Catheter-Associated Urinary Tract Infection (CAUTI) Risk Factors

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Purpose
To determine what common risk factors contributed to a patient’s development of a CAUTI.

Background
- Urinary catheters should be utilized for only as long as appropriately indicated and promptly removed when the patient no longer meets criteria for utilization
- Society of Urologic Nurses (SUNA, 2014) recognize CAUTI as a ‘never event’
- Centers for Medicare and Medicaid Services (CMS, 2015) no longer reimburses for hospital-acquired infections (HAIs) and now have penalties in place for those that exceed national benchmarks

Introduction
- Mortality rate associated with CAUTI is estimated at 14%-19% annually (Chenoweth & Saint, 2013)
- Attempting to identify patients at greatest risk for CAUTI can allow organizations to target their improvement efforts

Guiding Scholarly Question

The guiding question for this scholarly project was: In a multisystem acute-care organization, what trends in risk factors were identified among patients who developed a hospital-acquired CAUTI during calendar years 2015 and 2016 during a retrospective chart review utilizing a standardized tool?

Methods
Non-experimental mixed methods retrospective chart audit
- Setting: Large, multisystem acute-care hospital organization in central Indiana
- Tools: Standardized audit tool utilized for collection of documented inquiry of risk factors

Results
- A total of 45 cases were reviewed (27 in 2015 and 18 in 2016)
- Female patients were more likely to develop a CAUTI (66.67% of cases reviewed)
- 78% of the patients who developed a CAUTI had their urinary catheters placed by licensed providers physicians or registered nurses (RNs)
- Seven of the 45 patients were followed by urology service line (15.5%)
- Obese patients were more likely to develop a CAUTI (65% of the CAUTI patients)
- Enterobacteriaceae classification was the most common offending organism that contributed to CAUTI (76%), followed by pseudomonadaceae (22%)

Number of Days Catheter in Place Prior to CAUTI
- Mean 8.95
- Median 5.0

Patient Obesity Rates
- Mean 33.58
- Median 30.1

Limitations
- Retrospective review was limited to only information that was retrievable from the electronic medical record
- Conducted among four campuses at one hospital organization

Conclusion
- Each day a urinary catheter remains in place increases the risk for a CAUTI; those most likely to develop a CAUTI had an indwelling urinary catheter in place at least 5 days
- Attempting to remove the catheter as soon as the patient no longer meets indications is of utmost importance
- Urology service line patients were not the most common group to develop a CAUTI, possibly this group is more prudent with utilization

Future Research
- Brief summary of what you discovered based on results
- Indicate and explain whether or not the data supports your hypothesis
- Assessing patient “real time” versus retrospective review of cases to determine more in depth risk factors that were not retrievable from chart audit
- Opportunities to study alternative collection devices for female patients, such as female exdwelling urinary catheters

References