

N311 Care Plan #4
Lakeview College of Nursing
Caitlyn Blakeney

Demographics (5 points)

Date of Admission 10/17/20	Patient Initials TW	Age 64	Gender M
Race/Ethnicity African American	Occupation Preacher	Marital Status Married	Allergies None
Code Status Full Code	Height 5'9	Weight 231 lbs	

Medical History (5 Points)

Past Medical History: Obstructive Sleep Apnea.

Past Surgical History: None. (Patient states he hasn't had any surgeries.)

Family History: None that he is aware of.

Social History (tobacco/alcohol/drugs): Reports he has never used drugs. Reports he has never drank alcohol. Reports he has never used tobacco.

Admission Assessment

Chief Complaint (2 points): Trouble Breathing. Felt very weak.

History of present Illness (10 points): Patient was transferred from Danville to HMMC for higher level care, patient has Acute hypoxemic respiratory failure secondary to Covid pneumonia, desaturating on 4 L of oxygen. CT Bilateral infiltrates, patient reports hemoptysis, increasing work of breathing, he appeared toxic with possible impending

intubation. PMH w hx of OSA non-compliant with CPap. Pt reports feeling ill over the week. He was tested twice for Covid 19 w/ negative results. He was started on doxycycline for acute sinusitis. However due to abdominal pain he was transitioned to Azithromycin.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Acute chronic respiratory failure with Pneumonia.

Secondary Diagnosis (if applicable):

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

APA format (20 points): Pneumonia is an acute bacterial or viral infection that causes inflammation of the lung alveolar spaces and interstitial tissue.) As a result of the inflammation involved, the tissue in the lungs become edematous and the air spaces fill with consolidation, gas exchange cannot occur, and nonoxygenated blood is redirected into the vascular system, leading to hypoxemia. Pneumonia is most commonly caused by inhalation of droplets containing bacteria or other pathogens. The droplets enter the upper airways and gain entry into the lung tissue. Pathogens adhere to respiratory epithelium and stimulate an inflammatory reaction. The acute inflammation spreads to the lower respiratory tract and alveoli. At the sites of inflammation, vasodilation occurs with attraction of neutrophils out of capillaries and into the air spaces. Neutrophils phagocytize microbes and kill them with reactive oxygen species, antimicrobial proteins, and degradative enzymes. There is an excessive stimulation of respiratory goblet cells that secrete mucus. Mucous and exudative edema accumulate between the alveoli and capillaries. The alveoli attempt to open and

close against the purulent exudate; however, some cannot open. The sounds heard with the stethoscope over the alveoli opening against the exudative fluid are crackles. There is a layer of edema and infectious exudate at the capillary - alveoli interface that hinders optimal gas exchange. The patient can become hypoxic and hypercapnic, with obstructed exchange of O₂ and CO₂ at the pulmonary capillaries (Swearingen 2019).

Bacterial pneumonias involve all or part of the lobe whereas viral pneumonias appear throughout the lungs. Influenza, which can cause pneumonia, is the most serious viral airway infection for adults. The highest mortality rate from influenza are patients older than 50 years of age, residents of extended care facilities, and individuals with chronic health conditions. Pneumonias generally are classified into two types: community acquired, and hospital associated (nosocomial). A third type is pneumonia in the immunocompromised individual (Swearingen 2019).

Community acquired: Is the most common. Individuals with community-acquired pneumonia generally do not require hospitalization unless they have an underlying medical condition, such as chronic obstructive pulmonary disease (COPD), cardiac disease, diabetes mellitus, or an immunocompromised state complicates the illness. Hospital associated (nosocomial): Nosocomial pneumonias usually occur after aspiration of oropharyngeal flora or stomach contents in an individual whose resistance is altered or whose coughing mechanisms are impaired. Such as a patient who has decreased level of consciousness, dysphagia, diminished gag reflex, or a nasogastric tube or who has undergone thoracoabdominal surgery or someone who is on mechanical ventilation. Bacteria invade

the lower respiratory tract by three routes: gastric acid aspiration (the most common route), causing toxic injury to the lung; obstructions (foreign body or fluids); and infections (these are rare). Gram -negative pneumonias are associated with a high mortality rate, even with appropriate antibiotic therapy (Swearingen 2019). Aspiration pneumonia is a nonbacterial cause of hospital associated pneumonia that occurs when gastric contents are aspirated. Pneumonia is the second most common nosocomial infection in critically ill patients and is a leading cause of deaths in a hospital - acquired infection.

Ventilator -associated pneumonia (VAP) is defined as pneumonia occurring more than 48 hours after patients have been intubated and receive mechanical ventilation. Eighty-six percent of nosocomial pneumonias are classified as ventilator associated pneumonia. The risk for pneumonia increases 3 to 10 -fold in patients receiving mechanical ventilation. VAP is associated with increases morbidity and mortality (Critical Care Societies Collaborative, 2017).

Pneumonia in the immunocompromised individual: no suppression and neutropenia are predisposing factors in the development of nosocomial pneumonias from both common and unusual pathogens. Severely immunocompromised patients are affected not only by bacteria but also by viruses (cytomegalovirus) and fungi (Candida, Aspergillus, Pneumocystis jirovecii). Most commonly, P. jirovecii is seen in a person with a human immunodeficiency virus infection or in a person who is immunosuppressed therapeutically after organ transplantation. Primary care, with acute or intensive care hospitalization resulting from complications. The assessment findings are influenced by a patient's age,

extent of the disease process, underlying medical condition, and pathogen involved.

Generally, any factor that alters integrity of the lower airways thereby inhibiting ciliary activity, increases the likelihood of developing pneumonia. The general signs and symptoms of pneumonia include: Coughing (productive and nonproductive), increased sputum (rust colored, discolored purulent, bloody, or mucoid) production, fever, pleuritic chest pain (more common in community -acquired bacterial pneumonias), dyspnea, chills, headache, and myalgia (Swearingen 2019).

Older adults may be confused or disoriented and run low fevers but may present with few other signs and symptoms. The physical assessment findings include decreased skin turgor, restlessness, anxiety, and dry mucous membranes secondary to dehydration, presence of nasal flaring and expiratory grunt, use of accessory muscles of respiration (scalene , sternocleidomastoid , external intercostals) , decreased chest expansion caused by pleuritic pain , dullness on percussion over affected (consolidated) areas, tachypnea (respiratory rate 20 breaths /min), tachycardia (resting heart rate than 100 bpm), increased vocal fremitus, egophony over area of consolidation, decreased breath sounds . high -pitched and inspiratory crackles (rales) increased by or heard only after coughing, low -pitched inspiratory crackles(rales) caused by airway secretions, and circumoral cyanosis.

To diagnose pneumonia, a chest x-ray is the most important diagnostic study. CBC with differential will suggest either a bacterial or viral infection (Capriotti 2020). ABGs and pulse oximetry can demonstrate oxygenation Sputum culture and sensitivity can

exhibit the organism and antibiotic susceptibility (Capriotti 2020). Ultrasound and thoracocentesis are useful if pleural effusion is suspected. Sputum, serum, and urinary antigen tests are available for *S. pneumoniae* and *Legionella*. Treatment Antibiotic therapy and oxygenation of the patient are key priorities in the treatment of pneumonia. Fowler's position and oxygen via nasal cannula or mask is recommended (Capriotti 2020). The patient may require intravenous fluids if dehydrated. Analgesia, antipyretics, and bronchodilators may be needed. To prevent pneumonia in the elderly, infants, and children with risk factors, pneumococcal vaccine is recommended. (Capriotti 2020).

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: introductory concepts and clinical perspectives*. Philadelphia: F.A. Davis Company.

Capriotti, Theresa M. "Davis Advantage for Pathophysiology: Introductory Concepts and Clinical Perspectives" 2nd ed. (2020). *F.A Davis Company*.

Swearingen, P., & Wright, J., "All-in-One: Nursing Care Planning Resource" 5th Ed. (2019). *Elsevier Inc. (HS-US)*

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	4.0-4.9 $10^6/\mu\text{L}$	4.07	4.26	These values are high due to low oxygen levels in the blood caused by pneumonia (Capriotti & Frizzell, 2016)
Hgb	12.0-16.0 g/dL	11.3	11.3	
Hct	37.0-48.0%	33.8	35.8	These values are high due to low oxygen levels in the blood caused by pneumonia (Capriotti & Frizzell, 2016)
Platelets	150-400 $10^3/\mu\text{L}$	243	272	
WBC	4.1-10.9 $10^3/\mu\text{L}$	7.70	11.50	White cells are elevated due to fighting an infection. (Capriotti & Frizzell, 2016)
Neutrophils	1.50-7.70 $10^3/\mu\text{L}$	9.1	7.19	
Lymphocytes	1.00-4.90 $10^3/\mu\text{L}$	4.5	5.5	These values are high due to and infection or inflammatory condition. (Capriotti & Frizzell, 2016)
Monocytes	0.00-.080 $10^3/\mu\text{L}$	3.9	5.6	Monocytes are elevated due to viral infection. (Capriotti & Frizzell, 2016).
Eosinophils	0.00-0.50 $10^3/\mu\text{L}$	0.2	1.8	These values are high due to an infection or inflammation. (Capriotti & Frizzell, 2016)
Bands	N/A	n/a	n/a	

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-	136-145 mmol/L	142	145	
K+	3.5-5.1 mmol/L	3.9	3.7	
Cl-	98-107 mmol/L	110	109	Chloride levels are high due to lung disease (Capriotti & Frizzell, 2016)
CO2	21.0-32.0	25	24	CO2 levels are high due to lung disease/trouble breathing (Capriotti & Frizzell, 2016)
Glucose	60-99 mg/dL	125	84	
BUN	5-20 mg/dL	25	23	BUN levels are high due to lung disease (Capriotti & Frizzell, 2016)
Creatinine	0.5-1.5 mg/dL	1.17	.97	
Albumin	3.4-5.4 g/dL	2.5	2.9	Albumin levels are low due to inflammation/malnutrition. (Capriotti & Frizzell, 2016)
Calcium	8.5-10.1 mg/dL	7.8	8.8	
Mag	1.6-2.6 mg/dL	2.4	2.2	
Phosphate	-	n/a	n/a	
Bilirubin	-	n/a	n/a	
AlkPhos	-	n/a	n/a	

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, yellow, clear	Yellow, Clear	N/A	
pH	5.0-7.0	5.0	N/A	
Specific Gravity	1.003-1.005	1.039	N/A	Increased in specific gravity may be associated with dehydration. (Capriotti & Frizzell, 2016)
Glucose	Negative	Negative	N/A	
Protein	Negative	Negative	N/A	
Ketones	Negative	Negative	N/A	
WBC	0-25/uL	0-5	N/A	
RBC	0-25/uL	21-50	N/A	
Leukoesterase	Negative	N/A	N/A	

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		No culture in file	N/A	
Blood Culture		No culture in file	N/A	
Sputum Culture		No culture in file	N/A	
Stool Culture		No culture in file	N/A	

Lab Correlations Reference (APA): Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: introductory concepts and clinical perspectives*. Philadelphia: F.A. Davis Company.

Diagnostic Imaging:

All Other Diagnostic Tests (10 points):

CT chest w/o contrast Scan: No significant finding noted in Right or Left Axilla. Changes or bilateral pulmonary emphysema noted. Diffuse infiltration noted in both lung fields.

Small infiltration is more in Right than Left lung. Cystic areas noted in both lungs secondary to pulmonary emphysema.

Xray Chest: Endo tracheal tube and feeding tube has been removed. Bilateral alveolar opacities more prominent on Right. Most likely related to pneumonia.

**Current Medications (10 points, 2 points per completed med)
*5 different medications must be completed***

Medications (5 required)

Brand/Generic	Acetaminophen/Tylenol	Alprazolam/xanax	Amlodpine/Norvasc	Bisacodyl/Dulcolax	Ergocalciferol/Vitamin D
Dose	650mg	0.25mg	5mg	10mg	1.25mg
Frequency	Every 4hrs	3x daily	Daily	Daily	Weekly
Route	Oral	Oral	Oral	Oral	Oral
Classification	No salicylate, paraminopheno	Benzodiazepine, Anxiolytic, Antimanic	Calcium channel blocker, Antianginal	Stimulant laxative	ANDA

	l derivative.		, antihypertensive.		
Mechanism of Action	Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in peripheral nervous system.	May increase effects of gamma aminobutyric acid (GABA) and other inhibitory neurotransmitters by binding to specific benzodiazepine receptors in cortical and limbic areas of the CNS, GABA, inhibits excitatory stimulation, which helps control emotional behavior.	Binds to dihydropyridine and no dihydropyridine cell membrane receptor sites on myocardial and vascular smooth-muscle cells and inhibits influx of extracellular calcium ions across slow calcium channels. This decreases intracellular calcium level, inhibiting smooth-muscle cell contraction and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance and	Stimulating enteric nerves to cause peristalsis, i.e., colonic contractions. It is also a contact laxative; it increases fluid and salt secretion. The action of bisacodyl on the small intestine is negligible; stimulant laxatives mainly promote evacuation of the colon.	Vitamin D is well known as a hormone involved in mineral metabolism and bone growth. Its most dramatic effect is to facilitate intestinal absorption of calcium, although it also stimulates absorption of phosphate and magnesium ions. In the absence of vitamin D, dietary calcium is not absorbed at all efficiently

			reducing systolic and diastolic blood pressure.		
Reason Client Taking	To relieve mild to moderate pain; to manage moderate to severe pain with adjunctive opioid analgesics.	To control anxiety disorders, relieve anxiety, or treat anxiety associated with depression.	To control hypertension.	To treat constipation . It may also be used to clean out the intestines before a bowel examination /surgery.	To treat hypoparathyroidism (decreased functioning of the parathyroid glands), and is also used to treat rickets (softening of the bones caused by vitamin D deficiency) or low levels of phosphate in the blood (hypophosphatemia).
Contraindications (2)	Hypersensitivity to acetaminophen or its components , severe hepatic impairment , severe active liver disease.	Acute angle closure glaucoma, hypersensitivity to alprazolam, its components or other benzodiazepines, itraconazole or ketoconazole therapy.	Hypersensitivity to amlodipine or its components .	Ileus, intestinal obstruction, acute abdominal conditions including appendicitis , acute inflammatory bowel diseases, and severe abdominal pain associated with nausea and vomiting	Hypercalcemia, malabsorption syndrome, abnormal sensitivity to the toxic effects of vitamin D, and hypervitaminosis D.

				g which may be indicative of the aforementioned severe conditions.	
Side Effects/Adverse Reactions (2)	CNS: Agitation, anxiety, fatigue, fever, headache, insomnia. CV: Hypotension, Hypertension, peripheral edema.	CNS: Agitation, akathisia, confusion, depression, dizziness, drowsiness, fatigue, hallucinations, headache, insomnia, irritability, lack of coordination, lightheadedness, memory loss, nervousness, paresthesia, rigidity, speech problems, syncope, tremor, weakness. CV: chest pain, edema, hypotension, nonspecific ECG changes, palpitations	CNS: Anxiety, dizziness, extrapyramidal disorder, fatigue, headache, lethargy, light headedness, paresthesia, somnolence, syncope, tremor.	CNS: Abdominal cramping, Electrolyte and fluid imbalance, Excessive diarrhea, nausea, rectal burning, vertigo, stomach/abdominal pain, vomiting.	CNS: Impairment of renal function with polyuria, nocturia, polydipsia, hypercalciuria, reversible azotemia, hypertension, nephrocalcinosis, generalized vascular calcification, or irreversible renal insufficiency which may result in death. CNS: Mental retardation. Bone demineralization (osteoporosis) in adults occurs concomitantly. (dwarfism) vague aches, stiffness, and weakness. anorexia,

		, tachycardia .			constipation.
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Medications Reference (APA):

Jones & Bartlett Learning. (2019). *2020 Nurse's Drug Handbook* (19th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: difficulty breathing Alertness: Alert x4 Orientation: Oriented Distress: Moderate Overall appearance: Well nourished	
INTEGUMENTARY: Skin color: pale pink Character: Appears hydrated, clean. Temperature: Warm.	

<p>Turgor: Rapid recoil. Rashes: None noted. Bruises: From IV. L arm. Wounds: Bed Sore of Left Buttock Braden Score: 15 Drains present: None Drains present: Y <input type="checkbox"/> N x Type:</p>	<p><u>Braden score: 15</u> Patient does not walk frequently, his mobility is slightly limited, due to him not quite having his strength back from being intubated and shortness of breath.</p>
<p>HEENT: Head/Neck: Symmetrical Ears: Auricle was pink, moist, with no rashes or lesions. Eyes: Sclera white, cornea clear, conjunctiva pink with no lesions Nose: septum midline. No drainage Teeth: Appear normal.</p>	
<p>CARDIOVASCULAR: Heart sounds: s1, s2 clear with no murmurs or gallops. No carotid bruit. Cardiac rhythm (if applicable): Regular Rhythm Peripheral Pulses: 97 Radial Capillary refill: less than 3 seconds on fingers and toes bilaterally Neck Vein Distention: Y <input type="checkbox"/> Nx Edema Y Nx Location of Edema:</p>	
<p>RESPIRATORY: Accessory muscle use: Y <input type="checkbox"/> x N Breath Sounds: Breath sounds are abnormal bilaterally with shortness of breath.</p>	<p>Positive for cough (blood streak sputum) and shortness of breath. Increase work of breathing on non-rebreather, conversational dyspnea.</p>
<p>GASTROINTESTINAL: Diet at home: regular Current Diet: Consistent Dysphasia diet w/ honey Height: 5'0 Weight: 125lbs Auscultation Bowel sounds: present in all 4 quadrants. normoactive Last BM: 10/28/20 Palpation: Pain, Mass etc.: no pain or masses noted</p>	

<p>Inspection: no lesions or rashes noted Distention: none Incisions: none Scars: None Drains: non Wounds: none Ostomy: Y <input type="checkbox"/> N x Nasogastric: Y <input type="checkbox"/> N x Size: Feeding tubes/PEG tube Y <input type="checkbox"/> N x Type:</p>	
<p>GENITOURINARY: Color: clear, light yellow Character: no cloudiness or sediment in urine. Quantity of urine: spontaneous Pain with urination: Y <input type="checkbox"/> N x Dialysis: Y <input type="checkbox"/> N x Inspection of genitals: n/a Catheter: Y <input type="checkbox"/> N x Type: Size:</p>	
<p>MUSCULOSKELETAL: Neurovascular status: no deficits noted ROM: Patient performed flexion/extension, dorsi/planter independently without pain but is weak Supportive devices: patient uses walker. Strength: weak ADL Assistance: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Fall Risk: Y x N Fall Score: 18 Activity/Mobility Status: ambulate as tolerated. Needs help with assistance. Independent (up ad lib) Needs assistance with equipment Needs support to stand and walk - pt uses walker and is not able to be mobile without assistance.</p>	
<p>NEUROLOGICAL: MAEW: Y x N PERLA: Y x N <input type="checkbox"/></p>	

Strength Equal: Yx N <input type="checkbox"/> if no - Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/> Orientation: oriented to person, time, place and current events x 4 Mental Status: normal Speech: normal without slurring Sensory: good LOC: Alert, difficulty breathing	
PSYCHOSOCIAL/CULTURAL: Coping method(s): Family support/religious Developmental level: none noted Religion & what it means to pt.: father God is the most important. Personal/Family Data: daughter and wife help. Daughter is a Physician's Assistant.	

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
11:45	97 Radial	142/82 L arm	41	98.1 oral	97%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
11:45	0/10	None.	None.	None.	Using walker and is on 4L of Oxygen.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
100% food	240ml voided

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

Nursing Diagnosis <ul style="list-style-type: none"> • Include full nursing diagnosis with “related to” and “as evidenced by” components 	Rational <ul style="list-style-type: none"> • Explain why the nursing diagnosis was chosen 	Intervention (2 per dx)	Evaluation <ul style="list-style-type: none"> • How did the patient/family respond to the nurse’s actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective airway related to pneumonia and positive COVID test as evidence by pt gasping for air and being on oxygen.	1. The patient was needing oxygen due to increase oxygen saturation levels.	1. Patient was put on oxymizer 4 L of oxygen continuously. 2. Patient was put on dysphasia diet. 3. Patient on oxygen.	Patient was able to exchange gases with less struggle, oxygen saturation increased and oxymizer given. Goals were met.

<p>2. Impaired walking related to shortness of breath.</p>	<p>2. The patient is rating his pain as a 0 with walking to the chair and standing.</p>	<p>1. The patient was provided a walker.</p> <p>2. The patient was provided occupational, physical and ADL therapy to increase strength throughout the body.</p>	<p>Patient was able to move from bed to chair. Walker Was within patient's reach during my shift, with the assistance of myself. Physical therapy was completed. Goals were met.</p>
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Other References (APA): Swearingen, P. L., & Wright, J. D. (2019). All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health. St. Louis, MO: Elsevier.

Concept Map (20 Points):

Patient Information

