N311 Care Plan # 4

Lakeview College of Nursing

Andrea Stiff

Demographics (5 points)

Date of Admission	Patient Initials	Age	Gender
05-28-19	R.P.	82	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Rail-Road Construction	Widowed	NKA
Code Status	**Height**	**Weight**	
DNR	5'10 ft	161 lbs.	

Medical History (5 Points)

Past Medical History: Covid 19, Chronic Obstructive Pulmonary Disease, Emphysema, Orthostatic Hypotension, Bronchiectasis, Personal history of Transient Ischemic Attack (TIA), and Cerebral Infarction without residual deficits, Chronic Gastric Ulcer without hemorrhage or perforation, Occlusion and Stenosis of bilateral carotid arteries, Dysphagia Oropharyngeal phase, Dysphagia following Cerebral Infarction, Hyperlipidemia, Essential (primary) hypertension, Major depressive disorder, Spondylosis without Myelopathy or radiculopathy lumbar region, Other non-specified abnormal finding of lung field, Allergic Rhinitis, Muscle weakness, Headache, Cognitive communication deficit, Low back pain, Generalized anxiety disorder, Gastro-esophageal reflux disease.

Past Surgical History: Appendix, Right knee surgery (client unable to say what kind of surgery)

Family History: Unable to say

Social History (tobacco/alcohol/drugs): Smoking (several years)

Admission Assessment

Chief Complaint (2 points): Right knee pain

History of present Illness (10 points):82-year-old male client complaining of right knee pain. Client is unsure when the pain began. Client stated the pain is "off and on", but when

it is cold it tends to hurt more. Client described the pain as an ache feeling. Pain does not radiate anywhere. To relieve the pain the client gets up and walks around.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Chronic Obstructive Pulmonary Disease

Secondary Diagnosis (if applicable): n/a

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

"Chronic obstructive pulmonary disease (COPD) is a combination of chronic bronchitis, emphysema, and hyperreactive airway disease" (Capriotti & Frizzell, 2015, p. 504). The leading cause for COPD is smoking, 90 percent of COPD patients are smokers (Capriotti & Frizzell, 2015). Some other causes of COPD are environmental exposures to chemicals, dusts, and secondhand smoke (Capriotti & Frizzell, 2015). COPD can also be caused by genetic susceptibility and environmental exposures (Capriotti & Frizzell, 2015). "One such genetic predispositions to COPD is caused by alpha 1 anti-trypsin (AAT) deficiency" (Capriotti & Frizzell, 2015, p. 504). This is a very rare condition, it accounts for 1 percent of all COPD cases (Capriotti & Frizzell, 2015). How it works is AAT is a serum found in the lungs, it inhibits elastase which is a proteolytic enzyme released by white blood cells (Capriotti & Frizzell, 2015). The AAT deficiency lets elastase destroy the lung tissue (Capriotti & Frizzell, 2015).

COPD is when there is poorly reversable airflow (Capriotti & Frizzell, 2015). Chronic bronchitis is defined as hypersecretion of mucus in the airways (Capriotti & Frizzell, 2015). Emphysema is defined as overdistention of the alveoli with trapped air (Capriotti & Frizzell, 2015). COPD is a combination of those two definitions. "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 & Frizzell, 2015, p. 505). Chronic bronchitis can also cause inflammation which can cause permanent remodeling of the pulmonary structures (Capriotti & Frizzell, 2015). The changes consist of thickening of the walls and constrictions of the lumens (Capriotti & Frizzell, 2015). “Inflammation causes stimulation of macrophages followed by accumulation of neutrophils, T lymphocytes, and cytokines” (Capriotti & Frizzell, 2015, p. 505). “Neutrophils and macrophages secrete proteases, elastases, and metalloproteinases, which are all proteolytic enzymes” (Capriotti & Frizzell, 2015, p. 505). Smoking will activate proteolytic enzymes (Capriotti & Frizzell, 2015). “Cigarette smoke also contains free radicals that damage respiratory cell membranes and arterial endothelial cells” (Capriotti & Frizzell, 2015, p. 505). Severe cases of COPD with bronchitis there is poor ventilation and hypoxia that can stimulate pulmonary arterial vasoconstriction, which is also known as pulmonary hypertension (Capriotti & Frizzell, 2015). In other severe cases of COPD the increase of CO2 become chronic and the arterial chemoreceptors and respiratory center in the medulla become insensitive to higher CO2 levels (Capriotti & Frizzell, 2015). “The normal respiratory drive stimulus changed from Pco2 accumulation to low levels of Po2 (Capriotti & Frizzell, 2015, p. 505). Hypoxia will become the stimulus for breathing in this case (Capriotti & Frizzell, 2015).

“COPD symptoms often don’t appear until significant lung damage has occurred, and they worsen over time, particularly if smoking exposures continue” (Mayo clinic staff, 2020). The symptoms may include shortness of breath, wheezing, chest tightness, chronic cough with sputum, frequent respiratory infections, lack of energy, unintended weight loss, and swelling in

the legs (Mayo clinic staff, 2020). Since the symptoms appear overtime the age group for COPD is usually 40 to 50 years old (Capriotti & Frizzell, 2015).

Diagnosing COPD consists of taking a COPD assessment test (CAT) (Capriotti & Frizzell, 2015).

This is when the patient would get asked questions about their breathing and activity limitations (Capriotti & Frizzell, 2015). There are a certain number of questions on the CAT and the patient will be scored on those questions, the higher the score the more severe the disease is (Capriotti & Frizzell, 2015). Spirometers are also used to diagnose COPD (Capriotti & Frizzell, 2015). The spirometer will measure the air that is blown out and the amount of air that is going back in (Capriotti & Frizzell, 2015). A complete blood count (CBC), blood chemistry panel, chest x-ray, electrocardiogram (ECG), and ABG's should also be analyzed to determine if the disease is present (Capriotti & Frizzell, 2015).

A lot of people with COPD will have mild forms of the disease in which they can be treated with little therapy (Mayo clinic staff, 2020). "Even for more advanced stages of disease, effective therapy is available that can control symptoms, slow progression, reduce risk of complications and exacerbations, and improve your ability to lead an active life" (Mayo clinic staff, 2020). The most essential step in treatment is quitting smoking, this can stop COPD from getting worse (Mayo clinic staff, 2020). "Several medications are used to treat the symptoms and complications of COPD" (Mayo clinic staff, 2020). Bronchodilators usually come in inhalers; they relax the muscles in the airway (Mayo clinic staff, 2020). Some short acting medications are Albuterol, Ipratropium, and Levalbuterol and some fast acting would be Aclidinium, Arformoterol, Formoterol, Indacaterol, Tiotropium, Salmeterol, and Umeclidinium (Mayo clinic staff, 2020). Inhaled corticosteroids may also reduce airway inflammation (Mayo clinic staff,

2020). Lung therapies such as Oxygen can improve quality of life and is the only COPD therapy proved to extend life (Mayo clinic staff, 2020). BiPAP can also be used for when the patient sleeps (Mayo clinic staff, 2020).

Pathophysiology References (2) (APA):

Capriotti, T. M., & Frizzell, J. P. (2015). Pathophysiology: Introductory Concepts and Clinical Perspectives Faculty Bookshelf. 75.

Mayo clinic staff (2020, April 15). Copd. Retrieved March 10, 2021 https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679

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	**4.2-5.4**	**4.69**		
Hgb	**12.0-16.0**	**14.0**		
Hct	**37.0-47.0**	**41.5**		
Platelets	**130-400**	**150**		
WBC	**4.8-10.8**	**5.5**		
Neutrophils	**1.5-7.6**	**5.9**		
Lymphocytes	**1.4-4.4**	**1.9**		

Monocytes	**0-0.8**	**0.5**		
Eosinophils	**0.1-0.6**	**0.5**		
Bands	**10% or less**			

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-	**135-148**	**144**		
K+	**3.3-5.3**	**4.2**		
Cl-	**99-111**	**110**		
CO2	**23-29**			
Glucose	**70-110**	**115**		**Since it is not significant difference in numbers. It could just depend on if the client ate or drank something previous to getting her labs. It could also indicate diabetes. (Hyperglycemia, 2019)**
BUN	**5-25**	**21**		
Creatinine	**0.5-1.4**	**0.8**		
Albumin	**3.4-5.0**	**3.7**		
Calcium	**8.5-10.5**	**8.6**		
Mag	**1.7-2.2**			
Phosphate	**2.8-4.5**			
Bilirubin	**0.0-1.0**			

Alk Phos	**0.73-2.45**			

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**			**Culture did not have a U/A**
pH	**5-8**			
Specific Gravity	**1-1.030**			
Glucose	**0-50**			
Protein	**Neg -20**			
Ketones	**Negative**			
WBC	**0-5**			
RBC	**0-2**			
Leukoesterase	**Neg- 25**			

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**			**Client did not have cultures**
Blood Culture	**No growth**			
Sputum Culture	**No growth**			
Stool Culture	**No growth**			

Lab Correlations Reference (APA):

Hyperglycemia (high blood sugar): Symptoms, causes, treatments. (2019, May 11). Retrieved February 24, 2021, from https://www.webmd.com/diabetes/guide/diabetes-hyperglycemia

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

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

Medications (5 required)

Brand/ Generic	**Escitalopram/ Lexapro**	**Zestril /Lisinopril**	**Gonitro/ Nitroglycerin**	**Protonix/ Pantoprazole Sodium**	**Topiramate**
Dose	**20 mg**	**10 mg**	**0.4**	**40 mg**	**25 mg**
Frequency	**Daily**	**Daily**	**PRN**	**Daily**	**HS**
Route	**PO**	**PO**	**Sublingually**	**PO**	**PO**
Classification	**Antidepressant**	**Antihypertensive**	**Antianginal vasodilator**	**Antiulcer**	**Anticonvulsant**
Mechanism of Action	**Inhibits reuptake of neurotransmitter serotonin by CNS neurons, increasing serotonin available in nerve synapses.**	**Reduce blood pressure by inhibiting conversion of angiotensin I to angiotensin II, which is a potent vasoconstrictor that also stimulates adrenal cortex to secrete aldosterone. Decreased release of aldosterone reduces sodium and water reabsorption and increases their excretion thereby reducing blood pressure.**	**Forms free radical nitric oxide (NO) which activates guanylate cyclase, resulting in an increase of guanosine 3'5' monophosphate (cyclic GMP) in smooth muscle and other tissues.**	**Binds to the sulfhydryl group of H+, K+-ATPase, which is an enzyme implicated in acceleratin g the final step in the acid secretion pathway. The enzyme is inactivated , inhibiting gastric acid secretion.**	**Increases the availability of the inhibitory neurotransmitter gamma-aminobutyric acid by blocking voltage sensitive sodium channels. This action promotes the movement of chloride ions into neurons.**

Reason Client Taking	**Depression**	**Hypertension**	**Chest pain**	**Prevent stress ulcer**	**Headache**
Contraindications (2)	**Concomitant therapy with pimozide and hypersensitivity to escitalopram**	**Concurrent aliskiren use in patients with diabetes and hereditary or idiopathic angioedema of history of angioedema related to previous treatment with ACE inhibitors.**	**Acute MI and Angle closure glaucoma**	**Concurrent therapy with rilpivirine-containing products and hypersensitivity to pantoprazole**	**Hypersensitivity to topiramate or its components and metabolic acidosis with concurrent metformin use**
Side Effects/ Adverse Reactions (2)	**Dizziness and fatigue** (Jones & Bartlett Learning, 2019)	**Confusion and Depression** (Jones & Bartlett Learning, 2019)	**Agitation and blurred vision** (Jones & Bartlett Learning, 2019)	**Anxiety and Abdominal pain** (Jones & Bartlett Learning, 2019)	**Constipation and Chest pain** (Jones & Bartlett Learning, 2019)

Medications Reference (APA):

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

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 **A/O x3** **No distress** **Doesn't appear to be well groomed today**
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 **Pink** **Dry and soft** **Warm** **Turgor x3** **No rashes** **No bruising** **No wounds** **21**
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 **Head and neck symmetrical, normal cephalic** **Ears are free of discharge, hearing is good** **Eyes symmetrical PERL client has cataracts** **Nose symmetrical, no deviation, no polyps turbinated present** **Does not have teeth and client stated, "my grandkids buried my dentures" Gums are pink moist mucosa.** .
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:**	**Normal s1 and s2, no murmurs, no gallops, no rubs detected** **Pulses are equal** **Capillary refill less than 3s**
RESPIRATORY:	.

Accessory muscle use: Y☐ N ☒ **Breath Sounds: Location, character**	 **Breath sounds clear, regular, even and nonlabored** **No wheezes or crackles noted**
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:**	**Regular** **Regular** **5'10 ft** **162 lbs.** **Bowel sounds active in all four quadrants** **Morning of 03-04-20** **No masses or pain in the abdomen** **No distention** **No incisions** **Scaring on the abdomen from the appendectomy** **No wounds**
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	 **Not assessed**
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** ☐	**Extremities pink, warm, no numbness, no tingling, full sensation. Pain in the right knee.** **Full ROM of top extremities, lower extremities not assessed, client was laying down.** **Uses a walker** **40** **One assist with a wheelchair**

NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**Strength was equal in both arms** **Was unable to assess the client's lower extremities** **Client is well oriented and alert** **Cognitive to space, time and location** **Articulative speech** **Mature and cognitive** **No gross focal neurological deficits** **LOC- no**
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):**	**Client has 2 brothers, 2 sisters, 2 daughters and 1 son that he can cope with** **No religious preferences** **Developmental level: Mature**

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	66	179/76	16	97.5	98

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1000	0-10	Right knee	7	Aching	Walking

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
240	Toileting x1

240	

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 clearance related to decreased energy as evidenced by smoking for several years.	**Client had a history of smoking and past medical history stated COPD was present.**	**1.Assess and monitor respirations and breath sounds** **2.Keep environmental pollution to a minimum such as dust, smoke, and feather pillows**	**Maintain airway patency with breath sounds clear and demonstrate behaviors to improve airway clearance.**
2. Impaired	**Client rated the**	**1. Client used the**	**Client will be a 1 assist**

mobility related to right knee pain as evidenced by client stating pain score 7/10.	**pain a 7/10**	**wheelchair** **2.Assisted with getting the patient out of bed and helping the client bathe.**	**and will be able to move from the bed to the wheelchair.**

Other References (APA):

Concept Map (20 Points):

Subjective Data

Client stated pain was 7/10

Nursing Diagnosis/Outcomes

Client will be able to maintain airway patency with breath sounds clear. Patient should have a spirometer as a way of treatment.
The client is now a 1 assist and is not steady on his feet even though he says he is. Needs assistance walking to and from the bathroom.

Objective Data

T: 97.5
HR:66
R-16
O2: 98
R-16
BP: 179/76

Patient made a grimacing face when trying to get up.

Patient Information

See next page

Nursing Interventions

1.Assess and monitor respirations and breath sounds

2.Keep environmental pollution to a minimum such as dust, smoke, and feather pillows

1. Client used the wheelchair

2.Assisted with getting the patient out of bed and helping the client bathe.

82-year-old male client complaining of right knee pain. Client is unsure when the pain began. Client stated the pain is “off and on”, but when it is cold it tends to hurt more. Client described the pain as an ache feeling. Pain does not radiate anywhere. To relieve the pain the client gets up and walks around.