N431 Care Plan #3

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission 3/30/21	**Patient Initials** P.B.	**Age** 48	**Gender** Female
Race/Ethnicity Caucasian	**Occupation** On disability	**Marital Status** Single	**Allergies** Motrin, penicillin, bee venom, simvastatin
Code Status Full code	**Height** 5'3"	**Weight** 109 lbs	

Medical History (5 Points)

Past Medical History: Asthma, bipolar disorder 1, diabetes mellitus type 2, hypercholesterolemia, hypertension, hypothyroidism, depression, gastroesophageal reflux disease (GERD), and seizures.

Past Surgical History: Hysterectomy and appendectomy.

Family History: Father is deceased and had a history of heart disease and renal failure. The patient's mother is living and has hypercholesterolemia and thyroid disease.

Social History (tobacco/alcohol/drugs): Patient smokes a ½ pack of cigarettes a day. She states she "began smoking years ago." She also uses marijuana two times a week. The patient denies alcohol and other drug use.

Assistive Devices: No assistive devices.

Living Situation: Patient lives in a home with her mother. Her brother is currently staying with them as well.

Education Level: Patient attended high school.

Admission Assessment

Chief Complaint (2 points): Bilateral flank pain, fever of 103, nausea, and vomiting.

History of present Illness (10 points): Onset: The patient was admitted on 3/30/21 with bilateral flank pain, a fever of 103, nausea, and vomiting. She started experiencing symptoms on the weekend and went to Carle hospital. She had a urine sample taken and was given Bactrim DS to treat a UTI. Her urine culture contained a large amount of E. coli. On Tuesday evening her pain got worse and she developed a fever. **Location:** The client expressed that her lower back hurt bilaterally. **Duration:** The client stated that she started having flank pain and feeling nauseous over the weekend. The symptoms became progressively worse on Tuesday. Currently she is feeling pain in her back, but she no longer has a fever, nausea, or vomiting. **Characteristics:** The patient states that "it just hurts and is constant." When asked to describe the pain she said it was dull. She rated her pain between a two and four out of ten throughout the morning. **Aggravating factors:** The patient stated that "twisting makes it worse." **Relieving factors:** The patient stated that resting and pain medication helps relieve her pain. **Treatment:** The patient is receiving an antibiotic, ceftriaxone, to treat her kidney infection. She is also resting and consuming adequate nutrition. Vitals, including temperature are being monitored closely to ensure the treatment is effective.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Pyelonephritis, urinary tract infection (UTI), and hyponatremia.

Secondary Diagnosis (if applicable): Asthma, bipolar disorder 1, diabetes mellitus type 2, hypercholesterolemia, hypertension, hypothyroidism, depression, gastroesophageal reflux disease (GERD), and seizures.

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

Pyelonephritis, commonly known as a kidney infection, is an infection of the renal pelvis and interstitium. Often, the condition begins in the bladder and moves up through the ureters into the kidneys. The most common cause of an infection in the urinary tract system is the bacteria E. coli, but it can also be caused by a fungus or virus (Capriotti & Frizzell, 2016). Pyelonephritis is a prevalent infection. Annually, 200,000 people are hospitalized with a pyelonephritis infection (Capriotti & Frizzell, 2016). Due to a shorter urethra in the female anatomy, urinary tract infections are more common in women. Women have a shorter urethra, and the close proximity to the anus increases the risk for bacteria from feces to travel through the urethra and into the bladder. If the bacterial infection is not treated promptly, the bacteria can grow and multiply and travel up the ureters into the kidneys. The patient, P.B., was aware that she had a urinary tract infection and sought treatment. However, her condition worsened she developed an infection in her kidney as well.

Signs and symptoms of acute pyelonephritis include fever, flank pain, groin pain, costovertebral angle (CVA) tenderness, chills, urinary frequency, difficulty urinating, and painful urination (Mayo Clinic, 2020). Other symptoms include nausea, vomiting, cloudy or foul-smelling urine, and blood in the urine (Mayo Clinic, 2020). The patient was prompted to seek medical care when she developed a 103-degree fever, nausea, and vomiting. She was also experiencing bilateral flank pain and CVA tenderness.

Diagnosis of pyelonephritis is made through a variety of methods. A urine culture and sensitivity sample is collected and send to the lab to identify what type of organism is causing the infection. Once the specific organism is specified, the lab will test it against multiple antibiotics to determine which one works the best to destroy the bacteria. In P.B.’s case, the

bacteria E. coli was identified in the culture and was proven most sensitive to the antibiotics cephalexin, cefuroxime, cefpodoxime, and cefdinir. A leukocyte esterase test is also performed with the urine collected for the culture. Another diagnostic tool used to detect infection in the urinary tract system is a computed tomography (C.T.) scan. A CT scan helps provide a detailed picture of the urologic organs. The patient did undergo a C.T. scan that showed inflammation around the kidney and thickening of the bladder, which helped confirm the pyelonephritis diagnosis. It is also important to note that a pelvic exam should be performed on females experiencing UTI symptoms to rule out gynecological issues as the cause (Capriotti & Frizzell, 2016).

The treatment for pyelonephritis is usually antibiotics. The patient may have to take antibiotics for up to two weeks or longer. It is essential to take all prescribed medication, even after symptoms start to subside. The physician may recommend the patient return for another urine culture after treatment with medication to ensure the infection is completely gone. The patient needs to drink plenty of fluids to encourage good kidney function. In some cases, chronic pyelonephritis is caused by an underlying condition such as a misshapen urinary tract or urine retention (Mayo Clinic, 2020). The patient should follow up with a urologist for evaluation to correct the underlying issue.

Pathophysiology References (2) (APA):

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

Mayo Clinic. (2020). *Kidney infection.* https://www.mayoclinic.org/diseases-conditions/kidney-infection/symptoms-causes/syc-20353387.

Laboratory Data (15 points)

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	**4.40-5.80 mcL**	4.23	3.96	Values consistent with poor nutritional intake and smoking. Patient is most likely anemic. (Capriotti & Frizzell, 2016).
Hgb	**12.0-15.8 g/dL**	13.3	12.4	N/A
Hct	**38.0-50.0%**	38.0	35.8	Values consistent with poor nutritional intake and smoking. Patient is most likely anemic. (Capriotti & Frizzell, 2016).
Platelets	**140-440 mcL**	238	218	N/A
WBC	**4.40-12.0 mcL**	14.20	11.00	Value consistent with infection. (Capriotti & Frizzell, 2016).
Neutrophils	**40.0-68.0%**	81.2	N/A	N/A
Lymphocytes	**18.0-49.0%**	7.0	N/A	N/A
Monocytes	**3.0-12.0%**	11.5	N/A	N/A
Eosinophils	**0.0-8.0%**	0.1	N/A	N/A
Bands	**0.0-1.0%**	0.2	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-	**135-145 mmol/L**	128	131	Values consistent with vomiting. (Capriotti & Frizzell, 2016).
K+	**3.5-5.0 mmol/L**	4.1	4.5	N/A
Cl-	**98-107 mmol/L**	98	103	N/A
CO2	**21-31 mmol/L**	19	20	Values consistent with fever and infection. (Capriotti & Frizzell, 2016).

Glucose	**70-110 mg/ dL**	115	116	Values consistent with diabetes mellitus type 2. (Capriotti & Frizzell, 2016).
BUN	**7-25 mg/dL**	15	10	N/A
Creatinine	**0.50-1.20 mg/dL**	1.23	1.03	Value consistent with kidney infection. (Capriotti & Frizzell, 2016).
Albumin	**3.5-5.0 g/dL**	4.1	N/A	N/A
Calcium	**8.8-10.2 mg/dL**	9.5	N/A	N/A
Mag	**1.5-2.6 mg/ dL**	N/A	N/A	N/A
Phosphate	**2.5-4.5 mg/ dL**	N/A	N/A	N/A
Bilirubin	**0.2-0.8 mg/ dL**	0.4	N/A	N/A
Alk Phos	**32-104 U/L**	91	N/A	N/A
AST	**10-40 u/L**	N/A	N/A	N/A
ALT	**10-30 u/L**	N/A	N/A	N/A
Amylase	**23-85 u/L**	N/A	N/A	N/A
Lipase	**12-70 u/L**	N/A	N/A	N/A
Lactic Acid	**0.5-1.0 mmol/L**	0.6	N/A	N/A
Troponin	**0 - 0.4**	N/A	N/A	N/A
CK-MB	**5 - 25**	N/A	N/A	N/A
Total CK	**22 - 128**	N/A	N/A	N/A

Other Tests 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

INR	**0.8-1.4**	N/A	N/A	N/A
PT	**10.1-13.1 seconds**	N/A	N/A	N/A
PTT	**25-36 seconds**	N/A	N/A	N/A
D-Dimer	**<0.5**	N/A	N/A	N/A
BNP	**<100 mg/mL**	N/A	N/A	N/A
HDL	**>60 mg/dL**	N/A	N/A	N/A
LDL	**<100 mg/dL**	N/A	N/A	N/A
Cholesterol	**<200 mg/dL**	N/A	N/A	N/A
Triglycerides	**<150 mg/dL**	N/A	N/A	N/A
Hgb A1c	**<7%**	N/A	N/A	N/A
TSH	**0.4-4.0 mu/L**	N/A	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	**Yellow, clear, no odor present.**	Yellow, cloudy	Yellow, cloudy	Values consistent with urinary tract infection and kidney infection. (Capriotti & Frizzell, 2016).
pH	**4.6-8.0**	5.0	N/A	N/A
Specific Gravity	**1.005-1.030**	1.018	N/A	N/A
Glucose	**Negative**	Negative	N/A	N/A
Protein	**Negative**	2+	N/A	Value consistent with urinary tract and kidney infection. (Capriotti & Frizzell, 2016).
Ketones	**Negative**	Negative	N/A	N/A
WBC	**Negative/ 0-4**	6-10	N/A	Value consistent with urinary tract and kidney infection. (Capriotti & Frizzell, 2016).
RBC	**Negative/**	6-10	N/A	Value consistent with urinary tract

	0-2			and kidney infection. (Capriotti & Frizzell, 2016).
Leukoesterase	**Negative**	1+	N/A	Value consistent with urinary tract and kidney infection. (Capriotti & Frizzell, 2016).

Arterial Blood Gas 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
pH	**7.35-7.45**	N/A	N/A	N/A
PaO2	**75-100**	N/A	N/A	N/A
PaCO2	**38-42**	N/A	N/A	N/A
HCO3	**22-28**	N/A	N/A	N/A
SaO2	**95%-100%**	96%	97%	N/A

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	**Clean catch, no growth**	E. coli growth	N/A	E. coli in urine indicates infection in the urinary tract system. (Capriotti & Frizzell, 2016).
Blood Culture	**No growth after 3 days**	In process	N/A	N/A
Sputum Culture	**Negative**	N/A	N/A	N/A
Stool Culture	**Brown, soft, and well-formed**	N/A	N/A	N/A

Lab Correlations Reference (1) (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Computerized tomography (CT) scan: The CT scan showed an increase of perinephric stranding and mural thickening of the bladder. There was a 2.5cm renal cyst in the left kidney. No stones in the urinary system were present.

Chest X-Ray: The chest x-ray revealed a slight infiltrate in the base of the right lung. No other abnormalities present. The heart, bones, and mediastinum were all normal.

COVID-19 screening: The patient's COVID test was negative.

Diagnostic Test Correlation (5 points):

A chest x-ray is a diagnostic tool that can help determine or diagnose a problem that may be going on in the chest or abdomen. There was a slight infiltrate noted. This isn't an unexpected finding due to the patient's smoking history. All other structures were normal. The CT scan is also performed to visualize organs and other structures in more detail than regular x-ray (Mayo Clinic, 2019). The scan showed perinephric stranding, in which there is inflammation around the kidney (Morgan, n.d.). Mural thickening of the bladder was also noted. This is a common finding in a patient that has a kidney infection. The COVID-19 screening is a standard hospital screening due to the pandemic.

Diagnostic Test Reference (1) (APA):

Mayo Clinic. (2019). *CT scan*. https://www.mayoclinic.org/tests-procedures/ct-scan/about/pac-20393675#:~:text=A%20computerized%20tomography%20(CT)%20scan,than%20plain%20X%2Drays%20do.

Mayo Clinic. (2019). *CT scan*. https://www.mayoclinic.org/tests-procedures/ct-scan/about/pac-20393675#:~:text=A%20computerized%20tomography%20(CT)%20scan,than%20plain%20X%2Drays%20do.

Current Medications (10 points, 1 point per completed med)
10 different medications must be completed

Home Medications (5 required)

Brand/Generic	**Lipitor/ atorvastatin**	**Lamictal/ lamotrigine**	**Desyrel/ trazodone HCl**	**Neurotonin/ gabapentin**	**Lovenox/ enoxaprin**
Dose	40 mg	400 mg	150 mg	300 mg	40 mg
Frequency	Once every night	Once every night	Once every night	Three times daily	Once daily
Route	Oral	Oral	Oral	Oral	Subcutaneous
Classification	Antihyperlipidemic, HMG-CoA reductase inhibitor	Anticonvulsant, mood stabilizer	Antidepressant	Anticonvulsant	Antithrombic
Mechanism of Action	Reduces cholesterol by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver. It also increases LDL receptors on the liver to increase uptake of LDL and then breaks it down.	Stabilizes neuron membranes by blocking the sodium channel and stops the release of neurotransmitters.	Blocks serotonin reuptake which gives an antidepressant effect.	Structurally similar to GABA (neurotransmitter in the brain), that inhibits the rapid firing of neurons.	Binds with antithrombin III and rapidly binds with and inactivates clotting factors. Without thrombin, fibrinogen cant convert to fibrin and clots are unable to form.
Reason Client Taking	To treat high cholesterol.	To treat seizures.	To treat depression.	To treat neuropathic pain.	To prevent blood clots.

Contraindications (2)	Active hepatic disease. Hypersensitivity to atorvastatin.	Hypersensitivity to lamotrigine or its components.	Hypersensitivity to trazodone. Recovering from an MI.	Hypersensitivity to gabapentin. Major CNS depression when taken with alcohol.	Active major bleeding. History of heparin-induced thrombocytopenia.
Side Effects/Adverse Reactions (2)	Anemia. Orthostatic hypotension.	Dry mouth. Anemia.	Orthostatic hypotension. Anxiety.	Agitation. Acute renal failure.	Atrial fibrillation. Elevated liver enzymes.
Nursing Considerations (2)	Use medication cautiously in patients who abuse alcohol, as this increases the risk of liver dysfunction. Patients taking cyclosporine, gemfibrozil, ritonavir, or telaprevir shouldn't take atorvastatin due to increases risk of renal failure.	Use cautiously in patients with impaired cardiac or renal function. Monitor closely for fever, rash, or lymphadenopathy.	Closely monitor patient for suicidal thoughts and behaviors. Give larger portion of the dose at night if it makes the patient drowsy.	Gabapentin can be mixed with applesauce or fruit juice. Be aware that various brands of gabapentin are not interchangeable.	Watch closely for signs of bleeding or bruising. Never give medication through an I.V.
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Liver function tests should be performed before administration. The physician should review the use of this medication for this patient, due to his chronic liver disease, elevated liver enzymes, and alcohol abuse. Vitals should be checked prior to administration of medication.	Monitor vital signs before and after administration. Monitor patient for seizure activity. Frequent neuro assessments.	Vitals should be taken before administering medication. Interestingly this patient has atrial fibrillation, and this drug is contraindicated in patient with cardiac disease because it can cause an arrhythmia. The nurse should contact the pharmacist before administering this drug to a patient with an existing heart condition.	Renal function tests must be conducted. The patient should also be monitored and assessed for suicidal thinking and behaviors.	Monitor platelet levels. If platelet count falls below 100,000 notify prescriber immediately. Test stool for occult blood as ordered. Keep protamine sulfate near in case of accidental overdose. Check serum potassium levels for elevation, especially in patients with renal impairment or concurrent use of potassium sparing diuretics.
Client Teaching needs (2)	Instruct patient to take the medication at the same time every day to maintain effects. Emphasize the importance of a healthy diet to	Advise patient to avoid direct sunlight and wear protective clothing. Caution patient about the possibility of	Take with food or a snack to reduce risk of nausea. Advice the patient not to abruptly stop taking	Don't take within 2 hours of taking an antacid. Oral reactions may occur so educate the patient on the	Instruct client not to expel air bubble in syringe and not to rub the injection site after administration. Inform the patient that they may

	control hyperlipidemia.	suicidal thoughts.	medication.	importance of good oral hygiene.	bleed or bruise more easily and it may take longer than usual for the bleeding to stop.

Hospital Medications (5 required)

Brand/Generic	**Tylenol/ acetaminophen**	**Synthroid/ levothyroxine sodium**	**NicoDerm CQ/ nicotine transdermal patch**	**Rocephin/ ceftriaxone sodium**	**Trileptal/ oxcarbazepine**
Dose	650 mg	75 mcg	21 mg	1 g	600 mg
Frequency	Every 6 hours as needed	Every morning before breakfast	24-hour patch	Once daily	Twice daily
Route	Oral	Oral	Transdermal	IV	Oral
Classification	Antipyretic, nonopioid analgesic	Thyroid hormone replacement	Smoking cessation adjunct.	Antibiotic	Anticonvulsant
Mechanism of Action	Inhibits cyclooxygenase, blocks prostaglandin production, and interferes with pain impulse generation. Directly acts on temperature-regulating center in the brain.	Replaces thyroid hormone which helps control DNA transcription and protein synthesis. Plays roles in increasing energy expenditure, stimulates body tissue growth, maturation, and metabolism. Aids in myelination or nerves, regulates growth, decreases blood and hepatic cholesterol concentrations.	Binds to nicotine receptors in the brain.	Interferes with bacterial cell wall synthesis and inhibits peptidoglycan. Peptidoglycan makes the cell membrane rigid and protective. Without it the bacteria cells rupture and die.	May prevent or halt seizures by blocking or closing sodium channels in neuronal cell membranes. This slows nerve impulse transmission, decreasing the rate at which the neurons fire.
Reason Client Taking	To reduce fever and treat mild pain.	To treat hypothyroidism.	Reduce nicotine cravings and withdraw symptoms.	Kidney and urinary tract infection.	To treat and prevent partial seizures.
Contraindications (2)	Severe active liver disease. Severe hepatic impairment.	Acute MI. Uncorrected adrenal insufficiency.	Life-threatening arrhythmias. Hypersensitivity to nicotine.	Hypersensitivity to ceftriaxone or other cephalosporins. Contraindicated when also running calcium-	Hypersensitivity to oxcarbazepine. Hypersensitivity to eslicarbazepine.

				containing IV solutions.	
Side Effects/Adverse Reactions (2)	Constipation. Angioedema.	Headache. Dyspnea.	Hypertension. Headache.	Seizures. Clostridium difficile diarrhea.	Abnormal coordination or gait. EEG abnormalities.
Nursing Considerations (2)	Use acetaminophen cautiously in patients with hepatic disease and chronic alcoholism. Make sure that no more than 4,000 mg is given in a 24 hour period.	Administer medication as a single daily dose 30 to 60 minutes before breakfast. Give at least 4 hours before or after aluminum or magnesium containing antacids, calcium carbonate, or ferrous sulfate.	Remove patch if patient is undergoing an MRI. Place patch on hairless, dry, and intact skin.	Use cautiously in patients that have a hypersensitivity to penicillin due to a risk of cross-sensitivity. Calcium-containing products must not be given within 48 hours of ceftriaxone due to the possibility of ceftriaxone-calcium salts precipitating in the lungs and kidneys which can be fatal.	Adverse reactions are more likely to occur when taken with food therefore its best to administer 1 hour before or 2 hours after meals. Monitor patient closely for suicidal thinking or behavior.
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Assess vitals including temperature. Monitor liver function tests such as ALT, AST, bilirubin, and creatinine levels. Monitor renal function and urine. Blood or albumin in urine may indicate nephritis.	Monitor blood glucose levels in diabetic patients as this medication can worsen glycemic control. Monitor thyroid function tests for over or under treatment. Monitor PT if patients are also receiving anticoagulation therapy.	Assess site where patch is removed and assess the patient's skin where patch is going to be placed. Don't place on damaged or broken skin.	Obtain culture and sensitivity before administering medication. Monitor CBC, hematocrit, serum alkaline phosphatase, AST, ALT, and bilirubin. Monitor BUN and creatinine levels. Assess for signs of superinfection such as cough, sputum changes, fever, and pain. Assess bowel pattern.	Monitor patient's vital signs. Monitor for CNS reactions such as coordination abnormalities or fatigue. Check sodium levels for hyponatremia.
Client Teaching needs (2)	While taking Tylenol, caution patients when using over the counter medications to	Emphasize the need to drink a full glass of water to take this medication to prevent heartburn.	Instruct patient to rotate patch sites. Urge patient to also join a smoking cessation	Advise patient to report hypersensitivity reactions such as rash, itching, or hives.	Instruct patients not to break, chew, or crush tablets. Urge patient to avoid alcohol

	check if they contain acetaminophen. Teach patient to recognize signs of hepatotoxicity such as bleeding, easy bruising, and malaise.	Advise patient not to stop or change dose unless instructed by the physician.	program or support group.	Urge patient to report watery or bloody stools, even up to 2 months after therapy has ended.	during medication therapy.

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2019). *2019 Nurse's drug handbook* (18th. Ed.). Burlington, MA.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 Awake, alert x3 Oriented to person, place, and time. Doesn't appear to be in distress. Does complain about bilateral flank pain occasionally. Clean, groomed. Showered without assistance.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:**	 Skin color appropriate for age and race. Appears dull. Skin is warm to the touch. Intact. Good skin turgor. No rashes, lesions, or bruises.
Wounds: **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	No wounds present. Braden score: 23 No drains present.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 Normocephalic. Trachea midline. No lymphadenopathy noted. Hearing intact. Eyes clear, no discharge. Missing some teeth. No dentures or partials present.

CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1, S2 auscultated. No S3, S4, or murmurs auscultated. No gallops or rubs. Normal sinus rhythm. Pedal pulses 2+ Capillary refill < 3 seconds No neck vein distention. No edema noted.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Diminished lung sounds. No wheezes, crackles, or rales. No shortness of breath. No assistive oxygen devices. 97% O2 sat on room air.
GASTROINTESTINAL (2 points): **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:**	Patient on full diet. She stated she sometimes cooks for herself and her mother, but they eat a lot of frozen foods. Height: 5'3" Weight: 190 lbs. Bowel sounds auscultated in all four quadrants. Abdomen soft, non-tender. No distention, drains, or wounds present. Does have faint scars from previous appendectomy surgery.
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Urine yellow. Cloudy. 750 ml urine output from 0700-1100 Denies pain, frequency, and burning. Genitals not inspected. Bilateral CVA tenderness.
MUSCULOSKELETAL (2 points):	

Neurovascular status: **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☒** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	Intact. Appropriate range of motion in all four extremities. Doesn't require assistance to get out of bed. No walker or assistive device used. Fall score: 3 Independent activity/mobility.
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	 Moves all extremities well. Pupils equal and responsive to light. Equal strength throughout. Oriented to person, place, and time. Minor deficits present. Speech fast. Patient does slow speech and repeat when asked. No sensory impairments. No loss of consciousness.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	 Patient states that she copes with illness through family. She stated that she is very close with her mother, siblings, and nieces and nephews. Impaired developmental level. Patient has attended church in the past, but doesn't currently. She stated that she enjoyed the visit and prayer with the Chaplin. The patient and her mother live together. Her brother also in staying with them for a brief amount of time. The patient's mother visited her and they appear to get along well, enjoy each other's company, and support one another.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	90	98/65	14	97.6	97% on room air
1044	90	99/57	16	99.2	97% on room air

Vital Sign Trends: Vital signs remained stable and within normal limits throughout the day. The patient's blood pressure was on the lower end, but she stated that it was normal for her. Her temperature did rise to 99.2 at 1044. The staff will continue to monitor blood pressure and temperature to ensure they remain within normal limits.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	Numeric 0-10	Back, bilateral flanks	Rated at 2	Dull, constant.	Pain medication given.
1044	Numeric 0-10	Back, bilateral flanks	Rated at 4	Dull, constant.	Tylenol given. Nurse was asking physician about other pain medication options.

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV:	20 gauge
Location of IV:	Left hand
Date on IV:	3/30/21
Patency of IV:	Patent, flushes easily.
Signs of erythema, drainage, etc.:	No erythema or drainage.
IV dressing assessment:	Dressing clean, dry, intact.
	0.9% sodium chloride running 100 ml/hour.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
1480 mL	750 mL

50% of breakfast consumed	

Nursing Care

Summary of Care (2 points)

Overview of care: The patient was continuously monitored throughout the day. She is telemetry monitor. She ate half of her breakfast and is taking in an adequate amount of fluids. She showered without assistance. She was given scheduled, pain, and antibiotic medications. She is pleasant and cooperative with all interventions.

Procedures/testing done: The patient had a negative COVID-19 test. She had a urine culture at Carle hospital over the weekend. Her results showed a urinary tract infection of E. coli. The patient had an x-ray of her chest and abdomen. She also had a CT scan. No stones or hydronephrosis was noted. Her bladder showed thickening and hepatic stenosis.

Complaints/Issues: The patient's major complaint was pain in her back.

Vital signs (stable/unstable): The patient's vital signs were stable and within normal limits. The staff monitored blood pressure and temperature often.

Tolerating diet, activity, etc.: Patient is tolerating current diet and activity well. She wanted to get up and walk and before activities of daily living.

Physician notifications: No notifications at this time.

Future plans for patient: The patient will continue antibiotic therapy and monitoring. The patient will be discharged home on Thursday as long as she remains stable.

Discharge Planning (2 points)

Discharge location: The patient will be discharged to her home on Thursday as long as she doesn't have a fever. She doesn't have transportation home and uses the bus. Case management was looking into alternate transportation home.

Home health needs (if applicable): No home health needs at this time.

Equipment needs (if applicable): No equipment needs at this time.

Follow up plan: I am unaware of a follow up plan at this time. It would be beneficial to have a follow up appointment to ensure that the kidney infection is completely treated.

Education needs: A possible education topic includes the importance of antibiotic adherence such as taking all prescribed antibiotics, even after the patient starts to feel better. Another education topic that would benefit the patient immensely would be the importance of smoking cessation.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

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. Acute pain related to kidney infection as evidence by the patient reporting bilateral flank pain.	**The patient has bilateral flank pain and CVA tenderness due to a kidney infection.**	**1.Administer pain medication as ordered.** **2.Encourage the patient stay hydrated by drinking adequate amounts of water.**	**The patient asked for and took the prescribed pain medication. She did drink water but wanted to drink coffee most of the day.** **The patient was receiving IV 0.9% saline at 100 ml/hour through which helped her stay hydrated.**

			When she returns home, reminders to drink water throughout the day could be helpful.
2. Impaired gas exchange related to altered oxygen supply as evidence by cigarette smoking.	**The patient states that she smokes half a pack of cigarettes a day.**	**1. Educate and encourage patient to stop smoking.** **2.Continue to monitor lung sounds, respirations, and oxygen saturation.**	**The patient listened and was open to receiving information about the importance of cigarette smoking cessation. While the patient was pleasant and willing to talk about quitting smoking, she states that she doesn't want to stop smoking right now.** **The patient was compliant with monitoring and assessing.**
3. Risk for imbalanced nutrition related to unhealthy food choices as evidence by the client stating she eats a lot of frozen meals and processed foods.	**The patient states that she tries to make healthy meals but frozen and processed foods are less expensive and easier to prepare.**	**1. Educate the patient to check the nutrition labels on frozen foods. Advise her to take into consideration foods with excessively high sodium, fat, calorie, and carbohydrate contents.** **2. Encourage the patient to start with small changes such as cooking three healthy meals per week and gradually increasing the number.**	**The patient was interested in trying to cook healthier meals. Some options she was interested in was lean protein and grilled vegetables.** **The patient understands that proper nutrition can help manage some of her illnesses such as diabetes, high cholesterol, and high blood pressure.**
4. Hyperthermia related to	**The patient presented in the**	**1. Continue to monitor the**	**The patient is compliant with vital assessments**

kidney infection as evidence by 103 fever.	**emergency department with a 103-degree fever. Her temperature dropped to 97.6 this morning but rose back up to 99.2 a few hours later.**	**client's vital signs and temperature. Administer an antipyretic as needed. Check neuro status often for any changes.** **2. Educate the client on the importance of antibiotic therapy adherence. This includes taking the prescribed dose at the proper time, not sharing antibiotics with others, and finishing the entire amount of medication prescribed even if she begins to feel better.**	**and takes medication to help reduce the fever.** **The patient verbally stated that she understood all of the directions on antibiotic therapy.**

Other References (APA):

Martin, P. (2019). *6 Urinary tract infection nursing care plans.* Nurse Labs. https://nurseslabs.com/urinary-tract-infection-nursing-care-plans/.

Concept Map (20 Points):

Subjective Data

The patient complains of bilateral flank pain and CVA tenderness. The patient stated that she began not feeling well over the weekend. She did seek medical treatment earlier in the week, but her symptoms became progressively worse and her temperature rose to 103. The patient does admit to smoking half a pack of cigarettes a day and using marijuana twice weekly.

Nursing Diagnosis/Outcomes

Acute pain related to kidney infection as evidence by the patient reporting bilateral flank pain.
Outcome/Goal: The patient will continue to drink adequate amounts of fluids and take prescribed pain medication.

Impaired gas exchange related to altered oxygen supply as evidence by cigarette smoking.
Outcome/Goal: The patient was willing to discuss the importance of smoking cessation but is not willing to quit right now.

Risk for imbalanced nutrition related to unhealthy food choices as evidence by the client stating she eats a lot of frozen meals and processed foods.
Outcome/Goal: The patient will attempt to cook more healthy meals at home and check nutrition labels on frozen/processed dinners.

Hyperthermia related to kidney infection as evidence by 103 fever.
Outcome/Goal: The patient will comply with monitoring and antibiotic therapy.

Objective Data

Height: 5'3" Weight: 190 lbs BMI: 33.7
BP: 99/57 Pulse: 90 RR: 14 Temp: 99.2
O2: 97% on room air.

Vitals stable. Continuing to monitor blood pressure and temperature often. A CT scan ruled out kidney stones but showed inflammation around the kidney and thickening of the bladder indicating infection. Chest x-ray was normal. The urine culture revealed E. coli bacteria present.

Patient Information

48-year-old Caucasian female.
Admitted on 3/30/21.
Diagnosis: Pyelonephritis, hyponatremia, and urinary tract infection.
Patient is a full code. Allergies to Motrin, penicillin, bee venom, and simvastatin. History of asthma, bipolar 1 disorder, diabetes mellitus type 2, high cholesterol, hypertension, hypothyroidism, depression, GERD, and seizures.

Nursing Interventions

Administer pain medication as ordered.

Encourage the patient stay hydrated by drinking adequate amounts of water.

Educate and encourage patient to stop smoking.

Continue to monitor lung sounds, respirations, and oxygen saturation.

Educate the patient to check the nutrition labels on frozen foods. Advise her to take into consideration foods with excessively high sodium, fat, calorie, and carbohydrate contents.

Encourage the patient to start with small changes such as cooking three healthy meals per week and gradually increasing the number.

Continue to monitor the client's vital signs and temperature. Administer an antipyretic as needed. Check neuro status often for any changes.

Educate the client on the importance of antibiotic therapy adherence. This includes taking the prescribed dose at the proper time, not sharing antibiotics with others, and finishing the entire amount of medication prescribed even if she begins to feel better.