ones."

Also at the top of the list is pushing the issue of following clinical protocols. "I'm concerned that there isn't more emphasis in the EHR market on incorporating automatic protocol adherence in systems," says Clarke, especially given the CMS national initiative on core measures. He says an ideal EHR would provide alerts if a physician were failing to carry out the best protocol.

Helping facilitate Memorial's protocol development are alliances with local physician groups, such as the one with a 43-member cardiology group that includes the president of the American College of Cardiology. Those cardiologists have developed an EHR that blocks physicians from proceeding with a

patient's record completion unless they document compliance with best practices. Clarke asserts that EHR vendors should be just as proactive in incorporating protocols into their products. In a related venture for 2006, Memorial is developing plans for a new $75 million to $100-million, totally-digitized cardiac hospital.

As part of its mission to ensure a "Great Patient Experience," Memorial has launched a one-year initiative to provide more private patient rooms and fewer shared ones, following last year's launch of room-service dining, a strategy that allows hospital patients to order meals at whatever time of the day they like.

All of these efforts will coalesce around Memorial's decision to apply for the Malcolm Baldrige National Quality Award in 2007. "The Baldrige process is the most valuable process I've ever seen. It's more comprehensive than JCAHO or Magnet measures. I'm absolutely committed to it," says Clarke, who is quick to add IT is only a tool toward that end. "The main strategy in attaining Baldrige recognition is not IT. The goal is results. I hardly ever talk about IT as an objective," but only as a means to an end.

Stan Hupfeld, President and CEO Integris Health Oklahoma City

Stan Hupfeld, president and CEO, Integris Health, Oklahoma City

INTEGRIS Health

As the largest healthcare system in Oklahoma, Integris is poised this year for an enterprise-wide race for excellence. "We're going to focus all of our 14 hospitals on achieving close to perfection on all the JCAHO and CMS publicly reported core process measures," says Hupfeld. "Some measures are easier, some aided by physician-approved order sets and some IT-enabled. It's a mixture," he says. Small hospitals have some variance in meeting the publicly reported process measures.

A second initiative for Integris involves development of a RHIO for the state. While still in the early, discussion stages—most RHIOs are—top management believes the rise of regional health information exchanges is a trend that's here to stay. "We recognize that a number of communities have gone down this path and that we have some catching up to do," says Hupfeld. The next step is to collaborate with the Oklahoma Hospital Association on the initiative. "We expect to play a lead role as the largest provider in the state," he says.

Another area of emphasis for 2006 will be positioning the entire enterprise for a "Leap into Excellence" that will root out waste and inefficiencies in the organization using Six Sigma and Toyota Lean Production techniques. "Clearly an enabler of these projects will be IT," says Hupfeld.

The issue, he says, is that Integris has been quite successful both financially and clinically, so there's no sense of a "burning platform" around which to focus the effort. "We'll have to educate ourselves on these tools and probably come up with a blend of strategies, improving a process and then leveraging it for other ones," says Hupfeld, noting that it will likely take three to four years before Integris see measurable results. Two senior executives have been designated to lead the effort, he says.

The main strategy in achieving Baldrige recognition is not IT per se. The goal is results and IT is a means to an end.

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Dan Wolterman, President and CEO Memorial Hermann Healthcare System, Houston

Dan Wolterman, president and CEO, Memorial Hermann Healthcare System, Houston

Memorial Hermann, with nine acute-care hospitals and three long-term acute-care centers, has spent the past five years upgrading its IT infrastructure. "I consider IT critical to meet our strategic imperatives in the areas of quality, customer experience, operational excellence and growth. We look at IT as a major component of all of them," says Wolterman.

For 2006, the organization is undertaking three major IT-enabled initiatives, the biggest of which involves clinical transformation of care at the bedside. Dubbed "Advanced Care4," Memorial Hermann's clinical information system features four major components:

EMAR, or electronic medication administration record—provides nurses with positive patient ID using bar coding and automated medication administration;

Clinical documentation—all nurses and other caregivers document care electronically using handhelds and other portable computers;

Perioperative (OR) documentation—clinicians use an EMR-linked system to track patients throughout the entire surgery process, from preoperative to post-operative stages;

CPOE, or e-Ordering—all physicians place orders on the computer. "This is critically important for quality of care and patient safety," says Wolterman. Zynx Health is providing the standardized evidence-based order sets for physicians. Memorial Hermann intentionally delayed deployment of the order sets so it could work more closely to gain physician buy-in. CMIO Bob Murphy, MD, helped facilitate this process.

A second initiative for 2006 involves completing implementation of an electronic ICU, which Memorial Hermann began two years ago. "This year we will finalize the electronic ICU by putting all of our system's ICU beds on it," says Wolterman. That move will enable the organization to offer remote intensivist service to regional facilities within a 150-mile radius, including 23 regional hospitals ranging from 10 and 12 beds to 220 beds.

Memorial Hermann's third IT-enabled strategy for 2006 is rollout of PACS to all its hospitals as well as a digital cardiology system called HeartLab that replaces VHS tapes with CDs for digital-image storage. "All nine of our acute-care hospitals have heart services, three have dedicated heart and vascular institutes and five of our facilities conduct open heart surgery," says Wolterman.

Population growth, including the uninsured, is a big driver of strategy. Every five years, for example, Houston adds 500,000 more people, a third of whom are uninsured. As a result, Memorial Hermann has four brand-new hospitals under construction and the message is clear for all, says Wolterman: "Operational efficiency is critical to our success."

Tim Stack, President and CEO Piedmont Healthcare Atlanta

Piedmont is a three-hospital system with an IT pedigree, including the distinction of its flagship, Piedmont Hospital, being selected as a Most Wired 2005 facility and a Solucient Top 100 hospital. "Over 90% of our

orders are placed by our physicians using CPOE, and PACS has been up and running for some time," says Stack. "We're fairly computer literate." In 2006, Piedmont also seeks to further this distinction by implementing an electronic ICU, and management is now in the process of scrutinizing vendors of these systems.

Tim Stack, president and CEO, Piedmont Healthcare, Altanta

Not least on the agenda for the year "in our journey towards a complete Electronic Medical Record is mandatory use of CPOE by all physicians," says Stack, which has been a high priority for the past two of his four years at the health system's helm. "We've decided CPOE will be mandatory, including for the main hospital's 900 doctors, by the end of February 2006. That's a pretty significant step."

That effort involves the necessity of addressing the entire range of system interfaces at Piedmont. "You have different equipment at different sites. In the past it was always best of breed. Now we're favoring a single-vendor solution for hospital and physician applications," Stack says. The initiative also has to consider interoperability with community physicians, which is why Piedmont is working with a large cardiology practice to ensure standardization of systems between the two organizations.

"We try to standardize as much as we can, and if not, we ask why not?" says Stack. System integration is such a significant factor that it figures prominently in the due diligence Piedmont is undertaking as it looks at bringing another hospital on board this year. Depending on how easily the system can be integrated, he says, could make it "a slam dunk or be the deal breaker."

Conclusion

As healthcare CEOs look outward in 2006, IT has become an inextricable part of their strategy for success. This is clear from the acronyms that punctuate top management's discussions: CPOE, PACS, RHIOs, Six Sigma and Baldrige, just to name a few. As always, however, the question will be how we measure success. The answer is, of course, clinical and operational results. As we cover the topics raised by CEOs more closely in upcoming issues of Information Edge in 2006, we'll examine just how adept leading healthcare delivery systems are becoming at those measurements.

Communication Management Tools continued

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