N321 Care Plan # 2

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission 03/06/2021	Patient Initials M.W.	Age 64	Gender Female
Race/Ethnicity Caucasian	Occupation Retired	Marital Status Married	Allergies Acetaminophen "Makes me feel funny"
Code Status DNR	Height 161 cm	Weight 52.1 kg	

Medical History (5 Points)

Past Medical History: COPD with Exacerbation, Pulmonary Hypertension, Heart Failure with preserved ejection fraction, Chronic Respiratory Failure, Stage 4 – Severe COPD.
Past Surgical History: Colonoscopy 2015, Skin Cancer removal (face) 2016.

Family History: Mother: Skin Cancer, Stroke; Father: Heart Attack at age 35 years with expiration; Brother: heart attack at age 69, still living; Brother: heart attack at age 66, still living.

Social History (tobacco/alcohol/drugs): Past social alcohol use; last drink August 2018 – has not had an alcoholic beverage since. Smoker: Former smoker. Started smoking at age 17, quit at age 55. Smoked 1 pack per day for 38 years. Does not use illicit drugs; never has used any.

Assistive Devices: Home Oxygen (Started using on 11/4/2017). Uses Bi-Pap at night, started using July 2019.

Living Situation: Lives at home with her husband. No children.

Education Level: High School. Retired from R.R. Donnelly's Magazine Binding Factory after 38 years of work.

Admission Assessment

Chief Complaint (2 points): Shortness of Breath

History of present Illness (10 points): Onset: This pleasant 64-year-old Caucasian female presents via ambulance to Sarah Bush Lincoln Health Center for shortness of breath on March 6, 2021. **Location:** She complains of shortness of breath, even while wearing 4L of oxygen continuously. **Duration:** Patient states she started having shortness of breath symptoms on the early morning hours of March 6, 2021 but decided to wait it out until earlier morning to see if her breathing improved slightly. **Characteristics:** The characteristics include an intense tightening of the chest, the feeling of air hunger, and difficulty breathing. **Aggravating Factors:** Walking around in her house aggravates the shortness of breath because the more she is moving, the harder it feels to breathe. **Relieving Factors:** Nothing really relieves her symptoms, except staying in one spot and not moving if possible. **Treatment:** There is nothing more the patient feels she can do at home for treatment options.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Severe COPD exacerbation

Secondary Diagnosis (if applicable): Chronic Respiratory Failure

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

COPD - Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. **Etiology** - The main cause of COPD in developed countries is tobacco smoking. In the developing world, COPD often

occurs in people exposed to fumes from burning fuel for cooking and heating in poorly ventilated homes. Only about 20 to 30 percent of chronic smokers may develop clinically apparent COPD, although many smokers with long smoking histories may develop reduced lung function. Some smokers develop less common lung conditions. They may be misdiagnosed as having COPD until a more thorough evaluation is performed (Capriotti & Frizzell, 2016). **Risk Factors** - Risk factors for COPD include exposure to tobacco smoke. The most significant risk factor for COPD is long-term cigarette smoking. The more years you smoke and the more packs you smoke, the greater your risk. Pipe smokers, cigar smokers and marijuana smokers also may be at risk, as well as people exposed to large amounts of secondhand smoke. People with asthma who smoke are at great risk. The combination of asthma, a chronic inflammatory airway disease, and smoking increases the risk of COPD even more. Occupational exposure to dust and chemicals. Long-term exposure to chemical fumes, vapors and dust in the workplace can irritate and inflame your lungs. Exposure to fumes from burning fuel. In the developing world, people exposed to fumes from burning fuel for cooking and heating in poorly ventilated homes are at higher risk of developing

(Capriotti & Frizzell, 2016). The patient does admit that she started smoking at the age of 17 and quit at age 55. She also mentions that she worked in a magazine factory for her entire adult life until she was forced to retire at the age of 58. She states that even though the smoking was probably a big factor of her COPD, she also worked in the factory with no masks where she would bind magazines together. She mentioned that she and other factory workers would typically clean their machines by blowing the dust out towards other coworkers when they were finished running their binder. She also said when pages of the magazines would stick together, they often would use large barrels of cornstarch to keep pages of each magazine loose. **Age**. COPD develops slowly over

the years, so most people are at least 40 years old when symptoms begin (*Copd - Diagnosis and Treatment - Mayo Clinic*, n.d.). **Signs and Symptoms** - COPD symptoms often do not appear until significant lung damage has occurred, and they usually worsen over time, particularly if smoking exposure continues. For chronic bronchitis, the main symptom is a daily cough and mucus (sputum) production at least three months a year for two consecutive years. Other signs and symptoms of COPD may include shortness of breath, especially during physical activities, wheezing, chest tightness, having to clear your throat first thing in the morning, due to excess mucus in your lungs, a chronic cough that may produce mucus (sputum) that may be clear, white, yellow or greenish, blueness of the lips or fingernail beds (cyanosis), frequent respiratory infections, lack of energy, unintended weight loss (in later stages), and swelling in ankles, feet or legs (Capriotti & Frizzell, 2016). **Treatment** - The most essential step in any treatment plan for COPD is to stop all smoking. It is the only way to keep COPD from getting worse, which can eventually reduce the ability to breathe. But quitting smoking is not easy. And this task may seem particularly daunting if the patient has tried to quit and have been unsuccessful. Patients should talk to their doctor about nicotine replacement products and medications that might help, as well as how to handle relapses. Doctors may also recommend a support group for people who want to quit smoking. It is also a good idea for patients to avoid secondhand smoke exposure whenever possible (Capriotti & Frizzell, 2016). **Medications:** medications used to treat COPD include bronchodilators, inhaled steroids, phosphodiesterase-4 inhibitors, theophylline, and antibiotics (Capriotti & Frizzell, 2016). **Lung therapies**: Oxygen therapy and pulmonary rehabilitation program. Lung volume reduction surgery, lung transplant, and bullectomy (*Copd - Diagnosis and Treatment - Mayo Clinic*, n.d.). The patient was scheduled at Barnes

Jewish Hospital for a lung transplant in 2020 prior to COVID-19 pandemic. However, due to the pandemic, and the patient being more suspeptible to COVID-19, the patient will forgo the lung transplant until Spring of 2021.

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. (2016). *Pathophysiology: Introductory concepts and clinical perspectives.* (1st ed.). Philadelphia, PA; F.A. Davis Company.

Copd - diagnosis and treatment - mayo clinic. (n.d.). https://www.mayoclinic.org/diseases-conditions/copd/diagnosis-treatment/drc-20353685

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 (3/5/21)	Today's Value (3/8/21)	Reason for Abnormal Value
RBC	**4.5-6.3**	**4.27**	**3.97**	A decrease in low red blood cells is a result in the patient is not producing enough red blood cells which results to anemia within the body not being able to carry enough healthy RBCS and oxygen to compensate for breathing (*Cbc - Clinical: Complete Blood Count (Cbc) with Differential,*

				Blood, n.d.). The patient has chronic COPD.
Hgb	**14 - 18**	**12.7**	**11.7**	A decrease in her hemoglobin can mean there is a decrease in red blood cells being produced (*Cbc - Clinical: Complete Blood Count (Cbc) with Differential, Blood*, n.d.). The patient has severe COPD.
Hct	**41-51**	**38.1**	**35.1**	A decrease in her hematocrit can mean there is a decrease in red blood cells being produced in the body (*Cbc - Clinical: Complete Blood Count (Cbc) with Differential, Blood*, n.d.). The patient has Severe COPD.
Platelets	**140-440**	**187**	**176**	N/A
WBC	**4-10**	**9.2**	**9.1**	N/A
Neutrophils	**2-6.9**	**78.5**	**95.0**	An increase in neutrophils can mean there is an increase in metabolic activity in the body (*Cbc - Clinical: Complete Blood Count (Cbc) with Differential, Blood*, n.d.). The patient has Severe COPD.
Lymphocytes	**0.6-3.4**	**12.1**	**3.2**	An increase in lymphocytes can mean there is an abnormally high inflammatory response within the airways (*Cbc - Clinical: Complete Blood Count (Cbc) with Differential, Blood*, n.d.). The patient has Severe COPD.
Monocytes	**0-8**	**8.9**	**1.7**	An increase in monocytes can mean there is airway obstruction with inflammation within the lungs (*Cbc -*

				Clinical: Complete Blood Count (Cbc) with Differential, Blood, n.d.). The patient has Severe COPD.
Eosinophils	*	*	*	N/A
Bands	*	*	*	N/A

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

Lab	Normal Range	Admission Value (3/5/21)	Today's Value (3/8/21)	Reason for Abnormal
Na-	**135-145**	**138**	**144**	N/A
K+	**3.5-5.1**	**4.1**	**4.1**	N/A
Cl-	**98-107**	**99**	**104**	N/A
CO2	**22-29**	**32**	**35**	High CO2 levels indicate a breathing disorder. The CO2 levels indicate the amount of carbon dioxide in the blood (*Blood Test for Co2: Normal Ranges, Uses, Results, and Procedure*, n.d.). The patient does have severe COPD exacerbation.
Glucose	**70-99**	**152**	**133**	High glucose level could be because inflammation in the lungs the lungs leaky so the glucose can move from the blood into the airways, (*Glura -*

				Overview: Glucose, Random, Serum, n.d.). The patient has chronic COPD.
BUN	**6-20**	**21**	**24**	The determination of serum BUN currently is the most widely used screening test for the evaluation of atherosclerosis and heart failure (*Bun - Overview: Blood Urea Nitrogen (Bun), Serum*, n.d.) Patient does have heart failure with a preserved ejection fraction.
Creatinine	**0.50-1.00**	**0.55**	**0.47**	Creatinine is commonly measured in routine clinical practice and may be a more sensitive marker of early renal disease; however, it also means decreased muscle mass within the body (*Crcl - Overview: Creatinine Clearance, Serum and 24-Hour Urine*, n.d.). Patient does have severe COPD.
Albumin	**3.5-5.2**	**4.1**	*	N/A
Calcium	**8.4-10.5**	**9.1**	**8.3**	Calcium ions affect the lung function, muscle contraction and clotting in the lungs. A decrease in calcium also can play a role in osteoporosis in patients with COPD (*Ca - Overview: Calcium, Total, Serum*, n.d.). The patient does have heart failure, pulmonary hypertension, severe COPD, and a female who is post-menopausal.

Mag	**1.6-2.6**	*	*	N/A
Phosphate	**1.8-2.6**	*	*	N/A
Bilirubin	**0.3-1.0**	**0.7**	*	N/A
Alk Phos	**40-130**	*	*	N/A
AST	**10-40**	**20**	*	N/A
ALT	**10-55**	**31**	*	N/A
Amylase	**6.6-35.2**	*	*	N/A
Lipase	**0-160**	*	*	N/A
Lactic Acid	**10-25**	*	*	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	**2.0-3.0**	*	*	N/A
PT	**11-12.5**	*	*	N/A

PTT	**30-40**	*	*	N/A
D-Dimer	*	**0.68**	*	N/A
BNP	**<100**	*	*	N/A
HDL	**>45**	*	*	N/A
LDL	**<130**	*	*	N/A
Cholesterol	**<200**	*	*	N/A
Triglycerides	**40-160**	*	*	N/A
Hgb A1c	**N/A**	*	*	N/A
TSH	**<130%**	*	*	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/Yellow**	*	*	N/A
pH	**5-7**	*	*	N/A
Specific Gravity	**1.005-1.030**	*	*	N/A
Glucose	**Negative**	*	*	N/A

Protein	**Negative**	*	*	N/A
Ketones	**Negative**	*	*	N/A
WBC	**Negative**	*	*	N/A
RBC	**Negative**	*	*	N/A
Leukoesterase	**Negative (Merck Manuals, 2020)**	*	*	N/A

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	**Negative**	**N/A**	**N/A**	**N/A**
Blood Culture	**N/A**	**N/A**	**N/A**	**N/A**
Sputum Culture	**N/A**	**N/A**	**N/A**	**N/A**
Stool Culture	**N/A**	**N/A**	**N/A**	**N/A**

Lab Correlations Reference (1) (APA):

Alb - overview: Albumin, serum. (n.d.). https://www.mayocliniclabs.com/test-catalog/Overview/8436

Blood test for co2: Normal ranges, uses, results, and procedure. (n.d.). https://www.medicalnewstoday.com/articles/325259

Bun - overview: Blood urea nitrogen (bun), serum. (n.d.). https://www.mayocliniclabs.com/test-catalog/Overview/81793

Ca - overview: Calcium, total, serum. (n.d.). https://www.mayocliniclabs.com/test-catalog/Overview/601514

Cbc - clinical: Complete blood count (cbc) with differential, blood. (n.d.). https://www.mayocliniclabs.com/test-catalog/Clinical and Interpretive/9109

Crcl - overview: Creatinine clearance, serum and 24 hour urine. (n.d.). https://www.mayocliniclabs.com/test-catalog/Overview/113357

Glura - overview: Glucose, random, serum. (n.d.). https://www.mayocliniclabs.com/test-catalog/Overview/89115

All Other Diagnostic Tests (5 points):

CT Angio Chest/Pulm with Contrast (Indications Shortness of Breath/Rule out PE)

No acute embolism in main, lobar, or sequential branches. Aorta 3.5 cm upper abdominal aortic aneurysm. Lungs: Severe centrilobular pulmonary emphysema a few linear bands of atelectasis. Pleural Spaces: No pneumothorax or Pleural Effusion. Heart: Coronary calcifications. Impressions: Severe pulmonary emphysema, old thoracic multiple compression fractures. 3.5cm upper AAA, no pulmonary embolism. (Mayo Clinic Staff, 2020)

Continuous Telemetry Monitor placed on March 6, 2021 – Until patient discharges from hospital.

Diagnostic Test Correlation (5 points):

Patient had a CT Angio Chest/Pulmonary with contrast due to her shortness of breath when she presented to the hospital. The thought was that the patient could possibly have a pulmonary embolism which is why this test was ordered for the patient (*Pulmonary Embolism - Diagnosis and Treatment - Mayo Clinic*, n.d.)

The patient has a continuous telemetry monitor on her during her stay due to her heart failure with preserved ejection fraction, as well as the recent AAA that was discovered (*Electrocardiogram (Ecg or Ekg) - Care at Mayo Clinic - Mayo Clinic*, n.d.).

Diagnostic Test Reference (1) (APA):

Ct coronary angiogram - mayo clinic. (n.d.). https://www.mayoclinic.org/tests-procedures/ct-coronary-angiogram/about/pac-20385117

Pulmonary embolism - diagnosis and treatment - mayo clinic. (n.d.). https://www.mayoclinic.org/diseases-conditions/pulmonary-embolism/diagnosis-treatment/drc-20354653

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

Home Medications (5 required)

Brand/Generic	**aspirin/ Aspirin**	**albuterol sulfate/ Proair HFA**	**budesonide/ Pulmicort Flex haler**	**roflumilast/ Daliresp**	**prednisone/ Apo-Prednisone (CAN)**

Dose	81mg	1-2 Puffs	1mg=2mL	250mg	5mg
Frequency	Daily	Q4H / PRN	Daily	Daily	Daily
Route	PO	Inhalation	Nebulizer / Inhalation	PO	PO
Classification	NSAID	Bronchodilator	Corticosteroid	Selective phosphodiesterase 4 inhibitor	Glucocorticoid
Mechanism of Action	Blocks the activity of cyclooxygenase, the enzyme needed for prostaglandin synthesis. Prostaglandins, important mediators in the inflammatory response, cause local vasodilation with swelling and pain. With blocking of cyclooxygenase and inhibition of prostaglandins, inflammatory symptoms subside.	Albuterol attaches to beta 2 receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate. This reaction decreases intracellular levels of cAMP, as shown. Together, these defects relax bronchial smooth-muscle cells and inhibit histamine	Inhibits inflammatory cells and mediators possibly by decreasing influx into nasal passages, bronchial walls, or the intestines. As a result, nasal, or airway inflammation decreases. Oral inhalation form also inhibits mucus secretion in airways, decreasing the amount of viscosity or sputum.	Increases intracellular cyclic AMP in lung cells by inhibiting a major cyclic AMP-metabolizing enzyme in lung tissue to improve pulmonary function	Binds to intracellular glucocorticoid receptors and suppresses inflammatory and immune responses by inhibiting neutrophil and monocyte accumulation at inflammation site and suppressing their phagocytic and bactericidal activity

		release.			
Reason Client Taking	Circulation	COPD	COPD	COPD	Severe COPD
Contraindications (2)	Active bleeding or coagulation disorders; hypersensitivity to aspirin	Hypersensitivity to albuterol or its components	Hypersensitivity to budesonide or its components, recent septal ulcers, or nasal surgery or trauma (nasal spray); status asthmaticus or other acute asthma episodes (oral inhalation)	Hypersensitivity to roflumilast or its components, moderate to severe liver impairment	Hypersensitivity to prednisone or its components, systemic fungal infection
Side Effects/Adverse Reactions (2)	Prolonged bleeding time, thrombocytopenia	Angina, Bronchospasm	Bronchospasm, Benign intracranial hypertension	Atrial fibrillation, acute renal failure	Heart failure, Adrenal insufficiency
Nursing Considerations (2)	Advise adult patient taking low-dose aspirin not to also take ibuprofen because it may reduce the cardioprotective and stroke preventive effects of aspirin. Tell patient to consult prescriber before	Administer pressurized inhalations of albuterol during second half of inspiration, when airways are open wider and aerosol distribution is more effective. Use cautiously in patients with	Use budesonide cautiously if patient has ocular herpes simplex; tubercular infection; or untreated fungal, bacterial, or systemic viral infection. Closely monitor a child's growth	Monitor effectiveness of roflumilast to reduce COPD exacerbations. Watch patient closely for suicidal tendencies because roflumilast has been associated with an increase	Administer once-daily doses of prednisone in the morning to match body's normal cortisol secretion schedule. Because prednisone can produce many adverse

	taking aspirin with any prescription drug for blood disorder, diabetes, gout, or arthritis	cardiac disorders, diabetes mellitus, digitalis intoxication, hypertension, hyperthyroidism, or history of seizures.	patter; budesonide may stunt growth.	in psychiatric adverse reactions, such as depression and insomnia, as well as suicidal ideation.	reactions, assess regularly for signs and symptoms of such reactions such as heart failure and hypertension.

Hospital Medications (5 required)

Brand/Generic	**ondansetron hydrochloride/ Zofran**	**magnesium hydroxide / Milk of Magnesia**	**ipratropium bromide / Atrovent**	**enoxaparin sodium/ Lovenox**	**azithromycin / Zithromax**
Dose	4mg=2mL	30mL	3mL	40mg	500mg IV piggyback
Frequency	Q6H/PRN	QID/PRN	Q4H/PRN	Daily	Q24H
Route	IV Push	Oral	Inhalation	SQ	IV Piggyback
Classification	Selective serotonin	Mineral / electrolyte replacement	Anticholinergic / Bronchodilator	Low-molecular weight heparin	Antibiotic

Mechanism of Action	Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve terminal in the intestine.	Assists all enzymes involved in phosphate transfer reactions that use adenosine triphosphate (ATP). Magnesium is required for normal function of the ATP dependent sodium-potassium pump in muscle membranes.	After acetylcholine is released from cholinergic fibers, ipratropium prevents it from attaching to muscarinic receptors on membranes of smooth muscle cells. By blocking acetylcholine's effects in bronchi and bronchioles, ipratropium relaxes smooth muscles and causes bronchodilation.	Potentiates the action of antithrombin III, a coagulation inhibitor. By binding with antithrombin III, enoxaparin rapidly bids with an inactivate clotting factors (primarily factor Xa and thrombin). Without thrombin, fibrinogen cannot convert to fibrin and clots cannot form.	Binds to a ribosomal subunit of susceptible bacteria, blocking peptide translocation and inhibiting RNA-dependent protein synthesis. Drug concentrate in phagocytes, macrophages, and fibroblasts, which release it slowly and may help move it to infection sites.
Reason Client Taking	Nausea	Heartburn	SOB	Prophylaxis	COPD Exacerbation
Contraindications (2)	Concomitant use of apomorphine, congenital long QT syndrome, hypersensitivity to ondansetron or its components	Hypersensitivity to magnesium salts or any component of magnesium-containing preparations. Heart disease,	Hypersensitivity to atropine, ipratropium bromide, or their components; hypersensitivity to peanuts, soya	Active major bleeding history of heparin-induced thrombocytopenia (HIT) or immune-mediated HIT within past 100	History of cholestatic jaundice or hepatic dysfunction associated with prior use or azithromycin;

		renal impairment	lecithin, soybeans, or related products (with aerosol inhaler)	days or in the presences of circulating antibodies, which may persist for several years; hypersensitivity to benzyl alcohol (if only the multidose vial is available), enoxaparin, heparin (inducing low-molecular-weight heparins).	hypersensitivity to azithromycin, erythromycin, ketolide antibiotics, other macrolide antibiotics or their components
Side Effects/Adverse Reactions (2)	Hypotension, Bronchospasm, pulmonary embolism	Respiratory depression, Arrhythmias	Bronchospasm, oropharyngeal edema	Pulmonary edema, or embolism; Atrial fibrillation	Acute renal failure; Arrhythmias
Nursing Considerations (2)	Be aware that oral disintegrating tablets may contain aspartame, which is metabolized to phenylalanine and must be avoided in patient with phenylketonuria. Place	Avoid giving other oral drugs within 2 hours of magnesium-containing antacid. Be aware that magnesium may precipitate myasthenic crisis by decreasing patient's sensitivity to	Monitor patient for hypersensitivity reactions that could be life-threatening. If present, stop drug use immediately, notify prescriber, and provide supportive care, as needed.	Use enoxaparin with extreme caution in patients with a history of heparin-induced thrombocytopenia (HIT). Know that enoxaparin should only be used in these patients if more than 100 days have elapsed	Be aware that azithromycin should not be used in patients with known QT prolongation, brady arrhythmias, congenital long QT syndrome. Know that azithromycin should not be used in patients

	disintegrating tablet or oral soluble film or patient's tongue immediately after opening package. It dissolves in seconds.	acetylcholine. Frequently assess cardiac status of patient taking drugs that lower heart rate, such as beta blockers because magnesium may aggravate symptoms of heart block.	Cause patient not to use ipratropium to treat acute bronchospasms.	since the prior HIT episode and no circulating antibodies are present. Use extreme caution in patients with an increased risk of hemorrhage, as from active ulcerative or angiodysplasia GI disease; bacterial endocarditis; concurrent treatment with platelet inhibitor	who have undergone donor stem cell transplant for cancer of the blood or lymph nodes because of an increased risk for cancer relapse and possibly death.

Medications Reference (1) (APA):

2020 Nurse's drug handbook. (2020). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 Alert & Oriented X4 No Acute Distress Well-groomed and appropriately dressed

INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 Pink Dry Warm, 36.8 C No tenting/under 3 seconds None None None 17 – Moderate risk (only due to oxygen therapy which is continuous)
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Supple, non-tender-no carotid bruits, no JVD, no lymphadenopathy, no thyromegaly, normocephalic Clear tympanic membrane PERRLA, normal conjunctiva, EOMI No sinus tenderness No decay, moist oral mucosa
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	 Normal rate, S1 and S2 Regular rhythm N/A Less than 3 seconds
RESPIRATORY (2 points): **Accessory muscle use: Y☒ N ☐** **Breath Sounds: Location, character**	Diminished lung sounds bilateral lobes, anterior & posterior. No rhonchi or wheezes.
GASTROINTESTINAL (2 points):	

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:**	Normal/ Regular Regular 161 cm 52.1 kg Normal in all four quadrants 3/7/21 None None None None None None None
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	 Yellow Clear 300 mL Normal, no discharge
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:**	 ROM strong bilaterally upper extremities. ROM strong bilaterally in lower extremities No supportive devices needed, up stand by assist

Strength: **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☒** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	 45 Stand by assist Patient is a fall risk due to oxygen tubing/nasal cannula which she wears around the clock. Up stand by assist to bedside commode.
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	 Alert and Oriented X4 Alert Clear and intelligible Alert and responsive
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	 Husband Appropriate for age Christian. When the patient dies, she wants a Christian burial. Lives at home with her husband. No children.

Vital Signs, 2 sets (5 points) 2/22/21

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	**81 BPM**	**121/86**	**20**	**36.4 C**	**91% on high**

		Map 97 Left arm / dynamap		**infrared**	**flow nasal cannula at 45% at 30 LPM**
1030	**107 BPM**	**127/72 Right arm / dynamap**	**20**	**36.8 C infrared**	**91% on high flow nasal cannula at 45% at 30 LPM**

Pain Assessment, 2 sets (2 points) 2/22/21

Time	**Scale**	**Location**	**Severity**	**Characteristics**	**Interventions**
0800	**Numeric**	**N/A**	**N/A**	**N/A**	**N/A**
1100	**Numeric**	**N/A**	**N/A**	**N/A**	**N/A**

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 20g **Location of IV: Left forearm** **Date on IV:3/6/21** **Patency of IV: Patent** **Signs of erythema, drainage, etc.: N/A** **IV dressing assessment: Dry and intact**	Saline Lock

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
750mL – Oral Total – 750mL	300 mL – Voided Urine Total – 300mL

Nursing Care

Summary of Care (2 points)

Overview of care: Pt is A & O X 4, able to verbalize her needs, denies pain, and is up with stand-by assist to the bedside commode. She is a fall risk because she wears continuous oxygen around the clock. Pt has been seen by Dr. Catt during the shift.

Procedures/testing done: PT had a CT Chest/Pulmonary Angiogram completed due to her shortness of breath and the thought that she could possibly have developed a pulmonary embolism. Patient is noted to have a 3.5cm upper abdominal aortic aneurysm which was discovered. She will be closely monitored while at SBLHC and will be continuously monitored every few months to make sure AAA does not change in size.

Complaints/Issues: PT has no complaints or issues. PT reports no pain.

Vital signs (stable/unstable): Tele shows NSR with a HR between 80-100, with an occasional rate in the low 105-107 range. Other VSS and will continue to monitor patient during her stay.

Tolerating diet, activity, etc.: PT is up with stand-by assist to the bedside commode. Patient is listed as fall risk due to the use of her high flow oxygen. She is on a regular diet at home and while at SBLHC.

Physician notifications: Dr. Catt states patient will be monitored today and possibly d/c tomorrow (3/7/2021).

Future for patient: PT plans to discharge back to home tomorrow (March 7, 2021) with her husband.

Discharge Planning (2 points)

Discharge location: Home with husband; rural Mattoon.

Home health needs (if applicable): Nothing discussed at this time. Will care conference with patient, husband, and care team later today.

Equipment needs (if applicable): No equipment needs needed.

Follow up plan: Patient will report back to her PCP, approximately 2 weeks after discharge for a follow up appointment. Patient will continuously follow up with her PCP on a regular basis for her severe COPD diagnosis as well as the newly discovered AAA which was found on the CT Angio on 3/6/21.

Education needs: Patient will be educated on intermittently checking her pulse ox while at home and if her oxygen becomes low, when to get to the emergency room as soon as possible. Patient will also be educated on the need to eat small, frequent

meals throughout her day. For COPD patients, eating one large meal, takes a lot of energy, and the patient tires out quickly. Patient will also be received education from a dietitian about nutrition and proper fluid intake while at home.

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	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective airway clearance related to inflammation and narrowing of the airway and air trapping secondary to emphysema as evidenced by diminished lung sounds in the bases, occasional rhonchi with wheezes in both the anterior and posterior upper lobes	Restlessness, anxiety, shortness of breath, tachypnea, and use of accessory muscles of respiration are signs of respiratory distress. A decrease in breath sounds or an increase in adventitious breath sounds (diminished sounds in both lobs of the lungs bilaterally).	**1.** Assess respiratory status q2- 4h and as indicated by the patient's condition. **2.** Report significant findings. Auscultate breath sounds q2- 4h and as indicated by the patient's condition. **3.** Administer bronchodilator therapy as prescribed. Patient is prescribed 3 mL of albuterol	1.Goal met. Patient is being monitored Q2 hours due to her COPD exacerbation and remembering ABC of nursing care. 2.Goal met. Nursing staff is auscultating breath sounds Q2 hours. 3.Goal met. Patient is being administering bronchodilator Q4H/PRN. 4. Goal met. Patient is receiving corticosteroid daily via nebulizer treatment from Respiratory Therapy.

		sulfate/ipratropium Q4h/ PRN. **4.** Administer inhaled corticosteroids as prescribed. Patient is prescribed 1mg of Budesonide delivered via nebulizer daily for COPD. **5.** Deliver humidified oxygen as prescribed and monitor the patient's response. Patient is on 30LPM of oxygen via high-flow nasal cannula.	Patient is receiving 1mg=2mL of budesonide. 5. Goal met. Patient is receiving humidified oxygen via high flow nasal canula at 30 liters per minute at 45% which is receiving oxygen titrated at 91% to the patient.
2. Impaired gas exchange related to small airway inflammation and parenchymal destruction or alveolar edema secondary to bronchitis as evidenced by dyspnea on exertion and oxygen saturation of 91% on 30L of oxygen via high flow nasal cannula.	Tachypnea is usually present to some degree and may be pronounced on admission or during stress or concurrent acute infectious process. Respirations may be shallow and rapid, with prolonged expiration in comparison to inspiration. Respiratory dysfunction is variable depending on the underlying process such as infection, allergic reaction, and the stage of	1. Assess and monitor respirations and breath sounds, noting rate and sounds (tachypnea, stridor, crackles, wheezes). Note inspiratory and expiratory ratio and oxygen saturation 2. Auscultate breath sounds. Note adventitious breath sounds (wheezes, crackles, rhonchi). 3. Monitor and graph serial ABG's, pulse, oximetry,	1. Goal met. Patient is being monitored via her respirations, breath sounds by both nursing staff, respiratory and hospitalists on staff. 2. Goal met. Patient's breath sounds noted and charted. No Wheezes, crackles or rhonchi noted but will continue to monitor. 3. Goal met. Patient has ABG's monitored, pulse, and oximetry. Patient also had a CXR upon arrival which was negative for pulmonary

	chronicity in a patient with established COPD. Note: Using a 0–10 scale to rate dyspnea aids in quantifying and tracking changes in respiratory distress. Rapid onset of acute dyspnea may reflect pulmonary embolus	chest x-ray.	embolism.
3. Imbalanced nutrition: less than body requirements related to decreased intake occurring with fatigue and anorexia secondary to depression as evidenced by low body weight for height and decreased prealbumin levels.		1. Assess food and fluid status. 2. Educate the patient to provide the diet in small, frequent, high caloric meals that are nutritious and easy to consume. 3. Request consultation with a dietitian as indicated. 4. Discuss with the patient and husband the importance of good nutrition in the treatment of COPD.	1. Goal Met. Small meals are easier to consume in individuals who are fatigued. Patients with COPD expend an extraordinary amount of energy simply on breathing and require high caloric meals to maintain body weight and muscle mass. Loss of muscle and fat despite adequate nutrition is associated with higher mortality in individuals with COPD. 2. Goal Met. Such a consultation enables a comprehensive nutritional assessment and possible additional therapies, including nutritional counseling related to the disease process. The dietitian also may facilitate

			establishment of enteral or parental nutrition in the cachectic or intubated patient or those who are not able to consume adequate nutrition orally. 3. Goal met. Dietary information will promote adequate nutrition and stable body weight. The patient is more likely to adhere to the treatment plan.

Other References (APA):

Concept Map (20 Points):

Subjective Data

Patient states that she is a former smoker after smoking 1 pack per day for 38 years. She quit due to her COPD diagnosis. She also states she is a former factory worker where she worked at R.R. Donnelly for 38 years before her COPD diagnosis forced her into retirement. She is on a continuous nasal cannula at home and wears a Bi-Pap at night. She also mentions that she presented to the hospital due to not being able to breathe despite the same oxygen settings that she normally uses.

Objective Data

The patient had a chest x-ray done on 3/6/2021, in which a new discovery of a AAA was noted at 3.5cm. AAA is stable and is only being monitored at this time.
Abnormal Vitals to support diagnosis:
Temperature: 36.8 degrees Celsius
Blood Pressure: 121/86 mmHg and 110/80 mmHg. Heart Rate: 81-107 bpm

The labs that were abnormal that supported the diagnosis was increased RBC, HCT, HGB neutrophils, monocytes, creatinine, glucose, BUN, CO2, and calcium for blood draws. These labs corelate with the diagnosis of severe COPD exacerbation.

Patient Information

This pleasant 64-year-old Caucasian female presents via ambulance to Sarah Bush Lincoln Health Center for shortness of breath. She is a former smoker quitting after 38 years at 1 pack per day. She also is a retired paper factory worker where she worked her entire adult life until she was forced to retire due to her COPD diagnosis and needing to be placed on continuous oxygen therapy. She has a past medical history of COPD with Exacerbation, Pulmonary Hypertension, Heart Failure with preserved ejection fraction, Chronic Respiratory Failure, Stage 4 – Severe COPD.

Nursing Diagnosis/Outcomes

Ineffective airway clearance related to inflammation and narrowing of the airway and air trapping secondary to emphysema as evidenced by diminished lung sounds in the bases, occasional rhonchi with wheezes in both the anterior and posterior upper lobes
1.Goal met. Patient is being monitored Q2 hours due to her COPD exacerbation and remembering ABC of nursing care.

2.Goal met. Nursing staff is auscultating breath sounds Q2 hours.

3.Goal met. Patient is being administering bronchodilator Q4H/PRN.

4. Goal met. Patient is receiving corticosteroid daily via nebulizer treatment from Respiratory Therapy. Patient is receiving 1mg=2mL of budesonide.
5. Goal met. Patient is receiving humidified oxygen via high flow nasal canula at 30 liters per minute at 45% which is receiving oxygen titrated at 91% to the patient.

Impaired gas exchange related to small airway inflammation and parenchymal destruction or alveolar edema secondary to bronchitis as evidenced by dyspnea on exertion and oxygen saturation of 91% on 30L of oxygen via high flow nasal cannula.

Goal met. Patient is being monitored via her respirations, breath sounds by both nursing staff, respiratory and hospitalists on staff.
Goal met. Patient's breath sounds noted and charted. No Wheezes, crackles or rhonchi noted but will continue to monitor.
Goal met. Patient has ABG's monitored, pulse, and oximetry. Patient also had a CXR upon arrival which was negative for pulmonary embolism.

. Imbalanced nutrition: less than body requirements related to decreased intake occurring with fatigue and anorexia secondary to depression as evidenced by low body weight for height and decreased prealbumin levels.
Goal Met. Small meals are easier to consume in individuals who are fatigued. Patients with COPD expend an extraordinary amount of energy simply on breathing and require high caloric meals to maintain body weight and muscle mass. Loss of muscle and fat despite adequate nutrition is associated with higher mortality in individuals with COPD.
Goal Met. Such a consultation enables a comprehensive nutritional assessment and possible additional therapies, including nutritional counseling related to the disease process. The dietitian also may facilitate establishment of enteral or parental nutrition in the cachectic or intubated patient or those who are not able to consume adequate nutrition orally.

Goal met. Dietary information will promote adequate nutrition and stable body weight. The patient is more likely to adhere to the treatment plan.

Nursing Interventions

Assess respiratory status q2- 4h and as indicated by the patient's condition.

Report significant findings. Auscultate breath sounds q2- 4h and as indicated by the patient's condition.

Administer bronchodilator therapy as prescribed. Patient is prescribed 3 mL of albuterol sulfate/ipratropium Q4h/PRN.

Administer inhaled corticosteroids as prescribed. Patient is prescribed 1mg of Budesonide delivered via nebulizer daily for COPD.

Deliver humidified oxygen as prescribed and monitor the patient's response. Patient is on 30LPM of oxygen via high-flow nasal cannula.