

CASE STUDY

PHOEBE PUTNEY MEMORIAL HOSPITAL

ALBANY, GEORGIA

MEDDIRECT™ • ROBOT-Rx™ • MEDCAROUSEL® • HORIZON ADMIN-Rx™

REDUCING MEDICATION ORDER-TO-ADMINISTRATION TIMES

Profile

Phoebe Putney Memorial Hospital is the leading healthcare provider in Southwest Georgia. A 450-bed regional medical center, the hospital offers comprehensive care to more than 635,000 residents in a 38-county area of Southwest Georgia, including behavioral health, cancer, cardiac care, emergency medicine, labor and delivery, and women's health services.

Phoebe Putney serves one of the 10 poorest congressional districts in the country, with approximately one-third of the population receiving Medicaid. The hospital typically provides at least \$50 million in charity care annually, and has multiple community service programs aimed at improving access and getting cutting-edge care to the region's patients. In recognition of its community health contributions, Phoebe Putney received the 2003 Foster G. McGaw Prize, regarded as one of the most prestigious national honors in the healthcare field.

Challenges

As were many U.S. hospitals in the late 1990s, Phoebe Putney was experiencing staffing shortages and high turnover in both pharmacy and nursing. At the same time, the hospital was facing increasing demands for healthcare delivery.

To transfer medication orders from nursing to pharmacy, Phoebe Putney had used paper fax machines. As medication volume increased, the paper began piling up, creating bottlenecks, causing repeated phone calls, and overwhelming nursing and pharmacy.

"It caused a lot of redundancies and inefficiencies for both nursing and pharmacy," explained Randy Carver, R.Ph., pharmacy automation coordinator. "When physicians' orders are late, lost, or illegible, not only does nursing-pharmacy productivity fall sharply, but the potential for medication errors rises dramatically."

"Nationwide, most errors occur at administration," he continued. "If we can catch errors earlier in the process, we can stop them before they occur."

Phoebe Putney established a goal of improving medication safety while reducing the overall order-to-administration time. Said Carver, "We wanted to shrink time for STAT orders to 30 minutes and for regular orders to two hours."

Answers

To reengineer its medication order workflow process, Phoebe Putney installed McKesson's MedDirect™ Web-based imaging technology. With MedDirect, nurses scan and transmit medication orders directly to the pharmacy. Phoebe Putney has 40 fax stations in Nursing connected to the 14 viewing stations in the central and satellite pharmacies.

With Phoebe Putney's improved pharmacy medication selection workflow, all first dose orders are faxed to the central pharmacy. Pharmacists can simultaneously view magnified images of the order and compare it to the pharmacy information system. This allows pharmacists to zoom in on every part of the order for easy clarification—speeding order processing and reducing medication errors before they happen. "I remember one order where it was totally illegible until we scanned it with magnification and could see that it was a strikeover," said Carver.

For Carver, an important benefit of MedDirect is its ability to allow pharmacists to process orders on a first-come, first-served basis, regardless of origin. "Controlling workflow by minimizing phone calls and lost orders was a big priority," said Carver. "We set up system folders to help filter orders. Everyone in pharmacy sees the same thing so we can tell if we're falling behind and whether our satellite stations need to pitch in. And, we know that we are having fewer errors because the pharmacist has the patient profile right on the screen and can catch himself when it's the wrong profile in the computer."

The MedDirect integrated work queue software has been crucial in simplifying workflow and order priorities. Phoebe Putney's system automatically directs the order to the correct dispensing system:

AT A GLANCE

ORGANIZATION

Phoebe Putney Memorial Hospital
Albany, GA
450 beds

SOLUTION SPOTLIGHT

- MedDirect™
- ROBOT-Rx™
- MedCarousel®
- Horizon Admin-Rx™

CRITICAL ISSUES

- A 48% increase in daily medication orders
- Increasing risk of medication errors caused by late, lost, or illegible orders
- Long order-to-administration times

RESULTS

- 80% of STAT medications are available to patients in nine minutes
- Reduced fax-to-order-entry time to 34 minutes
- Withstood 48% increase in daily medication order volume while increasing productivity
- Improved pharmacy-nursing communication

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"This is the best investment we've made. I tell anyone if they're thinking of implementing cabinets or bedside scanning to first install your medication order imaging system. The transition will go much smoother."

Randy Carver, R.Ph.,
Pharmacy Automation Coordinator,
Phoebe Putney Memorial Hospital

- ROBOT-Rx™ is used primarily for 24-hour cart fill and for first doses not stocked in the unit-based cabinets.
- MedCarousel® is used for daily cabinet restocks—up to 5,000 doses per day—as well as some non-ROBOT-Rx first dose items, and for overall inventory control.

Developed by McKesson, ROBOT-Rx automates the storage, dispensing, returning, restocking, and crediting of bar-coded medications. MedCarousel is a medication storage and retrieval system that automates medication dispensing through a combination of rotating shelves, pick-to-light technologies, and forced-compliant bar-code scanning.

Floor stock orders flow from the medication profiles of the unit-based cabinets. Non-floor stock items are routed to ROBOT-Rx or to MedCarousel. For a handful of items, the system generates a non-MedCarousel, manual pick, bar-coded label.

All pharmacy and nursing automation solutions are bar-code-driven and are aligned on McKesson's common pharmacy information system, Connect-Rx®.

Results

Since implementing MedDirect, Phoebe Putney is averaging 1,100 faxed pages each weekday, up from 750 before implementation. Despite the 48 percent increase in volume, Carver said workflow has improved significantly—and is exceeding the established order-to-medication-availability time goals.

Said Carver, "We just completed a study that shows our average turnaround time for STAT orders, from fax to order entry, is nine minutes. For regular orders, the average time is just 34 minutes. And because 80 percent of medications are in unit-based cabinets, that means 80 percent of STAT orders are available to patients in just nine minutes. If the medication is not in a cabinet and has to come from pharmacy, our STAT order delivery time is averaging 21 minutes. For regular orders, the time is just 54 minutes."

Overall, Carver credits MedDirect for improved turnaround time, stronger nursing-pharmacy communication, and enhanced medication safety.

Recently, Phoebe Putney introduced McKesson's Horizon Admin-Rx™, a point-of-care solution that safely automates and documents the medication administration process with bar-code technology.

Since Horizon Admin-Rx implementation, an average of 1,900 orders are keyed in per day. "With our automated technology, we have electronic time stamps at each step to identify when an order was faxed, when it was received, when it was picked, and when it was administered," explained Carver. He believes that having this detail is helping the hospital identify where it can further improve processes.

For instance, prior to Horizon Admin-Rx, nurses manually changed orders on paper medication administration records (MARs). Now with the electronic MARs, a pharmacist can check and correct errors in real-time, before it affects the patient. Safety is improved, as is recordkeeping. Explained Carver, "In the past, they may have made the change to the paper MAR, but it didn't always fix the problem electronically. Now there is a paper trail so any changes that are made can be reconciled electronically with MedDirect."

Conclusion

Having made great strides across the transcribing-dispensing-administering medication continuum, Carver has some advice for those who are just beginning in this area. "If you are considering profile cabinets or bedside scanning, you need to have an imaging system in place first or you're shooting yourself in the foot."

"Start with MedDirect and the transition will go much smoother. Your turnaround time will improve because it's priority-based, your productivity will increase, and you'll keep the nurses happy and the patients safe."

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