

PREVENTION OF CATHETER-RELATED URINARY TRACT INFECTIONS

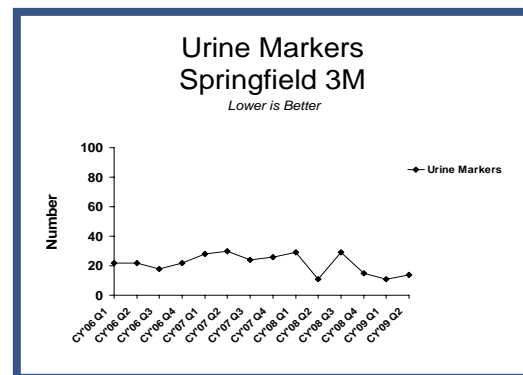
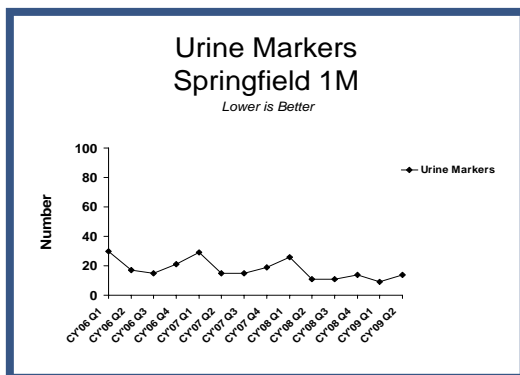
Where we've been...

Preventing Catheter-Associated Urinary Tract Infections (CA-UTI) CA-UTIs account for approximately 40% of all hospital-acquired infections annually and 80% of those can be attributed to indwelling urethral catheters. Besides placement, the duration of catheterization is directly related to increased risk of developing a CA-UTI. With a catheter in place, the daily risk of developing a urinary tract infection ranges from 3% to 7%, and the longer the catheter remains in place the higher the risk: 25% greater at 1 week and 100% greater at 1 month. Because of this, it is key that urinary catheters are used only when needed, in the appropriate patients, and removed as soon as they are not needed. The cost of CA-UTIs vary considerably, driven by an increased LOS from 0.5 to 1 day and needed supplies, tests and medication to combat the infection – between \$500 and \$700 extra per case. If a bacteremia develops, increased costs can range between \$2,500 and \$3,000. This impact is why, as of October 1, 2008, the Centers for Medicare & Medicaid Services (CMS) identified CA-UTI as one of the 10 “reasonably” preventable hospital-acquired conditions (HAC).

Where we are now...

BAYSTATE MEDICAL CENTER A multidisciplinary UTI prevention team has been in place for several years. Various interventions have been implemented, including the use of the engineered silver hydrogel foley catheter. In 2009, prevention strategies were updated and the team focused on implementing new interventions. The interventions included critical review of the need for the catheter, daily review of catheter need, reinforcement of hand washing, and proper insertion techniques. Interventions include:

- Identification and removal of catheters that are no longer necessary. Our EMR identifies patients with urethral catheters; a removal protocol for patients that no longer meet criteria for catheterization was developed with stakeholder input; daily rounds to increase awareness and communication, including daily assessment of catheter need. This is supported by the auto-stop order in CIS (EMR).
- Assessment of need for urinary drainage support. Alternative methods for urinary drainage have been identified and piloted; use of the bladder scanner to identify residual post-void retention; identifying patients who need indwelling urine drainage and obtaining an order for placement or removal; removal of care set standing or protocol orders for catheter placement.
- Focus on best practices for UTI prevention. Staff education and validation on aseptic technique and management of urethral catheters; annual validation and assessment of skills performed on inpatient units; development and implementation of a UTI prevention bundle; effective communication with posters and prevention script to engage staff.
- Provide feedback mechanism for stakeholders. Outcome measures identify successes and areas for continual improvement. Med Mined urine marker reports are provided to all units quarterly to track nosocomial UTIs. The Adult ICU, Springfield 1 Medicine and Springfield 3 Medicine are among several nursing units who have experienced reduced urine makers. Both Springfield 3 and the Adult ICU have demonstrated a 50% reduction in urine markers in CY 2009 Q2, while Springfield 1 has had an 80% reduction. This exciting news demonstrates how progress can be made when there is focus.



Where we are going...

In on-going prevention measures, the system-wide group has identified future work that will provide supporting structures and processes to post UTI prevention messages and communications for staff on Eworkplace, review removal protocol report to detect improvement in removal, finalize review of standard care sets, develop recommendations for straight catheterization, and develop and implement procedures for obtaining specimens from indwelling catheters based on best practice literature.