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BUILDING CARDIOLOGY CENTERS OF EXCELLENCE



Parkview Heart Institute

Using ACC and STS Data to Improve Quality at Parkview Heart Institute

Supporting JCAHO Accreditation, Lowering Door-to-Balloon, Reducing Blood Product Use and More

Highlights

“We’re doing excellent with STS. And the database started the process—we needed the data to show us where we were. And then it takes the hands-on approach to make the improvements. Because all of the pieces are important: the data, the surgeons, the cardiologists, the clinical coordinator, the nurses, Quality Management.”

—Kim Recht, MSN, NP-C
STS Data Manager
Parkview Heart Institute
Fort Wayne, IN

Door-to-Balloon Times Reduced. Collecting data electronically for the ACC-NCDR® CathPCI Registry® has enabled Parkview Heart Institute to lower door-to-balloon times to well below the national guidelines.

Blood Product Use Reduced. Data collected in Cardiac Surgery has been used to improve quality and performance in key ways, including reducing blood product usage. This has resulted in a savings of over \$200,000.

Achieved Chest Pain Center Certification and JCAHO Accreditation. Automating data collection has helped the hospital achieve Chest Pain Center certification and patient safety accreditation from the Joint Commission.

Adverse Outcomes Meetings Open to Entire Service Line. By holding monthly meetings open to the entire service line, the Heart Institute has been able to identify areas for improvement and quickly address them.



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The Parkview Heart Institute in Fort Wayne, Indiana has been submitting to the ACC-NCDR and the STS via the Apollo Advance™ clinical data repository for over five years. In that time clinicians and staff have been able to use their clinical information to improve patient quality and safety—most notably reducing blood use, renal failure and door-to-balloon times to well below national guidelines.

Registry Participation from the Ground Up

Current ACC Data Registry Manager and former Cath Lab Manager Brenda Springer, RN, BSN, explains the evolution of the registry system. “I started at ground zero. We weren’t doing ACC before 2002. No CathPCI, ICD, no STS either—just what Quality Management was doing with NRMI (the National Registry of Myocardial Infarction).” When the hospital decided to begin submitting to ACC they searched for software that would integrate into the current workflow and facilitate additional quality initiatives. The Cardiac Surgery department followed, participating in the STS Cardiac Surgery Database beginning in 2004.

“One of our physicians is fairly influential and he sits on the governing board for the ACC so of course that was a big push right there and it made starting registry participation faster,” says Brenda.

Third-party payors played a role in registry participation as well. “Payors were beginning to request our outcomes. They wanted to know what our outcomes were like before they sent us patients,” notes STS Data Manager Kim Recht, MSN, NP-C.

To support streamlined outcomes reporting and registry participation, the Heart Institute chose LUMEDX’s Apollo clinical data repository. “We had Witt as our hemo system at that time and I was able to get a link from our hospital information system to Witt to LUMEDX. And that is how it stands now,” explains Brenda.

PARKVIEW HEART INSTITUTE REDUCED

- Mortalities
- Door-to-balloon times
- Renal failures
- GI complications
- Blood product use
- Vent times
- Re-admits
- Infections
- Cross-clamp times

“Quality (Management) impacts a hospital in huge, huge ways—as far as reimbursement, as far as safety, as far as Board of Health, the Joint Commission, pay-for-performance and so on. The bottom line is quality patient care. If you don’t have quality patient care in this day and age you might as well hang it up.”

—Brenda Springer, RN, BSN
ACC Data Registry Manager
Parkview Heart Institute

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Integration Enables Straightforward Data Gathering

For CathPCI, data from the hemo system is brought into Apollo via a Witt interface. Brenda runs a patient log for each day from the Witt system, determining which patients need to be included for the CathPCI Registry. “And between demographics and some of the patient history and then a lot of the straightforward, black-and-white fields within Witt—this is what flows over to me and I can do chart review quickly,” she explains.

Kim gets her surgical information from a number of different systems. She has four screens at her desk. “I’ll have Apollo up on one. And then IDX Carecast on another and Streamline or Access Anywhere on the next and then maybe the Cardiology EMR up on the other screen. So I can just flip back and forth between them and enter the information into Apollo for STS.”

REPORTS TO DRIVE QUALITY IMPROVEMENTS

In the Cath Lab

1. Door-to-balloon time
2. Contrast use
3. Fluoro time
4. Stent use per physician
5. Lesion success
6. Adverse outcomes
7. Physician outcomes

In Cardiac Surgery

1. CABG and overall outcomes
2. Outcomes by-physician group
3. Adverse outcomes, including:
Atrial fibs • Renal failure • Sepsis
Re-ops for bleeding • Pneumonia
Readmissions • Prolonged vent time
4. Adverse outcomes by surgeon

Reducing Door-to-Balloon Times, Minimizing Blood Product Use and Achieving Accreditation

Because low door-to-balloon times are critical to successful outcomes, Parkview staff and clinicians have developed a system to capture door-to-balloon data as quickly as possible.

“The Cath Lab calls me when they get a STEMI and I review all the information for that while the patients are still here,” notes Brenda. She runs physician outcomes, patient outcomes and adverse outcomes reports. At the end of the month she puts the information together in graph form, de-identifies physicians and emails it to physicians and the administration. Because this process is largely electronic, the turnaround time for STEMI data is short and the Cath Lab can easily identify and respond to any trends the data reveals.

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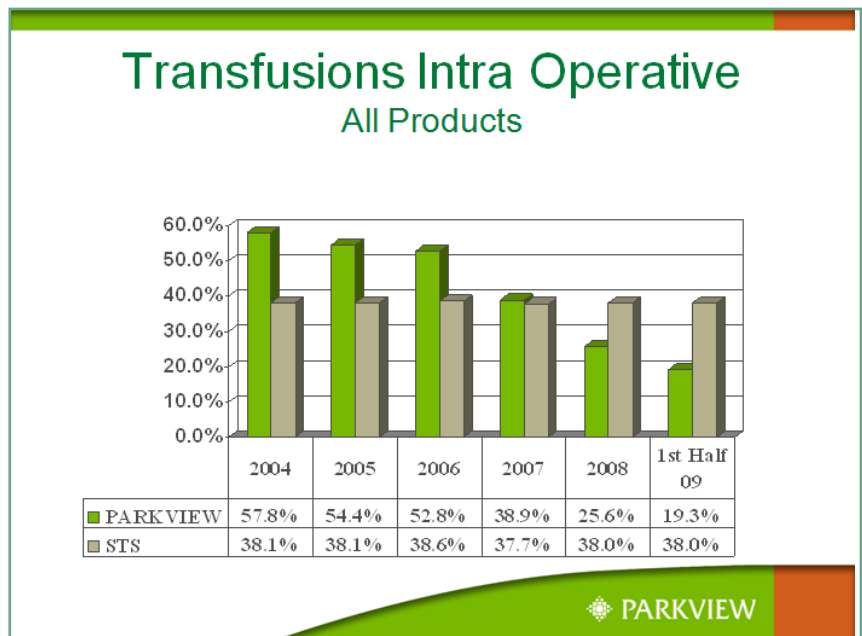
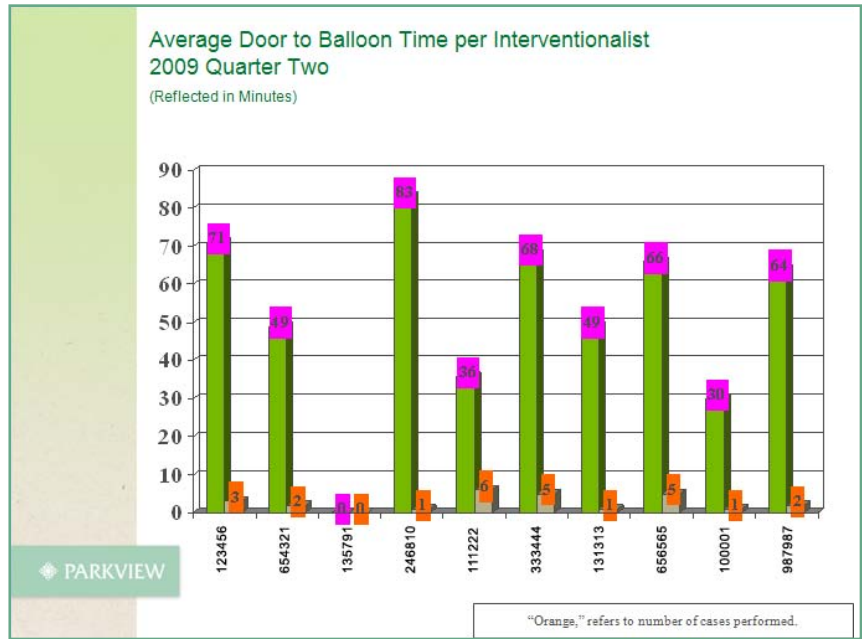
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To accelerate door-to-balloon reports Brenda has written the queries she needs in Apollo. “Even at the end of the quarter, when I really wrap up all this information, it takes me maybe a couple of days to get it ready for the physicians. I’ve been able to streamline most of this process,” Brenda says.

“We’ve been working on this for quite a while, since before the whole door-to-balloon initiative came out. We look at our data, the reports and graphs, and it’s interesting, we’ve learned that keeping your time down results mostly from communication and everybody working together,” adds Brenda. The result: Parkview is consistently below national guidelines for door-to-balloon times, with an average of 74 minutes to reperfusion.

In addition to her projects with cardiac surgeons, Kim has been working with the perfusionists. “They come and they may want to know how much blood the surgeons are using, which surgeons are using how much blood, etc.,” Kim says. “I can run a quick query and get an answer for them in 10 to 15 minutes. We have used this information quite a bit; in fact because of it we’ve been able to save hundreds of thousands of dollars over the years by reducing our blood volumes.”

Automating data collection has also helped the hospital achieve Chest Pain Center certification and patient safety accreditation from the Joint Commission.



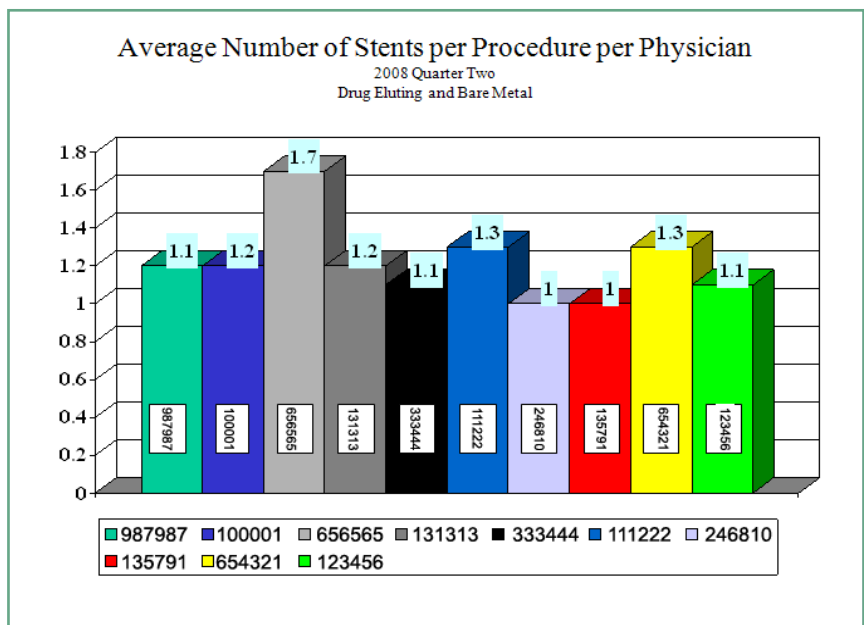
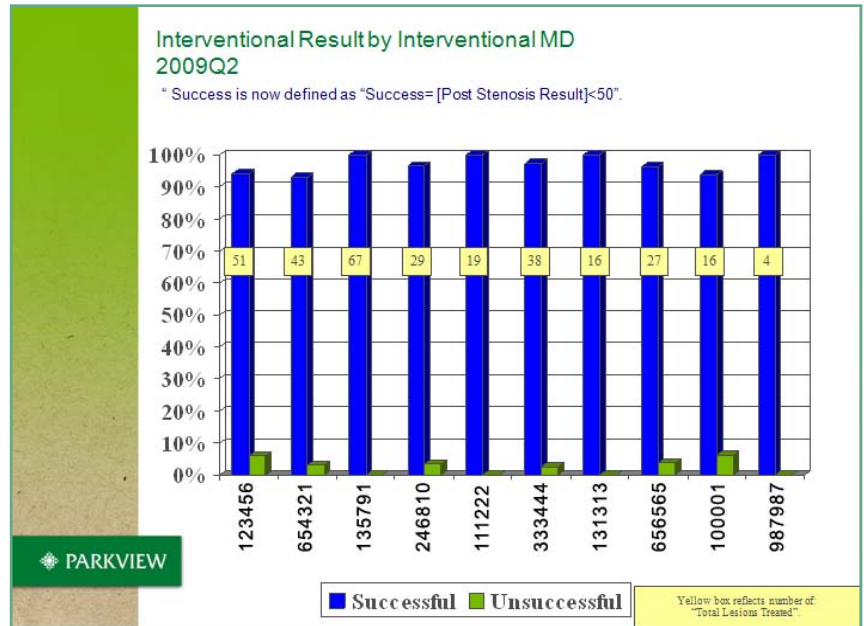
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Educating and Communicating Across Service Line to Improve Outcomes

Since implementing Apollo, Heart Institute physicians, clinicians and staff have been able to access and examine their clinical data more easily. Whereas in the past hospital-wide Quality Management was responsible for NRMI, electronic registry participation has brought the statistical results of procedures directly into the Cath Lab and CVOR. Communication across the service line and out to Quality Management has opened up considerably, resulting in a fuller understanding of mutual goals and how to achieve them.

“I regularly pull information through Apollo for my physicians,” Brenda notes. “I’ll wrap it up in graphs and they use it for their Morbidity and Mortality meetings.” The doctors are particularly interested in the graphs. “I send them about ten different graphs with different information on each. Contrast use, fluoro time, of course the door-to-balloon times, stent use per physician. I use lesion success on a lot of the canned reports that come with Apollo. Those are great because I can drop those into a PDF and e-mail them off too. This way the physicians can see how many lesions they did and how successful and how they compare to everyone else.”



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Moreover, in an ongoing effort to educate clinicians about standardized ACC definitions, Brenda distributes charts with verbiage that corresponds to ACC terminology to Cath Lab staff. "I'll send it and say, 'This is great; this is what we need.' And it has caught on and now this knowledge can help us with our CathPCI, our Core Measures, our STS data and our ICD data."

Additionally, the Heart Institute now conducts a regular meeting open to the entire cardiovascular service line. "We go over adverse outcomes at the monthly meeting," Kim explains. "Cardiology comes. OR. Nursing. Respiratory people. Our dedicated clinical coordinator. The surgeons. Everyone in the service line can come." The effort has paid off with across-the-board quality improvements.

Kim gives some examples from Surgery: "We look at our data and ask ourselves, What can we do to stop renal failure? Then we start doing some research and go from there. Same with GI. And we've seen results. Our readmits have gone down to next to nothing."

Ongoing and Future Projects

"One of [Cardiac Surgery's] goals for 2009 is to bring our vent times down. Now we have no pneumonias—we're at 0% through May of '09," says Kim. Decreasing length of ICU stay is another ongoing initiative. Next steps for the CathLab include participation in the upcoming ACC-NCDR ACTION Registry®. These efforts are paying off.

"We're doing excellent with STS," Kim adds. "And the database started the process—we needed the data to show where we were. And then it takes the hands-on approach to make the improvements. Because all of the pieces are important: the data, the surgeons, the cardiologists, the clinical coordinator, the nurses, Quality Management."

"We want to remain a premier carrier of cardiac services," Brenda explains. "Quality (management) impacts a hospital in huge, huge ways—as far as reimbursement, as far as safety, as far as Board of Health, the Joint Commission, pay-for-performance and so on. The bottom line is quality patient care. If you don't have quality patient care in this day and age you might as well hang it up."

KEY LUMEDX SOLUTIONS AT PARKVIEW HEART INSTITUTE

- Apollo Advance™ Clinical Data Repository
- ACC Registry Module
- STS Registry Module
- Witt Hemo Interface