



Nursing Care Plan

A Client with Pneumonia

Mary O'Neal is a 35-year-old executive assistant and a part-time college student. On returning home from class one evening, she begins to chill. She alternates between chills and sweats all night. Staying home from work, she remains in bed most of the next day. Her fever continues, and she develops a cough and dull aching chest pain. When the cough becomes productive of rust-colored sputum the following day, she seeks medical treatment from her family doctor.

ASSESSMENT

Debby Kowalski, RN, the family practice clinic nurse, admits Mrs. O'Neal to the clinic and obtains the nursing assessment. Mrs. O'Neal denies any previous history of respiratory diseases "other than the usual colds, flu, and such." She also denies any history of smoking or medication allergies. She says her symptoms began abruptly with the onset of the chills. She describes her chest pain as a dull ache that was initially substernal but now is localized in her lower lateral right chest. The pain increases with deep breathing, coughing, and moving. Her cough is increasing in frequency and severity, and her sputum appears rusty brown. Her vital signs are BP 116/74, P 104 and regular, R 26, T 101.8°F (38.7°C). Skin warm and flushed, with no evidence of cyanosis. Respirations shallow, unlabored; respiratory excursion equal. Diminished breath sounds in bases bilaterally, crackles noted in right posterior and lateral base. Faint pleural rub heard at right midaxillary line.

A STAT CBC shows a WBC of 18,900/mm³; differential shows increased numbers of neutrophils and immature WBCs (bands). Ms. Kowalski has Mrs. O'Neal rinse with an antiseptic mouthwash and collect a sputum specimen for culture and Gram stain prior to seeing the physician.

The physician orders a chest X-ray after examining Mrs. O'Neal. Based on her history, examination, and the chest X-ray, he makes the diagnosis of acute bacterial pneumonia, probably pneumococcal. He prescribes oral penicillin V, 500 mg every 6 hours for 10 days. He asks Mrs. O'Neal to return for a follow-up appointment in 10 days and refers her back to Ms. Kowalski for appropriate teaching.

DIAGNOSIS

Ms. Kowalski develops the following nursing diagnoses for Mrs. O'Neal.

- *Ineffective breathing pattern* related to pleuritic chest pain
- *Hyperthermia* related to inflammatory process
- *Deficient knowledge* about pneumonia and its treatment

EXPECTED OUTCOMES

The expected outcomes for the plan of care specify that Mrs. O'Neal will:

- Maintain normal pulmonary function.
- Describe measures to minimize elevations in body temperature.
- Identify a schedule for taking her medication that will facilitate compliance with the regimen.

- Describe manifestations that should be reported to the physician.

PLANNING AND IMPLEMENTATION

Ms. Kowalski plans and implements the following interventions for Mrs. O'Neal.

- Assess knowledge and understanding of pneumonia and its effects.
- Assist to develop a medication schedule that coordinates with normal daily routine.
- Teach about the following:
 - a. Importance of avoiding use of a cough suppressant except at night to facilitate rest
 - b. Ways to increase fluid intake to reduce fever and maintain thin mucus for easy expectoration
 - c. Beneficial effects of rest, especially during the acute phase of her illness
 - d. Safe use of aspirin and acetaminophen to reduce fever
 - e. Importance of taking all prescribed medication doses as scheduled
 - f. Common side effects of penicillin V and their management
 - g. Early manifestations of penicillin allergy that necessitate stopping the medication and notifying the physician
 - h. Signs of complications of pneumonia or worsening pneumonia to report

EVALUATION

The sputum culture confirms *S. pneumoniae* as the cause of Mrs. O'Neal's pneumonia. When she returns for her follow-up appointment, she reports that she began to feel better after 2 days on the penicillin and returned to work the following Monday. Her examination reveals good breath sounds throughout with no adventitious sounds. The follow-up sputum culture is free of pathogens.

Critical Thinking in the Nursing Process

1. Do any of the factors identified in the case study increase Mrs. O'Neal's risk for acute bacterial pneumonia?
2. Mrs. O'Neal's WBC differential showed increased neutrophil and band counts. Describe the reason for and effect of this change.
3. Even though Mrs. O'Neal has no history of medication allergies, anaphylactic shock remains a potential risk. Describe the sequence of events leading to anaphylactic shock, its initial symptoms, and immediate nursing interventions.
4. Had Mrs. O'Neal required hospitalization to treat her acute pneumonia, interruption of her usual activities and responsibilities could lead to anxiety. Develop a care plan for this situation, using the nursing diagnosis, *Altered role performance* related to hospitalization.

See Critical Thinking in the Nursing Process in Appendix C.