

## Washington Regional Medical Center achieves \$4.2 million ROI in five months



Washington Regional Medical Center is a 267-bed acute care facility located in Fayetteville, Arkansas. Situated in Northwest Arkansas, the state's fastest growing area, Washington Regional built a new hospital facility in 2002 to better serve the needs of its growing patient population. An important part of this initiative was the expansion of the emergency department (ED). This was vital because hospital management projected a dramatic increase in the number of visits and the ED serves as the entry point of nearly half of the hospital's admissions.

### Increasing ED efficiency

In preparation of the move to the new facility, Washington Regional management wanted to automate the ED. An analysis of operations showed several areas where effective automation could improve performance. "Our documentation wasn't reflecting the level of care our patients were receiving in the ED and our patient wait times were too long," said Becky Magee, Washington Regional vice president and chief information officer. Because all the interventions that

### Quick Profile

#### Washington Regional Medical Center

**Institution profile:** 267-bed medical center with 55,000 annual ED visits

**Key business/clinical drivers:** Handle heavier patient volume as the institution moved to a new medical center with an expanded ED

**Picis solutions:** CareSuite® ED PulseCheck®

**Interoperability:** McKesson HBOC STAR with the following integration points: ADT, patient charges, service master file update, charge master file update and order/results to CAREManager. In 2006 Cerner was implemented and the following were added: outbound order, inbound lab and radiology results, outbound text (report) to Cerner EMR, physician billing and physio-monitoring

### Results:

- Delivered \$4.2 million net return on investment (ROI) in 5 months
- Reduced patient wait times from three hours to 30 minutes
- Increased patient satisfaction scores by 6.3%
- Minimized need for new staff as volume increased from 48,000 to 55,000 annual visits



- ▶ a physician and nurse performed on a patient were not being captured, the ED was missing an opportunity to receive full reimbursements from payers.

In addition to improving reimbursement, ED management also felt that the right system would help:

- Reduce wait times and improve patient flow
- Reduce coding errors
- Decrease supply costs
- Improve the quality of patient documentation
- Increase patient and staff satisfaction
- Provide an analysis tool for management decision making

### Selecting the right system

A decision-making team — that included the CIO, ED medical officer, ED director, and a physician informaticist — was formed to select the right system to meet Washington Regional's needs. Seven initial ED solutions were reviewed and narrowed to three finalists.

Picis CareSuite ED PulseCheck was deemed the most integrated EDIS the team reviewed, and by far the best-liked solution from a physician and nurse perspective. ED PulseCheck offered level-based visit charging, CPT-4 physician levels tied to documented care, and medical legal risk flags during documentation that were far more advanced than other solutions. It was also highly regarded because of its Web-based architecture, ease of use, interoperability with existing systems and proven track record of success in other institutions.

### Implementing rapidly

The first challenge faced was a demanding timeframe for implementation. "We did a rapid implementation because we wanted to be live with the product 60 days before moving to our brand new facility," said Heather Hutchison, EDIS system administrator. ED PulseCheck was implemented on schedule and has proved to be straightforward and easy to use. The installation included several interfaces with the McKesson HIS to enhance interoperability and reduce manual data entry.

### Exceeding expectations

"The PulseCheck install is the "single most dramatic ROI I've ever seen in 23 years of healthcare IT," said Becky Magee, CP CIO. "We exceeded all of our goals, especially the projected return on investment. While hoping to see a \$350,000 ROI in 14 months,

the ED reduced costs by \$100,000, recouped \$208,000 in facility charges and captured more than \$3.9 million in additional charges. Net improvement was \$4.2 million in five months." Magee adds that ED PulseCheck continues to improve the ED's performance since the system helps better capture patient care data and associated charges and improves efficiency by identifying patient flow bottlenecks.

While the financial results are remarkable, the other results are just as impressive. The hospital has been able to use quantitative and qualitative data from the system to change processes and improve performance. Results include:

- Reduced wait times. Before the system was implemented patient wait times were two to three hours from triage to bed. ED PulseCheck helped identify the need for bedside registration, which reduced average patient wait time to just 30 minutes.
- Increased patient satisfaction. Automating the ED and implementing process change improved patient satisfaction by 6.3 percent.
- Faster laboratory results. ED PulseCheck showed that taking blood samples from patients took too long. A phlebotomist was placed in the ED reducing the 30-minute lab time to two minutes.
- Improved coding. The system helped reduce over- and under-coding errors from 25 percent to less than five percent.
- Eliminated lost charts. The medical record is available online so the time and effort in pulling and finding charts is eliminated.

In addition, nursing satisfaction also increased. Nurses have been very impressed with the technology and how it helps them do their job. The EDIS has been good for recruiting and retention.

### Gearing up for continued growth

By helping achieve overall efficiencies throughout the department, ED PulseCheck has minimized the need for additional staff even though patient volumes have increased dramatically. "Our volume has grown from 48,000 to 55,000 annual ED patient visits in the five years since we installed the system," said Hutchison. "We expect to see that volume grow to 70,000 per year over the next two or three years as we double the size of the ED. Without ED PulseCheck we wouldn't be able to efficiently handle this growth." ■

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