N311 Care Plan #2

Lakeview College of Nursing

Caitlyn Blakeney

Demographics (5 points)

Date of Admission **10/26/20**	**Patient Initials** **ND**	**Age** **67**	**Gender** **F**
Race/Ethnicity **White**	**Occupation** **Retired**	**Marital Status** **Married**	**Allergies** **NKA**
Code Status **Full Code**	**Height** **5'0**	**Weight** **125 lbs**	

Medical History (5 Points)

Past Medical History: Significant COPD, Falls, Hypertension, Memory Loss, Home Oxygen Dependent, Peripheral Arterial Disease, Continues Tobacco Abuse, Current nicotine patch, Cerebrovascular accident, Mixed Dyslipidemia.

Past Surgical History: None

Family History: None Provided.

Social History (tobacco/alcohol/drugs): Reports she has quit smoking. Dr. Reported continued tobacco use. She has never used smokeless tobacco. No use of Alcohol. No use of Drugs.

Admission Assessment

Chief Complaint (2 points): Trouble Breathing. Loss of consciousness. Acute ankle pain.

History of present Illness (10 points): Patient was brought to hospital on EMS after pt was found to have low oxygen saturation in the 80's. Patient was barely responsive. Patient was Afefibril on presentation, she was saturating 94% on 4L arterial blood gas. Patient was hypoxia and every hypercapnia respiratory failure with PCO2 greater than ill requiring BiPAP management. Her subsequent PCO2 was 83 her acidosis improved after at least 5 hours. She is given break from BiPAP, she is on nasal cannula and able to speak in

complete sentences. COVID Test was given, results were negative. No nausea, vomiting, or bloody stool. Her D-Dimer test was high, CT angiogram of the chest has shown no evidence of Pulmonary Embolism, small penetrating atherosclerotic ulcer in L lateral wall of mid descending aorta new prior examination. Patients has peri bronchial thickening and mucus plugging bilateral lower lobs. She also has intraluminal tracheal secretions suspicious for mucus/aspirations. Patient is stable from pulmonary standpoint to discontinue BiPAP, she is mentecting well. She reports she was smoking up to 2 pack or cigarets per day and she is still trying to quit.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Acute on chronic respiratory failure with hypoxia and hypercapnia. (COPD). Ineffective airway clearance.

Secondary Diagnosis (if applicable): Ankle injury due to loss of consciousness.

Pathophysiology of the Disease, APA format (20 points): Chronic obstructive pulmonary disease (COPD) is the combination of chronic bronchitis, emphysema, and hyperactive airway disease and is characterized by features of each of these diseases (Capriotti 2020). COPD is the third leading cause of deaths in the United States and is one of the leading causes of disability (Capriotti 2020). It is estimated that nearly 16 million individuals have COPD, most of these individuals being age 45 or older, however the prevalence of COPD may be much greater due to the underreporting of individuals who refuse to seek out care (Capriotti 2020). One major cause of COPD has been linked to smoking tobacco, with nearly 90% of patients with COPD being individuals who are smokers (Capriotti 2020). COPD is caused by a combination of genetic susceptibility and environmental factors (Capriotti 2020). One genetic susceptibility to COPD is caused by alpha 1 anti-trypsin

(AAT) deficiency, this rare genetic deficiency accounts for 1 percent of all COPD cases (Capriotti 2020). AAT is a serum protein that is normally found in the lungs that inhibits elastase (Capriotti 2020).

COPD is characterized by poorly reversible airflow limitations caused by the combination of chronic bronchitis, emphysema, and hyperactive airway disease (Capriotti 2020). The characteristic features of chronic bronchitis are hyper-secretion of mucus in the large and small airways, hypoxia and cyanosis (Capriotti 2020). The excess amount of mucus creates an obstruction to inspiratory airflow that inhibits optimal oxygenation (Capriotti 2020). In emphysema, the most common finding is the over distention of alveoli with trapped air, which creates an obstruction to the expiratory airflow and leaves a high residual volume of carbon dioxide in the lungs (Capriotti 2020). The pathological changes leading to airflow limitation in COPD include narrowing, excessive mucus and fibrosis in the bronchioles, loss of alveolar elastic recoil, and smooth muscle hypertrophy (Capriotti 2020). In severe COPD there is poor ventilation and hypoxia (Capriotti 2020). Also in severe cases of COPD, increased levels of CO2 become chronic and the arterial chemoreceptors and respiratory center in the medulla become insensitive to high levels of CO2 (Capriotti 2020).

The patients age and smoking history are vital factors in establishing a pattern of obstructive disease, where asthma occurs across a variety of ages COPD is generally seen in older patients opposed to adolescents (Capriotti 2020). A patient with COPD will commonly complain of dyspnea and cough, it is important to ask the patient what causes the dyspnea such as heavy lifting (Capriotti 2020). Cough or wheezing is another sign/symptom seen in COPD patients, the cough may be productive of sputum (Capriotti

2020). The nurse should be sure to assess the patient for signs of respiratory distress, assess their thoracic cage structure, and their complexion and vital signs (Capriotti 2020). COPD can be diagnosed with an assessment test that asks the patients specific questions about their breathing ability and activity limitations due to their pulmonary symptoms (Capriotti 2020). There is a series of eight questions that are asked involving the patients breathlessness, cough, chest tightness, etc and each item is scored from 0-5 with a higher score being a sign of severe disease (Capriotti 2020). PFT's also known as spirometry also play a key role in the diagnosis of COPD, as it measures your total volume of air that can be exhaled with maximum effort (FVC) and the volume of air expelled from the lungs during the first second of inhalation of air from the lungs (Capriotti 2020). The patients complete blood count CBC, blood chemistry panel, chest x-ray, ECG and ABG'S should be assessed, in mild to moderate cases all laboratory data would be normal except for the PFTs, in severe cases the chest x-ray may show low diaphragm borders and the hyperinflation of both lung fields (Capriotti 2020). Treatment of COPD begins with the usage of short-acting bronchodilators for patients with mild symptoms of the disease and incorporates long-acting agents into the patients treatment plan (Capriotti 2020). Beta 2 adrenergic agonist inhalers stimulate bronchiole smooth muscle causing it to dilate where anticholinergic inhaler agents counteract bronchoconstriction (Capriotti 2020). Continuous oxygen therapy should be given when the arterial PO2 is less than or equal to 55 mmHg or the patient's oxygen saturation is less than or equal to 88%, however oxygen should be given in the lowest doses as possible that can enhance the patients oxygenation (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.*

All-in-One Nursing Care Planning Resource 5th Edition by Pamela Swearingen, Jacqueline Wright and Publisher Elsevier (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/uL	4.16	3.81	These values are consistent due to trauma (Capriotti & Frizzell, 2016)
Hgb	12.0-16.0 g/dL	14.0	12.2	
Hct	37.0-48.0%	38.3	37.3	These values are consistent due to trauma (Capriotti & Frizzell, 2016)
Platelets	150-400 10^3/uL	213	237	
WBC	4.1-10.9 10^3u/L	11.50	5.90	White cells are elevated due to trauma and inflammatory reponse (Capriotti & Frizzell, 2016)
Neutrophils	1.50-7.70 10^3/uL	8.22	7.19	Neutrophils are elevated due to trauma/injury (Capriotti & Frizzell, 2016)
Lymphocytes	1.00-4.90 10^3/uL	9.9	18.5	
Monocytes	0.00-.0.80 10^3/uL	6.7	8.6	Monocytes are elevated due to trauma and inflammatory response (Capriotti & Frizzell, 2016).
Eosinophils	0.00-0.50 10^3/uL	0.10	0.0	
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	144	143	
K+	3.5-5.1 mmol/L	5.0	4.1	
Cl-	98-107 mmol/L	94	99	Chloride levels are low due to lung disease (Capriotti & Frizzell, 2016)
CO2	21.0-32.0	43	40	Chloride levels are high due to lung disease (Capriotti & Frizzell, 2016)
Glucose	60-99 mg/dL	99	98	
BUN	5-20 mg/dL	20	23	
Creatinine	0.5-1.5 mg/dL	0.30	0.56	
Albumin		No lab value noted	No lab value noted	
Calcium	8.5-10.1 mg/dL	10.1	9.2	
Mag	1.6-2.6 mg/dL	n/a	n/a	
Phosphate	-	n/a	n/a	
Bilirubin	-	n/a	n/a	
Alk Phos	-	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	6.0	N/A	
Specific Gravity	1.003-1.005	1.020	N/A	Increased in specific gravity may be associated with dehydration.
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	N/A	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: None

All Other Diagnostic Tests (10 points):

EKG: sinus tachycardia w/ occasional premature ventricle complexes.

CT Scan: no evidence of Pulmonary Embolism, small penetrating atherosclerotic ulcer in L lateral wall of mid descending aorta new prior examination.

D-Dimer Test: results below the off of 500 ng/mL FEU are highly sensitive for the exclusion of venous thromboembolism/pulmonary embolism in patient with low pre test probability dictional. Input with moderate to hight pretest probability additional studies are recommended.

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

Medications (5 required)

Brand/Generic	Acetaminophen/Tylenol	Albuteral/Proventil	Naproxen/Naprosyn	Prednisone/ Deltasone	Atorvastin /Lipitor
Dose	650mg	2.5mg	500mg	40mg	40mg
Frequency	Every 4hrs	3x daily	2x daily	1x a day	Nightly
Route	Oral	Nebulization	Oral	Oral	Oral
Classification	Nonsalicylate, paraaminophenol derivative.	Bronchodilators.	NSAID, Analgesic	Glucocorticoid, Immunosuppressant.	HMG-CoA reductase inhibitor. Antihyperlipidemic.

Mechanism of Action	**Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in peripheral nervous system.**	**Albuterol sulphate dilates the airways of the lung and is used for treating asthma and other conditions of the lung. Asthma is a breathing problem due to narrowing of the airways (bronchial tubes) that allow air to move in and out of the lungs.**	**Blocks cyclooxyrgenase, the enzyme needed to synthesize prostaglandin, which mediate the inflammatory response and cause local pain, swelling and vasodilation.**	**Binds to intracellular glucocorticoid receptors and suppresses inflammatory and immune responses.**	**Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-GOA reductase and cholesterol synthesis in the liver by increasing the number of LDL receptors on liver cells to enhance LDL uptake and break down.**
Reason Client Taking	**To relieve mild to moderate pain; to manage moderate to severe pain with adjunctive opioid analgesics.**	**To relieve bronchospasm in patients reversible obstructive airway disease.**	**To relieve mild to moderate musculoskeletal inflammation, including ankylosing spondylitis, osteoarthritis, and rheumatoid arthritis.**	**To treat adrenal insufficiency and acute and chronic inflammatory and immunosuppressive disorders.**	**To control lipid levels as adjunct to diet in primary hypercholesterolemia and mixed dyslipidemia.**

Contraindications (2)	**Hypersensitivity to acetaminophen or its components, severe hepatic impairment, severe active liver disease.**	**Overactive thyroid gland, diabetes, high blood pressure, abnormal heart rhythm, low supply of oxygen rich in blood to the heart.**	**Angioedema, asthma, bronchospasm, nasal polyps, rhinitis, or urticaria induced by aspirin, iodides, or other NSAIDs; hypersensitivity to naproxen or its components.**	**Hypersensitivity to prednisolone or its components, idiopathic thrombocytopenia purport, systemic fungal infection.**	**Active hepatic disease, breastfeeding, hypersensitivity to atorvastin or its components, pregnancy, unexplained persistent rise in serum transaminase level.**

Side Effects/Adverse Reactions (2)	**CNS: Agitation, anxiety, fatigue, fever, headache, insomnia. CV: Hypotension, Hypertension, peripheral edema.**	**CNS:Migraine headaches, Non-migraine headaches, nausea, stomach upset, flu like symptoms, otitis media, nervousness, tremor, wheezing, increased sputum, shortness of breath.**	**CNS:Aseptic meningitis, chills, cognitive impairment, CVA, decreased concentration, depression, dizziness, dream disturbances, drowsiness, fever, headache, insomnia, light-headedness, malaise, seizures, vertigo**	**CNS:Euphoria, headache, insomnia, nervousness, psychosis, restlessness, seizures, vertigo. CV:Edema, heart failure, hypertension.**	**Abnormal dreams, amnesia, asthenia, cognitive impairment, depression, dizziness, emotional lability, facial paralysis, fatigue, fever, headache.**

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: A&O x4** **Orientation: Oriented to person, time, place, and current events.** **Distress: No acute distress.** **Overall appearance: Well groomed.**	
INTEGUMENTARY: **Skin color: pale pink** **Character: Appears hydrated, clean.** **Temperature: Warm.** **Turgor: Rapid recoil.** **Rashes: None noted.** **Bruises: From IV. L arm.** **Wounds: None** **Braden Score: 20** **Drains present:None** **Drains present: Y☐ N x** **Type:**	
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. No cavities.**	
CARDIOVASCULAR: **Heart sounds: s1,s2 clear with no murmurs or gallops.** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses: 88bpm Radial** **Capillary refill: less than 3 seconds on fingers and toes bilaterally** **Neck Vein Distention: Y ☐ Nx** **Edema Y x N -** **Location of Edema: R Ankle/Foot**	

RESPIRATORY: **Accessory muscle use: Y☐ N x** **Breath Sounds:LUL: Wheezes course expiratory bilaterally present in LUL,LLL,RUL, RLL**	.
GASTROINTESTINAL: **Diet at home: regular** **Current Diet regular** **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** **Inspection: no lessons or rashes noted** **Distention: none** **Incisions: none** **Scars: None** **Drains: non** **Wounds: none** **Ostomy: Y ☐ N x** **Nasogastric: Y ☐ N x** **Size:** **Feeding tubes/PEG tube Y ☐ N x** **Type:**	.
GENITOURINARY: **Color: clear, light yellow** **Character: no cloudiness or sediment in urine.** **Quantity of urine: spontaneous** **Pain with urination: Y ☐ N x** **Dialysis: Y ☐ N x** **Inspection of genitals: n/a** **Catheter: Y ☐ N x** **Type:** **Size:**	

MUSCULOSKELETAL: **Neurovascular status: no difictis noted** **ROM: Patient performed flexion/extension, doris/planter independently with out pain. Minor discomfort in R ankle due to swelling.** **Supportive devices: pt uses walker/crutches** **Strength: over all good.** **ADL Assistance: Y☐ Nx☐** **Fall Risk: Yx N** **Fall Score: 39 22** **Activity/Mobility Status: ambulate as tolerated** **Independent (up ad lib)** **Needs assistance with equipment** **Needs support to stand and walk - pt uses walker/crutches**	.
NEUROLOGICAL: **MAEW: Y x N** **PERLA: Y x N☐** **Strength Equal: Yx N ☐ if no - Legs ☐ Arms ☐ Both ☐** **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** **Developmental level: none noted** **Religion & what it means to pt.: everything.** **Personal/Family Data (Think about home environment, family structure, and available family support): daughter and husband help her.**	.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
12:00	83 Radial	147/65	20	98	94%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1200	1/10	R ankle/foot	Pain with pressure.	Stiffness	Taking pain medication. Using crutches

Intake and Output (2 points)

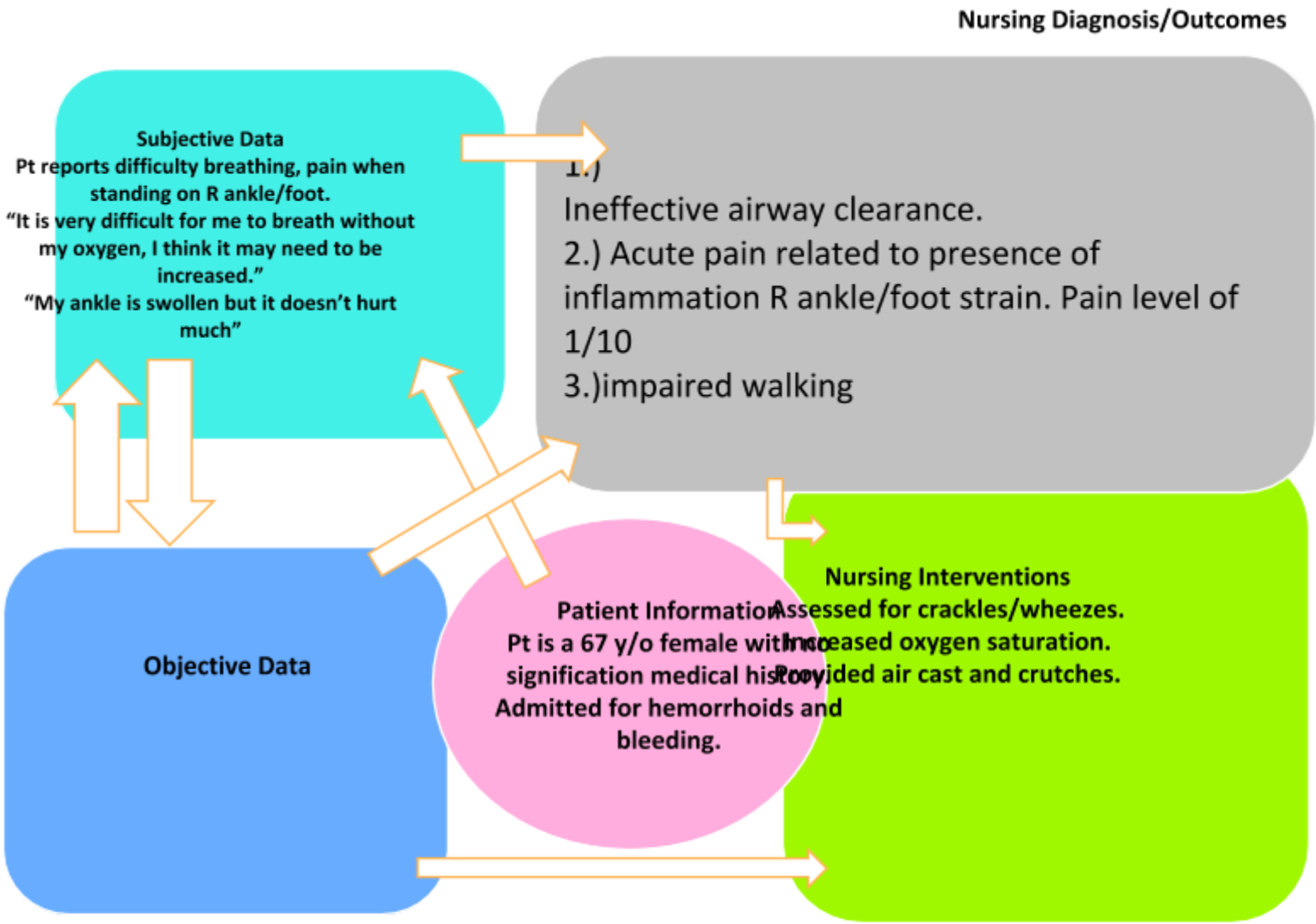
Intake (in mL)	Output (in mL)
400ml water, 100% food	350ml voided per self

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

Nursing Diagnosis ● Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** ● Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** ● 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 COPD 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 albuterol** **2.Patient in Fowlers position.** **3.Patient on oxygen.**	**Patient was able to exchange gases with less struggle, oxygen saturation increased. Goals were met.**
2. Impaired walking related to ankle ecchymosis as evidence by pt using air cast and crutches.	**2. The patient is rating her pain loon the paid scale with use of ice therapy. Decreased the inflammation of R ankle.**	**1. The patients ankle was iced.** **2. The patient was provided crutches.**	**Patient was able to move from bed to chair. Walker and crutches were within patient's reach during my shift, with the assistance of myself. Goals were met.**

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):



Ineffective airway.
Impaired walking.