N311 Care Plan # 1

Lakeview College of Nursing

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N311 Care Plan

Demographics (5 points)

Date of Admission 8/01/2019	**Patient Initials** HG	**Age** 68 (DOB: 1/01/1952)	**Gender** Male
Race/Ethnicity Hispanic	**Occupation** Retired	**Marital Status** Widowed	**Allergies** Ampicillin
Code Status No CPR	**Height** 5'8"	**Weight** 156lbs	

Medical History (5 Points)

Past Medical History:.

Hypertension, diabetes, kidney disease, liver disease, iron deficiency anemia, COPD, pneumonia.

Past Surgical History:

Tonsillectomy and colonoscopy

Family History:

Father had hypertension and colon cancer. Mother suffered from alcoholism and diabetes. Grandparents no known problems

Social History (tobacco/alcohol/drugs):

Client quit smoking 2 years ago. Previously smoked a pack a day for 40 years. Currently, drinks 4-5 beers a day. Denies any current or past drug usage.

Admission Assessment

Chief Complaint (2 points):.

Shortness of breath

History of present Illness (10 points):.

Onset: On August 1st, a 68 y/o Hispanic, widowed, male was admitted to Carle hospital for shortness of breath. Chronic shortness of breath due to COPD, but worsened two days prior to

being found on the floor unconscious. *Location*: Bilaterally mid-thoracic region of chest. *Duration*: Client noticed worsening symptoms two days prior to passing out on the floor. *Characteristics:* Productive cough, producing yellow tinged sputum.. Pain in accessory muscles from straining to get deep breath. General weakness. *Aggravating:* Worse when lying down and with any type of activity. *Relieving Factors*: Breathing treatments help short term and sleeping propped up on multiple pillows helps. *Treatment:* Client regularly sees his primary physician for chronic COPD and uses his inhalers regularly.

Primary Diagnosis:

Primary Diagnosis on Admission (3 points): COPD

Secondary Diagnosis (if applicable): Pneumonia

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

Chronic Obstructive Pulmonary Disease or COPD is defined as a combination of chronic bronchitis, emphysema, and hyperreactive airway disease (Capriotti & Frizzell, 2016). According to the American Lung Association (2020), COPD is the third leading cause of disease-related death in the United States. COPD has a higher prevalence in men, however; more women die from COPD in comparison to men (Capriotti & Frizzell, 2016). The causes of COPD include smoking as the highest risk factor, occupational exposure, environmental exposure, and genetic susceptibility (Capriotti & Frizzell, 2016).

Chronic bronchitis is characterized by hyper secretion of mucus in the airways, hypoxia, and cyanosis. The abundance of mucus obstructs airflow, which inhibits oxygenation, which leads to the hypoxia and cyanosis (Capriotti & Frizzell, 2016). The next component emphysema is characterized by the over distention of the alveoli. The alveoli have air stuck, and this creates an obstruction to expiratory airflow, loss of elastic recoil, and high residual volume of carbon

dioxide in the lungs (Capriotti &Frizzell, 2016). Finally, the hyperreactivity to irritants and bronchoconstriction are also characteristic of COPD (Capriotti & Frizzell, 2016).

There are various pathological changes in the body of one with COPD that lead to a decrease in airflow such as, narrowing of the bronchioles, excessive mucus and fibrosis of the bronchioles, loss of alveolar elastic recoil, and smooth muscle hypertrophy (Capriotti & Frizzell, 2016). Chronic bronchitis leads to permanent changes in the structure of the lungs. These changes include, chronic inflammatory changes, thickening of the walls, and constriction of the lumens (Capriotti & Frizzell, 2016). The inflammation sets of a series of cellular reactions including the stimulation of macrophages and then accumulation of neutrophils, T lymphocytes, and cytokines. The inflammatory mediators leukotrienes, interleukins, and tumor necrosis factor act as an proteolytic manner which chronically damage the lung structure (Capriotti & Frizzell, 2016). Another cellular characteristic of one with COPD is a proteolytic-antiproteolytic enzyme imbalance in the lungs, which is consistent with emphysema (Capriotti & Frizzell, 2016). Smoking, the most common cause of COPD activates proteolytic enzymes and deactivates the body's natural antioxidants and antiproteolytic enzymes (Capriotti & Frizzell, 2016).

Severe cases of COPD cause pulmonary hypertension. This causes right ventricular hypertrophy and right ventricular failure, which is called cor pulmonale (Capriotti & Frizzell, 2016). Clients with severe COPD also experience chronic high levels of carbon dioxide and the arterial chemoreceptors and respiratory center I n the medulla become insensitive to high levels of carbon dioxide (Capriotti & Frizzell, 2016). This insensitivity means the bodies primary respiratory stimulant is deactivated and a client with COPD now relies on hypoxia to stimulate breathing. This is why high doses of oxygen in a COPD client can depress their respiratory drive and lead to a respiratory arrest.

The first sign and symptoms of COPD is dyspnea. Through progression of the disease the client may develop a cough, wheezing, hypoxia, and cyanosis. Ultimately, the client will experience jugular venous distension, ascites, hepatosplenomegaly, and ankle edema (Capriotti & Frizzell, 2016). The signs and symptoms of hypoxia and cyanosis include clubbing of the nails, use of accessory muscles when breathing, barrel-shaped chest, blue hue to the lips. The client will have prolonged expiration and adventitious lung sounds (Capriotti & Frizzell, 2016).

A pulmonary function test is used to diagnose COPD. It is characteristic of one with COPD to have a FEV1/FVC ratio lower than 70% (Capriotti & Frizzell, 2016). The doctor will also run a complete blood count, blood chemistry panel, chest x-ray, electrocardiogram, and ABG's. In those with mild COPD, all should be normal except the PFTs. In severe cases of COPD the x-ray will show flattened, low diaphragm borders and hyperinflation of both lung fields. The ECG will show right ventricular hypertrophy. The CBC will also show a high number of erythrocytes because of constant secretion of erythropoietin (Capriotti & Frizzell, 2016).

This pathophysiology is evident is Mr. Gomez's presentation. He likely developed COPD from his long history of smoking, and he is in advanced COPD. He shows all the clinical signs like shortness of breath, hypoxia, cough, wheezing, and even right ventricular heart failure.

Pathophysiology References (2) (APA):

American Lung Association. (2020). *Chronic Obstructive Pulmonary Disease (COPD).* American Lung Associatoin. https://www.lung.org/lung-health-and-diseases/lung-disease- lookup/copd/

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

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 million/mm^3	4.8 million/ mm^3	NA	
Hgb	12.0-16.0g/ dL	9.3g/dL	NA	Hgb is low because of iron deficiency anemia.
Hct	37.0-48.0%	29%	NA	Hct is low because of iron deficiency anemia.
Platelets	150-400 10^3/ uL	162 10^3/uL	NA	
WBC	4.1-10.9 10^3/ uL	13 10^3/uL	NA	WBC is elevated from infection.
Neutrophils	1.50-7.70 10^3/ uL	NA	NA	
Lymphocytes	1.00-4.90 10^3/ uL	NA	NA	
Monocytes	0.00-0.80 10^3/ uL	NA	NA	
Eosinophils	0.00-0.50 10^3/ uL	NA	NA	
Bands	0-1.0 10^3/uL	NA	NA	

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-	136-145mEq/L	135mEq/L	NA	Sodium is low because of right ventricle heart failure.

K+	**3.5-5.1mEq/L**	**4.4mEq/L**	**NA**	
Cl-	**98-107Eq/L**	**100mEq/L**	**NA**	
CO2	**21.0-32.0mmHg**	**54mmHg**	**NA**	**CO2 is elevated because of distention of alveoli sacs, which causes them to retain CO2.**
Glucose	**60-99mm/dL**	**180mg/dL**	**NA**	**Glucose is high from diabetes.**
BUN	**5-20 mg/dL**	**22mg/dL**	**NA**	**BUN is elevated from right ventricular heart failure.**
Creatinine	**0.5-1.5mg/dL**	**1.0mg/dL**	**NA**	
Albumin	**3.4-5.4g/dL**	**3.0mg/dL**	**NA**	**Albumin is low from heart failure and liver damage.**
Calcium	**8.5-10.1mg/dL**	**9.0mg/dL**	**NA**	
Mag	**1.6-2.6mg/dL**	**NA**	NA	
Phosphate	**2.5-4.5mg/dL**	**5.5mEq/L**	**NA**	**Phosphate is elevated from liver disease and kidney failure.**
Bilirubin	**0-0.4mg/dL**	**NA**	**NA**	
Alk Phos	**44-147 IU/L**	**NA**	**NA**	

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**	**Clear**	**NA**	
pH	**5.0-7.0**	**5.8**	**NA**	
Specific Gravity	**1.003-1.005**	**1.002**	**NA**	**Specific gravity is low because of patients diabetes and kidney disease.**
Glucose	**Negative**	**Negative**	**NA**	
Protein	**Negative**	**Negative**	**NA**	

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

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	**NA**	**NA**	**NA**	*** No Cultures Completed for this pt***
Blood Culture	**NA**	**NA**	**NA**	
Sputum Culture	**NA**	**NA**	**NA**	
Stool Culture	**NA**	**NA**	**NA**	

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):

Chest X-Ray: Notable hyperinflation of bilateral lung fields and flattened diaphragm. Changes characteristic of atelectasis in bilateral bases. Abnormal area of density present in the left lung base suspicious of pneumonia.

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

Medications (5 required)

Brand/Generic	**Ceftriaxone (Rocephin)**	**Prednisone (Deltasone)**	**Salmeterol (Serevent Diskus)**	**Albuterol (Proventil)**	**Acetaminophen (Tylenol)**
Dose	**1g**	**10mg**	**1 inhalation**	**1.25mg/3mL 0.9% sodium chloride**	**650mg**
Frequency	**Q12hrs**	**Q12hrs**	**Q12hrs**	**Q4hrs**	**Q4hrs(PRN)**
Route	**IV**	**IV**	**Oral-inhale**	**Oral-nebulizer**	**Oral**
Classification	**Antibiotic**	**Immunosuppressant**	**Bronchodilator**	**Bronchodilator**	**Antipyretic and nonopioid analgesic**
Mechanism of Action	**Interferes with bacterial cell wall synthesis by inhibiting cross-linking of peptidoglycan strands.**	**Binds to intracellular glucocorticoid receptors and suppresses inflammatory and immune responses.**	**Attatches to beta$_2$ receptors on bronchial cell membranes, stimulating the intracellular enxyme adenylate cyclase to convert ATP to cAMP**	**Attatches to beta$_2$ receptors on bronchial cell membranes, stimulating the intracellular enxyme adenylate cyclase to convert ATP to cAMP**	**Inhibits the enxyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in the PNS.**
Reason Client Taking	**To treat infection**	**To treat adrenal insufficiency and chronic inflammatory disorders**	**Prevent bronchospasm**	**Prevent bronchospasm**	**Pain control**
Contraindication	**Calcium-**	**Hypersensitivity to**	**Primary**	**Hypersensitivit**	**Hypersensitivit**

s (2)	**containing I.V. solutions, hypersensitivity to ceftriaxone**	**prednisone and diabetes**	**treatment of COPD and high blood pressure**	**y to albuterol and diabetes**	**y to acetaminophen and liver disease**
Side Effects/Adverse Reactions (2)	**Edema, diarrhea**	**Edema and heart failure**	**Cough and tachycardia**	**Hypertension and chest pain**	**Hypertension and stridor**

Medications Reference (APA):

Jones & Bartlett Learning. (2020). *Nurse's drug handbook.* (19 th edition). Jones & Bartless Learning, LLC.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:.** **Distress:** **Overall appearance:**	**Alert and orientated to time, place, person, and current events X4** **Appears SOB** **Well-groomed and dressed appropriately**
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type: NA**	 **Pink** **Dry** **Warm** **Poor Recoil** **None** **Medium sized bruise on left hip** **None** **18**

HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Head and neck symmetrical. Thyroid and lymph nodes non palpable.** **Clients ears are pink and moist, canal is clear and free of drainage, tympanic membrane pearly grey.** **Eyes sclera is slightly yellow, conjunctiva is pink. EOM is intact. Rosenbaum 14/14** **Septum is midline, turbinates pink and moist, non tender sinuses.** **Good dentition.**
CARDIOVASCULAR: **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:**	**S1, S2 heard with no gallops, murmurs, or rubs.** **Pulses symmetrical and 2+ throughout.** **Poor Capillary refill, greater than 5 seconds.** **Clubbing of nails. No vein neck distention.** **Edema bilaterally in lower legs**
RESPIRATORY: **Accessory muscle use: Y☒ N ☐** **Breath Sounds: Location, character**	**Respirations are labored with use of accessory muscles when moving about** **Wheezes heard on expiration in vesicular lung. Crackles heard in lower left vesicular lung.**
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	**Diabetic diet at home, but experiencing loss of appetite since loss of his wife.** **Current diet is NPO.** **5'8"** **156lbs** **Bowel sounds are normoactive in each of the 4 quadrants.** **Last BM this morning (8/1/2019)** **No pain or masses found upon palpation.** **No distention, incisions, scars, drains, or wounds found upon inspection.**

GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**Yellow** **Clear** **150 void**
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **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☐**	**Normal ROM** **Does not use supportive devices** **Strength in extremities is good** **Fall Score is 15 (high fall risk)** **Moves with 1 assist and a gait belt**
NEUROLOGICAL: **MAEW: Y☒ N☐** **PERLA: Y☒ N☐** **Strength Equal: Y☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**Legs and arm are both strong** **Orientated to time, place, location, and current events** **Mature mental status** **Speech intact** **Alert**
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):**	**Coping mechanism is drinking alcohol ever since wife passed 6 months ago.** **Mature developmental status** **Catholic. Attends church every Sunday.** **Lives at home alone since wife passed.** **Daughter checks in on him every day after work.**

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	100	150/94	36	99.2Ferinheigh	91% 5L O2

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Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1300	**3/10**	**Chest**	**"Not the worse pain, but noticeable"**	**"Dull ache in chest muscles from trying to breathe"**	**Repositioned pillows and head of bed height for more comfort. Patient does not want pain meds at this time.**

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
0mL Client NPO	**150mL urine**

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. Disruption of gas exchange	**Related to clients COPD. Alvoli are**	**1. Maintain the head of the bed at**	**Goal Met: Patient was able to breath much**

	distended and not able to release all the CO2 causing it to build up in the body. Also, not enough O2 entering the alveoli because of the excess CO2 so there is an oxygen deficit.	**a minimum of 45 degrees** **2. Promote deep breathing and coughing exercises to allow for more efficient breathing and to expel secretions built up from pneumonia.**	**better sitting up right, and was even able to get some rest.** **Goal met: Patient expelled mucus that was stuck in his chest and O2 sats maintained at 92%**
2. Nutritional Deficiency	**Related to his wife passing and currently living alone. He is experiences loss of appetite and has an inability to cook nutrient rich meals for himself.**	**1. Once no longer NPO, will encourage to eat a minimum of 50% of each meal** **2.Will education client on which foods and meals are easy to make an nutrient rich.**	**Goal not yet met: Client seems excited to eat dinner once NPO is lifted, and has his meal already planned out. Stated "I will do my best to eat at least 50%."** **Goal met: Asked client what types of meals his wife used to cook for him, and printed step by step recipes form him. Also educated on types of food that are heart helthy.**

Other References (APA):

Concept Map (20 Points):

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Subjective Data

Client states " I feel as if I cannot catch my breath and am not able to get a full breath when I'm just lying here" and " I have been losing a lot of weight since my wife died because I do not know how to cook for myself and haven't felt overly hungry"

Nursing Diagnosis/Outcomes

sruption of Gas Exchange related to insufficient expulsion of CO2 from the alveolar sacs leading to a build up of Co2 in the body and a lack of oxygen as evidenced by a low pulse ox and high CO2.
Goal Met: Once head of the bed was set at a minimum of 45 degrees patient was able to get fuller breaths and even relax for awhile without feeling SOB.
Goal Met: Client practiced deep breathing and coughing exercises. Was able to maintain a pulse ox of 92%, and expelled mucus stuck in chest from pneumonia.

2: Nutritional Deficiency related to clients wife passing away and lack of knowledge on how to cook for himself and from a lack of an appetite as evidenced by a significant loss of weight.
Goal Unmet: Client not able to order food until dinner, but has picked out what he wants and stated he will try to eat a minimum of 50%.
Goal Met: Educated client on types of food that are nutrient rich and heart healthy so he knows what he should be eating. Also, printed off a few favorite recipes so he can make food for himself at home.

Objective Data

Diagnosed with COPD and pneumonia. Vital signs are as follows: pulse: 100, BP: 150/94, Respirations: 36 Temp: 99.2 F and Oxygen 91% on 5L O2.

Patient Information

Client is a 68 y/o Hispanic, widowed man who presented with SOB from COPD exacerbation and pneumonia. Client used to smoke a pack of cigarettes a day for 40 years, and since his wife dies 6 months ago has been drinking 4-5 beers a day. He is diabetic with heart failure.

Nursing Interventions

Maintain the head of the bed at a minimum of 45 degrees
Practice deep breathing and coughing exercises
Encourage to e at a minimum of 50% of meals once no longer NPO
Educate on heart healthy foods and provide a few recipes client can make at home

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