

Case Study

healthcare

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Houston Methodist Hospital

Ricoh EDE Makes Information Work for Houston Medical Hospital by Bridging the Gap Between Disparate Systems

With different systems and architectures in place, Ricoh EDE—an HL7 interface and data exchange solution—was the answer to Houston Methodist Hospital's interoperability challenges in the pharmacy and beyond.



ABOUT THE CUSTOMER

The days are often hectic when you're processing orders at a busy hospital network in a major metro area. While most orders are submitted electronically or through a computerized physician order entry (CPOE) process, some medication information still comes through on paper. Examples might include orders for chemotherapy treatments or REMS forms.

Electronic orders come in from nursing stations throughout the hospital and satellite locations at a brisk pace. Entering patient and clinical information for paper-based orders in addition to this can stall the fulfillment of time-sensitive orders for patients waiting for critical treatment.

This was the situation for the Department of Pharmacy at Houston Methodist Hospital in Houston, Texas. Comprised of a leading academic medical center and six community hospitals serving the greater Houston area, Houston Methodist Hospital is consistently listed among U.S. News & World Report's best hospitals. It wasn't until the pharmacy's version of its medication order management system was about to expire—and needed to be upgraded at a hefty cost—that a better way emerged.

CHALLENGE

- Manage paper-based orders
- Establish a cost-effective solution
- Find new system that mirrored existing process
- Make disparate systems communicate with each other

SOLUTION

- DocuScripts automated medication order management solution to supplement CPOE and EHR systems
- Dashboard to check order status, add information—in real time
- Platform for central pharmacy to manage and distribute workload
- Ricoh Electronic Data Exchange (EDE) and HL7 interface
- Ricoh Professional Services to integrate and maintain the solution with multiple Houston Methodist Hospital EHR systems

RESULTS

- Successful implementation of Ricoh EDE
- Disparate systems can now communicate with each other
- Improved efficiency in pharmacy, significant cost savings
- Potential to leverage Ricoh EDE with whiteboards, POS scanning, integrated clinical cameras and more

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Ricoh had been providing MFPs to the hospital for more than a decade. During a routine call to the pharmacy at the main hospital to inquire about printing and scanning needs, the Ricoh representative dug a little deeper. Ricoh learned that the hospital's central pharmacy was an ideal candidate for a new solution that could improve operational processes in the pharmacy and beyond—while creating more transparency for nursing staff and improving the patient experience.

The partnership between Houston Methodist Hospital and Ricoh was about to deepen.

CHALLENGE

Like many hospitals around the country, Houston Methodist Hospital faced challenges when it came to receiving, processing and filling paper-based in-patient and outpatient medication orders outside the CPOE, especially those receiving chemotherapy treatment to manage pain and improve outcomes. Orders were either scanned or faxed from an MFP in the nursing areas to the pharmacy or hand-delivered on paper. Then, it was a waiting game—for both nurses and patients.

Houston Methodist Hospital had existing electronic health records (EHR) software and was in the process of migrating to Epic EHR software to streamline the flow of information throughout the hospital network. Yet, it wasn't a solution that would remedy workflow issues in the pharmacy related to processing paper-based chemotherapy or other medication orders. In addition, the pharmacy had an immediate need to streamline its paper-based ordering process.

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The pharmacy wanted to eliminate cumbersome entry of patient and clinical information from paper forms into the medication order management system. They wanted a tool that eliminated the need for staff to get up from their desk to retrieve faxed and in-person orders. They wanted to eliminate filing of paper orders that took pharmacy staff away from more vital tasks and required extra space to maintain filing cabinets.

Most of all, they wanted a solution that mirrored their existing electronic medication order management system—and didn't require a completely new process, costly solution or extensive training for busy nursing and pharmacy staff.

"We're working with large nursing populations and they just want an easy way to get information to the pharmacy," said Julie Atay, System Manager of Pharmacy IT at Houston Methodist Hospital. "We needed a solution that was intuitive for nurses and pharmacy staff."

Yet Ricoh had an even broader vision. Fresh off the launch of a new electronic data exchange solution that could be integrated with the hospital's EHR systems, the Ricoh team knew it could make information—prescription and patient data as well as clinical photography and images—flow seamlessly throughout the campuses. The pharmacy could be the first implementation at Houston Methodist Hospital, but it didn't have to be the last.

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SOLUTION

Ricoh recommended an automated DocuScripts® medication order management solution to supplement the existing CPOE and EHR systems. With this solution, hardcopy paper prescription orders can be scanned or faxed by nurses at the Ricoh MFP and sent directly to the pharmacy in electronic format. DocuScripts picks up key information about the order such as patient name and room number, assigns the prescription to a pharmacist and then delivers the order to the queue to be filled. Orders can be prioritized if necessary.

“Our main goal was to eliminate the paper order entry system and create a workflow that could very closely mirror the existing workflow with an e-order system,” said Atay.

While this process was seamless and similar to the prior order management system, DocuScripts also made life easier and enhanced productivity for nursing and pharmacy staff alike. DocuScripts provided a convenient dashboard where nurses could see all of the information related to a prescription in one place, in real time.



The second part of the solution took Houston Methodist Hospital into groundbreaking territory. Ricoh's new subscription-based Electronic Data Exchange solution, Ricoh EDE, was the perfect fit for the hospital. It took Ricoh's relationship with Houston Methodist Hospital beyond typical hardware and software—into mission critical clinical solutions and professional services.

“This solution allows documentation to be attached to a patient, facilitates requirements for medical records better and allows retrieval of medical records to be faster and more efficient.”

With Ricoh EDE, DocuScripts and other systems at Houston Methodist Hospital could communicate with each other, removing tedious manual steps such as re-entering patient and clinical information as well as transferring and identifying medical orders. The transfer of information is managed through Ricoh's workflow server and delivered to the EHR on the direction of a physician, administrator or pharmacist validating the data. With disparate systems and architectures in place, Ricoh EDE and its HL7 interface was the answer to Houston Methodist Hospital's interoperability challenges—in the pharmacy and beyond.

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RESULTS

With Ricoh's technology infrastructure now in place, Houston Methodist Hospital's pharmacy has a streamlined solution that allows prescriptions to be entered automatically and processed much more efficiently. Since the Houston Methodist health system is taking a phased approach to migrating to its new Epic EHR, orders are being received across the enterprise through two different EHRs. Even when all the locations migrate to the Epic EHR, there will still be a need to maintain the Ricoh solutions for the subset of paper based orders that will continue to exist.

"There will still be providers, such as telemedicine, that won't be using Epic and will still need to input their paper orders," said Atay. "There will probably always be some need to have a separate way to capture paper orders electronically and we want retrieval and processing of those orders to be easy."

Seamless Process, Affordable Solution

From the nurse and pharmacy perspective, moving to the new pharmacy e-order solution was equally simple. Rather than formal training sessions, Houston Methodist Hospital and Ricoh provided laminated instruction sheets at the Ricoh MFP as well as informative emails.

Training at the pharmacy level was equally simple. Pharmacists received training and supplemental materials to read. All totaled, pharmacists were up to speed in about one hour. Yet, for such a simple solution, the new pharmacy e-ordering technology has made a significant impact on patient treatment, medical records compliance and communication of patient-specific information at Houston Methodist Hospital.

Beyond delivering dashboard capabilities and reducing paper from the pharmacy's workflow, the technology provided a nearly \$500,000 cost advantage compared to upgrading its previous medication ordering management system.

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Ricoh EDE Opens New Doors

With Ricoh EDE complete and the migration to Epic EHR ongoing, Houston Methodist Hospital's future is full of potential and promise. In fact, Houston Methodist Hospital is the first application of Ricoh EDE and serves as a proof of concept for other rollouts to healthcare providers.

The transition to Ricoh EDE was seamless to end users and the solution is now working behind the scenes, enabling Houston Methodist Hospital's staff to make information work for them like never before. Pharmacists are able to retrieve patient information quickly and easily, and eliminate re-entry of patient admission information into their system. They also have access to a multitude of patient information—date of birth, name, encounter data—right at their fingertips.

There's also the potential to use Ricoh EDE with interactive whiteboards, point-of-service scanning and integrated clinical cameras to automatically match patient photos and diagnostic images with the right patients to improve outcomes, enhance the quality of care and save clinicians time.