

Interdisciplinary Collaboration in the Reduction of Catheter-Associated Urinary Tract Infections (CAUTI)

Gary Bidwell, Dianne Danis, MS, RN, NEA-BC, FAAN; Michael Ford, MD; Terry Gion, MS, RN, CRRN; Robert Hoffman, MD; Greg Kennedy, MD; John Marx, MPH; Suzanne Purvis, DNP, RN, GCNS-BC; Sue Rees, DNP, RN, CPHQ, CENP; Nasia Safdar, MD; Linda Sauer; Cheryl Schutte, MBA

Project Goals and Measures

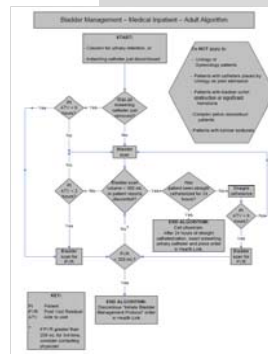
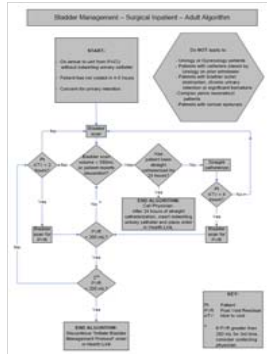
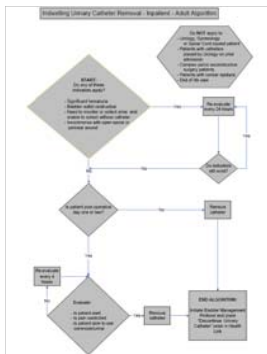
CAUTI rates were above benchmark in this academic medical center. An interdisciplinary clinical improvement workgroup was formed to evaluate evidence-based practice related to CAUTI. The goal was to reduce CAUTI through education and clinical practice changes.

Problem

Approximately 32% of nosocomial infections are attributed to CAUTI; duration of catheter is directly linked to incidence. CAUTI is associated with patient discomfort, antibiotic use, increased lengths of stay, increased costs, potential for skin breakdown, and potential for co-morbid conditions.

Needs Assessment

- Two teams were formed to evaluate and collect data on the current practice related to indwelling urinary catheter use on a medical and a surgical unit. Teams consisted of a Clinical Nurse Specialist (CNS) & a Physician. Results included:
- General lack of knowledge regarding indwelling catheter use, need for securement and bladder management.
 - Inappropriate reasons for continued use of indwelling catheters including staff convenience, patient requests for a catheter without medical justification, and poor communication between nursing staff and physicians.
 - Lack of knowledge among surgical staff regarding removal of catheters before post-op day 2 even with epidural use.
 - Need for education on alternatives to indwelling catheters.



Changes Implemented

- The CAUTI workgroup strategies included:
- Audit of early removal of indwelling catheters on surgical patients with epidurals showed that 25 of 31 (81%) did not have urinary retention with need for replacement of indwelling catheter.
 - Modifications to the protocols.
 - Education of 63 Registered Nurses, 13 Nurse Managers and 12 Clinical Nurse Specialists as CAUTI Champions.
 - Daily rounding by a CNS on patients with an indwelling catheter.
 - Education of medical staff by Physician Champions.
 - Educational handouts for patients and families.
 - Creation of a CAUTI toolbox on the hospital intranet.



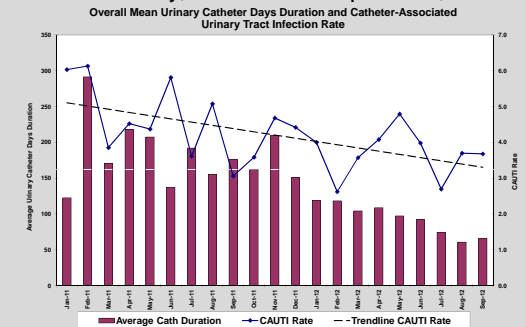
- CAUTI rates added to Nursing Scoreboard.
- Monthly report on CAUTI rates and catheter days.
- Indwelling urinary catheters, insertion kits, & securement devices available on all units.
- Icons added to the electronic medical record to identify patients with indwelling catheters or if recently removed.

Service	Primary Problem	Admit Date	Admit Time	Active Urinary Cathete	Bladder Management Protocol Order
GENERA SURGER	Pre-operative General Physical Examina (Principa Prob)	9/17/12	0517		
GENERA SURGER	Rectal Cancer (Principa Prob)	9/17/12	0515		

Acknowledgements: David Gaus, MD, Kris Leahy-Gross, BSN, RN; Andrea Kyser, BSN, RN, CPHQ; Aimee LaDousa, BSN, RN, CPHQ; Sue Tipple, MSN, RN; Shelly VanDenBergh, MS, RN, GCNS-BC; Joanie Watson, Jess Weber, MSN, RN, ACNS-BC, CCTN; Tamara Zupanc, RN, MSN, CCRN

Outcomes

- 46% reduction in catheter days from January 2011 to September 2012.
- Reduction in CAUTI rate (per 1,000 catheter days) from 6.0 January, 2011 to 3.7 September, 2012.



Impact on Clinical Performance

- Increase in:
- Use of bladder scanning and straight catheterization.
 - Collaboration between physicians and nurses regarding bladder management.
 - Patient ownership in their bladder management program.
 - Discussions regarding bladder management in interdisciplinary care planning meetings.
 - Indwelling urinary catheters pulled in operating room before patient transferred to the PACU.

Lessons Learned

- Unit CAUTI Champions were important resources for increasing the use of indwelling urinary catheter removal and bladder management protocols.
- Visual icons in the electronic medical record increased nurses' awareness of appropriate use of indwelling urinary catheters.
- Importance of monthly data reports on catheter use specific to different inpatient units.
- Importance of education of nursing staff, physicians, therapists, & transporters.
- Hospital cost for CAUTI for one unit for 3 months was \$36,613. Projected yearly savings for *one unit* could be as high as \$146,452.