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New and revised NPSGs on CAUTIs

Requirement

Effective Jan. 1, 2017, a new National Patient Safety Goal (NPSG) on catheter-associated urinary tract infections (CAUTIs) will apply to accredited nursing care centers, and revised NPSGs on CAUTIs will apply to accredited hospitals and critical access hospitals. The revisions were made to align the NPSGs with current scientific evidence as documented in the 2014 update to *A Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals*.¹

[Hospitals](#)

[Critical Access Hospitals](#)

[Nursing Care Centers](#)

The original requirement addressed in this issue of *R³ Report* was a 2012 National Patient Safety Goal for hospitals and critical access hospitals only.^{1,2}

Rationale

CAUTIs are the most common hospital-associated infections (HAI); 70-80 percent of these infections are attributable to an indwelling urethral catheter.^{3,4} Catheter use is also associated with negative outcomes other than infection, including nonbacterial urethral inflammation, urethral strictures, mechanical trauma, and mobility impairment.^{5,6} The length of time that a catheter is in place contributes to infection.^{7,8,9} So limiting catheter use and duration are important to preventing infection. The daily risk of acquisition of bacteriuria varies from 3 percent to 7 percent when an indwelling urethral catheter remains in situ. An educational intervention that includes catheter indications, timely removal, and correct management, along with the initiation of active surveillance have shown decreases in catheter use and CAUTI rates.¹⁰

The Centers for Disease Control and Prevention (CDC) published guidelines for preventing CAUTI in 1981 and 2009.² The Centers for Medicare & Medicaid Services (CMS) has identified eight conditions – including CAUTI – that have evidence-based prevention guidelines. If these conditions are acquired in the hospital, that hospital will receive reduced payment for that case because CMS believes they can reasonably be prevented through the application of evidence-based guidelines.^{11,12}

Although the prevalence of CAUTI is lower in nursing care centers compared to hospitals, CAUTI can lead to serious complications, including hospitalization.

Reference

The Joint Commission is a member of the HAI-Allied Task Force, a national stakeholder group that developed evidence-based implementation strategies for six high morbidity and mortality HAIs. The strategies were published by *Infection Control & Hospital Epidemiology* in October 2008 as *A Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals*. This publication was updated in 2014.¹ The goal of the implementation strategies was to provide the field with easy-to-use, concise, evidence-based practices that could be implemented to decrease HAIs.

Although the *Compendium* was developed for the hospital setting, the practices cited in the NPSG are also applicable to nursing care centers. According to the Agency for Healthcare Research and Quality (AHRQ), 1-3 million healthcare-associated infections (HAIs) strike nursing home residents annually, contributing to nearly 400,000 deaths each year.¹³

The Centers for Disease Control and Prevention (CDC) states: “Though prevalence of indwelling urinary catheter use in long term care facilities is lower than in the acute care setting, catheter-associated UTI (CAUTI) can lead to such complications as cystitis, pyelonephritis, bacteremia, and septic shock. These complications associated with CAUTI can result in decline in resident function and mobility, acute care hospitalizations, and increased mortality.”²

Level of Evidence

Below is an indication of the level of evidence for elements of performance (EPs) 1, 3, 4 and 5 under the CAUTI NPSG. The level of evidence for each EP is published in the updated *Compendium*.¹

The strategies in the *Compendium* are based on the review of scientific literature by individuals from several professional organizations with expertise in infection prevention and quality improvement. The scientific evidence was assessed using rigorous, standardized criteria. In the absence of a strong evidence base, experts achieved consensus recommendations on strategies where the potential benefits outweigh the potential risk. The *Compendium* integrates recommendations from many groups into a single resource for use by health care providers.

Requirement	Level of evidence
EP 1: Educate staff and licensed independent practitioners involved in the use of indwelling urinary catheters about CAUTI and the importance of infection prevention.	III
EP 3: Develop written criteria, using established evidence-based guidelines, for placement of an indwelling urinary catheter.	III
EP 4: Follow written procedures based on evidence-based guidelines for inserting and maintaining an indwelling urinary catheter. The procedures address the following:	
• Limiting use and duration to situations necessary for patient care	II
• Performing hand hygiene prior to catheter insertion or maintenance care	III
• Using aseptic techniques for site preparation, equipment, and supplies	III
• Securing catheters for unobstructed urine flow and drainage	III
• Maintaining the sterility of the urine collection system	II
• Replacing the urine collection system when required	III
• Collecting urine samples	III
EP 5: Measure and monitor catheter-associated urinary tract infection prevention processes and outcomes in high-volume areas by doing the following:	
• Selecting measures using evidence-based guidelines or best practices	III
• Monitoring compliance with evidence-based guidelines or best practices	III
• Evaluating the effectiveness of prevention efforts	III
Note: Surveillance may be targeted to areas with a high volume of patients using indwelling catheters. High-volume areas are identified through the hospital's risk assessment.	

Table 1: Grading of the Quality of Evidence

Grade	Definition
I High	Highly confident that the true effect lies close to that of the estimated size and direction of the effect. Evidence is rated as high quality when there is a wide range of studies with no major limitations, and there is little variation between studies, and the summary estimate has a narrow confidence interval.
II Moderate	The true effect is likely to be close to the estimated size and direction of the effect, but there is a possibility that it is substantially different. Evidence is rated as moderate quality when there are only a few studies and some have limitations but not major flaws, there is some variation between studies, or the confidence interval of the summary estimate is wide.
III Low	The true effect may be substantially different from the estimated size and direction of the effect. Evidence is rated as low quality when supporting studies have major flaws, there is important variation between studies, the confidence interval of the summary estimate is very wide, or there are no rigorous studies, only expert consensus.

Note: Based on Grades of Recommendation, Assessment, Development and Evaluation (GRADE) and the Canadian Task Force on Preventive Health Care.^{14,15}

Select bibliography

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