

New technologies have revolutionized medicine in recent decades, especially in fields such as diagnostics and drug therapies where advances in imaging (MRI) and biotechnology have brought dramatic improvements in the treatment of serious diseases. Yet in many ways, day-to-day clinical care and health administration have remained largely unaffected by automation and information technologies. Within the healthcare industry, enterprise software solutions such as physician order entry (POE) and clinical information systems (CIS) are seen as the answer to this problem. And indeed, studies and actual implementations prove that these systems are particularly effective at reducing adverse drug events and errors, improving clinical care, and driving down costs—in some cases by as much as a factor of four.



The Future of Healthcare IT

Despite this proven track record, however, a recent survey from the Leapfrog Group showed that only five percent of hospitals in the U.S. have fully implemented POE or CIS to date, even though these software solutions have been available for years. The primary reason for this slow adoption rate? Cost and lack of know-how. “Many hospitals, especially small and mid-sized regional facilities, can’t afford high-end IT and the staff to maintain it, let alone state-of-the-art systems such as POE,” said Jack Wolf, CEO of Emerging Health Information Technologies (EHIT).

A wholly owned subsidiary of Montefiore Medical Center in New York, EHIT designed, built and maintains Montefiore’s POE and CIS systems, and is pioneering a business model that will enable smaller facilities to gain access to these sophisticated technologies by sharing the cost of infrastructure and maintenance. EHIT launched its consortium-based services and technologies in 2001 with a deployment at Bronx-Lebanon Hospital Center in New York, including a registration system based on IDX Systems Corporation clinical software solutions, IDX Carecast™ and IDX LastWord® running on an HP

NonStop platform, as well as a Laboratory system from Triple “G” and a complete fiber optic infrastructure.

Giving New Meaning to “Mission Critical”

The crucial factor that separates POE and CIS from many other information technologies is the need for high availability. “When your doctors and patients are relying on a system to deliver care, such as with POE, that system needs to be industrial strength. In matters of life and death, downtime is not an option,” said Wolf. EHIT can deliver extremely reliable POE and CIS services because it uses GoldenGate Transactional Data Management to provide 100% continuous availability on its critical infrastructure. GoldenGate is key to EHIT in two respects. First, because it enables EHIT to mirror all transactions on the POE/CIS system, the company has instant failover capability in the event of an unscheduled downtime. Second, with GoldenGate capturing, enhancing and applying data in real-time from the HP NonStop platform to a Sybase data warehouse, EHIT can deliver a wide range of clinical decision support services. “With GoldenGate, our hospital customers don’t have to worry about downtime or systems outages,” remarked Wolf.

Dr. Eran Bellin, EHIT’s Director of Medical Informatics, explains the clinical value of the technology: “The reason GoldenGate is so important is that it allows us

to move data between complementary environments, each optimized for its own task. IDX Carecast is a wonderful tool for supporting clinical care rapidly, accessing all the important data a good clinician would need to make responsible clinical decisions. Clinical Looking Glass, developed by EHIT, permits longitudinal evaluation of the quality of care and targeted care improvement efforts. GoldenGate allows us to synchronize the data between both systems allowing us to benefit from the best of both worlds. We manage care and analysis, GoldenGate manages the transaction."

At Montefiore, users throughout the medical center can now generate detailed ad-hoc reports tracking patient health care quality metrics, length of stay, and other care management issues. EHIT expects that in the future these capabilities will become available to its other hospital customers as well.

Physician Order Entry In Action

For Montefiore, which has implemented 100% POE within its inpatient operations, the benefits of automated clinical ordering can be seen in numerous areas. In the old days, when a doctor had to place an order—prescribing a type and dosage of medication,

for instance—that doctor would dictate to a nurse or hand off a written note. The nurse would then relay that order to the pharmacy or route it through an internal channel, often involving an extended loop of people that had to have a hand in carrying out the original order. With POE, the doctor can simply enter the prescription into a wireless device that relays the information to the POE systems within EHIT's data center.

Not only is the prescription order directly relayed to the pharmacy, and then made available for execution by the nursing staff, but it is also automatically screened for adverse drug reactions or other problems. Since the patient's medical history is contained within the system databases, potential mistakes such as duplicate tests or redundant treatments are prevented. Moreover, with GoldenGate synchronizing this

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Information Technologies

data to reporting applications, hospital management gets far more detailed insight into issues such as which patients are highest priority, average cost of stay and so on. For Wolf, the benefits are obvious. “There's a lot of talk that the healthcare industry isn't ready for POE, that the ROI isn't there and doctors aren't ready for it. I'm here to say that it certainly improves the quality of patient care, and we can guarantee the high levels of availability that are essential in clinical situations. The time for POE is now.”

About GoldenGate

GoldenGate is a leader in Transactional Data Management. The GoldenGate platform enables companies to capture, route, enhance and apply data in real time inside and outside the enterprise to support key business initiatives such as business availability, data integration, business visibility, and compliance. GoldenGate, a private company, has thousands of installations in 35 countries. Customers include Bank of America, Sabre Holdings, Bank One, Dell, VISA, Merrill Lynch and the Federal Aviation Administration. For more information, please visit the company's web site at www.goldengate.com or call 1-877-447-7153.

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