N311 Care Plan 5

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Lakeview College of Nursing

N311: Foundations of Professional Practice

Kristal Henry

11/15/2024

Demographics (5 points)

Date of Admission	Client Initials	Age	Gender
11/08/2024	P.S.	88	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White/Caucasian	Harrison Steel	Married	Codeine, flunisolide, niacin, penicillin
Code Status	**Height**	**Weight**	
Full	5’3”	59.2 kg	

Medical History (5 Points)

Past Medical History: arthritis, asthma, chronic obstructive pulmonary disorder, coronary artery disease, myocardial infarction, stroke

Past Surgical History: exploratory laparotomy, cardiac surgery procedure unlist, colon surgery, laparoscopic inguinal hernia repair, colon surgery, cardiac procedure unlist, upper gastrointestinal endoscopy

Family History: asthma in father, cancer in mother, chronic obstructive pulmonary disorder in sister, heart attack in father

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): quit smoking 41 years ago, started smoking 77 years ago, 36.3 pack smoking history, never used smokeless tobacco, does not currently use alcohol, does not use drugs

Admission Assessment

Chief Complaint (2 points): chest pain

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

The patient reports that they were woken on 11/08/2024 at 0700 with a sharp chest pain radiating to their left shoulder and shortness of breath that made them “sure they were having a heart attack”. The patient also reported experiencing a severe cough and a “racing” heart rate. The patient uses 2L per minute of oxygen at home, but using the oxygen did not bring the patient

any relief. The patient tried changing their position at first to alleviate their symptoms, but they were so scared that they almost immediately called their son to come and take them to the hospital. The chest pain and shortness of breath was not eased until the patient arrived at the hospital and a chest tube was placed on their left side, during which they were sedated with etomidate.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): pneumothorax on the left

Secondary Diagnosis (if applicable): N/A

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

A pneumothorax (also referred to as a collapsed lung or punctured lung) occurs when air is present in the pleural cavity, which causes the pressure within the pleural cavity to rise and cause either a section of the lung or the entire lung to collapse (Capriotti, 2020). A pneumothorax can be caused by medical conditions (asthma, cystic fibrosis, chronic obstructive pulmonary disorder, emphysema, lung cancer), injuries (blunt force trauma, stab or gunshot wounds, medical procedures), or lifestyle considerations (smoking, activities that cause large pressure changes such as flying or scuba diving, drug use) (Cleveland Clinic Staff, 2023). Symptoms of a pneumothorax often include shortness of breath, chest pain, an increase in respiratory rate, a lack of breath sounds on the affected side, and intercostal muscle retractions, with patients often reporting that they think they are having a heart attack (Capriotti, 2020).

The five different types of pneumothoraxes are primary spontaneous pneumothorax (PSP), secondary spontaneous pneumothorax (SSP), traumatic pneumothorax, tension pneumothorax, and iatrogenic pneumothorax (Capriotti, 2020). A primary spontaneous pneumothorax occurs when there are no lung diseases present and no incident that would cause

the pneumothorax occurs; this type of pneumothorax is most seen in young men under forty or patients with a pre-existing genetic disposition and ruptured alveoli are presumed to be the cause (Capriotti, 2020). Secondary spontaneous pneumothoraxes are caused by underlying lung diseases when air enters the pleural cavity due to damaged and enlarged alveoli; they are often seen in patients with emphysema, tuberculosis, or cystic fibrosis (Capriotti, 2020). A traumatic pneumothorax occurs when an injury like a stab wound directly punctures the lung or an injury causes a fractured rib to extend out and puncture the lung, and, similarly, an iatrogenic pneumothorax is caused when the lung is punctured during a medical procedure such as a pleural biopsy or central venous catheter insertion (Cleveland Clinic Staff, 2023). A tension pneumothorax occurs when air builds up inside the pleural cavity that cannot escape, and causes increased pressure to press on the lung, bronchioles, heart, and vena cava (Capriotti, 2020).

Pneumothoraxes are diagnosed by using chest radiographs or computed tomography scans of the chest to search for abnormalities or by obtaining an arterial blood gas test to measure the levels of oxygen and carbon dioxide in the blood (Cleveland Clinic Staff, 2023). A pneumothorax will require that a chest tube with suction is placed on the affected side of the chest to rid the pleural cavity of air and fluids, and to allow the lung to re-expand (Capriotti, 2020).

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Pathophysiology: Introductory Concepts and Clinical Perspectives.* F.A. Davis.

Cleveland Clinic Staff. (2023, November 16th). *Pneumothorax (Collapsed Lung).*

https://my.clevelandclinic.org/health/diseases/15304-collapsed-lung-pneumothorax

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	4.40-5.80 10(6)mcL	4.46 10(6)mcL	3.51 10(6)mcL	Red blood cells can be decreased by chronic illness (Pagana, 2023). This patient has been diagnosed with chronic obstructive pulmonary disorder. Red blood cells can also be decreased by blood loss (Pagana, 2023). This patient lost blood when the chest tube was placed.
Hgb	13.0-16.5 g/dL	13.0 g/dL	10.4 g/dL	Hgb can be lowered by antihypertensive medications (Pagana, 2023). This patient is taking Lisinopril and Carvedilol.
Hct	38.0-50.0%	39.7%	30.8%	Hct levels can be decreased by chronic obstructive pulmonary disorder (Pagana, 2023). This patient has been diagnosed with chronic obstructive pulmonary disorder.
Platelets	140-440 10(3)mcL	149 10(3)mcL	153 10(3)mcL	N/A
WBC	4.00-12.00 10(3)mcL	11.40 10(3)mcL	11.90 10(3)mcL	N/A
Neutrophils	40.0-68.0%	75.3%	49.1%	N/A
Lymphocytes	19.0-49.0%	9.9%	13.8%	Lymphocytes are lowered by insufficient protein intake (Pagana, 2023). This patient has not been consuming enough protein in the hospital. Lymphocytes respond to foreign body infections by increasing (Pagana, 2023). This patient has had a foreign body (chest tube) introduced to their system. The

				lymphocytes increased to respond and are now showing a decrease.
Monocytes	3.0-13.0%	7.6%	8.8%	N/A
Eosinophils	0.0-8.0%	6.2%	27.7%	Eosinophils are increased by constant inflammation (Pagana, 2023). This patient is suffering from constant inflammation due to their asthma, arthritis, chronic obstructive pulmonary disorder, coronary artery disease, and the placement of a left chest tube.
Bands	0-3%	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	138 mmol/L	138 mmol/L	N/A
K+	3.5-5.1 mmol/L	3.6 mmol/L	4.0 mmol/L	N/A
Cl-	98-107M mmol/L	105 mmol/L	104 mmol/L	N/A
CO2	22-30 mmol/L	26 mmol/L	25 mmol/L	N/A
Glucose	70-99 mg/dL	113 mg/dL	104 mg/dL	Glucose can be increased after meals and acute stress reaction (Pagana, 2023). This patient has had an acute stress response because of their pneumothorax and possibly had a carb heavy lunch.
BUN	8-26 mg/dL	11 mg/dL	19 mg/dL	N/A
Creatinine	0.70-1.30 mg/dL	0.93 mg/dL	0.99 mg/dL	N/A
Albumin	3.5-5.0 g/dL	3.7 g/dL	3.0 g/dL	N/A
Calcium	8.7-10.5 mg/dL	9.0 mg/dL	9.1 mg/dL	N/A
Mag	1.6-2.6 mg/dL	N/A	N/A	N/A

Phosphate	2.5-4.5 mg/dL	N/A	5.0 mg/dL	N/A
Bilirubin	0.2-1.2 mg/dL	0.5 mg/dL	N/A	N/A
Alk Phos	40-150 U/L	62 U/L	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	Clear/yellow	N/A	N/A	**N/A**
pH	5.0-9.0	N/A	N/A	**N/A**
Specific Gravity	1.003-1.030	N/A	N/A	**N/A**
Glucose	Negative	N/A	N/A	**N/A**
Protein	Negative	N/A	N/A	**N/A**
Ketones	Negative	N/A	N/A	**N/A**
WBC	0-5 hpf	N/A	N/A	**N/A**
RBC	Negative	N/A	N/A	**N/A**
Leukoesterase	Negative	N/A	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	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (1) (APA):

Pagana, K. D., Pagana, T. J., & Pagana, A. (2023). *Mosby's diagnostic and laboratory test reference* (6th ed.*)*. Elsevier.

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

XR chest single view portable:

11/08/2024 12:24

The heart is enlarged, and the left ventricle is abnormally prominent, a large pneumothorax on the left side has caused an almost complete collapse of left lung, some of the alveoli in the lung bases have collapsed and the pulmonary blood vessels are enlarged on the right.

11/08 2024 13:43

A left side chest tube was manually placed which has significantly reduced the left pneumothorax. There is a small amount of subcutaneous emphysema in the left lateral chest. Pus, blood or collapsed alveoli in the left lower lung. Small amount of fluid around the left lung. Right lung is hyper inflated. 5.6 cm x 3.2 cm mass in the upper left lung. Calcium buildup in thoracic aorta.

11/09/2024

The left lungs show signs of long term disease. Subcutaneous emphysema on left side of chest wall. No pneumothorax was detected.

11/10/2024 0840

Single left sided chest tube in place, no pneumothorax demonstrated. 4cm x 1.8 cm mass on left mid lung, which has faintly decreased in size since 11/09/2024. Small amount of subcutaneous emphysema in left lateral chest. Small amount of fluid in the lungs, lungs appear hyper inflated. Calcified cells in left upper lung. Calcium build up in thoracic aorta.

11/10/2024 1324

Tiny collection of air in the lungs not seen on earlier exam. Single left sided chest tube with small amount of subcutaneous emphysema in left lateral chest. Darkened tissue in left midline lung previously seen appears less established. Slight lower lung damaged alveoli, hyperinflation both lungs. Small amount of blood/puss in right upper lung. Old granulomas disease in left upper lung. Small amount of fluid in left lung.

11/11/2024 0834

Pneumothorax is no longer detected, and a left side chest tube with a small amount of subcutaneous emphysema is in the left lateral chest. The infiltrates in the middle-left lung have not changed since yesterday. A small amount of fluid has been detected in the left lung that has increased in volume since yesterday was found. The right lung remains hyperinflated, the heart and pulmonary arteries and veins are within normal size.

EKG 12 Lead 11/08/2024 1129

Fast heartbeat, the electrical conduction system of the heart is disrupted.

Diagnostic Imaging Reference (1) (APA):

Pagana, K. D., Pagana, T. J., & Pagana, A. (2023). *Mosby's diagnostic and laboratory test reference* (6th ed.). Elsevier.

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	**Acetaminophen/ Tylenol**	**Albuterol/ PROVENTIL, VENTOLIN**	**Carvedilol/ COREG**	**Theophylline/ theo-24**	**Lisinopril/ PRINIVIL/ZESTRIL**
Dose	650 mg	0.083% nebulizer solution 2.5 mg	3.125 mg	100mg	5mg
Frequency	4x daily before meals and nightly, first dose given 11/09/2024 @ 2100 until discontinued	every 4 hours PRN, first dose given 11/08/2024 @ 1901 until discontinued	2x daily with meals, first dose given 11/08/2024 @ 1930 until discontinued	1x daily, first dose given 11/09/2024 @ 0900 until discontinued	1x daily, first dose given 11/09/2024 until discontinued
Route	oral	nebulization	oral	oral	oral
Classification	Pharmacologic: nonsalicylate, para-aminophenol derivative Therapeutic: antipyretic, nonopiod analgesic (Jones & Bartlett, 2024)	Pharmacologic: adrenergic Therapeutic: bronchodilator (Jones & Bartlett, 2024)	Pharmacologic: nonselective beta-blocker and alpha-1 blocker Therapeutic: antihypertensive, heart failure treatment adjunct (Jones & Bartlett, 2024)	Bronchodilator (Jones & Bartlett, 2024)	Pharmacologic: ACE inhibitor Therapeutic: antihypertensive

Mechanism of Action	Impedes the enzyme cyclooxygenase, blocks the production of prostaglandin, restricts pain impulse production in the central nervous system, reduces fever by stopping the production of Prostaglandin E2 (Jones & Bartlett, 2024)	Attaches to beta2 receptors on bronchial cell membrane, increases the conversion of cyclic adenosine monophosphate (Camp) from adenosine triphosphate (ATP), which in turn decreases intracellular calcium levels and increases intracellular levels of Camp, therefore causing the bronchial smooth muscle cells to relax and hinder histamine release (Jones & Bartlett, 2024)	Increases vasodilation, decreases peripheral vascular resistance, reduces blood pressure and cardiac output (Jones & Bartlett, 2024). Reduces plasma renin activity over time (Jones & Bartlett, 2024)	Inhibits phosphodiesterase, blocks adenosine receptors (Jones & Bartlett, 2024)	Stops the conversion of angiotensin I to angiotensin II, angiotensin II is a strong vasoconstrictor that causes the adrenal cortex to release aldosterone, when less aldosterone is released sodium and water reabsorption is reduced, which raises their excretion and therefore reduces blood pressure (Jones & Bartlett, 2024)
Reason Client Taking	Pain caused by left pneumothorax and chest	To dilate their bronchioles and allow	The patient was given carvedilol because of	To dilate their bronchioles and allow for	The patient was given lisinopril due to their history of heart

	tube placement	for easier inhalation/ gas exchange	their history of heart disease (Myocardial infarction, coronary artery disease, stroke)	easier inhalation/gas exchange	disease (Myocardial infarction, coronary artery disease, stroke)
Contraindications (2)	Severe liver disease/ impairment, hypoglycemic coma (Jones & Bartlett, 2024)	Metabolic acidosis, bronchospasm (Jones & Bartlett, 2024)	Bronchial asthma, cardiogenic shock (Jones & Bartlett, 2024)	Angina, hyperglycemia (Jones & Bartlett, 2024)	Myocardial infarction, bronchospasm (Jones & Bartlett, 2024)
Side Effects/Adverse Reactions (2)	Pulmonary edema, wheezing (Jones & Bartlett, 2024)	Chest pain, pulmonary edema (Jones & Bartlett, 2024)	Edema, orthostatic hypotension (Jones & Bartlett, 2024)	Angioedema, pulmonary edema (Jones & Bartlett, 2024)	Chest pain, fluid overload (Jones & Bartlett, 2024)

Medications Reference (1) (APA):

Nurse's Drug Handbook Jones & Bartlett Learning. (2024). Jones & Bartlett Learning.

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Patient is alert and oriented x 4, and cooperative. Patient appears comfortable with no visible signs of distress.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** .	Skin color is pale but appropriate for age and situation, warm, dry, with good turgor. Upper extremities are free from rashes and wounds, but several large bruises are present on the left and right arms. Braden Score: 20

Braden Score: **Drains present: Y☒ N ☐** **Type:**	Left chest tube is placed. The insertion sight is sutured closed and covered with gauze and silk tape.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck are symmetrical and free from masses or lesions. Carotid pulses are palpable and 2+ bilaterally. Lymph nodes and thyroid gland are not palpable. Trachea is not deviated. Bilateral auricles are present and free from masses or lesions. The patient wears hearing aids bilaterally. Bilateral sclera is white and bilateral conjunctivas are pink. No visible drainage coming from the eyes. PERRLA present bilaterally. EOM in tact bilaterally. Patient wears glasses. Bilateral turbinates are moist and pink bilaterally with no visible bleeding, sores, or lesions. Septum is midline. Bilateral sinuses are not tender to palpation. Nasal cannula is in place and set to 6L per minute. The uvula is midline, the soft palate rises and falls symmetrically, hard palate is intact. Oral mucosa is pink, moist, and free from sores and lesions. The patient wears dentures.
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:**	Clear S1 and S2 heart sounds are heard without murmurs, gallops, or rubs. PMI is palpable at 5th intercostal space. Rate and rhythm are normal.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Accessory muscle use was not noted in inspiration or expiration, although respirations were sometimes shallow. Fine, loud, prominent crackels were heard throughout both lungs. Wheezes noted in the left lung. A 20fr chest tube is placed in the left lateral rib space. Patient used 2L of oxygen per minute at home.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:**	Patient is tolerating a regular diet well in the hospital and at home. Height: 5'3" Weight: 59.2 kg

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:**	Bowel sounds are present and normoactive in all four quadrants. Last bowel movement was 11/10/2024 at 1920. The bowel movement was small, loose, and dark brown. A ventral hernia is palpable in the left lower abdomen. No ostomy present. No nasogastric tube placed. No feeding tube placed.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	Urine is clear and light yellow. Patient reports no pain, frequency, or urgency on urination. No dialysis. No catheter place, but the patient does wear a depends. Patient can ambulate to the bathroom with assistance and voids without issue.
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☐**	Patient has good range of motion in all four extremities. The patient is able to ambulate with assistance and walks occasionally but feels “generally weak”. The patient uses a bedside commode and is assisted with ambulation by a gait belt. Patient does require an assist x 1 with activities of daily living. Fall risk: 83
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:**	Patient can move all extremities well, and PERRLA is present bilaterally. Grip strength is in bilateral upper extremities. Pedal pushes and pulls are present and equal bilaterally. Speech is clear and unlabored. Mental status is formal operational.

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):**	The patient is still living independently with their spouse, although their spouse has been in and out of the hospital four times this month. The patient is still able to drive, but had their son drive them to the hospital on 11/08/2024. Lost one son in September, but the other son is active in the patient's life and provides them and their spouse with assistance and care. Patient reports that they are not religious but that they do like to fish when they feel well enough. Rest, time with family, and television have been helping the patient to cope with their current hospitalization.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1506	63 B/P/M	104/54 mm/Hg	19 B/P/M	97.8°F	97% nasal cannula/ 6L per minute

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1511	0-10	N/A	0-10	N/A	N/A

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
480 ml 11/11/2024 @ 0700	1150 ml @ 0700 250ml @ 1506

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.
1. Impaired gas exchange related to pulmonary edema and decreased alveolar surface area as evidenced by crackles upon lung auscultation and the patient requiring oxygen to maintain a healthy O2 saturation	The patient has been diagnosed with COPD and is incapable of clearing their lungs and maintaining proper oxygen saturation independently.	**1.**Administer medications (including oxygen) as needed/ordered to help increase oxygenation, monitor and document the positive and negative effects of the medications to help prevent adverse reactions and modify the care plan as needed as the patient improves	**1.** The patient's breath sounds will become clearer before their discharge. The patient will not experience dyspnea or hypoxia.	The patient was grateful to be relieved of their shortness of breath and their anxiety significantly decreased. The patient's family was responsive to education on how to administer oxygen safely. Breath sounds are clearer.

(Phelps, 2023).		(Phelps, 2023). **2.** Keep the patient in the high fowlers position to increase chest expansion and promote gas exchange (Phelps, 2023).		
2. Risk for infection related to impaired skin integrity as evidenced by an incision at the insertion site of a long-term indwelling drainage device (Phelps, 2023)	Chest tube insertion creates an open pathway for pathogens to enter the body that leads directly to the pleural cavity.	1**.** Monitor vital signs and the incision site for signs of infection such as redness or swelling at the insertion site, purulent drainage from the incision site, fever, tachycardia or tachypnea (Phelps, 2023). 2. Encourage an increase of fluid intake to thin lung excretions and allow for the patient to expel them easier, and to keep the body flushed of harmful pathogens (Phelps, 2023).	1. The patient will not receive an infection at the insertion site of their chest tube. The patient's vital signs will remain within their limits, and no harmful pathogens will be introduced into the patient's system.	The patient did not have to endure any complications from an infection. Their chest tube successfully drained the pleural space and was able to be removed without any further injury to the patient.

Other References (APA):

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

Concept Map (23 Points):

Initials: P.S.