N311 Care Plan #3

Lakeview College of Nursing

Cidney Hinchman

Demographics (5 points)

Date of Admission 08/01/2019	**Patient Initials** H.G	**Age** 68	**Gender** M
Race/Ethnicity Latino	**Occupation** Retired	**Marital Status** Widow	**Allergies** Ampicillin
Code Status FULL	**Height** 5'8"	**Weight** 156 lbs	

Medical History (5 Points)

Past Medical History: COPD and emphysema

Past Surgical History: N/A

Family History: Wife deceased from congestive heart failure at age 55. Pt has one daughter and she has previous history of emphysema. Both parents had a history of COPD but "died from old age, per pt.

Social History (tobacco/alcohol/drugs): Pt is a current smoker and smokes about a pack a day. Pt also has history of alcohol abuse that started at the age of 18. Pt denies any drug use.

Admission Assessment

Chief Complaint (2 points): Pneumonia, wheezing and coughing, and dyspnea

History of present Illness (10 points): Onset: On August 1st, a 68 y/o Latino, widow, male, was found unresponsive on the floor in his home by his daughter. PT was admitted to Carle hospital at 1030am for exacerbation of COPD. **Location**: Pt is experiencing pain in his chest area. **Duration:** about a week ago, on July 25th, the pt started noticing some chest pain and dyspnea. Pt stated, "over the last two or three days I began to feel a more consistent chest pain and the pain kept getting worse". **Characteristics:** The pt states "my chest feels very tight and it makes it hard for me to breathe". Pt denies any pain. **Associated Manifestations:** Laying down seems to make it harder for the pt to breathe. **Relieving factors:** Reports that sitting up or laying down

in bed with the head of the bed elevated helps his breathing and chest pains. He also has a nebulizer he can take to help as well. **Treatment:** Pt has not had previous treatment.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): COPD/Exacerbation

Secondary Diagnosis (if applicable): Pneumonia

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

Chronic obstructive pulmonary disease is a chronic inflammatory disease in your lungs that causes obstructed airflow from your lungs (Mayo Clinic, 2017). The main cause of COPD is from smoking tobacco (Mayo Clinic, 2017). COPD can often happen in people who are exposed to fumes from burning fuel for cooking and heating in poorly ventilated homes (Mayo Clinic, 2017). Most smokers will develop reduced lung function but only 20 to 30 percent of chronic smokers develop COPD (Mayo Clinic, 2017). COPD affects your lungs because air travels down your windpipe and into your lungs through two large tubes and inside your lungs, these tubes will divide multiple times into smaller tubes that end in clusters of tiny air sacs (Mayo Clinic, 2017). The air sacs have thin walls full of tiny blood vessels and the oxygen in the air that you inhale goes into these blood vessels and then enters your bloodstream (Mayo Clinic, 2017). During this time carbon dioxide is exhaled (Mayo Clinic, 2017). Your lungs depend on the natural elasticity of the bronchial tubes and air sacs to force air out of your body (Mayo Clinic, 2017). COPD causes your natural elasticity to loosen and over-expand leaving air trapped in your lungs when you exhale (Mayo Clinic, 2017). As for my patient he is a current smoker and smokes about a pack of cigarettes a day. Therefore, that is probably how he developed COPD.

Signs and symptoms don't usually appear until quite a bit of lung damage has occurred, and they usually will worsen over time especially if you continue to smoke (Mayo Clinic, 2017). Common signs and symptoms of COPD could include shortness of breath, wheezing, chest tightness, having to clear your throat when you wake up, chronic cough, cyanosis, frequent respiratory infections, lack of energy, weight loss, and swelling in ankles, feet, or legs (Mayo Clinic, 2017). People with COPD often experience what is known as exacerbations and during this time their symptoms become worse than the usual day-to-day symptoms and it will persist for at least a couple of days (Mayo Clinic, 2017). As for my patient he came into the emergency department experiencing COPD exacerbations. He was also experiencing shortness of breath, greenish mucus, wheezes, chest tightness, and a persistent cough. With having the exacerbations, it made all his symptoms that he would experience on a normal day worse causing his vital signs to be high due to the pain and trauma his body was experiencing. Although he denied having any pain when he arrived at the emergency department. Some common risk factors for COPD could include smoking, long term exposure to other lung irritants, age, and genetics (MedlinePlus, 2017). As for my patient he was older, had a history of smoking, and his parents had COPD therefore it put him at a really high risk for developing it.

COPD is known to cause many complications such as respiratory infections, heart problems, lung cancer, high blood pressure in lung arteries, and depression (Mayo Clinic, 2017). My patient developed pneumonia and appeared to have a high blood pressure. COPD can very well be prevented unlike other diseases (Mayo Clinic, 2017). The best way to prevent it is to not smoke cigarettes and to stop if you are smoking because it's never too late (Mayo Clinic, 2017). COPD is commonly misdiagnosed for other lung conditions and it is likely that if you do get diagnosed with COPD it won't be until the disease has advanced and interventions are less

effective (Mayo Clinic, 2017). To be diagnosed for COPD you could have some tests done such as pulmonary function test, a chest X-ray, a CT scan, arterial blood gas analysis, or laboratory tests (Mayo Clinic, 2017). Treatment cold include to stop smoking if you are, medications like bronchodilators, inhaled steroids, oral steroids, combination inhalers, oxygen therapy, lung transplant, bullectomy, and many other options are available (Mayo Clinic, 2017). My patient could have helped prevented COPD from not smoking or quitting his smoking once he was diagnosed. His treatments include many different medications like bronchodilators and inhalers. Once discharged he will continue his medications and continue breathing practices to hopefully help ease his signs and symptom.

Pathophysiology References (2) (APA):

Mayo Clinic. (2017, August 11). *COPD - Symptoms and causes.* https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679

MedlinePlus. (2017, January 2). *COPD.* https://medlineplus.gov/copd.html

Laboratory Data (20 points)
If laboratory data is unavailable, values will be assigned by the clinical instructor

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	4.0-4.9 *10^6/ uL*	4.8		
Hgb	12.0-16.0 *g/dL*	9.3		These values are consistent with exacerbation of COPD and low hgb means low tissue oxygenation (Capriotti & Frizzell, 2016).
Hct	37.0-48.0%	29%		These values are consistent with airway obstruction (Capriotti & Frizzell, 2016).
Platelets	150-400 *10^3/uL*	162,000		
WBC	4.1-10.9 *10^3/uL*	13,000		White cells are elevated due to trauma and inflammatory response (Capriotti & Frizzell, 2016).
Neutrophils		N/A		
Lymphocytes		N/A		
Monocytes		N/A		
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	Today' s Value	Reason For Abnormal
Na-	135-145 *mmol/L*	135		
K+	3.5-5.1 *mmol/L*	4.4		

Cl-	98 -107 mEq/L	100		
CO2		N/A		
Glucose	60-99 *mg/dL*	180		Blood sugar slightly elevated due to trauma (Capriotti & Frizzell, 2016).
BUN	5-20 *mg/dL*	22		Dehydration due to pneumonia (Capriotti & Frizzell, 2016)
Creatinine	0.5-1.5 *mg/dL*	1.0		
Albumin	3.5 – 5.2 mg/dL	3.0		These values are consistent with malnutrition due to anorexia (Capriotti & Frizzell, 2016).
Calcium	8.5-10.1 *mg/dL*	9.0		
Mag	1.6-2.6 *mg/dL*	N/A		
Phosphate	2.5-4.5 mg/dL	5.5		These values are consistent with trauma (Capriotti & Frizzell, 2016).
Bilirubin		N/A		
Alk Phos		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	Colorless-Yellow, Clear, and no odor present	Yellow, clear, and no odor present		
pH	5.0-7.0	5.8		
Specific Gravity	1.003-1.005	1.002		Specific gravity slightly decreased due to drinking too much fluid or the use of diuretics (Capriotti & Frizzell, 2016).
Glucose	Negative	Negative		

Protein	Negative	Negative		
Ketones	Negative	Negative		
WBC	0-25/*uL*	Negative		
RBC	0-20/*uL*	Negative		
Leukoesterase	Negative	Negative		

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 culture in file.		
Blood Culture	Negative	Negative		
Sputum Culture	Negative	Positive for Streptococci, Staphylococci		Sputum culture positive for Streptococci and Staphylococci due to pneumonia (Capriotti & Frizzell, 2016).
Stool Culture		No culture in file.		

Lab Correlations Reference (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (10 points): Pt has a pending chest X-ray.

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	Levofloxacin (Levaquin)	Albuterol (Proventil)	Acetaminophen (Tylenol)	Prednisone	Salmeterol (Serevent Diskus)
Dose	750mg	1.25mg/3mL 0.9% sodium chloride	650mg	10mg	1 inhalation
Frequency	q.d. (administer over 120 min)	q.4.h.	q.4.h. PRN	q.12.h.	q.12.h.
Route	IV bolus	Oral inhalation via nebulizer	Oral	IV bolus	Oral inhalation
Classification	Fluroquinolone, antibiotic	Adrenergic, bronchodilator	Nonsalicylate, para-aminophenol derivative, antipyretic, nonopioid analgesic	Immunosuppressant	Bronchodilator

Mechanism of Action	Interferes with bacterial cell replication by inhibiting the bacterial enzyme DNA gyrase, which is essential for repair and replication of bacterial DNA.	Albuterol attaches to beta2 receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate to cyclic adenosine monophosphate. This reaction decreases intracellular calcium levels. It also increases intracellular levels of cAMP. Together, these effects relax bronchial smooth-muscle cells and inhibit histamine release.	Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in the peripheral nervous system. Acetaminophen also acts directly on temperature-regulating center in the hypothalamus by inhibiting synthesis of prostaglandin E2.	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 bacterial activity, stabilizing lysosomal membranes, suppressing antigen response of macrophages and helper T cells, and inhibiting synthesis of inflammatory response mediators, such as cytokines, interleukins, and prostaglandins.	Attaches to beta2 receptors on bronchial cell membranes, stimulating the intracellular enzyme adenylate cyclase to convert to cAMP. The resulting increase in intracellular cAMP level inhibits histamine release, relaxes bronchial smooth-muscle cells, and stabilizes mast cells.
Reason Client Taking	This is an antibiotic the pt is taking to help treat his pneumonia.	This medication helps to treat bronchospasm in patients with	This medication is being taken as needed to decrease the	Suppresses the inflammation of air passages	To provide maintenance treatment of bronchospasm associated with chronic

		reversible obstructive airway disease, so the pt is taking this to help his breathing with her because of his pneumonia and COPD.	pt's pain.		obstructive pulmonary disease.
Contraindications (2)	Hypersensitivity to levofloxacin, other fluroquinolones, or their components; myasthenia gravis	Hypersensitivity to albuterol or its components.	Severe hepatic impairment, severe active liver disease	Hypersensitivity to prednisolone or its components, idiopathic thrombocytopenic purpura	Hypersensitivity to salmeterol, its components, or to milk proteins; treatment of asthma without use of an inhaled corticosteroid
Side Effects/Adverse Reactions (2)	CNS stimulation, confusion	Insomnia, irritability	Agitation, fatigue	Headache, nervousness	Dizziness, fever

Medications Reference (APA):

Jones & Bartless Learning. (2019). *2019 Nurse's drug handbook* (18th ed.). Burlington, MA.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Pt appears pleasant A&O x3 Oriented to person, time, place, and current events. No distress Pt appears well groomed.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 Tan/pink normal for race Appears slightly dehydrated, clean. Warm Normal turgor 2+ None noted None noted None noted 21
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 Head and neck symmetrical, no bumps or lesions noted. Trachea is midline. Lymph nodes are nonpalpable Ears are free of discharge, no bumps or lesions noted, healthy cerumen, and tympanic membrane is a pearly grey Eyes normal. Upon inspection sclera was white, cornea was clear, conjunctiva was white with no lesions or discharge noted. Normal EOM. Septum midline. No drainage or bleeding noted. No deviation or abnormalities and sinuses are not tender Patient has natural teeth on top and bottom. Good dentition overall. No lesions or bumps noted. Mouth is pink and moist.
CARDIOVASCULAR: **Heart sounds:** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:**	 S1 and S2 heart sounds normal, normal S4 gallop sound heart, no murmurs or rubs present Pulse is 96bpm radial Capillary refill is more than 3 seconds. It is

Neck Vein Distention: Y ☐ N ☒ **Edema Y ☐ N ☒** **Location of Edema: N/A**	between 5 and 6 seconds. .
RESPIRATORY: **Accessory muscle use: Y☒ N ☐** **Breath Sounds:**	Pt's lung sounds are diminished in the bases. He has some occasional rhonchi, with wheezes in both the anterior and posterior upper lobes.
GASTROINTESTINAL: **Diet at home: Regular Diet.** **Height:** **Weight:** **Last BM:** **Palpation:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type: N/A**	Low sodium, high fiber and protein diet at home. Also drinks alcohol excessively Low sodium, high fiber and protein diet 5'8" 156 lbs Present in all four quadrants post-prandial Yesterday morning No pain or masses noted on palpation No abnormalities found upon inspection for distention, incision, scars, drains, or wounds.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals: N/A** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Clear-light yellow Pt reports no cloudiness or sediment in urine. No odor present. Pt voided x3. Total mL during my shift from pt was 890mL.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) X**	Pt has no neurovascular deficits noted. ROM is good. No supportive devices are needed Good, equal bilaterally.

Needs assistance with equipment ☐ **Needs support to stand and walk☐**	
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ (Left) Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Moves both arms and legs well bilaterally. Oriented to person, time, place, and current events. Good Good No glasses or contacts present. Vision seems normal. Alert and oriented x3
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	While in the hospital, daughter keeps pt occupied. No deficits noted. Pt identifies as Catholic and typically goes to church every Sunday morning and Wednesday evenings. Pt lives alone. His wife passed away a few years ago but he does have a daughter that comes in and checks on him often. Pt states "I love my daughter more than anything and I am so thankful for how much she helps me out".

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1230am	96 radial	144/92 RA	24	99.1°F orally	93% with O2 at 2L

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1245am	Numerical 1-10 4/10	Chest pain	Pt complains of shortness of breath	The pt states "my chest feels very tight and it makes it hard for me to breathe".	Pt is taking albuterol nebulizer treatments to help with breathing. Pt is taking 650mg of

					Tylenol q.4.h. orally as needed to control his pain. Pt is also taking 750mg of levofloxacin IV bolus q.d. to help treat the pneumonia.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
3 mL IV @ 0800, 1200, & 1600 460mL of H2O at 0830 280mL of H2O at 1230 Total = 749mL	Pt voided 250mL of urine Pt voided 360mL of urine @ 0430 Pt voided 280mL of urine @ 1230 Total = 890mL

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

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. Impaired gas	Pt had an O2 of	1.Pt needs to stay in	Pt was able to maintain

exchange related to COPD as evidenced by dyspnea	93% with oxygen on at 2 liters. Pt had a decreased ability to breath sitting up right without having to hunch over. Client has crackles and wheezes heard in lower lungs.	high fowlers position with his O2 saturation being checked every 4 hours. 2. Pt needs to demonstrate improved ventilation and adequate oxygenation of tissues by ABGs within pt's normal range and be free of symptoms of respiratory distress.	being in the high fowlers position. His O2 saturation was checked every 4 hours and was slowly increasing. By the time my shift ended the pt's O2 saturation was up to 96% with 2 liters of O2. Pt showed improvement in ventilation and adequate oxygenation of tissues by ABGs. Pt was showing no more symptoms. Goals were met.
1. Ineffective breathing pattern related to COPD as evidenced by occasional rhonchi with wheezes in both the posterior and anterior upper lobes.	Pt had occasional rhonchi with wheezes in both the anterior and posterior upper lobes. Pt also had noticeable nasal flaring and a presence of a non-productive cough.	1. Auscultate breath sounds every 2 to 4 hours. Pt should practice breathing once every hour with an incentive spirometer. 2.Before my shift ends, I need to make sure the pt has been administered Salmeterol and that the pt's breathing sounds have improved.	Pt appears to be doing well. Auscultation was done every 2 to 4 hours with minimal rhonchi and wheezes heard. Pt continues to practice his breathing and will continue this once he is discharged. Medication was administered and pt felt some relive after 30 mins. Goals were met.

Other References (APA):

Swearingen, P. L., & Wright, J. D. (2019). *All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health*. St. Louis, MO: Elsevier.

N311 Care Plan

Concept Map (20 Points):

N311 Care Plan

Subjective Data

Chest pain
Pain is a 4 on a scale of 1-10
Dyspnea
Trouble breathing
Chest feels tight

Nursing Diagnosis/Outcome

1. Impaired gas exchange related to COPD as evidenced by dyspnea
   - Goals were met.
   - Pt was able to maintain being in the high fowlers position. His O2 saturation was checked every 4 hours and was slowly increasing. By the time my shift ended the pt's O2 saturation was up to 96% with 2 liters of O2.
   - Pt showed improvement in ventilation and adequate oxygenation of tissues by ABGs. Pt was showing no more symptoms.

2. Ineffective breathing pattern related to COPD as evidenced by occasional rhonchi with wheezes in both the posterior and anterior upper lobes.
   - Goals were met.
   - Pt appears to be doing well. Auscultation was done every 2 to 4 hours with minimal rhonchi and wheezes heard.
   - Pt continues to practice his breathing and will continue this once he is discharged with an incentive spirometer. Medication was administered and pt felt some relive after 30 mins.

Objective Data

Chief complaint: Wheezing and coughing, pneumonia, and dyspnea
Diagnosed with COPD and pneumonia
Vital signs: B/P- 144/92 RA
P – 96 radial
RR – 24
T – 99.1°F oral
O2 – 93% with 2L of O2
Pain – 4/10
Hgb, Hct, specific gravity, and Albumin are slightly decreased.
WBC, glucose, BUN, phosphate and BUN are slightly elevated. Sputum culture positive for Streptococci and Staphylococci. Urine was yellow, clear,

Patient Information

68-year-old latino, widow, male with a prior medical history of COPD and emphysema. Pt was found by his daughter and was unresponsive. The pt was brought into the ED from home where he was admitted for COPD and pneumonia.

Nursing Interventions

Pt needs to stay in high fowlers position with his O2 saturation being checked every 4 hours.

Pt needs to demonstrate improved ventilation and adequate oxygenation of tissues by ABGs within pt's normal range and be free of symptoms of respiratory distress.

Auscultate breath sounds every 2 to 4 hours. Pt should practice breathing once every hour with an incentive spirometer.

Before my shift ends, I need to make sure the pt has been administered Salmeterol and that the pt's breathing sounds have improved.

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