

Adult/Geriatric Critical Thinking Worksheet

Student Name: Caroline Dikes

Unit: HC5

Pt. Initials: HP

Date: 3/9/21

1. Disease Process & Brief Pathophysiology

Pneumonia is an infection of the lungs caused by fluid or purulent material filling up the alveoli. The alveoli become inflamed and decrease the patients ability of inspiration. The acquisition of pneumonia determines the type. The main causes of pneumonia include viruses, bacteria (*Streptococcus pneumoniae*), mycoplasma, fungi, and aspiration. Sputum color can be a insight into what type of pneumonia the patient is experiencing. In this case, the pneumonia was caused by COVID.

4. Diagnostic Tests pertinent or confirming of diagnosis

Chest X-ray (P)

A positive chest x-ray for pneumonia will show a dense white path. A sputum culture is then performed to determine the type of bacteria causing the infection. In this case, it was caused by COVID.

2. Factors for the Development of the Disease/Acute Illness

Nonmodifiable:

Colds/viral respiratory infection (P)

Chronic respiratory disease

Chronic illness (P)

influenza

Exposure to noxious gases

Aspiration

Immunosuppressive therapy

Modifiable:

Malnutrition, Smoking, Alcoholism

5. Lab Values that may be affected

CBC, specifically WBC >10.5 billion/L

Pulse oximetry is often low on room air and/or nasal cannula <95% (P)

Arterial blood gas <7.35, >7.45

Hemoglobin:

women: > 12.0-15.5 g/dL (P)

men: > 13.5- 17.5

3. Signs and Symptoms

Fever

Chills

Malaise

Pleural pain

Dyspnea

Hemoptysis

Productive or dry cough- green/yellow/rust in color

Adventitious lung sounds on auscultation-diminished or crackles

6. Current Treatment

Antibiotic, determined by the causative agent from the sputum

Bronchodilators to aid in breathing

Antitussives to suppress cough

Humidified O2 for comfort

Increased fluid intake to thin secretions

7. Focused Nursing Diagnosis:

Impaired gas exchange

8. Related to (r/t):

Pathophysiology of decreased alveolar function

9. As evidenced by (aeb):

Patient consistently having low O2 readings.

10. Desired patient outcome:

Patient will demonstrate a consistent O2 reading of greater than or equal to 90% by end of shift 3/9/21.

11. Nursing Interventions related to the Nursing Diagnosis in #7:

1. Raise HOB to 30-45 degrees

Evidenced Based Practice:

This will open up airway and decrease the chance of aspiration of secretions.

2. Assist the patient in TCDB exercises.

Evidenced Based Practice:

Strengthens accessory muscles of breathing. This will also expand the lungs and alveoli.

3. Assist patient in eating small, frequent meals. Although the patient has an NG tube, she can tolerate swallowing thick liquids in small portions throughout the day.

Evidenced Based Practice:

Malnutrition impairs the healing process.

12. Patient Teaching:

1. Teach patient incentive spirometry use to prevent atelectasis.

2. Encourage patient to take deep breaths during signs of distress.

3. Teach breathing and controlled coughing exercises to perform during hospital stay and post discharge.

13. Discharge Planning/Community Resources:

1. Refer patient to dietician to ensure proper nutrition for recovery.

2. Consult with respiratory therapist for continuation of home breathing treatments.

3. Facilitate acquisition of an a take home O2 saturation monitor.

Resources

Ackley, B. J., Ladwig, G. B., Flynn, M. M. B., Martinez-Kratz, M. R., & Zanotti, M. (2020). *Nursing diagnosis handbook: an evidence-based guide to planning care*. Elsevier.

U.S. Department of Health and Human Services. *Pneumonia*. National Heart Lung and Blood Institute. <https://www.nhlbi.nih.gov/health-topics/pneumonia>.

