Reduction of Surgical Complications (SCIP)

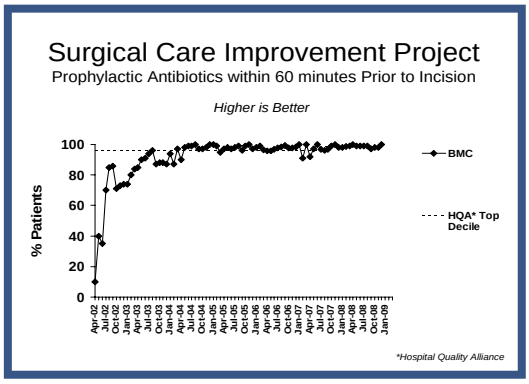
Where we've been...

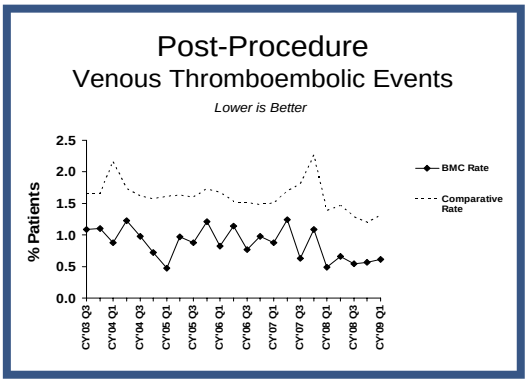
A significant number of the nearly 30 million operations performed each year have surgical care complications. Each complication is estimated to increase the length of hospital stay, the likelihood of a critical care admission, the incidence of readmission, and the risk of mortality. An estimated 50% of surgical complications are thought to be preventable with appropriate interventions. On the basis of that estimate, Baystate Health (BH) decided to participate in the nationwide quality improvement initiative, the "Surgical Care Improvement Project (SCIP)," led by the Centers for Medicare & Medicaid Services (CMS). SCIP is the expansion of the Surgical Infection Prevention (SIP) Collaborative which began in 2002. The goal of SCIP is to optimize the outcomes of patients undergoing surgery by improving the use of evidence-based practices shown to reduce the incidence of surgical complications.

Where we are now...

BAYSTATE MEDICAL CENTER Performance improvement methods such as PDSA (plan-do-study-act) and multiple small tests of change were used to ensure timely pre-operative cardiac risk assessment and intervention, antibiotic prophylaxis administration, hair removal, maintenance of normothermia and glycemic control, and appropriate post-operative venous thromboembolic (VTE) disease prevention (DVT/PE). This work resulted in a complete overhaul of the peri-operative system and is now well integrated into the peri-operative culture. Adoption of "Opt-Out" model ensures procedure-based interventions (antibiotic use and DVT care) are in CIS to guide and streamline ordering. In the Opt-Out model, the clinician has to actively choose not to apply or prescribe the agreed-on process or intervention. Typically, selecting to opt-out is more time consuming or difficult than allowing the agreed-on process to occur as part of the flow of work. Using this model promotes the desired action (the default) to be applied more consistently to a greater number of eligible patients. Antibiotics are prepared in the pre-operative holding area and given in the OR by the anesthesiologists. All patients undergoing major non-cardiac surgery are screened for cardiac and VTE risk and started or continued on therapy (i.e., beta blockers, compression boots) if indicated. Changes were made in operative forms to prompt and standardize antibiotic administration documentation. Point-of-care blood glucose levels are obtained to guide the use of insulin infusions to optimize glycemic control, and new techniques for patient thermoregulation have been tested to identify which interventions work best in our operating rooms. Finally, medical record review for potential preventability for any complication is in place to identify learning for future work.

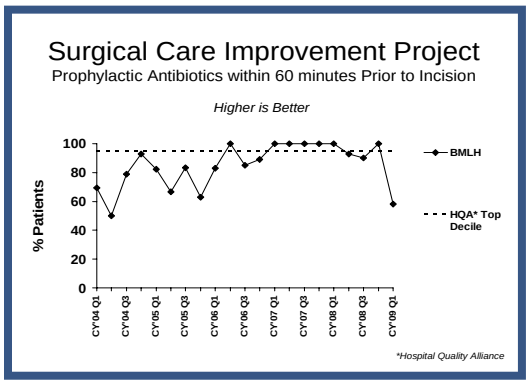
In 2009, antimicrobial prophylaxis continues to be at or well above national benchmarks. The current rate of on-time antibiotic administration is 100%. Discontinuing antibiotic therapy within 24 hours after surgery (historically a focus area) has improved and is 98% for FY'09 Q2. Appropriate use of VTE prophylaxis is currently at 100%, and we are sustaining improvements with a current post-procedure DVT rate of 0.61%. This sustained superior performance places BMC in the top 1% of U.S. hospitals based on the "Why Not the Best?" national comparative database (*whynotthebest.org*).

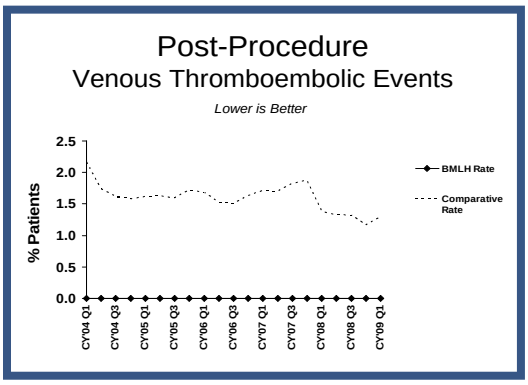




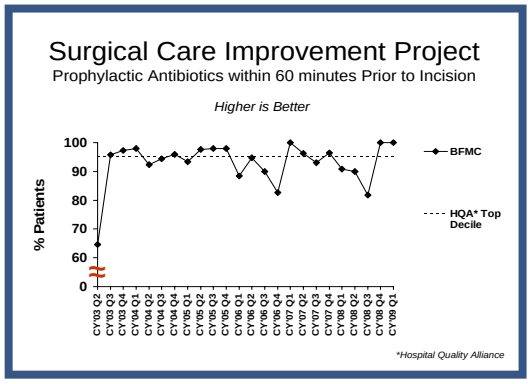
Reduction of Surgical Complications (SCIP)

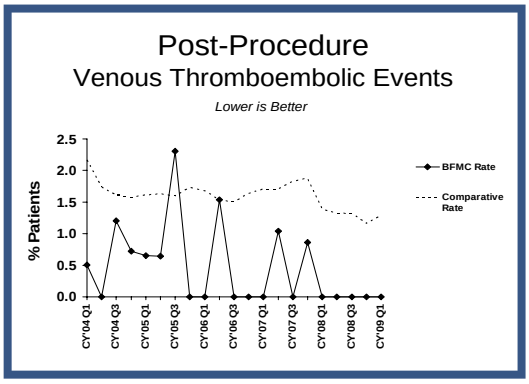
BAYSTATE MARY LANE HOSPITAL The SCIP work team meets regularly to review progress and make changes to the process to support ongoing improvement. Continued focus this year has been on timing and duration of antimicrobial prophylaxis and on the use of beta blockers peri-operatively. The current post-procedure VTE rate continues to be 0%.





BAYSTATE FRANKLIN MEDICAL CENTER Under the leadership of the Surgery Service Line team, the SCIP data is reviewed regularly and changes are made to the process to support ongoing improvement. Improvement has been demonstrated in VTE prophylaxis and normothermia; both measures are currently at 100%. The post-procedure VTE rate for 2009 YTD was 0%. Focus this year has been to work with providers on the use of beta blockers peri-operatively. Timing and discontinuing antibiotic therapy within 24 hours after surgery are the current focus areas for improvement, and efforts are aimed at revisions to the peri-operative orders. Feedback loops have been developed to provide timely information to all physicians and nursing staff if they miss an opportunity to provide optimal care. Additionally, BFMC has trialed the World Health Organization (WHO) Surgical Safety Checklist to help standardize care and processes in the operating rooms.





Where are we going...

The use of performance improvement methods, effective team-based multidisciplinary communication, CPOE, and application of reliability principles can improve the performance of evidence-based practices known to decrease rates of surgical complications. Future focus will be on continued application of consistent appropriate VTE prophylaxis and use of beta blockers to prevent cardiac events. This focus will ensure Baystate Health's continued role as a leader in the national collaborative to reduce surgical complications.