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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
<b>Required content objectives</b>	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.
<b>Academic writing standards</b>	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.
<b>APA formatting</b>	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).

A catheter associated urinary tract infection (CAUTI) is defined as a urinary tract infection (UTI) that is complicated by the presence of a foreign body in the urinary tract. This foreign body is usually a catheter that puts the patient at higher risk for developing an infection and compromises the patient's ability to remove bacteria from the lower urinary tract. About 80% of UTIs are associated with the presence of an indwelling urinary catheter (Newman, 2022). Urosepsis and septicemia are severe complications that can occur in relation to having a urinary catheter in place. According to the Center for Disease Control and Prevention (2019), all healthcare-associated urinary tract infections are caused by catheters and that 17% to 69% of CAUTI can be prevented. The Centers for Medicare and Medicaid Services (CMS) changed reimbursement regulations in 2008 because they deemed CAUTI to be preventable. Since then, many care facilities have taken great caution and improved catheter care to reduce the risk of CAUTI (Newman, 2022).

2. List factors associated with the development of CAUTI.

According to Newman (2022), CAUTI can be caused by extraluminal or intraluminal methods. Extraluminal bacteria are transmitted through the skin around the urethral opening and up through the urinary tract. Intraluminal bacteria migrate from the drainage bag as a result of contamination or urinary stasis. Biofilms can also cause CAUTI when they form on the inside or outside of the catheter. Biofilms develop quickly as they can grow as soon as fifteen minutes after catheter insertion. Biofilms grow extremely quickly and are difficult to eradicate. Timing and duration of indwelling urinary catheter placement is the most significant risk factor for CAUTI. The manner in which the catheter is inserted also can put the patient at risk for developing CAUTI as it is a sterile procedure that has risks of contamination. Other factors that put the patient at risk for developing CAUTI is having a female urethra as it is shorter than the

male's and the quality of catheter care. Many facilities have different standards of catheter cares, but all have a requirement for frequency and method of catheter care to prevent CAUTI.

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

According to Werneburg (2022), shortening the duration of time that the catheter is in place is the most important factor in mitigating the risk of a catheter associated urinary tract infection (CAUTI). With this in mind, it is vital that the necessity for the catheter be assessed once or twice daily and discussed with the primary care team to determine if the catheter is medically necessary. There are also alternative bladder drainage techniques that can be employed such as intermittent catheterization and external catheters. As CAUTI is treated with antibiotics, some healthcare providers utilize antibiotics for prevention but there is little evidence to support this practice and increases the risk for antibiotic resistance. Regular intake of cranberry juice can be beneficial for urinary tract health as it disrupts the adherence of bacteria to the uroepithelium. Catheter irrigation is used occasionally to prevent and treat CAUTI but there is little evidence to support the efficacy of irrigation. Therefore, this practice is not recommended (Newman, 2022).

4. Identify selection criteria for appropriate indwelling catheter size.

The typical size of an indwelling catheter is 14 Fr. Larger catheter sizes such as 16 or 18 Fr are used post genitourinary surgery when bleeding may be anticipated (Newman, 2022). Large catheters can increase the risk for bladder spasms. Bladder spasms can be extremely painful and places the patient at risk for leakage. The size of the balloon which sits at the base of the bladder is also very important. Tension on the catheter and large balloon weight on the bladder neck and sphincter can cause damage and incompetence of its function (Newman, 2022). It may be tempting to use a large catheter to reduce the risk of it becoming displaced, but using a large catheter can increase leakage, bladder spasms, and even cause damage to parts of the urinary tract. Securing the catheter properly is the most efficient method of optimizing urine drainage and preventing complications for catheter function.

5. Differentiate between a urinary tract infection and colonization.

According to Newmann (2022), within a few days, all patients with catheters will develop microbial colonization. This leads to a condition known as ASB which does not require treatment and does not result in any symptoms. The development of ASB is inevitable in patients who have long-term catheters. It is important to remember that all of these patients will have bacteria present in their urine but cultures are only indicated if the patient becomes symptomatic. CAUTI on the other hand does require treatment and

does produces symptoms such as fever, suprapubic tenderness, flank pain, odor, increased restlessness, confusion, and pyuria. According to the Center for Disease Control and Prevention (2019), there are criteria to follow when diagnosing CAUTI. The catheter must be in place for two days, have a positive urine culture with no more than two organisms, and at least one of the following symptoms: fever, suprapubic tenderness, and/or costovertebral angle pain.

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

Center for Disease Control and Prevention. (2019). Urinary tract infection (catheter-associated urinary tract infection [CAUTI] and non-catheter-associated urinary tract infection [UTI]) and other urinary system infection [USI] events. Device-associated Module. UTI. 7.1-7.17 National Healthcare Safety Network (NHSN) Patient Safety Component Manual. Retrieved from <https://www.cdc.gov/nhsn/PDFs/pscManual/7pscCAUTICurrent.pdf>

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. 405–427). Wolters-Kluwer.

Werneburg G. T. (2022). Catheter-Associated Urinary Tract Infections: Current Challenges and Future Prospects. *Research and reports in urology*, 14, 109–133. <https://doi.org/10.2147/RRU.S273663>