

## At a Glance

### Organization

Decatur Memorial Hospital  
Decatur, Ill.

- 356 beds
- 12,800 inpatient admissions annually
- 225,000 outpatient visits

### Solution Spotlight

- Horizon Expert Orders™

### Critical Issues

- Patient safety
- Medication turnarounds
- Inefficient manual processes

### Results

- Reduced transcription errors by 60% and medication errors by 78%
- Decreased incomplete medication orders by 94.8%
- Reduced incomplete radiology orders by 100%

## Decatur Memorial Hospital Achieves Superior Patient Safety through CPOE

In just nine months, Decatur Memorial deployed a computerized provider order entry (CPOE) solution for use with all physician orders, achieving a 60% reduction in transcription errors and an 80% reduction in order entry/legibility errors. In addition, the hospital realized a 94% decrease in incomplete medication orders and a 100% decrease in incomplete radiology orders.

### Challenges

Decatur Memorial is a 365-bed community hospital in Decatur, Ill. Faced with emerging market forces – including the reporting of performance measures – hospital leaders saw becoming a patient safety leader as a distinct competitive advantage.

In its drive to make each patient contact as safe and effective as possible, the hospital built a comprehensive electronic infrastructure using McKesson technology, including bar-code medication administration and pharmacy automation tools. The next logical step was converting physician orders into electronic format using CPOE/clinical decision support solution.

The use of CPOE encourages physicians to manage patient care in accordance with evidence-based national guidelines and standards.

It also eliminates medication errors stemming from illegible handwritten orders.

“The literature and our data suggest that a significant percentage of medication errors are related to legibility and misreads of the initial order during transcription,” explains Michael J. Zia, M.D., chief medical officer and vice president of Quality Management, Decatur Memorial. “We had already implemented other electronic means to help ensure safe medication delivery, so CPOE was fundamental to closing the loop on medication safety and preventing errors.”

### Answers

Decatur selected McKesson’s Horizon Expert Orders™ solution and developed a physician-centric plan that enlisted the aid of nurses and other clinicians to push universal physician adoption throughout the entire hospital within 12 months. Beginning with senior leadership, the team built support for the deployment. The entire care team, including nursing and unit secretaries, used the system.

“It is essential for all disciplines to work from the same system and decision support tool in order to achieve the highest levels of safety and reduce variability in care,” says Linda Fahey, RN, chief nursing officer, Decatur Memorial.

# Case Study

**"CPOE is a cornerstone of physicians' belief to 'first do no harm' and not optional if you are committed to patient safety."**

**Michael J. Zia, M.D.**  
*Chief Medical Officer  
and Vice President of  
Quality Management  
Decatur Memorial Hospital*

From the start, caregivers quickly learned that CPOE not only eliminated handwritten prescribing errors, but also enabled faster turnarounds for the delivery of medications and ancillary services.

"Our physicians could actually see things happening immediately for their patients," says Jenny Brandenburg, Decatur's CPOE project manager and clinical analyst. "The time for the process itself decreased right away, allowing more time for direct patient care."

## Results

Use of CPOE was already nearing 40% as the deadline for ending paper order sheets on patient care units drew near. In the end, universal adoption of CPOE was achieved in just nine months — three months ahead of Decatur's 12-month goal. In addition, 100% of routine rounding orders were placed electronically by physicians, and paper order sheets were completely removed from all patient care units.

Decatur also achieved a number of measurable and sustained improvements in hospital performance. Between December 2006 and December 2007, Decatur experienced a 78% decrease in errors that had a direct effect on patients. Within 30 days following deployment, medication errors fell from a high of 16 to four before reaching a record low of zero errors

in October 2007. Illegible orders decreased by 96% between March 2007 and December 2007. Efficiency measures improved as incomplete medication orders decreased 94% and incomplete radiology orders declined by 100%.

By achieving a significant reduction in incomplete orders, physicians now receive fewer calls from pharmacists related to order clarification, and the need to interpret handwriting has been eliminated. And while the driver for CPOE implementation was always patient safety, Decatur has also achieved cost savings through the redeployment of pharmacy personnel to higher-value tasks.

Implementing such far-reaching changes can be a difficult process. But the team at Decatur reports that the hospital has not only achieved a safer, more efficient system but also one that is embraced by its primary users: physicians. A survey of medication staff found that 87.5% agreed that the safety offered by the system was well worth the learning curve, and 88% would urge other doctors to replace written orders with electronic orders.

Dr. Zia concludes: "CPOE is a cornerstone of physicians' belief to 'first do no harm' and is no longer optional if you are committed to patient safety."

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