N431 Care Plan #1

Lakeview College of Nursing

Whitney Simlin

Demographics (3 points)

Date of Admission 3/19/2023	**Client Initials** J.O.	**Age** 76 years old	**Gender** Female
Race/Ethnicity White	**Occupation** Unemployed	**Marital Status** Married	**Allergies** Sulfonamide Antibiotics
Code Status Full Code	**Height** 5'1" (154.9 cm)	**Weight** 140 lbs. (63.6 kg)	

Medical History (5 Points)

Past Medical History: Brainstem stroke- 5/14/2019, Diabetes Mellitus, Hypertension, Hyperlipidemia, Hypothyroidism, Asthma, Gerd, Seasonal Allergies

Past Surgical History: No known surgical history

Family History: No pertinent family history

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use): Never used tobacco, alcohol, and drugs

Assistive Devices: No assistive devices

Living Situation: Lives at home with spouse

Education Level: Some college

Admission Assessment

Chief Complaint (2 points): Shortness of Breath

History of Present Illness – OLD CARTS (10 points): The patient was admitted to Carle hospital on 3/19/2024 for shortness of breath. The patient's symptoms began at home and worsened over the last two days. Noted upon observation are accessory muscle use and shallow breathing by the emergency room registered nurse. Her illness is severe. She is concerned about dying and asked, "Will I live through this?"

An aggravating factor is lying down. A know relieving factor is sitting upright and inclined to sleep. She has been sleeping in her recliner at home for the last two days. While home, the patient tried repositioning to treat her shortness of breath, cough, and lack of comfort. J.D. is being treated and receiving acute medical care at Carle Hospital with prescribed medication and respiratory therapy.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Acute hypoxic respiratory failure

Secondary Diagnosis (if applicable):

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

In acute hypoxic respiratory failure, pulmonary inflammation leads to the release of cytokines and other proinflammatory molecules. Once the cytokines activate alveolar macrophages and recruit neutrophils to the lungs- leukotrienes, oxidants, platelet-activating factors, and proteases are released (Patel, 2023). Release of those substances damages capillary endothelium and alveolar epithelium. Disruption of the barriers between capillaries and airspaces occurs. Edema fluid, seen on the chest X-ray J.D. had done, protein, and cellular debris flood the airspaces and interstitial, disrupting surfactant, ventilation-perfusion mismatch, shunting, and pulmonary hypertension. The airspace collapses commonly occur in dependent lung zones (Patel, 2023). This early phase of acute hypoxic respiratory failure, where J.D. appears to be, is exudative. Later, there is a proliferation of alveolar epithelium and fibrosis, constituting the fibro-proliferative phase.

Causes of acute hypoxic respiratory failure may involve direct or indirect lung injury (Patel, 2023). We are still determining what caused this in J.D. Early signs of respiratory failure

include shortness of breath- as seen in our client and a dry, hacky cough. Other symptoms are sleepiness or passing out, confusion, cyanosis, and tachycardia. There is no specific test to diagnose the acute hypoxic respiratory failure. We rely on a chest X-Ray, oxygen levels, and a physical exam to diagnose this disease. Heart problems can present with similar symptoms, so we must confirm no heart problems.

Treatment for acute hypoxic respiratory failure includes non-invasive oxygenation support and mechanical ventilation if the oxygen saturation is less than 90% on high-flow oxygen (Patel, 2023). J.D. is maintaining oxygen levels above 90% with high-flow oxygenation. Mechanical ventilation requires endotracheal ventilation to create an artificial airway.

Pathophysiology References (2) (APA):

Swearingen, P. L. (2019). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, psychiatric nursing care plans* (5th ed.)., Elsevier/Mosby.

Patel, B. K. (2023, March 15). *Acute hypoxemic respiratory failure (AHRF, ARDS) - critical care medicine*. Merck Manuals Professional Edition. Retrieved March 24, 2023, from https://www.merckmanuals.com/professional/critical-care-medicine/respiratory-failure-and-mechanical-ventilation/acute-hypoxemic-respiratory-failure-ahrf,-ards

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	3.80- 5.30	3.90	-	

Hgb	12.0- 15.8	11.3	-	Patient may be anemic (Pagana et al., 2018).
Hct	36.0- 47.0	33.9	-	Patient may be anemic (Pagana et al., 2018).
Platelets	140- 440	253	-	
WBC	4.00-12.00	10.00	-	
Neutrophils	1.60-7.70	4.6	-	
Lymphocytes	21-51	25	-	
Monocytes	1.7- 9.3	7.4	-	
Eosinophils	0.0-0.7	0.2	-	
Bands	0-10%	-	-	

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

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	135-145	143	-	
K+	3.5-5.1	4.2	-	
Cl-	98- 107	111	-	High chloride level is a sign of metabolic alkalosis- caused by AHRF (Pagana et al., 2018).
CO2	22.0-29.0	20	-	Low levels of CO2 result from metabolic alkalosis- caused by AHRF (Pagana et al., 2018).
Glucose	74-100	90	-	
BUN	10-20	30	-	This number is higher than normal and may be a sign of metabolic alkalosis (Pagana et al., 2018).
Creatinine	0.55-1.02	0.79	-	
Albumin	3.4-4.8	2.2	-	This number is lower than normal and may be a sign of metabolic alkalosis (Pagana et al., 2018).
Calcium	8.9-10.6	9.5	-	

Mag	1.6-2.6	-	-	
Phosphate	N/A	-	-	
Bilirubin	0.2-1.2	1.0	-	
Alk Phos	44-147	146	-	
AST	5-34	29	-	
ALT	0-55	50	-	
Amylase	N/A	-	-	
Lipase	N/A	-	-	
Lactic Acid	N/A	1.8	-	
Troponin	10<	8	-	
CK-MB	N/A	-	-	
Total CK	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	11.7-13.8	-	1.1	Low INR is most likely related to the patient's hypothyroidism (Pagana et al., 2018).
PT	0.9-1.1	-	1.0	
PTT	22.4-35.9	-	27.6	
D-Dimer	negative	-	-	
BNP	127<	-	115	
HDL	N/A	-	-	

LDL	N/A	-	-	
Cholesterol	N/A	-	-	
Triglycerides	N/A	-	-	
Hgb A1c	N/A		6.1	
TSH	N/A		1.310	

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	-	-	-	-
pH	-	-	-	-
Specific Gravity	-	-	-	-
Glucose	-	-	-	-
Protein	-	-	-	-
Ketones	-	-	-	-
WBC	-	-	-	-
RBC	-	-	-	-
Leukoesterase	-	-	-	-

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	-	-	-	-

PaO2	-	-	-	-
PaCO2	-	-	-	-
HCO3	-	-	-	-
SaO2	-	-	-	-

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	-	-	-	-
Blood Culture	-	-	-	-
Sputum Culture	-	-	-	-
Stool Culture	-	-	-	-

Lab Correlations Reference (1) (APA):

Pagana, K.D., Pagana, T.J., & Pagana, T.N. (2018). *Mosby's Diagnostic and Laboratory Test Reference* (14th ed.). Mosby.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Chest Xray: 3/20/23- diffuse pulmonary vascular congestion

EKG: 3/20/23- normal sinus

Diagnostic Test Correlation (5 points): The diagnostic imaging correlates with the patient having acute hypoxic respiratory failure. Having fluid in the interstitial tissue of the lungs or

edema can contribute to the patient having pulmonary vascular congestion (Pagana et al., 2018). The EKG results of normal sinus rhythm indicate the patient has a healthy heart rhythm (Pagana et al., 2018)

Diagnostic Test Reference (1) (APA):

Pagana, K.D., Pagana, T.J., & Pagana, T.N. (2018). *Mosby's Diagnostic and Laboratory Test Reference* (14th ed.). Mosby.

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

Home Medications (5 required)

Brand/Generic	**loratadine (Claritin)**	**furosemide (Lasix)**	**losartan (Cozaar)**	**oxycodone (Percocet)**	**pantoprazole (Protonix)**
Dose	10 mg	40 mg	25 mg	325 mg	40 mg
Frequency	Daily PRN	Daily AM	Daily	Daily	Daily
Route	Oral	Oral	Oral	Oral	Oral (delayed response)
Classification	Pharmacologic: CNS H1-receptor Therapeutic: Antihistamine	Pharmacologic: Loop diuretic Therapeutic: Anti-hypertensive	Pharmacologic: Angiotensin II receptor blocker (ARB) Therapeutic: Anti-hypertensive	Pharmacologic: Opioid Therapeutic: Opioid analgesic	Pharmacologic: Proton pump inhibitor Therapeutic: Antiulcer
Mechanism of Action	Binds to H1 histamine receptors found on endothelial cells and vascular smooth muscle to prevent or reduce	Inhibits sodium and water reabsorption and increases urine formation. By reducing intracellular and extracellular fluid, the drug	Block vasoconstriction that stimulates the adrenal cortex to release aldosterone. By doing this it reduces blood pressure (Jones	Alters perception and emotional response to pain at the spinal cord (Jones & Bartlett, 2020).	Interferes with gastric acid secretion by inhibiting the proton pump found in gastric parietal cells (Jones & Bartlett, 2020).

	histamine mediated symptoms (Jones & Bartlett, 2020).	decreases blood pressure and cardiac output (Jones & Bartlett, 2020).	& Bartlett, 2020).		
Reason Client Taking	To manage symptoms of seasonal allergies.	To reduce edema caused by heart failure.	To manage hypertension.	To relieve pain severe enough nonopioid analgesics could not alleviate.	To treat erosion associated with GERD.
Contraindications (2)	Hyper-sensitivity to loratadine or its components.	Anuria and hyper-sensitivity to furosemide or its components.	High levels of potassium and hyper- sensitivity to losartan or its components.	Acute or severe bronchial asthma and significant respiratory depression.	Severe hepatic disease and hyper-sensitivity to pantoprazole or its components.
Side Effects/Adverse Reactions (2)	Irregular heartbeat and dizziness.	Arrhythmias and hemolytic anemia.	Hypotension and thrombo-cytopenia.	Bradycardia and respiratory depression.	Hepatic failure and hyponatremia.
Nursing Considerations (2)	Monitor respiratory especially with asthmatic or chronic bronchitis patients. Be aware of medication interaction with CNS depressants.	Monitor patient's weight before and during furosemide treatment. Assess fluid status- intake and output ratios.	Monitor BP to evaluate drug effectiveness. Monitor symptoms of high plasma potassium levels (hyperkalemia).	Excessive use can lead to abuse, addiction, misuse, or overdose. Use with caution with patients who have asthma.	Do not abruptly stop as suppression can lead to serious complications. If therapy lasts more than 3 years, patient will not be able to absorb Vitamin B12.
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	Assess respiratory status for tightness or wheezing.	Monitor BP and pulse before and during administration Labs: BUN, blood glucose, creatinine, and electrolytes.	Blood pressure and renal function labs. Low sodium diet due to an increased risk of hyperkalemia.	Risk Evaluation and Mitigation Strategy (REMS) is required for oxycodone to be prescribed.	Expect to monitor PT/INR.
Client Teaching Needs (2)	Advise the patient about daytime drowsiness. Can be taken in the	Take at the same time every day and advise the patient to move slowly to	Avoid exercise in hot weather and alcohol consumption.	Swallow whole and do not chew because it leads to rapid release and possible	Monitor for bone fractures as it increases risk for osteoporosis.

	AM or PM.	prevent orthostatic hypotension.		fatal dosage. Oxycodone needs to be taken with food.	Due to vitamin B12 deficiency, patient will likely experience constipation.

Hospital Medications (5 required)

Brand/Generic	Amlodipine	Aspirin	Atorvastatin	Ceftriaxone	Furosemide
Dose	5 mg	81 mg	40 mg	120 ml/hr	40 mg
Frequency	Daily	Daily	Daily	Daily	BID (loop diuretic)
Route	PO	PO	PO	IV push	IV
Classification	Calcium channel blockers	Platelet aggregation inhibition	Statins	cephalosporin	Loop diuretic
Mechanism of Action	Amlodipine is a calcium antagonist (calcium ion antagonist or sloe channel blocker) that inhibits the transmembrane influx of calcium ions into vascular smooth muscle and cardiac muscle (Jones & Bartlett, 2020).	Acetylsalicylic acid disrupts the production of prostaglandins throughout the body by targeting cyclooxygenase-1 (COX-1) and cyclooxygenase-2 (COX-2) (Jones & Bartlett, 2020).			
Reason Client Taking	High blood pressure	Prevent blood clots			
Contraindications (2)	Known hypersensitivit	Known salicylate			

	y to amlodipine or its dosage form components and in patients with cardiogenic shock	hypersensitivity or NSAID hypersensitivity			
Side Effects/Adverse Reactions (2)	Headache, Upset stomach	Abdominal pain and black, tarry stools			
Nursing Considerations (2)	Take medications with if upset stomach occurs and report irregular heartbeat	Administer aspirin after meals or with food, advise patient to not crush or chew enteric- coated aspirin tablets			
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Assess heart rate and heart sounds	Monitor signs of anaphylaxis or allergic reactions			
Client Teaching Needs (2)	Take amlodipine as directed and report shortness of breath	Take aspirin exactly as directed and monitor for bruising			

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2020). *2021 Nurse's Drug Handbook* (19th ed.). Jones & Bartlett Learning

Assessment

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

GENERAL: Alertness: Orientation: Distress: Overall appearance:	A&O x 4 Yes Yes No Good
INTEGUMENTARY: Skin color: Character: Temperature: Turgor: Rashes: Bruises: Wounds: . Braden Score: Drains present: Y☐ N ☒ Type:	 Normal Dry Warm Immediate recoil, <2 seconds None None None 14-moderate risk N/A
HEENT: Head/Neck: Ears: Eyes: Nose: Teeth:	WNL WNL PERRLA WNL WNL WNL
CARDIOVASCULAR: Heart sounds: S1, S2, S3, S4, murmur etc. Cardiac rhythm (if applicable): Peripheral Pulses: 2+ Capillary refill: less than 2 seconds Neck Vein Distention: Y ☐ N ☒ Edema Y ☐ N ☒ Location of Edema:	WNL
RESPIRATORY:	No crackles, wheezes, or rhonchi were present.

Accessory muscle use: Y☐ N ☒ Breath Sounds: Location, character	Findings were consistent throughout the lungs bilaterally.
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:	Regular Cardiac 5'1 140 lbs. Normoactive bowel sounds were heard in all four quadrants Today
GENITOURINARY: Color: Yellow Character: Clear Quantity of urine: 70 cc at 1030 Pain with urination: Y ☐ N ☒ Dialysis: Y ☐ N ☒ Inspection of genitals: Catheter: Y ☐ N ☒ Type: Size:	Yellow Clear
MUSCULOSKELETAL: Neurovascular status: WNL ROM: WNL Supportive devices: WNL Strength: WNL ADL Assistance: Y☐ N x☐ Fall Risk: Y x☐ N☐ Fall Score: 30 Activity/Mobility Status: Moderate Fall Risk Independent (up ad lib) ☐ Needs assistance with equipment ☐ Needs support to stand and walk☐	.

NEUROLOGICAL: MAEW: Y ☒ N☐ PERLA: Y ☒ N☐ Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐ Orientation: WNL Mental Status: WNL Speech: WNL Sensory: WNL LOC: WNL	.
PSYCHOSOCIAL/CULTURAL÷ **Coping method(s):** Prayer **Developmental level:** Some College **Religion & what it means to pt.:** Christian, very important to patient **Personal/Family Data (Think about home environment, family structure, and available family support):** good support system- husband and daughter (both present at bedside)	.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0400	94	108/67	39	97.9	92, high flow nasal cannula
0800	87	112/68	24	98.1	97, high flow nasal cannula

Vital Sign Trends: B/P is improving, Respiratory rate is improving, Oxygen levels are improving, Pulse and Temperature remain WNL

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	0-10	-	0	-	Patient has not been in any pain
1015	0-10	-	0	-	Patient has not been in any pain

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock- Saline Lock
Size of IV: Location of IV: Date on IV: Patency of IV: Signs of erythema, drainage, etc.: IV dressing assessment:	Peripheral, 18 G Anterior Left Forearm 3/19/23 Good No Dry and intact

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
70 mL- water	100- mL urine

Nursing Care

Summary of Care (2 points)

Overview of care: Pt is being treated for Acute Hypoxic Respiratory Failure

Procedures/testing done: Chest Xray and EKG

Complaints/Issues: Shortness of Breath and Cough

Vital signs (stable/unstable): stable

Tolerating diet, activity, etc.: The patient is tolerating current and activity level

Physician notifications: Patient will be discharged tomorrow

Future plans for client: The patient is going home husband – located in Champaign IL

Discharge Planning (2 points)

Discharge location: Home with husband

Home health needs (if applicable):

Equipment needs (if applicable): Oxygen tank with high flow nasal cannula

Follow up plan: Pt will follow up with primary physician for ongoing care needs

Education needs: The patient needs to understand the importance of taking prescribed medications and contacting her primary physician if she suspects something is wrong

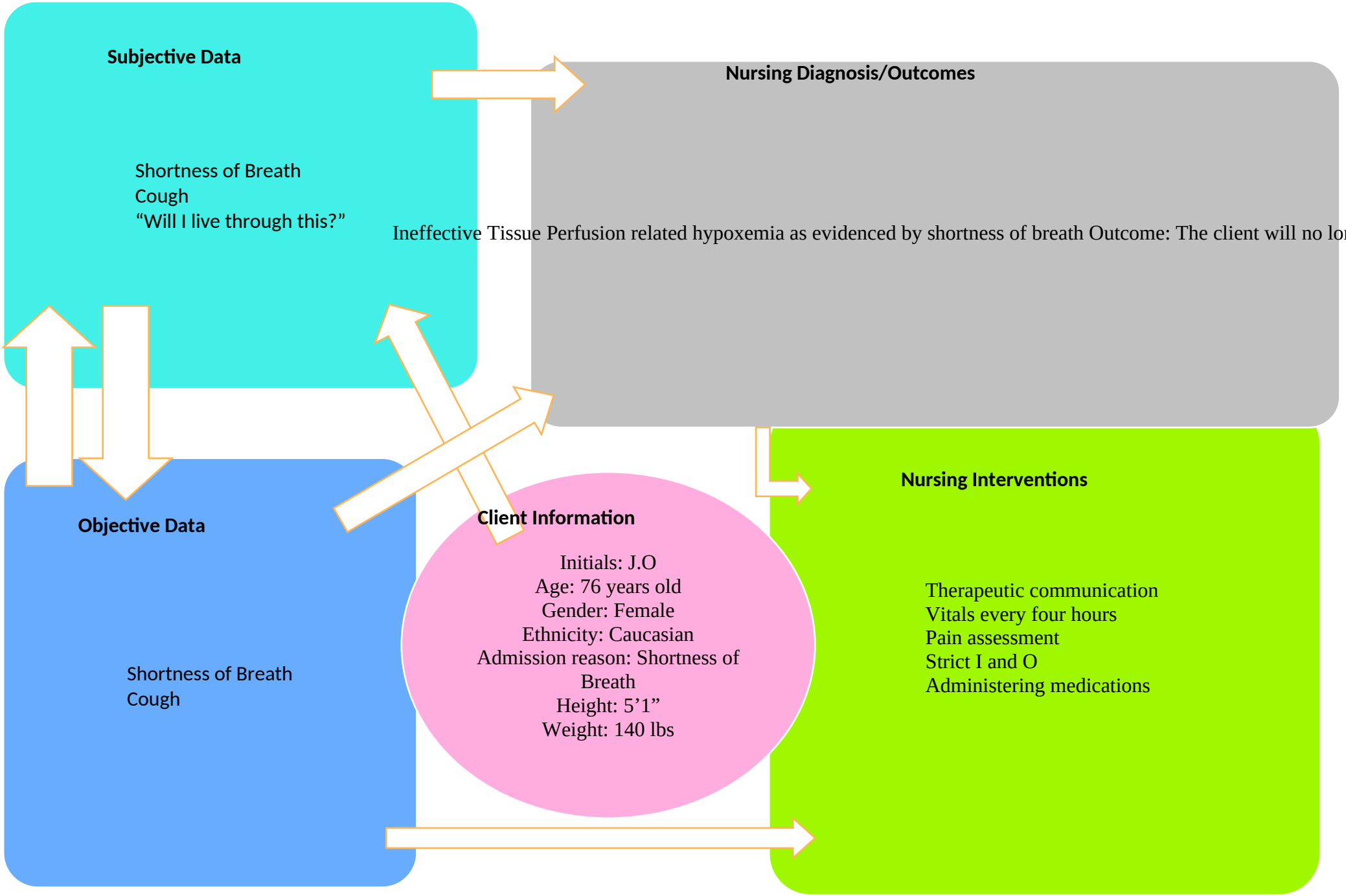
Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective Tissue Perfusion related hypoxemia as evidenced by shortness of breath	**The patient was experiencing hypoxemia and the cause is most likely ineffective**	**1. Assess mental status** **2. Closely monitor lab values and tests**	**1. Patient will have a higher level of oxygen in her blood.**	**The client will no longer be hypoxic.**

	tissue perfusion.			
2. Risk for abnormal arterial blood gases related to hypoxemia as evidenced by CO2 levels.	**The client may have metabolic acidosis.**	**1. Assess vital signs- especially O2 saturation** **2.Closely monitor changes in lab values and tests- especially metabolic panel**	**1. Patient will have a better quality of life without intubation**	**The patients metabolic panel will normalize.**
3. Ineffective airway clearance related to shallow breathing evidenced by the patient's cough	**Dizziness in relation to the heart is usually the result of circulatory problems**	**1.Encourage patient to plan for breaks during any activity** **2.** **Assess LOC every hour**	**1. Patient will be able to be more active**	**Patient will learn limitations**
4. Deficient knowledge related to insufficient knowledge of acute hypoxic respiratory failure evidenced by questions asked in the emergency department.	**The patient needs to understand having this disease puts her at risk for other complications but does not implicate immediate death.**	**1. Patient will be educated on acute hypoxic respiratory failure** **2. Patient will be educated on complications associated with acute hypoxic respiratory failure – heart damage, sepsis, and kidney damage**	**1. Patient will have a better quality of life.**	**Patient will understand acute hypoxic respiratory failure, its treatment, and complications associated with it.**

Other References (APA):

Concept Map (20 Points):


Subjective Data
Shortness of Breath
Cough
“Will I live through this?”
Nursing Diagnosis/Outcomes
Ineffective Tissue Perfusion related hypoxemia as evidenced by shortness of breath Outcome: The client will no lor
Objective Data
Shortness of Breath
Cough
Client Information
Initials: J.O
Age: 76 years old
Gender: Female
Ethnicity: Caucasian
Admission reason: Shortness of Breath
Height: 5’1”
Weight: 140 lbs
Nursing Interventions
Therapeutic communication
Vitals every four hours
Pain assessment
Strict I and O
Administering medications