

Cardinal Health helps McLeod Regional Medical Center “realize the vision of perfect medication delivery”

Pharmacy Management

The Challenge

In 2001, 460-bed McLeod Regional Medical Center in Florence, SC, hired Cardinal Health to completely revamp its pharmacy operations: the medication delivery process was a manual system, poorly designed and extremely labor intensive, with virtually no clinical programs or interventions. The pharmacy needed a vision - and results.

Background

Founded in 1906, McLeod Health is a not-for-profit organization that is totally self-supporting. Its service area includes 12 counties with a population close to one million. Today McLeod Regional Medical Center in Florence is recognized as one of the nation's finest hospitals. Acute care facilities include McLeod Medical Center - Dillon and McLeod Medical Center - Darlington.

Solutions

From manual to Pyxis: Natasha Nicol, Cardinal Health's Director of Pharmacy at McLeod, immediately set to work with an interdisciplinary team to redesign the Medication Safety Committee and forge a vision that would be instrumental in the work to follow.

"The question we ask of every new system at McLeod is: *Does it make it easy for caregivers to do the right thing and impossible to do the wrong thing,*" says Nicol. "If you come up with a vision you can apply, you can do what you set out to."

Within two weeks of Nicol's reporting for duty, McLeod ordered Pyxis for every unit where medications are administered. Soon, instead of drugs being available on a cart, nurses could only access drugs for a specific patient and only for orders the pharmacy had verified.

Bar-coding everything: In 2004 with automation and decentralization working, Nicol helped McLeod convert to Medication Administration Checker (MAC), a bar-coding system that is now fully implemented: Today there are barcodes on every nurse's badge, every patient's wristband, and every drug. Nurses use a rolling computer cart to scan all barcodes before administering a drug.

"That will ensure the five rights; right drug, right time, right dose, right route, for the right patient" says Destiny Patillo, Director, Medical Surgical Unit at McLeod. The system automatically updates the Medication Administration Record (MAR) and captures charges. Records are on-line and instantly available. To tap into this, McLeod is currently rolling out Computerized Physician Order Management (CPOM) on a pilot basis. CPOM is similar to CPOE, going beyond order entry to focus on the management aspects of pharmaceuticals.

(continued on reverse)

Results at a glance:

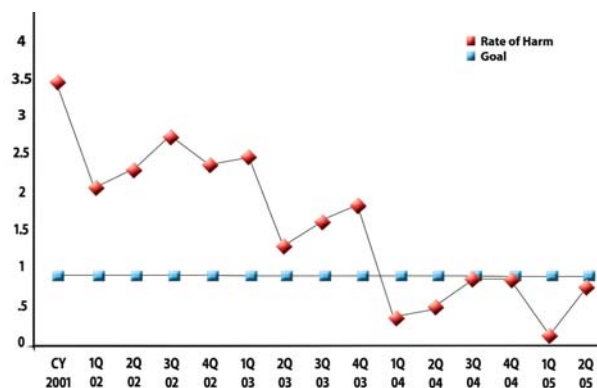
Cardinal Health has helped McLeod Regional Medical Center achieve the following:

- Medication steps cut from 17 to 5.
- Drug turnaround time reduced from 1 hr 45 min to 7 minutes.
- Drug interventions increased from near zero in 2001 to a projected 35,000 in 2005.
- About 20-30 medication errors prevented per day (equivalent to 2-3/1000 doses).
- Nursing satisfaction improved, resulting in decreased vacancy rate from 8-10% to 1.6%.



Rate of Harm per 1000 Doses

National Average 2-8 per 1000 doses
Rolling 8 month Rate of Harm



Since implementation of the Cardinal Health pharmacy system at McLeod Health, the rate of harm has fallen from 3.5 (industry average between 2 and 8) to 0.5.

"We measure value in terms of patient safety," says Marie Segars, Vice President of Patient Care Services at McLeod. "The greatest value that pharmacists provide here is consulting about complex drug regimens with MDs, nurses and patients. In terms of dollars, the initial outlay of capital can be recovered through improved drug inventory control, shortened patient length of stays, fewer errors, and improved charge capture when drugs are administered."

"McLeod is realizing the vision of perfect medication delivery" DOP Natasha Nicol says. "I would have wanted to implement this kind of program no matter where I went - that's our goal at Cardinal Health."

Drug reconciliation: The Cardinal Health/McLeod team tackled reconciliation with an Admission Assessment History form, which the nurse fills out on-line at the initial patient assessment. The physician reviews it (either on-line if CPOM or on paper) and the electronic form goes to the pharmacist for verification.

Universal Medication Form: For patient discharge, Nicol's team worked with the South Carolina Hospital Association to develop a Universal Medication Form, which has since become the state-wide standard, and which is currently under consideration by several other state associations.

Results

Automation: Pyxis automation cut the number of medication steps from 17 to five, cut turnaround time from 1 hour 45 minutes to 7 minutes, and freed the hospital's pharmacists to spend more time with nurses and physicians.

Bar coding: "If something isn't correct when the nurse is administering a drug, the computer's screen displays a big red X," says Nicol. "We count the X's as 'MAC saves'. If anything can be counted, we're counting it." On average, the system prevents about 20-30 medication errors per day (a rate of 2-3 per 1000 doses).

Medication profile: The computer system can generate a medication profile that shows the exact current status of a patient's medications. A fresh printout sits at the front of the chart anytime a patient is moved, dramatically improving patient care during hand-offs. The profile is also available on physician handhelds.

Drug reconciliation: Today McLeod captures on-line complete medication history information on every patient at the time of admission. The information automatically goes to the pharmacist and the patient's doctor for verification and approval. No more transcription errors.

Universal Medication Form: When patients are discharged, they receive copies of the UMF and instructions to give a copy to everyone involved in their care. Now the form is coming full circle - patients bring it with them if they are readmitted.

The Pharmacy Management business of Cardinal Health has more than 35 years of expertise in helping hospitals and health care systems improve both the financial predictability of pharmacies and the quality of patient care. Through clinical utilization, workflow processes and effectively managing pharmaceutical inventories, our experts can improve the pharmacy practice and provide the benchmarks to measure success.

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