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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.

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 infections make up 25% of the all infections recorded each year (Nelles & Ermer-Seltan, 2021). Catheter associated urinary tract infections make up the highest amount of hospital acquired infections year to year. The bacteria Escherichia coli (E. coli) is responsible for the most common cause of urinary tract infections, both community acquired and hospital acquired (Nelles & Ermer-Seltan, 2021). Urinary tract infections are more common in women, by age 24, one in three women have had a urinary tract infection (Nelles & Ermer-Seltan, 2021). Men most commonly develop urinary tract infections after the age of 50 because of structural problems within their anatomy, like prostate enlargement of ureter obstructions. The risk for a bladder infection increases as we get older, as does the decreased ability to fight infection as we age.

2. List factors associated with the development of CAUTI.
 - a. The presence of a foreign body in the urinary tract alters the body's ability to eradicate bacteria from the lower urinary tract (Newman, 2021). The main risk for developing a catheter associate urinary tract infection is the extended use catheters, for great than six days. Female gender and anatomy can be included in as risk factors as women have a shorter urethra and are more susceptible to infection because of this. A catheter inserted outside of the operating room, as a regular hospital room anywhere in the hospital is not a sterile environment. If the patient is receiving any urology procedures, trauma to this area can place them at risk. Medical diagnosis of diabetes mellitus, malnutrition or azotemia can contribute to a higher risk for urinary tract infections from catheters (Newman, 2021). Patients with an indwelling catheter who are not properly cleansing the area, or if unable to clean themselves, are not being properly cleansed are at risk because of the build up of biofilm. Although the use of iodine for washing is not recommended, just simply soap and water for cleansing the meatus is recommended. Biofilm will create a place for the bacteria to hold onto and create infection in the urinary tract, there have been no products or practices associated with preventing the development of biofilm (Newman, 2021). Pregnancy puts the patient at a higher risk for urinary tract infection as does disease of the renal system and therefore careful consideration should be used for

placing catheters in these patients. Although if the pregnant patient is going to have an epidural, a foley catheter is inevitable for this process.

3. Discuss nursing evidence-based interventions for CAUTI prevention and management.
 - a. The reeducation and education of nursing staff to aseptic urinary catheter insertion, with the emphasis on catheter associated urinary tract infection (CAUTI) prevention. It should be the mission of the entire staff taking care of the patient with a catheter to avoid CAUTIs from occurring on the unit. Surveillance data and review of this data is crucial to the upkeep of maintaining a CAUTI free environment. Not only does a staff member or management person need to collect the data on indwelling catheter maintenance, but that data needs to be reviewed (Mrziglod, et. al, 2023). This data includes, proper documentation of insertion, labeling the catheter bag so that there is a known date of length of insertion, viewing the bag at a lower height than the patient to prevent backflow of urine. Proper and ideal selection criteria is to be monitored by nursing and medical staff, ensuring the necessity for the catheter, if not necessary this prevents the opportunity for infection. Other maintenance options for infection prevention are: ensuring there are no breaks in aseptic technique or disconnection from the drainage tubing thus breaking the seal of the system, if this were to happen then the entire system should be replaced. The bag's tubing should never be kinked or folded ensuring that urinary flow is never obstructed. Drainage bags should be emptied at least once per shift, keeping an eye on the rate of urination also clues that primary nurse as to when to empty the bag (Technical Intervention, n.d.). Standard precaution should be used when handling the drainage bag, changing the system for the prevention of a CAUTI is also not recommended. Avoiding irrigation, as it has not been shown to help prevent the buildup of biofilm (Newman, 2021). If a sample needs to be collected, depending on the nurse's institution in regard to use of port for collection, sterilize the port before collection (Technical Intervention, n.d.).
4. Identify selection criteria for appropriate indwelling catheter size.
 - a. Catheter size is the outer diameter measurement, known as the French scale, when referencing the size of a foley catheter placed you will commonly here "I placed a 16 French" documented as 16Fr. The standard size for adults is 14Fr, but sometimes a particular size may be recommended for specific anatomical or urologic reasons (Newman, 2021). Larger sizes can cause more harm, "erosion to the bladder neck and urethral mucosa" (Newman, 2021). If drainage of blood clots with hematuria is necessary for the patient, a larger French size could be used, 20-24 French. There are also longer and shorter length sizes for pediatric patients or smaller adults. For premature infants to toddlers who weigh up to 30 kilograms, a 5-8 French size is recommended from the wound, ostomy and continence

nurses society guidelines (Newman, 2021). For school age children up to age 12 or depending on the age the child has started puberty, 8-10 French is used. Lastly is there is an obstruction for an adult 20-24 French is used, and with bleeding from the prostate a 30 French is recommended (Newman, 2021).

5. Differentiate between a urinary tract infection and colonization.
 - a. Colonization is the overgrowth of a particular bacteria in the urinary tract without experiencing symptoms, some people can live with a chronic overgrowth that when irritated by outside factors can lead to a urinary tract infection. Bacterial colonization can be caused incomplete bladder emptying, long term catheter use and ureteral stents all of these can leave an accumulation of bacteria which can colonize (Nelles & Ermer-Seltun, 2021). Colonization can also be noted as asymptomatic bacteriuria (ASB), which is more common in women who are postmenopausal and frail, living in community settings. ASB is not life threatening and should not be treated with antibiotics because it will leave the patient who experiences reoccurring urinary tract infections with multi drug resistant organisms. Urinary tract infections are most often caused by e.coli which is commonly found in the gastrointestinal tract and therefore in women because of close proximity to the urethra, infections occur more commonly (Nelles & Ermer-Seltun, 2021). Urinary tract infections (UTI) occur with a patient experiencing symptoms like fever, chills, frequency, burning sensation upon urination, hematuria, nausea and vomiting, nocturia, malodorous urine. In elderly patients, altered mental status, dizziness and hypotension and symptoms in addition to usual UTI symptoms (Nelles & Ermer-Seltun, 2021). Systemic diseases that can increase the risk factors for developing UTIs are: diabetes, kidney disease, malignancy, HIV and other immunosuppressive diseases (Nelles & Ermer-Seltun, 2021). As well as alternations to the function or structure of bladder organs or structure.

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

References:

Mrziglod, L., Saydan, S., Schwab, F., Zohlnhöfer-Momm, D., Gastmeier, P., & Hansen, S. (2023). Reducing urinary catheter use in geriatric patients - results of a single-center champion-led intervention. *BMC Infectious Diseases*, 23(1), 94.
<https://doi.org/10.1186/s12879-023-08064-8>

Nelles K. & Ermer- Seltun, J. (2021). 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., 381-403). Wolters Kluwer.

Newman, D.K. (2021). 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., 404-431). Wolters Kluwer.

Technical Intervention to Prevent CAUTI. (n.d.). Agency for Healthcare Research and Quality.
www.ahrq.gov/hai/cauti-tools/guides/implguide-pt3.html