Student name: _____

Points criteria:

Criteria	Under performance <3 points per criteria	Basic 3 – 3.9 points per criteria	Proficient 4.0 – 4.4 points per criteria	Distinguished 4.5 – 5 points per criteria
Required content objectives	Content objectives are missing or sparsely covered.	Content objectives are not consistently addressed. Demonstrates minimal understanding of content.	Content objectives consistently addressed. Demonstrates understanding of content.	Content objectives consistently addressed. Demonstrates mastery of content.
Academic writing standards	Writing lacks scholarly tone & focus. Sparse content. Multiple grammatical, spelling, & factual errors. Reliance on bullet points rather than effective writing in speaker notes. 4 or more direct quotes per project.	Writing is unclear and/or disorganized. Inconsistent scholarly tone. Inadequate depth of content. Grammatical and spelling errors. No more than 3 direct quote of less than 40 words per project.	Writing demonstrates general exploration of content. Responses are clearly written using scholarly tone. Few grammatical and/or spelling errors. No more than 2 direct quote of less than 40 words per project.	Writing demonstrates comprehensive exploration of content. Responses are clearly written using scholarly tone. Rare grammatical and/or spelling errors. No more than 1 direct quote of less than 40 words per project.
APA formatting	References and citations have multiple errors or are missing.	References and citations have errors.	References and citations have few errors.	References and citations have rare errors.

See course syllabus for reference requirements

Using academic writing standards and APA formatting of references and citations, respond to each of the following learning objectives. Using this document, enter your responses directly next to each objective listed below. Responses should be 150-350 words in length. Be sure to carefully review the assignment rubric on page one for specific details on how this assignment will be evaluated for points. Save the completed document as the assignment title with your name, and submit to the dropbox.

1. Describe the incidence and prevalence of catheter associated urinary tract infection (CAUTI).

Catheter associated urinary tract infection (CAUTI) is a common infection that occurs in both hospitals and in long term care facilities. The incidence and prevalence rate will vary depending on the patient population and setting the data is collected. For example, the prevalence rate may be higher in a long-term care facility where the average age is 70 when is it compared to the patient population in the standard medical surgical floor. In a study completed by Oumer at al, they found that CAUTIs had a prevalence rate of 16.88% and an incidence rate of 28.15% (Oumer et al, 2021). This study used a patient population of 231 patients that had a catheter in place for at least 2 days. Out of the 231 patients, 39 developed a CAUTI. According to this study, they found similar results from previous studies.

2. List factors associated with the development of CAUTI.

"The duration of urine catheter use is the main risk factor for the development of *CAUTI* and bacteriuria. The other potential risk factors including female gender, pregnancy, and conditions like poor nutrition, fecal incontinence, illness severity, and immunocompromised status" (Anggi et al, 2019). The longer the patient has a catheter in place, the higher risk the patient has of developing a CAUTI. Another factor was the female gender and pregnancy. The female is more at risk because all of the perineal openings are very close together and if the catheter is not cleansed properly, it could get contaminated. That is similar to fecal incontinence if stool was to integrate into the urethra causing infection. Illness and the immunocompromised patients are at a higher risk because of the bodies lower defense system to fight any infection that might be occurring. Cleanliness of the perineal area and catheter are important factors in preventing CAUTI. Special attention should be given in patients who are uncircumcised due to bacteria getting trapped.

3. Discuss nursing evidence-based interventions for CAUTI prevention and management.

The American Nurses Association created a CAUTI prevention tool kit for facilities to utilize. “Key practice strategies to reduce CAUTI: 1) fewer catheters used, 2) timely removal and 3) insertion, maintenance and post-removal care” (American Nurses Association, n.d.). The first step to prevention is ensuring that the patient is appropriate for an indwelling urinary catheter (IUC). When the IUC is not needed, and the patient has one in place is should be removed promptly and the nurse should monitor for output following facility protocol. The next thing to consider with proper insertion technique. Only a trained professional should be inserting IUC. Pre-procedure peri-care and hand hygiene is needed. Maintaining a sterile field for inserting is important to prevent contamination of the catheter and tubing. Following insertion, catheter care should be followed per protocol. Cleaning the catheter at least once per shift, frequent emptying of the bag, and prompt cleansing after a bowel movement should be done. The nurse and other care members should be monitoring the catheter frequently to ensure that the catheter/tubing is not obstructed or kinked. That can cause urine not to drain out of the bladder, increasing the risk of a UTI. Lastly, the goal is to keep the catheter in only as long as the patient needs it. The longer the catheter stays in, the increased risk the patient has of developing a UTI. If applicable, the nurse should get a voiding trial order from the doctor to allow the patient to void on their own. If the patient can void without residual, then the catheter should not be needed. The number one infection prevention strategy for all infections is hand washing and should be done when handling indwelling urinary catheters.

4. Identify selection criteria for appropriate indwelling catheter size.

It is important to pick the right catheter size and type when needed for patients in order to decrease any issues like dislodgement or trauma. “Features to be considered include catheter size, catheter tip, balloon size, and catheter material” (Newman, 2022, p.406). The catheter size refers to the length of the tube and the diameter of the tube. The diameter size is labeled as a number then French (16 French). The larger the number, the larger the diameter, meaning an increased risk for damage. The catheter tip refers to the end that is inserted into the urethra and comes in straight and coudé tip. The coudé tip is curved to get around an obstruction like an enlarged prostate. The balloon size refers to the balloon that holds the catheter in place in the bladder. It comes in 10 and 30ml sizes. The balloon must be deflated before catheter removal, or it may cause trauma to the urethra. Lastly is the catheter material. They come in latex, latex free, and silicone based to name a few.

5. Differentiate between a urinary tract infection and colonization.

Urinary tract infection and colonization in urine are similar but different at the same time. "Bacteriuria is the presence of bacteria in the urine and can be classified as symptomatic or asymptomatic" (Crader et al, 2022). A patient is considered colonized with they have bacteria but do not have any symptoms. The bacteria in the urine and the body live in homeostasis. Issues occur when the bacteria and the body start reacting to each other causing symptoms to occur. When the patient starts experiencing signs and symptoms such as pain when voiding, increased frequency of voiding, bloody urine, fever they would be considered to have a urinary tract infection. A urine culture should be collected in order to determine if patient is colonized or has a true infection to avoid unnecessary treatment leading to drug resistant infections.

List your references used for this assignment (*See the course syllabus for specific requirements on references for all assignments)*.

American Nurses Association. (n.d.). *Streamlined evidence-based RN tool: Catheter associated urinary tract infection (CAUTI) prevention*. American Nurses Association. https://www.nursingworld.org/~4aede8/globalassets/practiceandpolicy/innovation--evidence/clinical-practice-material/cauti-prevention-tool/anacautipreventiontool-final-19dec2014.pdf

Anggi, A., Wijaya, D. W., & Ramayani, O. R. (2019, October 14). Risk factors for catheter-associated urinary tract infection and Uropathogen bacterial profile in the intensive care unit in hospitals in Medan, Indonesia. *U.S. National Library of Medicine*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6980809/#:~:text=The%20duration%20of%20urine%20catheter,2%5D%2C%20%5B9%5D.

Crader, M. F., Kharsa, A., & Leslie, S. W. (2022). *Bacteriuria* . National Library of Medicine. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK441848/

Newman, D. K. (2022). Indwelling and intermittent urinary catheterization. In J. M. Ermer-Seltun & S. Engberg (Eds.), *Wound*, *Ostomy*, *and Continence Nurses Society core curriculum: Continence management* (2nd ed., pp.405432). Wolters Kluwer.

Oumer, Y., Dadi, B. R., Seid, M., Biresaw, G., & Manilal, A. (2021). *Catheter-Associated Urinary Tract Infection: Incidence*, *Associated Factors and Drug Resistance Patterns of Bacterial Isolates in Southern Ethiopia*. Dove Press. https://www.dovepress.com/catheter-associated-urinary-tract-infection-incidence-associated-facto-peer-reviewed-fulltext-article-IDR