N441 Care Plan

Lakeview College of Nursing

Claire Guyon

Demographics (3 points)

Date of Admission	**Client Initials**	**Age**	**Gender**
1-1-22	SM	76	F
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Self-employed	Married	No known allergies
Code Status	**Height**	**Weight**	
DNR	160 cm	91.6 kg	

Medical History (5 Points)

Past Medical History: SM has a past medical history of hyperlipidemia, hypertension, and coronary artery disease.

Past Surgical History: SM has a past medical history of a hysterectomy (1986) and a cardiac stent.

Family History: SM's father has a history of hypertension.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Patient does not use alcohol or drugs but is a former smoker and stopped smoking in 2017. Unable to assess how long she smoked and how many packs she smoked due to being sedated and intubated.

Assistive Devices: Patient does not use any assistive devices.

Living Situation: Patient lives at home with her husband.

Education Level: Unable to assess due to patient being intubated and sedated.

Admission Assessment

Chief Complaint (2 points): SM chief complaint is general weakness, worsening shortness of breath, hypoxia, and COVID positive.

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

SM presented to the emergency department with COVID-19 on 12-31-22. She was sent home with COVID at home. SM stated that while monitoring her oxygen levels they dropped down to 82%. Patient complains of worsening shortness of breath, mild nausea and denies any vomiting or diarrhea. She does states generalized weakness all over her body. On admission patient had no pain just worsening shortness of breath and dry cough in her lungs. Her lungs were clear on admission. Patient stated she was having worsening shortness of breath over the past 2 days. Nothing seemed to help her shortness of breath and walking aggravated it. Unable to assess the severity of her symptoms and any treatment due to the patient being sedated and intubated.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): COVID

Secondary Diagnosis (if applicable): Hypoxia

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

COVID-19 spreads through respiratory droplets that are transmitted from person to person. The virus enters the body and attaches itself and enters host cells. The coronavirus comprises four structural proteins: the S protein, M protein, N protein, and E protein. The S protein (spike) protrudes from the viral surface and is the one that initiates the attachment and penetration (Parasher, 2021). The S protein begins the invasion of the virus. After the invasion of the host cells, the virus enters the pulmonary alveolar epithelial cells it releases its viral contents inside. Now the virus undergoes replication and formation of the RNA negative strand. These new strands synthesize in the cytoplasm of the cell (Parasher, 2021). The N protein binds to the new RNA, and the M protein integrates to the cellular endoplasmic reticulum. The new nucleocapsid transports to the cell membrane and the extracellular space. They are now ready to

invade more epithelial cells and keep spreading. The process of transmission can be completed repeatedly and can infect many people (Parasher, 2021).

There are multiple signs and symptoms of COVID-19 as well as some people are symptomatic when they infect with COVID-19. Some common signs and symptoms are fever, chills, fatigue, shortness of breath, headache, the new loss of smell or taste, congestion, runny nose, nausea, vomiting, and diarrhea (Centers for Disease Control and Prevention, n.d.). There are some less common signs and symptoms that are not listed.

Expected findings related to COVID-19 are low oxygen saturations, tachycardia, and tachypnea. Increased D-dimer levels and mild thrombocytopenia are standard labs that can be abnormal (American College of Emergency Physicians, n.d.).

Tests that can diagnose COVID-19 are SARS-CoV-2 viral tests that use nose or mouth samples. Rapid Point of Care tests is rapid tests that include antigens and some NAATs. A laboratory test can take days to complete; they can include RT-PCR and other NAATs. Antibody tests can detect SARS-CoV-2 in the blood (Centers for Disease Control and Prevention, n.d.).

Treatment of COVID-19 includes self-care and treatment of the symptoms. Get rest and stay hydrated. COVID-19 is a virus, and to which there has not been a cure developed. Most of the treatment is treating the patient's symptoms, so taking acetaminophen for reducing fever and resting to help the body fight off the infection (Centers for Disease Control and Prevention, n.d.).

The patient came into the emergency department on 12-31-21. She was diagnosed with COVID-19 and was sent home with COVID at home. The patient returned the day after and stated that her oxygen level was 82% on room air and she had worsening shortness of breath. The patient received a chest x-ray, and it showed the patient had mild interstitial thickening. The

patient became worse and needed to be intubated and sedated on 100% FiO2 and in a prone position to help the patient maintain adequate oxygen levels.

Pathophysiology References (2) (APA):

American College of Emergency Physicians. (n.d.). *Laboratory abnormalities*. https://www.acep.org/corona/covid-19-field-guide/assessment/laboratory-abnormalities/#:~:text=Laboratory%20abnormalities%20commonly%20observed%20among,fibrin%20degradation%20products%3B%20and%2For

Centers for Disease Control and Prevention. (n.d.). *Symptoms of COVID-19*. https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

Parasher, A. (2021, May 1). *Covid-19: Current understanding of its pathophysiology, clinical presentation and treatment*. Postgraduate Medical Journal. Retrieved February 5, 2022, from https://pmj.bmj.com/content/97/1147/312

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	3.80-5.41	4.75	3.17	Patient was diagnosed with acute blood loss anemia which causes her RBCs to become low (WebMD, n.d.).
Hgb	11.3-15.2	14	9.4	Patient was diagnosed with acute blood loss anemia which causes her Hgb to become low (WebMD, n.d.).
Hct	33.2-45.3	41.4	29.1	Patient was diagnosed with acute blood loss anemia which causes her Hct to become low (WebMD, n.d.).
Platelets	149-393	188	280	
WBC	4-11.7	5.5	21.3	Patient has candida albicans in her urine and sputum which is an infection which causes her WBCs to be increased (Mayo Foundation for Medical Education and Research, 2020).

Neutrophils	45.3-79	79.6	N/A	
Lymphocytes	11.8-45.9	14.2	3	Corticosteroids can lower the number of lymphocytes in the body (Mount Sinai Health System, n.d.).
Monocytes	4.4-12.9	5.9	3	Corticosteroids can lower the number of monocytes in the body (Mount Sinai Health System, n.d.).
Eosinophils	0-6.3	N/A	N/A	
Bands	0-6	N/A	2	

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-	135-145	135	138	
K+	3.5-5.1	3.9	3.3	Using diuretics can lower the amount of potassium in the body and my patient is currently receiving Lasix (Mayo Foundation for Medical Education and Research, 2020).
Cl-	98-107	102	99	
CO2	21-31	22	28	
Glucose	74-109	96	114	Being on a ventilator puts a lot of stress of the body and stress can increase a patient's blood sugar.
BUN	7-25	16	101	BUN can become high when there is acute kidney problems which this patient is experiencing due to oliguria (Michigan Medicine, n.d.).
Creatinine	0.6-1.2	0.84	1.94	Creatinine can become high when there is acute kidney problems which this patient is experiencing due to oliguria (Michigan Medicine, n.d.).
Albumin	3.5-5.2	3.5	N/A	

Calcium	8.6-10.3	8.1	7.7	Vitamin D deficiency can be a cause to abnormally low calcium levels (WebMD, n.d.).
Mag	1.6-2.2	N/A	N/A	
Phosphate	2.5-4.5	N/A	N/A	
Bilirubin	0.3-1	0.3	0.4	
Alk Phos	34-104	56	126	A high Alk Phos level can be caused by kidney problems and the patient is experiencing acute kidney problems (SelfDecode Labs, 2021) .
AST	13-39	30	34	
ALT	7-52	26	22	
Amylase	100-300	N/A	N/A	
Lipase	0-60	N/A	N/A	
Lactic Acid	3-23	N/A	N/A	
Troponin	<0.05	<0.010	N/A	
CK-MB	4-6	N/A	N/A	
Total CK	50-204	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	0.86-1.14	N/A	1.56	Patient was diagnosed with acute blood loss anemia which can be the reason for a high INR (WebMD, n.d.).
PT	11.9-15	N/A	19.4	Patient was diagnosed with acute blood loss anemia which can be the reason for a high PT (WebMD, n.d.).

PTT	22.6-35.3	N/A	29.2	
D-Dimer	0-0.62	0.41	4.21	A d-dimer can be elevated due to a clot and the patient had a DVT in her upper left arm and a pulmonary embolism (University of Rochester Medical Center, n.d.).
BNP	<100	N/A	N/A	
HDL	40-60	N/A	N/A	
LDL	<100	N/A	N/A	
Cholesterol	<200	N/A	N/A	
Triglycerides	<150	N/A	N/A	
Hgb A1c	4-5.5%	N/A	N/A	
TSH	0.4-4.2	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	Yellow/clear	N/A	Yellow cloudy	Cloudy urine is indicating a urinary tract infection (Cleveland Clinic, n.d.).
pH	4.5-8	N/A	5	
Specific Gravity	1.005-1.034	N/A	1.026	
Glucose	Negative	N/A	normal	
Protein	<20mg/dL	N/A	1+	High proteins can indicate dehydration (Cleveland Clinic, n.d.).
Ketones	Negative	N/A	1+	High ketones indicate this patient is not receiving enough fats and fatty acids for fuel (Cleveland Clinic, n.d.).
WBC	>5 hpf	N/A	7	High WBCs indicated a urinary tract infection (Cleveland Clinic, n.d.).
RBC	>5 hbf	N/A	5	High RBCs indicate a urinary tract

				infection (Cleveland Clinic, n.d.).
Leukoesterase	Negative	N/A	1+	High leukoesterase indicated inflammation in the urinary tract (Cleveland Clinic, n.d.).

Arterial Blood Gas 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
pH	7.35-7.45	N/A	7.25	Low pH indicates this patient is in respiratory acidosis (Healthline, 2021).
PaO2	75-85	N/A	86.1	High PaO2 indicates she has slight oxygen toxicity (Hamilton Medical, 2017).
PaCO2	35-45	N/A	59.8	High CO2 indicates this patient is in respiratory acidosis (Healthline 2021).
HCO3	22-26	N/A	23.2	
SaO2	95-98	N/A	96.8	

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	Negative	Positive-Candida albicans	Positive candida albicans indicates the patient has a urinary tract infection (Cleveland Clinic, n.d.).
Blood Culture	Negative	Negative	Negative-it is still pending	
Sputum Culture	Negative	Positive-Staphylococcus aureus	Positive-Candida albicans	These cultures are positive which indicate that this patient has infection of the lungs and received candida albicans from the hospital (Moss & Musher, 2021).
Stool Culture	Negative	N/A	N/A	

Lab Correlations Reference (1) (APA):

Cleveland Clinic. (n.d.). *Urinalysis: What it is, purpose, types & results*. https://my.clevelandclinic.org/health/diagnostics/17893-urinalysis

Hamilton Medical. (2017, August). *Hyperoxemia in the ICU*. https://www.hamilton-medical.com/en_US/News/Newsletter-articles/Article~2017-07-05~Hyperoxemia-in-the-ICU~293a5ca6-45d5-41e6-a469-fa90f9f3c6df~.html#:~:text=Hyperoxemia%20can%20be%20defined%20as,27%20kPa)%20(3).

Healthline. (2021, December). *What to know about respiratory acidosis*. https://www.healthline.com/health/respiratory-acidosis#:~:text=Respiratory%20acidosis%20occurs%20when%20the,the%20ions%20that%20control%20acidity.

Mayo Foundation for Medical Education and Research. (2020, November). *High white blood cell count causes*. https://www.mayoclinic.org/symptoms/high-white-blood-cell-count/basics/causes/sym-20050611

Mayo Foundation for Medical Education and Research. (2020, July). *Low potassium (hypokalemia) causes*. Mayo Clinic. https://www.mayoclinic.org/symptoms/low-potassium/basics/causes/sym-20050632

Michigan Medicine. (n.d.). *Blood urea nitrogen (BUN) test*. https://www.uofmhealth.org/health-library/aa36271#:~:text=High%20BUN%2Dto%2Dcreatinine%20ratios,digestive%20tract%20or%20respiratory%20tract.

Moss, B. J., & Musher, D. M. (2021, July). *Candida species in community-acquired pneumonia in patients with chronic aspiration - pneumonia*. BioMed Central. https://pneumonia.biomedcentral.com/articles/10.1186/s41479-021-00090-x

Mount Sinai Health System. (n.d.). *Blood differential test*. https://www.mountsinai.org/health-library/tests/blood-differential-test

SelfDecode Labs. (2021, March). *High alkaline phosphatase symptoms & how to reduce it*. https://labs.selfdecode.com/blog/alkaline-phosphatase/#:~:text=or%20bone%20disorders.-,Causes%20of%20High%20Alkaline%20Phosphatase,can%20raise%20alkaline%20phosphatase%20levels.

University of Rochester Medical Center. (n.d.). *D-Dimer*. Retrieved February 5, 2022, from https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=167&contentid=d_dimer#:~:text=An%20elevated%20D%2Ddimer%20level,blood%20clot%20is%20highly%20unlikely.

WebMD. (n.d.). *Anemia: Causes, symptoms, diagnosis, treatments*. https://www.webmd.com/a-to-z-guides/understanding-anemia-basics#:~:text=Anemia%20is%20defined%20as%20a,delivers%20it%20throughout%20your%20body.

WebMD. (n.d.). *Hypocalcemia: Symptoms, causes, treatments, and more*. https://www.webmd.com/a-to-z-guides/what-is-hypocalcemia

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Chest X-ray (12-31-21): heart mildly enlarged. Diffuse mild interstitial thickening. No visualized pneumothorax. No pleural effusion, osseous structures intact.

Chest X-ray: 1-2-22,1-10-22, 1-11-22, 1-14-22, 1-15-22, 1-16-22, 1-17-22, 1-18-22, 1-19-22, 1-20-22, 1-21-22, 1-23-22, 1-24-22, 1-25-22, 1-26-22, 1-27-22, 1-28-22, 1-29-22, 1-31-22.

Chest X-Ray (1-31-22): Improved inspiratory effort with slight radiographic improvement in bilateral infiltrates. There is no significant change.

Chest X-Ray ET tube place (1-15-22, 1-27-22): right sided pneumothorax

CT Angio chest pulmonary without contrast (1-2-22): lungs: there are ground glass consolidations with super imposed alveolar consolidations present bilaterally and diffusely. Negative for pleural effusion or pneumothorax. Trachea is midline central airways are patent.

CT Chest pulmonary with contrast: new acute pulmonary emboli in branches to the medial posterior segment of the left lower lobe.

CT Angio chest pulmonary without contrast: 1-15-22

CT abdomen and pelvis without contrast: 1-20-22

Electrocardiogram (EKG): 1-24-22, 1-25-22

Ultrasound Venous Duplex upper ext. bilateral (1-11-22): There is echogenic, noncompressible left mid basilic vein consistent with thrombus.

Ultrasound Venous Duplex lower ext. bilateral (1-11-22): No evidence of deep vein thrombosis bilaterally.

Ultrasound Venous Duplex lower ext. bilateral (1-21-22): no evidence of deep vein thrombosis bilaterally.

Ultrasound Venous Duplex upper ext. bilateral (1-21-22): left axillary vein thrombus, left cephalic vein thrombosis, right basilic vein thrombosis

Echo (1-12-22): Ejection fraction is normal; wall thickness is within normal limits for both left and right ventricles. Left systolic function within normal limits. Right systolic function is mildly reduced. Aortic valve was not well visualized. Tricuspid valve and IVC/Hepatic veins are within normal limits.

Diagnostic Test Correlation (5 points):

Chest X-Ray: The patient is having continuous daily x-rays to help show the placement of her ET tube and to keep an eye on her lungs to show if her lungs are show progression or degression (Kocak, 2022).

CT Angio Chest Pulmonary: A CT Angio pulmonary shows if there are any clots in her lungs (Kocak, 2022). This test did show that she had a pulmonary embolism.

EKG: An EKG test measures the electrical signals in the heart. This test was done to show if the patient is having any change in the electrical signals in the heart (Kocak, 2022). This test shows that she was in normal sinus rhythm.

Ultrasound Venous Duplex: Ultrasound Venous Duplex is done to show if there is any clots in the veins in the patients arms and legs (Kocak, 2022). This test showed that the patient did have DVT in her basilic vein on her left extremity.

Echo: Echocardiogram checks the hearts chambers and valves are pumping the blood through the patient's heart (Kocak, 2022). This test was done to check on the patient's heart and help guide therapy options after the patient had a pulmonary embolism.

Diagnostic Test Reference (1) (APA):

Kocak, M. (2022, January). *Overview of imaging tests - special subjects*. Merck Manuals Consumer Version. https://www.merckmanuals.com/home/special-subjects/common-imaging-tests/overview-of-imaging-tests

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

Home Medications (5 required)

Brand/ Generic	Midamor/ amiloride hydrochloride	Prinivil/ lisinopril	Pravachol/ pravastatin	Tylenol/ acetaminophen	Pineal Hormone Melatonin/melatonin
Dose	5mg	40 mg	40 mg	650 mg	6 mg
Frequency	Daily	Daily	Daily	Every 6 hours PRN	HS PRN
Route	Oral	Oral	Oral	Oral	Oral
Classification	Potassium sparing diuretic; diuretic	Antihypertensive; angiotensin-converting enzyme (ACE) inhibitor	HMG-CoA reductase inhibitor (statin); antilipidemic	Nonsalicylate, Para aminophenol derivative; antipyretic, nonopioid analgesic	hormone
Mechanism of Action	Inhibits sodium reabsorption in distal convoluted tubules and cortical collecting ducts, causing sodium and water loss and enhancing potassium retention.	Reduces blood pressure by inhibiting the conversion of angiotensin I to angiotensin II. May also inhibit renal and vascular production of angiotensin II. This action reduces the release of aldosterone, which in turn reduces the	Inhibits cholesterol synthesis in liver by blocking the enzyme needed to convert hydromethlglutaryl-CoA to mevalonate, a cholesterol precursor. When cholesterol synthesis is blocked the liver also increases breakdown of LDL cholesterol.	Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in the peripheral nervous system. Acetaminophen also acts directly on temperature-regulating center in the hypothalamus by inhibiting synthesis of prostaglandin E2.	Binds to two receptors within the SCN of the hypothalamus. Specifically, it acts on melatonin receptor 1 and melatonin receptor 1. It sends signals to other receptors that start a cascade of actions ultimately resulting in the effects of melatonin.

		reabsorption of sodium and water and increases their excretion. This reduction in fluid volume will then reduce blood pressure.			
Reason Client Taking	HTN	HTN	To prevent cardiovascular and coronary events in patients at risk, to treat hyperlipidemia	To relieve mild to moderate pain	Treat delayed sleep phase
Contraindications (2)	-Impaired renal function -potassium level above 5.5 mEq/L	-Diabetics -Renal impairment	-active hepatic disease or unexplained persistent elevated liver enzymes -breastfeeding	-chronic intestinal disease -cirrhosis	-hypersensitivity to melatonin -concurrent use with immunosuppressive treatment
Side Effects/ Adverse Reactions (2)	-encephalopathy -arrythmias	-Hypotension - Cardiac arrhythmias	-hepatic failure -hemolytic anemia	-fulminant hepatitis -thrombocytopenia	-daytime fatigue -drowsiness
Nursing Considerations (2)	-don't administer amiloride with other potassium sparing diuretics	- Monitor blood pressure often. - Use caution in patients	-use pravastatin cautiously in patients with hepatic or renal impairment	-be aware that acarbose isn't recommended for patients with significant renal dysfunction	-instruct patient to take at bedtime as directed -caution patient to

	-monitor renal function test results, fluid intake and output, and weight, monitor potassium levels	with fluid volume deficit, impaired renal function, and heart failure.	and in elderly -report unexplained muscle aches or weakness and significant increases in creatine kinase.	and serum creatinine level 2 mg/dl -expect to decrease dosage to control GI upset	avoid driving
Key Nursing Assessment(s) /Lab(s) Prior to Administration	-monitor electrolytes like potassium and sodium -monitor weight and intake and output	-Should assess electrolytes, especially potassium and sodium -Assess patient's heart function, particularly blood pressure, pulse, and heart rhythm.	-monitor liver enzymes -monitor BUN and serum creatinine levels -monitor blood lipoprotein level	-check blood glucose -serum liver enzyme levels	-monitor blood glucose and coagulation panel - monitor neurological assessment
Client Teaching needs (2)	-warn patient to avoid high potassium food and salt substitutions that contain potassium -advise patient to increase fluid and fiber intake to prevent constipation.	-Explain lisinopril helps to control HTN but is not a cure. Pt may require lifelong therapy. - Advise patient to change positions slowly as lisinopril could cause orthostatic hypotension.	-instruct patient to take drug at bedtime without regard to meals -caution patient not to perform hazardous activities such as driving until effects of drug is unknown	-explain importance of self-monitoring glucose levels -warn patient that noncompliance with treatment can increase risk of diabetic complications	-use the lowest dose when you start taking melatonin. -instruct patient not to drive after taking this medication

Hospital Medications (5 required)

Brand/Generic	Dulcolax/ bisacodyl	Enoxaparin, Lovenox	Levemir/ Insulin detemir	Prevacid/ lansoprazole	Humulin R/Insulin regular
Dose	10 mg	90 mg	10 units	30 mg	Sliding scale
Frequency	Daily	Daily	Daily	daily	Every 6 hours
Route	Rectal suppository	SubQ injection	SubQ injection	Oral	SubQ injection
Classification	Surfactant; laxative, stool softener	Low-molecular weight heparin; anticoagulant	Antidiabetic, long-acting insulin	Proton pump inhibitor; antiulcer	Antidiabetics, insulin
Mechanism of Action	As a surfactant that softens stool but decreasing surface tension between oil and water in feces. This action lets more fluid penetrate stool, forming a softener fecal mass.	Potentiates the action of antithrombin III, a coagulation inhibitor by binding with antithrombin III, enoxaparin rapidly binds with and inactivates clotting factors. Without thrombin, fibrogen cannot convert to fibrin and	exert their specific action through binding to insulin receptors. Receptor-bound insulin lowers blood glucose by facilitating cellular uptake of glucose into skeletal muscle and fat and by	Binds to and inactivates the hydrogen potassium adenosine triphosphate enzyme system in gastric parietal cells. This action blocks the final step of gastric acid production	It helps move glucose from the blood into the body's cells. The cells then use this sugar for energy.

		clots cant form	inhibiting the output of glucose from the liver.		
Reason Client Taking	constipation	To prevent and treat DVT in patients with or without pulmonary embolism	Improve blood sugar control	To treat duodenal ulcers and maintain healed duodenal ulcers	Management if hyperglycemia
Contraindications (2)	-fecal impaction -intestinal obstruction	-active major bleeding -history of heparin induced thrombocytopenia	-hypersensitivity -hypoglycemia	-concurrent therapy with rilpivirune -hypersensitivity	-hypersensitivity -hypoglycemia
Side Effects/Adverse Reactions (2)	-stomach cramps -faintness	-atrial fibrillation -hemorrhage	-hypoglycemia -weight gain	-hepatitis -acute renal failure	-hypoglycemia -dizziness
Nursing Considerations (2)	-expect excessive or long-term use of docusate to cause dependence on laxatives for bowel movements, electrolyte imbalances, osteomalacia, steatorrhea, and vitamin and mineral deficiencies -assess for laxative abuse syndrome	Use enoxaparin with extreme caution in patients with a history of heparin induced thrombocytopenia -use extreme caution in patients with an increased risk of hemorrhage	-monitor blood glucose levels closely -monitor for adverse reactions such as hypoglycemia	-Give before meals -monitor patient for renal dysfunction because drug may cause acute intestinal nephritis at any point during therapy	- monitor blood glucose levels closely -monitor for adverse reactions such as hypoglycemia
Key Nursing Assessment(s)/	-monitor electrolyte	-monitor platelet	-monitor glucose	-monitor stool for C. Diff	-monitor glucose

Lab(s) Prior to Administration	imbalances -monitor for anorexia nervosa, depression	levels, potassium -monitor stool for occult blood	levels -monitor for hypoglycemia	-monitor renal and hepatic labs	levels -monitor for hypoglycemia
Client Teaching needs (2)	-tell the patient not to use docusate when she has abdominal pain, nausea, or vomiting -advise patient to take docusate with a full glass of water or milk	-Advise patient to notify prescriber about adverse reactions especially bleeding -Inform patient that taking NSAIDs can increase their risk for bleeding	-teach how to increase blood sugars quickly -teach client and clients family how to administer glucose injection in case of unconscious hypoglycemia	-warn patient to avoid alcoholic beverages while taking these medications -tell patient to stop taking drug and report to provider or decrease in urination	-teach how to increase blood sugars quickly -teach client and clients family how to administer glucose injection in case of unconscious hypoglycemia

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2020). *2020 Nurse's drug handbook* (19th ed.). Jones & Bartlett Learning.

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Patients' alertness and orientation could not be assessed adequately due to the patient being intubated and sedated. Patient was not able to respond to anything due to being on a paralytic. Patient did not show any signs of distress and her overall appearance was clean and groomed.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type: N/A**	Patients skin color was normal for race. Patient's skin was cool and moist to the touch. Patient was weeping due to being very edematous. Patient did not have any rashes. Patient had a large bruise over her ribs on her right side from a previous chest tube. Patient had another large bruise on her left side abdomen. Was not able to assess the front of her abdomen due to being in prone position. Patient had wounds on her mouth and lips due to being intubated. She was bleeding from the wounds on her lips due to the adhesive tape holding the ET tube and bleeding on the inside of her mouth. She also had an open stage 2 pressure injury on her coccus. Patient is at a high risk for skin pressure injury due to her being sedated/intubated and already has a stage 2 pressure injury on her coccus. Patients Braden score is 6.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck are symmetrical. Unable to assess patients thyroid due to patient being prone. Lymph nodes were soft and moveable. Carotid pulses were palpated and strong. No signs of jugular vein distention. Ears were symmetrical bilaterally. Tympanic membranes were gray and intact. Patient was not able to open eyes due to being sedated and intubated. Pupils were sluggish and 2mm in diameter. EOM was not able to be assessed due to being sedated. Conjunctiva is pink and moist. Patient had significant periorbital edema on her left eye and mild periorbital edema

	on her right eye. Nose had rhinorrhea coming from the nose due to the ET tube had a cuff leak. Unable to assess the septum, the turbinates, and if there are polyps due to patient being in a prone position. Patient's mouth had trauma due to the ET tube. Mouth care showed that there was active bleeding in the mouth. Unable to visualize the patient's teeth due to being intubated and patient's mouth had significant swelling.
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:**	Patients heart sounds were faint due to patient being in prone position but was S1 and S2 when heard. Patient's cardiac rhythm was normal sinus rhythm. Radial and Pedal pulses were 3+ bilaterally and cap refill was less than 3 seconds. Patient was fluid overloaded and was on Lasix to help remove any excess fluid. Patient's left and right arm and right leg was 3+ pitting edema. Patient's left leg was 2+ pitting edema. Patient also experienced edema on her eyes. She had periorbital edema of the left and right eye. The left eye was 3+ and the right eye was 1+.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character** **ET Tube:** **Size of tube:** **Placement (cm to lip):** **Respiration rate:** **FiO2:** **Total volume (TV):** **PEEP:** **VAP prevention measures:**	Breath sounds were auscultated anteriorly due to patient being in a prone position. Breath sounds were equal and regular with coarse crackles in both lungs bilaterally. Size: 7.5 mm Placement: 24 cm at the lip Respirations: 20 breaths per minute FiO2: 100% Tidal volume: 330 mL PEEP: 15 cmH2O Prevention measures: provide great oral care every 2 hours, brush patients teeth every 12 hours, ensure good hand hygiene when caring for the ET tube, have the patients head of bed above 30 degrees to avoid aspiration, suction the

	patients ET tube to help reduce aspirating on secretions.
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 ☒** **Orogastric: Y ☒ N ☐** **Size:** 16 French **Feeding tubes/PEG tube Y ☐ N ☒** **Type:** N/A	Patients diet at home is a regular diet with no restrictions. Patients current diet is tube feedings. During the shift the patient had 650 mL of residual in her stomach. So, they stopped her tube feeding during my shift and hope to start them up maybe tomorrow (2-2-21). The patients goal feedings are 40 mL per hour. Height: 160 cm Weight: 91.6 kg Bowel sounds: Bowel sounds were not able to be assessed due to patient being intubated/sedated and being in prone position. Inspection: unable to assess patient's abdomen due to patient being intubated/sedated.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type:** Foley **Size:** 16 French **CAUTI prevention measures:**	Patient's urine was cloudy yellow with sediment in the foley catheter. Urinary output collected during the clinical shift was 110 mL. Patient's genitals were red and erythema due to patient's urine culture being positive for candidiasis albicans. CAUTI prevention measures: good hand hygiene while caring for the urinary catheter, using aseptic technique when inserting a foley catheter, doing catheter care every 12 hours to help keep the area clean, only keeping the urinary catheter in place as necessary.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☒** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** ☐	Unable to assess patients nail beds due to patient having red nail polish. Patient's extremities were cool to touch and weeping. Unable to assess patient's active range of motion or the patient's strength due to the patient being intubated, sedated, and was receiving a paralytic. Patient did not use supportive devices before being admitted to the hospital. Was able to do passive range of motion on the patient and I was

Needs assistance with equipment ☐ **Needs support to stand and walk** ☐	able to move all patient's extremities. Patient is a very high fall risk due to being sedated, intubated, and is receiving a paralytic. Her fall risk score is 50.
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Patient was sedated and intubated so her neurological status could not be assessed. Patient's baseline is A&Ox4 but since the patient was intubated and sedated this was not observed during the clinical shift.
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):**	Patient's chart stated that the patient is Christian. Was not able to assess her coping methods, developmental level, what religion means to the patient, and personal/family data due to the patient being intubated and sedated.

Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	80	114/58	20	36.7 degrees Celsius	92%
0800	81	108/56	20	35.5 degrees Celsius	93%

Vital Sign Trends/Correlation:

The patient is sedated and intubated. Patient is currently on sedative medications as well as paralytic medications. Therefore, she is unable to breathe for herself and the ventilator is breathing for her. She is currently on 100% FiO2 and proning. Her vital signs are within normal

limits except for her last temperature at 35.5 degrees due to her being fluid overloaded and weeping from her extremities.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	FLACC	N/A	0	N/A	N/A
1148	FLACC	N/A	0	N/A	N/A

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 18 gauge **Location of IV:** Right antecubital **Date on IV:** 1-29-22 **Patency of IV:** flushes well and is patent **Signs of erythema, drainage, etc.:** no complications present **IV dressing assessment:** dressing is clean, dry, and intact	Saline Locked
Other Lines (PICC, Port, central line, etc.)	
Type: Central Line (PICC) **Size:** Triple left Fr **Location:** left upper extremity **Date of insertion:** 1-29-22 **Patency:** currently infusing **Signs of erythema, drainage, etc.:** no complications present **Dressing assessment:** dressing is clean, dry, intact **Date on dressing:** 1-31-22 **CUROS caps in place: Y ☒ N ☐**	Normal Saline: 3mL/hr Lasix: 40 mL/hr Cistracurium 8.2 mL/hr Fentanyl: 15mL/hr Midazolam: 1l mL/hr

CLABSI prevention measures: Perform good hand hygiene, apply appropriate skin antiseptic, ensure that the skin antiseptic is dry before inserting, ensure antiseptic technique, remove any unnecessary catheters, ensure dressings are clean and dry	

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
Tube feeding 305 mL Normal Saline flush: 3 mL Normal Saline Continuous: 22.5 mL Water through OG: 100 mL Cistracurium IV: 61.5 mL Fentanyl IV: 112.5 mL Midazolam IV: 82.5 mL Lasix IV: 300 mL **Total Input: 987 mL**	Catheter urine: 110 mL Stomach residual: 650 mL **Total Output: 760 mL**

Nursing Care

Summary of Care (2 points)

Overview of care: Continue full ventilator support with paralysis and proning, continue current sedatives, attempt to decrease tidal volume slowly to attempt to approximate plateu pressure as close to 30 as safely possible with permissive hypercapnia, monitor off antibiotics for

signs and symptoms of sepsis, continue Lasix drip monitoring creatinine, urine output, and potassium, continue full dose anticoagulant for VTE/PE, continue tube feeds as tolerated, head of bed and aspiration precautions, maintain blood sugars between 140-180, continue to discuss with family goals of care.

Procedures/testing done: Echo, CT with and without contrast, Ultrasound doppler on upper and lower extremities, chest x-rays, and EKG.

Complaints/Issues: She is maxed out on FiO2 at 100% and is proning. COVID-19 pneumonia- severe, acute hypoxic respiratory failure/ARDS, circulatory shock, septic shock, off pressors, cavitary pneumonia MSSA (left base) oliguric renal failure with azotemia, pulmonary effusion with RV dysfunction bilateral upper extremity DVT not on anticoagulant due to chest wall bleeding, acute blood loss anemia, and coronary artery disease.

Vital signs (stable/unstable): Patients vital signs are unstable due to a low temperature reading of 35.5 degrees Celsius.

Tolerating diet, activity, etc.: Patient is not tolerating diet, so doctor decided to stop tube feedings for now. Patient is proning and is tolerating proning well.

Physician notifications: We are going to continue with medications, paralytic and sedatives and talk with the family today in a meeting about future plans.

Future plans for client: A family meeting is set up for today to try and talk with the family to decide what is the best plan of action for this patient. She has been intubated for greater than 14 days and would need a tracheostomy to be placed but patient is to unstable.

Discharge Planning (2 points)

Discharge location: Discharge location is not applicable due to the patient being sedated and intubated.

Home health needs (if applicable): Home health needs are not applicable at this time. We do not know the future of this patient.

Equipment needs (if applicable): Equipment needs are not applicable currently. We do not know the future of this patient.

Follow up plan: Patient's follow up plan is to see if the patient can tolerate lowering the ventilator settings to see if she is able to tolerate that. She is currently maxed out at 100% FiO2 so we are not able to give her much more. We are just waiting to see if her body can recover.

Education needs: This patient will need education on regaining strength back in her body. We can educate her on catheter care and how to keep the area clean. We can educate her on proper hand hygiene to help reduce the risk of infection.

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"	**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

and “as evidenced by” components • Listed in order by priority – highest priority to lowest priority pertinent to this client				response, status of goals and outcomes, modifications to plan.
1. Impaired spontaneous ventilation related to acute respiratory failure. This is evidenced by arterial pH less than 7.35 (Nurseslabs, 2019).	This nursing diagnosis was chosen due to patient being in prone position and being completely maxed out at 100% FiO2 and her arterial pH is 7.25.	**1.** Auscultate the lungs for normal or adventitious breath sounds (Nurseslabs, 2019). **2.** Assess the skin color and examine lips and nailbeds for cyanosis(Nurseslabs, 2019).	**1.** Patient has normal and equal breath sounds (Nurseslabs, 2019). 2. Patient is oxygenating properly and there is no cyanosis of the lips and nailbeds (Nurseslabs, 2019).	1. Patient is not responding to well. Patients’ breath sounds are equal, but patient has coarse crackles in the lungs bilaterally. 2. Patient is oxygenating well on FiO2, and her oxygen saturation is 94%.
2. Ineffective airway clearance related to endotracheal intubation. This is evidenced by increased peak airway pressure (Nurseslabs, 2019).	This nursing diagnosis was chosen due to patient being intubated, sedated, and has her FiO2 is at 100%.	**1.** Turn the client every 2 hours (Nurseslabs, 2019). **2.** Use closed in-line suction (Nurseslabs, 2019).	**1.** Loosen the secretions and help prevent ventilator associated pneumonia (Nurseslabs, 2019). **2.** Suctioning the client every 2 hours helps reduce the risk for infection (Nurseslabs, 2019).	1. Patient is responding well to being turned. She is in prone position, but her head is being turned every 2 hours. Goal is to help loosen secretions. 2. The client is responding well to being suctioned every 2 hours and she did not drop in O2 saturations while we suctioned her.

				Goal is to help reduce the risk for pneumonia and maintain an effective airway.
3. Risk for decreased cardiac output related to mechanical ventilation as evidenced by patient's urine output is less than 30 mL per hour and patient is cool to the touch (Nurseslabs, 2019).	This nursing diagnosis was chosen due to the patient's urinary output was less than 30 mL per hour and the patient was weeping from her extremities.	**1.** Assess the patients capillary refill, skin temperature, and peripheral pulses (Nurseslabs, 2019). **2** Monitor fluid balance and urine output (Nurseslabs, 2019).	**1.** Patients capillary refill is less than three seconds, her skin temperature is warm to the touch, and her peripheral pulses are 3+ in all extremities (Nurseslabs, 2019). 2. Patient has a balance between the fluids she is receiving and her urine output (Nurseslabs, 2019).	**1.** Patient is responding well to this intervention her peripheral pulses are all 3+ and her capillary refill is less than 3 seconds. However, she is skin temperature is cool to the touch and she has pitting edema on all four extremities The goal is to ensure the patient is having proper cardiac output. 2. Patient is not responding well to this intervention. She is receiving more fluids than she is urinating. She is very fluid overloaded. Our goal is to help reduce the fluid by giving her Lasix to help excrete the excess fluid.
4. Risk for infection related to patient being intubated as	This nursing diagnosis was chosen due to patient	**1.** Maintain good hand hygiene and wear proper gloves whenever handling ET tube care	**1.** To help reduce the transmission of infection (Nurseslabs, 2019).	1. Patient is not responding well due to being infected with candida albicans

evidenced by patient is positive for Candida albicans in her sputum culture (Nurseslabs, 2019).	becoming infected with candida albicans in her lungs.	(Nurseslabs, 2019). **2.** Ensure proper oral care every 2 hours to help reduce the risk for infection (Nurseslabs, 2019).	2. Help reduce the risk of bacteria entering the lungs and causing infection (Nurseslabs, 2019).	in the lungs after she was intubated there for it was hospital acquired. Goal is to maintain proper hand hygiene to help reduce the risk for further infection. 2. Patient is not responding well due to obtaining an infection. Our goal is ensuring we are doing oral care every 2 hours to help further infection.
5. Risk for impaired skin integrity related to being intubated, sedated, and on bedrest. This is evidenced by patients Braden score is 6 (Nurseslabs, 2019).	This nursing diagnosis was chosen due to the patient being completely immobile and is in the prone position. She is weeping profusely due to being fluid overloaded.	**1.** Use preventative skin care devices to avoid skin breakdown (Nurseslabs, 2019). **2.** Inspect the patients skin every shift documenting and reporting in changes to the skin (Nurseslabs, 2019).	**1.** Patient will not have skin breakdown or worsening skin breakdown (Nurseslabs, 2019). 2. Any worsening or healing skin breakdown will be documented correctly and reported (Nurseslabs, 2019).	**1.** Patient is not responding well because she is needing to be proned to have adequate oxygenation. She also is having skin breakdown in and on her mouth due to having the ET tube placed. Goal is to help reduce and precent any furthering trauma to this patient. 2. Patient is not responding well, and her skin does not look great. We have wound care on board and are documenting her wounds and if there are any changes to them. Our goal is to

				help reduce the risk for worsening skin integrity.

Other References (APA):

Nurseslabs. (2019, May). *6 mechanical ventilation nursing care plans*. https://nurseslabs.com/6-mechanical-ventilation-nursing-care-plans/4/

Concept Map (20 Points):

Subjective Data

- Patient stated that she was having worsening shortness of breath.
- Patient stated that she is having generalized weakness all over her body.
- Patient stated that she was nauseous but reported that she did not vomit or have diarrhea.

Nursing Diagnosis/Outcomes

- Impaired spontaneous ventilation related to acute respiratory failure. This is evidenced by arterial pH less than 7.35 (Nurseslabs, 2019).
  - Patient has normal and equal breath sounds (Nurseslabs, 2019).
  - Patient is oxygenating properly and there is no cyanosis of the lips and nailbeds (Nurseslabs, 2019).
- Ineffective airway clearance related to endotracheal intubation. This is evidenced by increased peak airway pressure (Nurseslabs, 2019).
  - Loosen the secretions and help prevent ventilator associated pneumonia (Nurseslabs, 2019).
  - Suctioning the client every 2 hours helps reduce the risk for infection (Nurseslabs, 2019).
- Risk for decreased cardiac output related to mechanical ventilation as evidenced by patient's urine output is less than 30 mL per hour and patient is cool to the touch (Nurseslabs, 2019).
  - Patients capillary refill is less than three seconds, her skin temperature is warm to the touch, and her peripheral pulses are 3+ in all extremities (Nurseslabs, 2019).
  - Patient has a balance between the fluids she is receiving and her urine output (Nurseslabs, 2019).
- Risk for infection related to patient being intubated as evidenced by patient is positive for Candida albicans in her sputum culture (Nurseslabs, 2019).
  - To help reduce the transmission of infection (Nurseslabs, 2019).
  - Help reduce the risk of bacteria entering the lungs and causing infection (Nurseslabs, 2019).
- Risk for impaired skin integrity related to being intubated, sedated, and on bedrest. This is evidenced by patients Braden score is 6 (Nurseslabs, 2019).
  - Patient will not have skin breakdown or worsening skin breakdown (Nurseslabs, 2019).
  - Any worsening or healing skin breakdown will be documented correctly and reported (Nurseslabs, 2019).

Objective Data

-Patient's temperature was 35.5 degrees Celsius.
-Unable to assess the patient's neurological status due to the patient receiving a paralytic and sedation.
-Patient was diagnosed with COVID.
-She is in acute respiratory failure.
-She was positive for candida albicans in her urine and sputum.
-She had DVT and a PE.
-Patient's urine output was less than 30 mL per hour.
-Patient is fluid overloaded and is weeping from her extremities.

Client Information

SM is a 76-year-old Caucasian female who reported to the emergency department on 12-31-21 and was admitted on 1-1-22. SM stated that she was seen two days before in the ED and was sent home with COVID and then came back for worsening shortness of breath and overall weakness. SM has a past medical history of hyperlipidemia, hypertension, and coronary artery disease.

Nursing Interventions

- Auscultate the lungs for normal or adventitious breath sounds (Nurseslabs, 2019).
- Assess the skin color and examine lips and nailbeds for cyanosis (Nurseslabs, 2019).
- Turn the client every 2 hours (Nurseslabs, 2019).
- Use closed in-line suction (Nurseslabs, 2019).
- Assess the patients capillary refill, skin temperature, and peripheral pulses (Nurseslabs, 2019).
- Monitor fluid balance and urine output (Nurseslabs, 2019).
- Maintain good hand hygiene and wear proper gloves when handling ET tube care (Nurseslabs, 2019).
- Ensure proper oral care every 2 hours to help reduce the risk for infection (Nurseslabs, 2019).
- Use preventative skin care devices to avoid skin breakdown (Nurseslabs, 2019).
- Inspect the patients skin every shift for any changes and reporting changes to the skin (Nurseslabs, 2019).

Choose highest applicable score from each category		**Circle all that apply at the time of this fall**
History of falling	No	0
	Yes	25
Secondary diagnosis (More than one diagnosis)	No	0
	Yes	15
Ambulatory aid	None, on bedrest, uses W/C, or nurse assists	0
	Crutches, cane(s), walker	15
	Furniture	30
IV/Heparin lock or saline PIID	No	0
	Yes	20
Gait/transferring	Normal, on bedrest, immobile	0
	Weak (Uses touch for balance)	10
	Impaired (Unsteady, difficulty rising to stand)	20
Mental status	Oriented to own ability	0
	Forgets limitation	15
Total Morse Fall Scale score at the time of fall (high risk >50)		50