N431 Care Plan # 2

Lakeview College of Nursing

Ragin Baker

Demographics (3 points)

Date of Admission	Client Initials	Age	Gender
4/4/2024	DM	62 years old	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Unemployed	Divorced	Aspirin
Code Status	**Height**	**Weight**	
DNR	5’ 10” 177.8 cm	55.8 kg 125 lb	

Medical History (5 Points)

Past Medical History: anemia, asthma, atopic dermatitis, COPD, HTN, lung cancer, tobacco use disorder

Past Surgical History: endobronchial US, IR US venous access, port placement, tonsillectomy, total hip replacement

Family History: Father (cancer and COPD) Mother (COPD and peripheral artery disease) Maternal grandmother (stroke) Maternal grandfather (alcohol and drug use)

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Patient reports he used to smoke ½ a pack every day for 48 years. The patient also reports he was a former smokeless tobacco user, he used snuff chew. Reports he quit using snuff chew about 5 years ago. The patient reports he currently does not drink because he stopped in 2022. No reports of drug use.

Assistive Devices: No assistive devices needed. Patient is a standby assist.

Living Situation: The patient lives at home with ex-wife.

Education Level: GED

Admission Assessment

Chief Complaint (2 points): SOB and right sided chest pain

History of Present Illness – OLD CARTS (10 points):

A 62-year-old male came to the ED with complaints of SOB and right sided chest pain. The patient was previously discharged on 4/3/2024 from a hospital admission for pneumonia. The patient reports once he was discharged the next day, he began to fall short of breath and started to develop a cough which he was unable to stop. The patient reports once the coughing began, he developed right sided chest pain and reported that he had a difficult time with inspiration. The patient reports no blood or sputum with the cough. The patient reported that to help try and relieve the chest pain he wrapped a bandage around his chest, which he stated was effective for the pain. He reported taking liquid hydrocodone for the pain with no other medication. The patient reports no numbness/tingling in the lower extremities and no dizziness. The patient does report constipation, which he states is from his chemotherapy.

Primary Diagnosis

Primary Diagnosis on Admission (2 points):

Pulmonary embolism and infarction

Secondary Diagnosis (if applicable):

N/A

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

A pulmonary embolism happens when a blood clot obstructs the blood flow in an artery within the lung (“Pulmonary embolism,” 2022). Usually, a pulmonary embolism happens in multiples in the lower lobe more often (Vyas & Goyal, 2022). Larger embolisms affect the main pulmonary artery, while smaller embolisms affect the peripheral arteries, which can lead to infarction. Infarction only occurs in about 10% of individuals (Vyas & Goyal, 2022). A pulmonary embolism causes impaired gas exchange that is caused by an obstruction of the pulmonary vascular bed that leads to inconsistency in ventilation for perfusion (Vyas & Goyal, 2022). Blood flow of the pulmonary capillaries decrease (Vyas & Goyal, 2022). The pulmonary vascular resistance is increased, which is caused by a blockage of the vascular bed (Vyas & Goyal, 2022). The signs and symptoms of a pulmonary embolism range from a variety of symptoms. The different signs and symptoms depend on the size of the embolism and where it is in the lung (“Pulmonary embolism,” 2022). Some signs and symptoms include shortness of breath, chest pain, cough, fever, lightheadedness, and irregular heartbeat (“Pulmonary embolism,” 2022). An individual who has another pulmonary or heart disease dyspnea will be a worsening symptom (Vyas & Goyal, 2022). When an individual has chest pain this usually means that there is pleural irritation that is caused by a distal embolism that is causing pulmonary infarction (Vyas & Goyal, 2022). The patient’s oxygen saturation will be lower, and they will most of the time need oxygen supplement (Vyas & Goyal, 2022). The patient could have a high heart rate as well (Vyas & Goyal, 2022). To diagnose a pulmonary embolism the patient will have an ECG, ECHO, CT of chest, lung scintigraphy, or pulmonary angiography (Vyas & Goyal, 2022). Some labs that could be performed are a d-dimer, troponin, BNP, and ABGs (Vyas & Goyal, 2022). Some treatments that an individual can have for a pulmonary embolism is putting

the patient on an anticoagulant, surgical embolectomy, and vena cava filters (Vyas & Goyal, 2022). Some non-invasive treatments that a patient can do are compression stockings, leg elevation, and physical activity ("Pulmonary embolism," 2022). The patient came into the ED with SOB and right sided chest pain. He had an ECHO, ECG, CT of chest, and venous duplex performed. The CT and the ECHO showed a pulmonary embolism. The patient had a pulmonary embolism with infarction, which assumed the patient had an embolism in his peripheral arteries. The patient also has COPD, and his SOB was severe when he arrived at the ED. The patient also had an infrequent cough that was congested. The patient had a low O2 level and was on NC 3L and was stating in the upper 90s on O2.

Pathophysiology References (2) (APA):

Pulmonary embolism. (2022, December 1). Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/pulmonary-embolism/symptoms-causes/syc-20354647#:~:text=A%20pulmonary%20embolism%20is%20a,another%20part%20of%20the%20body.

Vyas, V. & Goyal, A. (2022, August 8). *Acute pulmonary embolism.* National Library of Medicine. https://www.ncbi.nlm.nih.gov/books/NBK560551/

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	4.10-5.70 10^6/uL	2.95 10^6/uL	2.51 10^6/uL	The patient has decreased RBCs due to his anemia (Martin, 2023).
Hgb	12.0-18.0 g/dL	8.9 g/dL	7.6 g/dL	There is a decrease in Hgb due to the patient's anemia (Martin, 2023).
Hct	37.0-51.0%	28.2 %	23.6 %	The patient has decreased levels of Hct due to anemia (Martin, 2023).
Platelets	140-400 10^3/uL	118 10^3/uL	13 10^3/uL	The patient has decreased platelets due to his lung cancer (Martin, 2023).

WBC	4.00-11.00 10^3/uL	3.8 10^3/uL	2.53 10^3/uL	The patient has decreased WBCs due to an infection or his lung cancer (Martin, 2023).
Neutrophils	1.60-7.70 10^3/uL	2.26 10^3/uL	1.86 10^3/uL	N/A
Lymphocytes	1.00-4.90 10^3/uL	0.63 10^3/uL	0.57 10^3/uL	There are decreased lymphocytes due to the patient's lung cancer or and infection (Martin, 2023).
Monocytes	0.00-1.10 10^3/uL	0.05 10^3/uL	0.07 10^3/uL	N/A
Eosinophils	0.00-0.50 10^3/uL	0.08 10^3/uL	0.01 10^3/uL	N/A
Bands	0-2% (Martin, 2023).	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 mmol/L	132 mmol/L	131 mmol/L	The patient has decreased sodium due to possible deficient dietary intake as evidence by the patient being underweight (Martin, 2023).
K+	3.5-5.1 mmol/L	4.6 mmol/L	4.8 mmol/L	N/A
Cl-	98-107 mmol/L	99 mmol/L	98 mmol/L	N/A
CO2	22.0-29.0 mmol/L	25.0 mmol/L	26.0 mmol/L	N/A
Glucose	74-100 mg/dL	100 mg/dL	98 mg/dL	N/A
BUN	8-26 mg/dL	30 mg/dL	23 mg/dL	The patient has an increase in BUN level due to the patient's COPD (Martin, 2023).
Creatinine	0.70-1.30 mg/dL	0.81 mg/dL	0.77 mg/dL	N/A
Albumin	3.4-4.8 g/dL	1.9 g/dL	N/A	There is a decrease in albumin level due to inflammatory response (Martin, 2023).
Calcium	8.9- 10.6 mg/dL	9.0 mg/dL	9.3 mg/dL	N/A

Mag	1.6-2.6 mg/dL	1.9 mg/dL	N/A	N/A
Phosphate	2.3-4.7 mg/dL	N/A	N/A	N/A
Bilirubin	0.2-1.2 mg/dL	0.2 mg/dL	0.2 mg/dL	N/A
Alk Phos	40-160 u/L	126 u/L	144 u/L	N/A
AST	5-34 u/L	27 u/L	26 u/L	N/A
ALT	0-55 u/L	25 u/L	29 u/L	N/A
Amylase	60-120 units/dL (Martin, 2023).	N/A	N/A	N/A
Lipase	0-160 units/L (Martin, 2023).	N/A	N/A	N/A
Lactic Acid	0.5-2.0 mmol/L	0.8 mmol/L	N/A	N/A
Troponin	0-4 ng/L	<3 ng/L	N/A	N/A
CK-MB	0% (Martin, 2023).	N/A	N/A	N/A
Total CK	30-135 units/L (Martin, 2023).	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	0.9-1.1 ratio	1.1 ratio	N/A	N/A
PT	11.7-13.8 sec	13.9 sec	N/A	
PTT	22.4-35.9 sec	31.8 sec	N/A	N/A
D-Dimer	<0.4 ug/mL	N/A	N/A	N/A

	(Martin, 2023).			
BNP	0.0-100.0 pg/mL	79.0 ng/mL	N/A	N/A
HDL	40-60 mg/dL	N/A	N/A	N/A
LDL	<100 mg/dL	N/A	N/A	N/A
Cholesterol	0-200 mg/dL	N/A	N/A	N/A
Triglycerides	<150 mg/dL	N/A	N/A	N/A
Hgb A1c	4-5.9% (Martin, 2023).	N/A	N/A	N/A
TSH	0.350-4.940 u[IU]/mL	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	N/A	N/A	N/A
pH	5.0-9.0	N/A	N/A	N/A
Specific Gravity	1.003-1.030	N/A	N/A	N/A
Glucose	Negative	N/A	N/A	N/A
Protein	Negative	N/A	N/A	N/A
Ketones	Negative	N/A	N/A	N/A
WBC	0-5 hpf	N/A	N/A	N/A
RBC	0-2 hpf	N/A	N/A	N/A
Leukoesterase	Negative	N/A	N/A	N/A

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

Test	Normal	Value on	Today's	Explanation of Findings

	Range	Admission	Value	
pH	7.35-7.45	N/A	N/A	N/A
PaO2	80-100 mmHg	N/A	N/A	N/A
PaCO2	35-45 mmHg	N/A	N/A	N/A
HCO3	22-26 mEq/L	N/A	N/A	N/A
SaO2	>95%	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	10,000-1,000,000 colonies/mL	N/A	N/A	N/A
Blood Culture	10-20 mL	N/A	N/A	N/A
Sputum Culture	>25 leukocytes <10 epithelial cells	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (1) (APA):

Martin, P. (2023). *Complete normal lab values reference guide cheat sheet*. Nurselabs. https://nurseslabs.com/normal-lab-values-nclex-nursing/

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

A CT of the chest was performed on 4/4 when the patient came into the ED. The scan showed an acute PE and an increase of infiltrative/infectious changes in the right upper lobe and left lower lobe. The patient also had an ECG performed when he came into the ED on 4/4. The test showed a sinus rhythm, with premature atrial complexes. The patient had an ECHO performed on 4/5, which showed an acute PE and 55-60 % ejection fraction. Also, on 4/5 the patient had a lower extremity venous duplex performed. There was no evidence of a DVT.

Diagnostic Test Correlation (5 points):

The patient came in for SOB and right sided chest pain. An ECG was performed. An ECG is used using electrodes that are placed on the patient's chest and extremities, to monitor the patient's heart electrical activity ("Electrocardiogram (EKG)," 2022). The ECG showed a sinus rhythm with premature atrial complexes. The patient also had a CT of the chest performed when he came into the ED. A CT of the chest is used to help explain SOB, unexplained coughing, chest pain, fever, and other chest signs and symptoms ("Chest CT," 2022). The CT uses x-ray equipment to look at the chest ("Chest CT," 2022). The patient's chest CT showed an acute pulmonary embolism with infiltrative and infectious changes. On 4/5 the patient had an ECHO performed. An echocardiogram is used to see the heart, and how the blood flows ("Echocardiogram," 2023). The echo showed an acute pulmonary embolism with an ejection fraction of 55-60%. The last test the patient had was on 4/5 and it was a lower extremity venous duplex. A venous duplex is an ultrasound that uses sound waves to look at the blood vessels. It measures the speed and flow of blood ("Venous duplex ultrasound for arms and legs," 2024). The patient's venous duplex showed no evidence of a DVT.

Diagnostic Test Reference (1) (APA):

Electrocardiogram (EKG). (2022, March 13). Cleveland Clinic. https://my.clevelandclinic.org/health/diagnostics/16953-electrocardiogram-ekg

Chest CT. (2022, November 1). RadiologyInfo.org. https://www.radiologyinfo.org/en/info/chestct#:~:text=Computed%20tomography%20(CT)%20of%20the,fever%2C%20and%20other%20chest%20symptoms.

Echocardiogram. (2023, January 31). Mayo Clinic. https://www.mayoclinic.org/tests-procedures/echocardiogram/about/pac-20393856#:~:text=An%20echocardiogram%20uses%20sound%20waves%20to%20create%20pictures%20of%20the,disease%20and%20other%20heart%20conditions.

Venous duplex ultrasound for arm and legs. (2024). MedStar Health. https://www.medstarhealth.org/services/venous-duplex-ultrasound

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

Home Medications (5 required)

Brand/ Generic	Albuterol	Hydrocodone Acetaminophen (Norco)	Ferrous sulfate	Amoxicillin	Digoxin
Dose	90 mcg	15 mL	324 mg	125 mg	0.125 mg
Frequency	1-2 puffs every Q6 hours	4x daily before meals	Daily	Q12 hours for 2 days	Daily
Route	Oral	Oral	Oral	Oral	Oral
Classification	Pharmacological: Adrenergic (NDH, 2023)	Pharmacological: Opioid (“Hydrocodone,” 2024)	Pharmacological: Hematinic (NDH, 2023) Therapeutic:	Pharmacological: Aminopenicillin (NDH,	Pharmacological: Cardiac glycoside

	Therapeutic: Bronchodilator (NDH, 2023)	Therapeutic: Schedule II controlled substance ("Norco prescribing information," 2023)	Antianemic, nutritional supplement (NDH, 2023)	2023) Therapeutic: Antibiotic (NDH, 2023)	(NDH, 2023) Therapeutic: Antiarrhythmic, cardiotonic (NDH, 2023)
Mechanism of Action	According to (NDH, 2023), it states, "albuterol attaches to beta2, receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate (ATP) to cyclic adenosine monophosphate (cAMP)."	According to ("Hydrocodone," 2024), it states, "reduces HCl formation by binding with H2 receptors on the surface of parietal cells."	According to (NDH, 2023), it states, "acts to normalize RBC production by binding with hemoglobin or by being oxidized and stored as hemosiderin or aggregated ferritin in reticuloendothelial cells of the bone marrow, liver, and spleen."	According to (NDH, 2023), it states, "kills bacteria by binding to and inactivating penicillin-binding proteins on the inner bacterial cell wall, weakening the bacterial cell wall and causing lysis."	According to (NDH, 2023), it states, "increases the force and velocity of myocardial contraction (NDH, 2023).
Reason Client Taking	SOB or wheezing	Pain management	For anemia	Pneumonia	Ejection fraction
Contraindications (2)	1. Hypersensitivity to the medication (NDH, 2023). 2. Tachy	1. Alcohol consumption ("Hydrocodone," 2024). 2. Using	1. Hemochromatosis (NDH, 2023). 2. Hemolytic anemias	1. Stevens-Johnson syndrome (NDH, 2023)	1. Ventricular fibrillation (NDH, 202

	cardia (NDH, 2023).	another opioid medication (“Hydrocodone,” 2024).	(NDH, 2023).	. 2. Beta-lactam antibiotics (NDH, 2023).	3). 2. Ventricular tachycardia (NDH, 2023).
Side Effects/Adverse Reactions (2)	1. Bronchospasms (NDH, 2023). 2. Anxiety (NDH, 2023).	1. Decreased respiratory rate (“Hydrocodone,” 2024). 2. Depressed CNS can occur (“Hydrocodone,” 2024).	1. Dizziness (NDH, 2023). 2. Hypotension (NDH, 2023).	1. Seizures (NDH, 2023). 2. Hepatic dysfunction (NDH, 2023).	1. Arrhythmias (NDH, 2023). 2. Electrolyte imbalances (NDH, 2023).
Nursing Considerations (2)	1. Be cautious in patients who have a cardiac disorder (NDH, 2023). 2. Monitor patient’s potassi	1. If a patient already has a respiratory disorder, the nurse needs to be cautious (“Hydrocodone,” 2024).	1. Monitor the patient for signs of iron overdose (NDH, 2023). 2. Collect stool for occult blood if ordered (NDH,	1. Patients who have mononucleosis should not take this medication it can cause eryth	1. Monitor the patient for digitalis toxicity (NDH, 2023). 2. Obtain EC

	um levels (NDH, 2023).	2. Be cautious if a patient is already on another opioid medication (“Hydrocodone,” 2024).	2023).	ematous rash (NDH, 2023). 2. Be cautious in patients who have hepatic disorders (NDH, 2023).	G testing frequently (NDH, 2023).
Key Nursing Assessment(s)/Lab(s) Prior to Administration	The nurse will need to monitor the patient for hypokalemia.	The nurse will need to monitor the patient’s pain levels, respiratory rate, and it is a sedative drug (“Hydrocodone,” 2024).	Monitor the patient’s iron levels and their stools (NDH, 2023).	Monitor the patient for diarrhea and monitor the patient’s renal function and CBC labs (NDH, 2023).	Monitor the patient’s potassium levels for hypokalemia (NDH, 2023).
Client Teaching Needs (2)	1. Educate the patient to wash the mouth piece and their mouth after use of	1. This medication can be taken without or with food (“Hydrocodone,” 2022).	1. Educate the patient to take the medication on an empty stomach (NDH, 2023).	1. Educate the patient to finish the medication fully (NDH,	1. Educate the patient to take the medication as pres

	medication (NDH, 2023). 2. Educate the patient to wait 1 minute between inhalations (NDH, 2023).	2. The patient will want to avoid consuming alcohol while taking this medication (“Hydrocodone,” 2024).	2. Educate the patient to eat foods such as chicken, fish, and lean red meat (NDH, 2023).	2023). 2. Educate the patient to report any signs or an adverse reaction (NDH, 2023).	cribed (NDH, 2023). 2. Educate the patient if they forget to take a dose take the dose as soon as they remember if it is within 12 hours (NDH, 2023).

Hospital Medications (5 required)

Brand/ Generic	Nicotine	Oxycodone	Polyethylene Glycol	Metoprolol	Guaifenesin Mucinex
Dose	14 mg/ 24 hour 1 patch	7.5 mg	17 g	25 mg	1,200 mg
Frequency	Daily	3x daily before meals	BID	BID	Q12
Route	Transdermal	Oral	Oral	Oral	Oral
Classification	Pharmacological: stimulant (“Nicotine, ” 2024) Therapeutic: stimulant (“Nicotine, ” 2024)	Pharmacological: Opioid (NDH, 2023) Therapeutic: Opioid analgesic-controlled substance schedule II (NDH, 2023)	Pharmacological: Laxative (“Polyethylene glycol,” 2024) Therapeutic: osmotic laxatives (“Polyethylene glycol,” 2024)	Pharmacological: Beta1-adrenergic blocker (NDH, 2023) Therapeutic: Antianginal and antihypertensive (NDH, 2023)	Pharmacological: Expectorants (Puckey, 2022) Therapeutic: Expectorants (Puckey, 2022)
Mechanism of Action	According to (“Nicotine, ” 2024), it states, “in the brain nicotine binds to nicotinic acetylcholine receptors on dopaminergic neurons in the cortical-limbic pathways.”	According to (NDH, 2023), it states, “alters perception of and emotional response to pain at spinal cord and higher levels of CNS by blocking release of inhibitory neurotransmitters.”	According to (Polyethylene glycol,” 2024), it states, “osmotic laxatives contain substances that are poorly absorbable and draw water into the lumen of the bowel.”	According to (NDH, 2023), it states, “inhibits stimulation of beta1-receptor sites, located mainly in the heart, resulting in decreased cardiac excitability, cardiac output, and myocardial oxygen demand.”	According to (“Guaifenesin, ” 2024), it states, “increasing mucus secretion.”
Reason	Relief of	Pain	Constipation	HTN	To help

Client Taking	nicotine withdrawal	management			remove mucus during coughing
Contraindications (2)	1. Allergy to adhesive tape (“Nicotine patch,” 2024). 2. A blood vessel disease (“Nicotine patch,” 2024).	1. Bronchial asthma (NDH, 2023). 2. Gastrointestinal obstruction (NDH, 2023).	1. Bowel obstruction (“Polyethylene glycol prescribing information,” 2024). 2. Hypersensitivity to medication (“Polyethylene glycol prescribing information,” 2024).	1. Bradycardia (NDH, 2023). 2. Systolic blood pressure less than 100 mm Hg (NDH, 2023).	1. Hypersensitivity to the medication (Puckey, 2022). 2. Already taking another expectorant (Puckey, 2022).
Side Effects/Adverse Reactions (2)	1. Dizziness (“Nicotine,” 2024). 2. Confusion (“Nicotine,” 202	1. Bradycardia (NDH, 2023). 2. Respiratory depression (NDH, 2023).	1. Abdominal cramping (“Polyethylene glycol prescribing information,” 2024). 2. Diarrhea	1. Cardiac arrest (NDH, 2023). 2. Bronchospasm (NDH, 2023).	1. Dizziness (Puckey, 2022). 2. Rash (Puckey, 2022).

	4).		(“Polyethylene glycol prescribing information,” 2024).		
Nursing Considerations (2)	1. Monitor the patient if the patient has high blood pressure (“Nicotine,” 2024). 2. Monitor the patient for toxicity (“Nicotine,” 2024).	1. Be cautious giving this medication to a patient who has a respiratory disorder (NDH, 2023). 2. Assess the patient for abdominal pain (NDH, 2023).	1. Be cautious in patients who may have a bowel obstruction (“Polyethylene glycol prescribing information,” 2024). 2. The nurse should be aware that this medication should be used for only two weeks or less (“Poly	1. Be cautious in patients who have a bronchospastic disorder (NDH, 2023). 2. Be cautious in patients who have hyperthyroidism (NDH, 2023).	1. The nurse should look for signs of an allergic reaction (Puckey, 20220. 2. The nurse should be cautious and aware of the exact dosage for the patient (Puckey, 022).

			ethylene glycol prescribing information," 2024).		
Key Nursing Assessment(s)/Lab(s) Prior to Administration	The nurse should do a Nero and peripheral vascular assessment ("Nicotine patch," 2024).	The nurse should monitor the patient's pain level and blood pressure (NDH, 2023).	The nurse should monitor the patient's bowel habits regularly ("Polyethylene glycol prescribing information," 2024).	The nurse should monitor the patient for worsening heart failure (NDH, 2023).	The nurse should assess the patient's respiratory function and document the findings (Puckey, 2022).
Client Teaching Needs (2)	1. Educate the patient to avoid drinking or eating for 15 minutes before the use of this medication and	1. Educate the patient that this medication needs to be taken with food (NDH, 2023). 2. Educate the patient to not stop the medication suddenly (NDH	1. Educate the patient about good eating habits and a high fiber diet ("Polyethylene glycol prescribing information," 2024). 2. Educate the patient that the medication	1. Educate the patient to take the medication with or directly after a meal every day (NDH, 2023). 2. Educate the patient to not stop the medication suddenly (NDH,	1. Educate the patient that this medication may impair thinking and reaction (Puckey, 2022). 2. Educate the patient if they miss, take the dose as soon as you

	during the use (“Nicotine,” 2024).	, 2023).	needs to be dissolved in some type of fluid that the patient can drink (“Polyethylene glycol prescribing information,” 2024).	2023).	remember (Puckey, 2022).

Medications Reference (1) (APA):

Guaifenesin. (2024, April 11). DRUGBANK Online. https://go.drugbank.com/drugs/DB00874

Hydrocodone. (2024, April 10). DRUGBANK Online. https://go.drugbank.com/drugs/DB00956

Nicotine. (2024, April 10). DRUGBANK Online. https://go.drugbank.com/drugs/DB00184

Nicotine patch; patch, transdermal 24 hours-uses, side effects, and more. (2024). WebMD. https://www.webmd.com/drugs/2/drug-6404/nicotine-transdermal/details

Norco prescribing information. (2023, May 31). Drugs.com. https://www.drugs.com/pro/norco.html#:~:text=NORCO%20contains%20hydrocodone%25%202C%20a%20Schedule,see%20DRUG%20ABUSE%20AND%20DEPENDENCE%5D

Nurse’s Drug Handbook. (2023). Jones & Bartlett Learning.

Polyethylene glycol. (2024, April 11). DRUGBANK Online.

https://go.drugbank.com/drugs/DB09287

Polyethylene glycol prescribing information. (2024, January 18). Drugs.com.

https://www.drugs.com/pro/polyethylene-glycol.html#s-34084-4

Puckey, M. (2022, May 16). *Guaifenesin.* Drugs.com.

https://www.drugs.com/guaifenesin.html#side-effects

Assessment

Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	The patient was alert and oriented x4 to person, place, situation, and time. The patient was in no acute distress and was well groomed.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	The patient's skin color was normal for ethnicity but pale. Skin was warm and dry upon palpation. The skin turgor was normal. The patient had no rashes or bruises noted. The patient had a pressure injury on his coccyx. Braden score was an 18. No drains present.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	The patient's head and neck were symmetrical. The patient's trachea was midline. The thyroid was not palpable. Carotid pulses were a 2+ bilaterally. PERRLA and EMOs were intact bilaterally. The patient's sclera was white with no lesions or drainage bilaterally. The patient's eyelids and conjunctiva were pink and moist with no lesions or drainage present. Septum is midline. No bleeding or drainage from nares noted. The patient's ears were symmetrical with no drainage or lesions noted. The patient's mouth was moist and pink with no lesions noted. The patient was missing a few teeth. The patient had a sore throat

	and hoarseness was present. The hard palate was intact. Soft palate rises and falls symmetrically. No sinus tenderness noted upon palpation. .
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐** **Edema Y ☐ N ☐** **Location of Edema:**	S1 and S2 were present. No gallops, murmurs, or rhonchi noted. Normal rate and rhythm present. Peripheral pulses were a 2+ bilaterally. PMI was palpable. The patient's capillary refill was 3 seconds or less in lower and upper extremities bilaterally. No neck vein distention or edema noted.
RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	The patient had a normal rhythm. Breathing was non-labored and symmetrical. Breath sounds were diminished and clear in all four quadrants. No wheezes, crackles, or rhonchi noted. The patient had a barrel chest. The patient had an infrequent weak and congested cough. Patient is on NC 3L.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☐** **Nasogastric: Y ☐ N ☐** **Size:** **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	The patient was on a regular diet at home. The patient was on a cardiac diet in the hospital. The patient's height was 177.8 cm (5' 10") and the patient's weight was 55.8 kg (123 lb). The patient's bowel sounds were normoactive in all four quadrants during auscultation. No pain in all four quadrants upon palpitation. Patient's last bowel movement was on 4/7/2024. No scars, incisions, distention, drains, or wounds noted upon inspection. Abdomen was soft and nontender during palpitation. No organomegaly noted. No ostomy, drains, nasogastric, or feeding tube present.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐**	The patient did not urinate during clinical. According to the chart the patient's urine was yellow, clear, with no foul-smelling odor. No reports of pain while urinating. No catheter present. Patient used the urinal at the bedside to

Dialysis: Y ☐ N ☐ **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	urinate. The last charted urine output was 150mL.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☐ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk** ☐	The patient had full range of motion but had generalized weakness. Hand grips and pedal pushes and pulls are weak bilaterally. No supportive devices were needed. The patient was a standby assist. Fall score was a 9.
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Patient was alert and oriented x4. PERRLA and MAEW were intact bilaterally. The patient's strength was weak equally in both upper and lower extremities. The patient's mental status was adult level. The patient's speech was hoarse. Patient was fully conscious.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient had the developmental level of an adult. The patient used to use smoking as a coping method, but does not have a coping method anymore. The patient reported he does not associate with a religion. The patient's support system was his ex-wife.

Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1130	81	136/71	18	97.8F Oral	96F NC 3L
1458	72	129/71	18	98.1F Oral	99 NC 3L

Vital Sign Trends: The patient's vital signs were stable through the clinical day. The patient does have HTN, but his blood pressureswere good and non-alarming. The patient is on NC 3L, which help the patient keep his O2 levels in a good range.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1121	0-10	Chest	5	Sore	Pain medication
1514	0-10	Chest	5	Sore	Pain medication

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:**	The patient did not have an IV but had a port on the right side of his chest. The port was placed on 1/15/2024. No drainage, erythema, or swelling noted. Dressing was dry and intact. No infusions were running at the time.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
The patient drank 150 mL of fluid during the clinical day. The patient did order food towards the end of clinical, but did not eat anything through the clinical day, so the patient had 0% food intake.	The patient did not urinate during the clinical day, but it was charted that the patient had a 300 mL of urine output that morning.

Nursing Care

Summary of Care (2 points)

Overview of care:

The patient's day was calm and relaxing. Most of the clinical day the patient was napping. The patient woke up toward the last few hours of the clinical day and he wanted to stay in bed and visit with his ex-wife. I completed a head-to-toe assessment on the patient once he woke up from his nap.

Procedures/testing done:

The patient did not have any testing during the clinical day and did not leave the floor.

Complaints/Issues:

The only complaint that the patient had was chest pain and pain medications were administered to help reduce his pain.

Vital signs (stable/unstable):

The patient's vital signs were stable throughout the clinical day.

Tolerating diet, activity, etc.:

The patient did not eat anything throughout the clinical day, but there were no reports of intolerance while eating. During the clinical day the patient mostly was napping, but once he woke up from his nap he remained in bed and visited with his ex-wife.

Physician notifications:

There were no physician notifications through the clinical day.

Future plans for client:

The patient was expected to be discharged home on 4/8/2024 the day of clinical. But it was thought that the patient should stay a day or two more just to monitor and help get his strength back.

Discharge Planning (2 points)

Discharge location:

The patient plans to discharge home with ex-wife.

Home health needs (if applicable):

The patient mentioned to the social worker about getting home health assistance for a few days during the week.

Equipment needs (if applicable):

No equipment is needed.

Follow up plan:

The patient has no follow up plans at this time, but the patient will continue with his oncology monitoring and possibly palliative care.

Education needs:

The patient could be educated on deep breathing and coughing exercises.

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

Nursing Diagnosis	Rationale	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation
• 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	• Explain why the nursing diagnosis was chosen			• How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications

				to plan.
1. Impaired gas exchange related to medical diagnosis of a pulmonary embolism as evidence by low O2 levels (Phelps, 2023).	The patient had shortness of breath and needed to be on NC 3L of oxygen.	**1.** Monitor the patient's vital signs and respiratory rate (Phelps, 2023). **2.** Promote oral hygiene and deep breathing exercises (Phelps, 2023).	**1.** The patient's vital signs and respiratory rate remain within normal limits and the patient performs oral care and deep breathing exercises (Phelps, 2023).	The patient's vital signs and respiratory rate remained in normal range and the patient had some oral care done the morning of clinical and was doing deep breathing exercises on his own.
2. Decreased cardiac output related medical diagnosis of a pulmonary embolism as evidence ECHO showing decreased ejection fraction (Phelps, 2023).	The patient has an ECHO performed on 4/5 that showed decreased ejection fraction at 55-60%.	**1.** Monitor the patient's heart rate and rhythm (Phelps, 2023). **2.**Monitor for fatigue and shortness of breath (Phelps, 2023).	**1.** The patient's heart rate and rhythm remain within normal limits and the patient's shortness of breath is controled (Phelps, 2023).	The patient's heart rate and rhythm remained within normal range and the patient reported no shortness of breath throughout the clinical day.
3. Impaired verbal communicatio n related to medical diagnosis of a pulmonary embolism and SOB as evidence by hoarseness speech	The patient had hoarse speech when speaking.	**1.** Monitor any changes in the patient's voice and LOC (Phelps, 2023). **2** Uses short sentences and simple questions (Phelps,	**1.** The patient's speech and LOC remain the same and the patient only uses short sentences or phrases when needed (Phelps, 2023).	The patient's LOC remained the same A/O x4 and the patient only spoke a few words when needed. He would shake his head yes or no to communicate most of the time.

(Phelps, 2023).		2023).		
4. Decreased activity tolerance related to decreased muscle strength as evidence by generalized weakness (Phelps, 2023).	The patient had generalized weakness bilaterally in upper and lower extremities.	**1.** Teach the patient about different exercises to increase strength (Phelps, 2023). **2.** Help the patient maintain proper body alignment (Phelps, 2023).	**1.** The patient performs different ROM exercises in the bed or out of the bed and the patient maintains the proper body alignment to help avoid contractures and maintain musculoskeletal balance (Phelps, 2023).	The patient would perform some little ROM in bed with his legs and arms and I helped the patient reposition and realign his body in bed.

Other References (APA):

Phelps, L. (2021). *Nursing diagnosis reference manual* (12th ed.). Wolters Kluwer.

Concept Map (20 Points):

Subjective Data

Shortness of breath
Right sided chest pain
Cough
Reported wrapped a bandage around the chest to help with chest pain.

Objective Data

Chest CT: Acute PE and infiltrative/infectious changes
ECG: sinus rhythm with premature atrial complexes
ECHO: acute PE and ejection fraction 55-60%
Lower extremity venous duplex: no evidence of DVT

Client Information

62-year-old
Male
Admission date: 4/4/2024
Unemployed
DNR
Allergies aspirin
Hx of COPD, HTN, lung cancer, anemia, and asthma

Nursing Diagnosis/Outcomes

Impaired gas exchange related to medical diagnosis of a pulmonary embolism as evidence by dyspnea and decreased O2 levels (Phelps, 2023).
Outcome: The patient's vital signs and respiratory rate remain within normal limits and the patient preforms oral care and deep breathing exercises (Phelps, 2023).

Decreased cardiac output related medical diagnosis of a pulmonary embolism as evidence ECHO showing decreased ejection fraction (Phelps, 2023).
Outcome: The patient's heart rate and rhythm remain within normal limits and the patient's shortness of breath is controls (Phelps, 2023).

Impaired verbal communication related to medical diagnosis of a pulmonary embolism and SOB as evidence by hoarsens speech (Phelps, 2023).
Outcome: The patient's speech and LOC remain the same and the patient only uses short sentences or phrases when needed (Phelps, 2023).

Decreased activity tolerance related to decreased muscle strength as evidence by generalized weakness (Phelps, 2023).
Outcome: The patient performs different ROM exercises in the bed or out of the bed and the patient maintains the proper body alignment to help avoid contractures and maintain musculoskeletal balance (Phelps, 2023).

Nursing Interventions

1. Monitor the patient's vital signs and respiratory rate (Phelps, 2023).

2. Promote oral hygiene and deep breathing exercises (Phelps, 2023).

1. Monitor the patient's heart rate and rhythm (Phelps, 2023).

2.Monitor for fatigue and shortness of breath (Phelps, 2023).

1. Monitor any changes in the patient's voice and LOC (Phelps, 2023).

2 Uses short sentences and simple questions (Phelps, 2023).

1. Teach patient about different exercises to increase strength (Phelps, 2023).

2. Help the patient maintain proper body alignment (Phelps, 2023).