CPOE: The Promise and the Pitfalls

As healthcare organizations venture into the brave new world of computerized physician order entry, the landscape is replete with rewards—and land mines. Yet for the estimated 5 percent of U.S. hospitals and health systems that have sold the concept—and absorb the price tag—the initial perils are being offset by the considerable payoffs. Here are the stories of three organizations that took the CPOE plunge. **BY BONNIE DARVES**

Trinity Health

**Like a pupil who knows the answer to the teacher’s question and wants to be picked, Mary Trimmer raised her hand and waved it vigorously when in 1999 Trinity Health went looking for a hospital willing to “go first” with CPOE implementation. Trimmer, then president and CEO of Mercy Hospital in Port Huron, Mich., made her bold move for personal and professional reasons. Twenty-five years earlier, she was part of a team that implemented a very early clinical information system at Methodist Hospital in Indianapolis, and she remembered fondly the sense of accomplishment she felt on its completion. Trimmer is now senior vice president of Project Genesis operations leader at Trinity Health.**

Her professional reason was largely practical. “I saw volunteering as an opportunity for us to take that quantum leap into the IT age—and to do it with incredible resources behind us,” Trimmer says. “A 119-bed hospital just couldn’t do this...without being part of a system.”

At Trinity, CPOE is one element of a $180 million technology initiative, Project Genesis, which will create a common platform for not only clinical information systems but also revenue-cycle and supply-chain management. The CPOE portion is being rolled out in tandem with a new pharmacy system, online nursing documentation capabilities and an electronic medical record. “All those components work together, so we chose to implement them simultaneously,” says Paul Browne, Trinity’s vice president of project management. The health system allotted a full year for the design of its baseline CPOE system, and spent much of that time tracking the way information would flow, post-implementation. Trinity also invested heavily in getting out a coordinated message about the implementation. Early-stage communication “tool kits” were aimed at increasing general awareness; later, Trinity began staging Project Genesis presentations in hospital cafeterias. “We even have small things—Project Genesis candy bars and lapel pins,” Browne says.

At Mercy Hospital, Port Huron, communication about CPOE began early and continues daily, even now. But that strategic effort did not eradicate the physician-resistance factor that has proved detrimental for many organizations—most notoriously for Cedars-Sinai Medical Center in Los Angeles, which scrapped its nearly $34 million system in early 2003 because of physician outcry over its user-unfriendly design.

“It has gone well, mostly, but that’s not to say some physicians wish it [CPOE] never happened,” Trimmer says. Port Huron experienced a dip in admissions soon after implementation, but that leveled off, Trimmer notes, after executives made a point of addressing individual physicians’ concerns one by one.
Some physicians were reluctant to embrace the learning curve and practice modification the switch to CPOE entailed. “We share a medical staff with another hospital in town, and in this environment, it’s hard to get physicians and the hospital aligned on strategy.” Trinity President and CEO Judy Pelham concurs. “The cultural and process changes—that’s the fundamental difficulty, and we’re still having adoption-curve issues.”

Key Implementation Challenges
• Getting staff and physicians to visualize CPOE’s future capabilities. Project Genesis team members had a clear sense of the benefits CPOE would afford, but it’s not easy to impart that, especially to staff who aren’t computer proficient, Browne notes. “When you’re moving people from a paper-based to an automation-based environment, it’s hard to get them to realize the potential benefits of remote access to patient data if they’ve never used an integrated system before,” he says. “But once some doctors have real-life experience and realize they can get up on a Saturday morning and sit at their home computer and look at patient results online, it clicks.”
• Designing a system when there is no industry gold standard. The CPOE must-haves and must-dos are still being determined in the marketplace, which poses challenges for early adopters. In Trinity’s system, for example, a great deal of information—from recent patient vital signs and order-history information to lab results and radiology results—is available to physicians. “But they had to click around a lot to get to it,” Browne says, which made creating discharge summaries more difficult than before CPOE. The solution? Key pieces of information are now “collected” by the system and displayed on a single screen.
• Dealing with the multiple unknowns and being unable to fully try out the system before going live. Because few organizations have taken the CPOE leap—and reported experiences are scant—fear about what can go wrong is a real issue. “So few people have done this [CPOE] that we don’t know what we don’t know,” Browne says. “It’s what we at Trinity call the ‘aha’ phenomenon—and everyone’s light bulb goes off at a different time.” For Trimmer, the biggest challenge was not having access to the live system until very close to the start date. “We knew there would be discrepancies between what people trained on and the one they used on day one of go-live.”

Major Gains
• Six months post-implementation nearly 40 percent of all physician orders are made through CPOE. “We believe that’s phenomenal because all of the benchmark studies tell us that most organizations take years to get to that point,” Trimmer says.
• Nursing end-of-shift documentation has also been streamlined substantially. “Some nurses are telling us they’re finishing their documentation on time—for the first time in years. It’s putting balance back in their lives,” Pelham says.
• Patients are being discharged sooner and physicians are doing their rounds faster and more efficiently than before, after the learning curve is tackled, and if they use remote access. Though there’s no hard data on those benefits yet, anecdotal reports of those gains “have been consistent,” Trimmer says.

Planning Tips
• Manage staff and physician expectations proactively. “You have to be honest about CPOE system capabilities—what it can and can’t do,” Trimmer says. “You have to explain why it’s not like the Internet or the sophisticated software people use on their home computers.”
• Allow adequate time and resources for training and problem resolution. Trinity offered multiple demo opportunities in cafeteria areas prior to implementation and, later, offered training opportunities in specially equipped trailers on the hospital campus. It also developed job aids, a CPOE-dedicated Web site and a 24/7 help desk. To smooth implementation at Mercy Port Huron, CPOE coaches—Port Huron employees who had been trained extensively in advance—were stationed throughout the hospital and nursing staffing was increased by 30 percent during the early weeks.