Patient Safety & QUALITY HEALTHCARE
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Computerized Physician Order Entry

CPOE at a Community Hospital:
First Steps

ABSTRACT

Huntington Hospital, a 525-bed not-for-profit community hospital in Pasadena, California, is in the process of implementing computer technology to support quality patient care. Though success in the implementation of functions such as computerized physician order entry has been well documented at governmental and teaching hospitals, success at the community hospital level has been less evident in the literature. This is the first in a series of articles that follows Huntington Hospital's efforts to install such technology, describe project plans, detail obstacles, and elicit feedback for future direction from readers.

By Maggie Lohnes, *RN, CPHIMS, FHIMSS*

The crescendo of recommendations from regulatory, clinical, payer, and purchaser groups touting applications such as computerized physician order entry (CPOE) as solutions to unacceptable error rates is hard to ignore. Success at government and academic hospitals whose physician staff are primarily employees with a single practice site has been well documented. Community hospitals, serving private practitioners who often practice at multiple facilities as well as their own offices, have been slow to adopt these technologies, stymied by a unique set of obstacles.

This is the first in a series of reports that will follow one community hospital's progress as it advances its computer functionality toward the goal of improved patient care. Implementers at Huntington Hospital have chosen an open approach, a demonstration project of sorts, in an effort to take advantage of the brain trust in the healthcare information technology community and avoid the pitfalls of brave early adopters. Readers are encouraged to comment on prospective plans and provide input from experience, with the goal of enjoying mutual pride in the ultimate success.

Strategic Plan for Information Technology

Huntington Hospital, a 525-bed not-for-profit tertiary care community hospital, was established in Pasadena, California, in 1892; its mission is simply to excel at the delivery of healthcare to its community. Taking a cue from its namesake — Henry Huntington, the tycoon who brought the Pacific Electric Trains to Los Angeles — Huntington Hospital has long embraced technology for the improvement of its services.

Healthcare information systems are welcomed for their positive impact on quality, patient safety, and operational efficiency.

Huntington Hospital's experience with healthcare information systems follows that of the typical community hospital, first acquiring financial systems, followed by patient tracking, results reporting, and patient billing systems. The hospital survived Y2K unscathed due to an exhaustive effort to reprogram its unsupported legacy systems with compliant code, leaving functional, though perfunctory, automation. Functionality for physicians consisted of printing patient lists and locating lab results.

With Y2K behind it, Huntington Hospital looked ahead with the development of an aggressive long-term information technology strategic plan. Huntington Hospital's information technology strategy is aligned with its overall business strategy emphasizing operational excellence and organizing to deliver high-quality service at a competitive price. Figure 1 (page 14) illustrates the key operational pillar of Huntington's overall strategic premise of *"market indispensability"* as approved by its Board, and the technical strategy that supports it. It is this tenet that drives and guides the information technology plan at Huntington Hospital.

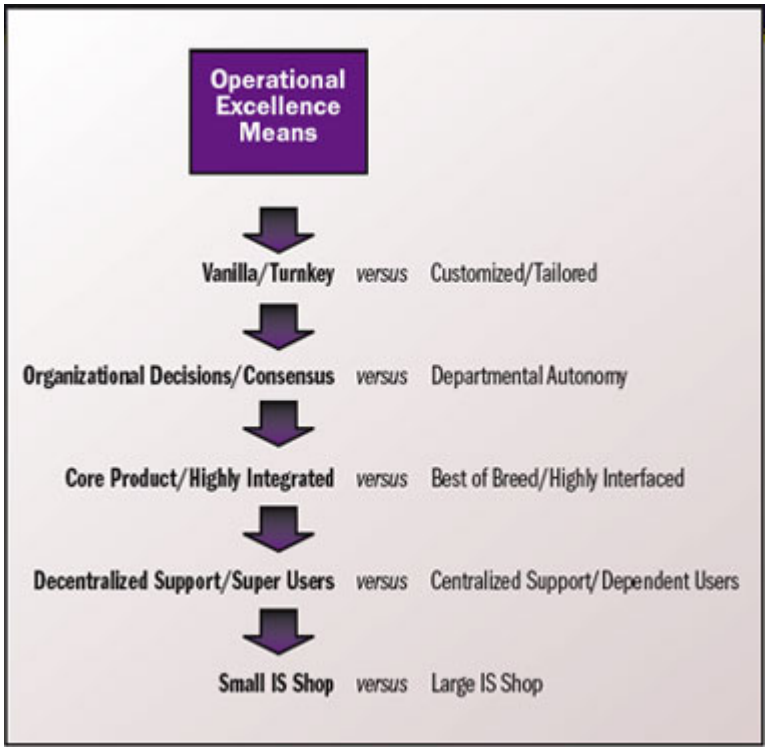

Figure 1: Guiding Principles Driving Huntington Information Technology

The strategic plan included a bold decision to replace money-hungry legacy mainframe systems with state-of-the-art client-server technology. About the same time, Huntington Hospital began an enthusiastic campaign to seek out solutions to meet physicians' overall needs. Using the motto, "Huntington Hospital, Where Good Doctors Come to Work," physicians were surveyed on a variety of topics. Everything from parking to dining to streamlining the patient admissions process was evaluated. Physicians began to express an interest in using technology to facilitate their work, not coincidentally falling on the heels of the release of the Institute of Medicine's landmark report, *To Err is Human,* and the well-publicized initial recommendations of The Leapfrog Group. Huntington's physicians expressed an unpredicted interest in using computers to streamline their daily patient care, choosing to embrace rather than reject technology.

As part of the information systems strategic plan, a position dedicated to support physicians' computer needs, the manager of physician computer services, was created. Though this position reports directly to the chief information officer as part of the information systems department, strong alliances were built with the patient care, medical staff services, graduate medical education, medical records, business development, and quality departments. The first order of business was to train the entire medical staff on the functionality of the new healthcare information system (HCIS).

Huntington Hospital's medical staff consists largely of private practitioners. Eight hundred active staff include solo practitioners, small and large medical groups, house-based physicians, and contracted emergency and radiology department physicians. Huntington also proudly supports a graduate medical education program of 35 medical and surgical residents.

Creativity and Luck Help in the Beginning

Attacking the physician training strategy with little precedent took some creativity and luck. The creative stroke of genius was to leverage the technological enthusiasm and relative poverty of the residents, the contacts of the business development department, and the budget of the information systems department. Luck was a matter of timing. A recent blitz of clinical journal articles supporting the need for electronic ambulatory clinical records, coupled with widespread adoption of personal digital assistants and wireless home networking, made "making the case" for automating health records relatively easy. If this project had taken place just a year or so before, physician adoption of computers for healthcare would certainly have been much less widespread.

A road show of a laptop, a projector, and an eager trainer made the rounds of physician offices, enlisting the aid of the office managers to corral busy physicians for a half-hour of training on-site. No opportunity was lost and the trainer even took advantage of opportunities during her personal healthcare visits to engage over-scheduled practitioners in a lively discussion of the merits of healthcare information technology. The residents staffed a 12-hour-per-day one-week training open house at the hospital and eagerly accepted a $100 gratuity to wear an "Ask Me About Meditech" button in the weeks immediately preceding and following go-live.

An ad hoc physician information technology committee was created, consisting of very kind volunteers who met monthly to review the build process. The committee gave input on whatever configurable items were presented, giving special input on the face sheet and communication plan.

On March 1, 2003, Huntington Hospital "went live" with its new Meditech Client-Server 5.3 healthcare information system on a brand-new network, 700 upgraded desktop PCs and 700 additional NEC "All in One" wireless workstations. Legacy functionality was replaced with a new supported application and an open-platform architecture. The expected stampede of irate physicians did not materialize. The phrase, "Just show me how it works, and make sure there are enough PCs," ruled the roost.

Physicians use the Enterprise Medical Record as their primary portal to patient information. By virtue of being tagged as the admitting or attending physician, a patient's name automatically appears on the "My Admitted" list. Physicians navigate through online lab, microbiology, blood bank, radiology, and medical record reports. Physicians called in to consult may add their names to the official list of providers by placing an electronic consult order, the only order they may currently enter online. Physician usage reports are monitored monthly and compared to patient volume reports; 70% of those seeing patients are using the systems on a regular basis. Interesting trends along specialty lines have appeared; surgeons have the least online time, while infectious disease specialists can't get enough of it.

The first phase went live on March 1, 2003, with a new healthcare information system replacing all basic functions such as patient registration, order entry and results reporting, pharmacy, radiology, laboratory, materials management, payroll, and general accounting. Phase II, currently under way, includes implementing remote-connectivity (live October 2003), physician wireless network (live January 2004), electronic signatures (in progress) and nursing documentation scheduled for fall 2004.

Establishing a Physician Committee

As planning moved forward to more advanced functionality, it became clear that the ad hoc Physician Information Technology Advisory Committee required more authority. Use of electronic signatures would necessitate bylaw changes and policy development. Online order entry would demand standards-setting and roll-out decisions. An official voice was needed to answer the question, "What do the physicians think of this?" A proposal to create a formal medical staff committee was placed on the Medical Executive Committee agenda by the physician champion. Meditech provided an industry expert who had participated in successful roll-outs to explain this committee's role as an essential component for the success of future physician automation projects.

The ad-hoc Physician Information Technology Advisory Committee became a formal medical staff committee in May 2004, with the charter to provide physician input into computer technology decisions. The committee reports directly to the medical staff Quality Committee, and upwards to the Medical Executive Committee. An obstetrician who sits on the Medical Executive Committee, and who has always voiced strong support for healthcare information technology, was asked to take the leadership role. The following month was spent recruiting a cross-section of physician members, representing the full spectrum of clinical specialties and technical prowess. Surgeons, pediatricians, intensivists, hospitalists, internists, the chief resident, and the head of the pharmacy, Therapeutics and Dietary Committee were recruited. Hospital personnel include the medical staff committee coordinator, the director of clinical informatics, the director of pharmacy, and the manager of physician computer services.

Physician training to view the upcoming online nursing documentation system is under way. Planned modes of training include large-group presentations to medical staff committees, a week-long open house staffed by medical residents, and 1:1 training at physician offices. Once again the residents will play a key role in the training process. Demonstrations of Meditech's "Physician Care Manager" module, which will provide tools for online physician documentation and order management, are attracting a higher-than-expected turnout; implementation of that functionality is expected for spring 2005.

Competition Among Projects

As Huntington Hospital moves on with its next phases, one key hurdle is fitting the projects in with competing hospital initiatives. The same personnel are frequently tapped to serve on committees to improve patient flow, address 27 new quality standards, monitor patient satisfaction, and prepare for the new continual-readiness accreditation process. The executive team expects a complete business plan including the scope of impact and costs for both financial and human resources before giving a project the green light to go forward. Approving a capital budget purchase is only half the battle. At a time of severe nursing shortages, pulling an RN off the floor for even a 1-hour training session makes compliance with California's mandated nurse:patient ratios extremely difficult.

Huntington Hospital's management team acknowledges that technology's cycle does not fit easily with its annual planning process and therefore provides a cushion for previously unexpected installations. The information systems department started 2004 with a list of 18 approved projects, including several that demand significant culture change. Continuous readiness tracking software and professional fee billing systems compete for resources with online nursing documentation and a new filmless radiology system.

By end the of June, 24 new projects had been added. In an attempt to anticipate upcoming demands, the chief information officer and his staff maintain a "Watch List" of not-quite-ready-for-prime-time technologies. As time progresses, projects such as the wireless "Guest" network bubble to the top and prove their worthiness. Figure 2 shows the list of physician-specific projects in their "live," "implementing," and "investigational" status.

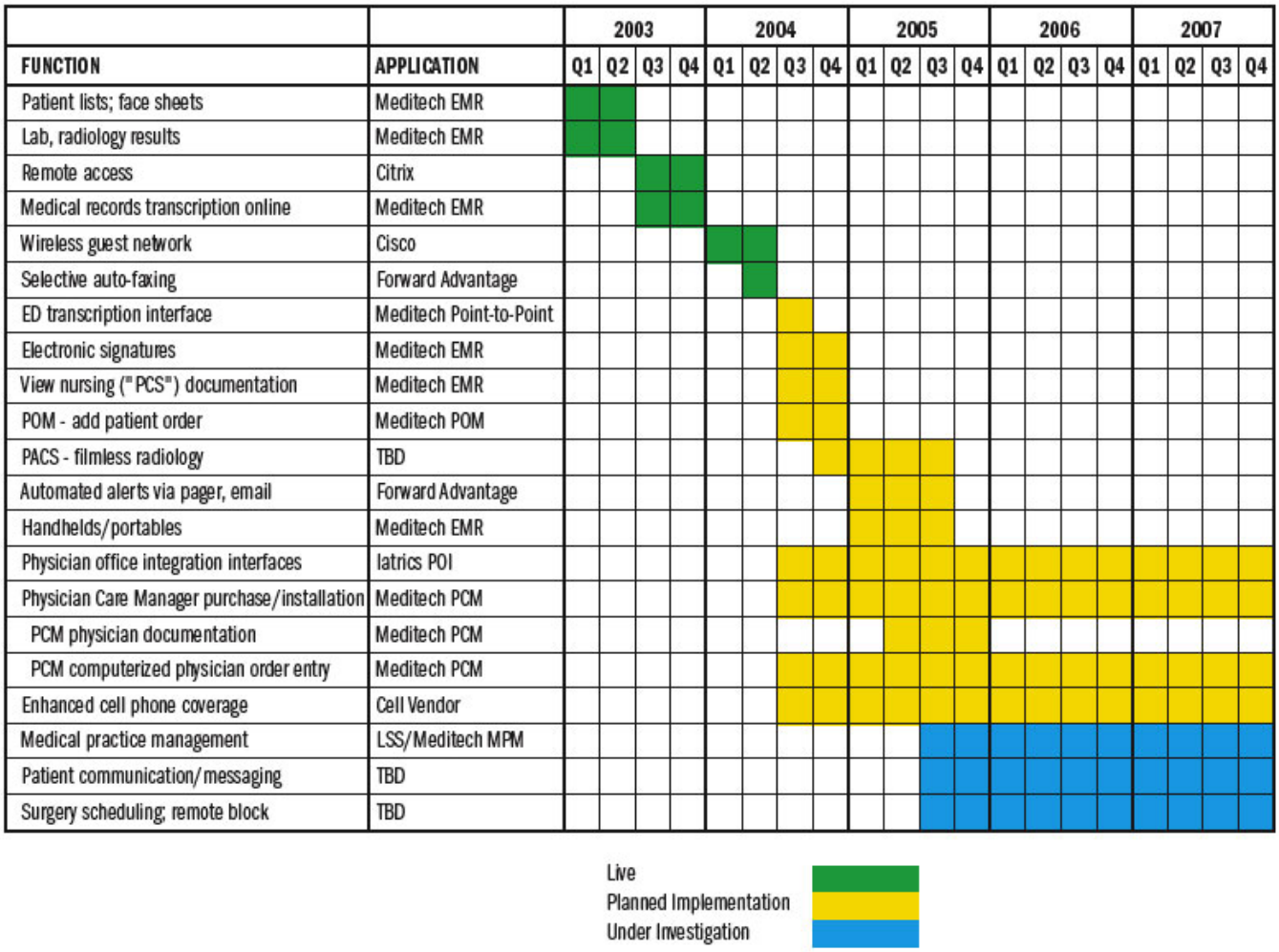

Figure 2: Guiding Principles Driving Huntington Information Technology (Click here to view a larger version)

Planning for CPOE

As Huntington Hospital approaches computerized physician online order entry, great care is taken to learn from the experience of early adopters. Fortunately, those who have had both successful and painful experiences have been willing to share their lessons learned.

The hospital's software vendor provides not only detailed step-by-step application installation plans, but puts at the hospital's disposal industry experts who suggest approaches and connect customers for moral support. Active membership in industry-related professional organizations such as the Healthcare Information and Management Systems Society (HIMSS; www.himss.org) and attendance at conferences

such as the Physician Computer Connection (www.keeneresearch.com/pcc.htm) have been invaluable for gaining access to industry experts and breaking down competitive organizational walls. Involvement in professional organization advocacy efforts prevents being blindsided by new state or federal regulations.

Huntington Hospital is currently pondering its approach to computerized physician order entry, and will soon put a stake in the ground for step-wise goals. Everything from a tentative step of ordering non-pharmaceutical items by a single clinical department through a no-holds-barred "Big Bang" — all orders/all clinical departments — is being considered.

Meanwhile, those preparatory steps that will not drain current resources are being taken. A project to catalog all current manual order sets is under way, with gaps to be identified and filled. Evidence-based medicine tools are being evaluated along with other knowledge-based resources. A subtle awareness campaign has begun, taking advantage of the theme in recent clinical literature for the promotion of ambulatory health records. Given that the acronym "CPOE" strikes immediate, visceral fear in the greatest of men, alternative names for the effort are being suggested.

Comments and Suggestions

Readers are invited to email the author (maggie.lohnes@huntingtonhospital.com) with comments and suggestions. The most immediate issues on the table include:

- How does a community hospital determine realistic goals for computerized order entry?
- What metrics should be used for pre- and post-measurement to document success for computerized order entry?

The case for quality and patient safety via healthcare information technology has been heard, but the "how-to" at the community hospital level remains cloudy. It is hoped that Huntington Hospital's open approach will benefit both the hospital's own effort to demonstrate successful installations, but also provide a model for other community hospitals to follow. Course corrections based on external input are anticipated and welcomed.

Maggie Lohnes is manager of physician computer services at Huntington Hospital in Pasadena, California. She is a member of PSQH's Editorial Advisory Board and may be contacted at maggie.lohnes@huntingtonhospital.com.

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CPOE at a Community Hospital:
Online Charting Goes Live

ABSTRACT

This is the second in a series of articles about Huntington Hospital, a 525-bed not-for-profit community hospital in Pasadena, California, which is in the process of implementing computer technology to support quality patient care. Though success in the implementation of functions such as computerized physician order entry (CPOE) has been well documented at governmental and teaching hospitals, success at the community hospital level has been less evident in the literature.

This article reports on the successful implementation of Phase II of Huntington's information technology strategic plan, online nursing documentation. Huntington Hospital openly describes its efforts to install such technology and to develop project plans. This article and the series are intended to inform readers and elicit feedback for future direction.

By Maggie Lohnes, RN, CPHIMS, FHIMSS

Huntington Hospital, a 525-bed not-for-profit tertiary care community hospital, was established in Pasadena, California, in 1892; its mission is simply to excel at the delivery of healthcare to its community. The last two years have seen a whirlwind of activity on the technical front as Huntington Hospital planned, budgeted, and began to implement an aggressive, multiphase healthcare information systems project. When the legacy clinical and administrative systems were replaced with updated technology (Phase I), the hospital turned its attention to the introduction of new functionality.

The third quarter of 2004 was spent preparing for the September 30th go-live of online nursing documentation. Phase II of Huntington Hospital's information technology strategic plan involved the further development of Huntington Hospital's electronic medical record by the installation of Meditech's Patient Care System (PCS). Under the guidance of Huntington's new director of clinical informatics, a team of over 20 nurses and occupational, physical, and respiratory therapists had devoted nearly a year to develop the system configuration. They developed and tested every documentation tool, from specialty care plans to assessment templates and medication administration records. The original go-live date of early April was delayed due to the unexpected length and intensity of the winter's high patient census; nurses could simply not be relieved from their clinical duties to attend training sessions.

Summer saw a massive nurse training effort whereby each registered nurse underwent three full days of computer training. All other nursing and ancillary staff, including the physical, occupational, and respiratory therapies, completed their training in two days. Training costs had been budgeted as part of the total system cost, and labor for both the trainers and trainees was transferred to the information systems department cost center. Huntington Hospital found the rental and outfitting of two portable

classrooms, each holding 24 training stations, to be a more comfortable and cost-effective solution to the need for training facilities than retrofitting existing space. In fact, the training trailers have been so useful and attractive that staff is hard-pressed to give them up.

Planning for Acceptance

The acceptance of the online nursing documentation by physicians was of great concern to hospital staff. They determined that a combination of extensive communication and flexible training options would be the best approach. The medical executive committee's official endorsement of the online charting system and its physician training plan was published in the medical staff newsletter.

Training of physicians to view the data entered by the nursing and ancillary staff began in earnest six weeks prior to the go-live. The training season kicked off with a well publicized and surprisingly well attended "Physician Computer Fair." The hospital's boardroom was outfitted with 12 wireless workstations, each staffed by a member of the development team. Physicians dropped in throughout the day to receive one-on-one training. Additional services offered by technicians from the information systems department included on-the-spot user names and passwords for remote connectivity, and configuration of wireless devices for use of Huntington Hospital's "guest" Internet access.

A raffle for a wireless PDA was a popular feature of the computer fair. Any credentialed physician who filled out the entry form was eligible for the drawing. Over 100 physicians signed their names to entry forms and answered "true" to each of three true-or-false questions:

- Huntington Hospital's online nurse charting system will go live on September 20th.
- Physicians can receive additional training by calling the manager of physician computer services.
- Problems with the new system can be called into the Support Center.

The vice president of medical services drew the winner, and a very surprised neonatalogist won the HP IPAQ at an early-morning staff meeting.

The physician computer fair was followed by a week-long training open house the week prior to go-live, and was complemented by remote demonstrations at physician offices on request.

Clinical informatics staff members maintained a list of physician issues and worked hard to resolve them. Physicians' concerns that not enough workstations would be available during peak hours were addressed by providing each of the hospital's 35 interns and residents with lightweight Fujitsu Lifebook wireless notebooks. Nearly 200 COWS ("Computers on Wheels") were deployed for the use of nursing staff, though the clever "moo" sound was removed for patient comfort reasons.

Physician acceptance of the online nurse charting system has been exceptional. Any weaknesses in the system have been counteracted by the ability to view the chart, with the proper security, from any location inside or outside the hospital. One of the most popular features is the online medication administration record; a physician can readily view all administration times and the full prescription details without the paper chart.

Physicians Are Next

With online nursing charting becoming a reality, members of the newly formed medical staff physician information technology advisory committee felt a need to ramp up their education on the automation

process for physician documentation. In droves, the most technically adept members of the medical staff offered to be "guinea pigs" for online order entry process. A high-level physician computerization checklist (Figure 1) was developed to provide an at-a-glance view of progress toward full automation.

The hospital invested in the education of its physician technology leaders by hosted attendance at a number of events. Each served in its own way to inspire excitement about the physician automation effort and provide direction on the course ahead.

One of the most beneficial educational opportunities is the Physician Computer Connection conference hosted by the Association of Medical Directors of Information Systems (AMDIS) each July. It's short (a couple of days), it's small (around 100 attendees), and it's completely focused on the progress of physician automation. Huntington's contingent learned lessons such as the value of the chief medical information officer role, the absolute necessity of healthcare automation, and the potential that automation provides for great advances in quality healthcare.

Meditech, the vendor of the hospital's healthcare information system, holds an annual "information exchange" forum dedicated to its physician users, and Huntington Hospital will host its physician leaders at that forum. The hospital also grabbed the opportunity to host Meditech's regional physician forum on computerized order entry, an opportunity to expand its roster of physician attendees without incurring travel expenses.

A recent flurry of documentation in the clinical literature has left private practice physicians anticipating the need to transition their own patient charts to electronic ambulatory records. In an effort to determine the level of interest, and to respond to increasing requests for direction in this evolution, Huntington's physician computer services department hosted a noontime demonstration of a private practice management/

electronic health record product offering that integrates with the hospital system. Eighty private practice physicians and their office staff attended. Post-demonstration surveys indicated a high level of interest in collaborating with the hospital to support electronic records along the full continuum of care. From solo practitioners to large physician groups, the demonstration left attendees excited about the advantages of leveraging the expertise of the hospital's technology base for the advancement of out-patient records.

As the dust settles following the implementation of online nurse charting, the physicians and hospital staff have begun to look ahead to enhance Huntington's electronic medical record with additional functionality. Online images, from radiology through cardiac monitoring wave forms, are especially anticipated. The selection of the hospital's filmless radiology (PACS) system is complete, both vendor and hospital resources are scheduled, and, after taking a breather, the clinical technology implementation team is ready to take on the next phase of Huntington Hospital's healthcare information strategic plan.

Readers are asked to submit comments and suggestions for Huntington Hospital's quality healthcare automation efforts to maggie.lohnes@huntingtonhospital.com.

Figure 1: Huntington Hospital's Physician Computerization Checklist

PHYSICIAN CUSTOMER SERVICE
- ❑ Online staff applications
- ❑ Re-credentialling
- ❑ Remote privileges access
- ❑ Physician profiling

ADMINISTRATIVE/ PATIENT CARE DOCUMENTATION
- ✓ Patient Scheduling/Registration/ OE/Results
- ✓ Nursing/ancillary charting
- ✓ Medication Administration records

PRIVATE PRACTICE INTEGRATION
- ✓ Citrix remote access
- ❑ Hospital-to-practice interfaces
- ❑ Private practice management/ ambulatory health record

PATIENT COMMUNICATION
- ✓ Information (www.huntingtonhospital.com)
- ❑ Online Scheduling
- ❑ Online Lab results
- ❑ Physician/Patient messaging

PHYSICIAN DOCUMENTATION

Transcribed Reports interface
- ✓ Medical Records
- ❑ Emergency Department
- ❑ Ancillary Departments

Electronic Signatures/Online Editing
- ✓ Radiology
- ✓ Pediatric ICU progress notes
- ❑ All others

Notes (Physician Care Manager)
- ❑ Narrative
- ❑ Template-driven

Computerized Physician Order Entry
- ❑ Order set development
- ❑ Knowledge base integration/ conflict checks

IMAGES
- ❑ Radiology
- ❑ Cardiac Cath
- ❑ Wave forms: fetal monitoring, telemetry
- ❑ Patient images: wounds

✓ Indicates system has been implemented

Editor's note: Part I of this series, "CPOE at a Community Hospital: First Steps," also written by Maggie Lohnes, was published in the July/September 2004 issue of Patient Safety and Quality Healthcare *(pp. 12 to 16). The full text of the article is available at www.psqh.com.*

Maggie Lohnes is manager of physician computer services at Huntington Hospital in Pasadena, California. She may be contacted at maggie.lohnes@huntingtonhospital.com.

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CPOE at a Community Hospital:
Beyond the Hospital Walls

ABSTRACT

This is the third in a series of articles following Huntington Hospital, a 525-bed not-for-profit community hospital in Pasadena, California, which is in the process of implementing computer technology to support quality patient care. Though success in the implementation of functions such as computerized physician order entry has been well documented at government and teaching hospitals, success at the community hospital level has been less evident in the literature. Huntington Hospital openly describes its efforts to develop project plans and install such technology as well as detailing obstacles and eliciting feedback for future direction from readers.

By Maggie Lohnes, RN, CPHIMS, FHIMSS

Huntington Hospital, a 525-bed not-for-profit tertiary care community hospital, was established in Pasadena, California, in 1892; its mission is simply to excel at the delivery of healthcare to its community. The last two years have seen a whirlwind of activity on the technical front as Huntington Hospital planned, budgeted, and began to implement an aggressive, multi-phased healthcare information systems project. When the legacy clinical and administrative systems were replaced with updated technology, attention was turned to the introduction of new functionality.

Providing patient information at the point of care is a primary goal of automated health records. To meet this goal, as Huntington Hospital approached the go-live of its nursing documentation system in fall 2004, clinician access to computers at the patients' bedsides was carefully considered. The house-wide wireless network was doubled in capacity, and a million-dollar budget was established for the purchase of portable data entry and viewing workstations. The entire nursing staff was invited to attend a "portable device" fair, where vendors provided hands-on demonstrations of their products. Clinicians voted their preference, and based on those results, 200 portable carts were purchased and deployed to the patient care units. These "computers on wheels," fondly referred to as COWs, are the primary computer device used by patient care staff.

Surprising Result

As the COWs went into full use, the unexpected happened: Huntington Hospital suddenly experienced a chair shortage. As theory became practice, nurses found that rather than inputting and view patient data at the bedside, they preferred performing their computer work outside the patient's room. The COWs were brought outside the room, lowered to desk height, and the closest chair was pulled into use. The unfortunate consequence was the lack of an available chair at the nurses' station for desktop PC use.

With a new patient tower in the design phase, Huntington Hospital continues to monitor computer device usage to determine if this work pattern is simply a result of getting used to a new way of working, or reflects a permanent preference for data entry devices.

As Huntington Hospital stepped back to reconsider its computer device deployment strategy, the goal of providing patient information at the point of care was examined. A series of subsequent requests reframed the goal to provide patient information at the point of care and at the point of clinical decision-making — not only within the patient rooms, but often outside the hospital walls.

Remote Access, Interfaces, Ambulatory Health Records, and RHIOs

Huntington Hospital's physicians and their private practice staff have incorporated remote access to inpatient information from their homes or offices into their daily routine. For two years, patient demographics, lab, and radiology results have been available via the hospital's Citrix physician Internet portal. Remote usage increased exponentially following the implementation of the nursing documentation system, as physicians found they could obtain vital signs, point-of-care testing results, nursing and ancillary staff notes online. Huntington Hospital doubled its bandwidth to accommodate the additional volume, and provided updated training and access for private practice office staff.

Several of Huntington Hospital's large physician groups, in the process of installing their own ambulatory health records, have requested interfaces of demographic, billing, and clinical data on their hospital patients. Such was the demand that a specialty interface engine, designed to filter data by physician, was purchased and installed. The first transmission of ADT, results, and reports data to a private practice ambulatory health record was accomplished by end of 2004. Six others are queued up to follow.

Though the large physician groups, by virtue of volume, could afford to purchase their own ambulatory health records, solo practitioners and small physician groups are stepping forward to ask for assistance in obtaining an affordable electronic health record for their own practices. Huntington Hospital is currently considering a number of support options, from consulting services for affordable system selection, to the business case for hosting an ambulatory health record to be leased back to physician practices. Long-awaited adjustments to the anti-kickback laws will certainly support such efforts.

To expand the circle even further, Huntington Hospital has elected to participate in a developing regional health information organization (RHIO). One of Huntington Hospital's physicians serves on the board of the Los Angeles County Medical Association and informed the hospital of an effort under way to share patient data across the entire continuum of care, from physician offices, commercial labs, retail pharmacies, to outpatient clinics and inpatient hospitals. Huntington Hospital accepted the invitation to be part of the Health-e-LA coalition and attended its first meetings in December.

Health-e-LA is a growing stakeholder coalition that was started by L.A. Care Health Plan, the Los Angeles County Department of Health Services, and the Los Angeles County Medical Association. The mission of Health-e-LA is to coordinate and expand support for e-health activities throughout the greater Los Angeles region. Huntington Hospital jumped at the chance to support this effort as both an interested hospital and one whose employees maintain connections to professional associations eager to provide support for such development.

The lesson learned is that the point of clinical decision-making is not necessarily the point of care, and a strategy shift is often required to meet this goal. Bricks-and-mortar, or workstations-and-cabling, cannot be a limiting factor.

Readers are asked to submit comments and suggestions for Huntington Hospital's quality healthcare automation efforts to maggie.lohnes@huntingtonhospital.com.

> ***Editor's note:*** Parts I and II of this series, "CPOE at a Community Hospital: First Steps," and "CPOE at a Community Hospital: Online Charting Goes Live," both written by Maggie Lohnes, were published in the July/September and October/December 2004 issues of *Patient Safety and Quality Healthcare.* The full text of both articles is available at www.psqh.com.

Maggie Lohnes is manager of physician computer services at Huntington Hospital in Pasadena, California. She may be contacted at maggie.lohnes@huntingtonhospital.com.

Health-e-LA Coalition • September 2004

Health-e-LA is a growing coalition of healthcare plans and providers, healthcare associations, government agencies, foundations, and researchers dedicated to developing an infrastructure for multi-organizational electronic exchange of clinical healthcare information throughout the greater Los Angeles region.

The vision of the Coalition is a future in which the electronic exchange of patient-controlled health records for residents of the Los Angeles region is seamless, easy, and secure, no matter where the person accesses healthcare.

Background

In January 2004, healthcare leaders began discussions regarding an infrastructure for the electronic exchange of clinical healthcare information among major organizations in the Los Angeles area. The co-conveners of these meetings were L.A. Care Health Plan, the Los Angeles County Department of Health Services, and the Los Angeles County Medical Association. These early discussions led to the formation of a group effort under the name "Los Angeles E-Health Coalition."

It soon became clear that: (1) considerable focus and resources would be needed to pursue effective regional planning efforts for multi-organizational electronic exchange of healthcare information; and (2) such efforts were already under way in several other metropolitan areas that the Coalition could monitor, evaluate, and potentially leverage.

Since early 2004, the Coalition has expanded to include several additional major organizations interested in planning activities for a regional e-health system. The Coalition is developing an inventory of existing regional e-health resources, and is studying models that are

under development in other regions.

Now called Health-e-LA, the Coalition meets on a regular basis in Los Angeles.

Los Angeles: Call to Action

The exchange of healthcare records electronically via the Internet, among interoperable computer systems, is viewed by many experts as one of the most promising paths to improving the quality and safety of healthcare services, as well as a means toward moderating the increase of healthcare costs. Earlier this year, President Bush announced a federal initiative to support interoperable electronic systems for e-health within the next 10 years and also established a new position of National Health Information Technology Coordinator within the Department of Health and Human Services. The Coalition started its work before the President's recent actions, and is positioned to serve as a planning and coordinating body for e-health in the Los Angeles area.

Since Los Angeles is the epicenter of the nation's uninsured crisis, with over 2 million people lacking health coverage, Health-e-LA will pay particular attention to the needs of public and private safety net providers and others who serve low-income, vulnerable populations.

Goals of Health-e-LA

The short- and long-term goals of Health-e-LA are:

- To research structural and technical topics relating to multi-organizational electronic exchange of healthcare information, and to monitor and evaluate similar activities taking place in other regions of the country;

- To continue to expand support for coordinated e-health activities throughout the greater Los Angeles region, especially in support of public and private safety net providers;

- To develop the principles and governance for the design and construction of a regional electronic "superhighway" for healthcare information (including collaborative pilot projects toward building the "system"); and

- Within a few years, to implement the "superhighway," thereby enabling the electronic exchange of patient-controlled, longitudinal health records for residents of the greater Los Angeles area.

Health-e-LA Participants

A number of organizations are participating in, or have offered early support to, the Coalition. Among them are (listed alphabetically):

- Community Clinic Association of Los Angeles County
- First 5 LA
- Hospital Association of Southern California
- Kaiser Permanente
- L.A. Care Health Plan
- LA Health Action
- Long Beach Department of Health and Human Services
- Los Angeles Area Chamber of Commerce
- Los Angeles County Department of Health Services
- Los Angeles County Medical Association
- Rand Corporation
- The California Endowment
- The Institute of Community Pharmacy
- University of California, Office of the President

Further Information

For further information, please contact:
Karen Elliott
L.A. Care Health Plan
(213) 694-1250 (ext. 4308)
kelliott@lacare.org

www.psqh.com

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