Athens Regional Medical Center
SSI Success Story

Athens Regional Health System (ARHS) is one of northeast Georgia's largest health care systems serving a 17-county service area in northeast Georgia. The system is composed of an acute care facility with 350-plus beds, four urgent care centers, a network of physicians and specialists, a health maintenance organization and a home health agency.

Contact Information

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Success Story Information

1. Why was change needed within your organization/what sparked the need for a new or improved practice?

Athens Regional Medical Center focused on reducing surgical site infections (SSIs) in open heart surgery patients. This area was chosen because we had previously focused on reducing these infections and noticed rates beginning to rise again and there was variation in performance. We began the work in April 2012 and set a goal to reduce deep or organ space SSIs by 40% with the ultimate goal of reducing SSIs to zero. We surpassed our goal of 40% and have now achieved twenty months with no deep sternal infections and only 1 superficial infection in Open Heart Surgery patients!
2. **Your Story: Tell us your story of success in any of the 11 Areas of Focus and how your work has helped improve safety, quality, and patient-centered care in your hospital:**

   Our journey began with an in depth analysis of our data from chart review. There were no variables that indicated any one area of statistical significance. This led us to the need to look at all processes.

   We formed a highly motivated and engaged multidisciplinary team and began evaluating all hundreds of patient touch points across the continuum. We examined processes starting with the physician’s office and continued through each area of the hospital as well as discharge venues such as Home Health Care and Inpatient Rehabilitation.

   We created flow charts showing the current process from the eyes of the patient through every part of the surgery process. This served as a starting point to identify areas of variation and opportunities for improvements. The flow charts were posted in several key areas of the departments so staff could easily share their suggestions and questions. This was a crucial step of the process as front line staff involvement is critical to understanding root causes of variation as well as ideas for improvement.

   Next the team conducted observations where they looked at areas other than their own and spoke to patients to gauge their experience. This included physician observations in the OR as related to surgical techniques and incisional care to identify opportunities. The purpose of the observations was not to evaluate compliance but to outline the process as it truly happens. The team met every two weeks to discuss the program and also met with vendors to discuss processes such as changing dressings, cleaning, clipping, patient education etc. The staff met with surgeons to troubleshoot and brainstorm. The goal was to rapidly implement, validate and improve ideas, while also educating staff, patients and their families.
Of the hundreds of touch points for patients we changed 44 things to reduce SSIs and developed an action plan that included:

- Standardized protocols for patients whether initiated in house or direct elective admits from physician office.
- Development of standard operation procedures for OR cleaning and check offs
- Changing the clipping process so none occurred in the OR.
- Using disposable EKG leads that follow patients throughout their stay
- Switching to silver mediastinal dressing
- Updating patient education sheets on nutrition, wound care and how to use CHG wipes before surgery
- Changing dressing for chest tube
- Changing suture technique and materials
- Using smaller sized heart pillows
- Extending process changes outside the hospital, including involving home healthcare, PT and rehabilitation staff in SSI reduction
- Worked with outlying IP Rehab facilities to clarify wound care
- Home Health Care now makes one post discharge follow up on all patients (if meet criteria)

These were done in rapid cycle implementations as soon as they were identified.

Keys to Success: We attribute our success to maintaining consistent processes and having a physician champion and leadership support, which helped drive staff engagement at all levels. Specific keys to success included

- Engaged frontline staff and highly motivated multidisciplinary team where nothing was off limits to make changes resulting in not only appropriate interventions but also ownership of the outcomes.
- CT Surgeon Physician Champion and Administrative leadership specifically inviting all staff to speak up. All hierarchy removed.
- CT Surgeon Physician Champion modeled the way of openness by asking CMO (plastic surgeon) to observe a case and make recommendations
- Ongoing observation where staff looked at areas other than their own units and were empowered to raise issues for discussion
- Looking at the flow of care from start to finish and from the patient’s perspective
- Visual flow chart posted in key areas to obtain front line staff feedback. Not all staff can leave patient care areas to attend meetings to this was a key way to get their input and share updates on changes.
- Standardizing processes
- Continuing to track data and post monthly so all front-line staff can view
- Audits of processes for example monitoring cleaning process and educate staff if there are problems or obtaining additional input if there were barriers
- Fostering collaboration and open staff communication, including developing a shared open heart file with policies and procedures that all staff can view
- Using real time data from observations to define current practice
- Posting performance data
- Celebrating success at least monthly and all along the way!!! Success breeds success!
3. Improvement Measures: Please provide any specific measurements (esp. outcome measures) that you feel demonstrate care is safer.

ARMC has achieved twenty months with no SSIs in open heart patients and only 1 superficial infection during this same timeframe. A line graph is posted in all departments that are includes prevention of SSI’s in cardiac surgery patients. The graph shows the SSI rate and volume.

The Association for Professionals in Infection Control and Epidemiology Cost of Health care-Associated Infections Model (APIC) was used to demonstrate cost avoidance impact on the organization. The total excess cost of SSI’s after open heart surgery for 2011 through March of 2012 was $250,965 with 156 excess hospital days. With the implementation of new practices and standardization from March 2012 to December 2013 the incidence of SSI’s was reduced with a cost avoidance of $212,335 and a decrease in excess hospital days to 24.

Insights: Please describe your greatest insights about what worked and why it worked (or didn’t). What were the defining moments that produced these results? What were the “ah-ha” moments?

The change in culture supporting all members working together as a system was critical and helped advance this from “just another initiative” that loses momentum over time. Key to development of this culture was the physician leader inviting all to speak up, engaging front line staff creatively to get their input, finding hidden influencers that impacted the staff’s ability to easily follow standardized processes and looking at processes through our patient’s eyes. We celebrated success monthly as we hit each milestone. This was very important as it kept the momentum going and created a sense of excitement about what was possible.

4. Challenges and Successes: What challenges did you encounter when implementing change? What strategies did you use to overcome these challenges?

All hospitals are busy places and many competing challenges and initiatives. Finding time for improvement work can be a challenge. Several key areas helped overcome these challenges. This initiative was supported by physicians and administrative and operational leadership and clear goals were established on improving care for our patients. In addition our Board was involved in tracking progress and recognizing success. VHA’s Rapid Adoption Network™ (RAN) methodology to engage staff was successful in opening communication and promoting interdisciplinary teamwork to address the needs of the patient and address quality of care, which are both key drivers for engaging staff. There was no resistance by staff because of strong operational leadership. It was important to have physicians as an integral part of our team and their leadership early on was a key factor in our success. The communication and messaging around this project was consistent and delivered with persistence.
5. **Sustaining the Vision: What have you done to sustain the changes implemented? What is your vision or the hospital’s future plan for continuing to sustain or build on these improvements?**

Ongoing performance is shared with all areas and periodic monitors of process help ensure we are consistently following recommended processes.

We have taken these lessons learned and implemented in other key areas of SSI prevention and are seeing success with these teams as well! For example our Spinal Fusion/Laminectomy SSI prevention team began work in April 2013 and has now has sustained 10 months without a deep/or organ space SSI and 6 months without a superficial SSI as well! We now are working on Colon SSI reduction. In addition we are applying these methods to other improvement opportunities in the Partnership for Patients as well as other areas.

6. **Do you have any other comments you would like to add or information about your achievements that you would like us to highlight?**

This was certainly a team effort. There was support and engagement of leadership, physicians and staff. This kept the team focused and action oriented. The Medical Director of Cardiothoracic Surgery was our physician champion. This was a key element to success because he engaged staff throughout the entire process, empowering them to speak up and assuring them nothing was off-limits to discuss. The team consisted of members from CICU, Surgery (intraoperative and perioperative staff), Step down, Infection Prevention, Dietary, Home Health, Quality Performance Improvement and Medical staff with other key stakeholders who were included as pertinent processes were evaluated. The team also included input from cardiac surgery patients as they walked the process and experienced it through the eyes of the patient. Opportunities for improvement were obtained by observation and also conversations with the patients and their families.

**Supporting Materials**

**Quotes:** Please provide a quote from a patient and/or a hospital executive describing their perspectives on your story.

“Our goal was to transition this improvement work from just another initiative to one of real culture change. We achieved this and it has been a key factor in our continued success.”

Dr James Moore, Senior VP and Chief Medical Officer
“There is a growing body of literature to support leveling the hierarchy in organizations. That is what we did; we had everybody from the OR to nursing staff in CICU and our CV Step Down Unit to look at our processes and broke it all down.”

Dr. Cullen D. Morris, Medical Director Cardiothoracic Surgery

“It was through multidisciplinary collaboration, determination, and teamwork that added to the success of “Achieving Zero” in our journey to preventing surgical site infections after isolated coronary artery bypass open heart surgeries. Our team analyzed routine procedures from the initial process of being scheduled for surgery until discharge of our open heart patients. This lead to our evidence-based practice implementations that helped our open heart team at ARMC surpass our original goal of 40 percent reduction of our annual rate to zero midsternal surgical site infections since May 2012.”

Melissa Ruark, RN, BSN, CCRN Cardiac Intensive Care Unit/Athens Regional Medical Center

Commitment to Share: Please provide the names and contact information for individuals we may contact if additional information is needed. Is there an advisor or leader in your hospital who would be willing to serve as a resource for other hospitals that wish to learn from your story?

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Resources: If relevant, please provide examples or attach copies of relevant tools or other materials that you used to bring about change in your hospital, and that you would be willing to share with other hospitals.

In the past we have had requests to share our policy and procedures, protocols, flow sheets and education tools. We would be delighted to share any of these tools that might be helpful to others.