

Nursing Case Study: Pneumonia in an Older Adult

I. Introduction

This nursing case study focuses on the care of a 68-year-old male patient admitted with community-acquired pneumonia. The goal is to demonstrate clinical reasoning, evidence-based decision-making, and structured nursing documentation. The case highlights assessment, planning, intervention, and evaluation steps according to standard nursing practice.

2. Patient Description

- **Name:** Mr. J. (pseudonym used for confidentiality)
- **Age:** 68 years
- **Gender:** Male
- **Marital status:** Widowed
- **Occupation:** Retired bus driver
- **Living situation:** Lives alone in a one-bedroom apartment
- **Medical history:** Type 2 diabetes mellitus, mild chronic obstructive pulmonary disease (COPD), hypertension
- **Lifestyle factors:** Smokes ten cigarettes a day for the past 35 years; occasional alcohol use; limited exercise

3. Clinical Presentation

Mr. J. arrived at the emergency department complaining of shortness of breath, fever, and a persistent productive cough for five days. He reported fatigue, poor appetite, and chest pain on deep inspiration.

Vital signs at admission showed:

- **Temperature:** 38.9°C
- **Respiratory rate:** 28 breaths per minute
- **Heart rate:** 106 beats per minute
- **Blood pressure:** 138/84 mmHg
- **Oxygen saturation:** 88% on room air

Crackles were heard in the right lower lobe upon auscultation. A chest X-ray confirmed right lower lobe consolidation consistent with pneumonia.

4. Patient Assessment

Information was gathered through direct observation, interview, and review of laboratory results. Sputum culture identified *Streptococcus pneumoniae*. White blood cell count was 14,600/mm³, and blood glucose levels were elevated at 185 mg/dL. The patient appeared tired, anxious, and slightly confused, particularly during fever spikes. Breath sounds were diminished in the affected lung field. Nursing observations noted shallow breathing and occasional use of accessory muscles.

5. Nursing Diagnoses / Problems

1. Impaired gas exchange related to alveolar inflammation and secretions
2. Ineffective airway clearance related to increased mucus production
3. Hyperthermia related to infection process
4. Imbalanced nutrition: less than body requirements due to poor appetite
5. Activity intolerance related to weakness and dyspnea

6. Nursing Care Plan

Goal 1: Improve oxygen saturation to at least 94% within 24 hours

- Administer prescribed oxygen therapy as ordered.
- Encourage semi-Fowler's position to ease breathing.
- Monitor oxygen saturation every two hours and record trends.

Goal 2: Maintain clear airways

- Assist with coughing and deep breathing exercises every two hours.
- Administer prescribed bronchodilators and expectorants.
- Provide fluids to thin secretions unless contraindicated.

Goal 3: Reduce fever and discomfort

- Administer prescribed antibiotics and antipyretics as ordered.
- Monitor temperature regularly.
- Encourage light bedding and increased oral fluids for comfort.

Goal 4: Improve nutritional intake

- Offer small, frequent, high-calorie meals.
- Monitor appetite and intake each shift.
- Consult with a dietitian for nutritional support if needed.

Goal 5: Conserve energy and manage activity

- Plan nursing activities to allow adequate rest periods.
- Assist with mobility as tolerated.
- Gradually increase activity once respiratory status improves.

7. Implementation and Documentation

All interventions were carried out as planned. Oxygen therapy at two liters per minute via nasal cannula maintained oxygen saturation above 94%. The patient was educated on breathing exercises and practiced them with supervision. Antibiotics were given on schedule. The nurse documented each intervention immediately after completion, noting changes in breathing, sputum color, and temperature.

Collaboration with the physician ensured regular review of antibiotic effectiveness.

8. Evaluation

After three days, Mr. J.'s condition improved. Oxygen saturation remained stable at 95–96%. Fever subsided, appetite returned gradually, and respiratory rate normalized. Sputum production decreased, and breath sounds improved. The patient was able to ambulate short distances without distress. Nursing goals were achieved, though continued home monitoring was recommended after discharge.

9. Ethical Considerations

Patient privacy was maintained throughout care. All documentation used initials only. Informed consent was obtained before procedures and treatments. The nurse provided clear explanations of care steps to ensure understanding and cooperation.

10. Reflection

This case reinforced the importance of early assessment, accurate oxygen monitoring, and consistent documentation. Pneumonia in older adults can progress quickly, but timely nursing interventions can prevent complications. The experience emphasized collaboration across disciplines and the role of patient education in recovery.