

Decreased Foley Insertion: Serial Straight Catheterization Versus Indwelling Catheterization

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BACKGROUND

- Catheter associated urinary tract infections (CAUTI) account for 30% of infections in acute care and are associated with increased morbidity, mortality, cost, and length of stay (CDC, 2009)
- \$340 million spent in CAUTIs each year in the United States (CDC, 2009)
- Current Protocol: Three straight catheterizations with an indwelling catheter placed as the fourth insertion (LVHN policy, 2015)
- Triggers:
 - Drive to decrease in Hospital Acquired Events
 - # CA-UTI for FY 15 = 9 and FY16 = 9
 - # Catheter days FY 15 = 1186, FY 16 = 1156, 1st QT FY 17 = 297
 - Hypothesis decrease # catheter days for FY 17 based on 1st quarter data
 - Note increase urinary retention in post operative spine patients with catheter reinsertion

PICO QUESTION

- Population: Medical surgical patients with urinary retention
- Intervention: Straight catheterize three times per current urinary retention protocol
- Comparison: Straight catheterize four times
- Outcome: Decrease the incidence of reinserting an urinary catheter to decrease the number of catheter utilization days

EVIDENCE

- Evidence suggests a benefit of using intermittent catheterization over indwelling catheter decreasing the number of CAUTIs. (Newman, 2014)
- The Healthcare Infection Control Practices Advisory Committee (HICPAC) suggests further study regarding the “Appropriate indications for continued use in postoperative patients and associated risk” with urinary catheters. (Gould, Umscheid, Ararwal, Kuntz & Pegues, 2010)
- Intermittent catheterization has been shown to be one of the most effective and commonly used methods of bladder management in patients with urinary retention. (Newman, 2014)
- In the neuroscience population, specifically neurosurgery population, evidence states that 28% of indwelling urinary catheters were found to be unnecessary (Newman & Willson, 2011).

METHODS

- Obtained approval from medical director prior to pilot implementation
- Trial increasing the number of straight catheterizations to four prior to insertion of indwelling catheter
- Poster displayed on unit to notify staff of trial
- Utilize safety huddle and electronic chart reviews to gather data
- Review outcomes: reduction in indwelling catheter placements with trial versus current protocol

RESULTS

Patient	Number of intermittent catheterizations	Outcomes
1	4	Patient transferred to higher level of care unable to continue trial
2	1	Patient passed voiding trial. No urinary catheter placed
3	4	Patient passed voiding trial. No urinary catheter placed
4	4	Patient passed voiding trail. No urinary catheter place



BARRIERS AND LIMITATIONS

- This study encountered unexpected barriers which affected study completion. Study barriers include:
 - Limited sample population
 - Transfer of patient to higher level of care with discontinuation of trial on transfer
 - Physician decision to place urinary catheter for patient comfort vs. continue in trial

CONCLUSIONS

- Extending the voiding trial was successful in preventing an insertion of an indwelling urinary catheter in two patients.
- Next steps for further research:
 - Further study needed with larger patient population to look at two alternatives
 - Compare increase number of straight catheterizations x 4 prior to insertion of indwelling catheter
 - Continuous straight catheterizations without insertion of indwelling urinary catheter
 - Partner with neurosurgery providers for 2400 hour catheter removal versus 0600 hours

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