

Medications

(Carle Database, 2022) (Jones and Bartlett Learning, 2021)

aspirin

- **Pharm class:** Salicylate
- **Therapeutic class:** NSAID
- **Reason client is taking:** To relieve mild pain and fever.
- **Nursing considerations:** Assess for pain prior to administering. Long-term: monitor renal and liver function. Assess for possible medication interactions.

azithromycin

- **Pharm class:** Macrolide
- **Therapeutic class:** Antibiotic
- **Reason client is taking:** To treat infection – pneumonia.
- **Nursing considerations:** Monitor GI symptoms, such as nausea, vomiting, heartburn, and diarrhea as the medication can worsen it.

Lab Values/Diagnostics

(Carle Database, 2022)

Lab Values

WBC – 21,960 cells/mcL

- **Normal range:** 4,000-11,000 cells/mcL
- **Reason for abnormal:** A client with an infection can have an increased WBC count (Hinkle & Cheever, 2022). The client has pneumonia.

aPTT – 40.4 seconds

- **Normal range:** 22.4-35.9 seconds
- **Reason for abnormal:** A client taking an anticoagulant can increase their aPTT value. The client is taking aspirin to treat mild pain and fever.

Diagnostics

Covid Swab – Negative

Demographic Data

Date of Admission: 03.24.2022

Admission Diagnosis/Chief Complaint: COPD exacerbation – SOB, Tachycardic

Age: 64 years old

Gender: Male

Race/Ethnicity: Caucasian

Allergies: None

Code Status: Full Code

Height in cm: 167.6 cm

Weight in kg: 50.2 kg

Psychosocial Developmental Stage: Generativity vs. Stagnation

Cognitive Developmental Stage: Formal operational

Braden Score: 20

Morse Fall Score: 5

Infection Control Precautions: None

Admission History

Admission history will be noted on the second page.

Medical History

Previous Medical History: COPD | Lived in a homeless shelter (03/03/2020) | Pneumonia secondary to human metapneumovirus (03/03/2020) | Pneumothorax

Prior Hospitalizations: Evaluation of renal colic (01/31/2022) | Vascular surgery - AAA (12/09/2021)

Previous Surgical History: R inguinal hernia repair (01/06/2017) | L forearm fracture surgery (01/05/2017) | B/I AAA repair, endovascular (12/09/2021)

Social History: Quit smoking (~14 years ago) – cigarettes
Previous alcohol use – 1 can of beer/week | No previous drug use.

Pathophysiology

(Hinkle & Cheever, 2022)

Disease process: COPD encompasses two diseases: emphysema and chronic bronchitis. This disease generally affects middle to older adults. COPD obstructs airflow and its chronic inflammation damages tissues. Scar tissue in the airways results in narrowing, limited airflow. The scar tissue in the parenchyma decreases elastic recoil or compliance and causes pulmonary hypertension.

S/S of disease: Signs and symptoms of COPD are reflective of emphysema and chronic bronchitis. Some s/s of COPD include:

- Cyanotic (Chronic bronchitis)
- Hypoxia (Chronic bronchitis)
- Hypercapnia (Chronic bronchitis)
- Dyspnea (Emphysema)
- Barrel Chest (Emphysema)
- Use of accessory muscles to breathe (Emphysema)

Active Orders

(Carle Database, 2022)

IV antibiotics

- **Reason:** Antibiotics are necessary to help treat the infection that the client currently has.

Nebulizer/albuterol

- **Reason:** The client is having difficulty breathing and is in respiratory distress. This treatment is a bronchodilator and will open the client's airway for better breathing.

Sputum check

- **Reason:** A sputum culture is necessary to diagnose infections of the airways and lungs. The client is currently diagnosed with COPD and emphysema; this test is necessary for this client to diagnose infection of the respiratory system.

Medications continued

(Carle Database, 2022) (Jones and Bartlett Learning, 2021)

ceftriaxone

- **Pharm class:** Third-generation cephalosporin
- **Therapeutic class:** Antibiotic
- **Reason client is taking:** To treat infection
- **Nursing considerations:** Watch for seizures. Monitor GI symptoms, such as nausea, vomiting, heartburn, and diarrhea as the medication can worsen it.

pantoprazole

- **Pharm class:** Proton pump inhibitor
- **Therapeutic class:** Antiulcer
- **Reason client is taking:** To treat GERD
- **Nursing considerations:** Monitor signs of hyperglycemia. Monitor improvements in GI symptoms.

prednisone

- **Pharm class:** Glucocorticoid
- **Therapeutic class:** Immunosuppressant
- **Reason client is taking:** To treat chronic inflammatory infection.
- **Nursing considerations:** Assess and monitor for signs of heartburn, nausea, bloody emesis, tarry stool, and loss of appetite.

Lab Values/Diagnostics continued

(Carle Database, 2022)

Diagnostics continued...

Performed on: 03/23/2022

Exam: Chest, single AP portable view

Comparisons: Film from 01/07/2017

Hx: 64-year-old with respiratory distress

Findings: Severe emphysema and chronic interstitial disease. May be superimposed interstitial infiltrates of the b/l lower lobes. No evidence of pleural effusion. No discernable Pneumothorax. Cardio-mediastinal silhouette appears normal in size. Visualized skeletal structures demonstrates no gross acute abnormality.

Impression: Severe emphysema and chronic interstitial disease, possibly mild superimposed interstitial infiltrates of the b/l lower lobes.

Admission History

Upon assessment, the client complains of chest pain and shortness of breath. The client appears to be in respiratory distress. Mr. G presented to the ER last night with complaints of SOB, increasing heart rate (tachycardic), and a febrile (101.6 °F oral). The client reports R chest and flank pain. The client rates the pain a three on a 0-10 numerical pain scale range. The client reported that nothing helped with the pain and that their blood pressure dropped when walking from bedroom to bathroom. The client did not take anything to treat the symptoms prior to calling EMS and being admitted. The client is being administered aspirin daily for pain and antibiotics to treat their infection at the hospital.

Pathophysiology continued

(Hinkle & Cheever, 2022)

Method of Diagnosis: Diagnosis of COPD includes the following:

- Obtaining a health history
- Pulmonary function tests
- Spirometry
- Arterial blood gas (ABGs)
- Chest x-ray

Treatment of disease: Treatment of COPD includes:

- Promote smoking cessation
- Oxygen therapy
- Breathing techniques
 - Diaphragmatic or abdominal breathing
 - Pursed-lip breathing
- Managing exacerbations
- Pneumococcal vaccine
- Influenza vaccine
- Pulmonary rehabilitation
- Medications:
 - Bronchodilators
 - Corticosteroids
 - Antibiotics
 - Mucolytics
 - Antitussives

Physical Exam/Assessment

General: Mr. G is a 64-year-old male. The client is groomed and tired. Height 167.6 cm, weight 50.2 kg, BMI 17.9 kg/m², T 97.6°F oral, P 85 2+ b/l, RR 24, 106/64 L arm sitting, 94% O₂ on 6L nasal cannula. The client appears to be in respiratory distress, using accessory muscles to assist in breathing.

Integument: Skin is warm and dry upon palpation. Skin turgor is less than two seconds, normal mobility. Nails are without clubbing. There are no rashes upon inspection. The client's capillary refill is less than 3 seconds between fingers and toes bilaterally. Bruising around R antecubital space due to puncture wound for IV placement. Braden scale score of 20 based on assessment DOS: 03/24/2022.

HEENT: The client's head and neck are symmetrical. The trachea is midline and there are non-palpable lymph nodes and lobes. The uvula is midline and tonsil size 2+. There is acuity to regular voices. There is no visible abnormality of ears or palpable deformities. The sclera is white bilaterally. The client's cornea is clear b/l. Their conjunctiva is pink b/l with no mucus. The client does not wear glasses. Their EOMs are intact b/l and PERRLA b/l. The client's septum is midline. The client has had no oral/dental surgeries. The client does not have dentures.

Cardiovascular: Upon auscultation, there are clear S1 and S2 without murmurs. The client's PMI is palpable at the 5th intercostal space at the MCL. There is a normal rate and rhythm. Mr. G's extremities are pink, warm, and dry. There is no edema -- palpated in all extremities. The epitrochlear lymph nodes are nonpalpable b/l. The client's pulses are 2+ b/l. Their capillary refill is less than 3 seconds between fingers and toes b/l.

Respiratory: Upon auscultation, wheezing is noted anteriorly and posteriorly bilaterally. Lungs are resonant upon percussion. There is accessory muscle use to assist with breathing. The client is on 6L O₂ nasal cannula. There is a hx of smoking – quit ~14 years ago.

Genitourinary: The amount of urine collected during the assessment was 300 mL @ 1115. The client reports no pain with urination. Color: Amber | Character: Odorless, not foggy | The client is not on dialysis and does not have a catheter. The client voids in a urinal.

Musculoskeletal: The client shows no signs of muscular atrophy in limbs. The client's arm muscle strength is rated at a 3/5 and their hip muscle strength is rated at a 3/5. The client needs assistance from a sitting to standing position. Client is not a fall risk with a score of 5.

Neurological: The patient is alert and relaxed. Mr. G is oriented x4, to person, place, time, and situation. The client presents with coherent speech, and their senses are intact. Upon assessment, PERRLA b/l. The client's strength is equal throughout. The client performed pedal pushes and hand grips with ease.

Most recent VS (include date/time and highlight if abnormal): DOS: 03/24/2022 | Time: 1130 | T 97.6°F oral, P 85 2+ b/l, RR 24, 106/64 L arm sitting, 94% O₂ on 6L nasal cannula

Pain and pain scale used: DOS: 03/24/2022 | Time: 0744 – Number Rating Pain Scale: 0 (0-10) | Time: 1130 – Number Rating Pain Scale: 3 (0-10)

Nursing Diagnoses: (Phelps, 2020)

<p align="center">Nursing Diagnosis 1</p> <p><i>Ineffective airway clearance related to COPD as evidenced by abnormal breath sounds.</i></p>	<p align="center">Nursing Diagnosis 2</p> <p><i>Impaired gas exchange related to altered oxygen supply as evidenced by reduced tolerance for activity.</i></p>	<p align="center">Nursing Diagnosis 3</p> <p><i>Ineffective breathing pattern related to ineffective inspiration and expiration occurring with chronic airflow constraints as evidenced by wheezes upon auscultation of lungs bilaterally.</i></p>
<p align="center">Rationale</p> <p><i>It is crucial for the client with COPD to maintain airway patency, as they are currently experiencing respiratory distress.</i></p>	<p align="center">Rationale</p> <p><i>The client is diagnosed with COPD, obstructing the client’s airway. The priority is to maintain airway patency.</i></p>	<p align="center">Rationale</p> <p><i>The main priority for this client is to manage their ABCs. Airway patency is crucial for a client who has COPD.</i></p>
<p align="center">Interventions</p> <p>Intervention 1: Administer oxygen as ordered. Intervention 2: Assess respiratory status at least every 4 hours or according to established standards.</p>	<p align="center">Interventions</p> <p>Intervention 1: Place the client in a position that best facilitates chest expansion. Intervention 2: Administer and monitor oxygen therapy, as ordered.</p>	<p align="center">Interventions</p> <p>Intervention 1: Assess and record respiratory rate and depth at least every 4 hours. Intervention 2: Administer oxygen as ordered.</p>
<p align="center">Evaluation of Interventions</p> <p><i>Oxygen will promote oxygenation of cells throughout the body. Obstruction in the airway leads to atelectasis, pneumonia, or respiratory failure.</i></p>	<p align="center">Evaluation of Interventions</p> <p><i>Positioning the client in a way that best facilitates chest expansion will enhance gas exchange. Administering oxygen will promote oxygenation and detect signs of decompensation. Detecting this early enough will allow for early intervention.</i></p>	<p align="center">Evaluation of Interventions</p> <p><i>Assessing every 4 hours will help detect early signs of respiratory compromise. Supplemental oxygen helps reduce hypoxemia and relieve respiratory distress.</i></p>

References (3) (APA):

Carle Database (2022)

Hinkle, J.L., & Cheever, K. H. (2022). *Brunner & suddarth's textbook of medical-surgical nursing* (15th ed.). Wolters Kluwer Health Lippincott Williams & Wilkins.

Jones & Bartlett Learning. (2021). *2021 Nurse’s Drug Handbook* (20th ed.). Jones & Bartlett Learning

Phelps, L.L. (2020). *Sparks and Taylor’s Nursing Diagnosis Reference Manual* (11th ed.). Wolters Kluwer.