N311 Care Plan # 1

Lakeview College of Nursing

Jayda Davis

Demographics (5 points)

Date of Admission	**Client Initials**	**Age**	**Gender**
2/25/21	W.H	79	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Factory	Widowed	Sulfa, Augmentin
Code Status	**Height**	**Weight**	
DNR	62 inches	100.3 kg	

Medical History (5 Points)

Past Medical History: Chronic obstructive pulmonary disorder, Depression, Type II diabetes mellitus, Gout, Hyperlipidemia, Hypertension, Overactive bladder, Vitamin B12 deficiency, Paroxysmal atrial fibrillation.

Past Surgical History: Bilateral cataract extraction in 2015, Total replacement of Left Knee in 2005, and Hysterectomy (no reported date)

Family History: Father- heart disease and stroke

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Never a smoker

Admission Assessment

Chief Complaint (2 points): Chronic obstructive pulmonary disorder with acute exacerbation

History of Present Illness – OLD CARTS (10 points): On February 25th, a 79-year-old female was admitted to Mattoon Rehabilitation and Health center for long-term care due to chronic obstructive disorder with acute exacerbation. The patient reported experiencing dyspnea, coughing, and increased sputum production. The patient started having symptoms on February 19th and was hospitalized for five days at Sara Bush Lincoln Hospital. The patient has had symptoms for two weeks. Walking, transferring, and lying flat make the symptoms worse.

Sitting still, not moving, and resting makes it better. The patient has been given an inhaler to help relieve her symptoms.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Chronic obstructive pulmonary disorder

Secondary Diagnosis (if applicable): Major depression disorder

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

Chronic obstructive pulmonary disorder is a disease located in the lungs. The condition is a combination of emphysema, chronic bronchitis, and hyperactive airway disease (Capriotti, pp. 504). COPD is caused by exposure to harmful gases and particles. Cigarette smoking is the most common cause of COPD (Capriotti, pp. 504). It also can be caused by exposure to unhealthy particles and gases (Agarwal et al., 2022). COPD affects adults over the age of 40. Since 2015, there has been a report of 174 million people being affected by COPD (Agarwal et al., 2022). Women have a higher mortality rate than men with COPD (Capriotti, pp. 504). Some symptoms of COPD are dyspnea, cough, increased sputum production, hypoxia, and cyanosis (Agarwal et al., 2022).

In COPD, the pathological changes leading to airflow limitation include excessing mucous and fibrosis in the bronchioles, smooth muscle hypertrophy, and the loss of alveolar elastic recoil (Capriotti, pp. 504). Due to inflammation, chronic bronchitis causes remolding of the pulmonary structure that is permanent (Capriotti, pp. 504). The remodeled bronchioles show thickening of the walls and constriction of the lumens (Capriotti, pp. 504). The proteolytic-antiprotolytic enzyme imbalance in COPD lungs causes changes with emphysema (Capriotti, pp. 504). Emphysema structural change causes the destruction of the alveolar sacs, which leads to

obstructive physiology (Agarwal et al., 2022). Smoking is an irritant of emphysema, therefore, creating an inflammatory response. Macrophages and neutrophils are released as they are multiple inflammatory mediators (Agarwal et al., 2022). With severe COPD, there is poor ventilation and hypoxia. Areas with hypoxia stimulate pulmonary arterial vasoconstriction (Capriotti, pp. 504). This can cause right ventricular hypertrophy and eventually causes right ventricular failure (Capriotti, pp. 504).

COPD is diagnosed with four tests known as the COPD assessment test (CAT), PFTs (spirometry), a complete blood count (CBC), and a chest x-ray. The COPD assessment test is a questionnaire for the patient that asks about the activity and breathing limitations the patient is experiencing (Capriotti, pp. 505). Each item has a scale of 0-5; a higher total score indicates a more severe disease (Capriotti, pp. 505). PFTs (spirometry) use FVC and FEV1 to measure the diagnosis of COPD. FVC is a total air volume exhaled with maximum effort (Capriotti, pp. 501). FEVI is the volume of air expelled during the first second of exhalation from the lungs (Capriotti, pp. 505). If the airflow limitation of the FEV1/FVC is less than 70%, it indicates COPD (Capriotti, pp. 505). In a complete blood count (CBC), the labs are used to assess for anemia, infection, and polycythemia (Agarwal et al., 2022). The chest x-ray will show characteristics that are consistent with emphysema. The characteristics will show a flattened, low diaphragm border and hyperinflation of both lungs due to retained air (Capriotti, pp. 505).
The primary treatment for COPD is a combination inhaler that contains a long-acting β2-agonist (LABA) and an inhaled corticosteroid (IC) (Capriotti, pp. 507). This inhaler is used for the daily treatment of COPD. Oxygen is also used when the patient's PO2 is lower than 55 mmHg, and Spo2 is lower than 88% (Capriotti, pp. 507)

The patient was diagnosed with COPD due to chronic exposure to pollutants. The patient worked in a factory for most of her life. She was diagnosed with COPD from a complete blood count (CBC). She needs help with activities of daily living due to dyspnea from COPD. The patient should be educated on concerning symptoms of COPD that will allow her to communicate and express what she needs help with (Agarwal et al., 2022).

Pathophysiology References (2) (APA):

Agarwal, A. K., Raja, A., & Brown, B. D. (2022). *Chronic obstructive pulmonary disease - statpearls - NCBI bookshelf*. National Library of Medicine. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK559281/

Capriotti, T. M. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F. A. Davis Company. https://fadavisreader.vitalsource.com/books/9781719641470

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 ($x10^6/\mu L$)	3.80-5.41	N/A	4.44	N/A
Hgb (g/dL)	11.3-15.2	N/A	12.2	N/A
Hct (%)	33.2-45.3	N/A	37.8	N/A
Platelets (K/μL)	149-393	N/A	166	N/A
WBC (K/μL)	4.0-11.7	N/A	8.0	N/A
Neutrophils (%)	46.8-70.0	N/A	51.1	N/A
Lymphocytes (%)	11.8-45.9	N/A	37.1	N/A

Monocytes (%)	4.4-12.0	N/A	8.1	N/A
Eosinophils (%)	0.0-8.3	N/A	2.7	N/A
Bands (%)	N/A	N/A	N/A	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- (mmol/L)	135-145	N/A	138	N/A
K+ (mmol/L)	3.5-5.1	N/A	4.0	N/A
Cl- (mmol/L)	98-107	N/A	103	N/A
CO2 (mmol/L)	21-31	N/A	29	N/A
Glucose (mg/dL)	74-109	N/A	109	N/A
BUN (mg/dL)	7-25	N/A	25	N/A
Creatinine (mg/dL)	0.60-1.20	N/A	1.20	N/A
Albumin (g/dL)	3.5-5.2	N/A	3.5	N/A
Calcium (mg/dL)	8.6-10.3	N/A	8.6	N/A
Mag (mg/dL)	N/A	N/A	N/A	N/A
Phosphate (units/L)	N/A	N/A	N/A	N/A
Bilirubin (mg/dL)	0.3-1.0	N/A	0.7	N/A
Alk Phos (units/L)	34-104	N/A	68	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	Light yellow and clear	N/A	N/A	N/A
pH	5.0-9.0	N/A	N/A	N/A
Specific Gravity	1.001-1.029	N/A	N/A	N/A
Glucose	Negative	N/A	N/A	N/A
Protein	Negative/Trace	N/A	N/A	N/A
Ketones	Negative	N/A	N/A	N/A
WBC	0-5	N/A	N/A	N/A
RBC	0-5	N/A	N/A	N/A
Leukoesterase	Negative	N/A	N/A	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): N/A

Diagnostic Imaging

All Other Diagnostic Tests (10 points): N/A

Diagnostic Imaging Reference (1) (APA): N/A

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

Medications (5 required)

Brand/Generic	Zyloprim/ Allopurinol	Zestril/ Lisinopril	Zocor/ Simvastatin	K-10 (CAN) /Potassium Chloride	Lopressor /Metoprolol Tartrate
Dose	300 mg	40 mg	20 mg	10 MEQ	50 mg
Frequency	QD	QD	QD	QD	QD
Route	PO	PO	PO	PO	PO
Classification	Xanthine oxidase inhibitor	Angiotensin-converting enzyme inhibitor	HMG-CoA reductase inhibitor (statin)	Electrolytes	Beta-adrenergic blocker
Mechanism of Action	Allopurinol inhibits xanthine oxidase and causes it to block the metabolism of xanthine to uric acid. This helps relieve the symptoms of gout. (Jones, 2020)	Reduce blood pressure by inhibiting angiotensin I conversion to angiotensin II. Helps decrease aldosterone which helps the reduction of sodium and water retention. This then	Decreased hepatic cholesterol levels stimulate the uptake of LDL. As LDL are consumed, it reduces the levels of cholesterol. (Jones, 2022)	Potassium becomes depleted and the ion leaves the cell. As ion is leaving the cell it is exchange with extracellular sodium and hydrogens to balance out electroneutrality.	Reduces blood pressure by decreasing the release of renin. Also inhibits the stimulation of beta-receptors sites in the heart. (Jones, 2022)

		helps lower blood pressure. (Jones, 2022)		(PDR search, 2022)	
Reason Client Taking	To treat gout	To treat hypertension	To treat hypercholesterolemia	To treat and prevent hypokalemia	To manage hypertension
Contraindications (2)	Hypersensitivity to allopurinol. Renal failure (Jones, 2022)	Hypersensitivity to lisinopril. Hereditary or idiopathic angioedema (Jones, 2022)	Active hepatic disease Hypersensitivity to simvastatin (Jones, 2022)	Complete heart block Decreased kidney function (PDR search, 2022)	Hypersensitivity to metoprolol Cardiogenic shock (Jones, 2022)
Side Effects/Adverse Reactions (2)	Chills Pruritus (Jones, 2022)	Orthostatic hypertension Arrhythmias (Jones, 2022)	Asthenia Pancreatitis (Jones, 2022)	Bleeding Rash (PDR search, 2022)	Confusion Bronchospasm (Jones, 2022)

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2022). *2022 nurse's drug handbook* (21st ed.). Jones & Bartlett Learning.

PDR Search. K-Tab (potassium chloride) dose, indications, adverse effects, interactions... from PDR.net. (2022). Retrieved from https://www.pdr.net/drug-summary/K-Tab-potassium-chloride-1073

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	ANO x4. Patient was alert and oriented. Patient was in no acute distress. Patient was well groomed.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 15** **Drains present: Y☐ N ☒** **Type:**	Patient's skin was dry, scaley, intact, and warm. No rashes, lesions, or bruising. Skin color was appropriate to ethnicity. Skin turgor was elastic and <3 seconds. Braiden score is 15.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patients head and neck are symmetrical. Thyroid is non palpable. Trachea is midline with no deviation. Bilateral carotid pulses are palpable and 2+. Patient wears glasses. Bilateral sclera white, bilateral conjunctiva is pink, and bilateral cornea is clear. Bilateral lids are pink and moist without any lesions or discharge. PERLA is bilaterally and EOM's intact bilaterally. Bilateral auricles are visible with no lumps or lesion. Bilateral canals clear with grey tympanic membranes. Nose is midline and septum are midline. Turbinate's are moist and pink bilaterally. No visible drainage or polyps. Bilateral frontal sinuses are nontender to palpation. Patient wears dentures. Tongue and buccal mucosa were pink, moist, and no lesions. .
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:**	N/A

Neck Vein Distention: Y ☐ N ☐ **Edema Y ☐ N ☐** **Location of Edema:**	
RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	N/A
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:**	N/A
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	N/A
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐**	N/A

Fall Risk: Y ☒ N☐ **Fall Score: 9.0** **Activity/Mobility Status:** **Independent (up ad lib)☐** **Needs assistance with equipment ☒** **Needs support to stand and walk☒**	
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	N/A
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):**	N/A

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0838	72 bpm	110/58 LA	22 resp/min	36.7°C Oral	96% RA

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0845	Numeric pain scale	N/A	0	N/A	N/A

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
75% of food	Voided 2x

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Impaired gas exchange related to chronic obstructive pulmonary disease as evidence by activity intolerance.	This diagnosis was given because the patient has a deficit in oxygen elimination.	1.Place patient in a position that best allows the facilitation of chest expansion to enhance gas exchange. 2.Assist patient with ADLs to decrease tissue oxygen perfusion.	1.Checking respiratory vital signs Q4H to monitor changes in vital signs**.**	Patient is compliant with instructions and wanted what was best for her needs. Nurse will keep a log of respiration vitals in patient's room to see if there are any changes. Patient would like to keep log for future doctor's visits.
1. Hopelessness related to	This diagnosis	1.Getting patient	1. Patient interacts with	Patient is excited to participate and

major depression disorder as evidence by excessive sleeping.	was given because the patient is sleeping excessively. Patient also is withdrawn from life experiences.	involved with activities. 2. Teach patient coping skills.	others and regains involvement in life experiences.	activities and the ability to leave her room more. Patient understands how to cope when feeling down. Patient will contact family to talk but also will do something she loves to do when feeling down**.**

Other References (APA):

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

Concept Map (20 Points)

Subjective Data

Dyspnea
Coughing
Increased sputum production
Patient reported no pain

Nursing Diagnosis/Outcomes

Impaired gas exchange related to chronic obstructive pulmonary disease as evidence by activity intolerance.

- Checking respiratory vital signs Q4H to monitor changes in vital signs.

Hopelessness related to major depressive disorder as evidence by excessive sleeping.

- Patient interacts with others and regains involvement in life experiences.

Objective Data

- Blood pressure- 110/58
- Respirations- 22 breaths per minute
- Temperature- 36.7
- Pulse- 72 beats per minute
- O2- 96%

Client Information

- 79-year-old patient has chronic obstructive pulmonary disorder. The patient also has a diagnosis of major depression disorder.
- Admitted to long term care facility for COPD.

Nursing Interventions

- Asses the patient's respiratory vital signs
- Help patient with activities of daily living.
- Encourage patient to participate in activities.
- Teach patient coping skills.