Student name: Dyann Stewart

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). In a journal article review on the incidence and prevalence of catheter-associated urinary tract infections, the study revealed that 75% of hospital-acquired urinary tract infections were related to CAUTI. The analysis also revealed that 15-25% of adult patients required an indwelling catheter in the acute care setting (Ma et al., 2020). Due to the high rates of CAUTIs acquired in an inpatient acute care hospital setting, it is crucial to investigate alternative methods and prevention measures to decrease the percentage of indwelling catheter usage, thus reducing the risk of developing a catheter-associated urinary tract infection. Assessing the risk versus the benefit of utilizing other methods, such as external condom catheters for men or PrimaFit external catheters for women and the PrimoFit for men, are options to consider. These methods would decrease the chance of developing a CAUTI, thus reducing the risk of developing a systemic infection. In addition, using alternative methods would significantly reduce the cost associated with CAUTIs.

2. List factors associated with the development of CAUTI. Many factors can be attributed to the development of a CAUTI. A catheter-associated urinary tract infection (CAUTI) stems from an indwelling catheter, disrupting the body's natural ability to eliminate bacteria from the body. One of the most common risk factors for developing a CAUTI is the extended use of an indwelling catheter for more than

six days (Newman, 2022). Assessing the earliest removal time of the catheter is imperative for preventing a urinary tract infection, thus resulting in a catheter-associated urinary tract infection.

Additional risk factors are a breach in sterile technique during the insertion of the catheter, improper perineal and catheter cleaning while the catheter is in place, the presence of fecal content introduced in the perineal area, stagnated or backflow of urine in the catheter tube that can flow back into the bladder, thus introducing bacteria into the urinary tract. Other risk factors include a break in the closed system while exchanging drainage bags, which increases the risk of contamination. An additional risk factor is the development of a biofilm on the catheter that can migrate into the bladder. Biofilm development can occur immediately after insertion of the catheter and can cause an increase in bacteria growth in a short period (Newman, 2022). If left untreated, this infection can become systemic, leading to sepsis.

3. Discuss nursing evidence-based interventions for CAUTI prevention and management. Catheter-associated urinary tract infection (CAUTI) prevention measures are essential in reducing the incidence of developing an infection. Assessing the need for an indwelling catheter is paramount to prevention and management, and other avenues must be explored before catheter placement is deemed medically necessary, such as the use of external catheter devices, pouch, suction collection devices, absorbent pads, or intermittent catheterization (Newman, 2022).

   In cases where an indwelling catheter is deemed medically necessary, strict measures must be considered for infection prevention. Some prevention measures to consider are incorporating a CAUTI prevention bundle by ensuring sterile techniques are used during catheter

insertion and by adhering to good hygiene practice by washing the hands for at least twenty seconds while singing the happy birthday songs twice as a guideline for proper hand hygiene. In addition, other prevention measures are routine cleaning of the perineal area and cleaning the catheter tube. When performing perineal care, it is essential to clean the perineal area from front to back using a clean cloth with warm soap and water or approved incontinence wipes. Incorporating the Enhanced Recovery After Surgery (ERAS) protocol for postoperative patients supports early catheter removal by 6:00 am on postoperative day one (Nelson et al., 2019).

4. Identify selection criteria for appropriate indwelling catheter size. When using an indwelling catheter, nursing staff must consider specific selection criteria for the correct device placement, such as the catheter size, catheter tip, balloon size, material, and catheter type. The outcome of urinary catheterization is to achieve adequate drainage while decreasing harm or potential complications when using the drainage system. The catheter sizes can range from 5Fr to 30Fr, with selection usage of the sizes based on the patient's age and indicated catheter use (Newman, 2022). The most used catheter sizes are the 14Fr for urinary complications; in contrast, the 20 - 24Fr are designed to support drainage in the presence of hematuria or blood clots (Newman, 2022). Avoidance of larger catheter sizes is recommended to prevent damage to the bladder neck, and urethral mucosa. When using the indwelling catheter, assessing the patient for allergies is essential to the proper selection, as the catheters are made from various latex materials that could cause sensitivity. It is also important to assess how long the catheter will be needed as specific catheters are designed for short and long-term use (Newman, 2022).

5. Differentiate between a urinary tract infection and colonization. Urinary tract infection (UTI) is the presence of bacteria within the urinary tract, characterized by symptoms of flank pain, frequency, urgency, and burning with urination with or without the absence of a fever. The infection may be present in the upper or lower urinary tracts, with a higher risk of infection in women (Nelles & Ermer-Seltun, 2022). With a bacterial infection, a urine culture sample is vital to identify the infection's source and select the appropriate antibiotic to resolve the infection.

   In contrast, bacterial colonization is present with complicated urinary tract infections where the bacteria resist antibiotic therapy. Complicated UTIs are seen with underlying medical conditions with prolonged use of a catheter, such as patients with stent placement, immunosuppression, chemotherapy, pregnancy, and renal disease (Nelles & Ermer-Seltun, 2022). Colonization is usually found during routine urine cultures as it can be present without known infection symptoms. In closing, UTIs usually respond to antibiotic therapy, whereas colonization is resistant.

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

References

Ermer-Seltun, J. M., & Engberg, S. (2022). Continence care nursing: An overview. In J. M. Ermer-Seltun & S. Engberg (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Continence management* (2nd ed., pp. 34-41). Wolters Kluwer.

Ma, G.W., O'Neill, C., & Mertz, D. (2020). Correlating incidence densities and point-prevalence for the surveillance of catheter-associated urinary tract infections. *American Journal of Infection Control*, 48(11), 1393–1395. https://doi.org/10.1016/j.ajic.2020.01.003

Nelles, K., & Ermer-Seltun, J. M. (2022). Urinary tract infection (UTI) prevention and management in adults. In J. M. Ermer-Seltun & S. Engberg (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Continence management* (2nd ed., pp. 382-401). Wolters Kluwer.

Nelson, G., Bakkum-Gamez, J., Kalogera, E., Glaser, G., Altman, A., Meyer, L. A., Taylor, J. S., Iniesta, M., Lasala, J., Mena, G., Scott, M., Gillis, C., Elias, K., Wijk, L., Huang, J., Nygren, J., Ljungqvist, O., Ramirez, P. T., & Dowdy, S. C. (2019). Guidelines for perioperative care in gynecologic/oncology: Enhanced recovery after surgery (ERAS) society recommendations—2019 update. *International Journal of Gynecological Cancer*, 29(4), 651–668. https://doi.org/10.1136/ijgc-2019-000356

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.