

Case Study



Memorial Hospital opened in 1955 as a 300-bed facility pioneering a new era in medical services. Considered the most modern hospital in the Southeast, Memorial Health grew to become a two-state healthcare organization serving a 35-county area in southeast Georgia and South Carolina. The health system includes its flagship Memorial Health University Medical Center, a 530-bed tertiary medical center; CareOne, a homecare division; Memorial Health University Physicians primary and specialty care networks; a major medical education program; business and industry services; and NurseOne, a 24-hour call center.



Memorial Health System Innovative Approach to CPOE Earns Robust Results

While the nearby Georgia coastal region attracts a bustling tourist trade, Savannah-based Memorial Health University Medical Center (Memorial Health) attracts patients and clinicians with its reputation for excellence. Memorial Health further strengthened its leadership in patient safety and care by an innovative deployment of McKesson's computerized physician order entry/decision support solution. The medical center has significantly increased order accuracy, decreased medication turnarounds by two hours, and achieved a 30% reduction in pharmacy callbacks due to illegibility.

Challenges

Memorial Health executives have long realized the value of information technology in improving clinical and operational performance. For example, the hospital moved ahead of many providers with its deployment of McKesson's Horizon^{W/P} Physician Portal six years ago, which gained widespread physician adoption with its anytime, anywhere access to vital patient information. The portal was followed by other wins for physicians with document and medical imaging technology. As management began to define the next set of strategic goals to

advance clinical and financial excellence, they uncovered an area for improvement.

Hospital staff studied processes tied to physician order entry and discovered that staff did not enter admission orders in the legacy system until 3.35 hours after the physician wrote them. It took 74 minutes for daily orders to be entered. Deciphering physician handwriting was also an issue with 23% of orders deemed illegible. Additionally, physicians spent an average of 7.2 minutes searching for a patient's chart. Pharmacy often did not have patient height, weight and allergy information, and other missing data created multiple opportunities for errors.

With clinical outcomes and patient safety as top priorities, hospital executives recognized that the next stage of innovation had to include one of healthcare's most widely discussed technologies: computerized provider order entry (CPOE).

Chief Executive Officer Bob Colvin explains Memorial Health's unique approach to garner maximum success. "In terms of patient safety, CPOE is a major step we've taken in the last five years," he says. "We saw the technology's potential to greatly reduce transcription and medication

At a Glance

Organization

Memorial Health System,
Savannah, GA

- 530-bed Memorial Health University Medical Center
- Primary and specialty care physician networks
- Homecare services
- 24-hour nurse call center
- Inpatient visits: 28,000
- Outpatient visits: 217,000

Solution Spotlight

- Horizon^{WP} Physician Portal
- Horizon Meds Manager
- Horizon Expert Orders

Critical Issues

- Missing clinical data
- Medication safety
- IT use and satisfaction
- Inefficient processes

Results (based on live units)

- Improved availability of height, weight and allergy information to 100%
- Increased legibility and accuracy of medication orders
- Reduced turnaround time for medications by an average of two hours
- Reduced order call backs associated with legibility by 30%

errors, but also as a way to automate processes around best practices. Because nurses provide a great deal of education and support for physicians, it made sense for us to deploy the technology to nurses first and then physicians.”

Answers

Memorial Health’s patient safety strategy included the selection of McKesson’s Horizon Expert Orders™ computerized order entry/clinical decision support system with Horizon Meds Manager™ pharmacy information system as the hub for the medication management process. In addition to electronic transcription capabilities, the system provides the necessary checks and balances for medication orders.

Memorial then rolled out Horizon Expert Orders to 935 nurses and unit secretaries for nonmedication ordering. This nontraditional approach created a built-in support system to drive physician adoption, explains Lynne Williams, RN, manager of clinical systems. “IT system adoption is enhanced with multiple layers of support,” says Williams. “By having nurses trained and using the system, they would be the power users and give physicians any needed support.”

As plans firmed up for the physician rollout, neonatologists learned their unit was scheduled last for deployment. “We had used a proprietary electronic medical record system and understood how electronic order entry eliminates illegible handwriting,” says Linda Sacks, M.D., a neonatologist and co-director of Nurseries. “We were excited about the capabilities of Horizon Expert Orders and asked to go live first.”

With neonatologists eager to use CPOE, Memorial Health chose the 44-bed neonatal unit as the starting point for the physician rollout. Neonatology was also a wise choice because the unit has a very low patient transfer rate and the physicians generate a high volume of daily orders. While the unit uses fewer than 100 different medications, the system supports the precise weight-based dosing required for infants.

Results

As part of its incremental approach, Memorial has implemented Horizon Expert Orders in neonatology, the emergency department, pediatric hematology and oncology, pediatric intensive care, and general pediatrics and has gained strong physician adoption.

According to Dr. Sacks, use of Horizon Expert Orders has improved both the accuracy and speed of carrying out physicians' orders, which in turn improves quality. "Physicians were entering 100% of their orders within days of going live," says Dr. Sacks. "We reduced turnaround time for orders, and the number of calls required to clarify verbal or written orders is rapidly approaching zero."

Other results for Memorial Health include:

Height, Weight and Allergy

Information – On the units where physicians use Horizon Expert Orders, the pharmacy now receives height, weight and allergy information 100% of the time, eliminating the opportunity for medication errors due to incomplete patient information.

Clinician Efficiency and Satisfaction –

Physicians can monitor active orders and make necessary changes to keep orders current and accurate. Clinicians praise the system's quick, efficient order entry process and real-time organized view of orders and patient care activities.

Medication Safety and

Turnarounds – The integrated systems have helped reduce time delays previously associated with order entry. Memorial Health has increased order accuracy, decreased turnarounds for medications by an average of two hours, and reduced pharmacy callbacks due to illegibility by 30%.

Dr. Sacks notes, "Neonatal drug dosing is extremely complex. Horizon Expert Orders allows me to instantly pick the correct evidenced-based dose for any given clinical patient need."

Memorial Health has earned strong results with CPOE, improving patient safety and access to mission-critical information and best practices. "We are improving adoption by providing physicians with technology that adds value to their processes, thus enhancing care," says Patty Massey, vice president and chief information officer.

Dr. Sacks agrees: "We are extremely enthusiastic about Horizon Expert Orders. The technology is physician-friendly, intuitive and can be quickly customized to the individual hospital or unit based on how we practice medicine daily."

"We are changing the culture by providing physicians with technology that supports the way they practice, thus delivering solutions that physicians find valuable."

Patty Massey

Vice President and

Chief Information Officer

Memorial Health

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