N311 Care Plan 3

Ngoc Trinh

Lakeview College of Nursing

N311: Foundations of Professional Practice

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Demographics

Date of Admission	Client Initials	Age	Biological Gender
03/12/25	GN	67-year-old	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Retired	Married	Sulfa Antibiotic
Code Status	**Height**	**Weight**	
Full code	165.1 cm	99.8 kg	

Medical History

Past Medical History: Hypothyroidism

Past Surgical History: N/A

Family History: Father – Gallbladder surgery, Mother – Breast cancer.

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use):

The patient denied smoking, alcohol, and drug use.

Education: First year of college.

Living Situation: The patient states she lives with her husband.

Assistive devices: N/A

Admission Assessment

Chief Complaint: Cough, Fever, Nausea and Diarrhea.

History of Present Illness (HPI) – OLD CARTS: The 67-year-old Caucasian female presented at OFS on March 17, 2025, complaining of cough, fever, nausea, and diarrhea. The patient coughed and felt pain; the location of the pain was her chest. She also states that the symptoms are worse when she is lying down. The patient describes the pain as a sore and rates the pain a 5/10 on a numerical scale. The patient states that she used Tylenol to relieve the pain.

Primary Diagnosis

Primary Diagnosis on Admission: Pneumonia.

Secondary Diagnosis (if applicable): Pain of upper abdomen, Hypoxia.

Pathophysiology

Pathophysiology of the Disease, APA format:

Pneumonia represents a serious lung disease where the lung parenchyma becomes inflamed and primarily affects the alveoli along with the bronchioles and interstitial tissue. Pneumonia develops because of different infectious agents such as bacteria, viruses, fungi, and gastric contents aspiration. Pneumonia causes compromised gas exchange while triggering respiratory distress and systemic symptoms according to Capriotti & Frizzell (2020). The patient arrived for admission due to pneumonia but complained of cough and fever along with nausea and diarrhea, and tested positive for Influenza A which frequently leads to community-acquired pneumonia.

Pneumonia pathophysiology starts when pathogens overcome the body's defense systems that include mucociliary clearance and immune response mechanisms along with the cough reflex. After reaching the lower respiratory tract pathogens invade alveolar spaces which activates an immune response. Alveolar macrophages activate during the immune response to release proinflammatory cytokines including tumor necrosis factor-alpha (TNF-α) and interleukins (IL-1 and IL-6). The cytokines direct neutrophils to infection sites which leads to higher capillary permeability and causes exudate to gather in the alveoli (Capriotti & Frizzell, 2020). The exudate contains fluid and immune cells as well as cellular debris with potential

blood presence leading to impaired oxygen and carbon dioxide exchange in the lung segments it occupies.

The patient's productive cough occurs because their body works to remove alveolar exudate and mucus from the respiratory tract. Pyrogens that affect the hypothalamic thermoregulatory center trigger fever as a hallmark symptom. Pyrogens function by raising the body temperature to suppress microbial proliferation while boosting immune (Capriotti & Frizzell, 2020). Multiple factors could explain why patients experience nausea and diarrhea. Patients infected with Influenza A experience gastrointestinal symptoms because systemic inflammation triggers these side effects. The body's elevated temperature during fever and related inflammatory markers affect the digestive system by speeding up gastrointestinal movement and changing intestinal bacteria which leads to nausea and diarrhea (Capriotti & Frizzell, 2020).

When a patient tests positive for Influenza A it indicates that their pneumonia could be a viral infection or developed as a bacterial infection after the initial viral infection. Influenza viruses destroy respiratory epithelial cells which diminishes mucociliary clearance and increases the risk of bacterial invasion in the lungs. The damage allows bacteria to enter the lower airways, possibly resulting in secondary bacterial pneumonia which tends to be severe and can lead to complications such as sepsis or acute respiratory distress syndrome (Capriotti & Frizzell, 2020).

The patient's lab results indicate additional evidence supporting the diagnosis of pneumonia alongside a systemic infection. The body shows active defense against bacterial pathogens through high neutrophil levels at 84.3%, surpassing the normal range of 47.0–73.0%, which signals an acute bacterial infection. The patient's low lymphocyte count suggests an

immunosuppression due to stress or an expected reaction to bacterial infections, to which neutrophils primarily respond. The patient's systemic infection manifests as a fever of 102.1°F and high blood pressure at 161/87 mmHg.

In conclusion, pneumonia develops through complex inflammation due to lung tissue infection which causes fluid and immune cells to accumulate in the alveoli thereby disrupting gas exchange. The combination of cough, fever, nausea, diarrhea symptoms and a positive result for Influenza A indicates viral pneumonia with potential secondary bacterial infection. Timely medical assessment combined with appropriate supportive treatment and correct use of antimicrobial drugs helps avoid health setbacks while supporting patient recovery.

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives*. F.A. Davis Company.

Laboratory/Diagnostic Data

Lab Name	Admission Value	Today's Value	Normal Range	Reasons for Abnormal
Glucose	117	87	70-99 mg/dL	High glucose indicates possible impaired glucose metabolism or stress response (Taylor & Bartlett, 2023).
Neutrophils	84.3	79.6	47.0-73	High neutrophil count suggests an acute inflammatory reaction, most likely brought on by an infection (Taylor & Bartlett, 2023).

Lymphocytes	7.2	11.6	18.0-42.0 %	Low lymphocyte count suggests a possible bacterial infection or stress-related immune suppression (Taylor & Bartlett, 2023).
Absolute	0.70	0.90	1.30-3.20	Low absolute lymphocyte count indicates weakened immune response, often seen in bacterial infections or acute stress (Taylor & Bartlett, 2023).
MCV	74.9	75.5	82.0-96.0 FL	Low MCV indicates microcytic red blood cells, commonly associated with iron deficiency anemia (Taylor & Bartlett, 2023).
BUN	9	7	10-20 mg/dL	Low BUN may indicate liver dysfunction, overhydration, or a low-protein diet (Taylor & Bartlett, 2023).
MCH	24.1	24.3	26.0-34.0 pg.	Low MCH indicates less hemoglobin per red blood cell, often seen in iron deficiency anemia (Taylor & Bartlett, 2023).
Calcium	8.4	8.2	8.7-10.5 mg/dL	Low calcium can indicate metabolic issues or deficiencies (Taylor & Bartlett, 2023).
Flu A	Positive	Negative	Negative	Positive Flu A result indicates infected with influenza A virus, which causes acute respiratory illness. (Taylor & Bartlett, 2023).

Diagnostic Test & Purpose	Clients Signs and Symptoms	Results
CT Abd/pelvis	Pain of upper abdomen	Mural thickening of the bladder, suspicious for cystitis. The purpose of this test was to rule out intra-abdominal pathology and assess the reason of the patient's upper abdominal pain.
XR Chest	SOB	Left lower lung airspace opacification representing pneumonia. Trace left pleural effusion. The purpose of this test was to evaluate the lungs for potential pneumonia or other respiratory disorders producing dyspnea, a chest X-ray was required.
ED EKG	Hypoxia	Normal sinus rhythm. No STEMI.

		The purpose of this test was to check for cardiac involvement or arrhythmias as a potential cause of hypoxia.

Diagnostic Test Reference (1) (APA):

Taylor, C., Lynn, P., & Bartlett, J. L. (2023). *Fundamentals of nursing: The art and science of person-centered care* (10th ed.). Wolters Kluwer.

Assessment

Physical Exam – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

General, Psychosocial/Cultural, and TWO focused assessment specific to the client is required.

The student and instructor may complete these assessments together.

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Alertness:** The patient was alert & oriented x4 **Orientation**: The patient was able to verify the time. **Distress:** The patient showed no signs of distress. **Overall appearance:** The patient was well-groomed.

INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	**Braden Score:** 21
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐ Edema Y ☐ N ☐** **Location of Edema:**	.
RESPIRATORY:	**Accessory muscle use: Y☐ N ☒**

Accessory muscle use: Y☐ N ☐ **Breath Sounds: Location, character**	**Breath Sounds:** Crackles over left lung.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy:** Y ☐ N ☐ **Nasogastric:** Y ☐ N ☐ **Size:** **Feeding tubes/PEG tube** Y ☐ N ☐ **Type:**	**Diet at home:** None reported **Current Diet:** **Height:** 165.1 cm **Weight:** 99.8 kg **Auscultation Bowel sounds:** All quadrants **Last BM:** 03/12/2025 **Palpation: Pain, Mass etc.:** None reported **Inspection:** **Distention:** None reported **Incisions:** None reported **Scars:** None reported **Drains:** None reported **Wounds:** None reported **Ostomy:** Y ☐ N ☒ **Nasogastric:** Y ☐ N ☒ **Size:** **Feeding tubes/PEG tube** Y ☐ N ☒ **Type:**
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination:** Y ☐ N ☐ **Dialysis:** Y ☐ N ☐	

Inspection of genitals: **Catheter: Y ☐ N ☐** **Type:** **Size:**	
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☐ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk**☐	**Fall Risk: Y ☐ N☒** **Fall Score:** 12
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	.

PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**Coping method(s):** The patient uses techniques like deep breathing to cope with the pain and discomfort. **Developmental level:** Stage 8: integrity vs despair. **Religion & what it means to pt.:** The patient identifies as Christian and expresses that her faith is a source of strength, providing her with emotional support during difficult times. **Personal/Family Data (Think about home environment, family structure, and available family support):** The patient has her husband who support and monitors.

Vital Signs, 1 set – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0718	95 bpm	161/87 mmHg	18 Respirations per minute.	102.1 Temporal	85% Room air

Pain Assessment, 1 set

Time	Scale	Location	Severity	Characteristics	Interventions
1345	0-10	Chest	5/10	Sore	Tylenol

Intake and Output

Intake (in mL)	Output (in mL)
NS: 100 mL Total: 100 mL	Urine voided: 25 mL Total: 25 mL

Nursing Diagnosis
Must be NANDA approved nursing diagnosis

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective airway clearance related to increased sputum production as evidenced by productive cough (Vera, 2024).	This diagnosis was chosen because the patient has reported of cough and pain in chest.	**1.**Elevate the head of the bed and change position frequently (Vera, 2024). **2.**Auscultate lung fields, noting areas of decreased or absent airflow and adventitious breath sounds: crackles, wheezes (Vera, 2024).	**1.** The patient will maintain effective airway clearance and exhibit stable respiratory status, with no recurrence of pneumonia symptoms.	The client showed improved airway clearance with decreased crackles and effective coughing, partially meeting the outcome goal and requiring continued monitoring and supportive interventions.
1. Ineffective thermoregulation related to inflammatory process	This diagnosis was chosen	**1.** Eliminate excess clothing and	**1.** The patient will keep their	The client's temperature and blood pressure

as evidenced by hyperthermia, elevated blood pressure (Vera, 2024).	because the patient has body temp was 102.1 F, and blood pressure was 161/87.	covers. Encourage patient to dress in lightweight clothing and keep the room at a comfortable temperature. Exposing skin to room air decreases warmth, increases evaporative cooling, and promotes patient comfort (Vera, 2024). **2.**Administer antipyretic medications as prescribed. Antipyretic medications lower body temperature by blocking the synthesis of prostaglandins that act in the hypothalamus (Vera, 2024).	blood pressure and temperature within normal range.	decreased to within normal ranges after antipyretic administration and environmental adjustments. The goal was met. The patient will discharge today.

Other References (APA):

Matt Vera BSN, R.N. (2024). *Pneumonia nursing diagnosis & nursing care plans*. Nurseslabs. https://nurseslabs.com/pneumonia-nursing-care-plans/