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

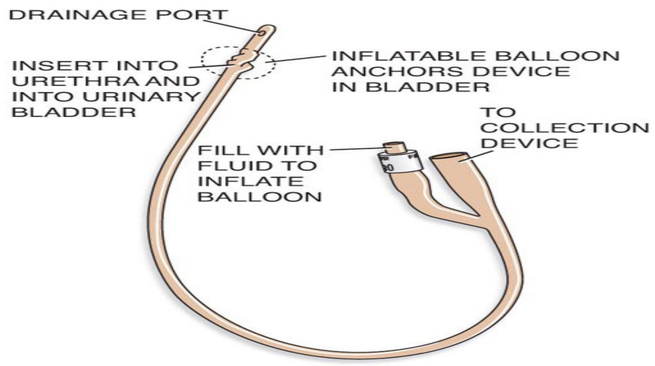
The guiding question for this scholarly project was: In a multisystem acute-care organization, what trends in risk factors were identified among patients who developed a hospital-acquired CAUTI for calendar years 2015 and 2016 during a retrospective chart review utilizing a standardized tool?

Methods

Non-experimental mixed methods retrospective chart audit
Population: Convenience sample of Infection Prevention (IP) identified patients who met National Healthcare Safety Network (NHSN, 2015) surveillance criteria for a hospital-acquired CAUTI during calendar years 2015 and 2016
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 hypothesisAssessing 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

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