

**N431 Care Plan 1**

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N431: Adult Health II

Professor Smalley

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### Demographics (3 points)

<b>Date of Admission</b> 06/19/2023	<b>Client Initials</b> E.B.	<b>Age</b> 89	<b>Gender</b> F
<b>Race/Ethnicity</b> White	<b>Occupation</b> Retired	<b>Marital Status</b> Widowed	<b>Allergies</b> Azithromycin, cefepime, lisinopril, metformin, penicillins, pioglitazone, sulfa antibiotics, and valsartan
<b>Code Status</b> DNR	<b>Height</b> 157.5 cm	<b>Weight</b> 58.2 kg	

### Medical History (5 Points)

**Past Medical History:** The patient has a history of COPD, CKD, Type 2 diabetes mellitus, GERD, LBBB, Anxiety, Hyperlipidemia, anemia, and hypertensive retinopathy.

**Past Surgical History:** No significant surgical history.

**Family History:** No significant family history.

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

Former Smoker

**Assistive Devices:** CPAP, oxygen, walker, wheelchair, dentures, and glasses

**Living Situation:** Lives in the nursing home

**Education Level:** high school degree

### Admission Assessment

**Chief Complaint (2 points):** Shortness of breath

**History of Present Illness – OLD CARTS (10 points):** The patient woke up at around 0400 after accidentally taking her CPAP mask off while she was sleeping. She woke up in a panic, feeling like she could not catch her breath. The feeling of shortness of breath lasted until the paramedics arrived at the nursing home and gave her a duo-neb. She said, “I felt like I was

drowning.” She mentioned the duo-neb helped her breath a lot. Oxygen and the albuterol breathing treatment helped her begin to catch her breath again.

### **Primary Diagnosis**

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

**Secondary Diagnosis (if applicable):** Acute hypoxia and hypercarbia

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

Respiratory failure is a condition in which the respiratory system is unable to effectively provide oxygen to the body or remove carbon dioxide from it. There are two types of respiratory failure: Type 1 and Type 2. Type 1 respiratory failure occurs when the respiratory system cannot adequately supply oxygen to the body, leading to low levels of oxygen in the blood (hypoxemia). This can be caused by various factors such as alveolar hypoventilation, low atmospheric pressure, diffusion defects, ventilation/perfusion mismatch, and right-to-left shunt (Mirabile et. al., 2023). Type 2 respiratory failure happens when the respiratory system fails to remove carbon dioxide from the body, resulting in high levels of carbon dioxide in the blood (hypercapnia). Causes of Type 2 respiratory failure include respiratory pump failure and increased carbon dioxide production. Respiratory failure can be acute, chronic, or a combination of both (Mirabile et. al., 2023). In the case of this patient, type 2 is consistent with her high CO<sub>2</sub> from her ABG and history of COPD as those with COPD tend to hold onto CO<sub>2</sub>.

The signs and symptoms of acute respiratory failure are the following: Dyspnea, tachypnea, shallow breathing, cyanosis, confusion, fatigue, weakness, chest pain, and wheezing lung sounds (Capriotti, 2022). This client experienced all these signs and symptoms at some point during her admission and is currently just experiencing dyspnea, moderate tachypnea, and wheezing lung sounds.

Vital signs tend to show hypoxia and tachypnea while lab signs tend to show an ABG consistent with respiratory acidosis and a low H&H (Capriotti, 2020). The client's vital signs and laboratory values are consistent with acute respiratory failure.

This illness is diagnosed with the use of many diagnostic labs and imaging. These diagnostic tools include X-Rays, CT angiography w/ contrast, EKG, ultrasound, MRI, pulse oximetry, ABG lab results, CBC lab results, and CMP results. The illness can also be diagnosed by an assessment from a licensed provider (Mirabile et. al., 2023) In this case, the X-Ray, CT, EKG, CBC, ABG, and the ER provider's assessment ruled her an acute respiratory failure patient.

Treatment for this illness includes oxygen therapy, duo-nebulizers with albuterol, treatment of underlying causes, supportive care, and in the worst case, mechanical ventilation (Mirabile et. al., 2023). This patient received Oxygen, duo-nebulizers, and supportive care to bring her back to baseline.

### **Pathophysiology References (2) (APA):**

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2<sup>nd</sup> ed.). F.A. Davis Company.

Mirabile, V., Shebl, E., Sankari, A., & Burns, B. (2023, May 29). *Respiratory failure*. National Library of medicine. <https://www.ncbi.nlm.nih.gov/books/NBK526127/>

### 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
<b>RBC</b>	4.5 – 5.5	<b>3.24</b>	<b>2.56</b>	The client's RBC value is likely low due to her malnutrition and lack of mobility while in the hospital. She stated that she has hardly gotten out of bed and has not had an appetite. This patient also has a history of anemia and takes an iron supplement at home (Capriotti, 2020).
<b>Hgb</b>	13.0 – 18.0	<b>9.5</b>	<b>7.6</b>	Like RBCs, Hgb is likely low due to the lack of a well-balanced diet. Not being able to eat food can lead to a lack of nutrition needed to stimulate the production of these blood cells. Like RBCs, Hgb requires iron to be produced and used efficiently. The patient has a history of anemia that could contribute to her current low hemoglobin levels (Capriotti, 2020).
<b>Hct</b>	45.0 – 52.0	<b>29.5</b>	<b>23.0</b>	Hematocrit is "the percentage of blood that consists of RBCs." When RBCs are low, hematocrit will also be low (Capriotti, 2020).
<b>Platelets</b>	150 – 450	<b>208</b>	<b>219</b>	N/A
<b>WBC</b>	4.0 – 10.0	<b>13.6</b>	<b>5.90</b>	The WBCs are high in cases of acute inflammation and stress brought on by the acute respiratory failure. This value could also be due to an underlying and unknown infection (Capriotti, 2020).
<b>Neutrophils</b>	40 – 80	<b>95.1</b>	<b>69.4</b>	These cell types are a percentage of the WBCs and neutrophils are commonly increased in signs of infection, inflammation, and stress. This increase is likely due to the stress from the acute respiratory failure (Capriotti, 2020).
<b>Lymphocytes</b>	20 – 40	<b>1.5</b>	<b>18.7</b>	Lower due to high neutrophil value (Capriotti, 2020).

<b>Monocytes</b>	<b>2-10</b>	<b>3.2</b>	<b>9.4</b>	<b>N/A</b>
<b>Eosinophils</b>	<b>1-7</b>	<b>0.0</b>	<b>2.3</b>	Lower due to high neutrophil value (Capriotti, 2020).
<b>Bands</b>	<b>0-10</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

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

<b>Lab</b>	<b>Normal Range</b>	<b>Admission Value</b>	<b>Today's Value</b>	<b>Reason For Abnormal</b>
<b>Na-</b>	<b>135-145</b>	<b>135</b>	<b>136</b>	<b>N/A</b>
<b>K+</b>	<b>3.5-5.2</b>	<b>3.7</b>	<b>3.9</b>	<b>N/A</b>
<b>Cl-</b>	<b>98-107</b>	<b>98</b>	<b>101</b>	<b>N/A</b>
<b>CO2</b>	<b>22-29</b>	<b>30</b>	<b>30</b>	<b>N/A</b>
<b>Glucose</b>	<b>74-109</b>	<b>339</b>	<b>90</b>	This patient has a history of Hyperglycemia and diabetes, likely uncontrolled in the nursing home (Capriotti, 2020).
<b>BUN</b>	<b>5-20</b>	<b>20</b>	<b>20</b>	<b>N/A</b>
<b>Creatinine</b>	<b>0.5-1.5</b>	<b>0.81</b>	<b>0.67</b>	<b>N/A</b>
<b>Albumin</b>	<b>3.5-4.5</b>	<b>3.8</b>	<b>3.6</b>	<b>N/A</b>
<b>Calcium</b>	<b>8.7-10</b>	<b>9.7</b>	<b>8.9</b>	<b>N/A</b>
<b>Mag</b>	<b>1.5-2.5</b>	<b>2.3</b>	<b>N/A</b>	<b>N/A</b>
<b>Phosphate</b>	<b>2.5-4.5</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Bilirubin</b>	<b>0.3-1.0</b>	<b>0.5</b>	<b>0.5</b>	<b>N/A</b>
<b>Alk Phos</b>	<b>34-104</b>	<b>78</b>	<b>55</b>	<b>N/A</b>
<b>AST</b>	<b>13-39</b>	<b>14</b>	<b>17</b>	<b>N/A</b>

<b>ALT</b>	7-52	<b>10</b>	<b>13</b>	N/A
<b>Amylase</b>	40-140	N/A	N/A	N/A
<b>Lipase</b>	0-160	N/A	N/A	N/A
<b>Lactic Acid</b>	0.5-2.0	N/A	N/A	N/A
<b>Troponin</b>	0.00	<b>0.03</b>	N/A	Troponin is released when the muscles of the heart are damaged due to increased exertion or hypoxia. She is likely having increased troponin due to her heart compensating for her acute respiratory failure (Capriotti, 2020).
<b>CK-MB</b>	<4% total CK	N/A	N/A	N/A
<b>Total CK</b>	30-145 (females) 55-170 (males)	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.

<b>Lab Test</b>	<b>Normal Range</b>	<b>Value on Admission</b>	<b>Today's Value</b>	<b>Reason for Abnormal</b>
<b>INR</b>	<1	<b>1.0</b>	N/A	N/A
<b>PT</b>	10-14	<b>13</b>	N/A	N/A
<b>PTT</b>	30-40	<b>29</b>	N/A	N/A
<b>D-Dimer</b>	<500	N/A	N/A	N/A
<b>BNP</b>	<100	N/A	N/A	N/A
<b>HDL</b>	>60	N/A	N/A	N/A
<b>LDL</b>	<100	N/A	N/A	N/A
<b>Cholesterol</b>	<150	N/A	N/A	N/A
<b>Triglycerides</b>	<150	N/A	N/A	N/A

Hgb A1c	<5.7%	N/A	N/A	N/A
TSH	0.4-4.0	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	Clear and slightly yellow	Clear yellow	N/A	N/A
pH	5.0-9.0	5.0	N/A	N/A
Specific Gravity	1.001-1.030	1.021	N/A	N/A
Glucose	Negative	1+	N/A	The patient is a diabetic and will likely see glucose in the urine (Capriotti, 2020).
Protein	Negative or trace	Negative	N/A	N/A
Ketones	Negative	Negative	N/A	N/A
WBC	0-5	Negative	N/A	N/A
RBC	0-5	Negative	N/A	N/A
Leukoesterase	Negative	Negative	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 Range	Value on Admission	Today's Value	Explanation of Findings
pH	7.35-7.45	7.26	N/A	These ABG findings are consistent with respiratory acidosis related to acute respiratory failure (Capriotti, 2020).
PaO2	85-105	83	N/A	These ABG findings are consistent with respiratory acidosis related to acute respiratory failure (Capriotti, 2020).
PaCO2	35-45	78	N/A	This high CO2 is present because

				the patient is unable to expel enough CO <sub>2</sub> with the lungs. These ABG findings are consistent with respiratory acidosis related to acute respiratory failure (Capriotti, 2020).
<b>HCO<sub>3</sub></b>	<b>22-26</b>	<b>34.9</b>	<b>N/A</b>	The Bicarbonate is high because the kidneys are trying to compensate for the high CO <sub>2</sub> , introducing more alkalinity into the body to bring the PH down. These ABG findings are consistent with respiratory acidosis related to acute respiratory failure (Capriotti, 2020).
<b>SaO<sub>2</sub></b>	<b>95-100</b>	<b>94%</b>	<b>N/A</b>	These ABG findings are consistent with respiratory acidosis related to acute respiratory failure (Capriotti, 2020).

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
<b>Urine Culture</b>	<b>Negative</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Blood Culture</b>	<b>Negative</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Sputum Culture</b>	<b>Negative</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Stool Culture</b>	<b>Negative</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

**Lab Correlations Reference (1) (APA):**

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2<sup>nd</sup> ed.). F.A. Davis Company.

Cleveland Clinic. (2022). *CK-MB test*. MyClevelandClinic. Retrieved June 4, 2023, from <https://my.clevelandclinic.org/health/diagnostics/24519-ck-mb-test>

Kurec, A. (2022). *Creatine kinase (CK) blood test*. Testing. Retrieved June 4, 2023, from <https://www.testing.com/tests/creatine-kinase-ck/>

### **Diagnostic Imaging**

#### **All Other Diagnostic Tests with correlations (10 points):**

- 1. EKG:** This diagnostic test is used to the patient's acute respiratory failure affected her heart rate and rhythm. The EKG was taken a few hours after admission and showed a left bundle branch block with normal sinus rhythm, 63 bpm. This result shows that her respiratory status had improved (a few hours after admission) as evidenced by her lower heart rate at this time (Capriotti, 2020).
- 2. Chest X-Ray:** This diagnostic test is used to determine lung status and heart size for those with acute respiratory failure. The results from this test showed extensive infiltrates in the left lung. The lungs are hyperinflated. There are small bilateral pleural effusions. No signs of cardiomegaly. These findings are consistent with her chief complaint of shortness of breath and her diagnosis of acute respiratory failure (Capriotti, 2020).
- 3. CT angiography w/contrast:** This test has a higher resolution than the X-Ray and is done to visualize the circulation status in the chest area which includes the arteries and veins in the lungs and heart. The results from this scan showed extensive infiltrate in the right lung, appearing worse than previous study. Lateral pleural effusions in lower lung lobes. These findings are consistent with her chief complaint of shortness of breath and her diagnosis of acute respiratory failure (Mirabile et. al., 2023).

**Diagnostic Test Reference (1) (APA):**

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2<sup>nd</sup> ed.). F.A. Davis Company.

Mirabile, V., Shebl, E., Sankari, A., & Burns, B. (2023, May 29). *Respiratory failure*. National Library of medicine. <https://www.ncbi.nlm.nih.gov/books/NBK526127/>

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

**Home Medications (5 required)**

<b>Brand/Generic</b>	Lipitor/ Atorvastatin	Lorazepam	Cozaar/ Losartan	Ecotrin/Aspirin	Insulin
<b>Dose</b>	40 mg	0.5 mg	25mg tablet	81mg tablet	Sliding scale
<b>Frequency</b>	HS	TID, PRN for anxiety	BID	BID	Mealtimes
<b>Route</b>	PO	PO	PO	PO, chewable	Subcutaneous
<b>Classification</b>	“HMG-CoA reductase inhibitors” (Vallerand & Sanoski, 2023).	Therapeutic: anesthetic and antianxiety Pharmacologic: benzodiazepines (Vallerand & Sanoski, 2023).	Pharmacologic Class: “Angiotensin II receptor blocker (ARB)” Therapeutic Class: “Antihypertensive” (Jones, 2022).	Pharmacologic Class: “Salicylate” Therapeutic Class: “Antiplatelet” (Jones, 2022).	Pharmacologic Class: “Human Insulin” Therapeutic Class: “Antidiabetic” (Jones, 2022).
<b>Mechanism of Action</b>	“HMG-CoA reductase inhibitors (atorvastatin) inhibit an enzyme involved in cholesterol synthesis. The PCSK9 inhibitors (alirocumab, evolocumab) facilitate clearing of LDL from the	“Depresses the CNS, probably by potentiating GABA, an inhibitory neurotransmitter. (Vallerand & Sanoski, 2023).	“Blocks binding of angiotensin II receptor sites in many tissues, including adrenal glands and vascular smooth muscle. Angiotensin II is a potent vasoconstrictor that also stimulates the adrenal cortex to secrete	“Blocks the activity of cyclooxygenase, the enzyme needed for prostaglandin synthesis. Prostaglandins, important mediators in the inflammatory response, cause local vasodilation	“Lowers blood glucose levels by stimulating peripheral glucose uptake by fat and skeletal muscle, and by inhibiting hepatic glucose production” (Jones, 2022).

	blood. Bile acid sequestrants (cholestyramine, colestipol, colesevelam) bind cholesterol in the GI tract. Ezetimibe inhibits the absorption of cholesterol in the small intestine. Fenofibrate, gemfi- brozil, and niacin act by other mechanisms” (Vallerand & Sanoski, 2023).		aldosterone” (Jones, 2022).	with swelling and pain. With blocking of cyclooxygenase and inhibition of prostaglandins, inflammatory symptoms subside” (Jones, 2022).	
<b>Reason Client Taking</b>	Pt. takes this medication for hyperlipidemia.	This patient takes this medication to help manage his anxiety.	The patient has hypertension	To reduce the risk of MI, stroke, and to reduce inflammation and pain.	The patient is a type 2 diabetic.
<b>Contraindications (2)</b>	“Hypersensitivity and acute hepatic failure” (Vallerand & Sanoski, 2023).	“Comatose patients and those with pre-existing CNS depression” (Vallerand & Sanoski, 2023).	“Concurrent aliskiren therapy and hypersensitivity to losartan” (Jones, 2022).	“Active bleeding and coagulation disorders” (Jones, 2022).	“Chronic Lung disease and hypoglycemia” (Jones, 2022).
<b>Side Effects/ Adverse Reactions (2)</b>	“Nausea and headaches” (Vallerand & Sanoski, 2023).	“Dizziness and drowsiness” (Vallerand & Sanoski, 2023).	“Headache and malaise” (Jones, 2022).	“GI bleeding and CNS depression” (Jones, 2022).	“Confusion and drowsiness” (Jones, 2022).
<b>Nursing Considerations (2)</b>	“Obtain diet history in regard to fat and alcohol consumption, and liver function tests should be assessed” (Vallerand &	“Monitor mental status and level of anxiety” (Vallerand & Sanoski, 2023).	Blood pressure must be monitored while taking this medication.	Be aware that aspirin can cause stomach ulcers and can thin the blood.	Be sure to check blood sugars before giving insulin. Also, ensure that the correct amount is drawn and

	Sanoski, 2023).				verify with another nurse.
<b>Key Nursing Assessment(s)/Lab(s) Prior to Administration</b>	Review lipid panel if the labs were taken recently and assess vital signs.	Assess level of consciousness and anxiety level before giving the medication.	Assess a blood pressure and a heart rate before administering this medication.	Assess for signs of stomach ulcers and bleeding risks.	Assess for signs and symptoms of hyperglycemia and hypoglycemia.
<b>Client Teaching Needs (2)</b>	Teach the client that there should still be lifestyle modifications that could be implemented in addition to taking the statin medication.	Teach the client to use non pharmaceutical relaxation techniques, when possible, to alleviate anxiety.	Teach the client to monitor their own blood pressures at home when taking this medication.	Teach the client to recognize bloody stool.	Teach the client that insulin needs to be taken with all meals in accordance with the sliding scale her doctor has prescribed.

### Hospital Medications (5 required)

<b>Brand/Generic</b>	Ventolin/ Albuterol	Protonix/ pantoprazole	Tylenol/ acetaminophen	Colace/ Docusate	Milk of Magnesia/ Magnesium hydroxide
<b>Dose</b>	2.5 mg	40 mg	650 mg	100 mg	400 mg chewable tablet
<b>Frequency</b>	PRN Q6	BID	Q6 PRN for pain	BID, PRN for constipation	Up to 8 tablets per day given at bedtime.
<b>Route</b>	Inhaled	PO	PO	PO	PO
<b>Classification</b>	“Therapeutic: Bronchodilators Pharmacologic: adrenergic” (Vallerand & Sanoski, 2023).	“Therapeutic: antiulcer Pharmacologic: proton-pump inhibitors” (Vallerand & Sanoski, 2023).	Therapeutic: antipyretics and non-opioid analgesics (Vallerand & Sanoski, 2023).	Therapeutic: Laxative Pharmacologic : stool softener (Vallerand & Sanoski, 2023).	“Pharmacologic Class: Mineral Therapeutic Class: Electrolyte replacement” (Jones, 2022).
<b>Mechanism of Action</b>	“Binds to beta2- adrenergic receptors in airway smooth muscle, leading to activation of	“Binds to an enzyme in the presence of acidic gastric pH, preventing the final	“Inhibits synthesis of prostaglandins that may serve as mediators of pain and fever,	“Promotes incorporation of water into stool, resulting in softer fecal mass. May also	“As a laxative, magnesium exerts a hyperosmotic effect in the small intestine.

	<p>adenyl cyclase and increased levels of cyclic-3, 5-adenosine monophosphate (cAMP). Increases in cAMP activate kinases, which inhibit the phosphorylation of myosin and decrease intracellular calcium. Decreased intracellular calcium relaxes smooth muscle airways. Relaxation of airway smooth muscle with subsequent bronchodilation. Relatively selective for beta2 (pulmonary) receptors” (Vallerand &amp; Sanoski, 2023).</p>	<p>transport of hydrogen ions into the gastric lumen” (Vallerand &amp; Sanoski, 2023).</p>	<p>primarily in the CNS. Has no significant anti-inflammatory properties or GI toxicity” (Vallerand &amp; Sanoski, 2023).</p>	<p>promote electrolyte and water secretion into the colon” (Vallerand &amp; Sanoski, 2023).</p>	<p>It causes water retention that distends the bowel and causes the duodenum to secrete cholecystokinin. This substance stimulates fluid secretion and intestinal mobility. As an antacid, magnesium reacts with water, converting magnesium oxide to magnesium hydroxide. Magnesium hydroxide rapidly reacts with gastric acid to form water and magnesium chloride, which increases gastric PH” (Jones, 2022).</p>
<b>Reason Client Taking</b>	<p>Pt. uses albuterol for shortness of breath and wheezing.</p>	<p>This medication is taken to prevent ulcers</p>	<p>This patient takes this medication for pain relief as needed.</p>	<p>This client takes this medication for constipation.</p>	<p>This is typically given to the patient if he is experiencing constipation or indigestion.</p>
<b>Contraindications (2)</b>	<p>“Arrhythmias and Hyperthyroidism” (Vallerand &amp; Sanoski, 2023).</p>	<p>“Patients taking high-doses for over 1 year and hypersensitivity” (Vallerand &amp; Sanoski, 2023).</p>	<p>“Alcohol use and aspartame” (Vallerand &amp; Sanoski, 2023).</p>	<p>“Abdominal pain and nausea” (Vallerand &amp; Sanoski, 2023).</p>	<p>“Acute abdominal problems and fecal impaction” (Jones, 2022).</p>

<b>Side Effects/ Adverse Reactions (2)</b>	“Nervousness and restlessness” (Vallerand & Sanoski, 2023).	“Hyperglycemia and abdominal pain” (Vallerand & Sanoski, 2023).	“Hypotension and insomnia” (Vallerand & Sanoski, 2023).	“Throat irritation and cramps” (Vallerand & Sanoski, 2023).	“Confusion and arrhythmias” (Jones, 2022).
<b>Nursing Considerations (2)</b>	“Assess lung sounds before and after, and monitor vital signs” (Vallerand & Sanoski, 2023).	“Assess patient for epigastric and abdominal pain and may cause abnormal liver function tests” (Vallerand & Sanoski, 2023).	“Assess alcohol usage and assess pain level before and after administration” (Vallerand & Sanoski, 2023).	“Assess for abdominal distention and assess for the presence of bowel sounds” (Vallerand & Sanoski, 2023).	Consider the fact that two medications prescribed to this patient can induce a bowel movement. Be sure the patient is comfortable.
<b>Key Nursing Assessment(s)/Lab(s) Prior to Administration</b>	Be sure the patient is not tachycardic, and to hold beta blockers after administration.	Understand if the patient is at risk for stomach ulcers	Review the patient’s chart for a history of alcoholism or hepatic deficiencies.	Assess when the patient had their last bowel movement and how they have been.	Assess the client’s bowel sounds and ask when the last bowel movement was.
<b>Client Teaching Needs (2)</b>	Teach the client to inhale the medication fully and to exhale fully with each breath.	Teach the client that this medication is used to prevent stomach ulcers and bleeding.	Teach the client that she can take no more than 4,000 mg per day.	Educate the patient on the importance of exercise and hydration when it comes to having consistent bowel movements.	Teach the client about drinking more fluids and staying mobile to improve bowel regularity.

### Medications Reference (1) (APA):

Jones & Bartlett Learning. (2021). *2022 nurse’s drug handbook* (21<sup>st</sup> ed.). Jones & Bartlett Learning.

Vallerand, A. H., & Sanoski, C. A. (2023). *Davis’s drug guide for Nurses* (17th ed.). F.A. Davis.

## Assessment

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

<p><b>GENERAL:</b>  <b>Alertness:</b>  <b>Orientation:</b>  <b>Distress:</b>  <b>Overall appearance:</b></p>	<p><b>Alertness and Orientation:</b> Patient was alert and oriented x4 (name/DOB, location, situation, and current date).  <b>Distress:</b> Patient was in no acute distress. Patient reported no concerns.  <b>Overall appearance:</b> Patient wore a clean hospital gown and maintained hygiene.</p>
<p><b>INTEGUMENTARY:</b>  <b>Skin color:</b>  <b>Character:</b>  <b>Temperature:</b>  <b>Turgor:</b>  <b>Rashes:</b>  <b>Bruises:</b>  <b>Wounds:</b>  <b>Braden Score: 14</b>  <b>Drains present:</b> Y <input type="checkbox"/> N <input type="checkbox"/>  <b>Type:</b></p>	<p><b>Skin color:</b> Pink and white normal to ethnicity, evenly toned  <b>Character:</b> Smooth, <b>dry and slightly flaky</b>, overall intact  <b>Temperature:</b> Warm  <b>Turgor:</b> Elastic; No tenting present, skin on clavicle returns to form upon release  <b>Rashes:</b> None  <b>Bruises:</b> <b>Small bruises on hands and lower limbs</b>  <b>Wounds:</b> <b>Small skin tear on her left forearm from a previous injury weeks ago</b>  <b>Braden Score: 14 (Moderate Risk)</b></p>

<p><b>HEENT:</b>  <b>Head/Neck:</b>  <b>Ears:</b>  <b>Eyes:</b>  <b>Nose:</b>  <b>Teeth:</b></p>	<p><b>Head/Neck:</b> Symmetrical; Trachea midline with no deviations; Thyroid nonpalpable with no nodules; Bilateral carotid pulses 2+ with a regular rate/rhythm; Assessed the following lymph nodes: Preauricular, posterior auricular, tonsillar, submandibular, submental, anterior cervical, posterior cervical, occipital, supraclavicular; All lymph nodes nonpalpable and nontender bilaterally</p> <p><b>Ears:</b> No wounds, lumps, or lesions; unable to assess canal for cerumen per patient request</p> <p><b>Eyes:</b> Bilateral PERRLA, bilateral EOMs intact; Eyelids pink and moist, free of lumps or lesions; Sclerae white and shiny with no excessive vascularity; Bilateral lashes and eyebrows thick, even; Conjunctivae pink and moist; No evidence of drainage or inflammation; 14/14 visual acuity with Rosenbaum chart.</p> <p><b>Nose:</b> Septum midline; Turbinates pink and moist; No polyps; Frontal sinuses bilaterally nonpalpable and nontender; Maxillary sinuses bilaterally nonpalpable and nontender. A small mepilex pad placed on the bridge of her nose to reduce skin breakdown from her CPAP. Some redness noted on the bridge of her nose related to chronic CPAP wearing.</p> <p><b>Throat/Teeth:</b> Good dentition with dentures. Oral and pharyngeal mucosae pink and moist with no lesions; Hard palate intact, soft palate intact and rises evenly, uvula midline; Tonsils pink and moist, +1 with no exudate</p>
<p><b>CARDIOVASCULAR:</b>  <b>Heart sounds:</b>  <b>S1, S2, S3, S4, murmur etc.</b>  <b>Cardiac rhythm (if applicable):</b>  <b>Peripheral Pulses:</b>  <b>Capillary refill:</b>  <b>Neck Vein Distention:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Edema</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>  <b>Location of Edema:</b></p>	<p><b>Heart sounds:</b> S1 and S2 auscultated at APETM (Aortic, Pulmonic, Erb's Point, Tricuspid, Mitral) locations; No murmurs, gallops, or rubs</p> <p><b>Cardiac rhythm:</b> Normal rate/rhythm with auscultation at each location; Normal sinus rhythm on cardiac monitor</p> <p><b>Peripheral pulses:</b> Bilateral 2+ brachial, radial, ulnar, posterior tibial, and dorsalis pedis pulses; Regular rate/rhythm</p> <p><b>Capillary refill:</b> less than 3 seconds fingers and toes, bilaterally</p> <p><b>Lymphatics:</b> Epitrochlear nodes nonpalpable and nontender bilaterally</p> <p><b>Edema:</b> pitting edema present to lower extremities at 2+</p>

<p><b>RESPIRATORY:</b>  <b>Accessory muscle use:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Breath Sounds: Location, character</b></p>	<p>Location and Character: Wheezing present upon auscultation of anterior and posterior lungs, bilaterally related to COPD exacerbation and acute respiratory failure. Regular rate (20 respirations/minute), equal rise and fall of left and right chest.</p>
<p><b>GASTROINTESTINAL:</b>  <b>Diet at home:</b>  <b>Current Diet</b>  <b>Height:</b>  <b>Weight:</b>  <b>Auscultation Bowel sounds:</b>  <b>Last BM:</b>  <b>Palpation: Pain, Mass etc.:</b>  <b>Inspection:</b>  <b>Distention:</b>  <b>Incisions:</b>  <b>Scars:</b>  <b>Drains:</b>  <b>Wounds:</b>  <b>Ostomy:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Nasogastric:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Size:</b>  <b>Feeding tubes/PEG tube</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Type:</b></p>	<p>Diet at home: Regular diet  <b>Current Diet:</b> Regular diet  <b>Height: 157.5 cm</b>  <b>Weight: 58.2 kg</b>  <b>Bowel Sounds:</b> Normoactive bowel sounds in all four quadrants.  <b>Last BM:</b> 06/017/2023 @ approx. 0800  <b>Palpation:</b> No lumps or signs of organomegaly. Nontender upon palpation in all four quadrants.  <b>Distention:</b> None  <b>Incisions:</b> None  <b>Scars:</b> None  <b>Drains:</b> None  <b>Wounds:</b> None</p>
<p><b>GENITOURINARY:</b>  <b>Color:</b>  <b>Character:</b>  <b>Quantity of urine:</b>  <b>Pain with urination:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Dialysis:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Inspection of genitals:</b>  <b>Catheter:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Type:</b>  <b>Size:</b></p>	<p><b>Color:</b> Yellow  <b>Character:</b> Clear  <b>Quantity:</b> 200 mL  <b>Inspection of genitals:</b> Did not assess</p>
<p><b>MUSCULOSKELETAL:</b>  <b>Neurovascular status:</b>  <b>ROM:</b>  <b>Supportive devices:</b>  <b>Strength:</b>  <b>ADL Assistance:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>  <b>Fall Risk:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>  <b>Fall Score: 85</b>  <b>Activity/Mobility Status:</b>  <b>Independent (up ad lib)</b> <input type="checkbox"/></p>	<p>Neurovascular status: pink nail beds with 2 seconds capillary refill, sensation intact in all bilateral distal extremities, 2+ pulses [brachial, radial, ulnar, posterior tibialis, dorsalis pedis]  <b>ROM:</b> Active ROM  <b>Supportive devices:</b> walker and a wheelchair  <b>Strength:</b> 5/5 in UE and LE  <b>Fall Score: 85 (High Risk)</b></p>

Needs assistance with equipment <input checked="" type="checkbox"/> Needs support to stand and walk <input type="checkbox"/>	
<b>NEUROLOGICAL:</b> <b>MAEW:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> <b>PERLA:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> <b>Strength Equal:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no - <b>Legs</b> <input type="checkbox"/> <b>Arms</b> <input type="checkbox"/> <b>Both</b> <input type="checkbox"/> <b>Orientation:</b> <b>Mental Status:</b> <b>Speech:</b> <b>Sensory:</b> <b>LOC:</b>	<b>Orientation:</b> A&Ox4 (name/DOB, location, situation, and current date) <b>Mental Status:</b> Unimpaired <b>Speech:</b> Clear, soft <b>Sensory:</b> Intact <b>LOC:</b> Alert
<b>PSYCHOSOCIAL/CULTURAL:</b> <b>Coping method(s):</b> <b>Developmental level:</b> <b>Religion &amp; what it means to pt.:</b> <b>Personal/Family Data (Think about home environment, family structure, and available family support):</b>	<b>Coping method(s):</b> "I talk to my daughters when I'm stressed." <b>Developmental level:</b> Appropriate for age <b>Religion:</b> Nondenominational <b>Personal/Family Data:</b> Widowed, but her daughters have come to visit her. She lives in a nursing home with other residents for community.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0925	82	144/55	22	98.3	93%
1330	88	143/69	20	98.3	93%

**Vital Sign Trends:** Stable hypertension and Oxygen saturation, consistent with her health history of COPD and other heart and respiratory diseases.

**Pain Assessment, 2 sets (2 points)**

Time	Scale	Location	Severity	Characteristics	Interventions
0925	Numeric	N/A	0	N/A	Repositioned the patient for

					<b>comfort</b>
<b>1330</b>	<b>Numeric</b>	<b>N/A</b>	<b>0</b>	<b>N/A</b>	<b>I gave the patient water to stay hydrated.</b>

#### IV Assessment (2 Points)

<b>IV Assessment</b>	<b>Fluid Type/Rate or Saline Lock</b>
<b>Size of IV: 20g</b> <b>Location of IV: Right forearm</b> <b>Date on IV: 6/20/23</b> <b>Patency of IV: Patent w/ flush</b> <b>Signs of erythema, drainage, etc.: none</b> <b>IV dressing assessment: Intact, clear dressing, dry</b>	Saline Lock

#### Intake and Output (2 points)

<b>Intake (in mL)</b>	<b>Output (in mL)</b>
<b>400 mL water</b>	<b>200 mL Void</b>
<b>200 mL water</b>	<b>Unknown small amount Void</b>
<b>25% breakfast</b>	

#### Nursing Care

##### Summary of Care (2 points)

**Overview of care:** This student nurse passed medications (She takes these finely crushed in a small amount of pudding), assessed vital signs, performed a head-to-toe assessment,

provided refreshments to keep the patient hydrated, and answered questions about her care throughout the day.

**Procedures/testing done:** N/A

**Complaints/Issues:** The pills that this student nurse was not crushed finely enough and was given in too little pudding. The patient is ready and wanting to go back to the nursing home.

**Vital signs (stable/unstable):** Vital signs are stable currently.

**Tolerating diet, activity, etc.:** The patient is currently tolerating her regular diet.

**Physician notifications:** N/A

**Future plans for client:** Discharge to nursing home.

### Discharge Planning (2 points)

**Discharge location:** Nursing home

**Home health needs (if applicable):** N/A

**Equipment needs (if applicable):** The patient has all her assistive equipment at the nursing home.

**Follow up plan:** The patient should follow-up with her primary care provider.

**Education needs:** Reminder to keep straps tight on her CPAP at night

### Nursing Diagnosis (15 points)

**\*Must be NANDA approved nursing diagnosis and listed in order of priority\***

<b>Nursing Diagnosis</b> <ul style="list-style-type: none"> <li>• Include full nursing diagnosis with “related to” and “as evidenced by” components</li> <li>• Listed in</li> </ul>	<b>Rationale</b> <ul style="list-style-type: none"> <li>• Explain why the nursing diagnosis was chosen</li> </ul>	<b>Interventions (2 per dx)</b>	<b>Outcome Goal (1 per dx)</b>	<b>Evaluation</b> <ul style="list-style-type: none"> <li>• How did the client/family respond to the nurse’s actions?</li> <li>• Client response, status of goals and outcomes, modifications to plan.</li> </ul>

order by priority – highest priority to lowest priority pertinent to this client				
1. Impaired gas exchange related to ventilation-perfusion imbalance as evidenced by high CO <sub>2</sub> and low SaO <sub>2</sub> (Phelps, 2020).	This is the most important aspect to monitor for this patient since her acute respiratory failure. This nurse must follow ABCs of nursing.	1. assess and record pulmonary status every 4 hours or more frequently if patient's condition is unstable (Phelps, 2020). 2. change patient's position at least every 2 hours (Phelps, 2020).	1. The goal for this patient is not improve gas exchange for healthy discharge (Phelps, 2020).	The patient wants to feel better and is willing to try new things to stay healthy. She understands that wearing her CPAP machine is necessary for adequate breathing at night.
2. Anxiety related to threat of death as evidenced by acute onset of shortness of breath (Phelps, 2020).	This diagnosis was chosen because it is what the patient are most concerned about. The patient had acute respiratory failure just from taking her CPAP off at night. She has been anxious to sleep and wear the CPAP since	1. Give the patient clear, concise explanation of anything that about to occur (Phelps, 2020).  2. Teach the patient relaxation techniques to be performed every 4 hours, such as guided imagery or meditation (Phelps, 2020).	1. The goal is to reduce her overall anxiety, reducing the risk of anxiety induced hyperventilation and respiratory distress (Phelps, 2020).	The patient responded positively, agreeing that this is an important goal to have and achieve.
3. Impaired standing related to insufficient	The patient is experiencing weakness	1. Use a gait belt when necessary to	1. The patient will achieve the highest level of	The patient did respond positively to this. However,

strength as evidence by weakness and acute respiratory distress (Phelps, 2020).	related to her recent COPD exacerbation and needs to continue working towards regaining her strength. This puts her at higher risk for falls and skin breakdown.	support the patient and prevent falls.  2.Encourage independence by helping the patient use assistive devices to complete ADLs (Phelps, 2020).	independence possible when standing (Phelps, 2020).	the patient did not seem to have the motivation to engage herself in the outcome goal. I also explained to her how working on this goal would help her feel better.
4.Impaired skin integrity related to pressure over bony prominences as evidenced by inability to stand and sit in the chair next to her bed (Phelps, 2020).	This was chosen because the patient is at high risk for skin breakdown. She is immobile and unwilling to get out of bed. She will also be discharged to the nursing home where she likely won't be active either.	1.inspect the skin every 8 hours, describe and document skin condition, and report changes (Phelps, 2020).  2.maintain infection control standards to help minimize risk of nosocomial infections (Phelps, 2020).	1. The goal for this patient is to not have any bed sores when she is discharged to the nursing home in the next few days (Phelps, 2020).	She agrees that she needs to get up and moving but is unwilling to do so currently. The nurses will continue to assess the patient and encourage mobility.

**Other References (APA):**

Phelps, L. L. (2020). *Sparks and Taylor's nursing diagnosis reference manual* (11<sup>th</sup> ed.). Wolters Kluwer.

**Concept Map (20 Points):**

### Subjective Data

The patient feels anxious about what had happened is cared to sleep with her CPAP at night. She still feels some shortness of breath and is apprehensive about getting up out of bed in fear of making her SOB worse. She reports a 0/10 on the numeric pain scale.

### Nursing Diagnosis/Outcomes

- 1.
2. Impaired gas exchange related to ventilation-perfusion imbalance as evidenced by high CO<sub>2</sub> and low SaO<sub>2</sub> (Phelps, 2020).
  - a. The patient responded positively, agreeing that this is an important goal to have and achieve.
3. Anxiety related to threat of death as evidenced by acute onset of shortness of breath (Phelps, 2020).
  - a. The patient responded positively, agreeing that this is an important goal to have and achieve.
4. Impaired standing related to insufficient strength as evidence by weakness and acute respiratory distress (Phelps, 2020).
  - a. The patient did respond positively to this. However, the patient did not seem to have the motivation to engage herself in the outcome goal. I also explained to her how working on this goal would help her feel better.
5. Impaired skin integrity related to pressure over bony prominences as evidenced by inability to stand and sit in the chair next to her bed (Phelps, 2020).
  - a. She agrees that she needs to get up and moving but is unwilling to do so currently. The nurses will continue to assess the patient and encourage mobility.

### Objective Data

The patient's blood work shows signs of anemia and respiratory acidosis related to acute respiratory failure. The patient's Fall score is 85 (High risk) and her Braden score is 14 (moderate risk). She has 2+ pitting edema on her lower extremities and wheezing breath sounds. Her chest X-Ray and CT scan showed large amount of infiltrate and bilateral pleural effusions, likely contributing to her respiratory failure. She's also experiencing hypertension.

### Client Information

This patient is an 89-year-old white female. She is a DNR and widowed. She lives at a nursing home with other residents and plans to be discharged to the same nursing home. She has an extensive heart and respiratory health history.

### Nursing Interventions

1. Give the patient clear, concise explanation of anything that about to occur (Phelps, 2020).
2. change patient's position at least every 2 hours (Phelps, 2020).
3. **assess and record pulmonary status every 4 hours or more frequently if patient's condition is unstable**
4. change patient's position at least every 2 hours (Phelps, 2020).
5. Use a gait belt when necessary to support the patient and prevent falls.
6. Encourage independence by helping the patient use assistive devices to complete ADLs (Phelps, 2020).
7. inspect the skin every 8 hours, describe and document skin condition, and report changes (Phelps, 2020).
8. maintain infection control standards to help minimize risk of nosocomial infections (Phelps, 2020).



