

Student name: Katelyn Stickney

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 infections (CAUTI).

Catheter-associated urinary tract infections (CAUTI) have a major impact on patient health and healthcare reimbursement. Urinary tract infections as a whole account for the second-highest leading cause of bacterial infections in the United States and 25% of infections in healthcare settings (Nelles & Ermer-Seltun, 2022). At least half of all hospital-acquired urinary tract infections are caused by *Escherichia coli* (Nelles & Ermer-Seltun, 2022). CAUTI is defined as a urinary tract infection that develops at least 48 hours after an indwelling urinary catheter has been initially placed or the day following the removal of the catheter (Nelles & Ermer-Seltun, 2022). It is reported that CAUTI's account for a total of eighty percent of total urinary tract infections (Newman, 2022). The longer the catheter stays present in a patient, the risk of UTI increases. It has been reported that bacteremia will occur up to ten percent per day of catheters that are present (Fekete, 2022). Of those with bacteremia, up to a quarter of them will go on to develop an infection (Fekete, 2022).

2. List factors associated with the development of CAUTI.

As stated above, a urinary tract infection detected 48 hours after catheter placement or detected one-day following removal is considered a CAUTI. One of the major risk factors for a CAUTI is related to the term of use. Patients with catheters that are being used for long periods of time, such as greater than 6 days, are at the highest risk to develop a urinary tract infection (Newman, 2022). There are also other risk factors that pertain to CAUTI. If a catheter is inserted outside of the operating room, there is a higher risk due to the lack of sterile environment. Patients with a history of diabetes mellitus and malnutrition are also at higher risk for general infection, therefore at higher risk for CAUTI (Newman, 2022). Females are also at higher risk of infection due to the shorter urethra and risk of fecal contamination with catheterization (Newman, 2022). Finally, patients who undergo a catheter placement that was contaminated, in other words the sterile field was compromised, that patient will have a higher risk for urinary tract infection.

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

Nurses have a vital impact on the association of CAUTI. First, CAUTI prevention needs to begin at the initial step of insertion. Indwelling catheter insertion must be done under sterile conditions. If catheterization is difficult, it is worthwhile to consult the LIP or urology team as trauma related to difficult catheterization is linked with a higher likelihood of CAUTI (Newman, 2022). After an indwelling catheter has been placed, it is up to the healthcare team to perform catheter care. Nurses must ensure that the catheter is being washed with soap and water at least twice per day, and when soiled. If a patient is incontinent of stool, this places the patient with an indwelling catheter at a higher risk for CAUTI. This means, patients who are incontinent of stool with an indwelling catheter need increased surveillance to prevent the seepage of stool near the catheter. If the patient is incontinent, the patient should be cleansed thoroughly with soap and water. If a catheter ever needs to be flushed, it is important that the nurse maintain a sterile field by cleansing the port side with alcohol prior to instilling sterile water. It is also important that the healthcare team have the understanding to keep the urinary bag below the waist level to prevent the backflow of urine. Many institutions have begun to implement nursing-driven protocols to discontinue indwelling catheters in patients. The goal of this initiative is to discontinue unnecessary indwelling catheters that may potentially cause an increased risk for CAUTI.

4. Identify selection criteria for appropriate indwelling catheter size.

Catheter size can directly impact patient outcomes. There are many different types of catheters that can be chosen based on the situation. The goal of catheter placement is to ensure adequate drainage of the bladder without providing harm to the patient. When selecting a catheter, the size of the catheter, the design of the tip, the material, and the size of the balloon should be individualized (Newman, 2022). It is also important to consider what will be draining from the bladder. For example, the routine size of a catheter is a 14-french, however, larger sizes such as 16 French or higher should be considered when draining bloody urine that may contain clots, urine with a lot of sediment, or if a 14-french isn't draining adequately (Newman, 2022). If a straight indwelling catheter tip is difficult to pass, or if the nurse knows that the patient has a hypertrophied prostate, a Coude-tip, also known as the curved tip, an indwelling catheter may be better suited (Newman, 2022). Another important consideration the nurse needs to consider is if the patient is allergic to Latex. In this scenario, a hypoallergenic catheter should be chosen.

5. Differentiate between a urinary tract infection and colonization.

It is important to differentiate between urinary tract infection and colonization as this can affect reimbursement rates by Medicare. When patients have an indwelling catheter placed, they are prone to bacterial colonization. Bacterial colonization does not cause any urinary symptoms as compared with a urinary tract infection. For this reason, another term for bacteria colonization is asymptomatic bacteriuria (ASB).

Patients who have long term indwelling catheters, especially those that are in place for greater than 1-month, will have colonization of bacteria. Testing of the urine with culture is not indicated unless the patient has symptoms of a urinary tract infection (Newman, 2022). In order for a catheter-associated urinary tract infection to be confirmed, the patient must have a 38 degrees Celsius or higher temperature, suprapubic tenderness, and/or pain or tenderness at the costovertebral angle (Newman, 2022). If the patient has urinary symptoms as described and a urine culture is performed, then the culture must have no more than two types of bacteria present and one of those need to be in excess of more than 10^5 CFU/mL (Newman, 2022).

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

References

Fekete, T. (2022). Catheter-associated urinary tract infections in adults. *UpToDate*. Retrieved May 5, 2023, from

<https://www.uptodate.com/contents/catheter-associated-urinary-tract-infection-in-adults>

Nelles, K. & Ermer-Seltun J. M. (2022). Urinary tract infection (UTI) prevention and management in adults. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, ostomy, and continence nurses society core curriculum: Continence management* (2nd ed., pp. 382-404). Wolters-Kluwer.

Newman, D. K. (2022). Indwelling and intermittent urinary catheterization. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, ostomy, and continence nurses society core curriculum: Continence management* (2nd ed., pp. 405-432). Wolters-Kluwer.

