N431 Care Plan #2

Lakeview College of Nursing

Ashley Miller

Demographics (3 points)

Date of Admission 3/28/2021	Patient Initials B.M.	Age 67-years-old	Gender Female
Race/Ethnicity White	Occupation Retired	Marital Status Widowed	Allergies Azithromycin: Cardiac Arrest: Severe
Code Status Full Code/ DNI	Height 162cm: 63.8in	Weight 84.8kg: 186.56lbs	

Medical History (5 Points)

Past Medical History: Acute injury of kidney, Coronary artery disease (CAD), cancer of the left breast: stage 4, chronic anemia, depression, insomnia, dyspnea, lupus, obesity, hyperlipidemia, history of ventricular fibrillation, secondary malignant neoplasm of bone, chronic obstructive pulmonary disease (COPD), coronary arteriosclerosis, non-Hodgkin's lymphoma, torsade de pointes, sudden cardiac arrest, prolonged Q-T interval on ECG, sebaceous cyst, pneumonia due to gram negative bacteria, paroxysmal atrial fibrillation, postherpetic neuralgia, frequent premature ventricular contractions (PVC), and automatic implantable cardioverter-defibrillator (AICD).

Past Surgical History: BM has a past surgical history of Colonoscopy polypectomy with snare, esophagogastroduodenoscopy biopsy (EGD), cardiac catheterization, defibrillator device, Hodgkin's disease, and lymphocytic-histiocytic predominance of lymph nodes of multiple sites.

Family History:

BM family history consists of

Father: stroke, diabetes mellitus, transient ischemic attack (TIA)

Mother: arthritis, cardiac disease, heart attack, heart disease, heart failure, hyperlipidemia, hypertension, stroke, and seizure disorder.

Aunt: breast cancer

Grandmother: asthma, cardiovascular disease, and heart disease.

Brother: cardiovascular disease

Sister: cardiovascular disease

Social History (tobacco/alcohol/drugs): BM social history consists of her not using any illicit drugs, no alcohol use, and currently a cigarette smoker who smokes somedays about half pack per day for fifty years.

Assistive Devices: BM uses oxygen sometimes at home and has a walker or cane at home that she uses to get around the house.

Living Situation: BM lives her daughter and son-in-law with their children in Mattoon, IL.

Education Level: BM has some college experience from Lake Land College and has her high school diploma.

Admission Assessment

Chief Complaint (2 points): Burning with urination

History of present Illness (10 points):

BM reported to the emergency department on Saturday, March 27, 2021. She reported that she was burning with urination the last couple of days that she has been at home. The characteristics she was experiencing were burning with urination. The only aggravating factor she is experiencing is when she goes to the bathroom to urinate. There were no relieving factors for BM when she was at home. There was no treatment until she came to the hospital and is receiving IV antibiotics.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Urinary Tract Infection (UTI)

Secondary Diagnosis (if applicable): N/A

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

Urinary tract infection (UTI) is the reason for six to seven million primary care visits per year (Capriotti & Frizzell, 2016). A healthy urinary tract is sterile and bacterial flora are typically confined to the urethral opening (Capriotti & Frizzell, 2016). Urine contains high osmolarity, urea, and organic acids that diminish bacterial viability in the bladder (Capriotti & Frizzell, 2016). Any obstruction of urinary outflow decreases the bladder's resistance to bacterial infection (Capriotti & Frizzell, 2016). Interference with urinary outflow occurs in such conditions as chronic voluntary suppression of urination, sexual intercourse, urinary tract obstruction, instrumentation of the urinary tract, use of catheters not drained to gravity, and vesicoureteral reflux (Capriotti & Frizzell, 2016). Although familiar, UTIs are not a severe disease in women unless associated with urinary obstruction or pregnancy (Capriotti & Frizzell, 2016). UTIs are very uncommon in males, and the cause should be thoroughly investigated (Capriotti & Frizzell, 2016). Continual free outflow urine clears bacteria from the body (Capriotti & Frizzell, 2016). Immunoglobulin A (IgA), secreted by WBCs in the urinary tract, also prevents bacteria's adherence to the bladder wall (Capriotti & Frizzell, 2016). When host defenses are overcome, urine can act as a medium for bacterial growth (Capriotti & Frizzell, 2016). E. coli, a bacteria found in the bowel, causes 70% to 95% of upper and lower UTIs (Capriotti & Frizzell, 2016). Staphylococcus saprophyticus, Klebsiella, Proteus, Pseudomonas, and Enterococcus faecalis are also uropathogenic bacteria (Capriotti & Frizzell, 2016).

Uropathogenic bacteria can adhere, proliferate, and resist host defenses in the bladder (Capriotti & Frizzell, 2016).

Risk factors that increase susceptibility to UTI in women include improper perineal hygiene; tight, restrictive clothing; and use of irritating bath products (Capriotti & Frizzell, 2016). Sexual intercourse increases a woman's risk of UTI, and the use of contraceptive diaphragms and spermicides are also known to increase susceptibility (Capriotti & Frizzell, 2016). UTIs in older males are generally associated with urinary tract obstruction caused by enlargement of the prostate gland (Capriotti & Frizzell, 2016). Lower UTI in men before fifty years is uncommon (Capriotti & Frizzell, 2016). In both males and females, other risk factors for UTI include dehydration, urinary catheterization, diabetes, bladder cancer and cancer in tissues adjacent to the bladder, and cancer treatments (Capriotti & Frizzell, 2016).

Signs and Symptoms:

Classic UTI symptoms of frequency, pain or burning on urination (dysuria), urgency, and occasionally hematuria (Capriotti & Frizzell, 2016). UTI symptoms are caused by the inflammation and edema of the urethra and bladder (Capriotti & Frizzell, 2016). Frequency is the need to urinate multiple times a day (Capriotti & Frizzell, 2016). Commonly in UTI, the bladder does not empty, and urinary retention causes frequent small amounts of urine flow (Capriotti & Frizzell, 2016).

Expected findings:

There are usually no changes noted in the physical examination (Capriotti & Frizzell, 2016). A urinalysis is a diagnostic test used to check for a UTI (Capriotti & Frizzell, 2016). A urinalysis shows some red blood cells, positive leukocyte esterase, white

blood cells, and nitrates, indicating bacteria (Capriotti & Frizzell, 2016). Urine culture infection is indicated by a colony count of bacteria greater than 10 to the fifth mL (Capriotti & Frizzell, 2016).

Diagnostic Findings:

Urine cultures are used to document a UTI and identify the specific organism (Hinkle & Cheever, 2018). Bacteria diagnose UTI in the urine culture. Microscopic hematuria is present in about half of patients with an acute UTI (Hinkle & Cheever, 2018). White blood cells in the urine occur in all patterns of UTI (Hinkle & Cheever, 2018). It is not specific for bacterial infection (Hinkle & Cheever, 2018). A multiple-test dipstick often includes testing for white blood cells, known as leukocyte esterase test, and nitrite testing (Hinkle & Cheever, 2018). X-ray images, computed tomography scans, ultrasonography, and kidney scans are helpful diagnostic tools (Hinkle & Cheever, 2018). A computed tomography scan may detect pyelonephritis or abscesses (Hinkle & Cheever, 2018). Ultrasonography and kidney scans are extremely sensitive for detecting obstruction, abscesses, tumors, and cysts (Hinkle & Cheever, 2018).

Treatment:

The usual treatment for UTI is an antibiotic (Capriotti & Frizzell, 2016). The specific antibiotic can be determined by culture and sensitivity testing (Capriotti & Frizzell, 2016). Nitrofurantoin or trimethoprim-sulfamethoxazole are commonly prescribed (Capriotti & Frizzell, 2016). Phenazopyridine may be prescribed for urinary tract pain relief (Capriotti & Frizzell, 2016). Hydration to accentuate unidirectional clearance of bacteriuria is also part of recommended treatment (Capriotti & Frizzell, 2016). Some have shown that

cranberry juice can decrease UTI risk because it lessens the adherence of bacteria to the bladder wall (Capriotti & Frizzell, 2016).

The patient I assessed had a low sodium level, low red blood cells, hematocrit, and hemoglobin. The patient also had a high white blood cell count and neutrophils, low lymphocytes, monocytes, and eosinophils. The patient also had a urinalysis done, and it showed that the white blood cells were increased, the red blood cells were increased, and the leukeesterase was increased. The patient also had a urine culture performed that showed there was a gram-negative bacillus. One final test performed but is still in progress showed gram-positive cocci resembling strep two out of two sites. The patient was also complaining that it was still burning when she was urinating.

The treatments used for this patient are Ceftriaxone and Vancomycin were the two antibiotics prescribed to treat her urinary tract infection.

Pathophysiology References (2) (APA):

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

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical perspectives*. F.A. Davis Company.

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	**4.7-6.1**	**2.21**	**2.11**	**Low red blood cell count in patient with a urinary tract infection is that**

				the patient has a history of chronic anemia (Pagana et al., 2019**).**
Hgb	**14-18**	**7.9**	**7.5**	**Low hemoglobin count in a patient with a urinary tract infection is that the patient has a history of chronic anemia and lupus (**Pagana et al., 2019**).**
Hct	**40%-52%**	**23.2**	**22.0**	**Low hematocrit count in a patient with a urinary tract infection is that the patient has a history of chronic anemia and Hodgkin disease (**Pagana et al., 2019**).**
Platelets	**150-400**	**171**	**158**	**Normal lab value**
WBC	**5000-10000**	**14.4**	**11.1**	**High levels of white blood cells in a patient with a urinary tract infection is due to the infection in the urine (**Pagana et al., 2019**).**
Neutrophils	**55-70**	**87**	**85.2**	**High level of neutrophils in a patient with a urinary tract infection is due to the infection in the urine (**Pagana et al., 2019**).**
Lymphocytes	**20-40**	**3.9**	**9.1**	**Low level of lymphocytes in a patient with a urinary tract infection is due to the infection in the urine (**Pagana et al., 2019**).**
Monocytes	**2-8**	**1.6**	**2.7**	**Decreased levels of monocytes in a patient with a urinary tract infection is due to the infection in the urine (**Pagana et al., 2019**).**
Eosinophils	**1-4**	**1.1**	**0.4**	**Low eosinophils in a patient with a urinary tract infection is due to the infection in the urine (**Pagana et al., 2019**).**
Bands	**3%-5%**	**N/A**	**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-	**136-145**	**136**	**134**	**Low level of sodium in a patient with a urinary tract infection is due to the inadequate sodium intake (**Pagana et al., 2019**).**

K+	**3.5-5.0**	**4.0**	**3.8**	**Normal lab value**
Cl-	**98-106**	**100**	**98**	**Normal lab value**
CO2	**23-30**	**29**	**31**	**Normal lab value**
Glucose	**74-106**	**151**	**98**	**A high glucose level in a patient with a urinary tract infection is due to malnutrition (**Pagana et al., 2019**).**
BUN	**10-20**	**12**	**11**	**Normal lab value**
Creatinine	**0.5-1.1**	**0.91**	**0.84**	**Normal lab value**
Albumin	**3.5-5.0**	**3.7**	**N/A**	**Normal lab value**
Calcium	**9-10.5**	**8.6**	**8.2**	**A low calcium level in a patient with a urinary tract infection is due to impaired renal failure (**Pagana et al., 2019**).**
Mag	**1.3-2.1**	**N/A**	**N/A**	**N/A**
Phosphate	**3.0-4.5**	**N/A**	**N/A**	**N/A**
Bilirubin	**0.3-1.0**	**0.3**	**N/A**	**Normal lab value**
Alk Phos	**30-120**	**64**	**N/A**	**Normal lab value**
AST	**0-35**	**19**	**N/A**	**Normal lab value**
ALT	**4-36**	**13**	**N/A**	**Normal lab value**
Amylase	**60-120**	**N/A**	**N/A**	**N/A**
Lipase	**0-160**	**N/A**	**N/A**	**N/A**
Lactic Acid	**5-20: Venous 3-7: Arterial**	**N/A**	**N/A**	**N/A**
Troponin	**<0.1: T <0.03: I**	**N/A**	**N/A**	**N/A**

CK-MB	**3%-5%**	**N/A**	**N/A**	**N/A**
Total CK	**55-170**	**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	**0.8-1.1**	**N/A**	**N/A**	**N/A**
PT	**11-12.5**	**N/A**	**N/A**	**N/A**
PTT	**30-40 seconds**	**N/A**	**N/A**	**N/A**
D-Dimer	**<250**	**N/A**	**N/A**	**N/A**
BNP	**<100**	**N/A**	**N/A**	**N/A**
HDL	**>45**	**N/A**	**N/A**	**N/A**
LDL	**<130**	**N/A**	**N/A**	**N/A**
Cholesterol	**<200**	**N/A**	**N/A**	**N/A**
Triglycerides	**40-180**	**N/A**	**N/A**	**N/A**
Hgb A1c	**4%-5.9%**	**N/A**	**N/A**	**N/A**
TSH	**2-10**	**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**	**Yellow/Clear**	**N/A**	**Normal lab value**
pH	**4.6-8**	**5.5**	**N/A**	**N/A**
Specific Gravity	**1.005-1.030**	**1.015**	**N/A**	**N/A**
Glucose	**50-300**	**>1000**	**N/A**	**An increase in glucose could be due to the urinary tract**

				infection (Pagana et al., 2019**).**
Protein	**0-8**	**Negative**	**N/A**	**N/A**
Ketones	**Negative**	**Negative**	**N/A**	**N/A**
WBC	**Negative**	**99**	**N/A**	**A positive white blood cell count in a patient with a urinary tract infection is due to the bacteria in the urinary tract (**Pagana et al., 2019**).**
RBC	**<2**	**6**	**N/A**	**A high level of red blood cells in a patient with a urinary tract infection could be due to renal trauma (**Pagana et al., 2019**).**
Leukoesterase	**Negative**	**4+**	**N/A**	**A positive leukoasterase is due to the patient having a urinary tract infection (**Pagana et al., 2019**).**

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	**80-100**	**N/A**	**N/A**	**N/A**
PaCO2	**35-45**	**N/A**	**N/A**	**N/A**
HCO3	**21-28**	**N/A**	**N/A**	**N/A**
SaO2	**95-100**	**N/A**	**N/A**	**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	**Negative**	**Gram Negative Bacilli**	**N/A**	The positive test is due to the patient having a urinary tract infection (Pagana et al., 2019**).**
Blood Culture	**Negative**	**In Progress**	**N/A**	**Gram Positive Cocci resembling strep 2 out of 2 sites**
Sputum Culture	**Negative**	**N/A**	**N/A**	**N/A**
Stool Culture	**Negative**	**N/A**	**N/A**	**N/A**

Lab Correlations Reference (1) (APA):

Pagana, K.D., Pagana, T.J. & Pagana, T.N. (2019). *Mosby's diagnostic and laboratory test reference*. Elsevier.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

- **Chest X-Ray: was used to check for the placement of the pacemaker and cardiac catheterization. The chest x-ray showed that the pacemaker is in place. There is no evidence of pneumothorax or pleural effusion, lungs otherwise appear clear, atherosclerotic calcification involves the aortic arch. No acute disease or distress.**

Diagnostic Test Correlation (5 points):

- **Chest X-Ray was ordered to check the location of centrally placed IV access device (**Pagana et al., 2019**).**

Diagnostic Test Reference (1) (APA):

Pagana, K.D., Pagana, T.J. & Pagana, T.N. (2019). *Mosby's diagnostic and laboratory test reference*. Elsevier.

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

Home Medications (5 required)

Brand/Generic	**Aspirin/ Zorprin**	**Atorvastatin Calcium/ Lipitor**	**Digoxin/ Lanoxin**	**Duloxetine hydrochloride/ Cymbalta**	**Eliquis/ apixaban**
Dose	**81mg**	**40 mg**	**125 mcg**	**30 mg**	**5 mg**
Frequency	**Daily**	**Daily**	**Daily**	**Daily**	**BID**
Route	**Oral**	**Oral**	**Oral**	**Oral**	**Oral**
Classification	**NSAID**	**Antihyperlipidemic**	**Antiarrhythmic**	**Antidepressant**	**Anticoagulant**
Mechanism of Action	**Blocks the activity of cyclooxygenase, the enzyme needed for prostaglandin synthesis.**	**Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of LDL receptors on liver cells to enhance LDL uptake and breakdown.**	**Increases the force and velocity of myocardial contraction, r3esultinng in positive inotropic effects by decreasing the conduction rate and increasing the effective refractory period of the AV node.**	**Inhibits dopamine, neuronal serotonin, and norepinephrine reuptake to potentiate noradrenergeric and serotonergic activity in the CNS.**	**Inhibits free and clot-bound factor Xa and prothrombinase activity. Although apixaban has no direct effect on platelet aggregation, it does indirectly inhibit platelet aggregation induced by thrombin.**
Reason Client Taking	**To relieve mild to moderate pain due to**	**Cholesterol**	**Heart Failure**	**Depression**	**Treat deep vein thrombosis and**

	inflammation				**pulmonary embolism**
Contraindications (2)	**Active bleeding or coagulation disorders, hypersensitivity to aspirin, aspirin products, other NSAIDs**	**Active hepatic disease, hypersensitivity to atorvastatin or its components**	**Hypersensitivity to digoxin or its components, ventricular fibrillation**	**Chronic liver disease including cirrhosis, hypersensitivity to duloxetine or its component severe renal impairment**	**Active pathological bleeding, severe hypersensitivity to apixaban or its components**
Side Effects/Adverse Reactions (2)	**GI bleeding, CNS depression**	**Arrhythmias, hypoglycemia**	**Arrhythmias, heart block**	**Seizures, suicidal ideation**	**Hemorrhagic stroke, bleeding**
Nursing Considerations (2)	**Do not crush timed-released or controlled release aspirin tablets unless directed, ask about tinnitus. This reaction usually occurs when blood aspirin level reaches or exceeds maximum dosage for therapeutic effect.**	**Know that atorvastatin is used in patients with homozygous familial hypercholesterolemia as an adjunct to other lipid-lowering treatments or along only if other treatment of heterozygous, be aware that atorvastatin may be used with colestipol or cholestyramine for additive antihyperlipidemic effects**	**Expect to treat underlying thiamine deficiency in patients with beri-beri heart disease because if left untreated, digoxin therapy may be ineffective, assess for drug effectiveness if patient has acute or unstable chronic atrial fibrillation**	**Use duloxetine cautiously in patients with delayed gastric emptying because drug's enteric coating resists dissolution until it reaches an area where pH exceeds 5.5, watch closely for evidence of suicidal thinking or behavior, especially when therapy**	**Know that apixaban should not be given to patients with severe hepatic dysfunction, be aware that if apixaban is discontinued prematurely and adequate alternative anticoagulation is not present, the risk of thrombosis increases**

				starts or dosage changes	
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	**Assess patient for signs of bleeding**	**Assess liver function tests**	**Monitor patient's potassium serum level and take the patient's apical pulse before giving each dose and notify prescriber if it is below 60 beats per minute**	**Monitor serum sodium levels and hepatic function**	**Monitor the patient closely for bleeding**
Client Teaching needs (2)	**Instruct the patient to take aspirin with food of after meals because it may cause GI upset if taken on an empty stomach, instruct patient to stop taking aspirin and notify prescriber if any symptoms of stomach or intestinal bleeding occur such as passage of bloody or tarry**	**Emphasize that atorvastatin is an adjunct to- not a substitute for-a low-cholesterol diet, tell patient to take drug at the same time each day to maintain its effects**	**Advise patient to consult prescriber before using other drugs, including OTC products,**	**Advise patient not to stop duloxetine abruptly because adverse reactions may occur, instruct patient to notify prescriber if any serious or troublesome adverse effects develop, especially if they are persistent, severe, or unusual**	**Emphasize the importance of taking apixaban exactly as prescribed, tell patient to alert all prescribers to use of apixaban therapy before any invasive procedure, including dental work, is scheduled**

	stools or if patient is coughing up blood or vomit that looks like coffee grounds.				

Hospital Medications (5 required)

Brand/Generic	**Ceftriaxone sodium, Rocephin**	**Vancomycin hydrochloride/ Vancocin**	**Magnesium Oxide/ Uro-Mag**	**Potassium Chloride/Kloor-Con Powder**	**Daliresp/ Roflumilast**
Dose	**1 gram**	**1000 mg**	**800 mg**	**20 mEq**	**500 mcg**
Frequency	**Q 24 hour**	**Q 12 hour**	**Daily**	**Daily**	**Daily**
Route	**IV Piggyback**	**IV Piggyback**	**Oral**	**Oral**	**Oral**
Classification	**Antibiotic**	**Antibiotic**	**Electrolyte Replacement**	**Electrolyte replacement**	**Phosphodiesterase Inhibitors**
Mechanism of Action	**Interferes with bacterial cell wall synthesis by inhibiting cross-linking of peptidoglycan strands. Peptidoglycan makes the cell membrane rigid and protective.**	**Inhibits bact3erial RNA and cell wall synthesis; alters permeability of bacterial membranes, causing cell wall lysis and cell death**	**Assists all enzymes involved in phosphate trans fer reactions that use adenosine triphosphate (ATP). Magnesium is required for normal function of the ATP-dependent**	**Acts as the major cation in intracellular fluid, activating many enzymatic reactions essential for physiologic processes, including nerve impulse transmissio**	**Reduced inflammation in the lungs that leads to chronic obstructive pulmonary disease**

	Without t, bacterial cells rupture and die.		**sodium-potassium pump in muscle membrane.**	**n and cardiac and skeletal muscle contraction**	
Reason Client Taking	**UTI**	**Bacteremia**	**To treat torsades de pointes**	**Hypokalemia**	**COPD**
Contraindications (2)	**Calcium-containing I.V. solutions, hypersensitivity to ceftriaxone**	**Hypersensitivity to corn or corn products when given with dextrose solutions, hypersensitivity to vancomycin or its components**	**Hypersensitivity to magnesium salts or any component of magnesium-containing preparations, intestinal obstruction or perforation**	**Acute dehydration, potassium-sparing diuretics**	**Moderate or severe liver disease, allergic roflumilast**
Side Effects/Adverse Reactions (2)	**Seizures, hepatic failure**	**Hypotension, acute kidney injury**	**Arrythmias, respiratory depression**	**Arrythmias, GI bleeding**	**Tremors, loss of appetite**
Nursing Considerations (2)	**Use ceftriaxone cautiously in patients who are hypersensitive to penicillins because cross-sensitivity has occurred in about 1% to 3% of such patients, protect powder from light**	**Be aware that vancomycin is not indicated for prophylaxis of endophthalmitis, nor should it be administered intracamerally or intravitreally, especially during or after cataract surgery, expect to**	**Be aware that magnesium sulfate is the elemental form of magnesium. Oral preparation are not all equivalent, avoid giving other oral drugs within two hours of magnesium-containing antacid**	**Administer oral potassium with or immediately after meals, review patient's medical history before administering potassium chloride**	**Administer with or without food, administer once-daily in the morning**

		monitor blood vancomycin concentration frequently			
Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Monitor BUN and creatinine levels, assess ALT, AST, bilirubin, CBC, hematocrit, LD, and serum alkaline phosphatase levels**	**Monitor serum vancomycin concentration, check CBC results and BUN and serum creatinine levels during therapy**	**Assess cardiac status and monitor serum electrolyte levels**	**Monitor serum creatinine level and urine output**	**Monitor weight daily and assess mental status**
Client Teaching needs (2)	**Tell patient to report evidence of blood dyscrasia or superinfection to prescriber immediately, urge patient to report watery, bloody to 2 months after drug therapy has ended**	**Instruct patient to use a calibrated measuring device to measure accurate doses of oral solution, advise patient to notify prescriber if no improvement occurs after a few days**	**Instruct patient to refrigerate magnesium citrate solution, caution patient about risk of dependence with long-term laxative use**	**Teach patient correct way to take prescribed potassium, teach patient how to take her radial pulse, and advise her to notify prescriber about significant changes in heart rate or rhythm**	**Instruct patient to roflumilast as directed, inform patient that roflumilast is not a bronchodilator and should not be used for treating sudden breathing problems**

(2020 Nurse's drug handbook, 2020)

Medications Reference (1) (APA):

2020 Nurse's drug handbook. (2020). Jones and Bartlett learning

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Patient is A&O x4. She knows her name, birthdate, where she is, and why she is was there. She was not in distress. Her overall appearance was clean and well-groomed.**
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 18** **Drains present: Y☐ N ☒** **Type:**	**Skin color was normal for ethnicity. Character and temperature of skin was warm and dry. Skin turgor was elastic with no tenting. Patient presents with no rashes or wounds. Patient did present with bruises on forearms bilaterally.**
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Head and neck are symmetrical and no deviations. The trachea was midline. The patient's eyes were PERRLA and six cardinal fields of gaze bilaterally. The tympanic membrane was pearly gray, and intact bilaterally. The patient does wear glasses on a regular. No signs of drainage from the ears or nose. There was no deviated septum, equal turbinates, bilaterally. The oral mucosa pink, moist, and intact. The patient has top dentures only and is missing five teeth on the bottom.**
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 and S2 were heard with regular heartbeat. No presence of S3 or S4. Normal sinus rhythm. Pedal pulses were strong bilaterally with a grade of +3. Capillary refill was less than three seconds. No presence of neck vein distention. No presence of edema.** **The patient was wearing telemetry as well.**
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒**	**The patient's respirations were 20 breaths per minute with anterior and posterior all lobes**

Breath Sounds: Location, character	**expiratory wheezes bilaterally. The patient presented with chronic cough as well. The patient did not show accessory muscle usage.**
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:**	**Height: 162 cm** **Weight: 84.8 kg** **Last BM: 3/29/2021 that morning** **The patient's diet at home was regular; during hospital stay the patient was on a 1500-1700 heart healthy diet. The patient's abdomen was firm and non-tender. Bowel sounds were hyperactive and heard in all four quadrants. The abdomen showed no signs of incisions, drains, or wounds.** **The patient had no ostomy, nasogastric tube, or feeding tubes present.**
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☒ N ☐** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**During assessment, the patient's urine was cloudy and yellow. Quantity of urine was about 200 milliliters during time on floor. Patient stated that she had some burning during urination due to the UTI. No dialysis or catheter during time of assessment. Inspection of genitals were normal for age and ethnicity.**
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 50** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	**Patient has a history of falls.** **Patient was able to perform range of motion with upper and lower extremities bilaterally. Strength was equal with upper and lower extremities bilaterally. The patient's strength being weak in upper and lower extremities bilaterally. Patient was one assist with a walker or cane for transfers and to the bathroom.** **Patient was not up ad lib.** **Patient needs assistance with equipment.** **Patient needs support to stand and walk.**

NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**BM speaks English as primary language and responds appropriately for age.** **MAEW was present.** **PERRLA was present.** **BM strength was equal bilaterally for all extremities. BM strength was weak in upper and lower extremities bilaterally.** **BM mental status is appropriate for age. BM's sensory and level of consciousness (LOC) are present. Orientation is A&O x4.**
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):**	**BM was calm and cooperative during time of assessment. BM's religion is Christian, patient states, "It is what keeps me alive." BM stated that she lives with her daughter and son-in-law along with their children. BM states that she has a good family structure that is supportive.**

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1205	90 beats per minute	111/70 mmHg	20 breaths per minute	38.8 degrees Celsius	93% NC 2 Liter of oxygen
1500	77 beats per minute	105/49 mmHg	20 breaths per minute	37.6 degrees Celsius	94% NC 2 Liter of oxygen

Vital Sign Trends:

The patient's baseline blood pressure is slightly low at rest. BM's vitals were within normal limits, other than her blood pressure and temperature. The temperature was elevated during the first set of vitals and then slightly came down during the second set but

was still out of normal range. The second set of blood pressure was even lower than the first set for BM. BM's oxygen saturation was on the low end of the normal range, and that was with a nasal canula on two liters of oxygen.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1420	Numeric (0-10)	Head	9 out of 10	Real sharp and headache	Offered patient medication (Tylenol)
1500	Numeric (0-10)	Head, back, and butt	5 out of 10	Real sharp and headache	Repositioned the patient (went from the bed to the chair)

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: Implanted Port Single Location of IV: Left Arm Date on IV: 3/28/2021 Patency of IV: Patent Signs of erythema, drainage, etc.: Dressing was changed on 3/28/2021, there was no signs of erythema, drainage, redness, and the dressing was dry and intact.	Saline Lock

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Vancomycin: 400 mL Oral: 600 mL	Total: 200 mL

Nursing Care

Summary of Care (2 points)

Overview of care:

The first set of vitals were taken at 1205 for BM. The patient's vitals were within normal limits except for her low blood pressure and temperature, which was running slightly high. The patient's heart rate was 77-90 beats per minute. BM respirations were 20 breaths per minute, with lungs being expiratory wheezes anterior and posterior in all lobes bilaterally with oxygen saturation of 93% to 94% on two liters of the nasal cannula. After BM had lunch, a complete head-to-toe assessment was performed at the bedside. BM was cooperative and calm during the assessment and answered all questions with complete sentences. The patient was open about her medical history and social history. The last set of vitals were performed at 1500; BM blood pressure came down to 105/49 mm Hg, and her temperature came down to 37.6 degrees Celsius.

Procedures/testing done:

No procedures or testing were done during time of assessment.

Complaints/Issues:

The patient did not mention any complaints or issues while on the floor.

Vital signs (stable/unstable):

BM's vital signs were stable when compared to baseline vital signs during time of assessment on the floor. BM did have slightly low blood pressure during assessment. Which the second set of vitals for her blood pressure came down even further.

Tolerating diet, activity, etc.:

BM was on a 1500-1700 heart healthy diet during time of assessment. Patient was tolerating the diet well during the time of assessment. BM's activity she feels weak when walking to the bathroom or to her chair. She did require assistants when ambulating to the bathroom and chair.

Physician notifications:

The doctor did not leave any notifications during time on the floor.

Future plans for patient:

Is to discharge home with daughter in the next couple days.

Discharge Planning (2 points)

Discharge location:

B.M. will discharge home with her daughter who lives in Mattoon with her husband and grandchildren.

Home health needs (if applicable):

B.M. wears oxygen while at home and uses a cane/walker to get around the home.

Equipment needs (if applicable):

BM's equipment needs have no changed since her time of admission. She will continue to use oxygen and her cane/walker to ambulate.

Follow up plan:

B.M. will follow up with appointments and prescribed medications.

Education needs:

B.M. need some education on how to keep the frequency of urinary tract infections down. Whether that would be drinking more water, taking a shower instead of baths, or even a

diet to help keep the urinary tract infections down. BM will need education to continue taking medications as prescribed.

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. Infection related to patient being admitted to the hospital for a urinary tract infection as evidenced by the patient's urine culture and urinalysis coming back positive for a urinary tract infection.	**The patient has a history of urinary tract infections.**	**1. Encourage the patient to finish all prescribed antibiotics; note their effectiveness.** **2. Suggest cranberry or prune juice, or vitamin C 500 to 1000 mg/day.**	**- Patient will follow the prescribed dose of antibiotics and finish them as prescribed.** **- Patient will take a cranberry or prune juice, or a vitamin C 500 to 1000 mg/day to prevent urinary tract infections when patient is discharged to home.**
2. Acute pain related to the patient having a burning sensation while urinating as evidenced by the patient stating, "It burns when I urinate."	**The patient stating, she has a burning sensation when urinating.**	**1. Assess the patient's description of pain.** **2. Instruct the patient in the use of sitz bath.**	**- Patient's pain of burning sensation while urinating will decrease by the time of discharge.** **- Patient may use a sitz bath to help relieve the burning sensation and may find some relief by the**

			end of the shift.
3. Impaired renal function related to the patient having a urinary tract infection as evidenced by the patient being on vancomycin and Ceftriaxone.	**The patient is on two different antibiotics and antibiotics are hard on the kidneys.**	**1. Achieve optimal urinary elimination.** **2. When administering medications metabolized by the kidneys, anticipate that dosages, frequency, or both may require adjustment.**	**- The patient's electrolytes and urinalysis results with be within normal limits by follow up appointment.** **- The patient will report signs of nephrotoxicity to the nursing staff when experiencing symptoms.**
4. Knowledge deficit related to the patient having a history of urinary tract infections as evidenced by patient being back in the hospital for a urinary tract infection.	**The patient's reoccurring urinary tract infections.**	**1. Assess the patient's knowledge of urinary tract infections risk factors, prevention, and treatment.** **2. Teach the patient to complete the full course of antibiotic medication, even if symptoms resolve.**	**- Patient will verbalize knowledge of risk factors, prevention, and treatment of urinary tract infections by the time of discharge.** **- Patient will finish all prescribed antibiotics as ordered by the prescriber.**

(Gulanick & Myers, 2017**)**

Other References (APA):

Gulanick, M., & Myers, J. L. (2017). Nursing care plans: diagnoses, interventions, & outcomes (9th ed.). Elsevier.

Concept Map (20 Points):

Subjective Data

Patient complains of burning when urinating

Nursing Diagnosis/Outcomes

1. Infection related to patient being admitted to the hospital for a urinary tract infection as evidenced by the patient's urine culture and urinalysis coming back positive for a urinary tract infection.
   - Patient will follow the prescribed dose of antibiotics and finish them as prescribed.
   - Patient will take a cranberry or prune juice, or a vitamin C 500 to 1000 mg/day to prevent urinary tract infections when patient is discharged to home.
2. Acute pain related to the patient having a burning sensation while urinating as evidenced by the patient stating, "It burns when I urinate."
   - Patient's pain of burning sensation while urinating will decrease by the time of discharge.
   - Patient may use a sitz bath to help relieve the burning sensation and may find some relief by the end of the shift.
3. Impaired renal function related to the patient having a urinary tract infection as evidenced by the patient being on vancomycin and Ceftriaxone.
   - The patient's electrolytes and urinalysis results with be within normal limits by follow up appointment.
   - The patient will report signs of nephrotoxicity to the nursing staff when experiencing symptoms.
4. Knowledge deficit related to the patient having a history of urinary tract infections as evidenced by patient being back in the hospital for a urinary tract infection.
   - Patient will verbalize knowledge of risk factors, prevention, and treatment of urinary tract infections by the time of discharge.
   - Patient will finish all prescribed antibiotics as ordered by the prescriber.

Objective Data

The patient's vital signs were within normal limits other than the blood pressure that was 111/70 mm Hg and 105/49 mm Hg, and her temperature was slightly high, which was 38.8 degrees Celsius and 37.6 degrees Celsius. The urinalysis test showed increased glucose, white blood cells, red blood cells, and leukpoesterase in the urine. The urine culture showed gram-negative bacilli in the urine. The abnormal labs were: red blood cells, hematocrit, hemoglobin, calcium, sodium, lymphocytes, monocytes, eosinophils were all decreased, while white blood cells, neutrophils, and glucose were increased.

Patient Information

BM is a 67-year-old white female who was admitted for a urinary tract infection. The patient has a history of urinary tract infections. Her primary symptom was burning with urination. The patient had a urinalysis and urine culture performed to confirm the urinary tract infection. The patient is on Ceftriaxone and Vancomycin to treat the urinary tract infection.

Nursing Interventions

1. Encourage the patient to finish all prescribed antibiotics; note their effectiveness.
2. Suggest cranberry or prune juice, or vitamin C 500 to 1000 mg/day.
1. Assess the patient's description of pain.
2. Instruct the patient in the use of sitz bath.
1. Achieve optimal urinary elimination.
2. When administering medications metabolized by the kidneys, anticipate that dosages, frequency, or both may require adjustment
1. Assess the patient's knowledge of urinary tract infections risk factors, prevention, and treatment.
2. Teach the patient to complete the full course of antibiotic medication, even if symptoms resolve.