

N311 Care Plan 4

Anisha Coleman

Lakeview College of Nursing

N311: Foundations of Professional Practice

Professor Linda Scribner

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Demographics (5 points)

Date of Admission 10/30	Client Initials SS	Age 70	Gender F
Race/Ethnicity Black, non-Hispanic	Occupation n/a	Marital Status unknown	Allergies (listed below)
Code Status FULL	Height 5'7	Weight 73.8 kg (162lbs, 11.2oz)	

Allergies:

- Iodine- High, SOB
- Moxifloxacin – High, SOB
- ACE Inhibitor – not specified, Cough
- Aspirin-dipyridamole – Low, Rash
- Clindamycin – Low, Rash
- Penicillin – Low, Rash
- Sulfonamide antibiotics – Low, Rash
- Valdecoxib – Low, Rash

Medical History (5 Points)

(unable to obtain some information due to patients' factor)

Past Medical History: systemic lupus erythematosus organ, system involvement unspecified, lupus, hypertension, hyperlipidemia, L breast cancer, bipolar disorder, GERD, restrictive lung disease, dementia

Past Surgical History: L breast mastectomy, thoracentesis

Family History: no pertinent family history

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

- Patient does not smoke nor drink

Admission Assessment

Chief Complaint (2 points): Abnormal Lab

History of Present Illness – OLD CARTS (10 points): Patient was admitted to the ER at St.

Mary Hospital in Decatur from 10/5 – 10/18 for UTI related complications. She had labs drawn

up for a follow-up that revealed worsening generalized weakness and leukocytosis with elevated WBC and was then referred to the ER. SS presented to the ER with physical deconditioning, UTI complications with sepsis, and was found to have large right pleural effusion with atelectasis resulting in a thoracentesis where 750cc of exudative fluid was removed. A chest tube was placed 10/9 and removed on 10/12. A CT and X-ray was ordered revealing worsening of R pleural effusion with new hydropneumothorax throughout both lungs. She was transferred to Carle Foundation Hospital for further management on 10/30 because of empyema. Location is generalized with evolving duration. Pain assessment is unable to be obtained due to patients' factors of altered mental status and dementia. Abnormal labs are related to diagnosis of empyema. There is currently no relief for the condition however a chest tube and antibiotics were used as treatment.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Pleural effusion; empyema of R lung

Secondary Diagnosis (if applicable): Hydropneumothorax with worsening of R pleural effusion

Pathophysiology

Pathophysiology of the Disease, APA format (20 points):

A pleural effusion is an abnormal collection of fluid within the pleural cavity that compresses lung tissue and inhibits lung inflation (Capriotti, 2020). It is commonly edematous fluid that may be exudate, transudate, purulent, lymph or sanguineous (bloody), that accumulates within the pleural space because of heart failure, severe pulmonary infection or neoplasm (Capriotti, 2020). The pleural space normally contains approximately 1 mL of fluid that lubricates with visceral and parietal pleural membrane which should be free of any extra air or

fluid (Capriotti, 2020). Fluid leaks out of the pulmonary capillaries and cells into the pleural space when the hydrostatic pressure in the lung tissue exceeds oncotic pressure (Capriotti, 2020). Hydrostatic pressure exerts an outward force that pushes water into the interstitial fluid (ISF) and intercellular fluid compartment (ICF) (Capriotti 2020). ISF filtrate blood located between the cells and capillaries (Capriotti, 2020). Oncotic pressure, sometimes called colloidal osmotic pressure, is a type of osmotic pressure that has a pulling force from ICF and extracellular fluid (ECF) (Capriotti, 2020). The ECF contains electrolytes oxygen, glucose and nutrients to be delivered to cells (Capriotti, 2020). When the oncotic pressure is low, the force exerted by hydrostatic pressure overwhelms the oncotic pressure causing water in the bloodstream to push outward from the capillary pores towards the ISF and ICF (Capriotti, 2020). Some signs of presence of pleural effusion are dyspnea, tachypnea, chest pain, dullness to percussion, diminished breath sounds (Capriotti, 2020). To diagnosis pleural effusion, chest x-ray, CT scans, CT angiogram, and ultrasounds are required (Capriotti, 2020). A thoracentesis will be done to relieve pressure on the lungs while suction and drainage of a pleural effusion are a necessary form of treatment (Capriotti, 2020). Empyema is a collection of pus in the pleural cavity, gram-positive, or culture from the pleural fluid that is usually associated with pneumonia but may also develop after thoracic surgery or thoracic trauma (Garvia & Paul, 2023). The infection is either community-acquired or hospital-acquired (Garvia & Paul, 2023). During an inflammatory process (pneumonia), there is an increase in fluid production in the pleural cavity known as the exudate stage (Garvia & Paul, 2023). Exudates is a cloudy, edematous fluid with high protein content that is mostly caused by an infectious immunological or inflammatory process and comes from impaired lymphatic drainage of the pleural space (Capriotti, 2020). As the disease

progresses, bacteria colonize the fluid characterized by elevated lactate dehydrogenase, proteins, neutrophils, and dead cells, resulting in generating empyema (Garvia & Paul, 2023).

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC 10 ⁶ /uL	3.5 – 5.20	3.45 ↓	3.39 ↓	Anemia, hemorrhage, renal disease
Hgb g/dL	11.0 – 16.0	7.7 ↓	7.6 ↓	Chronic hemorrhage, neoplasia, splenomegaly
Hct %	34.0 – 47.0	24.0 ↓	22.6 ↓	Anemia, cirrhosis, leukemia, multiple myeloma
Platelets 10 ³ /uL	140 – 400	390	324	-
WBC 10 ³ /uL	4.00 – 11.00	27.08 ↑	14.43 ↑	Infection, inflammation, tissue necrosis
Neutrophils 10 ³ /uL	1.60 – 7.70	22.23	10.65 ↑	Inflammatory disease: rheumatic fever Metabolic disorder: eclampsia Acute suppurative infection
Lymphocytes 10 ³ /uL	1.0– 4.90	2.11	2.11	-
Monocytes 10 ³ /uL	0.00 – 1.10	1.09	1.09	-
Eosinophils 10 ³ /uL	0.00 – 0.50	0.26	0.26	-
Bands	n/a	n/a	n/a	-

(Carle Foundation Hospital Laboratory, 2024. Epic)

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na- mmol/L	136 - 145	140	138	-

K+ mmol/L	3.5 - 5.1	4.5	5.8↑	Acidosis, renal failure, dehydration, infection
Cl- mmol/L	98 – 107	107	111↑	Anemia, dehydration, respiratory alkalosis, hyperparathyroidism
CO2 mmol/L	22.0 – 29.0	23.0	20.0↓	Renal failure, shock, metabolic acidosis, diabetic ketoacidosis
Glucose mg/dL	74 – 100	92	88	-
BUN mg/dL	10 – 20	20	18	-
Creatinine mg/dL	0.55 – 1.02	1.45↑	1.11↑	Glomerulonephritis, urinary tract obstruction, reduced renal blood flow (shock, dehydration, CHF)
Albumin g/dL	3.4 – 4.8	1.4↓	1.4↓	Acute infection, cirrhosis, chronic infection
Calcium mg/dL	8.9 – 10.6	8.1↓	6.1↓	Alkalosis, hypoparathyroidism, malabsorption, renal failure
Mag mg/dL	1.6 – 2.6	2.0	1.9	-
Phosphate	n/a	n/a	n/a	-
Bilirubin mg/dL	0.2 – 1.2	0.4	0.4	-
Alk Phos U/L	40 – 150	106	106	-

(Carle Foundation Hospital Laboratory, 2024. Epic)

Urinalysis **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Colorless, clear	Yellow, clear	-	-
pH	4.5 – 8.0	6.5	-	-
Specific Gravity	1.003–1.035	1.017	-	-
Glucose mg/dL	Negative	Negative	-	-
Protein	Negative	30	-	Proteinuria, renal disease, diabetic

mg/dL				mellitus, glomerulonephritis, multiple myeloma
Ketones mg/dL	Negative	Negative	-	-
WBC U/L	0 - 25	6	-	-
RBC U/L	0 - 20	<2	-	-
Leukoesterase	Negative	Negative	-	-

(Carle Foundation Hospital Laboratory, 2024. Epic)

Cultures **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	n/a	n/a	-	-
Blood Culture	No growth in 24 hours	No growth in 24 hours	-	-
Sputum Culture	n/a	n/a	-	-
Stool Culture	n/a	n/a	-	-

(Carle Foundation Hospital Laboratory, 2024. Epic)

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

SS had a chest x-ray on October 30th for R sided empyema status post chest tube. Chest X-rays produce images of your heart, lungs, blood vessels, airways, and the bones of the chest and spine and can also reveal fluid in or around your lungs or air surrounding a lung (Mayo Clinic, 2024). The diagnostic impression is 1) R basilar pleural drainage catheter in place with finding of a presumed R hemithorax empyema better demonstrated on outside facility (Carle, 2024) and 2) R mid and lower lung opacity likely reflect a combination of the empyema, atelectasis, and possible pneumonia/pneumonitis (Epic,

2024) On an x-ray, some of the characteristics of a pleural effusion are blunted due to costodiaphragmatic angles and lungs filled with radiolucent fluid (depending on the size of the effusion) (Garvia & Paul, 2023)

SS received a CT of the thorax without contrast on October 29th for outside imaging follow up with possible hydropneumothorax. A CT scan is a painless type of imaging that uses X-ray techniques to create detailed images of the body more detailed than plain X-rays do (Mayo Clinic, 2024). The diagnostic impression is 1) interval worsening R pleural effusion with new hydropneumothorax potentially with loculated components, 2) associated pleura thickening noted which may be related to empyema, and 3) new patchy areas of scattered pulmonary opacities with tree-in-bud distribution predominantly throughout both lungs (Epic, 2024).

Current Medications (10 points, 2 points per completed med)

5 different medications must be completed

Medications (5 required)

Brand/Generic	Brand Citalopram hydrobromide Generic: Celexa	Brand donepezil hydrochloride Generic: Aricept	Brand: mirtazapine Generic: Remeron	Brand Trazadone Generic	Brand Norco Generic Hydrocodone acetaminophen
Dose	10mg	10mg	15mg	50mg	8.6mg
Frequency	Daily	Daily at bedtime	Daily at bedtime	Daily at bedtime	BID
Route	P.O.	P.O.	P.O.	P.O.	P.O.
Classification	Pharmacologic: SSRI Therapeutic: antidepressant	Pharmacologic: acetylcholinesterase Therapeutic: antidementia	Pharmacologic tetracyclic antidepressant Therapeutic antidepressant	Pharmacologic triazolopyridine Therapeutic antidepressant	Pharmacologi c Therapeutic:
Mechanism of Action	Blocks serotonin reuptake by adrenergic nerves at the nerve synapses	Inhibits acetylcholinesterase reversibly and improves acetylcholine's concentration at cholinergic synapse	May inhibit neuronal reuptake of norepinephrine and serotonin to increase the action of these neurotransmitte rs in the nerve cell	Blocks serotonin reuptake along the presynaptic neuronal membrane causing an antidepressant effect	Blocking pain signals in the brain

Reason Client Taking	Treatment of unipolar major depressive disorders in adults	To treat mild to moderate Alzheimer's disease	To treat major depression	To treat major depression	To treat moderate pain
Contraindications (2)	Hypersensitivity, use within 14 days of MOA inhibitor	History of allergic contact dermatitis, hypersensitivity to donepezil	Hypersensitivity to mirtazapine, used within 14 days of MAO inhibitor	Hypersensitivity to trazodone, use within 14 days of an MOA inhibitor	Alcohol, antihistamines,
Side Effects/Adverse Reactions (2)	Seizures, heart failure, GI bleeding, hemolytic anemia, hyponatremia	Seizures, AV block, hepatitis, hemolytic hemorrhage	Cerebral ischemia, bradycardia, exfoliative dermatitis	CVA, arrhythmias, hemolytic anemia, apnea, hyponatremia	Constipation, dizziness, headaches, nausea, vomiting

- SSRI – selective serotonin reuptake inhibitor

Assessment

Physical Exam (18 points) – **HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS**

General, Psychosocial/Cultural, and TWO focused assessments specific to the client.

GENERAL: Alertness: Orientation: Distress: Overall appearance:	<p>Patient is alert and oriented to self. No signs of distress. Unable to hold a stable conversation but can identify name and DOB</p>
INTEGUMENTARY: Skin color: Character: Temperature: Turgor: Rashes: Bruises: Wounds: . Braden Score: Drains present: Y <input type="checkbox"/> N <input type="checkbox"/> Type:	<p>Skin is brown and aligns with patient race. Skin is warm and dry upon palpation. No rashes, lesions, or bruising. Normal quantity, distribution and texture of hair. Nails without clubbing or cyanosis. Skin turgor normal mobility. Capillary refill less than 3 seconds fingers and toes bilaterally.</p> <p>Braden Score: 14</p> <p>Fall Risk: 35</p>

<p>HEENT:</p> <p>Head/Neck:</p> <p>Ears:</p> <p>Eyes:</p> <p>Nose:</p> <p>Teeth:</p>	.
<p>CARDIOVASCULAR:</p> <p>Heart sounds:</p> <p>S1, S2, S3, S4, murmur etc. .</p> <p>Cardiac rhythm (if applicable):</p> <p>Peripheral Pulses:</p> <p>Capillary refill:</p> <p>Neck Vein Distention: Y <input type="checkbox"/> N <input type="checkbox"/> Edema Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Location of Edema:</p>	.
<p>RESPIRATORY:</p> <p>Accessory muscle use: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Breath Sounds: Location, character</p>	<p>Normal rate and pattern of respiration. Crackling sounds are heard upon posterior auscultation. No wheezing or rhonchi noted.</p> <p>Accessory muscles: Yes</p>
<p>GASTROINTESTINAL:</p> <p>Diet at home:</p> <p>Current Diet</p> <p>Height:</p> <p>Weight:</p> <p>Auscultation Bowel sounds:</p> <p>Last BM:</p> <p>Palpation: Pain, Mass etc.:</p>	.

<p>Inspection:</p> <p>Distention:</p> <p>Incisions:</p> <p>Scars:</p> <p>Drains:</p> <p>Wounds:</p> <p>Ostomy: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Nasogastric: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Size:</p> <p>Feeding tubes/PEG tube Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Type:</p>	
<p>GENITOURINARY:</p> <p>Color:</p> <p>Character:</p> <p>Quantity of urine:</p> <p>Pain with urination: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Dialysis: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Inspection of genitals:</p> <p>Catheter: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Type:</p> <p>Size:</p>	
<p>MUSCULOSKELETAL:</p> <p>Neurovascular status:</p> <p>ROM:</p> <p>Supportive devices:</p> <p>Strength:</p> <p>ADL Assistance: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Fall Risk: Y <input type="checkbox"/> N <input type="checkbox"/></p>	

<p>Fall Score:</p> <p>Activity/Mobility Status:</p> <p>Independent (up ad lib) <input type="checkbox"/></p> <p>Needs assistance with equipment <input type="checkbox"/></p> <p>Needs support to stand and walk <input type="checkbox"/></p>	
<p>NEUROLOGICAL:</p> <p>MAEW: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>PERLA: Y <input type="checkbox"/> N <input type="checkbox"/></p> <p>Strength Equal: Y <input type="checkbox"/> N <input type="checkbox"/> if no - Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/></p> <p>Orientation:</p> <p>Mental Status:</p> <p>Speech:</p> <p>Sensory:</p> <p>LOC:</p>	
<p>PSYCHOSOCIAL/CULTURAL:</p> <p>Coping method(s):</p> <p>Developmental level:</p> <p>Religion & what it means to pt.:</p> <p>Personal/Family Data (Think about home environment, family structure, and available family support):</p>	<p>Patient unable to answers questions due to patients' factor</p> <p>Integrity vs. Despair (Cherry, 2023)</p> <p>Patient unable to answers questions due to patients' factor</p> <p>Live at home with daughter</p>

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
8:05am	67	116/64 Manual	18	97.8 Axillary	91

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
8:11a	Facial expression	n/a	n/a	No pain	Pain meds

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
125 (half of her juice from breakfast)	n/a

Nursing Diagnosis (15 points)***Must be NANDA approved nursing diagnosis***

Nursing Diagnosis	Rationale	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Explain why the nursing diagnosis was chosen 			<ul style="list-style-type: none"> • How did the client/family respond to the nurse’s actions? <ul style="list-style-type: none"> • Client response, status of goals and outcomes, modifications to plan.

1. Impaired gas exchange related to empyema as evidenced by a chest tube placement. I decided this because patients’ labs show evidence of pneumonia. Two interventions used are to assess and record pulmonary status every 4 hours or more frequently of patient’s condition is unstable; Poor pulmonary status may result in hypoxemia and change patient’s position at least every 2 hours to mobilize secretions and allow aeration of all lung fields. Outcome: patient will have normal breath sounds. Evaluation: patient’s respiratory rate remains within established limits.

2. Impaired spontaneous ventilation related to respiratory muscle fatigue as evidenced by crackling breathing sounds. I decided this because patients had an inability to initiate and/or maintain independent breathing that is adequate to support self. Two interventions used are monitor hemoglobin and hematocrit levels and elevate the head of the bed to increase comfort and to promote adequate chest expansion and diaphragmatic excursion, thereby decreasing work of breathing. Outcome: patient indicates feeling comfortable and doesn't report pain, dyspnea, or fatigue. Evaluation: patients' respiratory rate will remain within 5 breaths/minute of baseline.

Concept Map (23 Points):

Subjective Data

A/O to self, dementia, abnormal/elevated labs

Nursing Diagnosis/Outcomes

1. patient will have normal breath sounds
2. patient indicates feeling comfortable and doesn't report pain, dyspnea, or fatigue



Objective Data

Pulse: 67; BP: 112/64 L arm, sitting

Resp Rate 18; Temp 97.8f Axillary

Oxygen: 91 room air

Abnormal Values:

Decreases RBC, Hgb, Hct, elevated WBC and neutrophils

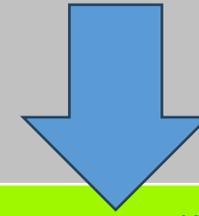
Elevated potassium, chloride, creatinine, protein

Decreased CO2, Albumin, Calcium



Client Information

70 yrs old, Female, black/non-Hispanic, 5'7, 162lbs



Nursing Interventions

1. Two interventions used are to assess and record pulmonary status every 4 hours or more frequently if patient's condition is unstable; Poor pulmonary status may result in hypoxemia and change patient's position at least every 2 hours to mobilize secretions and allow aeration of all lung fields (Phelps, 2020)
2. monitor hemoglobin and hematocrit levels and elevate the head of the bed to increase comfort and to promote adequate chest expansion and diaphragmatic excursion, thereby decreasing work of breathing (Phelps, 2020)



Reference

Diagnostic Imaging Reference (1) (APA):

Carle Foundation Hospital. (2024, October 31). Epic.

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Lab Correlations Reference (1) (APA):

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Pagana, K. Pagana, T. Pagana, T. (2021). *Mosby's Diagnostic and Laboratory Test Reference: sixteenth edition*. Elsevier.

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Cleveland Clinic. (2024, May 1). Hydrocodone & Acetaminophen Capsules or Tablets: Uses & Side Effects. Available from <https://my.clevelandclinic.org/health/drugs/19619-acetaminophen-hydrocodone-capsules-or-tablets>

Nursing Diagnosis Reference (1) (APA):

Phelps, L. (2020, Feb 4). *Sparks and Taylor's Nursing Diagnosis Reference Manual: Eleventh Edition*. Wolter's Kluwer.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Davis Advantage for Pathophysiology: Introductory Concepts and Clinical Perspectives Second Edition*. F.A. Davis Company.

Garvia, V. Paul, M. Empyema. (2023, Aug 7). *Empyema*. StatPearls Publishing. Available from <https://www.ncbi.nlm.nih.gov/books/NBK459237/>

Physical Exam:

Cherry, K. (2023, Feb 28). Integrity vs. Despair in Psychosocial Development. Very well mind.
Available from <https://www.verywellmind.com/integrity-versus-despair-2795738>