

# Proper Indwelling and External Catheter use to Reduce CAUTI's

## Abstract

Evidence based practice and research shows that the risk for CAUTI's increases each day of catheterization. Research has shown that the rate of inappropriate catheterizations was very high. The conclusion made from the research recommends that catheters be removed as soon as possible in order to decrease the risk of CAUTI's. Interventions to decrease CAUTI and inappropriate catheterization rates includes requiring a new doctor order for the continuation of an indwelling catheter every day and requiring more frequent assessment of the need for a PartWick. This method serves both the doctor and the nurse to assess the patient for the need to continue the PartWick. By implementing these interventions into practice, the rate of CAUTI's, skin breakdowns and inappropriate catheterizations should decrease.



## Recommendations

- Require a new doctor's order for the continuation of an indwelling catheter every day.
- By requiring the doctor to write a new order for a catheter every day, this would force the nurse to assess the patient and/or their chart for the need of the IDC. The nurse is already required to assess the patient and record the need of an IDC every shift, so having the doctor's order to assess the patient will increase the risk of the patient remaining catheterized if they do not get reassessed. Requiring doctors to write a new daily order will also allow them to reassess the data with who they need to be monitoring and reassessing.
- Require more frequent assessment of the need for a PartWick.
- Although the risk for CAUTI development is lower with the PartWick, it is not responsible and there are still side effects with this method. By frequently reassessing the patients need for the continuation of the PartWick and pressure ulcer development. Frequent reassessment also improves documentation.

## Background

Catheter associated UTI's are a huge issue in hospitals today, and their account for a large portion of nosocomial infections. These CAUTI's have a variety of causes and have the ability to affect anyone regardless of age, gender and ethnicity. With that being said, since CAUTI's are preventable with the right studies have in common is that longer duration of catheterization lead to increased risks of CAUTI and older adults are the most common population for inappropriate catheterization. The aim of this study is to prove that: 1) requiring a new doctor's order for the continuation of an indwelling catheter every day and 2) requiring more frequent assessment of the need for a PartWick could lead to a decrease in the amount of CAUTI's and inappropriate catheterizations.

## Evidence

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### Inappropriate use of urinary catheters in elderly patients at a Midwest community teaching hospital

- Documentation of catheterization by nurses and physicians was very low. The study stated, "an order for the catheter was given in 47% of cases, and the rationale for catheterization was documented in only 13% of the charts" (Gosdak et al., 2004).
- "It has been estimated that nosocomial UTI increase the length of hospital stay by 1 to 4 days and a hospital-acquired UTI adds approximately 36% to the cost of hospitalization" (Gosdak et al., 2004).

### Identifying the risk factors for catheter-associated urinary tract infections: a large cross-sectional study of six hospitals

- In a study conducted by BMJ Open (2013), it was found that catheterization increased each additional day of that the risk for CAUTI's increased each additional day of that catheterization (Lara-Kriegel et al., 2013).
- The results of this study showed the following: "at 10 days and 32.2% of patients were CAUTI free, at 30 days and 27.3% at 60 days. This study also found that approximately 12% of patients who have a catheter inserted for 30 days will develop a CAUTI" (Lara-Kriegel et al., 2013).

### A Real-Life Snapshot of the Use and Abuse of Urinary Catheters on General Medical Wards

- The results of this study showed that "The mean duration of catheterization was significantly longer if the doctor knew the IDC was present" (Haley et al., 2011, p. 1214).
- However, this study showed that only 72% of doctors and 57% of nurses knew their patients had IDC's (Haley et al., 2011, p. 1217).
- This study also stated the "insertion date was documented in 82% of patients, indication for IDC in 28%" (Haley et al., 2011, p. 1214).

### Medical device related pressure ulcers in hospitalized patients

- According to the International Wound Journal, patients using any type of medical device were found to be 2.6 times more likely to develop a pressure ulcer (Black et al., 2010).

## Conclusion

All in all, there are additional methods to decrease the risk of CAUTI's with both indwelling and external catheterizations. Requiring doctors to assess the patient's need for the catheter for the need to continue catheterization should decrease the risk of patients remaining inappropriately catheterized and in turn, this would decrease catheter duration. This is a benefit because as research showed, CAUTI risk decreases with longer catheter duration. Having nurses reassess the need for a PartWick is also important in reducing the risk of CAUTI's and skin breakdowns. These changes are fairly simple and do not take much time away from the daily work routine to implement them. CAUTI's remain as one of the most common nosocomial infections. They are uncomfortable for the patient and often lead to longer hospital stays and other health complications. As a healthcare provider one of your main priorities is to make sure the patient is comfortable. With that being said, we need to take every effort to implement these changes into practice to decrease CAUTI rates and patient discomfort.

## Theoretical Framework

### Kobak's theory of comfort is the theory that was used to guide the research for this EBP. Providing comfort is one of the most important factors in healthcare. In an article found while researching Patient Safety, nursing includes the intentional assessment of comfort and needs, the design of comfort measures to address those needs, and the assessment of comfort levels after implementation" (Pripstein, the reassessment of comfort levels after implementation" (Pripstein, 2016). In this EBP, the focus is to decrease the risk of CAUTI's and pressure ulcers and have the potential to cause comfort interventions and have the potential to cause comfort interventions and have the potential to cause comfort interventions.

### Strategies to Prevent Catheter-Associated Urinary Tract Infections in Acute Care Hospitals: 2014 Update

- The Society for Healthcare Epidemiology of America (SHEA) states that, "The daily risk of acquisition of bacteriuria rises from 3% to 7% when an indwelling urethral catheter remains in situ" (Le et al., 2014, p. 464).
- This article also supports the fact that each additional day of catheterization increases the risk of CAUTI's and increases the chance for collection of the bacteria that leads to UTI's.
- This article includes many recommendations to reduce the instances of CAUTI's. One recommendation was, "Conduct daily review during rounds of all patients with urinary catheters by nursing and physician staff to ascertain the necessity of continuing catheter use" (Le et al., 2014, p. 469).

### Care and Management of Patients with Urinary Catheters: A Clinical Resource Guide

- In another article from the Wound, Ostomy and Continence Nurses Society (WOCN) they identified causes and factors related to skin breakdown that included urine leakage and wetness/nouriture from the catheter.

### Inappropriate use of urinary catheters: A prospective observational study

- This is one reason why the reassessment of the need for a catheter is so important. By reassessing these patients who were inappropriately catheterized, they could have caught the mistake and removed it. This could have decrease the length of the patient's hospitalization and risk for CAUTI development (Town et al., 2012).

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