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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.

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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 complication of catheterization. The incidence and prevalence of CAUTI vary depending on the patient population, the duration of catheterization, and the care provided. It is reported that CAUTIs form about 9% of hospital-acquired infections (Van Decker et al., 2021) with 75% of healthcare associated UTI's being catheter related. The incidence of CAUTI is highest in patients who are catheterized for long periods, such as those in long-term care facilities or those with spinal cord injuries (Al-Qahtani et al., 2019). CAUTI can be as high as 5-10% per day of catheterization in these populations. In hospitalized patients, the incidence of CAUTI varies from 1-5% per day of catheterization. The prevalence of CAUTI also varies depending on the patient population. In acute care hospitals, the prevalence of CAUTI is estimated to be between 3-7% of all hospitalized patients. Higher rates are observed in intensive care units (ICUs), with a prevalence of 25%. In long-term care facilities, the prevalence of CAUTI is even higher, with estimates ranging from 25-50%. This is because many residents of long-term care facilities are older adults with comorbidities that increase their risk of developing infections (Al-Qahtani et al., 2019).

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2. List factors associated with the development of CAUTI.

Several factors can contribute to a patient developing a catheter-associated urinary tract infection (CAUTI). Some of the most common factors include:

- Duration of catheterization: The longer a catheter remains in place, the higher the risk of developing a CAUTI (Al-Hazmi, 2015). According to CDC, ‘one out of three catheter days are unnecessary” one third of providers are unaware their patient has a catheter. This predisposes the patient to an unnecessary longer duration of catheterization.
- Inappropriate use of catheters: Catheters should only be used when necessary, and their insertion should be based on clear medical indications. Unnecessary catheterization or catheterization without clear medical indications can increase the risk of CAUTI (Parker et al., 2017; CDC, 2022).
- Catheter insertion technique: The catheter insertion technique can also impact the risk of CAUTI. Aseptic technique during insertion can help reduce the risk of infection (CDC, 2022).
- Patient factors: Patients with certain conditions, such as diabetes, spinal cord injury, or a weakened immune system, may be more susceptible to CAUTI (Rubi et al., 2022).
- Poor catheter maintenance: Proper catheter maintenance, such as regular cleaning and emptying of the urine bag, can reduce the risk of CAUTI. Improper maintenance, such as failure to empty the urine bag regularly, can increase the risk of infection (CDC, 2022).

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- Contamination during catheterization: Contamination of the catheter or surrounding area during insertion or care can also increase the risk of CAUTI (CDC, 2022).
- Female gender: Women are at a higher risk of developing CAUTI due to the shorter urethra, which allows bacteria to travel more easily to the bladder (CDC, 2022).
- Older age: Older adults are at higher risk of developing CAUTI due to age-related changes in the urinary system and an increased likelihood of having comorbid conditions (CDC, 2022).

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

Preventing and managing catheter-associated urinary tract infection (CAUTI) requires a comprehensive approach that includes patient and staff education, adherence to evidence-based practices, and prompt recognition and treatment of infection. Appropriate use of catheters has been cited as an effective intervention for CAUTI prevention and management. Nurses should assess patients for a catheter and use it only when necessary. They should also ensure that the catheter is removed as soon as possible once it is no longer needed (Gartley, 2022). Proper catheter insertion and maintenance are also effective, with nurses being required to use an aseptic technique when inserting a catheter and maintain proper catheter care to prevent contamination and infection (Christian, 2023).

According to Jones et al. (2022), nurses interested in preventing or managing CAUTI can use bladder scanning or other reminder systems to ensure the timely removal of catheters and reduce the duration of catheterization. In addition, implementing a urinary catheter bundle has proven an effective CAUTI management strategy. A urinary catheter bundle is a set of evidence-based

interventions to prevent CAUTI. Nurses can implement a bundle that includes appropriate use of catheters, hand hygiene, daily catheter review, and timely removal of catheters (Frödin et al., 2022). Moreover, nurses should educate patients and their caregivers on the importance of proper catheter care, the signs and symptoms of CAUTI, and the need for prompt reporting of any changes or symptoms (Jones et al. (2022). Urine culture stewardship is another tiered approach to CAUTI prevention and management. It is paramount to educate clinicians to only order a culture only if symptoms such as pyuria, or fever are present. Promoting the responsible use of antibiotics is also paramount by ensuring they are prescribed only when necessary and appropriate. Overuse and inappropriate use of antibiotics can lead to antibiotic resistance and recurrent infections (Maffucci et al., 2023).

4. Identify selection criteria for appropriate indwelling catheter size.

The selection of an appropriate indwelling catheter size for a patient should be based on several criteria. The catheter size may vary based on the patient's age and gender. For example, female patients generally require a smaller catheter than male patients due to differences in anatomy. Jones et al. (2022) state that the catheter size may also depend on the patient's body size. A larger patient may require a larger catheter to ensure proper urine drainage. The patient's clinical condition should also be considered when selecting a catheter size. For example, patients with severe urinary retention or obstruction may require a larger catheter to ensure proper drainage. Again, the purpose of catheterization may influence the choice of catheter size. For example, a larger catheter may be required if the catheter is being used for irrigation or medication administration. The duration of catheterization has also been found to influence the choice of catheter size. A more extended catheterization period may require a larger catheter to reduce discomfort and

complications. The patient's previous catheterization history should also be considered. Patients who have had difficulty with previous catheterizations may require a smaller catheter to reduce discomfort and complications (Van Decker et al., 2021).

5. Differentiate between a urinary tract infection and colonization.

Urinary tract infection (UTI) and colonization are two concepts related to microorganisms in the urinary tract. UTI is a clinical syndrome caused by invading microorganisms, such as bacteria, into the urinary tract. It is characterized by dysuria, frequency, urgency, suprapubic pain, and fever (Abdullahi et al., 2022). UTI occurs when bacteria enter the urinary tract and cause infection, leading to inflammation and tissue damage. On the other hand, colonization refers to the presence of microorganisms in the urinary tract without causing any symptoms or signs of infection. Colonization is common in patients with urinary catheters and can be considered a risk factor for developing a UTI. It is important to note that colonization does not always lead to infection. However, it may increase the risk of a UTI if the bacteria are not cleared from the urinary tract (Abdullahi et al., 2022).

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

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