

Don't Statement:

Don't place or maintain a urinary catheter in a patient unless there is a specific indication to do so.

Statement of Rationale:

Catheter-associated urinary tract infections (CAUTIs) are among the most common healthcare-associated infections (HAIs) in the U.S. Because most CAUTIs are related to urinary catheters, they can largely be prevented by reduced use of indwelling urinary catheters and catheter removal as soon as possible. Because the use of a catheter is sometimes unnecessary, nurses should discuss the need with a physician, patient and/or their caregivers. Each CAUTI episode has been estimated to cost \$600. The cost rises to approximately \$2800 per episode when a CAUTI leads to a bloodstream infection. CAUTIs are responsible for an annual increase of \$131 million in U.S. healthcare costs.

Background:

While certain conditions among hospitalized patients may require the use of a urinary catheter, limiting their use altogether and decreasing the length of use are the most effective methods of reducing patients' exposure to CAUTIs. Previously considered a convenience for nurses and patients, only recently has the impact of catheter use and duration become recognized as directly associated with development of HAIs. Focus on HAIs in general has uncovered the prevalence of CAUTIs, their impact on patient morbidity and the financial consequences for the healthcare system. This heightened awareness has prompted attention to indications for catheter use and recommended for protocols for timely removal, neither of which existed previously among the universal nursing care routines.

Evidence:

Reference	Key Points
Andreesen L, Wilde MH, Herendeen P. Preventing catheter-associated urinary tract infections in acute care: The bundle approach. <i>J Nurs Care Qual.</i> 2012;27(3): 209-217.	Purpose: Quality improvement initiative. Interdisciplinary team developed catheter care bundle based on CDC recommendations. Measured compliance and CAUTI rates. The article describes the bundle, which includes catheter insertion and maintenance. CAUTI rates decreased when the initiative was implemented.
Bernard MS, Hunter K F, Moore KN. A review of strategies to decrease the duration of indwelling urethral catheters and	Purpose: Review of 53 abstracts to identify strategies to reduce catheter insertion time and effect on the duration of catheterization and incidence of CAUTIs. Nine studies addressed the topic. Results:

<p>potentially reduce the incidence of catheter associated urinary tract infections. <i>Urologic Nurs.</i> 2012;32(1):29-37.</p>	<ul style="list-style-type: none"> - Some evidence supports nurse-led or chart reminders to stimulate daily assessment, continuing need and removal. Unknown if one method is more effective than another. <p>Conclusion:</p> <ul style="list-style-type: none"> - Nurse-led and computer-based reminders are both successful in reducing how long urinary catheters remain in place - More research is needed to determine an optimal method of ensuring timely removal of urinary catheters
<p>Meddings J, Rogers MAM, Macy M, et al. Systematic review and meta-analysis: Reminder systems to reduce catheter associated urinary tract infections and urinary catheter use in hospitalized patients. <i>Clin Infect Dis.</i> 2010; 51:550-560.</p>	<p>Inclusion criterion: Evaluate interventions to remove unnecessary catheters and inclusion of 1 relevant outcome and a comparison group.</p> <p>Results:</p> <ul style="list-style-type: none"> - 667 citations; 14 used reminder or stop orders - Urinary catheter reminders and stop orders decreased the rate of CAUTI by half.
<p>Oman, KS, Makic MB, Fink R, et al. Nurse-directed interventions to reduce catheter-associated urinary tract infections. <i>Am J Infect Control.</i> 2012;40(6):548-553.</p>	<p>Changes in practice: Secure catheter; maintain drainage bag lower than level of bladder at all times; empty drainage bag every 8 hours, when 2/3 full, and before any transfer. Refresher on on practices already in place: charge nurse rounds, focus on early removal, use of bladder scanner to prevent reinsertion.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> - CAUTI rates were already low so difficult to determine overall impact. Had some fluctuations. - Reduced catheter days from 400 to 305, decreased length of hospital stay, increased use of bladder scanner, decreased reinsertions to 2. - Discontinuing use of silver alloy-coated catheter did not increase CAUTI rates and saved \$52,000.
<p>Tenke P, Koves B, Johansen TEB. An update on prevention and treatment of CAUTI. <i>Curr Opin Infect Dis.</i> 2014 Feb; 27(1):102-107.</p>	<p>Overview of evidence:</p> <ul style="list-style-type: none"> - Recommendations: avoid unnecessary catheterizations, aseptic insertion, remove ASAP, reminder systems (nurse-led or computer-based). implementation of catheter-care bundles - Evidence does not support routine use of antimicrobial-impregnated catheters - Use of hydrophilic-coated catheters for clean intermittent catheters can reduce the rate of CAUTIs - Suprapubic catheterization is not more effective than urethral catheterization in reducing the incidence of catheter-related bacteremia

References:

Andreesen L, Wilde MH, Herendeen P. Preventing catheter-associated urinary tract infections in acute care: The bundle approach. *J Nurs Care Qual.* 2012;27(3): 209-217.

Bernard MS, Hunter K F, Moore KN. A review of strategies to decrease the duration of indwelling urethral catheters and potentially reduce the incidence of catheter associated urinary tract infections. *Urologic Nurs.* 2012;32(1):29-37.

Chenoweth CE, Gould CB, Saint S. Diagnosis, management, and prevention of catheter-associated urinary tract infections. *Infect Dis Clin North Am.* 2014;28:105-119.

Gould CV, Umscheid CA, Agarwal RK, et al. Guideline for the prevention of catheter-associated urinary tract infections. Centers for Disease Control. 2009.

Lo E, Nicolle LE, Coffin SE, et al. Strategies to prevent catheter-associated urinary tract infections in acute care hospitals. *Infect Control Hosp Epidemiol.* 2014;35(5): 464-479.

Oman, KS, Makic MB, Fink R, et al. Nurse-directed interventions to reduce catheter-associated urinary tract infections. *Am J Infect Control.* 2012;40(6):548-553.

Meddings J, Rogers MAM, Macy M, et al. Systematic review and meta-analysis: Reminder systems to reduce catheter associated urinary tract infections and urinary catheter use in hospitalized patients. *Clin Infect Dis.* 2010; 51:550-560.

Saint S, Greene MT, Kowalski CP, et al. Preventing catheter associated urinary tract infections in the US: A national comparative study. *JAMA Intern Med.* 2013;173(10):874-879.

Stone, PW, Pogorzelska-Maziarz M, Herzig TA, et al. State of infection prevention in US hospitals enrolled in the National Health & Safety Network. *Am J Infect Control.* 2014;42:94-99.

Tenke P, Koves B, Johansen TEB. An update on prevention and treatment of CAUTI. *Curr Opin Infect Dis.* 2014 Feb; 27(1):102-107.

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