



For females, does the use of external catheters reduce the risk of catheter associated urinary tract infections compared with women who use indwelling Foley catheters?



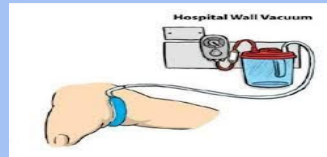
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Abstract

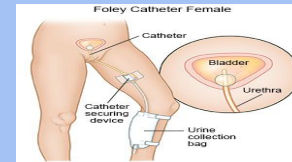
Catheter-associated urinary tract infections are among one of the highest hospital-acquired infections. These infections are most commonly associated with the use of indwelling Foley catheters. The indwelling Foley catheter is placed through the urethra and can remain inserted for prolonged periods of time. This increases the risk for build-up of bacteria, which leads to the urinary tract infection. Due to the increased risk of infection, the external female catheter has now become an alternative. This device is placed externally, between the labia majora, and is changed every eight to twelve hours. This alternative has tremendously decreased the associated risk of urinary tract infections.

Evaluation & Analysis

When evaluating the information provided by the sources, the evaluation has three focal points. According to the theorist, Avedis Donabedian, the three focal points of an evaluation include structure, process, and outcomes (Grove & Gray, 2019, p. 443). The structure of our research is based in acute care settings in hospitals. The process includes the maintenance of a PureWick catheter, which requires the device to be replaced or changed every eight to twelve hours, or when visibly soiled. The desired outcome with use of external catheters would be the reduction of catheter-associated urinary tract infections.



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Conclusion & Implications for Future Research

In the acute care setting, it is difficult to manage female urinary incontinence. With the use of external female catheters, the risk of catheter-associated urinary tract infections decreases tremendously. The use of external female catheters should have a higher implementation rate than that of the indwelling Foley catheters. The indwelling Foley catheter should be used as a last resort, and in the occurrence that one is placed, it should be removed in a timely manner. "The female external urine collection device is a feasible alternative, regardless of patient population or body habitus, to an indwelling urinary catheter and should be considered for prevention of hospital-acquired conditions. It allows for ongoing monitoring of continuous output, aids in the provision of patient dignity, and, reportedly, improves nurse satisfaction" (Beeson & Davis, 2018). Due to the unfamiliarity of the PureWick device, future research should be conducted to find consistent outcomes and results relating to the decrease of catheter-associated urinary tract infections. Although current research has shown that this device does decrease the infection rate, further research should be done to provide more evidence.

Introduction

- A catheter associated urinary tract infection is a device-associated infection that is common in the United States and one of the most common healthcare associated infections worldwide.
- Approximately 12% to 16% of adult hospital inpatients will have an indwelling (urinary) catheter at some time during their hospitalization (Beeson & Davis, 2018).
- The risk of infection increases by 3% to 7% each day the catheter is placed (Beeson & Davis, 2018).
- The alternative to indwelling Foley catheters is now a purewick, which is an external female catheter which is connected to low continuous suction providing a pump mechanism to collect and measure urine output.

Methods

The purpose of this literature review was to enhance and strengthen the evidence that was needed to prove that external female catheters reduce the risk of catheter-associated urinary tract infections (CAUTIs). Databases such as PubMed, Google Scholar, and MEDLINE to find articles dated back no more than five years prior were used. When selecting articles, the abstract was reviewed to ensure that the information is current and relevant to the topic. Each article was relevant in discussing the occurrence of catheter-associated urinary tract infections related to indwelling Foley catheters. Due to the recent use of external female catheters, only a select few of the articles discussed the benefits of using PureWick catheters rather than indwelling Foley catheters. These articles presented commonalities among the reduction of the infection rate.

PICO Question:

P: female patients
I: the use of a female external catheter
C: women with indwelling Foley catheters
O: reduce the risk of catheter associated urinary tract infections

Selected References

- Beeson, T., & Davis, C. (2018). Urinary Management With an External Female Collection Device. *Journal of Wound, Ostomy and Continence Nursing*, 45(2), 187–189.
- Grove, S. K., & Gray, J. R. (2019). *Understanding nursing research: Building an evidence-based practice*. (7th ed.). St. Louis, MO: Elsevier.
- Newton, C., Call, E., & Chan, K. S. L. (2016). Measuring safety, effectiveness, and ease of use of PureWick in the management of urinary incontinence in bed bound women: Case Studies.