EVIDENCE-BASED PRACTICE

Decreasing Catheter-Associated Urinary Tract Infections

Regina Keller, MSN RN CRRN

The physical medicine and rehabilitation doctor on the rehabilitation care unit at Southern Ohio Medical Center (SOMC) in Portsmouth, OH, encourages the discontinuation of an indwelling urinary catheter as soon as possible during a patient's rehabilitation stay. Unfortunately, for various medical reasons, some patients must keep their indwelling urinary catheters. In October 2008, a catheter-associated urinary tract infection (CAUTI) became classified as a “never event”—something that should never occur while a patient is hospitalized—by the Centers for Medicare and Medicaid Services (CMS), and therefore CAUTIs are no longer reimbursable. Knowing this and wanting to provide excellent care to the patient, the SOMC Infection Prevention Committee and the Nursing Standards team identified a need for improvement in the care of patients with indwelling urinary catheters in order to reduce CAUTIs.

Two registered nurses on the rehab care unit were members of the SOMC Infection Prevention Committee and the Nursing Standards team and were involved in the search for evidence-based practice recommendations and the implementation of a process change for the organization. Evidence-based practices and prevention guidelines offered by the Centers for Disease Control and Prevention (CDC) were reviewed, along with recommendations from the Institute for Healthcare Improvement (IHI). SOMC chose the Foley catheter bundle as the evidence-based practice strategy for improvement. The bundle included aseptic technique, insertion procedures, maintenance procedures, catheter removal, and documentation. The strategy was based on studies shared by IHI. IHI reports that urinary tract infections account for about 40% of all the hospital-acquired infections within a year and that 80% of these occur with indwelling Foley catheters. By incorporating the evidence-based practice of the Foley bundle, SOMC was able to report a 16% reduction in CAUTIs in the first year of the study and a 13% reduction in the second year. The Foley catheter kits the organization used were modified to include a silver-coated Foley catheter and a leg attachment device. New nursing protocols were developed by the Nursing Standards team for collection of urine specimens for urinalysis, culture, and sensitivity. These specimen collections are retrieved immediately following Foley insertions to help determine whether the patient had a urinary infection present on admission. If the infection is found to be present on admission, the infection is not counted as a CAUTI. The SOMC infection preventionist collects CAUTI surveillance data institution-wide and reports the information to the SOMC Infection Prevention Committee and the department involved. In addition to the implementation of the new protocol, the rehab care unit continued to switch the urinary catheter bag to a leg bag for the patient while the patient participates in his or her daily therapy. When the therapy is finished, the patient’s nurse switches the leg bag back to the urinary catheter bag for the rest of the evening and night, being cautious to maintain aseptic technique. The nurse and patient’s therapy team keep watch on the leg bag during the therapy day to empty it as needed so it is not too full at any time.

Education on these changes was disseminated to each inpatient unit in the organization by way of the unit educators. Random audits were conducted to ensure that the process was being followed. An in-depth chart review was conducted by the unit manager or designee when a CAUTI occurred. A tool to review appropriate components in the process was provided as part of the chart review. Results of the chart review were reported to the organization-wide safety accountability team and shared with staff at the unit level as appropriate. Sharing the results of the chart review with staff was an educational opportunity for reminding people about the process and what should be documented rather than a punitive step.

The rehab care unit’s CAUTI data are collected, analyzed, and compared through the National Database for Nursing Quality Indicators (NDNQI) with other rehabilitation units. Before the implementation of the evidence-based practice changes with the Foley bundle, the rehab care unit had a CAUTI rate of 4.1 and 4.05 (rate = the number of CAUTIs divided by the number of Foley days x 1,000) in quarters 3 and 4 of 2011, both higher rates than the NDNQI mean for those quarters (3.64 and 3.76, respectively). With the implementation of the new evidence-based practices, the current rehab care unit mean for 2012 is 3.17, in comparison with the NDNQI mean of 7.21. Not only is the rehab
care unit’s number below the NDNQI mean, but the number for each inpatient unit within the organization is also below the NDNQI mean for fiscal year 2012.

Although the goal to discontinue the indwelling urinary catheter as soon as possible upon the patient’s admission to the rehab care unit remains, use of this evidence-based process has been proven to decrease CAUTIs on the rehab care unit for those patients who, because of a medical condition, must keep the indwelling catheter in place during their stay. Researching evidence-based practices and incorporating practice changes will continue to help guide our nursing practice in providing only excellent care to the patients we serve.

Regina Keller, MSN RN CRRN, is the nurse manager of the rehabilitation care unit at Southern Ohio Medical Center in Portsmouth, OH.

Bibliography


Save the Date: Upcoming ARN Webinar on CAUTIs and Pressure Ulcers

Best Practices in Catheter-Associated Urinary Tract Infections (CAUTIs) and Pressure Ulcers: Be a Zero Reporting Facility!

November 14, 2012, 2 pm EST/1 pm CST/noon MST/11 am PST

Registration opens September 17, 2012.

As of October 1, 2012, inpatient rehabilitation facilities are required to report facility-acquired CAUTIs through the National Healthcare Safety Network and pressure ulcers through the Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI). Identification of risk factors and early prevention are the keys to becoming a zero reporting facility. This program will review the definitions of CAUTIs and pressure ulcers established by the Centers for Medicare and Medicaid Services, prevention strategies, and some best-practice initiatives to help your facility be a zero reporter. Visit www.rehabnurse.org for more information on the Webinar as it becomes available.

Price: ARN member, $150; nonmember, $200.