N441 Care Plan

Lakeview College of Nursing

Sarah Evans

Demographics (3 points)

Date of Admission 12/21/21	Client Initials LA	Age 68 DOB 8/31/53	Gender Male
Race/Ethnicity Caucasian	Occupation Not known by SN	Marital Status Married to JoEllen	Allergies Penicillin causes hives
Code Status Full	Height 177.8 cm	Weight 91.1 kg	

Medical History (5 Points)

Past Medical History: The patient has a past medical history of Covid-19 virus infection (12/13/21), hyperlipidemia, hypertension, type two diabetes mellitus, obesity, erectile dysfunction, elevated prostate-specific antigen, insomnia, trigger finger, anxiety, and depression.

Past Surgical History: The patient has undergone the following surgeries: release of trigger finger (03/2019), colonoscopy (5/1/2010), appendectomy, carpal tunnel release, and hemorrhoid treatment.

Family History: The patient's chart did not note any pertinent family history.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): The patient denies ever using tobacco products and elicit drugs. The patient denies using alcohol.

Assistive Devices: The patient wears glasses.

Living Situation: The patient lives at home with his wife JoEllen.

Education Level: The patient's education level is not noted in his chart and the patient was not able to state his education level due to being sedated.

Admission Assessment

Chief Complaint (2 points): The patient presented to the emergency room with increased shortness of breath and cough related to Covid-19.

History of Present Illness – OLD CARTS (10 points): The patient was diagnosed with Covid-19 on 12/11/21 after experiencing symptoms since 12/09/21. The patient received an antibody infusion on 12/17/21. The patient stated he received the Covid-19 vaccine in April of 2021. In the emergency room on 12/20/21, the nurse placed the patient on a high flow nasal canal with 40 L with 100% FiO2. This intervention resulted in the patient's oxygen saturation improving to 94%. On the morning of 12/21/21, the hospitalist admitted the patient to the step-down unit. The patient could not tolerate the BiPap, so the nurse used a maxed-out high flow nasal canal with a 15L non-rebreather overlying the high flow nasal cannula.

On 12/24/21, the patient's condition deteriorated, requiring him to be intubated and moved to the critical care unit. The health care team placed an oral gastric tube on 12/27/21. The patient was able to be weaned off the ventilator on 1/6/22. After extubation, he used BiPap and then was downgraded to a high flow nasal canal once more. The patient's oxygen requirements worsened on 1/11/22, and he was diagnosed with a catheter-acquired urinary tract infection. On 1/12/22, the patient's condition deteriorated, and he needed re-intubation. The physician noted he was likely silently aspirating on his secretions prior to this. At this time, the patient's sputum culture revealed methicillin-resistant Staphylococcus aureus. On 1/13/22, the patient's urine and blood cultures were negative for bacterial infection. On 1/15/22, the patient was diagnosed with a partial thrombus in the basilica vein on his right upper extremity. Today the patient's sputum culture remains positive for methicillin-resistant staphylococcus aureus. He is receiving vancomycin. The patient received a percutaneous endoscopic gastrostomy tube and a

tracheostomy. The patient's current diagnoses are acute respiratory failure with hypoxia secondary to Covid-19 and adult respiratory distress syndrome secondary to severe Covid pneumonia.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Covid pneumonia

Secondary Diagnosis (if applicable): Hypoxia

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

Covid Pneumonia is a diagnosis that results in altered lung perfusion. The patient's natural positive end-expiratory pressure (PEEP) is the amount of positive pressure that remains in the lungs at the end of expiration. This pressure keeps alveoli open. In patients with Covid, the patient's natural ability to maintain the necessary peep is lacking (Gattinoni et al., 2021). This lack of peep results in atelectasis and fluid retention in the lungs (Gattinoni et al., 2021). If the patient's condition does not improve, this can lead to lung fibrosis. If fibrosis forms in the lungs, they become less responsive to mechanical ventilation, and increased PEEP and prone positioning become ineffective (Gattinoni et al., 2021). The lungs' ability to perfuse oxygen into the bloodstream declines, resulting in severe hypoxia and retained carbon dioxide. This illness sometimes results in death if the patient's condition does not improve with treatment.

My patient, who stated he received the Covid vaccines in April of 2021, started experiencing Covid symptoms on 12/9/21 and tested positive for Covid on 12/11/21. He received antibody treatment on 12/17/21. The patient presented to the emergency room on 12/20/21 with complaints of shortness of breath. Upon examination, his oxygen saturation was 87% on room air. With a non-rebreather mask and 40 L of oxygen, his O2 saturation

improved to 94% while in the ER. His condition deteriorated on 12/24/21, requiring intubation. He gradually was weaned from the ventilator and extubated on 1/6/22. He contracted a urinary tract infection and went septic on 1/11/21, which eventually resulted in a decline in his respiratory status requiring re-intubation. As of 1/18/21, the patient's sputum contains MRSA.

Covid pneumonia happens when the patient starts to retain fluid in the lungs. This fluid retention is called oedema or pulmonary edema. The lungs cannot transfer fluid into the veins and lymph ducts surrounding the lungs (Gattinoni et al., 2021).

The signs and symptoms of Covid pneumonia are all typical Covid symptoms. They include fever or chills, cough, shortness of breath, fatigue, body aches, headache, the new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea. In addition to these symptoms, patients with Covid pneumonia may experience pain or pressure in the chest, new confusion, blue color of the skin or nail beds, and increased fatigue (Gattinoni et al., 2021). These symptoms are specific to covid pneumonia because they are signs of the patient becoming hypoxic and retaining fluid in the lung tissue.

Those most at risk for covid pneumonia are males over the age of 65, who have medical conditions that impair the immune system, are obese, have hypertension, and display shortness of breath at the time of hospital admission (Gattinoni et al., 2021).

Covid pneumonia is diagnosed most commonly with a chest x-ray that shows bilateral patchy infiltrates in the lungs. Some patients will also have a CT scan which typically shows ground-glass opacity in the posterior and outer parts of the lungs (Gattinoni et al., 2021).

The current best treatments for Covid pneumonia are to mechanically ventilate the patient when it becomes necessary and to use dexamethasone and IV tocilizumab for patients who require mechanical ventilation. The patient should also be positioned in the prone position for up to 16 hours daily to improve their perfusion.

My patient is currently sedated and cannot understand information about his illness. Therefore, if/when he becomes able to understand patient education, he should receive education about his new tracheostomy and the importance of proper care required to prevent infection.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

Gattinoni, L., Gattarello, S., Steinberg, I., Busana, M., Palermo, P., Lazzari, S., Romitti, F., Quintel, M., Meissner, K., Marini, J. J., Chiumello, D., & Camporota, L. (2021). COVID-19 pneumonia: pathophysiology and management. *European Respiratory Review : An Official Journal of the European Respiratory Society*, *30*(162). https://doi.org/10.1183/16000617.0138-2021

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer.

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	Admission	Today's	Reason for Abnormal Value

	Range	Value	Value	
RBC	**4.4-5.8**	**4.74**	**2.75**	**This patient is becoming anemic possibly because of inflammation, prolonged illness, and having excess fluid in his system (Pagana et al., 2019).**
Hgb	**12.0-15.8**	**14.7**	**8.2**	**Low hemoglobin levels are also caused by anemia (Pagana et al., 2019).**
Hct	**36.0-47.0**	**43.3**	**25.5**	**Low hematocrit is also caused by anemia (Pagana et al., 2019).**
Platelets	**140-440**	**249**	**351**	**N/A**
WBC	**4.0-12.0**	**5.6**	**16.6**	**High white blood cells are caused by infection and this patient currently has MRSA (Pagana et al., 2019).**
Neutrophils	**45.3-79.0%**	**64.8**	**N/A**	**N/A**
Lymphocytes	**11.8-45.9%**	**20.9**	**12.0**	**N/A**
Monocytes	**4.4-12.0%**	**12.1**	**4.0 L**	**Viral infections and inflammation can cause increased monocytes, and anemia can cause low monocytes (Pagana et al., 2019).**
Eosinophils	**0.0-6.3%**	**2.0**	**6.0**	**N/A**
Bands	**0.0-6.0**	**N/A**	**2.0**	**N/A**

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	**134-144**	**140**	**141**	**N/A**
K+	**3.5-5.1**	**3.3**	**3.5**	**Diuretics can cause low potassium (Pagana et al., 2019).**
Cl-	**98-107**	**103**	**94**	**Respiratory acidosis can cause low chloride (Pagana et al., 2019).**

CO2	**21-31**	**26**	**41**	**High CO2 in the blood can be caused by respiratory failure (Pagana et al., 2019).**
Glucose	**70-99**	**119**	**276**	**The patient has diabetes type 2 and is taking two types of insulin, at times his blood sugar will be high due to inadequate insulin levels in his blood (Pagana et al., 2019).**
BUN	**7-25**	**36**	**24**	**The patient's BUN level could be high due to his hydration status or due to infection (Pagana et al., 2019).**
Creatinine	**0.50-1.20**	**1.53**	**0.87**	**The patient's creatinine level will also be high depending on his hydration level and infection (Pagana et al., 2019).**
Albumin	**3.5-5.7**	**3.6**	**2.1**	**Albumin is commonly low in critically ill patients due to the body using more of it along with underproduction which can be caused by sepsis (Vincent et al., 2018)**
Calcium	**8.6-5.7**	**8.8**	**7.5**	**Increased levels of calcium can be caused by prolonged immobility (Pagana et al., 2019). The bone breaks down and more calcium is available in the blood.**
Mag	**1.6-2.6**	**N/A**	**N/A**	**N/A**
Phosphate	**2.5-4.5**	**N/A**	**N/A**	**N/A**
Bilirubin	**0.3-1.0**	**0.5**	**0.9**	**N/A**
Alk Phos	**30-120**	**90**	**210**	**High levels of alkaline phosphatase can be caused by antibiotics (Pagana et al., 2019).**
AST	**0-35**	**75**	**48**	**Opioid medication can cause high levels of AST (Pagana et al., 2019).**

ALT	**4-38**	**56**	**38**	**High levels of ALT can also be caused by some medication the patient was taking prior to admission. If he was taking too much tylenol this could damage his liver causing elevated ALT. Cephalosporin antibiotics also cause elevated ALT and cefapime is a cephalosporin (Pagana et al., 2019).**
Amylase	**60-120**	**N/A**	**N/A**	**N/A**
Lipase	**0-160**	**N/A**	**N/A**	**N/A**
Lactic Acid	**0.5-2.2**	**2.1**	**N/A**	**High**
Troponin	**<0.04**	**0.012**	**N/A**	**N/A**
CK-MB	**3-5**	**N/A**	**N/A**	**N/A**
Total CK	**22-198**	**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.

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	**0.9-1.1**	**N/A**	**N/A**	**N/A**
PT	**10.1-13.1**	**N/A**	**N/A**	**N/A**
PTT	**25-36 seconds**	**N/A**	**N/A**	**N/A**
D-Dimer	**<0.05**	**1.29**	**2.85**	**Both levels are critically high which indicates the patient has a thrombus. A thrombus was found in the patients right upper arm (Pagana et al., 2019).**
BNP	**>400**	**N/A**	**N/A**	**N/A**

HDL	**>60**	**N/A**	**N/A**	**N/A**
LDL	**<130**	**N/A**	**N/A**	**N/A**
Cholesterol	**<200**	**N/A**	**N/A**	**N/A**
Triglycerides	**<150**	**N/A**	**N/A**	**N/A**
Hgb A1c	**<5.7**	**N/A**	**N/A**	**N/A**
TSH	**0.5-5.0**	**N/A**	**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**	**yellow clear**	**yellow clear**	**N/A**
pH	**5.0-9.0**	**6.0**	**5.5**	**N/A**
Specific Gravity	**1.003-1.035**	**1.025**	**1.028**	**N/A**
Glucose	**negative**	**negative**	**negative**	**N/A**
Protein	**negative**	**1+**	**1+**	**The patient takes hydrochlorothiazide which can irritate the kidneys (Pagana et al., 2019).**
Ketones	**negative**	**1+**	**negative**	**The patient had not been eating well prior to admission due to his illness. When the body uses fat for fuel ketones are spilled in the urine (Pagana et al., 2019).**
WBC	**Less than 5**	**2**	**4**	**N/A**
RBC	**0-3**	**3**	**7**	**High red blood cells can be caused by catheter insertion trauma or by infection in the bladder (Pagana et al., 2019).**

Leukoesterase	**negaitive**	**negative**	**1+**	**High leukoesterase indicates the patient probably has a UTI (Pagana et al., 2019).**

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**	**7.40**	**7.41**	**N/A**
PaO2	**10.3-23.3**	**52.9**	**64.9**	**Both of the values are high which can be caused by hyperventilation (Pagana et al., 2019).**
PaCO2	**35.0-45.0**	**38.7**	**66.1**	**This is critically high which indicates this patient is hypoxic (Pagana et al., 2019).**
HCO3	**22.0-26.0**	**23.9**	**38.2**	**High HCO3 can be caused by diuretic use (Pagana et al., 2019).**
SaO2	**92-100**	**87**	**94**	**The patient's SaO2 was low upon admission due to hypoxia (Pagana et al., 2019).**

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**	**1/1/22 negative**	**1/13/22 negative**	**N/A**
Blood Culture	**negative**	**12/25/21 negative**	**1/13/22 negative**	**N/A**
Sputum Culture	**negative**	**12/24/21 negative**	**1/18/22positive**	**The sputum shows MRSA.**
Stool Culture	**negative**	**N/A**	**N/A**	**N/A**

Lab Correlations Reference (1) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2019). *Mosby's diagnostic and laboratory test reference* (14th ed.). Elsevier.

Vincent, J., Russell, J., Jacob, M., Martin, G., Guidet, B., Wernerman, J., Ferrer, R., McCluskey, S., & Gattinoni, L. (2018). Albumin administration in the acutely ill: What is new and where next? *Critical Care*, *18*(4), 231. https://doi.org/10.1186/cc13991

Diagnostic Imaging

All Other Diagnostic Tests (5 points): Diagnostic Test Correlation (5 points):

Blood culture (1/13/22)- The results show the patient's blood is negative for bacteria. This test was run to check for improvement after treatment for sepsis. This test allows us to find out if there is bacteria present in the blood and if so, what type.

EC Echo Limited without contrast (1/15/22)- The results show no endocarditis. This test was done because sepsis can cause endocarditis. The echocardiogram is a type of ultrasound that allows the health care team to visualize the anatomy of the heart. Endocarditis usually effects the heart valves which can be visualized with this test.

Arterial Blood Gas (12/24/21 and 1/16/22)- The results of the ABGs upon admission show normal findings. On 1/16/22 the results indicate this patient is in fully compensated metabolic alkalosis. This test was used to determine the patient's oxygenation and metabolic status and if the health care team needs to intervene to help keep the body's pH balance in the neutral range.

X-ray of Chest (12/20/21)- the admitting chest x-ray showed finding consistent with bilateral pneumonia with probable small effusions. The chest x-ray was done in the ER to check for pneumonia. A chest x-ray is used to help visualize opacity in the lungs and can also show if the lung has collapsed or if there is a pneumothorax or pleural effusion.

X-ray of Chest (12/21/21- 1/18/22)- Chest x-rays were taken daily on this patient, sometimes two in a day. Each one showed stable tube placement and opacity and then gradually show the opacity resolving. The chest x-ray from 1/17/21 and 1/18/21 noted improvement in the opacity in the lungs bilaterally. The chest x-rays were done to check for the progression of the patient's pneumonia and during intubation to check the positioning of his central line, ET tube, and OG tube.

US Venous Duplex Upper Right Extremity- no DVT was found but the ulnar and radial veins were not observed. There was a partial thrombus found in the right basilic vein. This is likely

the cause of the patient's elevated d-dimer level. This test was completed because the patient had a bruise and redness on his upper right arm indicating a possible DVT. This test is used to find the location of a suspected thrombus when signs and symptoms as well as lab results indicate that a thrombus is present (Pagana et al., 2019).

Diagnostic Test Reference (1) (APA):

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2019). *Mosby's diagnostic and laboratory test reference* (14th ed.). Elsevier.

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

Home Medications (5 required)

Brand/Generic	atorvastatin Lipitor	acetylsalicylic acid Bayer aspirin	venlafaxine hydrochloride Effexor XR	lisinopril-hydrochlorothiazide Zestoretic	methylprednisolone Medrol dose pak
Dose	20 mg	81 mg	37.5 mg	20 mg- 12.5 mg	4 mg
Frequency	daily at bed time	daily	daily	daily	daily
Route	Oral	Oral	Oral	Oral	Oral
Classification	HMG-CoA reductase inhibitor Antihyperlipidemic	Salicylate NSAID, antiplatelet, antipyretic, nonopioid analgesic	Selective serotonin and norepinephrine re-uptake inhibitor (SSNRI) Antidepressant	lisinopril-angitensin-convering enzyme inhibitor, antihypertensive hydrochlorothiazide-thiazide diuretic, diuretic	Glucocorticoid Corticosteroid

Mechanism of Action	Lowers cholesterol in the blood by inhibiting cholesterol synthesis by the liver. (Jones, 2021)	Blocks platelet aggregation by stopping the production of thromboxane A2 which stimulates platelet aggregation. (Jones, 2021)	Inhibits the re-uptake of norepinephrine and serotonin which raises the availability of these substances at the nerve junction. This results in increased mood responses (Jones, 2021).	Lisinopril helps reduce blood pressure and water retention by making the body secrete more aldosterone which increases excretion of water and sodium. Hydrochlorothiazide- causes salt to move into the distal tubules of the nephrons which in turn causes excess fluid to be excreted. It also causes vasodilation (Jones, 2021).	Inhibits the aggregation of white blood cells at sites of inflammation which reduces inflammation (Jones, 2021).
Reason Client Taking	Hyperlipidemia	To prevent MI	History of depression	Hypertension	Prescribed treatment for COVID-19 lung inflammation

Contraindications (2)	Active hepatic disease, breastfeeding (Jones, 2021)	Active bleeding, Ulcers (Jones, 2021)	Use of an MAO inhibitor within the last two weeks, hypersensitivity (Jones, 2021).	Hypotension, clients taking lithium (Jones, 2021).	Hypersensitivity to lactose, idiopathic thrombocytopenia (Jones, 2021).
Side Effects/Adverse Reactions (2)	Arrhythmias and hypoglycemia (Jones, 2021)	GI bleeding, prolonged bleeding time (Jones, 2021)	Cerebral ischemia, arrhythmia (Jones, 2021).	Hypotension, renal failure (Jones, 2021).	Increased inter cranial pressure, arrhythmias (Jones, 2021).
Nursing Considerations (2)	Use this drug cautiously for patients who drink a lot of alcohol because taking atorvastatin increases the risk of liver dysfunction. Perform liver function tests to monitor patient. (Jones, 2021)	Instruct patient to take it with food because it may cause GI upset. Tell patient to notify provider if they pass dark tarry stools or are coughing up blood that looks like coffee grounds. (Jones, 2021)	This medication could cause serotonin syndrome and neuroleptic malignant syndrome. Monitor for signs of these (Jones, 2021).	Monitor vomiting and diarrhea while taking this medication because the patients is more at risk for dehydration, diabetics also need to use this medication cautiously (Web MD, n.d.)	Expect to taper long-term therapy to prevent adrenocortical insufficiency before discontinuing, give with food (Jones, 2021).

Key Nursing Assessment(s)/Lab(s) Prior to Administration	Check liver function before administration because atorvastatin can cause damage to the liver (Jones, 2021).	The nurse should check the patient's platelet count.	Don't use in patients who have increased heart rate, so check the patient's heart rate. Monitor blood pressure (Jones, 2021).	Check the patient's blood pressure and heart rate before administration (Jones, 2021).	For patients with diabetes monitor glucose levels (Jones, 2021).
Client Teaching needs (2)	Take this drug at the same time each day. This is not a replacement for a low cholesterol diet (Jones, 2021).	This medication should never be given to children, it should be taken with food to prevent damage to the lining of the stomach (Jones, 2021).	Do not stop abruptly, also avoid NSAIDS (Jones, 2021).	Teach the patient to check their own blood pressure and to stay hydrated while taking this medication (Web MD, n.d.).	Do not stop taking abruptly, follow prescription precisely (Jones, 2021).

Hospital Medications (5 required)

Brand/Generic	**fentanyl Sublimaze**	**propofol Diprivan**	**docusate-senna Colace**	**cefepime Masipime**	**vacomycin Firvanq**

Dose	**1250 mcg Starting drip rate is 25 mcg/hr. Max rate is 400 mcg/hr. Titrate up or down by 25mcg q 5 minutes until the goal of pain < 3 is met.**	**1000 mg Starting drip rate is 5mcg/kg/minute. Max rate is 85 mcg/kg/minute. Titrate up or down by 5-10 mcg/kg/minute until RASS of -1 is met.**	**50 mg- 8.6 mg**	**2000 mg**	**1250 mg**
Frequency	**Continuously titrated to maintain goal of pain < 3.**	**Continuously titrated to maintain goal of RASS -3.**	**BID**	**Q8H**	**Q12H**
Route	**IV drip**	**IV drip**	**Oral (administered through PEG tube)**	**IV Piggyback**	**IV Piggyback**
Classification	**Opioid** **Opioid analgesic**	**Phenol derivative Sedative-hypnotic**	**Surfactant** **Laxative, stool softener**	**4th generation cephalosporin Antibiotic**	**Glycopeptide** **Antibiotic**

Mechanism of Action	**Inhibits conduction of neurons that sense pain by binding to receptor sites in the central nervous system (Jones, 2021).**	**This medication reduces the blood flow to the brain, and reduces brain cell oxygen consumption. It also reduces intracranial pressure (Jones, 2021).**	**This medication reduces the surface tension between oil and water in the stool to soften it (Jones, 2021).**	**Inhibits cell wall synthesis causing cell death (Jones, 2021).**	**Disrupts RNA and cell wall production causing cell death (Jones, 2021).**
Reason Client Taking	**To control pain level.**	**This is being used as a paralytic to sedate the patient for intubation.**	**The patient is taking opioids and is sedated, this medication will prevent constipation.**	**To treat infection. The patient had a CAUTI and currently has MRSA in the sputum.**	**The patient has MRSA.**
Contraindications (2)	**Hypersensitivity to fentanyl, respiratory depression (Jones, 2021).**	**Hypersensitivity to propofol, egg and soy allergy (Jones, 2021).**	**Do not use if fecal impaction is suspected, or if the patient has an intestinal obstruction or appendicitis (Jones, 2021).**	**Hypersensitivity to cephalosporins, hypersensitivity to penicillins which the patient's chart says he has (Jones, 2021).**	**Allergy to corn, hypersensitivity to vancomycin (Jones, 2021).**
Side Effects/Adverse Reactions (2)	**Seizures, and bradycardia**	**Bradycardia, hypotension**	**Dizziness, Palpitations (Jones,**	**Coma, encephalopathy (Jones,**	**Hypotension, actue kidney**

	(Jones, 2021).	**(Jones, 2021).**	**2021).**	**2021).**	**injury (Jones, 2021).**
Nursing Considerations (2)	**Do not use if a patient is pregnant, cautiously titrate this medication in elderly patients (Jones, 2021).**	**If dilution before administration is necessary use D5W only, shake the container well before administration (Jones, 2021).**	**Long term use can cause dependence, can also cause electrolyte imbalances (Jones, 2021).**	**If the patient's kidneys are impaired use this med cautiously, obtain culture and sensitivity prior to drug administration (Jones, 2021).**	**Rapid administration can cause red man syndrome so infuse 1 hour per gram. Look for signs of this syndrome which are sweating, chills, flushing, fever, red face or upper body (Web MD, n.d.).**
Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Assess the patient's pain level and respiratory rate before administration (Jones, 2021).**	**Assess the patient's RASS score before administration (Jones, 2021).**	**Assess the patient for laxative abuse, and note frequency of bowel movements before administration (Jones, 2021).**	**Check the patient's allergies before administration (Jones, 2021).**	**Assess the vancomycin level in the blood before administration (Jones, 2021).**

Client Teaching needs (2)	**The patient should not drive until the CNS effects of this medication are known, this drug often causes constipation so consider increasing fluids and fiber and/or taking a stool softener (Jones, 2021).**	**Asking the patient to voice their concerns before administration is necessary because after administration they likely will not be able to, tell the patient great care will be taken to support their body while they are under this sedative (Jones, 2021).**	**This medication should not be used when the patient is nauseas or vomiting, take this medication with an entire cup of water (Jones, 2021).**	**Teach the patient to report severe diarrhea, and seek immediate care if mental status declines while using this medication (Jones, 2021).**	**If no improvement is noted contact the provider, completing the whole prescription is necessary (Jones, 2021).**

Medications Reference (1) (APA):

Jones & Bartlett Learning, LLC. (2021). 2021 Nurse's Drug Handbook (20th ed.).

WebMD. (n.d.). *Zestoretic: Uses, side effects, and more. WebMD*. Retrieved January 21, 2022, from https://www.webmd.com/drugs/2/drug-5591/zestoretic-oral/details

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	At the time of this assessment the patient was alert and oriented x0 to person, place, time, and situation due to being sedated. The patient did not show signs of distressed. The patient appeared to be diaphoretic but clean.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	The patient's skin color was appropriate for ethnicity. The patient's skin was warm and dry upon palpation. His arms and forehead were diaphoretic, but the rest of his body was dry. The patient's skin turgor did not show any signs of tenting or dehydration. The patient had a rash on his posterior right upper back likely caused by heat rash, he also had a bruise on his right upper arm which was caused by a partial thrombus there. The patient had a tracheostomy and PEG tube inserted during this clinical shift so he had two new surgical wounds. The tracheostomy site showed signs of light bleeding after the patient returned from the OR. The patient also has a pressure injury to his upper lip. The patient's Braden score in the chart was 14 which indicates moderate risk of skin break down. The student nurse did her own Braden score assessment and rated him as an 8 which is severe risk for skin break down. The student nurse believes the score of 14 is inaccurate at this time. The patient's nails showed no clubbing or cyanosis. The patient had no drains present.

HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	The patient's head and neck were symmetrical. His trachea was without deviation and midline. He has a central line with three lumen in his right jugular vein. There was no lymphadenopathy inspected or palpated. His thyroid was non palpable. The patient's ears were without drainage did not appear to be tender. Due to sedation the patient was not able to take a visual acuity assessment, but he does wear glasses. The chart did not indicate any hearing loss. The patient's pupils were about 3 mm in size, and had sluggish responses to light. The patient had no cornea reflex and did not move his eyes at all. His sclera were white and his conjunctiva were pink. The patient did not show signs of nasal drainage. The patient did not appear to have missing teeth, his mucous membranes were a bit dry due to constantly having an open mouth due to intubation, but the nursing staff is providing oral care every two hours and PRN. The patient does have trauma to his upper lip caused by the ET tube and the cuff used to hold the tube.
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:**	The student nurse clearly auscultated the S1 and S2 heart sounds. There were no audible murmurs, gallops, or rubs. Pulses were 2+ and were palpated at the carotid, radial, and dorsalis pedis pulse sites bilaterally. The patient's capillary refill was less than three-seconds on the upper arms bilaterally. The patient's capillary refill on his feet was less than three seconds. There was no JVD visualized or noted in the chart. The patient's right hand has +2 pitting edema, and his left had has +1 non-pitting edema. The student nurse did not have the opportunity to look at a cardiac rhythm strop during this clinical experience.

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:**	The patient's breath sounds were even, clear and non-labored bilaterally both anteriorly and posteriorly. No crackles, wheezes, or rhonchi were noted. His lungs sounded clear. The patient was maintaining his oxygen saturation about 94% with the help of mechanical ventilation. At the start of the shift the patient had an ET tube. It was an 8.0, and 25 cm at the lip. At about 1130 it was replaced with a tracheostomy which was also a size 8.0. The patient's respiration rate was 24, FiO2 was 60%, total volume was 380, and PEEP was 10.0. In order to prevent ventilator acquired pneumonia (VAP) the student nurse used the inline suctioning device when suctioning the ET tube and provided oral care every 2 hours. The student nurse also carefully cleaned the ET tube in the oral cavity so that bacteria does not migrate down the tube. The health care team can also lower the risk of VAP by having good hand hygiene practices.

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:**	The patient is a type two diabetic who usually takes Metformin at home. His diet at home was regular, but while he was in the ER he stated he had not been eating well during his COVID illness. In the hospital the patient was NPO due to sedation. At the beginning of the shift the patient had an oral gastric tube which was replaced with a PEG tube around 1150. His feedings were stopped in preparation for this procedure, but when they begin again he will receive Jevity formula 1.2 kcal/mL. The goal rate is 70 mL/hour. 17.8 cm 91.10 kg The patient's bowel sounds were normo-active in all four quadrants during the time of the assessment. The student nurse was unable to find the patient's last bowel movement in the I&O section of the patient's chart. No masses were palpable. The student nurse did not observe noticeable scars on the patient's body, but he likely has a scar from his appendectomy, carpal tunnel procedures, and trigger finger release procedure. The patient had two new surgical incisions from where his tracheostomy and PEG tube were placed on 1/18/22. There are no drains or osmotic present.

GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type:** **Size:** **CAUTI prevention measures:**	The patient's urine was yellow and clear at the time of assessment. His catheter was draining appropriately. During this clinical experience his urine output was 850. The patient had a 14 french urinary catheter. Due to sedation the patient is not able to state if he experiences pain with urination. The patient is not on dialysis. The student nurse did clean the patient's genital area during his bed bath and did not note any abnormalities. Indwelling urinary catheter, 14 french. To prevent CAUTIs the nurse can provide excellent catheter care, ensure the collection bag is lower than the bladder at all times, and the tubing is not kinked so that it drains appropriately. At the time of insertion the nurse needs to ensure proper sterile technique to prevent introducing bacteria to the urinary tract.
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**	The patient’s capillary refill was less than three-seconds for upper and lower extremities bilaterally. There was not pallor, or pulselessness noted. The patient is unable to express sensations of pain or tingling at this time. The patient tolerated passive range of motion. The patient is using sequential compression devices, and many pillows for proper positioning. The patient required complete assistance with ADLs. Fall score is 50 which indicates high risk for falling. The patient was not up at liberty due to sedation status. The patient did not need assistance with ambulation or equipment during this shift because he stayed in bed. The patient is completely dependent at this time.

NEUROLOGICAL: **MAEW: Y ☐ N ☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	The patient was not oriented to person, place, time, and situation due to his sedation status. He is not able to move independently because of his paralytic medication. His pupils are equal and sluggishly react to light. He has no strength in any of his extremities due to paralytic medication. His mental status is not known at this time. There are no speech deficits noted in the patient's chart but this was not assessed due to sedation. The patient did not show any reaction to painful stimulus. The patient's level of consciousness is is extremely sedated. His RASS score was -5 at the time of this assessment. The nurse titrated his medication down to decrease this.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient is married to his wife JoEllen and has at least one son who was present today for a short time. The patient's coping methods, developmental level, religion, and information regarding his family were not assessed during this encounter due to the patient's sedation.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
930	119 bpm	**113/62**	24	36.4 degrees celcius	**94%**
1230	109 bpm	**110/59**	24	36.4 degrees celcius	**94%**

Vital Sign Trends/Correlation:

The patient's heart rate was elevated continuously during this clinical experience, his blood pressure is stable, he is not breathing over the vent settings, his oxygen saturation is in a safe range, and he does not have a fever at this time. The heart is trying to perfuse oxygen to the entire body adequately so it is beating more than normal.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0930	**FLACC**	**n/a**	**0**	**The patient does not appear to be in any pain at the time of this assessment. His RASS score is -5 currently so he is not moving and has no reaction to painful stimulus.**	**The primary nurse titrated his paralytic and pain medication lower to see if his RASS score would change.**
1230	**FLACC**	**n/a**	**0**	**Same findings as 0930 assessment. This assessment was right after returning from the OR. The patient was still very sedated.**	**No interventions at this time.**

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:**	The patient does not have any peripheral IV sites at this time.
Other Lines (PICC, Port, central line, etc.)	The patient has a central line
Type: **Size:** **Location:** **Date of insertion:** **Patency:** **Signs of erythema, drainage, etc.:** **Dressing assessment:** **Date on dressing:** **CUROS caps in place: Y ☒ N ☐** **CLABSI prevention measures:**	Triple lumen central line SN not able to find this in the chart. Right jugular vein 1/12/22 The student nurse assessed two lumens that both flushed well. There was currently fentanyl and propofol infusing into one lumen and the other two lumens were saline locked. The student nurse saw the tele doctor assess the dressing site and she noted dried blood, but no signs of infection, bleeding, erythema, or drainage. Dressing date 1/12/22 and is clean, dry, and intact except for a little bit of old blood that is visible, but the provider said was fine. CUROS cap in place on both lumens that were not in use. To prevent CLABSI the nurse should use alcohol impregnated CUROS caps, CHG impregnated dressings, wash hands, give the client CHG baths daily except for genitals and face. When performing dressing changes the nurse must use sterile technique and dawn sterile gloves, a sterile gown, mask, and cap. When using the lumens take care to clean with alcohol, flush, and replace CUROS caps.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
There were 181 mL of fluids noted in this patient's chart during this clinical experience. He received 150 mL of NS fluid while in surgery and the other 30 mL is the fentanyl and propofol he received.	The patient had 850 mL of urinary output during this shift. There were no other forms out output.

Nursing Care

Summary of Care (2 points)

Overview of care: The student nurse provided oral care, a bed bath, peri care, catheter care, administered medications including insulin and propofol, RASS score assessment, central venous catheter assessment, and preventative skin care like turning and repositioning q2h. Additionally the health care team maintained continual pulse oximetry monitoring, cardiac monitoring, contact isolation precautions, blood glucose monitoring, wound care for the patient's right upper lip, and maintained intake and output records. This patient also received a tracheostomy and PEG tube today in the operating room. The nurses will now care for these sites as they heal to prevent infection. While in the operating room sequential compression devices were given to the patient to help with venous blood return to the heart and to prevent DVT.

Procedures/testing done: The patient underwent surgical placement of a tracheostomy and PEG tub to replace his ET tube and oral gastric tube. The patient received a chest x-ray this morning to confirm placement of tubes and lines as well as to assess his lungs.

Complaints/Issues: The patient did not have any complaints, but he was unable to communicate.

Vital signs (stable/unstable): The patient's vital signs were stable during this shift.

Tolerating diet, activity, etc.: The patient was NPO during this clinical experience due to his surgery. The patient is tolerating the current interventions as well as can be expected at this time.

Physician notifications: The student nurse was not aware of any physician notification during this clinical experience, but due to being in the OR for a large portion of the day she could have missed something.

Future plans for client: The plans for the client include continuing to keep the patient free from hospital acquired infections until his lungs can heal enough to breath on their own again.

Discharge Planning (2 points)

Discharge location: This has yet to be determined because of the critical nature of the patient's condition. If the patient improves enough to be transferred to a long term care facility this could be his discharge location if he is able to discharge. The next few days will be very important for this patient's outcome.

Home health needs (if applicable): It is not yet known what the patient's home health needs are. If the patient is able to recover to the point that he were able to go home this would be assessed at that time. Currently the patient could not survive outside of the CCU.

Equipment needs (if applicable): Right now the patient requires mechanical ventilation, sequential compression devices, and a special bed mattress to prevent pressure

injuries. If he is able to transfer to a long term care facility he may still need this equipment but this should be reassessed if this transfer becomes possible.

Follow up plan: The health care team cannot make follow up recommendations at this time because of the critical nature of the patient's condition. Currently he needs constant medial care, and this will be the case for some time. So follow up planning is not currently applicable.

Education needs: The family needs to be educated about the critical nature of their loved one's condition, his chances for a successful recovery, what that recovery could look like, their choices in what is currently happening, and ways they can be involved in the care of their loved one. The family should also be educated on the need for the interventions currently being used for their loved one so that they understand what is happening and why. The health care team needs to be sure to meet the needs of this family to help them understand their loved ones medical condition. They can do this by listening to their concerns and answering questions.

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 • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for ineffective peripheral tissue perfusion related to pneumonia as evidenced by O2 saturation 87% upon admission and opacity observed on chest x-ray.	The patient's current O2 saturation is 94%. This is on the lower end of what is considered normal. The patient needs close monitoring to ensure his oxygen perfusion remains sufficient.	1. Closely monitor the patient's respirations including breath sounds, rate, rhythm, depth, use of accessory muscles, and work of breathing. 2. Closely monitor the patient's O2 saturation and ABG levels, as well as oxygenation requirements from the ventilator.	1. The patient's respiratory status will not decline during this shift. This will be evidenced by maintaining clear breath sounds, no increased work of breathing, O2 sat above 92%, and ability to maintain the same ventilator settings or to reduce them.	1. Goal met: The patient's oxygen saturation was around 94% during the entire shift. 2. Goal met: The patient's respiratory status did not show any signs of decline during this shift.

2. Impaired spontaneous ventilation related to acute respiratory failure as evidenced by O2 saturation quickly deteriorating on 1/11/22 and requiring intubation, and critical PaCO2 level.	The patient's current primary diagnosis is respiratory failure and hypoxia. He is not able to breath independen tly.	1. Assess the ET tube (and now the tracheostomy) for correct tube placement, check the tubing connections. 2. Assess the patient for bilateral breath sounds and that the chest rises and falls equally bilaterally, also monitor the end tidal volume continuously.	1. The patient will demonstrate no complications from the mechani cal ventilation during this shift.	1. Goal met- The student nurse with her professor checked the positioning of the ET tube and the connections of the ventilator tubing. 2. Goal met- the student nurse assessed the patient’s breathing and end total volume about every hour during this clinical experience.
3. Risk for infection related to hospital acquired infections as evidenced by the patient having his second hospital acquired infection during this encounter.	He has had a CAUTI, was septic, and currently has MRSA in his sputum. Also there is a high risk for infection d/ t new tracheosto my.	1. Monitor for possible infection through daily blood work and temperature checks as ordered. 2.Work to prevent infection through hand hygiene and proper nursing care of catheter, central line, and tracheostomy.	1. The patient will not show any new signs or evidence of infection during this shift and the nurse will provide high quality nursing care for the entire shift in order to prevent infection.	1. Goal met the daily labs and temperature checks did not show any new evidence of infection during this shift. 2. Goal partially met. The student nurse briefly dropped the central line lumen while open onto the patient's chest. This is not best practice. All other nursing care was given properly in order to prevent infection.

4. Risk for unstable blood glucose level related to type two diabetes mellitus as evidenced by elevated blood glucose levels.	The patient has a history of type two diabetes mellitus and is not currently taking his metformin. His blood sugars are being controlled with insulin while in the hospital.	1. Monitor glucose levels routinely. 2. Administer insulin as prescribed.	1.The patient's blood glucose will be well controlled (between 70 and 125 is usually the goal but for a critically ill patient this expected range may be different) for with the two types of insulin he is receiving during this shift.	Goal met- patient was unable to have tube feeing formula during this shift due to scheduled procedures which required NPO status. His blood sugar was checked twice while the SN was present. Goal met- the student nurse administered the patient's long acting insulin around 0920.
5. Risk for impaired skin integrity related to immobility as evidenced by the patient's RASS score of -5 and Braden score of 8 (Student nurse's Braden assessment).	The patient is not able to move or sense pain which puts him at a high risk for skin break down.	1.Turn and reposition the patient every 2 hours. 2. Monitor common sites of skin breakdown to see if they become red, do not blanch, etc.	1. The patient's skin will not show signs of break down like redness over bony prominences and the color will return to the skin in less than six seconds when blanched (Swearingen, 2019).	1. Goal met- the patient was turned and repositioned every 2 hours during this clinical experience. 2. Goal met- the student nurse and the professor check the bony prominences for skin break down during the bed bath.

Other References (APA):

Swearingen, P. L., & Wright, J. D. (2019). All-in-one nursing care planning

Concept Map (20 Points)

PLEASE SEE NEXT PAGE
Subjective Data

The patient stated he was short of breath when he was in the emergency room, he also stated he had had the COVID vaccine which I only saw noted in his chart because he stated as such. The patient was not able to give further subjective data during this clinical rotation because of his sedation.

Nursing Diagnosis/Outcomes

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ventilator settings or to reduce them.
Impaired spontaneous ventilation **Goal:**The patient will demonstrate no complications fro
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Objective Data

Covid diagnosis 12/13/21, Covid pneumonia diagnosis 12/21/21. Re-intubated 1/12/22. The patient's RBCs, Hgb, and Hct are all low. The patient's WBC count is high. The patient's glucose is 276. His albumin and calcium are low. His alk phosphate and AST are high. His D-dimer results are critically high. His PaCo2 level is critically high

Client Information

The patient is a 68 year old male who lives at home with is wife JoEllen. He has a history of hyperlipidemia, HTN, T2DM, and obesity. He stated he was vaccinated for COVID in April of 2021. He tested positive for Covid 12/13/21 and received antibody treatment on 12/17/21. He came to the ER d/t SOB

Nursing Interventions

1. Closely monitor the patient's respirations including breath sounds, rate, rhythm, depth, use of accessory muscles, and work of breathing. Closely monitor the patient's O2 saturation and ABG levels, as well as oxygenation requirements from the ventilator.
2. Assess the ET tube (and now the tracheostomy) for correct tube placement, check the tubing connections. Assess the patient for bilateral breath sounds and that the chest rises and falls equally bilaterally, also monitor the end tidal volume continuously.
3. Monitor for possible infection through daily blood work and temperature checks as ordered. Work to prevent infection through hand hygiene and proper nursing care of catheter, central line, and tracheostomy.
4. Monitor glucose levels routinely and administer insulin as prescribed.
5. Turn and reposition the patient every 2 hours. Monitor common sites of skin breakdown to see if they become red, do not blanch, etc.

Concept Map Information : I tried for about 40 minutes to get the concept map to fill in correctly. I used two computers and both pages and word documents. Please accept the following information even though it is not formated in the concept map above. I did the best I could.

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Nursing Diagnosis/ Outcomes

1. **Risk for ineffective peripheral tissue perfusion Goal:The patient's respiratory status will not decline during this shift. This will be evidenced by maintaining clear breath sounds, no increased work of breathing, O2 sat above 92%, and ability to maintain the same ventilator settings or to reduce them.**
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