**Practice Changes for Reducing Urinary Tract Infections in Colon and Rectal Surgical Patients**

**The Problem**
Colon and rectal surgery is an independent risk factor for post-operative urinary tract infections (UTI), which can lead to increased morbidity, mortality and healthcare costs. Based on National Surgical Quality Improvement Program (NSQIP) data, BIDMC’s rate of postoperative UTIs was elevated in the colorectal surgery patient, in the 10th decile of performance.

**Aim/Goal**
After review of data, and using NSQIP criteria to define a UTI, the Colon and Rectal service implemented a practice change for placing an indwelling urinary catheter looking to reduce and possibly eliminate post-operative urinary tract infections by removing the catheter within 48 hours. Those patients undergoing colon or rectal surgery by the Acute Care or General Surgery service were exempt from this practice change.

**The Team**
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**The Interventions**
- **January 2010**: A daily needs reassessment and electronic order set for indwelling urinary catheters were implemented across all service lines at BIDMC to promote early removal of indwelling urinary catheters.
- **February 2011**: An additional daily prompt was added to the electronic medical record that required a clinical justification to continue urinary catheter placement; no other orders could be placed until this was addressed.
- **July 2012**: A service specific intervention of sterile intraoperative catheter placement was initiated by the Colon and Rectal Surgery service. This required that once the patient was prepped and draped and once the surgeon was scrubbed, gowned and gloved the surgeon would place the urinary catheter and then change gloves. In addition, the indwelling urinary catheter was kept away from the patient by suspending it from the inner thigh drapes with a clamp to avoid potential contamination.

**The Results/Progress to Date**

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**Lessons Learned**
Practice changes that were implemented by the Colon and Rectal service led to a statistically significant and sustained decrease of UTIs for that patient population as evidenced in the October 2014 and January 2015 NSQIP Semi-Annual Report.
- Early removal of indwelling urinary catheters--within 48 hours--led to a significant decrease in UTIs.
- Sterile intraoperative indwelling urinary catheter placement had the greatest impact in postoperative UTI reduction for Colon and Rectal surgery patients.

**Next Steps/What Should Happen Next**
- Consider initiating sterile intraoperative indwelling urinary catheters across other service lines.
- Continue to review NSQIP data to assure sustainability of decreased UTI rates.

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