N431 CARE PLAN #2

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N431: Adult Health II

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Demographics

Date of Admission	Client Initials	Age	Biological Gender
11/14/2024	MD	53 years	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Unemployed	Single	No known allergies
Code Status	**Height**	**Weight**	
Full code	170.2 cm (5’7”)	68.9 kg (151 lbs 4.4 oz)	

Medical History

Past Medical History: Polysubstance Abuse (Intravenous Drug Use – Heroin), Hypertension, Anemia, Recurrent Infectious Endocarditis with Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia, Shock, Strep Bacteremia, Extended-spectrum Beta-lactamase (ESBL) pyelonephritis, Acute on Chronic Pulmonary Embolism with Cor Pulmonale, Acute Metabolic Encephalopathy, Tricuspid Valve Regurgitation

Past Surgical History: Upper Gastrointestinal Endoscopy (05/22/24), Bronchoscopy (06/04/2024)

Family History: The patient denied any family history at admission.

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use):

The patient uses tobacco daily. She smokes 0.5 packs daily and has been smoking for 30 years.

The patient denies current alcohol use and states she quit over 10 years ago.

The patient is a daily IV heroin user. She injects an unknown amount and states she has been using heroin for “a while.” She also states she uses meth occasionally.

Education: MD was severely lethargic during her interview and declined to answer. Therefore, the client's education status is unknown.

Living Situation: MD lives at home with her boyfriend.

Assistive devices: MD uses a standard walker.

Admission History

Chief Complaint: Shortness of Breath

History of Present Illness (HPI)– OLD CARTS

MD presented to Paris Community Hospital on 11/14/24 with a complaint of shortness of breath. The patient was lethargic during her interview and unable to verbalize how long the shortness of breath has been occurring, but she has been seen multiple times since May of 2024 for a recurring pulmonary embolism and related shortness of breath. When asked where she felt the symptoms the most, MD pointed to her chest. She was unable to verbalize whether the shortness of breath was ongoing or intermittent but was able to say she currently did not have any. Due to her lethargy, she was unable to express the characteristics of her shortness of breath. She was also unable to verbalize any aggravating or relieving factors. MD was not able to express what treatment she had used for her shortness of breath; however, she did receive treatment from 10/24/24 through 11/01/24 at Carle Foundation Hospital in the form of heparin therapy. She was not given anti-coagulation meds upon discharge due to being at high risk for bleeding. At the time of the interview, she was unable to verbalize the severity of her shortness of breath but stated she felt good at the present time.

Admission Diagnosis

Primary Diagnosis: Pulmonary Embolism

Secondary Diagnosis (if applicable): Endocarditis, Hypotension

Pathophysiology

A pulmonary embolism (PE) is a type of blood clot that occurs or travels to the arteries of the lungs (Capriotti, 2020). The clot typically originates in the veins of the extremities, called deep vein thrombosis (DVT), or on the right side of the heart (Capriotti, 2020). These clots occur because of inappropriate coagulation of the platelets (Hinkle et al., 2022). As the thrombus forms, it dislodges and travels through the venous system into the pulmonary arteries, where it lodges and infarctions of the lungs occur (Hinkle et al., 2022). This leads to decreased blood flow and oxygenation of the lung tissue and, therefore, reduces the perfusion of oxygen to the rest of the body (Hinkle et al., 2022).

Signs and symptoms of a PE include shortness of breath, chest pain, palpitations, cough, anxiety, excessive sweating, tachypnea, and fainting (Capriotti, 2020). Symptoms vary depending on where the PE is located, and some people may not exhibit any or may have few symptoms (Hinkle et al., 2022). A PE can result in sudden death in some circumstances (Hinkle et al., 2022). This client exhibited shortness of breath and tachycardia upon arrival at Paris Community Hospital. She had multiple episodes of PE previously, so she presented to the hospital when she noticed symptoms like her previous episodes. She denied any other symptoms.

Diagnosis of a PE includes lab work and imaging. A D-dimer is a blood test that looks for potential clots in the blood and are often the first tests performed (Hinkle et al., 2022). Other blood tests, like a troponin or B-type natriuretic peptide, may be done to rule out other causes of the symptoms (Hinkle et al., 2022). Chest X-ray (CXR) is used to determine if any underlying pulmonary or cardiac issues are occurring (Hinkle et al., 2022). A CT angiography (CTA) of the

chest will be performed to visualize any clots and determine their size and location (Hinkle et al., 2022). Additionally, an electrocardiogram (ECG) will be done to rule out cardiac issues (Hinkle et al., 2022). This patient had a CTA and CXR performed at the Paris Community Hospital which showed a PE. She also had an ECG that ruled out a myocardial infarction. At Carle Foundation Hospital, she had a troponin and BNP performed to determine if any cardiac issues may be present.

Treatment for a PE includes anticoagulants and thrombolytic agents (Capriotti, 2020). Thrombolytic agents are typically only used for a PE that causes extreme hemodynamic changes or is severely life-threatening (Hinkle et al., 2022). Anticoagulants are the preferred treatment for a stable PE as they do not break up the clot but prevent further clotting from occurring (Hinkle et al., 2022). Surgical treatment may be needed to remove the clot if it is extensive (Hinkle et al., 2022). This client was hemodynamically stable and, therefore, did not require thrombolytic treatment. She is receiving anticoagulation therapy in the form of heparin to prevent further clotting.

Pathophysiology References (2) (APA):

Capriotti, T. (2020, February 4). Chapter 21: Restrictive and Obstructive Pulmonary Disorders. In *Davis Advantage for pathophysiology: Introductory Concepts and Clinical Perspectives* (Second Edition, pp. 514). F.A. Davis Company.

Hinkle, J. L., Cheever, K. H., & Overbaugh, K. (2022). Chapter 26: Assessment and Management of Patients with Vascular Disorders and Problems of Peripheral Circulation. In *Brunner & Suddarth's Textbook of Medical-Surgical Nursing* (15th ed., pp. 850-851). Wolters Kluwer.

Laboratory/Diagnostic Data

Lab Name	Admission Value	Today's Value	Normal Range	Reasons for Abnormal
Calcium	7.5 mg/dL	7.5 mg/dL	8.9 – 10.6 mg/dL	Decreased calcium levels may be related to her decreased albumin levels, or a potential vitamin D deficiency or malabsorption (Pagana et al., 2023).
Glucose	104 mg/dL	93 mg/dL	74 – 100 mg/dL	Her initial increased glucose was nonfasting, so an increased level slightly above normal may indicate recent ingestion of food (Pagana et al., 2023). Increased glucose levels can also indicate acute stress (Pagana et al., 2023).
Albumin	1.8 g/dL	1.6 g/dL	3.5 – 5.0 g/dL	Decreased albumin levels can be related to infection, stress, malabsorption, or possible cirrhosis (Pagana

				et al., 2023).
AST	48 U/L	700 U/L	9 – 43 U/L	An increased AST is often related to liver diseases such as cirrhosis or hepatitis (Pagana et al., 2023). It may also indicate drug-induced liver injury, as this client has an extensive history of drug use (Pagana et al., 2023). This patient does not have a history of liver disease, so further inquiry into her liver health may be necessary (Pagana et al., 2023).
ALT	<7 U/L	109 U/L	0 – 34 U/L	Elevated ALT levels can be related to shock, drugs toxic to the liver, hepatitis, cirrhosis, or myocardial injury (Pagana et al., 2023). Further investigation into the

				client's elevated liver labs should be performed as she does not currently have a liver disease diagnosed (Pagana et al., 2023).
Sodium	134 mmol/L	130 mmol/L	136 – 145 mmol/L	Decreased sodium levels can be related to heart failure, inadequate intake of sodium, or malabsorption (Pagana et al., 2023).
Potassium	5.2 mmol/L	3.8 mmol/L	3.5 – 5.1 mmol/L	Elevated potassium levels can indicate dehydration, acidosis, or infection (Pagana et al., 2023).
Carbon Dioxide	20.0 mmol/L	22.0 mmol/L	22.0 – 29.0 mmol/L	A decreased carbon dioxide reading may be related to shock or starvation (Pagana et al., 2023).
Red Blood Cells	3.29 10^6U/L	2.97 10^6U/L	3.50 – 5.20 10^6U/L	The client's decreased RBCs can be related to

				her anemia, chronic illness, or endocarditis (Pagana et al., 2023).
Hemoglobin	10.0 g/dL	9.3 g/dL	11.0 – 16.0 g/dL	The client's hemoglobin level being decreased is most likely related to her anemia, but can also be related to nutritional deficiencies (Pagana et al., 2023).
Hematocrit	32.7%	29.9%	34.0 – 47.0%	Decreased hematocrit can be related to the client's anemia but can also indicate cirrhosis or nutritional deficiencies (Pagana et al., 2023).
Mean corpuscular hemoglobin concentration (MCHC)	30.6 g/dL	31.1 g/dL	31.0 – 35.0 g/dL	A decreased MCHC is likely due to the client's anemia (Pagana et al., 2023).
Red Blood Cell Distribution Width (RDW)	23.0%	21.2%	12.0 – 15.0%	Increased RDWs are related to the client's anemia (Pagana et al.,

				2023).
Red Cell Distribution Width (Standard Deviation) (RDW-SD)	83.6 fL	77.6 fL	38.0 – 52.0 fL	An increased RDW-SD level is related to the client's anemia (Pagana et al., 2023).
Absolute Neutrophils	N/A	8.09 10^3U/L	1.60 – 7.70 10^3U/L	Increased neutrophils are related to infection, metabolic or inflammatory disorders, or stress (Pagana et al., 2023).
Troponin	89 ng/L	N/A	0 – 4 ng/L	Increased troponin levels indicated myocardial injury, likely related to the client's endocarditis (Pagana et al., 2023).
B-Type Natriuretic Peptide (BNP)	691.0 pg/mL	N/A	0.0 – 100.0 pg/mL	Increased BNP levels suggest heart failure or cor pulmonale (Pagana et al., 2023).
C-Reactive Protein (CRP)	N/A	12.11 mg/dL	0.00 – 0.50 mg/dL	An increased CRP level is indicative of infection, pulmonary infarction, or

				other tissue damage or stress (Pagana et al., 2023).

Diagnostic Test & Purpose	Clients Signs and Symptoms	Results
11/14 at Paris Community Hospital: Computed tomography (CT)/CT Angiography (CTA) Chest. A CT/CTA of the chest is used to visualize the organs and blood vessels of the chest (Pagana et al., 2023). The CT of the chest visualizes the organs and bones of the chest while the CTA determines blood flow in the vessels (Pagana et al., 2023). The CT is done to determine if there is any damage to the organs of the chest (Pagana et al., 2023). The CTA is done to determine if there is a blood clot, called a pulmonary embolism, within the lung vessels (Pagana et al., 2023). The client had this test performed to determine the reason for her	The CTA was performed due to the client's shortness of breath and her history of recurrent pulmonary emboli.	The CTA showed a pulmonary embolism located in the inter pulmonary artery branches that extends into the left segmental branches and an embolus suggested in the right segmental branch. Additionally, possible nodules or infiltrates are seen bilaterally in the middle and lower lung segments, more pronounced posteriorly. This is possibly indicative of an infectious disease.

shortness of breath.		
11/14 at Paris Community Hospital: Chest X-Ray (CXR). A CXR allows for the tissue, organs, and bones of the chest to be visualized (Pagana et al., 2023). A CXR is utilized by the provider to diagnose fractures, visualize changes to organs, and show the presence of fluid, air, or infection in the chest (Pagana et al., 2023). A CXR shows the heart, lungs, blood vessels, and ribcage (Pagana et al., 2023). In this case, a CXR was needed to determine the cause of the client's shortness of breath.	The CXR was performed due to the client's shortness of breath and her history of recurrent pulmonary emboli.	The CXR showed airspace disease bilaterally, indicative of possible pneumonia.
11/15: Electrocardiogram (ECG). An ECG is a test done to show the electrical conduction of the heart (Pagana et al., 2023).	The ECG was performed due to the client's shortness of breath, elevated troponin, diagnosis of a pulmonary embolism, diagnosis of endocarditis, and vital signs upon admission to the facility.	The ECG show sinus tachycardia with a right axis deviation. The QRS segment had low voltage and there is evidence of an anterior infarct of undetermined age.
11/17: Complete Bilateral Lower	The venous duplex was ordered due to the client's diagnosis of a pulmonary	The venous duplex results were normal,

Extremity Venous Duplex. A venous duplex is a test using ultrasound to visualize the vessels of, in this case, the lower extremities (Pagana et al., 2023).	embolism to rule out further clots.	showing no changes to the blood flow of the legs and no evidence of a deep vein thrombosis.
11/18: Echocardiogram. An echo is a type of ultrasound that shows cardiac function. It looks at cardiac output, function of the heart and vessels, and the structure of the heart (Pagana et al., 2023).	The echo was ordered due to the client's diagnosis of endocarditis, her BNP and troponin results, ECG results, hypotension, tachycardia, and her impaired tissue perfusion.	The echocardiogram resulted with multiple issues. MD's ejection fraction is 45-50%. She has infectious masses seen in the tricuspid valve as well as an accessory leaflet. Infectious masses are also visualized on the right atrium and the base of the interatrial septum. There is severe regurgitation of the tricuspid valve and mild regurgitation of the mitral valve. The left ventricle showed some decrease in the contractility. The right ventricle was severely enlarged with

		moderately decreased contractility. The septum was flattened, a small pericardial effusion was noted, and the right atrium was found to be moderately enlarged.

Diagnostic Test Reference (1) (APA):

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2023). *Mosby's Diagnostic and Laboratory Test Reference* (16th ed.). Elsevier.

Active Orders

Active Orders	Rationale
Admit.	This order is placed for all clients being admitted to the hospital and remains active until discharge.
Vital signs every 4 hours.	This client is a medical-surgical patient. Protocol for vital signs on a medical-surgical unit unless otherwise ordered is every 4 hours.
Isolation – contact.	This client has ESBL, which requires contact isolation.
Activity – increase activity as tolerated.	This client is ambulatory with a walker at home. She is, however, severely lethargic, so she is to increase her activity as she can tolerate.
Diet – regular; consult cardiology/pre-procedure diet order panel.	This client has no medication conditions requiring a special diet, but care should be taken to note if a procedure is upcoming to implement nothing by mouth status.
Magic cup with dinner.	This order was placed to help supplement the client's

	caloric intake.
Consult infectious disease.	This consult was placed due to the client's infectious endocarditis and ESBL.
Consult cardiology.	This consult was placed due to the client's pulmonary embolism and endocarditis.
Consult oncology/hematology.	This consult was placed due to the client's recurrent pulmonary embolism and anti-coagulation therapy.
Consult substance abuse navigator (SUN).	This consult was placed due to the client's history of heroin use.
Consult dietician.	This consult was placed to help determine a plan for the client's meals to ensure proper caloric intake.
Notify MD if systolic blood pressure 90 < or >180; heart rate 50 < or > 120; respiratory rate 10 < or >30; oxygen saturation <92%; or temperature 97 F < or > 100.4 F.	This order was placed to ensure parameters are set for the nurse to know when to communicate with the provider for clinically significant changes to the client's status.
Opioid withdrawal assessment – vital signs and COWS: • <5 – assess with vital signs as needed every shift. • 5 – 12 (mild) – every 6 hours. • 13 – 24 (moderate) – every 4 hours. • 25 – 36 (moderate to severe) – every 2 hours. • >36 (severe withdrawal) – every hour. • Additional COWS to be administered 30 minutes after any buprenorphine. • If COWS is greater than or equal to 25 for 4 or more hours on medical-surgical unit, notify	This order was placed due to the client's withdrawal from heroin. It is important to know where the client is in their withdrawal. This helps guides clinical decisions and medication administration.

MD to consider transfer to higher level of care.	
Daily weight before breakfast.	This order is placed to help determine the heparin dosage calculation.
Urinary catheter placement and care – external catheter.	This order is placed so the patient may have an external catheter placed if she experiences any difficulty transferring to the commode, ambulating to the toilet, or using a bedpan.
Cardiac monitoring for 48 hours.	This order was placed due to the client's pulmonary embolism to observe their cardiac status.
Notify MD for: • Unplanned interruption in unfractionated heparin (UFH) delivery. • Anti-Xa lab result greater than or equal to 1.1 IU/mL. • Decrease in platelets to <100,000 or by more than 50% from the baseline. • Decrease in hemoglobin greater than or equal to 2 g/dL from the previous measurement. • Decrease in hematocrit greater than or equal to 6% from the previous measurement. • Significant changes in clinical condition (bleeding, signs or symptoms of worsening ischemia, etc.). • Hemoccult/guaiac positive stool, urine, or emesis. • Patient falls or sustains other trauma.	This order is placed to inform nursing staff that communication with the provider is needed for changes to the client's status, labs, or heparin therapy plan.

• Therapeutic range not reached after 2 consecutive dose adjustments.	
Place order for UFH anti-Xa 6 hours after starting/restarting UFH.	This order is placed to inform nursing staff that lab work is needed when starting or re-starting heparin therapy.
Place order for UFH anti-Xa serum per subsequent anti-Xa measurement per dosing titration table.	This order is placed to inform nursing staff that lab work is needed during the client's heparin therapy to determine the dosage.
Avoid intramuscular injections while on UFH infusion.	This order is placed to ensure IM injections are not being given due to the risk for bleeding and bruising on heparin therapy.
Weigh patient if not done in the past 24 hours.	This order is placed due to the client being on heparin therapy as it is a weight-based medication.
Use actual body weight for UFH dosing calculation up to 100kg.	This order is placed due to the client being on heparin therapy as it is a weight-based medication.
Pump programming.	This order is placed to ensure proper pump programming of heparin occurs.
If UFH infusion if resumed after being held for a procedure, re-initiate at the last pre-procedure rate without a bolus unless otherwise ordered.	This order is placed to communicate heparin therapy guidelines to nursing staff.
Initiate HospBasicCare1027 – Hospitalized patient PRN pain medication substitution.	This order is placed to provide guidelines to nursing staff about PRN pain medications that can be used instead of opioids due to this client's substance abuse history.
Bladder scan PRN for urine output <300 mL in 8 hours.	This order is placed in the case that the client does not void more than 300 mL in 8 hours.
Heating pad PRN for pain.	This order is placed to provide nonpharmacological

	pain management due to the client's substance abuse history.
Moderate risk for DVT/PE.	This order is placed to communicate the client's risk for clots.
Pharmacological prophylaxis contraindicated OR patient currently on therapeutic coagulation.	This order is placed to communicate that the client is not able to receive prophylactic anti-coagulation therapy, such as warfarin, due to the client currently receiving heparin therapy.
Pulse oximetry spot check daily on room air.	This order is placed to check the patient's oxygen saturation on room air daily.
Respiratory therapy to assess and treat.	This order is placed so that respiratory therapy will consult with the client and treat them as needed.
Oxygen therapy per protocol.	This order is placed so that the oxygen therapy can be placed and titrated as needed.
Physical therapy evaluation and treatment.	This order is placed due to the client's decreased mobility and lethargy.
Occupational therapy evaluation and treatment.	This order is placed due to the client's decreased mobility and lethargy.
Intake and output every shift.	This order is placed to watch the client's fluid balance.

Medications

Home Medications (Must List ALL)

Brand/Generic	Fluoxetine (Prozac)	Fluticasone-umeclidinium-vilanterol (Trelegy)	Sennosides (Senokot)
Classification	Pharmacologic class: Selective serotonin reuptake inhibitor (SSRI) (Jones & Bartlett Learning, 2023). Therapeutic class: Antidepressant (Jones & Bartlett Learning, 2023).	Pharmacologic class: Corticosteroid (Jones & Bartlett Learning, 2023). Therapeutic class: Antiasthmatic, anti-inflammatory, anticholinergic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Laxative (Drugs.com, 2024g). Therapeutic class: Laxative (Drugs.com, 2024g).

Reason Client Taking	The client is taking this medication for anxiety.	The client is taking this at home for her shortness of breath related to her chronic pulmonary embolism.	The client has this ordered for constipation.
List two teaching needs for the medication pertinent to the client	The client should be instructed to report worsening symptoms of depression as SSRIs can increase these feelings (Jones & Bartlett Learning, 2023). They should also be educated one the signs and symptoms of serotonin syndrome, like confusion, diarrhea, and tremors (Jones & Bartlett Learning, 2023). Additionally, the client should be educated in the need to taper the medication rather than them stopping all together (Jones & Bartlett Learning, 2023).	The client should be educated on the difference between her hospital fluticasone, Breo Ellipta, compared to her home version, Trelegy (Anderson, 2024). This includes the different side effects seen with Trelegy, such as GI issues or increased incidence of urinary tract infections (Anderson, 2024). The client should also be educated on proper administration, such as shaking the inhaler prior to administering and rinsing her mouth afterwards (Jones & Bartlett Learning, 2023).	The client should be instructed to contact their provider if their constipation worsens (Drugs.com, 2024g). They should also be instructed to wait 2 hours before taking any other medications after taking this sennosides(Drugs.com, 2024g).
Key nursing assessment(s) prior to administration	The client should be monitored for worsening depression while on fluoxetine (Jones & Bartlett Learning, 2023). The client should also be monitored for decreased sodium levels and increased blood glucose (Jones & Bartlett Learning, 2023).	Monitor the client for respiratory complications and do no administer if they show signs of bronchospasm (Jones & Bartlett Learning, 2023). Assess the client for ocular reactions such as increased pressure (Jones & Bartlett Learning, 2023). Additionally, the client should have their mouth assessed for thrush as improper rinsing after administration of an inhaled corticosteroid can increase the risk of yeast growth (Jones & Bartlett Learning, 2023).	The nurse should assess the client's GI system for pain, distension, or signs of worsening constipation or blockage (Drugs.com, 2024g).

Hospital Medications (Must List ALL)

Brand/ Generic	Acetaminophen (Tylenol)	Alum-mag hydroxide-simeth (Mag-al Plus)	Benzocaine-menthol (Cepacol Sore Throat)	Calcium carbonate (Tums)	Ceftriaxone Sodium (Ceftriaxone)	Fluticasone furoate-vilanterol (Breo Ellipta)
Classification	Pharmacologic class: Nonsalicylate, para-aminophenol derivative (Jones & Bartlett Learning, 2023). Therapeutic class: Antipyretic, nonopioid analgesic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Aluminum salt (Drugs.com, 2023a). Therapeutic class: Antacid, phosphate binder (Drugs.com, 2023a).	Pharmacologic class: Local anesthetic (Drugs.com, 2024a). Therapeutic class: Mouth and throat anesthetic (Drugs.com, 2024a).	Pharmacologic class: Calcium salts (Jones & Bartlett Learning, 2023). Therapeutic class: Antacid, antihypermagnesemic, antihyperphosphatemic, antihypocalcemic, calcium replacement, cardiotonic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Third-generation cephalosporin (Jones & Bartlett Learning, 2023). Therapeutic class: Antibiotic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Corticosteroid (Jones & Bartlett Learning, 2023). Therapeutic class: Antiasthmatic, anti-inflammatory (Jones & Bartlett Learning, 2023).

Reason Client Taking	The client is taking this as needed for mild pain.	The client is taking this medication for GI upset.	The client is taking this medication for sore throat.	The client is taking this for acid reflux.	The client is taking this for endocarditis and ESBL.	The client is taking this medication for her shortness of breath from her pulmonary embolism.
List two teaching needs for the medication pertinent to the client	The client should be educated on limiting their intake of acetaminophen to 4 grams daily to prevent liver damage or overdose (Jones & Bartlett Learning, 2023). The client should be educated about the signs and symptoms of liver damage, such as bruising, bleeding, pain in the right upper quadrant, or feeling ill (Jones & Bartlett Learning, 2023).	The client should be educated on the need to drink plenty of water and eat high fiber foods while taking this medication as it can result in constipation (Drugs.com, 2023a). They should also be instructed to notify the nurse or provider if their reflux gets worse while taking this medication (Drugs.com, 2023a).	The client should be taught to wait to eat until their tongue is not numb anymore as they may bite it and causing bleeding, especially as this client is at high risk for bleeding due to her heparin therapy (Drugs.com, 2024a). She should also be taught not to take more than needed (Drugs.com, 2024a).	The client should be instructed to avoid alcohol, tobacco, and caffeine while taking this medication (Jones & Bartlett Learning, 2023). They should also be instructed to drink a full glass of water after taking the medication (Jones & Bartlett Learning, 2023).	The client should be educated on the need to inform the nurse or provider of watery stools as antibiotic treatment can lead to *Clostridium difficile* infection (Jones & Bartlett Learning, 2023). They should also be taught to report vaginal itchiness as antibiotics can lead to opportunistic fungal infections like a yeast infection (Jones & Bartlett Learning, 2023).	The client should be educated on the differemce in side effects from her hospital fluticasone ffrom her home medication (Anderson, 2024). For instance, the patient should understand that the hospital version can cause increased blood pressure and fever whereas her home medication does not have this side effect (Anderson, 2024). The client should also be instructed to report increased eye pressure (Jones & Bartlett Learning, 2023).
Key nursing assessment(s) prior to administration	The nurse should monitor the client's liver function as long term use can lead to liver failure, especially in patients with a history of drug or alcohol use (Jones & Bartlett Learning, 2023). The nurse should	The nurse should assess the client's comprehensive metabolic panel to watch their electrolytes for any increases or decreases (Drugs.com, 2023a). They should also ensure the	The nurse should assess for signs of methemoglobinemia, such as blue or grey skin, arrythmias, dizziness, or a bad headache (Drugs.com, 2024a).	The client should have their blood calcium level monitored while using this medication (Jones & Bartlett Learning, 2023).	The nurse should monitor the client laboratory reports for signs of nephrotoxicity or liver damage (Jones & Bartlett Learning, 2023). They should also	The nurse should evaluate the client's respiratory status prior to administering to verify the client is not currently experiencing respiratory distress or bronchospasms (Jones & Bartlett

	also calculate how much acetaminophen the client has taken daily to ensure they are not exceeding 4 grams (Jones & Bartlett Learning, 2023).	patient is able to swallow the medication and consider a liquid version if they are unable to swallow the powder tablet (Drugs.com, 2023d).			assess the client's stool for signs of *C. difficile* infection (Jones & Bartlett Learning, 2023).	Learning, 2023).
Brand/ Generic	Guaifenesin (Mucinex)	Heparin (Heparin Sodium Injection)	Hydralazine (Apresoline)	Hydrocodone-acetaminophen (Norco)	Hydroxyzine (Atarax)	Loperamide (Imodium)
Classification	Pharmacologic class: Expectorants (Drugs.com, 2024b). Therapeutic class: Expectorants (Drugs.com, 2024b).	Pharmacologic class: Anticoagulant (Jones & Bartlett Learning, 2023). Therapeutic class: Anticoagulant (Jones & Bartlett Learning, 2023).	Pharmacologic class: Vasodilator (Jones & Bartlett Learning, 2023). Therapeutic class: Antihypertensive (Jones & Bartlett Learning, 2023).	Pharmacologic class: Opioid, nonsalicylate (Jones & Bartlett Learning, 2023). Therapeutic class: Opioid analgesic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Piperazine derivative (Jones & Bartlett Learning, 2023). Therapeutic class: Anxiolytic, antiemetic, antihistamine, sedative-hypnotic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Antidiarrheals (Drugs.com, 2024c). Therapeutic class: Antidiarrheals (Drugs.com, 2024c).
Reason Client Taking	The client is taking this medication for cough and congestion.	The client is getting this medication for her pulmonary embolism.	The client is receiving this medication if her blood pressure is too elevated.	The patient is taking this medication for moderate pain.	The client is taking this medication for anxiety and insomnia.	The client is taking this medication for diarrhea.
List two teaching needs for the medication pertinent to the client	The client should be educated to take this medication with food to prevent GI upset (Drugs.com, 2024b). The client should also be educated to only take this medication when needed (Drugs.com, 2024b).	The client should be instructed to avoid using other blood thinning medications like aspirin while on heparin (Jones & Bartlett Learning, 2023). They should also be taught to monitor for signs of bleeding bright red or dark tarry stools and increased bruising (Jones &	The client should be educated to take this medication on an empty stomach to avoid worsening side effects (Jones & Bartlett Learning, 2023). They should also be educated to notify the nurse or provider if they experience dizziness upon changing positions (Jones & Bartlett Learning, 2023).	The client should be taught to take only the prescribed amount of medication (Jones & Bartlett Learning, 2023). They should also be taught how to use naloxone to treat overdose (Jones & Bartlett Learning, 2023).	The patient should be educated on not using heavy machinery or driving after taking this medication (Jones & Bartlett Learning, 2023). They should also be instructed to report any chest pain or odd heart palpitations as hydroxyzine can cause Torsades de Pointes (Jones &	The client should be taught to drink plenty of water to avoid dehydration (Drugs.com, 2024c). They should also report continuing diarrhea to the nurse if the diarrhea does not stop after 2 days of taking Imodium (Drugs.com, 2024c).

		Bartlett Learning, 2023).			Bartlett Learning, 2023).	
Key nursing assessment(s) prior to administration	The client's respiratory system should be monitored for signs of worsening congestion (Drugs.com, 2024b).	The nurse should assess the client's anti-Xa level to determine the proper dose needed (Jones & Bartlett Learning, 2023). They should also keep protamine sulfate on hand so overdose can be treated quickly (Jones & Bartlett Learning, 2023).	The nurse should monitor the client's blood pressure for hypotension on this medication (Jones & Bartlett Learning, 2023).	The nurse should monitor this client for reduced response to Norco as they have a history of opioid use (Jones & Bartlett Learning, 2023). They should also monitor for signs of overdose and give naloxone as needed (Jones & Bartlett Learning, 2023).	The nurse should monitor the client's telemetry monitor for arrythmias while using this medication (Jones & Bartlett Learning, 2023). They should also watch for oversedation (Jones & Bartlett Learning, 2023).	The nurse should monitor for arrythmia while on this medication (Drugs.com, 2024c). They should alos monitor for worsening diarrhea as this can indicate *C. difficile* infection (Drugs.com, 2024c).
Brand/ Generic	Magnesium L-lactate (Mag-Tab SR)	Melatonin (Melatonin OTC)	Midodrine (Orvaten)	Nicotine (NicoDerm CQ)	Ondansetron (Zofran)	Polyethylene glycol (Miralax)
Classification	Pharmacologic class: Minerals and electrolytes (Drugs.com, 2023b). Therapeutic class: Minerals and electrolytes (Drugs.com, 2023b).	Pharmacologic class: Minerals and electrolytes (Drugs.com, 2024d). Therapeutic class: Minerals and electrolytes, anxiolytics, sedative-hypnotics (Drugs.com, 2024d).	Pharmacologic class: Vasopressor (Drugs.com, 2024e). Therapeutic class: alpha-adrenergic agonists (Drugs.com, 2024e).	Pharmacologic class: Nicotinic agonist (Jones & Bartlett Learning, 2023). Therapeutic class: Smoking cessation adjunct (Jones & Bartlett Learning, 2023).	Pharmacologic class: Selective serotonin (5-HT_3) receptor antagonist (Jones & Bartlett Learning, 2023). Therapeutic class: Antiemetic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Electrolyte (Drugs.com, 2024f). Therapeutic class: Laxative (Drugs.com, 2024f).
Reason Client Taking	The patient is taking this for neurological support.	The client is taking this for sleep support.	The client is taking this for her hypotension.	The client is using these patches for her history of smoking as she is unable to smoke during her hospitalization	The client is taking this for nausea.	The client is taking this for constipation.
List two teaching needs for the medication pertinent to the client	The client should be taught to report GI upset (Drugs.com, 2023b). They should also be educated to take the capsule whole instead of chewing (Drugs.com, 2023b).	Patients should be taught not to drive after taking melatonin (Drugs.com, 2024d). They should also be educated on the need to take melatonin short-term to	The client should be instructed to report a slow heart rate (Drugs.com, 2024e). She should also be taught the signs of hypertension, such as blurry vision, headache, and chest pain (Drugs.com, 2024e).	The client should be educated on the need to use only one patch at a time (Jones & Bartlett Learning, 2023). They should also be educated on smoking cessation (Jones & Bartlett Learning, 2023).	The client should be taught how to take the medication for best effects (Jones & Bartlett Learning, 2023). They should also be taught to report any chest pain or	The client should be taught how to mix the medication with water (Drugs.com, 2024f). They should also be taught to report worsening constipation, distension, or

		prevent the body from reducing the amount of melatonin produced (Drugs.com, 2024d).			tightness (Jones & Bartlett Learning, 2023).	abdominal pain (Drugs.com, 2024f).
Key nursing assessment(s) prior to administration	The nurse should monitor for confusion, dizziness, or bradycardia before administering as this can indicated elevated magnesium levels (Drugs.com, 2023b).	Patients should be monitored for worsening sleep issues (Drugs.com, 2024d).	The nurse should assess the client's vital signs prior to administering Drugs.com, 2024e).	The nurse should assess for arrythmias prior to giving (Jones & Bartlett Learning, 2023).	The nurse should monitor for arrhythmias and bradycardia and withhold the medication if these are noted (Jones & Bartlett Learning, 2023).	The nurse should assess the client's GI system for distension, worsening constipation, pain, and vomiting, which can indicate a blockage (Drugs.com, 2024f).
Brand/ Generic	Prochlorperazine (Compazine)	Tiotropium bromide (Spiriva Respimat)				
Classification	Pharmacologic class: Piperazine phenothiazine (Jones & Bartlett Learning, 2023). Therapeutic class: Antiemetic (Jones & Bartlett Learning, 2023).	Pharmacologic class: Anticholinergic (Jones & Bartlett Learning, 2023). Therapeutic class: Bronchodilator (Jones & Bartlett Learning, 2023).				
Reason Client Taking	The client is taking this for nausea.	The client is taking this for her shortness of breath relayed to her pulmonary embolism.				
List two teaching needs for the medication pertinent to the client	The client should be instructed to stand slowly as orthostatic hypotension may occur (Jones & Bartlett Learning, 2023). They should also be taught to avoid sun exposure on this medication (Jones &	The patient should be taught to rinse their mouth after administration of the medication (Jones & Bartlett Learning, 2023). They should also be educated on reporting signs of complications				

	Bartlett Learning, 2023).	such as vision changes, palpitations, or headache (Jones & Bartlett Learning, 2023).				
Key nursing assessment(s) prior to administration	The nurse should monitor for hypotension prior to giving this medication as it can decrease blood pressure (Jones & Bartlett Learning, 2023).	The nurse should assess for signs of respiratory distress or bronchospasms prior to giving this medication as it does not treat these issues (Jones & Bartlett Learning, 2023).				

Prioritize Three Hospital Medications

Medications	Why this medication was chosen	List 2 side effects. These must correlate to your client
1. Heparin sodium	This medication was chosen because it a blood thinner used to treat pulmonary embolism and prevent further clots (Jones & Bartlett Learning, 2023). It has major risks and requires the nurse to assess the patient frequently and perform medication calculations based on laboratory values to prevent overdose and undertreatment (Jones & Bartlett Learning, 2023).	**1.** Excessive bleeding (Jones & Bartlett Learning, 2023). **2.** Chest pain (Jones & Bartlett Learning, 2023).
2. Ceftriaxone	This medication was chosen as the	**1.** Hepatic failure (Jones & Bartlett Learning, 2023).

	patient has severe infectious endocarditis and ESBL. She needs treatment for the endocarditis to increase her cardiac function and reduce her chance of sepsis or shock (Jones & Bartlett Learning, 2023). She was prescribed this medication during her previous hospitalization to be given IV at an outpatient clinic but did not go to her appointments. The infection has therefore been untreated.	**2.** *C. difficile* infection (Jones & Bartlett Learning, 2023).
3. Midodrine	This medication was chosen due to the client's hypotension. She is receiving this medication and is still maintaining a systolic blood pressure in the 90's. She is also on many medications that can cause orthostatic hypotension.	**1.** Severe hypertension (Drugs.com, 2024e). **2.** Difficulty urinating (Drugs.com, 2024e).

Medications Reference (1) (APA):

Aluminum hydroxide, magnesium hydroxide, and Simethicone uses, Side Effects & Warnings. Drugs.com. (2023a). https://www.drugs.com/mtm/aluminum-hydroxide-magnesium-hydroxide-and-simethicone.html

Anderson, L. A. (2024, March 19). *Trelegy vs. Breo: How does their use and cost compare?*. Drugs.com. https://www.drugs.com/medical-answers/trelegy-breo-compare-3552689/

#:~:text=Trelegy%20contains%20fluticasone%2C%20vilanterol%20and,differ%20between%20the%20two%20drugs.

Benzocaine and menthol lozenges information. Drugs.com. (2024a). https://www.drugs.com/cdi/benzocaine-and-menthol-lozenges.html

Guaifenesin uses, dosage & side effects. Drugs.com. (2024b). https://www.drugs.com/guaifenesin.html

Jones & Bartlett Learning (2023). *NDH: Nurse's Drug Handbook (23rd ed.)*. Jones & Bartlett Learning.

Loperamide: Uses, dosage, side effects, warnings. Drugs.com. (2024c). https://www.drugs.com/loperamide.html

Magnesium lactate uses, side effects & warnings. Drugs.com. (2023b). https://www.drugs.com/mtm/magnesium-lactate.html

Melatonin: Uses, side effects, dosage (kids/adults). Drugs.com. (2024d). https://www.drugs.com/melatonin.html

Midodrine uses, Side Effects & Warnings. Drugs.com. (2024e). https://www.drugs.com/mtm/midodrine.html

Polyethylene glycol electrolyte solution uses, side effects & warnings. Drugs.com. (2024f). https://www.drugs.com/mtm/polyethylene-glycol-electrolyte-solution.html

Sennosides capsules and tablets information. Drugs.com. (2024g). https://www.drugs.com/cdi/sennosides-capsules-and-tablets.html

Physical Exam

HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL:	MD is a pleasant 53-year-old female. She is

Alertness: Lethargic. **Orientation:** Oriented to person, place, and situation. Not oriented to time. **Distress:** No acute distress. **Overall appearance:** Disheveled. **Infection Control precautions:** Contact. **Client Complaints or Concerns:** Unable to assess due to lethargy.	lethargic and oriented to person, place, and situation, disoriented to time. She appears to be in no acute distress. Her appearance is disheveled and untidy. She is on contact precautions for ESBL. She is lethargic and unable to answer if she has any complaints or concerns.
VITAL SIGNS: **Time:** 16:03 **Temp:** 97.2 F (36.2 C) Axillary **Resp rate:** 18 bpm **Pulse:** 100 bpm **B/P:** 99/73 (MAP 82) **Oxygen:** 95% **Delivery Method:** 1L Nasal Cannula	The client's vital signs at 16:03 are within normal limits and are as follows: temperature is 97.2 F (36.2 C) axillary; respirations are 18 breathes per minute; pulse is 100 beats per minute; blood pressure is 99/73 with a mean arterial pressure of 82; oxygen saturation is 95% on 1L oxygen via nasal cannula.
PAIN ASSESSMENT: **Time:** 15:00 **Scale:** Numeric **Location:** N/A **Severity:** 0 **Characteristics:** N/A **Interventions:** Dark, quiet room.	The client denies any current pain. She is lethargic but states she likes the quiet. The room was darkened and left quiet to promote a comfortable environment.
IV ASSESSMENT: **IV 1:** **Size of IV:** 20 gauge **Location of IV:** Right anterior forearm **Date on IV:** 11/14/24 **Patency of IV:** Patent **Signs of erythema, drainage, etc.:** None **IV dressing assessment:** Clean, dry, intact **Fluid Type/Rate or Saline Lock:** 0.9% sodium chloride at 100 mL/hour **IV 2:** **Size of IV:** 22 gauge **Location of IV:** Left upper anterior forearm **Date on IV:** 11/14/24 **Patency of IV:** Patent **Signs of erythema, drainage, etc.:** None **IV dressing assessment:** Clean, dry, intact **Fluid Type/Rate or Saline Lock:** Saline lock	The client has two intravenous (IV) lines currently. A 20-gauge IV is present in her right anterior forearm. It was placed on 11/14/24. The line is patent and flushes with ease. No bruising, bleeding, or drainage is present. It is dressed with a transparent Tegaderm and is clean, dry, and intact. She currently has 0.9% sodium chloride running at 100 mL/hour. A 22-gauge IV is present in the left upper anterior forearm. The IV was placed on 11/14/24. It is patent and flushes with ease. No bruising, bleeding, or drainage is present. It is pressed with a transparent Tegaderm and is clean, dry, and intact. No fluid is currently being infused and it is saline locked.
INTEGUMENTARY: **Skin color:** Pale, greyish with a slightly yellow tint	MD's skin is pale and greyish and a slight yellow tint. She is cool and dry with normal skin turgor. No rashes are present. She has scattered

Character: Dry **Temperature:** Cool **Turgor:** Normal **Rashes:** None **Bruises:** Petechiae, bruising on legs and arms **Wounds:** Small, scattered scabs and scratch-like sores **Braden Score:** 19 **Drains present:** **Y**☐ **N** ☒ **Type:** N/A	petechiae on her legs and bruising present on her arms and legs. She has small, scratch-like sores throughout, and scattered small scabs. Her Braden score is 19, placing her at a low risk for impaired skin integrity. She does not have any drains present.
HEENT: **Head/Neck:** Midline, symmetrical **Ears:** Equal, no drainage **Eyes:** Equal, PERRLA **Nose:** Midline, no deviation or drainage **Teeth:** Severe decay	Head and face are symmetrical. Trachea is midline without deviation, thyroid and lymph nodes are not palpable and are without pain. Ears are symmetrical, no redness, drainage, or lumps are present. The patient can hear and understand well but is slow to respond. Pupils are equal, round, reactive to light, and accommodating. Pupil size 3mm bilaterally. Conjunctiva pink, cornea clear, sclera is white. No drainage or redness is present. Deep grey/purple circles are noted in her under eyes. Nose is midline and without deviation. No drainage, redness, or lumps are present, mucus membranes are pale pink, dry, and cracked. Lips are dry and pale pink. Dentition shows severe decay.
CARDIOVASCULAR: **Heart sounds:** Murmur **Cardiac rhythm (if applicable):** Sinus tachycardia on telemetry monitor **Peripheral Pulses:** 2+ throughout **Capillary refill:** < 3 seconds **Neck Vein Distention:** **Y** ☐ **N** ☒ **Edema Y** ☐ **N** ☒ **Location of Edema:** N/A	Sinus tachycardia on telemetry monitor. S1 and S2 are present but muffled by a murmur. No gallops or rubs. Peripheral pulses are 2+ throughout. Capillary refill is 3 seconds. No jugular vein distension is noted. No edema is noted.
RESPIRATORY: **Accessory muscle use:** **Y**☐ **N** ☒ **Breath Sounds:** Diminished in the right lung throughout, diminished in the upper left lobe and absent in the lower left lobe.	Normal rate, rhythm, and depth of respirations. No accessory muscle use or retractions. Lung sounds are clear and diminished in the left upper lung and right lung throughout posteriorly and anteriorly. She has absent lung sounds in her left lower lung.
GASTROINTESTINAL: **Diet at home:** Unable to assess due to	Patient is currently on a regular diet. She is 170.2 cm and 68.9 kg. Bowel sounds are hypoactive.

lethargy **Current Diet:** Regular **Is Client Tolerating Diet?:** Yes **Height:** 170.2 cm (5'7") **Weight:** 68.9 kg (151 lbs 4.4 oz) **Auscultation Bowel sounds:** Hypoactive **Last BM:** 11/14/24 **Palpation: Pain, Mass etc.:** No pain, no organomegaly **Inspection:** **Distention:** No distention noted **Incisions:** None **Scars:** Small round scars throughout **Drains:** None **Wounds:** Small scabs throughout **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** N/A **Feeding tubes/PEG tube Y ☐ N ☒** **Type:** N/A	Her last bowel movement was on 11/14/24, unable to assess if this is normal for her due to her lethargy. There is no pain on light or deep palpation. No organomegaly or masses are noted. No distention, incisions, or drains are present. Small, scattered scabs and scars are present throughout.
GENITOURINARY: **Color:** Amber **Character:** Slightly cloudy **Quantity of urine:** 750 mL **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** N/A **Size:** N/A	The client's urine is amber and sightly cloudy. She has had 750mL of urine output. There is no pain with urination reported, and she is not on dialysis. She uses a bedside commode to void.
Intake (in mLs) None from 12:00 – 17:30; patient lethargic and requesting to sleep, denies thirst or hunger. 100 mL/hour of 0.9% sodium chloride via peripheral IV (PIV) = 550 mL from 12:00 – 17:30. **Output (in mLs)** 750 mL urine	The client did not eat or drink anything during our time together. She refused anything by mouth. She received 550 mL of normal saline via PIV from 12:00 – 17:30. She had 750 mL of voided urine from 12:00 – 17:30.
MUSCULOSKELETAL: **Neurovascular status:** No cyanosis. Clubbing of the toes is present. Skin is cool and dry.	Patient has no cyanosis of the nailbeds. She has no clubbing of the fingernails, but some clubbing is noted in her toenails. Extremities are cool and dry. Patient refuses to perform active or passive

ROM: Refuses active or passive ROM exercises. **Supportive devices:** Walker. **Strength:** Diminished throughout. **ADL Assistance:** **Y☒ N ☐** **Fall Risk:** **Y ☒ N☐** **Fall Score:** 18 - high **Activity/Mobility Status:** 1 assist, increase activity as tolerated **Activity Tolerance:** **Needs support to stand and walk**	range of motion. MD uses a standard walker. She has diminished strength throughout. Requires assistance with her ADL's. She is a fall risk and requires a 1 person assist to stand and pivot.
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation:** Oriented to person, place, situation, disoriented to time. **Mental Status:** Lethargic, unable to assess further. **Speech:** Slow, unable to speak more than a couple of words at a time. **Sensory:** Normal. **LOC:** Lethargic.	Patient moves all extremities poorly and slowly with diminished but equal strength. Pupils are equal, round, reactive to light, and accommodating. Patient is lethargic and oriented to person, place, and situation, disoriented to time. Speech is slurred, mumbled, and slow. GCS of 13. COWS score is 3.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** MD uses IV drugs (heroin) to cope with stress, does not state any other methods of coping. **Developmental level:** Unable to assess due to lethargy. **Religion & what it means to pt.:** Patient shook her head no when asked about any religions. **Personal/Family Data (Think about home environment, family structure, and available family support):** States live-in boyfriend is her only support, does not verbalize other support persons.	MD was extremely lethargic and slow to answer when asked questions. She did not state any coping mechanisms but states she has always used drugs when upset. Her developmental status is unable to be determined due to her lethargy. When asked if she followed any religious beliefs, MD shook her head no. She was able to verbalize that she lives in an apartment with her boyfriend and that her is her support person, but did not answer when asked about any other support persons. Per her chart, the client's niece is allowed to receive updates regarding her health status.

Discharge Planning

Discharge location:

Currently, there is no planned discharge location. The client may be placed in a skilled nursing facility if she is accepting. However, the client has declined this in the recent past. The discharge location will be decided as the client continues her care.

Home health needs:

The client will need outpatient antibiotic therapy via PIV due to her inability to maintain a central line at home. She will need to be seen either in an infusion clinic, in a skilled facility, or during home visits, depending on the discharge location. She may also need home physical and occupational therapy due to her refusing therapy in the hospital and her current mobility status.

Equipment needs:

MD will need her standard walker upon discharge. She may also need assistive devices such as bathroom bars placed in the home to assist with her mobility issues.

Follow-up plan:

MD will need to follow up with multiple providers. She will need to see infectious disease to maintain her antibiotic therapy and manage her endocarditis and ESBL. She will need to see cardiology and hematology for her recurrent pulmonary embolism. She will also need to see an oral-maxillofacial surgeon to discuss her severe dental decay. She was recommended to have all her teeth removed and refused at the time, so proper follow-up to ensure treatment is being received is necessary.

Education needs:

MD needs education on her home medication regimen and the importance of continuing her antibiotic therapy upon discharge. Education regarding her ESBL infection and endocarditis should also occur so that an understanding of the need for proper treatment occurs. MD should also be educated on resources for her substance use disorder. This can include rehabilitation facilities, medications such as methadone, Narcotics Anonymous, mentors, and harm reduction methods. Lastly, she should be educated on her risk of recurring emboli and prevention methods.

Nursing Process
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 • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Outcome Goal (1 per dx)**	**Interventions (2 per goal)**	**Evaluation of interventions**
1. Impaired gas exchanged related to ineffective breathing pattern and heart disease as evidenced by extensive smoking and drug use history, skin color, lethargy,	This nursing diagnosis was chosen due to the client's assessment, most importantly absent breath sounds in her lower left lung and diminished lung sounds in the remaining lobes. She showed many	The patient will have a return of breath sounds to her left lower lung and a return of normal lung sounds to her remaining lung lobes within 1 week	**1.** Administer oxygen therapy as ordered for increased oxygenation (Phelps, 2023). **2.** Administer medications for the client's emboli as prescribed	The client is on 1L of oxygen by nasal cannula to increase her oxygenation. She is receiving heparin to reduce coagulation around her pulmonary embolism. She has not shown signs of

tachycardia, absent lung left lower lung sounds, diminished lung sounds, hypotension, nail clubbing, decreased activity tolerance, and need for assistance performing ADL's (Phelps, 2023).	signs of impaired gas exchange and related complications. She has an extensive history of pulmonary emboli, lending to long term impaired gas exchange and leading to her ultimately being hospitalized again.	(Phelps, 2023).	(Phelps, 2023).	improvement with these two interventions. Further interventions are needed, such as positional changes or monitoring ABG levels.
2. Decreased cardiac output related to heart and vascular disease as evidenced by ejection fraction 45-50% on echo, vegetations on echo, regurgitation on echo, shortness of breath, lethargy, weakness, sinus tachycardia on telemetry monitor, decreased activity tolerance, murmur on heart auscultation, decreased urine output,	This nursing diagnosis was chosen due to the client's echocardiogram results. The clients showed a reduced ejection fraction, endocarditis, and a pericardial effusion on her echo. She is severely lethargic, which may be due to her cardiac output. Her cardiac output and cardiovascular illnesses can lead to further comorbidities, shock, or death if not effectively treated.	MD will maintain adequate cardiac output and not show signs of worsening cardiac output upon discharge from the facility (Phelps, 2023).	**1.** Monitor the patient's respiratory and cardiovascular status at least every 4 hours to monitor for changes to cardiac output (Phelps, 2023). **2.** Assess the client's level of consciousness and mental status every 2 hours to determine if alterations have occurred that indicate decrease perfusion to the brain (Phelps, 2023).	During the time this client was evaluated, no changes to the client's respiratory, cardiovascular, or neurological status occurred. The client remained lethargic for the duration of this shift. Monitoring and assessments are ongoing.

diminished and absent breath sounds, history of endocarditis, history of pulmonary embolism, history of smoking, and hypotension (Phelps, 2023).				
3. Ineffective tissue perfusion related to inadequate blood flow and inadequate blood pressure as evidenced by decreased blood pressure, tachycardia, decreased hemoglobin, LOC and orientation alterations, cool skin, pale mucous membranes, pale skin, and weakness (Phelps, 2023).	This nursing diagnosis was chosen due to the client's assessment data. She was extremely lethargic, which is a sign of decreased cerebral perfusion, and showed signs of decrease peripheral perfusion in her clubbed toenails, pale and cool skin, and a decrease hemoglobin level.	MD will show signs of improvement to cerebral perfusion by being alert and oriented x4 within the next week (Phelps, 2023).	**1.** Perform neurological assessments at least every 2-4 hours to determine changes to the client's level of consciousness (Phelps, 2023). **2** Administer medications for blood pressure alterations as ordered (Phelps, 2023).	The client's neurological status was monitored multiple times during this nursing student's clinical time. She remained lethargic but did not show signs of worsening changes to her LOC such as stupor. Her blood pressure went from 100/71 at 12:02 to 99/73 at 16:23, so her pressor medication was not needed. If her systolic blood pressure goes below 90 at the next vital sign check, she will need to receive her midodrine.
4. Decreased activity tolerance	This diagnosis was chosen due to the client's	MD will perform her some ADLs	**1.** Gradually increase activity to	These interventions would be

	related to impaired gas exchange and decreased cardiac outputes evidenced by breath sounds on auscultation, hypotension and need for pressors, decreased hemoglobin, sinus tachycardia on telemetry monitor at rest, lethargy, inability to perform active or passive ROM, weakness, and history of cardiac and circulatory disease (Phelps, 2023).	inability to perform active or passive ROM, her lethargy, and her decreased mobility status. MD was able to stand and walk with a walker without assistance at the beginning of her hospitalization and now requires assistance to stand and pivot. She also refuses PT/OT due to feeling tired.	without assistance within 5 days (Phelps, 2023).	meet patient's abilities (Phelps, 2023). **2.** Teach the patient how to conserve energy while performing ADLs (Phelps, 2023).	evaluated after the implementation, such as after showing the client how to conserve energy by sitting while brushing her teeth. The client's ability to perform these tasks and her ability to progress to higher levels of activity would be evaluated and documented.

Other References (APA):

Phelps, L. L. (2023). *Nursing diagnosis reference manual* (12th ed.). Wolters Kluwer.