N311 Care Plan 3

Lakeview College of Nursing

Jennifer Colbert

Demographics (5 points)

Date of Admission 08/01/2019	Patient Initials J.J	Age 78 (03/15/1941)	Gender Female
Race/Ethnicity Caucasian	Occupation Retired	Marital Status Widowed	Allergies None
Code Status No CPR	Height 5'7"	Weight 156lbs	

Medical History (5 Points)

Past Medical History: Congestive heart failure, hypertension, and diabetes

Past Surgical History: Tonsillectomy (around age 10), right bunionectomy, colonoscopy.

Family History: Father had a history of hypertension and Alzheimer's. Mother also had a history of hypertension. No siblings, and grandparent's history is unknown.

Social History (tobacco/alcohol/drugs): Client reports drinking one glass of wine a week and denies any past or current drug and tobacco usage.

Admission Assessment

Chief Complaint (2 points): Painful urination, cloudy urine, and flank pain

History of present Illness (10 points): Onset: On August 1st, 2019 at 0400, a Caucasian female comes into the emergency room at Carle Hospital complaining of painful urination, cloudy urine, and back pain starting last week (July 25th). Her neighbor who checks in on her every day dropped her off here at the emergency room because she was acting agitated and reported back pain and painful urination. Location: Client reports flank pain radiating down both sides of her lower abdomen down to her vagina. Duration: The painful and cloudy urination started last week and has been consistent. The flank pain started last night. Characteristics: Client describes pain as an 8/10 and when she urinates it is a "burning sensation". Aggravating/Associated factors:

Client reports feeling “foggy” since this started and has become agitated since arrival. Relieving Factors: Hot and cold pack temporarily relieve her pain, but it starts up again right away. She has also tried taking Tylenol this morning around 1030, but has not noticed any improvements and that is why she came in. Treatment: This is her first-time seeking treatment for her current symptoms.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Urosepsis

Secondary Diagnosis (if applicable):NA

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

Each year 6 to 7 million people see their primary care provides because of a urinary tract infection (Capriotti & Frizzell, 2016). Women are more prone to get urinary tract infections because of their shorter urethras and proximity to the anus. In fact, half of all women will have one at some point in their life (Capriotti & Frizzell, 2016).

There are several risk factors that increase one’s risk at getting a UTI. These risk factors include; improper hygiene, tight clothing, irritating bath products, sextual intercourse, dehydration, urinary catheters, diabetes, bladder cancer, cancer treatments and pregnancy (Capriotti & Frizzell, 2016). Older man can get UTIs because of enlargements of their prostate, however UTIs in men under the age of 50 is very uncommon (Capriotti & Frizzell, 2016).

The bacteria *Escherichia coli* (E. coli) is the most common bacteria that causes urinary tact infections. The E. coli is transmitted form the rectum to the urethra causing the infection (Capriotti & Frizzell, 2016). Our bodies natural defense against getting a UTI is the high osmolarity, urea, and organic acids that make it hard for bacteria to grow and travel in the

urethra. If there is any type of obstruction, bacteria can grow (Captiotti & Frizzell,2016). The bacteria migrate to the bladder and can continue to proliferate. Things that interfere with the urinary flow and can aid the bacteria in growth and transportation are voluntary suppression of urination, sexual intercourse, urinary tract obstruction, instrumentation of the urinary tract, use of catheters not drained by gravity, and vesicoureteral reflux (Capriotti & Frizzell, 2016).

The most common symptoms include, frequency, pain or burning on urination, urgency, and occasionally hematuria. These symptoms are usually caused by inflammation and edema of the bladder (Capriotti & Frizzell, 2016). Other symptoms that may occur are strong smelling urine, cloudy urine, and pelvic pain (Mayo, 2020). Severe infections can cause bladder spasms. There are usually no changes in the physical examination (Capriotti & Frizzell, 2016).

A urinary tract infection is usually diagnosed by a urinalysis and a urine culture and sensitivity (Capriotti & Frizzell, 2016). The urinalysis shows red blood cells, leukocyte esterase, and nitrates (Capriotti & Frizzell, 2016). A microscopic analysis shows neutrophils, red blood cells, and bacteria are present in the urine (Capriotti & Frizzell, 2016). The culture and sensitivity will tell what the bacteria is and how to best treat it. Antibiotics are commonly used to treat urinary tract infections. Pyridium can be used to control pain (Capriotti & Frizzell, 2016). Drinking plenty of fluids and either drinking cranberry juice or taking a cranberry pill will also help.

A urinary tract infection can become urosepsis, which is a serious complication of UTI’s. The symptoms include fever, chills, confusion, disorientation, and hypotension (Capriotti & Frizzell, 2016). When a client has urosepsis, the infection is all over the urinary tract, and the client is at risk for developing sepsis, which is life threatening.

This pathophysiology is evident in Mrs. Jordan because she has quite a few of the main symptoms such as back pain, pain while urinating, cloudy urine, fever, and the slight agitation. Her labs are also indicative of a UTI because of the elevated WBCs, high BUN, and specific gravity. She likely got the infection from being dehydrated and cross contamination of bacterium from the anus to her urethra.

Pathophysiology References (2) (APA):

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

Mayo Clinic. (2020). *Urinary Tract Infection (UTI).* https://www.mayoclinic.org/diseases-\conditions/urinary-tract-infection/symptoms-causes/syc-20353447

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	**4.0-4.9 million/mm^3**	**4.8million/mm^3**	**N/A**	
Hgb	**12.0-16.0g/ dL**	**11.3g/dL**	**N/A**	**Hgb low from kidney damage from dehydration and urosepsis.**
Hct	**37.0-48.0%**	**33%**	**N/A**	**Hct low from kidney damage from dehydration and urosepsis.**
Platelets	**150-400 10^3/ uL**	**222.0 10^3/uL**	**N/A**	
WBC	**4.1-10.9 10^3/ uL**	**13.0 10^3/uL**	**N/A**	**WBC is elevated from the infection.**
Neutrophils	**1.50-7.70 10^3/uL**	**N/A**	**N/A**	
Lymphocytes	**1.00-4.90**	**N/A**	**N/A**	

	10^3/uL			
Monocytes	**0.00-0.80 10^3/uL**	**N/A**	**N/A**	
Eosinophils	**0.00-0.50 10^3/uL**	**N/A**	**N/A**	
Bands	**0.00-1.0 10^3/ uL**	**N/A**	**N/A**	

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-	**136-145mEq/L**	**135mEq/L**	**N/A**	**Elevated sodium from dehydration.**
K+	**3.5-5.1mEq/L**	**4.4mEq/L**	**N/A**	
Cl-	**98-107mEq/L**	**100mEq/L**	**N/A**	
CO2	**21.0-32.0 mmHg**	**N/A**	**N/A**	
Glucose	**60-99 mg/dL**	**92mm/dL**	**N/A**	
BUN	**5-20mg/dL**	**21mg/dL**	**N/A**	**Elevated BUN from dehydration.**
Creatinine	**0.5-1.5 mg/ dL**	**1.0mg/dL**	**N/A**	
Albumin	**3.4-5.4mg/ dL**	**3.2mg/dL**	**N/A**	**Low albumin from the inflammation caused by the infection.**
Calcium	**8.5-10.1 mg/dL**	**9mg/dL**	**N/A**	
Mag	**1.6-2.6mg-dL**	**N/A**	**N/A**	
Phosphate	**2.5-4.5mg/ dL**	**3.7mg/dL**	**N/A**	
Bilirubin	**0.0-0.4mg/ dL**	**N/A**	**N/A**	
Alk Phos	**20-140 IU/ L**	**N/A**	**N/A**	

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	Colorless	Slight amber/ cloudy	N/A	Color change from dehydration and infection.
pH	5.0-7.0	5.6	N/A	
Specific Gravity	1.003-1.005	1.039	N/A	Specific gravity is elevated because of decreased fluid volume.
Glucose	Negative	Negative	N/A	
Protein	Negative	2mg/dL	N/A	Protein in the urine from diabetes.
Ketones	Negative	Negative	N/A	
WBC	0-25/uL	10	N/A	
RBC	0-20/uL	4-6	N/A	
Leukoesterase	Negative	Positive	N/A	Positive because of elevated WBCs due to infection.

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	N/A	N/A	N/A	
Blood Culture	N/A	N/A	N/A	
Sputum Culture	N/A	N/A	N/A	

Stool Culture	**N/A**	**N/A**	**N/A**	

Lab Correlations Reference (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Abdominal Ultrasound Scan:

Kidneys show signs of hydronephrosis.

(This would demonstrate there is a severe infection causing problems in the kidneys)

Urine Culture and Sensitivity:

The urine tested positive for E. Coli and can be treated with Levaquin.

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

Medications (5 required)

Brand/Generic	Glyburide (DiaBeta)	Levofloxacin (Levaquin)	Acetaminophen (Tylenol)	Lorazepam (Ativan)	Lisinopril (Prinivil)
Dose	2.5mg	250mg bolus	325mg	2mg	10mg
Frequency	Once a day (with breakfast)	Q12 hrs	Q4 (PRN)	Q6 (PRN)	Once a day
Route	Oral	IV	Oral	Oral	Oral
Classification	Antidiabetic	Antibiotic	Nonopioid analgesic and antipyretic	Anxiolytic	Antihypertensive
Mechanism of Action	Stimulates insulin	Interferes with	Inhibits the enzyme	May potentiate the	May reduce blood

	release from beta cells in the pancreas.	bacterial cell replication by inhibiting the bacterial enzyme DNA gyrase, which is essential for repair and replication of bacterial DNA.	cyclooxygenase, blocking prostaglandid production and interfering with pain impulse generation in the peripheral nervous system.	effects of GABA and other inhibitory neurotransmitters by binding to specific benzodiazepine receptors in cortical and limbic areas of CNS.	pressure by inhibiting conversion of angiotensin I to angiotensin II.
Reason Client Taking	To adjunct to control blood glucose level in type 2 diabetes.	To treat a UTI	To relieve pain.	To calm agitation	To treat hypertension
Contraindications (2)	Diabetic ketoacidosis and hypersensitivity to glyburide	Diabetes and low blood sugar	Hepatic impairment and hypersensitivity to acetaminophen.	Hypersensitivity to lorazepam and psychosis	Hypotension and surgery
Side Effects/Adverse Reactions (2)	Edema and dysuria	Acute renal failure and back pain	Abdominal pain and fever	Abdominal pain and fatigue.	Depression and headace

Medications Reference (APA):

Jones & Bartlett Learning. (2020). *Nurse's drug handbook.* (19 th edition). Jones & Bartlett Learning, LLC.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Alert and orientated person, time, and current events. Client is agitated and confused on where she is. Does not appear to be in distress Well-groomed and dressed appropriately
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 Pale Moist Cool Poor Recoil None None None 16
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck are symmetrical. Thyroid and lymph nodes non palpable. Clients ears are pink and moist, calan is clear and free of drainage, tympanic membrane pearly grey. Eyes: Sclera is white, conjunctiva is pink, EOM is intake, Rosenbaum 14/14 with corrective lenses. Septum is midline, turbinates pink and moist, non-tender sinuses. Good dentition. .
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒**	 S1, S2 heard with no gallops, murmurs, or rubs. Pulses symmetrical and 2+ throughout. HR elevated. Good capillary refill, less than 3 seconds.

Location of Edema:	
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Respirations are nonlabored. Breath sounds are clear in vesicular lung and no adventitious sounds present.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	Diabetic diet 2 g sodium diet 5'7" 156lbs Bowel sounds are normoactive in each of the 4 quadrants Last BM: Last night at 2100 No pain or masses No distention, incisions, scars, drains, or wounds.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☒ N ☐** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type: Indwelling** **Size:**	Slightly Amber Cloudy 100 void into catheter bag Pain/ burning when urinating
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** ☐	Normal ROM Does not use supportive devices Strength in extremities is good. Fall score is 18 (High Fall Risk) Moves with one assist and gait belt. Watch for dizziness.

Needs assistance with equipment ☐ **Needs support to stand and walk** ☐	
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Legs and arms are both strong Orientated to time, person, and current events. Currently agitated and confused from UTI Mature mental status Speech intact Confused
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	Client has good coping mechanisms, she does crafts when she feels stressed or lonely. Mature developmental status Catholic. Attends church every Sunday Lives at home alone. Neighbor comes by every day to check on her.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0500	96 right radial pulse	136/76 right upper arm	24	99.4℉ Oral	91% 2L nasal canula
0700	88 right radial pulse	128/84 right upper arm	22	99.0 ℉ Oral	91% 2L nasal canula

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0500	0-10	Flank and vaginal pain	8/10	"Consistent ache and burning sensation"	Administer Tylenol 325mg PO.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)

Breakfast: 100% Lunch: 75% Oral Intake: 400mL (water) IV Intake: 2360mL **Total: 2760mL**	Void: 100mL (indwelling catheter) **Total: 100mL**

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, status of goals and outcomes, modifications to plan.
1. Fluid volume deficit related to dehydration as evidenced by elevated BUN, dark urine, and poor skin turgor.	The client is dehydrated which could have caused her urinary tact infection, and proper fluid intake can make the infection go away faster because it will help wash out the bacteria.	1. Administer the Lactated Ringers fluids to maintain and replenish lost fluids. 2.Encourge oral intake of fluids to maintain and replenish lost fluids.	Goal met: Clients skin turgor improved, and urine is starting to lighten up. Goal met: Client had an oral input of 400mL of water. Improvement in skin turgor shows client is becoming hydrated.
2. Acute pain related to urosepsis as evidenced by pain rating of 8/10.	The client rated her pain as a 8/10 because the infection has spread all the way up to her kidney's which is very painful.	1. Give the PRN acetaminophen. 2. Alternate hot and cold therapies for no more than 20 minutes each to reduce pain.	Goal Met: Upon reevaluating clients pain she is now at a 2/10 which is tolerable for her. Goal Met: Client reports the hot and cold therapies helped reduce her pain until the oral medications worked. Pain is now a 2/10.

Other References (APA):

Concept Map (20 Points):

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Subjective Data

-Painful urination
-Flank Pain
-Pain 8/10
-“Constant ache and burning sensation”

Nursing Diagnosis/Outcomes

1: Fluid volume deficit related to dehydration as evidences by elevated BUN, dark urine, and poor skin turgor.
Goal met: Clients skin turgor improved, and urine is starting to lighten up.
Goal met: Client had an oral input of 400mL of water. Improvement in skin turgor shows client is becoming hydrated.
2. Acute pain related to urosepsis as evidences by pain rating of 8/10.
a. Goal Met: Upon reevaluating clients pain she is now at a 2/10 which is tolerable for her.
b. Goal Met: Client reports the hot and cold therapies helped reduce her pain until the oral medications
worked. Pain is now a 2/10.

Objective Data

Poor skin turgor
Vital Signs:
BP: 128/84
Pulse: 88
Respirations: 22
Temp: 99.0 F
91% O2 on 2L nasal canula
Elevated BUN, WBC, Specific gravity
Decreased Hgb and Hct.
CT shows hydronephrosis

Patient Information

Client is a 78 y/o, Caucasian female how came into the emergency room August 1 at 0400 complaining of painful urination, cloudy urine, and flank pain. She has a history of diabetes, hypertension, and congestive heart failure. Her neighbor dropped her off because she was agitated and showing signs of a UTI.

Nursing Interventions

Administer the Lactated Ringers fluids to maintain and replenish lost fluids.
Encourage oral intake of fluids to maintain and replenish lost fluids.
Give PRN acetaminophen.
Alternate hot and cold therapies for no more than 20 minutes each to reduce pain.

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