

N321 Care Plan 2

Lakeview College of Nursing

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**Demographics (3 points)**

<b>Date of Admission</b> 6/22/20	<b>Patient Initials</b> DF	<b>Age</b> 80	<b>Gender</b> Male
<b>Race/Ethnicity</b> Caucasian	<b>Occupation</b> Retired	<b>Marital Status</b> Single	<b>Allergies</b> Lisinopril, codeine, Vicodin
<b>Code Status</b> Full code	<b>Height</b> 6' (182.9 cm)	<b>Weight</b> 217 lb (98.4 kg)	

**Medical History (5 Points)**

**Past Medical History:** Past history of alcoholic cardiomyopathy; alcoholism; anxiety; arthritis; Barrett esophagus; broken jaw; broken neck; coronary artery disease; chronic ischemic heart disease; chronic pain; congestive heart failure (CHF); constipation; COPD; depression; diverticulosis; gastroesophageal reflux disease; hiatal hernia; hyperlipidemia; hypertension; hypervolemia; insomnia; migraine; prostatism

**Past Surgical History:** Removal of gallbladder; appendectomy; mandible fracture surgery (left); surgery; neck surgery (bilateral); laparoscopic inguinal hernia repair; eye surgery (bilateral); cataract removal with implant (bilateral); coronary angioplasty with stent placement; ultrasound right extremity non-vascular (right); cyst incision and drainage; cardiac catheterization (8/15/2019)

**Family History:** The patient's family history includes cancer in his mother and heart attack in father.

**Social History (tobacco/alcohol/drugs):** He reports that he quit smoking about 30 years ago. He has never used smokeless tobacco. He reports current alcohol use. He reports that he does not use recreational drugs.

**Assistive Devices:** Walker (with wheels, brakes, and a holder for oxygen)

**Living Situation:** The client lives at home with his long-term girlfriend of 20 years.

**Education Level:** He completed high school and two years of college.

### **Admission Assessment**

**Chief Complaint (2 points):** Shortness of breath; altered mental status

**History of present Illness (10 points):**

The patient is an 80-year-old male with multiple medical problems presented to the Emergency Department with severe shortness of breath that drastically worsened earlier in the day. He was of an altered mental status according to his girlfriend who accompanied him. He was unable to give a history at that time. She noted the patient had a recent fall in the bathtub in the week prior to coming to the hospital. He also presented with hemoptysis and was febrile and hypoxic. Due to his rapidly declining respiratory status, he was sedated and intubated in the Emergency Department.

### **Primary Diagnosis**

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

**Secondary Diagnosis (if applicable):** Bilateral pneumonia

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

Acute respiratory failure is the failure of the pulmonary system in oxygenating the blood and failure to eliminate carbon dioxide sufficiently (Capriotti & Frizzell, 2016). Respiratory failure is often categorized as either hypoxemic or hypercapnic respiratory failure (Capriotti & Frizzell, 2016).

Hypoxemic respiratory failure is characterized by the pressure of oxygen in the arterial blood, also called PaO<sub>2</sub>, being lower than 60 mmHg with normal arterial carbon dioxide levels (PaCO<sub>2</sub>) (Capriotti & Frizzell, 2016). Many acute illnesses of the lung may cause hypoxemic

failure. These may include pulmonary edema, pulmonary embolism, pneumonia, or pneumothorax, all of which inhibit proper ventilation and perfusion at the alveolar level (Capriotti & Frizzell, 2016).

Hypercapnic respiratory failure is shown by a PaCO<sub>2</sub> greater than 50 mmHg (Capriotti & Frizzell, 2016). Causes of hypercapnic respiratory failure may include chronic obstructive pulmonary disease (COPD) and asthma. Hypoxemia may accompany hypercapnia in individuals breathing room air (Capriotti & Frizzell, 2016).

Arterial blood gases (ABGs) are used to diagnose respiratory failure. As mentioned above, respiratory failure is often demonstrated by a PaO<sub>2</sub> of less than 60 mmHg and a PaCO<sub>2</sub> greater than 50 mmHg. Respiratory failure can also be shown by a pulse oximetry value (SpO<sub>2</sub>) value of less than 91% (Medline Plus, 2020). Diagnostic testing may also be used to identify the underlying cause of the respiratory failure. These tests may include chest x rays and computerized tomography (CT) of the chest (Medline Plus, 2020).

Certain signs and symptoms may demonstrate respiratory failure. The patient may appear distressed, of an altered mental status, use accessory muscles to facilitate breathing, and may have difficulty maintaining a normal respiratory rate despite receiving supplemental oxygen (Capriotti & Frizzell, 2016). Serial ABGs should be taken to monitor the patient's respiratory status. With respiratory failure, one will often see a gradual increase in PaCO<sub>2</sub> and a gradual decrease in PaO<sub>2</sub> (Capriotti & Frizzell, 2016). If the patient declines significantly, treatment may include intubation, a method of providing artificial respirations through a ventilator. The ABG values and all the patient's information will be weighed prior to resorting to intubation. The patient may remain intubated until the ventilatory status is improved and the underlying cause of the respiratory failure is corrected (Capriotti & Frizzell, 2016).

This patient offered data that demonstrated respiratory failure that resulted from his bilateral pneumonia. The patient presented to the Emergency Department with significant shortness of breath. His mental status had declined to the level that he was unable to be a sufficient historian for himself. An ABG was taken and showed a PaCO<sub>2</sub> of 47 mmHg and a PO<sub>2</sub> of 62 mmHg. This patient was promptly intubated in the Emergency Department. The patient received a chest x ray that demonstrated bilateral infiltrates. A CT of the chest also indicated bibasilar infiltrates in the lungs, which is characteristic of pneumonia. The laboratory values and diagnostic imaging collectively support the patient’s diagnosis of acute respiratory failure and secondary diagnosis of bilateral pneumonia.

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

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory concepts and clinical perspectives*. Philadelphia: F.A. Davis Company.

Medline Plus. (2020). *Respiratory failure*.

<https://medlineplus.gov/respiratoryfailure.html#:~:text=How%20is%20respiratory%20failure%20diagnosed%3F&text=Pulse%20oximetry%2C%20a%20small%20sensor,dioxide%20levels%20in%20your%20blood>.

**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	3.8 – 5.3	4.85	4.24	
Hgb	12 – 15.8	15.0	12.9	
Hct	36 – 47	45.9	38.9	
Platelets	140 – 440	249	221	

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<b>WBC</b>	<b>4 – 12 x 10<sup>3</sup></b>	<b>8.9</b>	<b>7.70</b>	
<b>Neutrophils</b>	<b>47 – 73%</b>	<b>90.1</b>	<b>64.5</b>	
<b>Lymphocytes</b>	<b>18 – 42%</b>	<b>4.5</b>	<b>12.6</b>	<b>Low lymphocyte values have been associated with long-term alcoholism or sepsis (Simply Health, 2020).</b>
<b>Monocytes</b>	<b>4 – 12%</b>	<b>3.4</b>	<b>19.1</b>	<b>An increase in monocytes may result from a parasitic infection, such as with the patients bilateral pneumonia (Icahn School of Medicine Mount Sinai, 2020).</b>
<b>Eosinophils</b>	<b>0 – 5%</b>	<b>0.7</b>	<b>2.8</b>	
<b>Bands</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>133 – 145</b>	<b>145</b>	<b>142</b>	
<b>K+</b>	<b>3.5 – 5.1</b>	<b>3.8</b>	<b>3.2</b>	<b>Hypokalemia may result from diuretic use, such as patient's furosemide (Mayo Clinic, 2018).</b>
<b>Cl-</b>	<b>98 – 107</b>	<b>104</b>	<b>101</b>	
<b>CO2</b>	<b>21 – 31</b>	<b>26</b>	<b>30</b>	
<b>Glucose</b>	<b>70 - 99</b>	<b>83</b>	<b>84</b>	
<b>BUN</b>	<b>7 – 25</b>	<b>12</b>	<b>11</b>	
<b>Creatinine</b>	<b>0.5 – 1</b>	<b>0.86</b>	<b>0.78</b>	
<b>Albumin</b>	<b>3.5 – 5.7</b>	<b>3.9</b>	<b>N/A</b>	
<b>Calcium</b>	<b>8.8 – 10.2</b>	<b>8.5</b>	<b>8.5</b>	<b>Loop diuretics, such as furosemide, can cause hypocalcemia (Open Anesthesia,</b>

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				2020)
<b>Mag</b>	<b>1.6 – 2.6</b>	<b>2.0</b>	N/A	
<b>Phosphate</b>	N/A	N/A	N/A	
<b>Bilirubin</b>	<b>0.2 – 0.8</b>	<b>1.3</b>	N/A	<b>The patient’s increased bilirubin levels may be related to his chronic alcoholism and its corresponding liver damage (Mayo Clinic, 2018).</b>
<b>Alk Phos</b>	<b>34 – 104</b>	<b>97</b>	N/A	
<b>AST</b>	<b>13 – 39</b>	N/A	N/A	
<b>ALT</b>	<b>7 – 52</b>	N/A	N/A	
<b>Amylase</b>	N/A	N/A	N/A	
<b>Lipase</b>	N/A	N/A	N/A	
<b>Lactic Acid</b>	<b>0.5 – 2.0</b>	<b>3.9</b>	N/A	<b>High lactic acid may be due to heart failure or sepsis (University of Michigan, 2019).</b>

**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>	<b>0.8 – 1.1</b>	<b>1.0</b>	N/A	
<b>PT</b>	<b>10.1 – 13.1</b>	<b>11.9</b>	N/A	
<b>PTT</b>	<b>25 – 36</b>	<b>24</b>	N/A	<b>PTT is used to monitor heparin levels (Capriotti &amp; Frizzell, 2016). The patient had not been receiving heparin prior hospitalization, so this value may be his baseline value.</b>
<b>D-Dimer</b>	<b>0 – 622</b>	N/A	N/A	
<b>BNP</b>	<b>0 - 100</b>	<b>571</b>	N/A	<b>A high BNP may be related to the</b>

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				patient's history of congestive heart failure (Capriotti & Frizzell, 2016).
<b>HDL</b>	<b>&gt;40</b>	<b>N/A</b>	<b>76</b>	
<b>LDL</b>	<b>&lt;130</b>	<b>N/A</b>	<b>41</b>	
<b>Cholesterol</b>	<b>&lt;200</b>	<b>N/A</b>	<b>138</b>	
<b>Triglycerides</b>	<b>&lt;150</b>	<b>N/A</b>	<b>107</b>	
<b>Hgb A1c</b>	<b>4.0 – 6.0%</b>	<b>N/A</b>	<b>4.8</b>	
<b>TSH</b>	<b>0.270 – 4.200</b>	<b>N/A</b>	<b>7.367</b>	<b>High TSH, or hypothyroidism, may result from autoimmune disorders, such as the clients arthritis, or can occur with various medications (Mayo Clinic, 2020).</b>

Urinalysis **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>Color &amp; Clarity</b>	<b>Yellow, clear</b>	<b>Yellow, clear</b>	<b>N/A</b>	
<b>pH</b>	<b>4.6 – 8.0</b>	<b>5.0</b>	<b>N/A</b>	
<b>Specific Gravity</b>	<b>1.005 – 1.030</b>	<b>1.013</b>	<b>N/A</b>	
<b>Glucose</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	
<b>Protein</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	
<b>Ketones</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	
<b>WBC</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	
<b>RBC</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	
<b>Leukoesterase</b>	<b>Negative</b>	<b>Negative</b>	<b>N/A</b>	

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	No growth	N/A	N/A	
Blood Culture	No growth	Specimen collected	No growth within 5 days	
Sputum Culture	No growth	Specimen collected	Few mixed flora-probable usual flora for this specimen source.	
Stool Culture	No growth	N/A	N/A	

**Lab Correlations Reference (APA):**

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory concepts and clinical perspectives*. Philadelphia: F.A. Davis Company.

Simply Health. (2020). *14 causes of low lymphocyte count*. <https://simplyhealth.io/14-frequent-causes-of-low-lymphocyte-count/3/>

Icahn School of Medicine Mount Sinai. (2020). *Blood differential test*. <https://www.mountsinai.org/health-library/tests/blood-differential-test>

Mayo Clinic. (2018). *Low potassium (hypokalemia)*. <https://www.mayoclinic.org/symptoms/low-potassium/basics/causes/sym-20050632>

Mayo Clinic. (2018). *Bilirubin test*. <https://www.mayoclinic.org/tests-procedures/bilirubin/about/pac-20393041>

Mayo Clinic. (2020). Hypothyroidism (underactive thyroid).

<https://www.mayoclinic.org/diseases-conditions/hypothyroidism/symptoms-causes/syc-20350284>

Open Anesthesia. (2020). *Diuretics- adverse effects.*

[https://www.openanesthesia.org/aba\\_diuretics\\_-\\_adverse\\_effects/#:~:text=They%20can%20also%20can%20cause,which%20can%20lead%20to%20hypocalcemia.](https://www.openanesthesia.org/aba_diuretics_-_adverse_effects/#:~:text=They%20can%20also%20can%20cause,which%20can%20lead%20to%20hypocalcemia.)

University of Michigan. (2019). Lactic acid.

<https://www.uofmhealth.org/health-library/hw7871>

### Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Test	Relevant notes and findings:
CT head and brain without contrast	<p><b>Indication:</b> Altered mental status</p> <p><b>Findings:</b> Third and fourth and lateral ventricles and sulci show enlargement with moderate atrophy. Brainstem and cerebellum and the remainder of the posterior fossa shows no abnormality. Periventricular white matter shows moderate chronic deep white matter ischemic changes. No hemorrhage or mass effect.</p> <p><b>Impression:</b> Moderate atrophy.</p>
CT spine without contrast	<p><b>Indication:</b> Neck pain. Unresponsive.</p> <p><b>Findings:</b> Cervical spine demonstrates normal alignment. The vertebrae are intact, without evidence of fracture or destructive osseous lesion.</p>
CT chest without contrast	<p><b>Indication:</b> Unresponsive. Respiratory failure.</p> <p><b>Findings:</b> Bibasilar infiltrates seen more prominent on right than left. Infiltrate also seen in right upper lobe.</p>
CT angiography head and neck without contrast	<p><b>Indication:</b> Neuro deficit</p> <p><b>Findings:</b> All vessels of head and neck patent with no signs of aneurysm, stenosis,</p>

	<b>or brain occlusions.</b>
<b>X ray: ribs (bilateral)</b>	<b>Indication: Rib pain after fall on right side</b>  <b>Findings: Mildly displaced right-sided rib fractures at right bilateral eighth and ninth ribs. Healing right lateral second rib fracture. No fractures to the left.</b>
<b>Chest x ray</b>	<b>Indication: shortness of breath</b>  <b>Findings: Bilateral infiltrates seen. Poor inspiration.</b>
<b>Echocardiogram</b>	<b>Findings: Ejection fraction is 35 – 40%. No valvular abnormalities. Mild left ventricular hypertrophy is present.</b>
<b>EKG 12 Lead</b>	<b>Findings: Normal sinus rhythm. Right bundle branch block. Bifascicular block. Possible lateral infarct. T wave abnormality consider inferior ischemia. Abnormal EKG.</b>
<b>US bilateral Duplex lower extremity veins</b>	<b>Indication: Routine</b>  <b>Summary: No evidence of deep or superficial venous thrombosis in bilateral lower extremities.</b>

**Arterial Blood Gases**

<b>Test</b>	<b>Normal Range</b>	<b>Value on Admission</b>
<b>pH arterial</b>	<b>7.35 – 7.45</b>	<b>7.36</b>
<b>PaCO<sub>2</sub></b>	<b>35 - 45</b>	<b>47</b>
<b>PaO<sub>2</sub></b>	<b>80 – 100</b>	<b>62</b>
<b>Base arterial</b>	<b>-2.0 – 2.0</b>	<b>0.9</b>
<b>Bicarbonate</b>	<b>22.0 – 26.0</b>	<b>26.8</b>

**Diagnostic Test Correlation (5 points):**

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To further investigate the underlying cause of the patient's shortness of breath, his providers ordered a series of diagnostic tests. These tests included a CT of the chest without contrast and a chest x ray. Both of these tests demonstrated bilateral infiltrates in the lungs, which is characteristic of pneumonia (Capriotti & Frizzell, 2016). The providers also ordered tests to further investigate the patients altered mental status. The CT of the head and brain without contrast and the CT angiography of the head and neck without contrast were not significant of any vessel or anatomical abnormalities in the brain and neck. In order to assess any possible injuries after the patients fall, a CT of the spine without contrast and an x ray of the ribs were ordered. The CT of the spine demonstrated no abnormalities. The x ray of the ribs showed various fractures of the ribs. An echocardiogram and EKG were ordered to assess the patients cardiovascular status and to assess his congestive heart failure. An ultrasound of the lower extremities was ordered to rule out deep vein thrombosis.

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

**Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory concepts and clinical perspectives*. Philadelphia: F.A. Davis Company.**

### **Current Medications (10 points, 1 point per completed med)**

**\*10 different medications must be completed\***

### **Home Medications (5 required)**

<b>Brand/Generic</b>	<b>AccuNeb/ albuterol sulfate</b>	<b>Symbicort/ budesonide- formoterol</b>	<b>Cordarone/ amiodarone</b>	<b>Atarax/ hydroxyzine</b>	<b>Naprosyn/ Naproxen</b>
<b>Dose</b>	<b>1 puff</b>	<b>1 puff</b>	<b>200 mg</b>	<b>25 mg</b>	<b>500 mg</b>
<b>Frequency</b>	<b>Every 4 hours PRN</b>	<b>Twice daily with meals</b>	<b>Once daily</b>	<b>Twice daily</b>	<b>Once daily</b>

<b>Route</b>	<b>Inhalation</b>	<b>Inhalation</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>
<b>Classification</b>	<b>Broncho-dilator (adrenergic )</b>	<b>Antiasthmatic , anti-inflammatory (corticosteroid)</b>	<b>Class III anti-arrhythmic (Benzofuran derivative)</b>	<b>Anxiolytic, antiemetic, antihistamine</b>	<b>Analgesic (NSAID)</b>
<b>Mechanism of Action</b>	<b>Albuterol stimulates intracellular enzymes by binding to beta<sub>2</sub> receptors on bronchial cell membranes . This relaxes bronchial smooth-muscle cells and inhibits histamine release (Jones and Bartlett Learning, 2020).</b>	<b>Mechanism is not fully known but is thought to decrease the influx of inflammatory cells and mediators into the nasal passages, bronchial walls, or intestines. This decreases airway inflammation (Jones and Bartlett Learning, 2020).</b>	<b>Amiodarone reacts with the cardiac cell membranes, extending repolarization and the refractory period (Jones and Bartlett Learning, 2020).</b>	<b>Hydroxyzine works at the subcortical level of the CNS to lessen the sensation of anxiety (Jones and Bartlett Learning, 2020).</b>	<b>Naproxen blocks the enzyme needed to synthesize prostaglandins. This reduces symptoms of inflammation and relieves pain (Jones and Bartlett Learning, 2020).</b>
<b>Reason Client Taking</b>	<b>To treat or prevent bronchospasms</b>	<b>To provide maintenance therapy in asthma</b>	<b>To treat and prevent ventricular fibrillation</b>	<b>To relieve anxiety</b>	<b>To relieve mild to moderate inflammation or pain</b>
<b>Contraindications (2)</b>	<b>1. Hypersensitivity to albuterol 2. Those with diabetes</b>	<b>1. Hypersensitivity to budesonide 2. Recent septal ulcers</b>	<b>1. Bradycardia that causes syncope 2. SA node dysfunction</b>	<b>1. Hypersensitivity to cetirizine 2. Prolonged QT interval</b>	<b>1. Angioedema 2. Postoperatively following coronary artery bypass graft (CABG)</b>
<b>Side Effects/Adverse</b>	<b>1. Angina 2.</b>	<b>1. Bronchospasm</b>	<b>1. Bradycardia</b>	<b>1. Seizures 2. Hyper-</b>	<b>1. CVA 2. Heart</b>

<b>Reactions (2)</b>	<b>Arrhythmias</b>	<b>2. Adrenal insufficiency</b>	<b>2. QT prolongation</b>	<b>sensitivity reactions</b>	<b>failure</b>
<b>Nursing Considerations (2)</b>	<p><b>1. Use cautiously in patients with cardiac disorders and diabetes. Albuterol could worsen these conditions.</b></p> <p><b>2. Administer albuterol during the second half of inspiration when airways are open and wider.</b></p>	<p><b>1. Use cautiously in patients with ocular herpes simplex or tubercular infection.</b></p> <p><b>2. Assess patients who have switched from systemic corticosteroids to inhaled budesonide for signs of adrenal insufficiency.</b></p>	<p><b>1. Dilute parenteral amiodarone in D<sub>5</sub>W or normal saline.</b></p> <p><b>2. Amiodarone may worsen current pulmonary disorders. Recommend a chest x ray and pulmonary function test before starting amiodarone.</b></p>	<p><b>1. Use cautiously in patients with bradyarrhythmias</b></p> <p><b>2. Do not give hydroxyzine subcutaneously or intravenously . Tissue necrosis may occur.</b></p>	<p><b>1. Monitor the patient closely for thrombotic events, including MI and stroke.</b></p> <p><b>2. Use cautiously in patients with a history of GI bleeding or ulcer disease, because naproxen can increase risk of bleeding.</b></p>

**Hospital Medications (5 required)**

<b>Brand/Generic</b>	<b>Lipitor/ atorvastatin</b>	<b>Lasix/ furosemide</b>	<b>Mucinex/ guaifenesin</b>	<b>Norco/ hydrocodone - acetaminophen</b>	<b>Aspirin/ acetyl salicylic acid</b>
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<b>Dose</b>	<b>20 mg</b>	<b>40 mg</b>	<b>600 mg</b>	<b>5-325 mg</b>	<b>81 mg</b>
<b>Frequency</b>	<b>Once daily (at night)</b>	<b>Once daily</b>	<b>Twice daily</b>	<b>Every 4 hours</b>	<b>Once daily</b>
<b>Route</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>
<b>Classification</b>	<b>Antihyperlipidemic (HMG-CoA reductase inhibitor)</b>	<b>Antihypertensive (loop diuretic)</b>	<b>Expectorant (glyceryl guaiacolate)</b>	<b>Opioid analgesic</b>	<b>Anti-platelet (NSAID)</b>
<b>Mechanism of Action</b>	<b>Inhibits HMG-CoA reductase reducing plasma cholesterol and lipoprotein levels. Inhibits cholesterol synthesis in the liver (Jones and Bartlett Learning, 2020).</b>	<b>Furosemide inhibits sodium and water reabsorption in the loop of Henle and increases urine formation, resulting in decreased blood pressure (Jones and Bartlett Learning, 2020).</b>	<b>Increases the volume of secretions and reduces their adhesiveness and surface tension allowing for fluid and mucus removal from the upper respiratory tract (Jones and Bartlett Learning, 2020).</b>	<b>Hydrocodone binds with opioid receptors in the central nervous system to help modulate pain. Acetaminophen inhibits prostaglandin synthesis, therefore prevention inflammation (Jones and Bartlett Learning, 2020).</b>	<b>Aspirin inhibits platelet aggregation by interfering with the production of thromboxane, which is a substance that stimulates platelet aggregation (Jones and Bartlett Learning, 2020).</b>
<b>Reason Client Taking</b>	<b>To reduce cholesterol</b>	<b>To reduce blood pressure</b>	<b>To promote productive cough</b>	<b>To relieve mild to moderate pain</b>	<b>To prevent TIA and MI, especially with coronary artery disease</b>
<b>Contraindications (2)</b>	<b>1. Active hepatic disease 2. Hypersensitivity to atorvastatin</b>	<b>1. Anuria 2. Hypersensitivity to furosemide</b>	<b>1. Hypersensitivity 2. Hyperthyroidism</b>	<b>1. Tricyclic antidepressants 2. Antihistamin</b>	<b>1. Active bleeding or coagulation disorders 2. Current</b>

				es	or recent GI bleed or presence of ulcers
<b>Side Effects/Adverse Reactions (2)</b>	1. Arrhythmias 2. Hypoglycemia	1. Thromboembolism 2. Arrhythmias	1. Dizziness 2. Nausea	1. Dizziness 2. Sedation	1. CNS depression 2. Bronchospasm
<b>Nursing Considerations (2)</b>	1. Atorvastatin is used in those with homozygous familial hypercholesterolemia. 2. Atorvastatin should not be used in those taking cyclosporine, gemfibrozil, tipranavir, or telaprevir because of risk for rhabdomyolysis.	1. Those allergic to sulfonamides may also be allergic to furosemide. 2. Obtain patient's weight before beginning furosemide treatment.	1. Monitor for evidence of a more serious condition, such as a cough that lasts longer than 1 week, fever, persistent headache, and rash. 2. Advise the increase fluid intake to further thin mucus secretions.	1. Instruct patients to look for acetaminophen on product labels prior to purchasing over the counter medications. 2. Advise patient to seek emergency medical attention if they consume over 4,000/day, even without symptoms.	1. Use immediate-release aspirin in situations where a rapid onset of action is required, including MI. 2. Do not crush time-released or controlled release tablets.

**Medications Reference (APA):**

Jones and Bartlett Learning. (2020). *Nurse's drug handbook*. (19th ed.). Jones and Bartlett Learning, LLC.

**Assessment**

**Physical Exam (18 points)**

<p><b>GENERAL (1 point):</b>  <b>Alertness:</b>  <b>Orientation:</b>  <b>Distress:</b>  <b>Overall appearance:</b></p>	<p>The patient is oriented to person, place and time. He does not appear to be in distress at this time. He appears overall well, and has exceptional energy.</p>
<p><b>INTEGUMENTARY (2 points):</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: 21</b>  <b>Drains present: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Type:</b></p>	<p>The patients skin is warm and dry, and of an appropriate color for his ethnicity. He has good skin turgor. He has a large hematoma on the rights side of his abdomen following a fall. Patient has no rashes. He has significant bruising about both arms from numerous blood draws and IV placements. He has a scab on his face, also acquired during the fall. Patient has tattoos on both arms and upper chest. The tattoos appear healed and have no signs of inflammation.</p>
<p><b>HEENT (1 point):</b>  <b>Head/Neck:</b>  <b>Ears:</b>  <b>Eyes:</b>  <b>Nose:</b>  <b>Teeth:</b></p>	<p>Head and neck are symmetrical. Carotids are 2+. No JVD present. No obvious lymphadenopathy. Auricles are pink and moist. Tympanic membranes are pearly gray, bilaterally. PERRLA. EOMs intact. Nose is midline with no polyps or drainage present. Patient has both upper and lower dentures. He states his dentures are ill-fitted, but do not affect his eating habits. Oral mucosa is pink and moist.</p>
<p><b>CARDIOVASCULAR (2 points):</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: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Edema Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>Location of Edema:</b></p>	<p>S1 and S2 heart sounds are present. Patient is in normal sinus rhythm but develops an irregular pulse at times. Pulses are 2+ throughout and bilaterally. Capillary refill is less than 3 seconds. Edema is present in both lower extremities below the knees.</p>
<p><b>RESPIRATORY (2 points):</b>  <b>Accessory muscle use: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Breath Sounds: Location, character</b></p>	<p>Patient has normal breath sounds. No signs of crackles, rhonchi or wheezing. He is currently receiving 3 L/min oxygen via nasal cannula.</p>
<p><b>GASTROINTESTINAL (2 points):</b>  <b>Diet at home:</b></p>	<p>Patient explains that he is on no particular diet at home. He reports eating a substantial</p>

<p><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: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Nasogastric: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Size:</b>  <b>Feeding tubes/PEG tube Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Type:</b></p>	<p>amount of fruits and vegetables and has limited desserts. He states, "I like my whiskey". Patient reports drinking a couple alcoholic drinks on a regular basis throughout the week.  <b>Current diet: Heart healthy/DASH.</b>  <b>Height: 6' (182.9 cm)</b>  <b>Weight: 217 lb (98.4 kg)</b>  <b>Patient has active bowel sounds. Last BM was earlier this morning. No pain upon palpation. No masses palpated. Abdomen is slightly distended. No incisions, scars, drains or wounds present.</b></p>
<p><b>GENITOURINARY (2 Points):</b>  <b>Color:</b>  <b>Character:</b>  <b>Quantity of urine:</b>  <b>Pain with urination: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Dialysis: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Inspection of genitals:</b>  <b>Catheter: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Type:</b>              <b>Size:</b></p>	<p><b>Urine is yellow and clear and has no foul odor. Patient is voiding regularly and without discomfort. Genitals are pink and moist and without lesion. Patient voids via urinal.</b></p>
<p><b>MUSCULOSKELETAL (2 points):</b>  <b>Neurovascular status:</b>  <b>ROM:</b>  <b>Supportive devices:</b>  <b>Strength:</b>  <b>ADL Assistance: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>Fall Risk: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>Fall Score: 40</b>  <b>Activity/Mobility Status:</b>  <b>Independent (up ad lib) <input type="checkbox"/></b>  <b>Needs assistance with equipment: <input checked="" type="checkbox"/></b>  <b>Needs support to stand and walk <input checked="" type="checkbox"/></b></p>	<p><b>Patient has full range of motion of all extremities. He explains, "I use my walker most of the time to get around. It has wheels and a place for my oxygen. It also has a seat I can use if I get tired while walking". Patient has moderate strength appropriate for his age and state. Patient is a moderate fall risk. He benefits from being assisted by 1 person while rising to a standing position.</b>  <b>Activity status: Up with 1 assist</b></p>
<p><b>NEUROLOGICAL (2 points):</b>  <b>MAEW: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>PERLA: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>Strength Equal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no -</b>  <b>Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/></b></p>	<p><b>Patient has exceptional grip strength, bilaterally. He has good strength of the lower extremities, bilaterally. Patient is oriented to person, place and time. He has clear speech. He mild hearing impairment but doesn't not</b></p>

<b>Orientation:</b> <b>Mental Status:</b> <b>Speech:</b> <b>Sensory:</b> <b>LOC:</b>	use hearing aids. Patient is of appropriate mental status and LOC.
<b>PSYCHOSOCIAL/CULTURAL (2 points):</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>	When asked about his coping methods, he explains, "I like to sit down, relax and watch TV". He is of an appropriate developmental level for his age. He states that he was raised Catholic but does not attend church anymore. He reports having a strong relationship with his long-term girlfriend, family and friends, and they show him great support.

**Vital Signs, 2 sets (5 points)**

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	80	143/102 RA	16	98.3° F (36.8° C) Temporal	97% 3L NC
1130	86	140/74 RA	18	97.4° F (36.3° C) Temporal	100% 3L NC

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

Time	Scale	Location	Severity	Characteristics	Interventions
0800	0 – 10	N/A	0	N/A	N/A
1130	0 - 10	Along right side of abdomen	4	"Sharp and feels like stabbing when I move"	The patient states his pain is improved with movement. Physical therapy assisted the patient.

**IV Assessment (2 Points)**

<b>IV Assessment</b>	<b>Fluid Type/Rate or Saline Lock</b>
<b>Size of IV:</b>	Peripheral IV Line
<b>Location of IV:</b>	-22 gauge

<b>Date on IV:</b>	-6/27/20
<b>Patency of IV:</b>	-Flushes without difficulty. Saline locked.
<b>Signs of erythema, drainage, etc.:</b>	-No signs of erythema and drainage
<b>IV dressing assessment:</b>	-Dressing is clean, dry, and intact.

**Intake and Output (2 points)**

<b>Intake (in mL)</b>	<b>Output (in mL)</b>
IV piggyback - 500 mL	Urine – 1,250 mL
PO – 1,480 mL	
<b>Total = 1,980 mL</b>	<b>Total = 1,250 mL</b>

**Nursing Care**

**Summary of Care (2 points)**

**Overview of care:** The patient spent most of his day resting and awaiting his pending discharge. He was visited by physical therapy and occupational therapy.

**Procedures/testing done:** Tests done throughout the patients visit include CBC, CMP, CT of the head and neck, CT of the spine, CT of the chest, CT angiography of the head and neck, x ray of the ribs, chest x ray, echocardiogram, EKG 12 lead, and Duplex ultrasound of the lower extremities.

**Complaints/Issues:** Patient denies any complaints today.

**Vital signs (stable/unstable):** Blood pressure is elevated, but of an adequate level for the patient.

**Tolerating diet, activity, etc.:** He is eating well, with no report of abdominal discomfort. The patient has tolerated activity well and maintains stable vitals with activity. He is able to ambulate with one assist. He tolerated physical and occupational therapy well.

**Physician notifications:** By the end of the day, the provider placed discharge orders for the patient.

**Future plans for patient:** The patient will be discharged to Waters Edge Long Term Care.

**Discharge Planning (2 points)**

**Discharge location:** Waters Edge Long Term Care.

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

**Equipment needs (if applicable):** N/A. Patient will be re-evaluated prior to discharge from long term care for any further equipment needs.

**Follow up plan:** He will follow up with his cardiologist post discharge. Physical therapy and occupational therapy are to see patient five times a week for continued rehabilitation.

**Education needs:** The patient could be educated on decreasing his alcohol intake and its benefits to his health.

**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> </ul>	<b>Rational</b> <ul style="list-style-type: none"> <li>• Explain why the nursing diagnosis was chosen</li> </ul>	<b>Intervention (2 per dx)</b>	<b>Evaluation</b> <ul style="list-style-type: none"> <li>• How did the patient/family respond to the nurse’s actions?</li> <li>• Client response, status of goals and outcomes, modifications to plan.</li> </ul>
<ul style="list-style-type: none"> <li>➤ <b>Impaired gas exchange related to bilateral pneumonia as evidenced</b></li> </ul>	<p><b>I chose this diagnosis because there were bilateral infiltrates in the lungs confirmed by chest x ray.</b></p>	<p><b>1.Auscultate breath sounds every 2 to 4 hours for any significant changes.</b></p> <p><b>2.Monitor pulse oximetry every 4 hours.</b></p>	<p><b>Goal met- Breath sounds were auscultated every two to four hours. Normal breath sounds were auscultated during final examination.</b></p>

<p>by ABG values of PaCO<sub>2</sub> of 47 mmHg and PaO<sub>2</sub> of 62.</p>			<p>Goal met- Patient was monitored every 4 hours and had SpO<sub>2</sub> values of 97% and 100%.</p>
<p>➤ Risk for infection related to intubation</p>	<p>I chose this diagnosis because the patient was intubated, putting him at greater risk for further infection and sepsis. The patient was also evaluated from possible sepsis throughout his admission.</p>	<p>1. Perform hand hygiene prior to and after contacting the patient.  2. Monitor lab values for signs of infection.</p>	<p>Goal met- Hand hygiene was performed upon entering the patient's room and after contacting the patient.  Goal met- Lab values were monitored regularly. The patient's WBC remained within normal limits throughout his hospitalization.</p>
<p>➤ Activity intolerance related to pneumonia and previous intubation as evidenced by "I need my walker to get around", and the need for 1 person assistance.</p>	<p>I chose this diagnosis because following his period of intubation and pneumonia, the patient was inactive for an extended period of time.</p>	<p>1. Ensure the patient changes position every 2 hours.  2. Ensure patient practices range of motion exercises daily.</p>	<p>Goal met- The patient was reminded to turn and was able to do so independently.  Goal met- The patient received physical therapy daily and will continue to receive therapy following discharge.</p>

Other References (APA):

Concept Map (20 Points):

**Subjective Data**

Presents with shortness of breath  
Altered mental status according to girlfriend  
History of chronic obstructive pulmonary disease (COPD)  
Recent fall at home

**Nursing Diagnosis/Outcomes**

Impaired gas exchange related to bilateral pneumonia as evidenced by ABG values of PaCO<sub>2</sub> of 47 mmHg and PaO<sub>2</sub> of 62.  
Outcomes: (1) Breath sounds were auscultated every two to four hours. Normal breath sounds were auscultated during final examination. (2) Patient was monitored every 4 hours and had SpO<sub>2</sub> values of 97% and 100%.  
Risk for infection related to intubation  
Outcomes: (1) Hand hygiene was performed upon entering the patient's room and after contacting the patient. (2) Lab values were monitored regularly. The patient's WBC remained within normal limits throughout his hospitalization.  
Activity intolerance related to pneumonia and previous intubation as evidenced by "I need my walker to get around", and the need for 1-person assistance.  
Outcomes: (1) The patient was reminded to turn and was able to do so independently. (2) The patient received physical therapy daily and will continue to receive therapy following discharge.

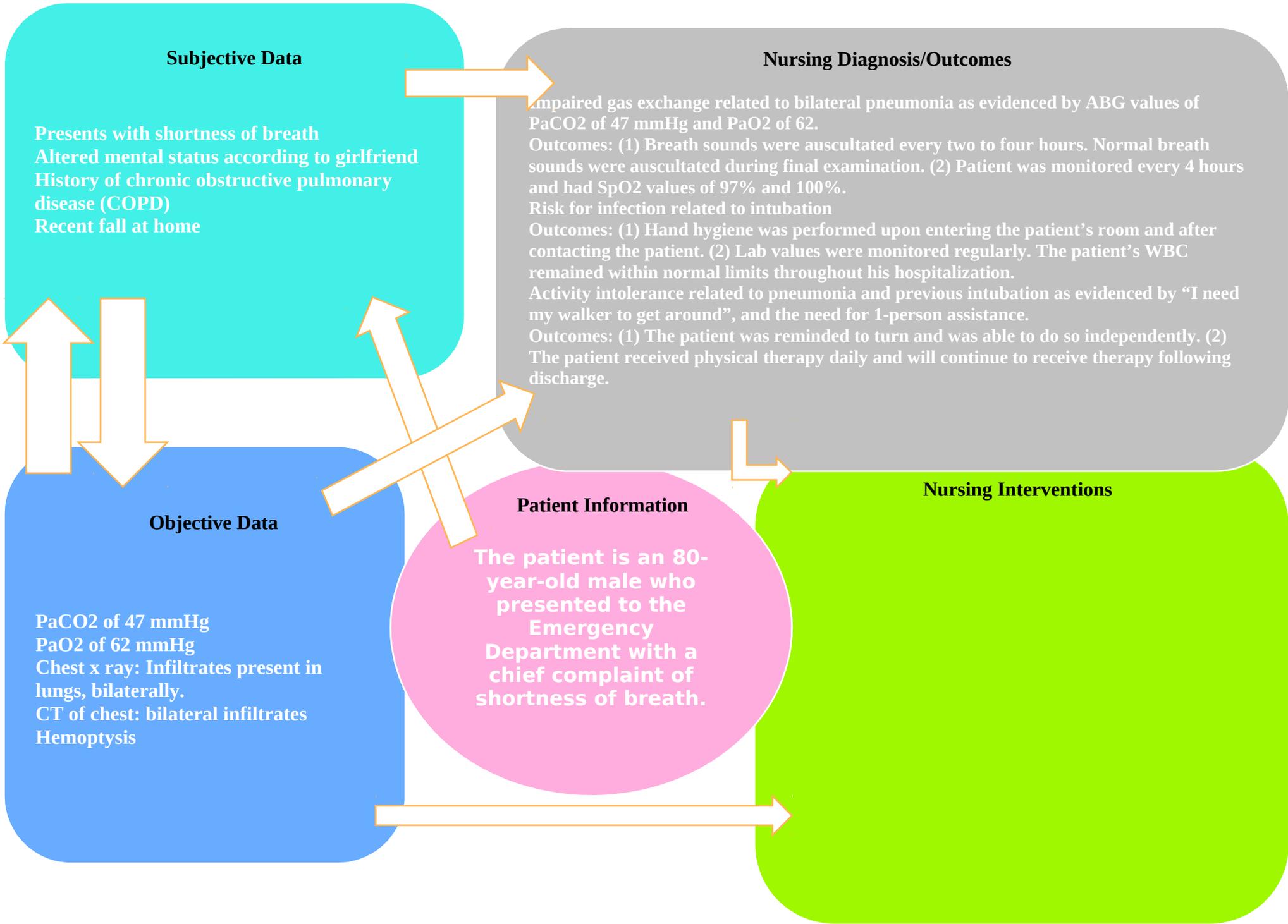
**Objective Data**

PaCO<sub>2</sub> of 47 mmHg  
PaO<sub>2</sub> of 62 mmHg  
Chest x ray: Infiltrates present in lungs, bilaterally.  
CT of chest: bilateral infiltrates  
Hemoptysis

**Patient Information**

The patient is an 80-year-old male who presented to the Emergency Department with a chief complaint of shortness of breath.

**Nursing Interventions**



## N321 Care Plan

## N321 Care Plan