N311 Care Plan 3

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Lakeview College of Nursing

N311: Foundations of Professional Practice

Professor Smalley

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Demographics (5 points)

Date of Admission 3/6	**Client Initials** B.G.	**Age** 92 years old	**Gender** Female
Race/Ethnicity White	**Occupation** Retired	**Marital Status** Widowed	**Allergies** Acyclovir, nausea occurs. Cephalexin, hives occur. Macrobid [Nitrofurantoin Macrocrystal], hives occur. Nitrofurantoin, hives occur. Sulfa antibiotics, hives occur. Venlafaxine, nausea occurs. Zoloft [Sertraline], nausea occurs.
Code Status No CPR	**Height** 5’4”	**Weight** 107 pounds	

Medical History (5 Points)

Past Medical History: no dates were provided.

- Anorexia Nervosa
- Arthritis

- Atrophic vulvovaginitis
- Chronic obstructive pulmonary disease (COPD)
- Fibromyalgia
- Gastroesophageal reflux disease (GERD)
- Hypertension
- Hypothyroidism
- Myalgia
- Osteoporosis
- Ovarian Cyst
- Polyneuropathy
- Proteinuria
- Restless leg syndrome
- Shingles
- Sleep apnea.
- Spinal stenosis
- Supraventricular tachycardia

Past Surgical History: no dates provided unless listed.

- Bilateral cataract removal with implant
- Cholecystectomy
- Colonoscopy (3/10/2016)
- Exploration of the kidney (2013)
- Hysterectomy
- Upper gastrointestinal endoscopy (7/5/2023)

Family History: No family history on file or stated by the client.

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

Client has a history of using cigarettes and quit in 1961. She used ½ a pack for 5 years. The client has no history of using alcohol or drugs.

Admission Assessment

Chief Complaint (2 points): Dyspnea and a productive cough for a month.

History of Present Illness – OLD CARTS (10 points):

B.G. has been experiencing shortness of breath for “quite a while”. She was unable to tell us the exact time or date she started experiencing symptoms. She was admitted on March 6th with complaints of shortness of breath and pain that was radiating to her back and chest. She described her chest pain as “just heavy”, almost as if someone was sitting on her chest. She also had a productive cough which she was coughing up “yellow stuff” which was also thick. She utilized her at-home inhaler and nebulizer treatment to help with

some relief, but she was unable to get any relief. She tried to relieve her pain with Tylenol, but it was only a little relief. Her severity was rated a 6/10 when she was admitted and a 0/10 when I asked her the day of my clinical.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Pneumonia

Secondary Diagnosis (if applicable):

Pathophysiology

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

Pneumonia is a lung tissue disease in which the alveolar air gaps become filled with purulent, inflamed cells and mucus (Capriotti, 2019). The most frequent cause is bacterial or viral infection, but aspiration of a substance or infection with other infectious agents can also cause it (Capriotti, 2020). Pneumonia can be obtained by being out in the community, being in a hospital, or being on a ventilator. Pneumonia is a very common cause of death. Community-acquired is mostly caused by *Streptococcus pneumoniae.* This can be obtained through the air. Some types of pneumonia can be obtained from pathogens in the blood going to the lungs which is from *Staphylococcus. Staphylococcus aureus* can be obtained by being in the hospital or *Legionella* which is acquired in places with large air condition units or mists from grocery stores. Vancomycin-resistant *enterococcus* is the virus that results in ventilator-associated pneumonia. The most frequent cause of pneumonia is inhaling droplets including bacteria or other organisms. The droplets reach the upper bronchi and enter the lung tissue, where bacteria cling to the respiratory epithelium and provoke an inflammatory response. The infection can migrate and spread through the lungs. Vasodilation takes place at areas of inflammation, leading to the movement of neutrophils across capillaries to the air gaps. Neutrophils engulf microbes and eliminate them through the use of reactive oxygen species, antimicrobial proteins, or enzymes. This process leads to an excessive activation of respiratory goblet cells, which

produce mucus that accumulates between the alveoli and capillaries. The alveoli have trouble in opening and closing, resulting in the audible crackles heard on a stethoscope.

Symptoms associated with pneumonia are simple to identify. Some of the most frequent symptoms we observe are cough, shortness of breath, shallow breathing, possible fever, nausea, and vomiting (American Lung Association, 2023). Some patients might even present with the use of accessory muscles when breathing (Capriotti, 2020). As stated above, there will be an obvious sign of fluid in the lungs when you auscultate the lungs by asking your patient to breathe deeply. My patient presented to the emergency department with shortness of breath. I was able to auscultate and listen to the crackles in her lungs which was an obvious sign of pneumonia.

A chest X-ray is normally the most important way to identify pneumonia (Capriotti, 2019). CBC results should tell you if the pneumonia is bacterial or viral. An increased quantity of lymphocytes would serve as an indicator of a viral illness, whereas an increased granulocyte level would imply a bacterial infection (Boule, 2021). An ultrasound can be used to rule out any other issues (Capriotti, 2019). My patient had a CT scan done to determine the fluid in her lungs as well as a chest x-ray as a sign of pneumonia.

Pathophysiology References (2) (APA):

Boule. (2021). *Complete blood count and its utility in fever investigations*. https://boule.com/wp-content/uploads/2022/08/white-paper-cbc-in-infectious-diseases-wp-39211-39211-2.pdf

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

Pneumonia Symptoms and Diagnosis. (2023, August 3). American Lung Association. Retrieved March 20, 2024, from https://www.lung.org/lung-health-diseases/lung-disease-lookup/pneumonia/symptoms-and-diagnosis

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	3.8-5.3 10^6/mcL	3.26	2.64	Red blood cells that are decreased may be a normal sign for this patient due to aging, chronic anemia, or low RBC production in the bones. There may be a possibility of anemia as well or a dietary deficiency. There is no definite reason this is low relating to her primary diagnosis (Pagana, 2019). We can see the levels are decreasing which is not a positive sign.
Hgb	12.0-15.8 g/dL	10.0	9.3	The decrease in the patients Hemoglobin is likely due to aging and chronic anemia. The decrease in Hgb may also be from the infection (Pagana, 2019). We can see the levels are decreasing which is not a positive sign.
Hct	36.0-47.1%	30.8	27.4	Hematocrit is low and decreasing which isn't positive. Her elevated WBC may also be a reason the Hct level is altered as well. This may also be from another underlying condition of the patient may have such as anemia and normal aging (Pagana, 2019).

Platelets	140-440 10^3/mcL	482	433	Platelets were elevated on the day of admission but are now in normal range which is positive. Her levels may have been elevated from another underlying disease such as iron-deficient anemia or from her infection of pneumonia (Pagana, 2019).
WBC	4.0-12.0 10^3/mcL	11.80	13.2	Elevated white blood cells are an indication of an infection. It is not a positive sign that her levels are increasing with her hospital stay. This elevation is because of her infection in her lungs secondary to her primary diagnosis of pneumonia as well as inflammation (Pagana, 2019).
Neutrophils	47.0-73.0%	84%	76.3%	Neutrophils are elevated and showing a decrease in number. The reason for this increase is the infection her body is trying to fight off. It may be elevated because of her physical stress as well with being in the hospital (Pagana, 2019).
Lymphocytes	18.0-42.0%	8.2%	14.8%	Lymphocytes are decreased as a sign of possible sepsis. It is decreased in a state of infection where the lymphocytes go the lungs and try and fight the infection of her pneumonia (Pagana, 2019).
Monocytes	4.0-12.0%	7.0%	7.8%	
Eosinophils	0.0-5.0%	0.2%	0.3%	
Bands	3-5%	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	132	132	Decreased levels of sodium may be caused by a sodium deficiency and low intake of sodium. Low levels of sodium can be an indication of a pleural effusion. Low sodium may also be from high liquid intake either orally or IV (Pagana, 2019). She has a history of anorexia nervosa as well.
K+	3.5-5.1 mmol/L	4.2	3.8	
Cl-	98-107 mmol/L	88	84	Chloride is decreased and is decreasing slowly. Chloride is decreased in someone with overhydration and someone who is experiencing respiratory acidosis, which may be something this patient is experiencing (Pagana, 2019).
CO2	22-30 mmol/L	36	38	Carbon dioxide is high in someone trying to compensate for their shortness of breath. They will have a high respiration rate associated with high levels of CO2 as well.
Glucose	70-99 mg/dL	89	70	
BUN	10-20 mg/dL	8	6	BUN levels may be altered in relation to overhydration and changes in protein intake (Pagana,

				2019).
Creatinine	0.60-1.00 mg/dL	0.51	0.49	Creatinine is decreased due to her history of osteoporosis which is not related to her primary diagnosis and reason for admission (Pagana, 2019).
Albumin	3.5-5 g/dL	3.2	N/A	Albumin was slightly decreased in this patient which may be from her history of anorexia and her low intake of protein (Pagana, 2019). This is not related to her reason for being admitted.
Calcium	8.7-10.5 mg/dL	9.6	9.5	
Mag	1.6-2.6 mg/dL	N/A	N/A	
Phosphate	2.5-4.5 mg/dL	N/A	N/A	
Bilirubin	0.2-1.2 mg/dL	0.4	N/A	
Alk Phos	40-150 u/L	58	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	Yellow/clear	N/A	N/A	

pH	5.0-9.0	N/A	N/A	
Specific Gravity	1.003-1.030	N/A	N/A	
Glucose	Neg	N/A	N/A	
Protein	Neg	N/A	N/A	
Ketones	Neg	N/A	N/A	
WBC	Neg	N/A	N/A	
RBC	Neg	N/A	N/A	
Leukoesterase	Neg	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 growth	N/A	N/A	
Blood Culture	No growth	N/A	N/A	
Sputum Culture	Neg	N/A	N/A	
Stool Culture	Neg	N/A	N/A	

Lab Correlations Reference (1) (APA):

Pagana, K., Pagana, T., Pagana, N. (2019). *Mosbys Diagnostic and Laboratory test reference* (14th ed.). Elsevier.

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

"An electrocardiogram (EKG) was performed on 3/6. The reason for this test was because of her reported shortness of breath. This EKG showed a ventricular rate of 83 beats per minute, PR interval 208 ms, QRS duration 76 ms, QT/QTc 356/418 ms, and P-R-T axes 72. She had a normal sinus rhythm but an abnormal EKG. There was a left anterior fascicular block."

An EKG is used to observe the electrical impulses of the heart during a cardiac cycle (Pagana, 2019). It is important to rule out any problems with the heart when the lungs are involved to ensure proper circulation and oxygenation. An EKG is also used to rule out a pulmonary embolism rather than infection. So, the diagnostic test of an EKG is not directly used for diagnosing pneumonia but is used to rule out any other serious issues that might occur.

"An X-ray of the single chest view was performed on 3/6/ The reason for this test was because of her reported chest pain. The impression from the test was that the "cardiac size is within normal limits, both hila are prominent which may be due to lymphadenopathy or other etiology." "Noncalcified pulmonary nodule noted in right base measuring 7mm." "Bilateral perihilar Infiltration noted. Emphysematous changes noted in both lungs." "Pneumonia is not excluded.""

An X-ray is used to identify many things such as inflammation in the lungs which can lead to the diagnosis of pneumonia (Pagana, 2019). It is also used to rule out pericarditis, view the size of the cardiac muscle, as well as rule out or diagnose many issues going on with the lungs (Pagana, 2019). It is a simple way to view if there is any fluid in the lungs which is an important finding. Since the hospital was able to do this test

for my patient, we identified key things that helped lead them to her admitting diagnosis of pneumonia as well as helped them know to follow up with another test.

"A CT, computed tomography, was performed on contrast on 3/6. The reason for this test was the suspected pneumonia. The impression from the test is that "there is no evidence of pulmonary embolism, no dissection of the aorta is noted, a large area of consolidation noted in the right perihilar area measuring 5.9 x 2.5 cm." "No air bronchogram noted. Consolidation noted in left upper lobe measuring 2.9 x 3.8 cm, no other bronchogram noted." "Changes of bronchiectasis noted in both lower lobes and cardiac size within normal limits.""

Computed tomography, or CT, is most commonly used to take images of different parts of the body to help in the diagnosis (Mayo Clinic, 2022). A CT was performed on my patient to help with the diagnosis of pneumonia. The test was also helpful so that they could rule out any other issue that the patient might be experiencing. This test allowed the healthcare team to view the lungs more clearly (Emory Healthcare, 2023).

Diagnostic Imaging Reference (1) (APA):

CT scan. (2022, January 6). Mayo Clinic. Retrieved March 21, 2024, from https://www.mayoclinic.org/tests-procedures/ct-scan/about/pac-20393675

Angeli, F., Spanevello, A., De Ponti, R., Visca, D., Marazzato, J., Palmiotto, G., Feci, D., Reboldi, G., Fabbri, L. M., & Verdecchia, P. (2020). Electrocardiographic features of patients with COVID-19 pneumonia. *European journal of internal medicine*, *78*, 101–106. https://doi.org/10.1016/j.ejim.2020.06.015

Pagana, K., Pagana, T., Pagana, N. (2019). *Mosbys Diagnostic and Laboratory test reference* (14th ed.). Elsevier.

What Is Lung CT Scan & How Does It Work? (2023). Emory Healthcare. Retrieved March 20, 2024, from https://www.emoryhealthcare.org/centers-programs/lung-ct-program/about#:~:text=Common%20Lung%20CT%20Screening%20Questions&text=CT%20scans%20are%20used%20to,solid%20or%20filled%20with%20fluid.

Assessment

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

General, Psychosocial/Cultural, and ONE focused assessment specific to the client is required. The student and instructor may complete these assessments together.

GENERAL: **Alertness: Alert** **Orientation: To person, place and time** **Distress: Slight distress and fatigue** **Overall appearance: Well-groomed and appropriate for her age.**	
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:**	

Wounds: . **Braden Score: 21** **Drains present: Y☐ N ☐** **Type:**	
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:	**Patient is on O2 at home. Patient was on 4L of O2**

Accessory muscle use: Y☒ N ☐ **Breath Sounds: Location, character**	**per nasal cannula humidified during my time with her. She uses a CPAP, continuous positive airway pressure, at night and uses an inhaler. 1136 was the time when I performed my focused assessment where I had observed the patient has no retractions, she has even rise and fall, she is mildly labored when talking, her O2 saturation was 97% on 4L per NC and her respirations were 26. I was able to hear respiratory crackles bilaterally in her lower lobes bilaterally as well as an expiratory wheeze. There were some wheezing and coughing during the deep breaths she was taking during my physical assessment.**
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:**	
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**☐	
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):**	**B.G. is a devoted Baptist who enjoys reading books on the bible any chance she can. She has**

Developmental level: **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**bookshelves full of books on the bible and being a Baptist. Her developmental level is appropriate for her age. She uses prayer and taking to her grandsons as a coping mechanism when she gets down. When I had a conversation with B.G. on her books, she lit up and became more intrigued in my question. She informed me her children have passed but she has grandsons who she loves and loves to see. She is a resident of Bowman Estates in Danville. She is originally from Danville, Virginia.**

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1136	**84**	**112/57**	**26**	**97.3 F**	**97%**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1135	Numeric	Left side of her upper back	0/10	"Heavy"	Tylenol

Intake and Output (2 points)

Intake (in mL)	Output (in mL)

60 mL	300 mL

Nursing Diagnosis (15 points)
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.
Impaired gas exchange related to ineffective breathing pattern as evidence by respiratory rate of 26 breaths per minute and medical diagnosis of pneumonia (Phelps, 2023).	**I chose this diagnosis for this patient because I believe it is the most important due to her diagnosis. It is important she gets adequate gas exchange for adequate living. I also observed her respirations which were 26.**	**1.Encourage the patient to cough and clear the airway for better breathing efforts (Phelps, 2023).** **2.Assess respiration and O2 saturation hourly (Phelps, 2023).**	**1. The patients breathing efforts, respiratory rate, and O2 saturation will be in the normal range of 12-20 respirations per minute and 91%-100% for O2 saturation at the end of her stay.**	The client was accepting of the information and help regarding her airway clearance. She acknowledges the importance of her interventions. The patients O2 saturation and respirations were improved by the end of her stay with the interventions put in place such as the encouraging the patient to cough frequently.

Ineffective airway clearance related to retained secretions in her lung as evidence by auscultating crackles and confirmed presence by diagnostic chest x-ray and CT (Phelps, 2023).	**I chose this because it is important to this client who has fluid in her lungs such can lead to atelectasis and other harmful issues.**	**1. Assess respirations every hour (Phelps, 2023). 2. Encourage the patient to change position every 2 hours and keep head of bed elevated at least 30 degrees (Phelps, 2023).**	**1. The patient will be able to breathe freely of any sputum or secretions by the end of her stay. The patient's respirations will be in within the normal range of 12-20 per minute as well.**	**The client was very receptive to this information and understood the importance of clearing their airway. The client was very involved in her care. The patients respirations were able to be within the normal range before their discharge. The patient responded well to the interventions put in place and the changes in position and elevating the head of the bed, improved the patients airway clearance.**

Other References (APA):

Phelps, L. L. (12th ed.) (2023). *Nursing Diagnosis Reference Manual.* Wolters Kluwer.

Concept Map (20 Points):

Subjective Data

- The pain was a 0/10 rating yet localized in her chest area when she is in pain.
- The patient states that they do not use alcohol but was a former smoker.
- OLDCARTS.
- The patient was able to verbalize their physicosocial/cultural section of the physical assessment.

Nursing Diagnosis/Outcomes

- Impaired gas exchange related to ineffective breathing pattern as evidence by the respiratory rate of 26 breaths per minute and medical diagnosis of pneumonia (Phelps, 2023).
  - The patient's breathing efforts, respiratory rate, and O2 saturation will be in the normal range of 12-20 respirations per minute and 91%-100% for O2 saturation at the end of her stay.
- Ineffective airway clearance related to retained secretions in her lung as evidence by auscultating crackles and confirmed presence by diagnostic chest x-ray and CT (Phelps, 2023).
  - The patient will be able to breathe freely of any sputum or secretions by the end of her stay. The patient's respirations will be in within the normal range of 12-20 per minute as well.

Objective Data

- Oxygen was 97%
- The temperature was 97.3 F
- Pulse 84 bpm
- BP 112/57
- Respirations 26
- I was able to observe the patient coughing up yellow sputum as well as my auscultation of the crackles in her lungs
- Abnormalities in her labs that related to her primary diagnoses such as WBC, Hct, Hgb, Platelets WBC, Neutrophils, Lymphocytes, sodium, chloride, carbon dioxide, BUN, Creatinine, and albumin.
- I was able to observe her diagnostic test of a CT, chest X-ray, and EKG which was done to identify the pneumonia.

Client Information

B.G is a white woman who is 92. They were admitted on 3/6 for dyspnea. She has a long medical history which includes COPD and GERD. A history of smoking. She is compliant with the treatment plan. She is a resident at Bowman Estates here in Danville.

Nursing Interventions CHANGE THIS

- Encourage the patient to cough and clear the airway for better breathing efforts (Phelps, 2023).
- Assess respiration and O2 saturation hourly (Phelps, 2023).
- Assess respirations every hour (Phelps, 2023).
- Encourage the patient to change position every 2 hours and keep head of bed elevated at least 30 degrees (Phelps, 2023).