

Medications

-carvedilol (Coreg)- 2.25mg orally daily to help control his blood pressure.

Pharmacological- Nonselective beta-blocker (Jones & Bartlett, 2023)

Therapeutic- antihypertensive (Jones & Bartlett, 2023)

Key nursing assessment- Monitor blood glucose levels

-fluticasone furoate-vilanterol (Breo- Ellipta)- 100-125mcg inhaled daily for control of his COPD

Pharmacological- Long-acting beta-agonists (Jones & Bartlett, 2023)

Therapeutic- Steroid (Jones & Bartlett, 2023)

Key nursing assessment- Make sure the patient can take a deep breathe on their own before administration.

Furosemide (Lasix)- 20 mg orally daily to help remove excess caused by excess swelling

Pharmacological- Loop Diuretic (Jones & Bartlett, 2023)

Therapeutic- Antihypertensive (Jones & Bartlett, 2023)

Key nursing assessment- To check his blood pressure before administration

Lisinopril (Prinivil)- 10mg orally daily for his hypertension.

Pharmacological- Angiotensin (Jones & Bartlett, 2023)

Therapeutic- Antihypertensive (Jones & Bartlett, 2023)

Key nursing assessment- Take his blood pressure before administration to get a baseline

prednisone (Rayos)- 40 mg orally daily to help decrease inflammation of his airways.

Pharmacological- Glucocorticoid (Jones & Bartlett, 2023)

Therapeutic- Immunosuppressant (Jones & Bartlett, 2023)

Key nursing assessment- educate patient that this will suppress his immune system

Demographic Data

Date of Admission: 3-1-2024

Admission Diagnosis/Chief Complaint: CC: Shortness of breath

Diagnosis: COBD

Age: 67

Gender: Male

Race/Ethnicity: White/Caucasian

Allergies: Penicillin

Code Status: No CPR

Height in cm: 170cm

Weight in kg: 84kg

Psychosocial Developmental Stage: Integrity vs Despair

Cognitive Developmental Stage: Formal Operation

Braden Score: 21

Morse Fall Score: 12

Infection Control Precautions: Standard

Pathophysiology

Disease process:

COPD is a condition where the airways get inflamed (Agarwal et al., 2023). There is destruction in the alveoli that lead to obstructive physiology. The response from the inflammation causes a reduction in forced expiratory volume (Agarwal et al., 2023). CO2 retention is the result from the decrease in ventilation (Agarwal et al., 2023). Because respiratory effect the entire body, everything can be affected.

S/S of disease: Signs and symptoms include wheezing, muscle wasting, shortness of breather, pursed-lip breathing, hypoxia, clubbing, accessory muscle use, and a barrel chest (Agarwal et al., 2023). The patient had persisted wheezing with shortness of breath. He had low oxygen but was out on 3L to help raise his levels. He had a barrel chest and his legs had little muscle to them.

Method of Diagnosis: A spirometry can help detect for COPD before symptoms are recognized (Agarwal et al., 2023). An ABG, chest x-ray, and a CT can also be used as a method of diagnosing COPD. The patient was already diagnosed with COPD, so I am unsure the exact method that was used. This current hospital stay included a chest X-ray.

Treatment of disease: Treat of COPD is to help control the symptoms. The medications that are prescribed include inhaled corticosteroids, antibiotics, and bronchodilators (Agarwal et al., 2023). Oxygen can also be used. In severe cases, lung transplant may be needed (Agarwal et al., 2023). The patient was put on steroids, bronchodilators, and oxygen therapy.

Lab Values/Diagnostics

Glucose- 109 (70-100 mg/dL)- A patient with exacerbation of COPD has an increase of glucose in relation to his steroid use.

WBC- 13.52(4-12 10(3)mcl)-The increase of WBCs is in relation to his COPD that causes systemic inflammation (Chong et al.,2024).

Absolute Neutrophil 9.73 (2.5-6.0 10(3)mcl)- the increase of absolute neutrophils is in relation to the severity of his COPD exacerbation (Chong et al.,2024).

Absolute Monocytes- 1.51(0.03-0.0710(3)mcl) - The increase of absolute monocyte is in relation to the severity of his COPD exacerbation(Chong et al.,2024).

Troponin- 17(0.5-2.0mmol/L)- The increase of troponin could be in relation to his hear being stressed out of his COPD exacerbation.

Imaging- AP chest X-ray- normal heart size, probably small amount of bibasilar atelectasis, multilevel degenerative change

Admission History

Patient presented to ED on 3-1-2024 for shortness of breath and wheezing. He has known COPD. He was taking prednisone and doxycycline, but stopper taking it two days ago because It makes him feel sick. This is when the onset of SOB started, and nothing made it better. He tried laying down and breathing exercises He used an albuterol inhaler in prone position that helped relieve his symptoms a little.

Medical History

Previous Medical History: CHF, COPD, MI, Osteoporosis

Prior Hospitalizations: 2022(MI), 2019 (Shoulder replacement)

Previous Surgical History: Shoulder Replacement in 2019

Social History: Smokes ¾ of ap ack of cigarette per day for 50 years, 4-6 beer a week, and 3 shots per week. Smokes marijuana occasionally.

Active Orders

-Cardiac diet- The diet focuses of the decrease of sodium intake which can affect the heart's health

-VS Q4 hours- To monitor to BP and vital signs to make sure he is not declining.

-Cardiac Monitor 24 hours- To monitor and see how the heart is working after the COPD exacerbation

-increase activity as tolerated- to make sure the patient retains his FROM

-pneumatic compression stockings- To help prevent a blood clot

-oxygen therapy - To help keep his oxygen levels stable

Physical Exam/Assessment

General: The patient is AxO x4. He in no acute distress and appears to bewell-groomed.

Integument: Skin is slightly pink with even hair distribution. No rashes, lesions, bruises, or ecchymosis. IS dry and warm upon palpation. Skin turgor is normal. Cap refill is less than 3 seconds on toes and fingers bilaterally. Peripheral pulses felt and are a 2+ throughout bilaterally.

HEENT: Trachea is midline with no deviation. Eyes are clear with no drainage. No visible drainage. Lids are moist and pink bilaterally. PERRLA intact bilaterally. Red light flex present. EOMS are intact bilaterally. Ears have no visible drainage or injury. The septum is midline in the nose. Sinus sinuses are non-tender bilaterally. **He has missing teeth** but has dentures. Tonsils are moist and pink, 1+. Uvula is midline and soft palate rises and falls symmetrically.

Cardiovascular: S1 and S2 are noted with no murmurs or gallops. Normal sinus rhythm. Normal rate and rhythm .

Respiratory: **Tachypnea** seen at 24 breaths per minute. **Labored breathing** but are symmetrical. Lung sounds have no crackles, only **wheezes** upon auscultaiton

Genitourinary: The patient has no pain while urination. Urine is clear and yellow.

Gastrointestinal: The patient has active bowel sounds in all four quadrants. Last BM was 3-3-2024. Abdomen is nontender with no organomegaly. **Abdomen is distended.** NO drains , scar, or wounds present

Musculoskeletal: The patient has FROM of all extremities. NO supportive devices. Hands grips and pedal pushers are normal strength bilaterally. Smooth and balance gait. Negative Homans sign.

Neurological: Patients speech is clear. AxOx 4. Mental state was like an adults. He was alert.

Most recent VS (include date/time and highlight if abnormal): 3-4-2024 1101. BP: **109/65** Temp: 97.7 RR:16 HR:72 O2:94. Pain was 2. Location was his back. Numerical scale used.

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
<p style="text-align: center;">3</p> <p style="text-align: center;">Nursing Diagnosis</p> <p>Decrease activity tolerance related to his imbalance between oxygen supply and demand as evidence by him getting out of breath going to the bathroom (Phelps, 2021).</p> <p style="text-align: center;">Rationale</p> <p>Patient could barely make it back to bed after using the bathroom that was a short distance away.</p>	<p style="text-align: center;">2</p> <p style="text-align: center;">Nursing Diagnosis</p> <p>Infective health maintenance behavior related to his social history as evidence by patient smoking ¾ of pack of cigarettes per day for 50 years (Phelps, 2021).</p> <p style="text-align: center;">Rationale</p> <p>Patients’ social history had a significant effect of his health. Smoking is a risk factor of COPD.</p>	<p style="text-align: center;">1</p> <p style="text-align: center;">Nursing Diagnosis</p> <p>Risk for impaired gas exchange in relation to his activity level as evidenced by his tachypnea after physical activity (Phelps, 2021).</p> <p style="text-align: center;">Rationale</p> <p>The patient had rapid breathing after walking a few feet.</p>
<p style="text-align: center;">Interventions</p> <p>Intervention 1: Identify how much activity causes shortness of breath (Phelps, 2021). Intervention 2: provide encouragement and emotional support</p>	<p style="text-align: center;">Interventions</p> <p>Intervention 1: Evaluate the patient's understanding of risk factors for COPD Intervention 2: Provide resources for the patient to help stop smoking (Phelps, 2021).</p>	<p style="text-align: center;">Interventions</p> <p>Intervention 1: Put patient in high fowler Intervention 2: Administer medication as ordered</p>
<p style="text-align: center;">Evaluation of Interventions</p> <p>Patient was embarrassment about his decrease in activity tolerance but responded well to encouragement. The bathroom was 5 yards of the bed, so not much activity set him off.</p>	<p style="text-align: center;">Evaluation of Interventions</p> <p>The patient understood what smoking would do to his health. The patient did not have any desire to stop smoking.</p>	<p style="text-align: center;">Evaluation of Interventions</p> <p>The patient slowed down breathing when sitting in a bed that was in high fowlers. The patient knew he could take an inhaler if needed but did not want to.</p>

References (3) (APA):

Argarwal, A., Raja, A., & Brown, B. (2023, June 3). *Chronic obstructive pulmonary disease*. Medscape.

<https://emedicine.medscape.com/article/297664-overview?form=fpf>

Chong, E., Koo, S., Park, H., Kim, W., Jung, K., Yoo, K., & Yoon, H. (2024). Predictive role of white blood cell differential count for the development of acute exacerbation in Korean chronic obstructive pulmonary disease. *International Journal of Chronic Obstructive Pulmonary Disease* 19(2024), 17-31.

<https://www.tandfonline.com/doi/full/10.2147/COPD.S435921>

Jones & Bartlett Learning. (2023). *Nurse's drug handbook* (22nd ed., pp 823-824). Jones & Bartlett Learning

Phelps, L. (2021). *Nursing diagnosis reference manual* (12th ed.). Wolters Kluwer