N321 Care Plan #2
Lakeview College of Nursing
Whitney Miller

Demographics (3 points)

Date of Admission	**Patient Initials**	**Age**	**Gender**
3/9/21	W.K.	65	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Retired	Married	Peanuts, tape, theophylline
Code Status	**Height**	**Weight**	
Full	5'10"	105 kg	

Medical History (5 Points)

Past Medical History: Chronic kidney disease, COPD, coronary artery disease, type II diabetes, hypertension, hyperlipidemia, chronic respiratory failure with hypoxia, obesity, peripheral arterial disease, liver disease
Past Surgical History: Thoracoscopy with possible thoracotomy, feeding tube, foot, glaucoma, hernia of abdominal wall, knee replacement, shoulder replacement, stent
Family History: Father: colon cancer, diabetes mellitus, heart attack. Mother: aortic valve disorder, breast cancer, cardiovascular disease, heart attack. Brother: heart disease. Sister: breast cancer
Social History (tobacco/alcohol/drugs): Alcohol: patient states he drinks "one or two times a year since I was twenty". Tobacco: former smoker, one to two packs per day for thirty-four years. Pt says he stopped smoking at age forty-six. Drugs: patient denies use of other drugs.
Assistive Devices: Prescription glasses
Living Situation: Private residence with wife
Education Level: Some college education

Admission Assessment

Chief Complaint (2 points): Pt suffers from shortness of breath.
History of present Illness (10 points):. On March ninth, a sixty-five year old white, married female with a past medical history or chronic kidney disease, COPD, coronary artery disease, type II diabetes, hypertension, hyperlipidemia, chronic respiratory failure with hypoxia, obesity and peripheral artery disease was admitted to Sarah Bush Lincoln Hospital after coming into the emergency room with shortness of breath and hypoxia. Pt states, "my shortness of breath started Saturday so I got tested for COVID and it came back positive". Pt states, "I tested positive for COVID on Saturday and I was feeling fine until Monday when I couldn't breath and came straight to the emergency room". Patient has a sharp pinch in his lung when trying to breathe deeply. Pt uses his inhaler to relieve his shortness of breath. Patient is being treated with steroids and oxygen to improve his breathing.

Primary Diagnosis

Primary Diagnosis on Admission (2 points):. COVID related SOB
Secondary Diagnosis (if applicable):. Not applicable
Pathophysiology of the Disease, APA format (20 points):

Coronavirus is a single-stranded RNA virus that can be found in mammals. Coronaviruses are a family of viruses that start off with cold and flu symptoms but can develop into more serious illnesses such as severe respiratory syndrome and Middle East respiratory syndrome. This virus can cause respiratory, gastrointestinal, and neurological disease. Coronavirus typically causes common cold symptoms in immunocompetent patients.

Bats are thought to be a natural reservoir for SARS-CoV-2 (Yuki, Fujiogi, Koutsogiannaki, 2020). A new strand of coronavirus started in Wuhan China in 2019.This new strain of coronavirus was declared a worldwide pandemic by the World Health Organization in 2020. SARS-CoV-2 can adapt to and infect new hosts using genetic recombination and variation. In the beginning stages, SARS-CoV-2 binds to epithelial cells in the nasal cavity and starts the replication process. At this stage, the virus can be detected by a nasal swab, however, patients are often asymptomatic. These patients are still infectious. The virus then begins stage two, the upper airway and conducting airway response. The virus moves into the respiratory tract. This second stage happens 4-6 days after the infection. About eighty percent of individuals will have the infection contained in the upper and conducting airway. Stage three is hypoxia, ground glass infiltrates, and progression to ARDS. Only about twenty percent of patients have this infection spread to a stage three level. These patients develop pulmonary infiltrates and severe diseases. The

virus reaches gas exchange in the lungs and infects alveoli. The end result is self-replicating pulmonary toxins that are released and infect type II cells in adjacent units. Elderly are at a higher risk for severe illness due to their diminished immune system and reduced ability to repair the damaged epithelial cells. There is a significant knowledge gap when it comes to COVID-19 because it is a new strain (Mason, 2020).

Signs and symptoms for COVID-19 include the following: loss of taste or smell, shortness of breath, difficulty breathing, fever, cough, fatigue, muscle aches, chills, sore throat, runny nose, headache, chest pain, pink eye, nausea, vomiting, diarrhea, and rash (Mayo Clinic Staff, 2021). Patients with this disease may come into the hospital with findings of a high respiratory rate and a low oxygen level. My patient exhibited a respiratory rate of twenty-four which was elevated. Lymphoma is the most common laboratory finding among individuals who are diagnosed and hospitalised with COVID-19. Patients may have laboratory findings of neutrophilia, elevated lactate dehydrogenase, high CRP, and high ferritin levels. Chest radiographs and chest CT scans are used for diagnosis (O'Mare, 2021). My patient got a chest x-ray to determine the severity of his disease. Approved testing for COVID-19 include a PCR test, and antigen test. The means of testing include nose or throat swabs and a saliva sample. My patient has a nasal swab done March sixth that came back positive.

Treatment for COVID-19 includes quarantine, rest and hydration, the use of remdesivir, and the use of dexamethasone. Because COVID-19 is a virus and not a bacteria, it is hard to treat with medication and the medication that is used for treatment has a lot of side effects. Hospitalized patients are usually treated for their signs and symptoms and plans of treatment are often changed as a result of how well the patient responds to treatment (Howen, 2020).

Pathophysiology References (2) (APA):

Yuki, K., Fujiogi, M., & Koutsogiannaki, S. (2020, June). *COVID-19 pathophysiology: A review*. Clinical immunology (Orlando, Fla.). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7169933/.

Mason, R. J. (2020, April 1). *Pathogenesis of COVID-19 from a cell biology perspective*. European Respiratory Society. https://erj.ersjournals.com/content/55/4/2000607.

Mayo Clinic Staff. (2021, March 3). *Coronavirus disease 2019 (COVID-19)*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/coronavirus/symptoms-causes/syc-20479963.

O'Mare, D. (2021, February 16). *Management of Patients with Confirmed 2019-nCoV*. Centers for Disease Control and Prevention. https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html.

Howen, R. (2020, November 17). *Coronavirus Disease 2019 (COVID-19): Frequently Asked Questions*. Coronavirus Disease 2019 (COVID-19): Frequently Asked Questions | IDPH. http://www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/coronavirus/faq.

Laboratory Data (15 points)

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 - 5.41	4.01	N/A	Pt was admitted at 2300 on 2/9 and has not had labs since admission. The body produces an increase of red blood cells to compensate for low oxygen levels. (WebMD Staff, 2020)
Hgb	11.3 - 15.2	11.5	N/A	
Hct	33.2 - 45.3	35.2	N/A	

Platelets	149 - 393	145	N/A	Slightly low platelet count in this patient is the result of immune system problems. (WebMD Staff, 2021)
WBC	4.0 - 11.7	4.0	N/A	
Neutrophils	2.4 - 8.4	3.1	N/A	
Lymphocytes	0.8 - 3.7	0.4	N/A	Viral infection is the cause of low lymphocytes in this patient. (WebMD Staff, 2020)
Monocytes	4.4 - 12.0	12.4	N/A	The patient's monocytes are high because he is fighting a viral infection. (WebMD Staff, 2021)
Eosinophils	0.0 - 6.3	N/A	N/A	
Bands	0.2 - 1.6	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	135	N/A	This patient has low sodium because he suffers from chronic kidney disease. (WebMD Staff, 2019)
K+	3.5 - 5	4.2	N/A	
Cl-	98 - 107	101	N/A	
CO2	21 - 31	22	N/A	
Glucose	74 - 109	166	N/A	This patient has diabetes type II. (WebMD Staff, 2021)
BUN	7 - 25	29	N/A	This patient has a high BUN because he suffers from chronic kidney disease. (WebMD Staff, 2020)
Creatinine	0.7 - 1.3	1.4	N/A	This patient has a high creatinine because he suffers from chronic kidney disease. (WebMD Staff, 2020)
Albumin	3.5 - 5.2	3.9	N/A	
Calcium	8.6 - 10.3	8.2	N/A	This patient has low calcium levels because he suffers from chronic kidney disease. (WebMD Staff, 2019)
Mag	1.6 - 2.4	N/A	N/A	
Phosphate	2.5 - 4.5	N/A	N/A	
Bilirubin	0.3 - 1.0	0.5	N/A	
Alk Phos	34 - 104	113	N/A	This patient has high alkaline phosphatase because he has liver disease. (WebMD Staff, 2021)
AST	13 - 39	50	N/A	This patient has a high AST because he has liver disease. (WebMD Staff, 2020)
ALT	7 - 52	52	N/A	
Amylase	30 - 110	N/A	N/A	
Lipase	24 - 151	N/A	N/A	
Lactic Acid	0.5 - 1	N/A	N/A	

Other Tests 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
INR	0 - 1.1	N/A	N/A	No testing done besides D-Dimer.

PT	11 - 13.5	N/A	N/A	
PTT	25 - 35	N/A	N/A	
D-Dimer	0 - 250	0.57	N/A	
BNP	0 - 100	N/A	N/A	
HDL	40 - 100	N/A	N/A	
LDL	0 - 100	N/A	N/A	
Cholesterol	0 - 200	N/A	N/A	
Triglycerides	0 - 150	N/A	N/A	
Hgb A1c	0 - 5.7	N/A	N/A	
TSH	0.4 - 4	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	Straw/clear	N/A	N/A	No testing done.
pH	5.0 - 7.0	N/A	N/A	
Specific Gravity	1.003-1.030	N/A	N/A	
Glucose	Negative	N/A	N/A	
Protein	Negative	N/A	N/A	
Ketones	Negative	N/A	N/A	
WBC	0 - 5	N/A	N/A	
RBC	0 - 4	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	10,000 - 1,000,000	N/A	N/A	No testing done.
Blood Culture	Negative, no growth	N/A	N/A	
Sputum Culture	Negative, no growth	N/A	N/A	
Stool Culture	Negative, no growth	N/A	N/A	

Lab Correlations Reference (1) (APA):

WebMD Staff. (2021). *Better information. Better health.* WebMD. https://www.webmd.com/.

WebMD Staff. (2020). *Better information. Better health.* WebMD. https://www.webmd.com/.

WebMD Staff. (2019). *Better information. Better health.* WebMD. https://www.webmd.com/.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

XR Chest 1 View - Findings: heart size normal, bilateral airspace disease, no pneumothorax or pleural effusion, right shoulder arthroplasty

12 Lead ECG - Findings: normal sinus rhythm

Diagnostic Test Correlation (5 points):

XR Chest 1 View - diagnose or rule out pneumonia as a second diagnosis. Estimate fluid or predict severity of disease in lungs.

12 Lead ECG - monitor patients heart rate and rhythm to prevent complications of Coronavirus.

Diagnostic Test Reference (1) (APA):

Young, A. (2021, January 13). *Chest X-rays in the ER Can Help Predict Severity of COVID-19 in Younger Patients*. Imaging Technology News. https://www.itnonline.com/content/chest-x-rays-er-can-help-predict-severity-covid-19-younger-patients.

Current Medications (10 points, 1 point per completed med)
10 <u>different</u> medications must be completed

Home Medications (5 required)

Brand/Generic	Proventil HFA/ albuterol	Advair Diskus/ fluticasone propionate	Lipitor/Atorvastatin	Glucophage/ Metformin	Isoptin SR/ Verapamil
Dose	90mcg/inh	250 mcg	40 mg	1000 mg	100 mg
Frequency	Q4H, PRN	BID	Daily	QPM	Daily
Route	Inhale	Inhalation powder	Oral	Oral	Oral
Classification	Bronchodilators	Corticosteroids	Statins	Biguanides	Calcium channel blockers
Mechanism of Action	Acts on beta-2 adrenergic receptors to relax the bronchial smooth muscle.	Fluticasone is a steroid that reduces inflammation and salmeterol is a bronchodilator.	Slows the production of cholesterol in the body to decrease cholesterol	Acts on liver to lower glucose production, and acts on gut to increase glucose utilisation	Inhibits calcium ion influx and contractile myocardial cells and vascular smooth muscle cells
Reason Client Taking	COPD	COPD	Hyperlipidemia	Diabetes type II	Hypertension
Contraindications (2)	Diabetes, hypertension	Diabetes, hypertension	Renal impairment, hepatic impairment	Renal impairment, hepatic impairment	Severe hypertension, renal impairment

Side Effects/Adverse Reactions (2)	Nervousness, shakiness	Headache, dizziness	Joint pain, insomnia	Heartburn, stomach pain	Dizziness, constipation
Nursing Considerations (2)	May decrease the effectiveness of beta blockers, monitor for chest pain and palpitation	Patient needs to rinse their mouth after inhaling, not for acute bronchospasms	Ensure patient has tried cholesterol lowering diet before beginning therapy, do not combine with other statins or fibrates	Monitor glucose levels frequently, use IV glucose if hypoglycemia occurs as result of overdose	Monitor cardiac rhythm regularly, monitor for renal or hepatic impairment

Hospital Medications (5 required)

Brand/Generic	Decadron/ dexamethasone	Lasix/Furosemide	Lovenox/ enoxaparin	Novolog/ Insulin aspart	Pantoprazole/ protonix
Dose	6 mg	40 mg	1 mL	4 units	40 mg
Frequency	Daily	Daily	BID	TID	Daily
Route	IV push	Oral	SubQ injection	SubQ injection	Oral
Classification	Corticosteroid	Diuretic	Anticoagulants	Insulins	Proton pump inhibitor
Mechanism of Action	Inhibition of inflammatory cells and suppression of expression of inflammatory mediators	Loop diuretic. Increases excretion of sodium and water by kidneys	Activates antithrombin III which causes blood to clot by acting on blood protein called fibrinogen	Promotes the storage and inhibits the breakdown of glucose, fat, and amino acids.	Binds to and inhibits H+, K+ ATPase which accelerates the final step in the acid secretion pathway
Reason Client Taking	Coronavirus, bring down inflammation in the lungs	Kidney disease	Blood clotting	Type II Diabetes	Acid reflux
Contraindications (2)	Uncontrolled infections, diabetes	Diabetes, low sodium in the blood	Renal impairment, hepatic impairment	Episodes of hypoglycemia, renal impairment	Renal impairment, hepatic impairment
Side Effects/Adverse Reactions (2)	Swelling, insomnia	Increased urination, thirst	Pain, bruising	Weight gain, low blood sugar	Headache, diarrhea

Nursing Considerations (2)	Do not give to nursing mothers, increase dosage when patient is under stress	Assess fluid status often, monitor blood pressure and pulse before administering	Monitor for signs of bleeding, administer in subcutaneous tissue	Roll the vial gently between hands, rotate injection sites regularly	May increase bleeding with warfarin, assess liver enzymes

Medications Reference (1) (APA):

WebMD Staff. (2021). *Better information. Better health.* WebMD. https://www.webmd.com/.

WebMD Staff. (2020). *Better information. Better health.* WebMD. https://www.webmd.com/.

WebMD Staff. (2019). *Better information. Better health.* WebMD. https://www.webmd.com/.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	ANO X4 Oriented to time and place No distress Poor hygiene
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N** X **Type:**	 Warm, dry, pink Skin turgor slow No rashes No bruises No wounds Braden score: 20
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 Symmetrical Tympanic membrane pearly grey Sclera normal Nose normal Teeth normal .
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N** X **Edema Y ☐ N** X **Location of Edema:**	 .Heart sounds normal S2 Peripheral pulses 3+ Capillary refill normal

RESPIRATORY (2 points): **Accessory muscle use: Y☐ N** X **Breath Sounds: Location, character**	.Breath sounds heart on back, right, and left Normal breath sounds High flow nasal cannula
GASTROINTESTINAL (2 points): **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** X **Nasogastric: Y ☐ N** X **Size:** **Feeding tubes/PEG tube Y ☐ N** X **Type:**	.Heart healthy diet at home Heart healthy diet at hospital 5'10" 105 kg Normoactive bowel sounds Last BM 5/9 AM Soft, nontender, distended
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N** X **Dialysis: Y ☐ N** X **Inspection of genitals:** **Catheter: Y ☐ N** X **Type:** **Size:**	Straw/clear 600 mL Genitals normal
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N** X **Fall Risk: Y ☐ N** X **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** **Needs assistance with equipment** **Needs support to stand and walk**	.Normal neurovascular Glasses only supportive device Strength in all limbs Fall risk score: 7 Up ad lib No assistance with equipment No support needed

NEUROLOGICAL (2 points): **MAEW: Y** X **N**☐ **PERLA: Y** X **N**☐ **Strength Equal: Y** X **N** ☐ **if no - Legs** ☐ **Arms** ☐ **Both** ☐ **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	.Speech normal Pt oriented to place and time LOC aware Sensory normal Normal mental status
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	.Supportive wife helps pt cope Pt has some college education Baptist Normal developmental level for age Lives with wife at private residence Wife would be able to assist and support

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0255	85	137/74	28	37.3	99
0824	89	138/86	24	37.4	97

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0900	1 -10	N/A	0	N/A	N/A
0945	1 - 10	N/A	0	N/A	N/A

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:**	20 gauge Left wrist Dates 3/9 No phlebitis No signs of athena or drainage IV patent No infiltration present Saline lock Dressing clean, dry and intact

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Sodium chloride 0.9% tremdesiuir 290 mL	Urine void 600 mL

Nursing Care

Summary of Care (2 points)

Overview of care: I did a full head to toe assessment and care plan on my patient.

Procedures/testing done: Not applicable

Complaints/Issues: Patient requested to be left alone to sleep. Patient requests to change his Atorvastatin from AM to PM.

Vital signs (stable/unstable): Vital signs are stable, high respiratory rate.

Tolerating diet, activity, etc.: Pt is tolerating heart healthy diet.

Physician notifications: not applicable

Future plans for patient: Pt will continue to be on oxygen and steroids and be treated for coronavirus complications. Patient will be discharged when complications are under control.

Discharge Planning (2 points)

Discharge location: Private residence with wife.

Home health needs (if applicable): Patient may need to be sent home with oxygen if he does not respond well to treatment.

Equipment needs (if applicable): Potentially oxygen

Follow up plan: Primary care provider or pulmonary specialist

Education needs: Educate the patient on what coronavirus is and how it is going to affect him since he is already suffering from COPD and other serious health risks. Educate the patient on the importance of continuing a heart healthy diet at home, any new medications he may be receiving, how to protect himself from exposure to coronavirus, and how to keep his symptoms under control.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

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.
● Ineffective airway clearance related to patient experiencing shortness or breath as evidenced by patient being diagnosed with COPD and coronavirus.	Patient complains of shortness of breath and struggles to breath without high-flow oxygen and medication.	**1.** Ensure the pt is at an acceptable oxygen saturation. **2.** Administer the patient's medication on time to ensure he doesn't go without important steroids and anti-inflammatory medications.	The pt is at an acceptable oxygen saturation and no modifications need to be made at this time. Client was happy and receptive for me to check his oxygen saturation. Goal met. I was able to administer the patient's medications on time. Goal met.
● Risk for infection related to pt not taking care of himself as evidenced by poor hygiene and weakened immune system.	Patient has visibly poor hygiene and a weakened immune system. This pt needs to protect himself from future viruses to prevent hospital visits.	**1.** Teach client how to properly wash hands. **2.** Ensure client knows to wear a mask and use sanitizer when going out in a public space.	I was able to show the client proper hand washing technique and talk him through how to do it on his own. Client was grateful for this teaching. Goal met. Client states he does wear a mask in public spaces. Client states he will be bringing sanitizer with him when he goes in public. Pt was thankful for the advice. Goal met.

• Ineffective self-health management related to patient long list of health complications as evidenced by continuing to eat excessive calories and fatty foods.	Patient states he "tries to do the heart healthy diet at home, but it is hard". Patient continues to eat poorly for his heart and hyperlipidemia.	**1.** Teach the patient about a heart-healthy diet. **2**.Let the patient know how important eating healthy is for his overall health and how eating poorly can negatively impact his body.	I was able to teach the client what foods he should be eating for a heart healthy diet. Patient was grateful for this information. Goal met. I instructed the patient on how eating poorly can negatively affect his body and how obesity continues to impact his other health conditions. The patient was thankful for this information. Goal met.

Other References (APA):
Concept Map (20 Points):