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Nurse Education on Decreasing Urinary Tract Infections

Lee Ranalli

Arizona State University

Introduction of the Problem in Nursing

Performing urinary catheterization is a common responsibility performed by nurses in many fields. If the indwelling catheter is not performed or maintained correctly, the catheterization may lead to a urinary tract infection (UTI) in the hospitalized patient. Catheter-related urinary tract infections are caused by bacteria entering and multiplying in the bladder from an indwelling catheter system. When developed in the hospitals, the urinary tract infections tend to be more complicated than that of community acquired UTI. The hospital-acquired infection can affect any age group and gender while the community-acquired affects mainly women. Additionally, another difference is that hospitalized patients who have catheterization have a physical condition causing urinary retention; this leaves the patient unable to eliminate the bacteria that are multiplying in the bladder which are causing the UTI.

A nurse has to be fully aware of the entire catheterization process because bacteria can enter the bladder during or after the catheterization is complete. First, if any part of the inside or outside of the catheter is contaminated during the catheterization it would provide a direct link for the bacteria to access the bladder. Also, it is possible for bacteria to enter through the outlet tube of the drainage bag, the catheter to urethral surface, or where the catheter attaches to the plastic tubing. Finally, nurses need to account for the time period of the catheter in use because the risk of infection increases about 5% with each day it is remains in the patient. (Maki & Tambyah, 2001).

Significance

Urinary tract infections are the most common nosocomial infection in the United States, they account for at least 40% of all in-hospital infections (Orenstein & Wong, 1999). With that high of a percentage that number concludes to be around 1 million cases per year where patients

suffer from a UTI secondary to just being in the hospital. Urinary tract infections develop in the hospital because of contaminated catheters and tend to be more serious than the UTI occurring in the community because hospital related infections can be more resistant to drug treatment and the patients are often poor in health. Orenstein and Wong (1999) cite that the estimated total cost to the United States healthcare system solely due to urinary tract infections is approximately 1 billion dollars annually. Saint (2001) reports that the average cost of urinary tract infections to be from $675 dollars for the antibiotic treatment, but if the bacteria happens to reach the blood and cause bacteremia the additional cost can easily jump to about $2800 dollars.

With the short staffing of nurses and the traffic amongst hospitals it is also unfortunate that the average stay for a patient increases an average of 1-4 days depending on the severity of the UTI (Jarvis, 1996). The goal of the asepsis catheterization program is to reduce hospital-acquired urinary tract infections ultimately leading to lower spending for the patients and the hospital.

Purpose Statement

The purpose of this study is to investigate the effectiveness of an asepsis catheterization program for the prevention of urinary tract infections for patients in a hospital setting.

Hypothesis or Study Question

The first hypothesis for this study is: There will be a decrease in the incidence of urinary tract infections following the initiation of an asepsis catheterization program as compared to prior to the asepsis catheterization program.

The second hypothesis for this study is: There will be a decreased average cost for patients in a hospital setting following the initiation of the asepsis catheterization compared to prior to the infection control program.

Variables

Independent Variable: Asepsis catheterization program

Dependent Variables: 1) Incidence of urinary tract infections

2) Decreased average cost of patients in a hospitalized setting

Extraneous Variables: Underlying diseases, duration of patient stay, differences in medication, environment, immunological state, age, gender

References

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