

Scottsdale Healthcare Realizes Net Gain of \$4.2 Million in Benefits

Using ED PulseCheck® and LYNX ED Charging Application



Founded in 1962, Scottsdale Healthcare is a three-hospital 834-bed community not-for-profit integrated delivery network (IDN) serving greater Scottsdale and Arizona's Northeast Valley region. The health care system employs 6,700 full-time employees at its three hospitals: Osborn Medical Center, Shea Medical Center, and Thompson Peak Hospital Scottsdale. Scottsdale Healthcare's commitment to excellence has earned numerous accolades, ranging from achieving Magnet Recognition and the 2010 Pioneer Award for Quality, to being listed in the 2009 Thomson Reuters 100 Top Hospitals: National Benchmarks Award.

Challenges

The emergency departments (EDs) at Scottsdale Healthcare's three hospitals handle more than 177,000 patient visits per year, making them not only an important source of revenue, but also a vital component in the organization's care quality and patient safety initiatives. Accomplishing these initiatives, however, required the exchange of complete and accurate patient information, which Scottsdale Healthcare's paper-based processes didn't support well. The challenges posed by the reliance on paper-based processes included:

- Searching for misplaced paper charts reduced time that staff spent on patient care
- Illegibility of handwritten notes created the potential for patient safety issues
- Lost charges resulted from incomplete documentation and inefficient processes
- Data within the paper documentation could not be consolidated easily for analysis and benchmarking
- Transcription costs were escalating to more than \$1 million per year
- Overall inefficiencies were impacting patient length of stay and care delivery processes

Highlights

- 97 percent transcription cost reduction, saving more than \$1 million annually
- 3.7 percent net revenue increase
- 85 percent return on investment
- 10 percent reduction in ED patient length of stay
- 28 percent reduction in patients who left ED without being seen
- 41 percent decrease in medication events per month

These issues prompted Scottsdale Healthcare to seek out technology that could help them overcome these challenges. “To improve our process and patient flow, it was critical to have good information, which is why we decided to go to an electronic documentation system,” said Bettie McCarter, RN, CEN, EDIS System Administration, Emergency Services, Scottsdale Healthcare.

Solutions

Scottsdale Healthcare completed a thorough analysis of several ED electronic medical record (EMR) systems. The involvement by all interested parties — physicians, nurses, technicians and administrators — helped ensure that the EMR selected would meet everyone’s needs. Criteria included selecting a specialty niche ED solution that could be customized and interoperate across all three EDs and with the IDN’s existing hospital information system (HIS).

Ultimately, the health system selected two solutions from ED PulseCheck® LYNX ED Charging Application. “Most EMRs expect physicians to change their workflow to fit their process and are built with billing or coding in mind, not ED workflow,” said Craig Norquist, MD, Scottsdale Healthcare.

“Instead, ED PulseCheck was developed by physicians for physicians, so that it conforms closer to the usual processes physicians use in the ED.”

ED PulseCheck’s integrated ED solutions promote consistent and compliant documentation and charging for procedures. The LYNX ED Charging Application prompts nurses to document all of the care provided to patients, including details about infusion and injection procedures. Evaluation and management (E/M) levels are calculated using patient acuity mix and resource use to comply with Outpatient Prospective Payment System (OPPS) guidelines.

ED PulseCheck is an ED-focused EMR with capabilities that remind nurses to complete their documentation, and documents infusion duration values based on the start and stop times entered into the ED Charging Application. Clinicians placing medication orders through ED PulseCheck are prompted to distinguish between medication delivery type (e.g., injection versus infusion, etc.) to improve documentation, charge capture, and reimbursement.

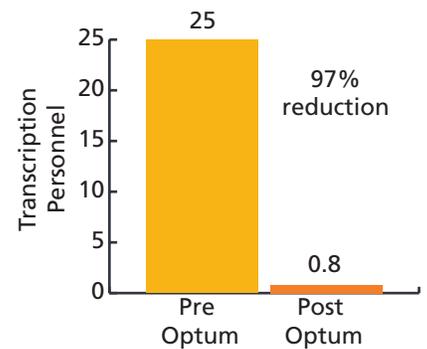
From the first day following the implementation of ED PulseCheck, paper charts were eliminated as clinicians began entering patient information directly into the system. Patient test results are now viewed and entered on patient charts in a single step. Near real-time patient records are now available to all ED providers, eliminating the need to track down patient records to determine next steps in patient care. Additionally, the bi-directional exchange of information between the LYNX ED Charging Application and Scottsdale Healthcare’s HIS helps avoid lost charges.

“Previously, information was not immediately placed in the paper charts, and it was routinely necessary to find the doctor to get an update on a patient,” explains Jay Chikowski, RN, Thompson Peak Hospital Scottsdale. “Now the ED EMR chart reads like a book. When we turn things over to the night staff it is easy to see what’s happened during the previous shift. We can instantly read the electronic notes and there is no need to get updated by a doctor.”

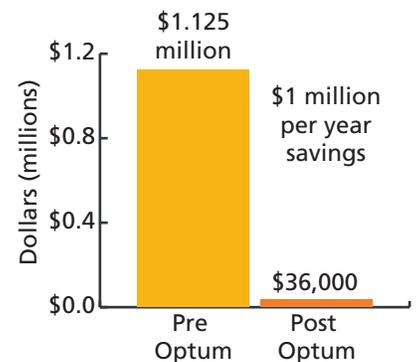
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— Craig Norquist, MD
Scottsdale Healthcare

Transcription Reduction



Transcription Cost Savings



Results

Since implementing ED PulseCheck and the LYNX ED Charging Application, Scottsdale Healthcare has realized significant gains in efficiency and productivity that have driven clinical and financial improvements. Using ED PulseCheck, combined with clinical rules content, enables clinicians to have the latest medical information to make quick and accurate decisions that improve care measures, as well as patient care and satisfaction:

Efficiency, Productivity and Patient Access Measures	Improvement	Details
Doctor-to-decision times	29%	Decreased from 110 minutes to 78 minutes
Patient length-of-stay in ED	10%	Falling from 110 minutes to 78 minutes
Patient diversions due to ED capacity limits	33%	Decreased from 12.3 hours per month to 8.2 hours
Patients who left without being seen (LWOBS)	28%	Falling from 606 patients per quarter to 439

The use of ED PulseCheck also assists physicians with clinical decision making and alerts them to potential patient safety issues. “The ED EMR helps clinicians provide an additional measure of patient care by flagging potential drug interactions or allergic reactions,” said Eric VanMoorlehem, MD, Scottsdale Healthcare. “The physician’s knowledge is very critical, but the EMR documents and saves time by presenting the potential causes for consideration.”

Clinical Measures	Improvement	Details
Medication events per month	41%	Decreased from 100 per month to 59
Septic shock mortality rate	18%	Decreased from 27.8 to 22.8 over a comparable time span
Cardiac care door-to-balloon times	7%	Falling from an average of 78 minutes to 72 minutes
Antibiotics not administered within 6 hours of ED visit	46%	Lowering from 2.9% of cases to 1.6% of cases

“The quality of data available with the EMR is outstanding,” said Kelley Christensen, RN, BSN, CEN, ED Nurse Manager, Shea Campus. “Getting objective data helps in so many ways, including how doctors and nurses are performing on specific metrics so that we can identify best practices and try to implement them throughout the ED.”

From a financial perspective, **ED PulseCheck** solutions have delivered substantial benefits, helping Scottsdale Healthcare reduce costs and generate additional revenue:

- **97 Percent Transcription Cost Reduction** — Having clinicians enter information directly into ED PulseCheck has enabled Scottsdale Healthcare to reduce its transcription staff from 25 full-time equivalents (FTEs) to 0.8 FTE, resulting in a \$1.125 million annual savings.
- **3.7 Percent Net Revenue Increase** — Using ED PulseCheck increased net revenue capture from \$1.49 million in 2010 to \$1.88 million in 2011.
- **85 Percent Return on Investment (ROI)** — Combining net revenue charge capture results with monetized productivity increases, weighted against project costs, resulted in a project net present value of nearly \$4.2 million and an ROI of 86 percent.

Working with ED PulseCheck

"It's been refreshing to work with PulseCheck. They are willing to customize to meet our needs. The software helps empower users to create reports versus having a systems analyst build the reports," notes Candice Larson, IS Project Manager, Scottsdale Healthcare. "Looking back, it went very smoothly."

Ultimately, the transition to electronic documentation helped Scottsdale Healthcare achieve its goals. "Our goals were to help clinicians improve patient care and safety practices, enhance our quality outcomes and the patient experience, and to increase efficiency/productivity. We have been pleased with the implementation of ED PulseCheck. It has enabled a systemic approach to achieve key patient care priorities in all our emergency departments," said Mary Kopp, RN, BSN, MS, Associate Vice President, Scottsdale Healthcare.

About ED PulseCheck

ED PulseCheck, a leading health services business, is a global provider of innovative information solutions that enable rapid and sustained delivery of clinical documentation, financial and operational results in the emergency departments, surgical suites and intensive care units of the hospital. ED PulseCheck offers the most advanced suite of integrated products focused on these life-critical areas of the hospital where the patients are the most vulnerable, the care process is the most complex and an increasing majority of hospital costs and potential revenue are concentrated. Headquartered in Wakefield, Massachusetts, ED PulseCheck has licensed systems for use at more than 2000 hospitals in 21 countries.

For more information about ED PulseCheck, visit www.harrispulsecheck.com
