N311 Care Plan # 3

Lakeview College of Nursing

Name Jamario Jeffries

Demographics (5 points)

Date of Admission	Patient Initials	Age	Gender
08/01/XX	J.J	78	FEMALE
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
WHITE	RETIRED	SINGLE	NKA
Code Status	**Height**	**Weight**	
FULL CODE	170 cm	71kg	

Medical History (5 Points)

Past Medical History: Congestive Heart Failure and Diabetes Mellitus.

Past Surgical History: None

Family History: None

Social History (tobacco/alcohol/drugs): None

Admission Assessment

Chief Complaint (2 points): Pain with urination

History of present Illness (10 points): Patients urosepsis started about a week ago and tried taking cranberry pills to aid in the relief of it. Pain is in the lower abdomen and feel sharp and still burns when she urinates. It's a stabbing pain sometimes throughout the day, and when she urinates, going to the bathroom aggravates the pain/burning sensation. The patient is not taking any medications for it.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Urinary Tract Infection

Secondary Diagnosis (if applicable): Urosepsis

Pathophysiology of the Disease, APA format (20 points):

Urinary incontinence (UI) is silent, and most people do not seek medical attention (Capriotti, 2020). Women are more likely to develop UI and are hesitant to discuss it because of embarrassment (Capriotti, 2020). Urinary incontinence has multiple different types; stress, urge or overactive bladder, overflow, neurogenic bladder, functional, and mixed (Capriotti, 2020). UI can lead to urinary tract infections (UTI) if not caught early. UTI's are most commonly the result of a bacterial infection caused by the organism Escherichia coli (E. coli) and is responsible for 75% to 90% of all urinary tract infections (Capriotti, 2020). Typically, the urinary tract is sterile, and bacterial flora generally is confined to the urethral opening (Capriotti, 2020). Normally, immunoglobulin A (IgA), secreted by white blood cells in the urinary tract, also prevents adherence of bacteria to the bladder wall (Capriotti, 2020). However, many women are not secretors of IgA, therefore making them more susceptible to bacteria growth in the bladder (Capriotti, 2020). However, when the urine flow is stagnant is becomes a garden for bacterial growth, allowing the bacteria from the urethral opening to travel up the urethra and into the bladder (Capriotti, 2020). There are two types of anatomical UTI's upper and lower (Aggarwal & Singh, 2010). Untreated lower UTIs and stagnant urine in the bladder can lead bacteria to travel up the ureters and will lead to an upper UTI (Aggarwal & Singh, 2010). Upper UTI infections are more likely to become severe or life-threatening due to the kidney's connectivity to the circulatory system (Aggarwal & Singh, 2010).

UTI's throughout the clinical presentation; the patient is likely to experience dysuria, urgency, and occasional hematuria. The symptoms of a UTI by the inflammation and edema of the urethra and bladder. Also, in UTIs, the patient will experience urinary retention; this is where the bladder does not empty, therefore leaving stagnant urine in the bladder to collect (Aggarwal & Singh, 2010). The patient will most likely have urgency, which is the sensation of emergent urination; however, the patient will void small amounts of urine, furthermore, leaving stagnant urine in the bladder (Aggarwal & Singh, 2010). Rarely some patients might experience suprapubic tenderness with lower UTI's (Aggarwal & Singh, 2010). However, patients with upper UTI's might experience flank pain (Aggarwal & Singh, 2010), fever and chills, unilateral costovertebral tenderness, nocturia, and bacteremia (Aggarwal & Singh, 2010). Upper UTIs can become systemic because of the glomeruli and the connection to the circulatory system (Aggarwal & Singh, 2010). Urosepsis is a condition caused by bacteremia, and a detrimental complication of a UTI if not promptly treated (Capriotti, 2016). Patients with urosepsis can experience, such as chills, confusion, disorientation, hypotension, and fever (Capriotti, 2016). Upon admission, our patient was A&L x3, however as the urosepsis set in her mental status also progressively worsened by her asking, "where am I?".

When diagnosing a possible lower UTI, a urinalysis and urine culture is done as a confirmatory test (Aggarwal & Singh, 2010). A dipstick with red blood cells, positive leukocyte esterase, and nitrates are all indicative of a UTI (Aggarwal & Singh, 2010). A diagnostic urinalysis test was completed to support the symptoms of the patient having a UTI (Capriotti, 2016). In treating a regular UTI, antibiotics are the standard (RN Adult Medical-Surgical Urinary Tract Infection, n.d.). Nitrofurantoin and trimethoprim-

sulfamethoxazole are the most common types of medicines prescribed (RN Adult Medical-Surgical Urinary Tract Infection, n.d.). Treatment of urosepsis is not as natural as prescribing antibiotics; they will require oxygen to avoid hypoxia and septic shock. Our patient's requirement for oxygen progressively increased, starting at 2 liters and eventually increasing to 6 liters (Urosepsis: Symptoms, treatment, and complications, n.d.). The use of fluids in sepsis is dire to improve the patient's status (Avila et al., 2016). In our patient's case, the use of lactated ringers may increase oxygen consumption (Avila et al., 2016).

Pathophysiology References (2) (APA):

Aggarwal, S., & Singh, H. (2010). Approach to urinary tract infections. Indian Journal of Nephrology, 20(2), 118. https://doi.org/10.4103/0971-4065.65311

Avila, A. A., Kinberg, E. C., Sherwin, N. K., & Taylor, R. D. (2016). The Use of Fluids in Sepsis. Cureus. https://doi.org/10.7759/cureus.528

Capriotti, T., & Frizzell, J.P. (2016) Pathophysiology: Introductory concepts and clinical perspectives. (1st ed.). Philadelphia, PA: F.A. Davis Company.

Urosepsis: Symptoms, treatment, and complications. (n.d.). Www.Medicalnewstoday.Com. Retrieved March 25, 2020, from https://www.medicalnewstoday.com/articles/320401#prevention

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	**4.2-5.4**	**n/a**	**4.8**	**Normal**
Hgb	**12.0- 16.0**	**n/a**	**11.3 (low)**	**Acute reduction in hemoglobin levels is frequently seen in urosepsis (Muady et al., 2016)**
Hct	**37.0-47.0**	**n/a**	**33 (low)**	**Acute reduction in hemoglobin levels is frequently seen in urosepsis (Muady et al., 2016)**
Platelets	**140.0-440.0**	**n/a**	**220,000 mm^3**	
WBC	**4.0-10.0**	**n/a**	**13,000**	

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal
Na-	**136-145 mEq/L**	**n/a**	**135 mEq/L**	**Patients with urinary retention are more likely to experience lower sodium levels (Mahajan & Simon, 2013).**
K+	**3.5-5.1 mEq/L**	**n/a**	**4.4 mEq/L**	**Normal**
Glucose	**74-109**	**n/a**	**92**	**Normal**
BUN	**7-25 mg/ dL**	**n/a**	**21 mg/ dL**	**normal**
Creatinine	**0.7-1.30 mg/dL**	**n/a**	**1.0 mg/ dL**	**Normal**
Albumin	**3.5-5.7 mg/ dL**	**n/a**	**3.2 mg/ dL**	**Patients with low albumin levels in the blood can be indicative of kidney damage ((Albumin (Urine) - Health Encyclopedia - University of Rochester Medical Center, n.d.)**

				)
Calcium	**8.6-10.3 mg/dL**	**n/a**	**9.0 mg/ dL**	**Normal**
Phosphate	**2.5-4.5 mg/ dL**	**n/a**	**3.7 mg/ dL**	**Normal**

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	**Straw-colored**	**n/a**	**Cloudy, and slightly amber**	**The cloudiness and slightly amber color come from the urinary retention and infection of the bladder (Urine Test | Kaiser Permanente, n.d.).**
pH	**Acidic (5.5-6)**	**n/a**	**5.6**	**Normal**
Specific Gravity	**1.003-1.030**	**n/a**	**1.039**	**The urine has a high specific gravity because of the higher number of constituents (Urine Test | Kaiser Permanente, n.d.).**
Glucose	**negative**	**n/a**	**negative**	**Normal**
Protein	**Negative or trace (<30 mg/dl)**	**n/a**	**2 mg/dL**	**Normal**
Ketones	**negative**	**n/a**	**negative**	**Normal**
WBC	**0-5/hpf**	**n/a**	**10**	**Higher levels of WBC in the urine is indicative of a UTI (Urine Test | Kaiser Permanente, n.d.).**
RBC	**0-4 cc**	**n/a**	**4-6**	**Normal**
Leukoesterase	**negative**	**n/a**	**positive**	**Leukoesterase present in the urine is indicative of an active UTI (Urine Test | Kaiser Permanente, n.d.)**

(RN Adult Medical-Surgical Urinary Tract Infection, n.d.)

(Urinalysis (General & Microscopic), n.d.)

Lab Correlations Reference (APA):

Albumin (Urine) - Health Encyclopedia - University of Rochester Medical Center. (n.d.). Www.Urmc.Rochester.Edu. Retrieved March 26, 2020, from https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=167&contentid=albumin_urine

Mahajan, R., & Simon, E. G. (2013). Urinary Retention as a Cause of Hyponatremia in an Elderly Man. Indian Journal of Clinical Biochemistry, 29(2), 260–261. https://doi.org/10.1007/s12291-013-0378-0

RN Adult Medical-Surgical Urinary Tract Infection. (n.d.). Scorm.Atitesting.Com. Retrieved March 25, 2020, from http://scorm.atitesting.com/courses/defaultID/57d807d8-8143-47d3-8da1-a30d2ac196fe/3/launchpage.html

Urinalysis (General & Microscopic). (n.d.). Www.Uncmedicalcenter.Org. Retrieved March 25, 2020, from https://www.uncmedicalcenter.org/mclendon-clinical-laboratories/available-tests/urinalysis-general-microscopic/

Urine specific gravity test: Procedure and results. (n.d.). Www.Medicalnewstoday.Com. https://www.medicalnewstoday.com/articles/322125#results

Mahajan, R., & Simon, E. G. (2013). Urinary Retention as a Cause of Hyponatremia in an Elderly Man. Indian Journal of Clinical Biochemistry, 29(2), 260–261. https://doi.org/10.1007/s12291-013-0378-0

Muady, G. F., Bitterman, H., Laor, A., Vardi, M., Urin, V., & Ghanem-Zoubi, N. (2016). Hemoglobin levels and blood transfusion in patients with sepsis in Internal Medicine

Departments. BMC Infectious Diseases, 16(1). https://doi.org/10.1186/s12879-016-1882-7

Urine Test | Kaiser Permanente. (n.d.). Healthy.Kaiserpermanente.Org. Retrieved March 28, 2020, from https://m.kp.org/health-wellness/health-encyclopedia/he.hw6580

Diagnostic Imaging

- **Chest X-Ray**
- **Left hip and Femur X-Ray**
- **Left elbow X-Ray**

Diagnostic Imaging References:

RN Adult Medical-Surgical Urinary Tract Infection. (n.d.). Scorm.Atitesting.Com. Retrieved March 25, 2020, from http://scorm.atitesting.com/courses/defaultID/57d807d8-8143-47d3-8da1-a30d2ac196fe/3/launchpage.html

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	**Glyburide (glibenclamide)**	**Levofloxacin (Levaquin)**	**Digoxin (Lanoxin)**	**Acetaminophen (Tylenol)**	**Lactated Ringers (Dextrose)**
Dose	**2.5 mg**	**250 mg**	**0.25 mg**	**325 mg**	**30 mL/hr**
Frequency	**Daily (morning)**	**Every twelve hours**	**Immediately, then prn**	**Every 4 hours**	**On the hour**
Route	**PO**	**iV**	**PO**	**PO**	**IV**
Classification	**Antidiabetic**	**Antibiotic**	**Antiarrhythmic**	**Antipyretic. Nonopioid analgesic**	**Glucose-elevating agent. Nutritional**

					Supplement.
Mechanism of Action	**Stimulates insulin release from beta cells in the pancreas. Glyburide also increases peripheral tissue sensitivity to insulin either by enhancing insulin binding to cellular receptors or by increasing the number of insulin receptors.**	**Interferes with bacterial cell replication by inhibiting the bacterial enzyme DNA gyrase, which is essential for repair and replication of bacterial DNA.**	**Increases the force and velocity of myocardial contraction, resulting in positive inotropic effects. Digoxin produces antiarrhythmic effects and increasing the effective refractory period of the AV node.**	**It inhibits the enzyme cyclooxygenase, blocking prostagland in production and interfering with pain impulse generation in the peripheral nervous system. Acetaminophen also acts directly on the temperature-regulating center in the hypothalamus by inhibiting the synthesis of prostagland in E_2.**	**Prevents nitrogen and protein loss, promotes glycogen deposition, prevents or decreases ketosis, and, in large amounts, acts as an osmotic diuretic. Dextrose is readily metabolized and undergoes oxidation to carbon dioxide and water. The oral for-glucose-is absorbed from the intestines and is distributed, stored, or used in the liver.**
Reason Client Taking	**To control blood glucose levels.**	**To stop any infections, the patient might experience from the UTI.**	**To treat the patient's congestive heart failure.**	**To assist with the pain from the femur fracture.**	**To treat insulin-induced hypoglycemia. Hydration and to increase urine**

					production.
Contraindications (2)	**Concurrent therapy with bosentan; diabetic ketoacidosis; hypersensitivity to glyburide, sulfonylureas; or their components; ketoacidosis; type 1 diabetes mellitus**	**Hypersensitivity to levofloxacin, other fluoroquinolones, or their components; myasthenia's gravis.**	**History or presence of digitalis toxicity or idiosyncratic reaction to digoxin, hypersensitivity to digoxin or its components, ventricular fibrillation, ventricular tachycardia unless heart failure occurs unrelated to digoxin therapy.**	**Hypersensitivity to acetaminophen or its components, severe hepatic impairment, severe active liver disease.**	**Diabetic coma with excessively elevated blood glucose level. For all concentrated solutions: anuria, alcohol withdrawal syndrome in a dehydrated patient, glucose-galactose malabsorption syndrome, hepatic coma, hypersensitivity to corn or corn products, intracranial or intraspinal hemorrhage, overhydration, severe dehydration**
Side Effects/ Adverse Reactions (2)	**Hypoglycemia Thrombocytopenia.**	**Hypoglycemia. Hepatitis.**	**Arrhythmias. Electrolyte imbalances.**	**Hypotension Stridor**	**Hypotension. Venous thrombosis.**

(2020 Nurse's drug handbook., 2020b)

Medications Reference (APA): 2020 Nurse's drug handbook. (2020b). Jones & Bartlett

Assessment

Physical Exam (18 points)

GENERAL: **Alertness: A&L X 2** **Orientation: A&L X2** **Distress: The patient appears to be in distress, evidenced by SOB and diaphoresis.** **Overall appearance: well-kept for age.**	**The patient was alert and oriented up until the end of the day; the patient was able to identify her name and DOB.**
INTEGUMENTARY: **Skin color: standard for race** **Character: clammy** **Temperature: cool** **Turgor: not assessed** **Rashes: none** **Bruises: none** **Wounds: stage II pressure ulcer located on the coccyx** **Braden Score: 13 – moderate risk.** **Drains present: Y☐ N ☒** **Type:**	
HEENT: **Head/Neck: Full ROM** **Ears: Normal** **Eyes: Normal** **Nose: Normal** **Teeth: Normal**	.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur, etc.** **Cardiac rhythm (if applicable): Normal** **Peripheral Pulses: Strong and equal** **Capillary refill: Normal, less than 3 seconds.** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema: none note**	.

RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character.**	**The patient has coarse crackles, and the patient started a nasal cannula that progressed from 2 to 6 liters throughout her examination. The patient was SOB when resting.** **Respiratory Rate: 24**
GASTROINTESTINAL: **Diet at home: Regular, eats normal food** **Current Diet** **Height: 170 cm** **Weight: 71 kg** **Auscultation bowel sounds: active in all four quadrants** **Last BM: 3/23/2020** **Palpation: Pain, Mass, etc.: no mass., the abdomen is soft, non-tender, with no masses palpated.** **Inspection:** **Distention: none** **Incisions: none** **Scars: none** **Drains: none** **Wounds: none** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	.
GENITOURINARY: **Color: yellow** **Character: cloudy** **Quantity of urine: little output.** **Pain with urination: Y ☒ N ☐** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type: Foley catheter** **Size: 14 French**	**Patient experiences burning and discomfort when urinating.** **Catheter size is 14 French**
MUSCULOSKELETAL: **Neurovascular status:** **ROM: Limited range of motion to bilateral lower extremities, range of motion to upper extremities is intact.** **Supportive devices: buck's tractions** **Strength: Strength to upper extremities**	.

are good, and lower extremities not assessed because of femur fracture. **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 65 – high risk** **Activity/Mobility Status: Bedrest.** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no – limited range of motion in legs. Legs ☒ Arms ☐ Both ☐** **Orientation: Alert with confusion as the urosepsis progressed. A&L x2** **Mental Status:** **Speech: Clear, but distressed because of pain** **Sensory:** **LOC: A&L x2**	.
PSYCHOSOCIAL/CULTURAL: **Coping method(s): Unidentified.** **Developmental level: Good for age.** **Religion & what it means to pt.: Catholic** **Personal/Family Data (Think about home environment, family structure, and available family support): The patient has a neighbor that brought her the medications, and the friend will assist her once she's discharged.**	.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0500	96	136/76	24	37.4 C	91%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0500	Numerical	Lower back	4	Stabbing and	Pain

		area		**sharp**	**management and Fluids**

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
	Less than 100 mL

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis • **Include full nursing diagnosis with "related to" and "as evidenced by" components**	**Rational** • **Explain why the nursing diagnosis was chosen**	**Intervention (2 per dx)**	**Evaluation** • **How did the patient/family respond to the nurse's actions?** • **Client response, the status of goals and outcomes, modifications to plan.**
1. Acute pain.	**As related to pain with urination as evidenced by patient complaining, she feels "sharp, stabbing and burning pain" when she voids (https://www.facebook.com/nurseslabs, 2017).**	**1. Encourage the use of analgesics.** **2. Apply a heating pad to the lower suprapubic area or lower back.**	**Goal met. The patient was okay with taking the pain meds.** **Goal met. The patient was open to the idea and was very adamant about the heat pad.**
2. Impaired urinary eliminatio	**As related to urgency & retention, as evidenced by dysuria, frequency (https://www.facebook.com/nursesl**	**1Palpate the client's bladder to stimulate**	**Goal not met. The client was in too much**

n.	**abs, 2017).**	**voiding.** **2. Encourage the client to void every 2-3 hours.**	**pain and did not want the nurse to touch her bladder area. Evidenced by grimacing and guarding upon palpation of the bladder.** **Goal partially met. The client is in pain and can only void for a few seconds before having pain.**

Other References (APA):

https://www.facebook.com/nurseslabs. (2017, January 9). 6 Urinary Tract Infection Nursing Care Plans. Nurseslabs. https://nurseslabs.com/urinary-tract-infection-nursing-care-plans/

Concept Map (20 Points):

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Subjective Data

Pt shows signs of sob, labored breathing, coarse lung crackles in all lobes, and diaphoresis. The patient shows signs of progressively worse sepsis, and her mental status worsened as the scenario went on.

Nursing Diagnosis/Outcomes

1. Acute pain **as related to pain with urination as evidenced by patient complaining seg feels "sharp, stabbing and burning pain" when she voids.**
   a. **Goal met: Encourage the use of analgesics by the nurse.**
   b. **Goal met: The patient was semi-relieved when applying the heating pad.**
2. **Impaired Urinary elimination related to the patients grimacing, pain, and burning sensation when she voids.**
   a. **Goal not met: The client was in too much pain when the nurse tried palpating the client's bladder.**
   b. Goal partially met. The client is in pain and can only void small amounts of urine.

Objective Data

The client's chief complaint is pain when voiding. The patient is diagnosed with congestive heart failure and diabetes.
Vitals:
BP: **136/76**
RR: 24
Pulse: 96
SpO_2%: 91%
Temp: 37.4 C

Patient Information

78- year old, white female who lives alone. Patient presents today with signs of a UTI and possible urosepsis.

Nursing Interventions

1. Administer pain medications around the clock
2. Apply a heating pad to the patient's suprapubic area
3. Palpate the client's bladder to aid in urinary elimination.
4. Encourage elimination every 2-3 hours.

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