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

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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.

Outcomes

- 46% reduction in catheter days from January 2011 to September 2012.
- Reduction in CAUTI rate (per 1,000 catheter days) from 8.0 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.

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