

N431 Care Plan 2

Lakeview College of Nursing

Jamario Jeffries

Demographics (3 points)

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|--|---------------------------------|---------------------------------|-------------------------------|
| Date of Admission 11/10/2021 | Patient Initials J.B. | Age 38 | Gender Male |
| Race/Ethnicity White/Caucasian | Occupation Unemployed | Marital Status Single | Allergies NKA, NKDA |
| Code Status Full Code | Height 5'8" | Weight 136.8 kg | |

Medical History (5 Points)

Past Medical History: The client has a history of anxiety, deep vein thrombosis, hypertension, morbid obesity, obstructive sleep apnea, pulmonary embolism, and umbilical hernia.

Past Surgical History: Hernia repair (3/16/2021).

Family History: The client's mother has a history of hypertension.

Social History (tobacco/alcohol/drugs): The client has a history of alcohol with one beer a day for several years; he has not had a drink since April of this year. The client smokes marijuana about one joint per day, furthermore, the client states he smoked two packs a week for several years, and he has not smoked cigarettes since March of this year.

Assistive Devices: None.

Living Situation: At home with mom.

Education Level: High-school graduate.

Admission Assessment

Chief Complaint (2 points): Blood in stool

History of present Illness (10 points): The client presented to the emergency department on 11/10/2021 with complaints of bloody stool starting that morning. The client stated the blood is only located in his stool and happens every time he defecates. The client states that it is a bright

red color. The client did not try any relieving factors, and there are no aggravating factors he noted.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Covid-19

Secondary Diagnosis (if applicable): Blood in stool

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

The SARV-CoV-2 infection is transmitted via respiratory droplet, and the fecal-oral route is possible (Mason, 2020). The virus inoculates the upper respiratory tract; after the asymptomatic stage, the virus propagates and migrates down the respiratory tract along the conducting airways, and a more robust innate immune response is triggered (Mason, 2020). This period is when patients notice symptoms such as fever, dry cough, dyspnea, myalgias, sore throat, and diarrhea (Mason, 2020).

About 80% of infected patients, the disease will be mild and mostly restricted to the upper and conducting airways; these individuals can be monitored at home (Mason, 2020). However, the remaining 20% can progress to what is known as stage 3 of the disease and will develop pulmonary infiltrates, hypoxia, and probable progression to acute respiratory distress syndrome (Mason, 2020).

Patients under investigation for COVID-19 will likely receive a lung CT, ultrasound, and chest x-ray to affirm the diagnosis (Mason, 2020). Laboratory tests consist of rRT-PCR testing and rapid antigen testing (Mason, 2020). The CT will likely show consolidations and opacities, and the ultrasound will likely show interstitial syndrome (Mason, 2020). Treatment for COVID-19 is completed one drug only, and this is remdesevir (Veklury) to treat in hospitalized adults and

children who are age 12 and older in the hospital (Mason, 2020). Nursing care and interventions for clients diagnosed with COVID-19 consist of monitoring vital signs, oxygen saturation, managing fever, maintaining respiratory isolation, enforcing strict hand hygiene, and providing education (Xia & Huang, 2021). For example, fluid therapy, oxygen support, and prone positioning as needed (Mason, 2020).

Some complications of COVID-19 are blood clotting and blood vessel problems, pneumonia, viral sepsis, acute respiratory distress syndrome, kidney failure, respiratory failure, pulmonary fibrosis, and chronic COVID syndrome (Mason, 2020). The client had a CT of the abdomen and pelvis without contrast that showed inflamed duodenum consistent with duodenitis, left-sided empyema, pneumonia bilaterally, and a new cavitory nodular area in the right lower lobe base. Secondly, the client had a chest x-ray completed with the impression of a slight increase in bilateral lung infiltrates. Lastly, the client had a COVID-19 diagnosis in the last month before hospitalization. The laboratory and diagnostic data findings correlate to clinical manifestations the client presented with and have developed throughout his hospitalization.

Pathophysiology References (2) (APA):

Mason, R. J. (2020). Pathogenesis of COVID-19 from a cell biology perspective. *European Respiratory Journal*, 55(4), 2000607. <https://doi.org/10.1183/13993003.00607-2020>

Xia, W., & Huang, X. (2021). Management of COVID-19 rehabilitation nursing. *Rehabilitation from COVID-19*, 171-194. <https://doi.org/10.1201/9781003143147-8>

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 |
|------------|---------------------|------------------------|----------------------|----------------------------------|
|------------|---------------------|------------------------|----------------------|----------------------------------|

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|--------------------|--|------|------|---|
| RBC | 3.8 – 5.41 (Sarah Bush Lincoln, 2021). | 3.23 | 3.25 | The client had a positive hemocult test, which indicates an active GI bleed. Diarrhea is a common symptom of COVID-19 (Pourbagheri-Sigaroodi et al., 2020), which would explain the decreased RBC levels. |
| Hgb | 11.3 – 15.2 (Sarah Bush Lincoln, 2021). | 9.5 | 9.1 | The client has a COVID-19 diagnosis, accompanied by empyema, bilateral pneumonia, and a tension pneumothorax. This combination decreases the client's ability to receive adequate oxygenation, which would be a liable cause of the decreased Hgb levels. |
| Hct | 33.2 – 45.3 (Sarah Bush Lincoln, 2021). | 27.4 | 27.6 | The client has a COVID-19 diagnosis, accompanied by empyema, bilateral pneumonia, and a tension pneumothorax. This combination decreases the client's ability to receive adequate oxygenation, which would be a liable cause of the reduced Hct levels. |
| Platelets | 149 – 393 (Sarah Bush Lincoln, 2021). | 248 | 272 | No abnormal findings to report. |
| WBC | 4 – 11.7 (Sarah Bush Lincoln, 2021). | 7.6 | 11.5 | No abnormal findings to report. |
| Neutrophils | 2.4 – 8.4 (Sarah Bush Lincoln, 2021). | 5.9 | 9.1 | An increase in neutrophils is the body's first defense against bacterial infection, various inflammatory processes, physical stress, or tissue necrosis (Corbett & Banks, 2018). The client developed tension pneumothorax in the hospital, which could be a form of physical stress. |
| Lymphocytes | 0.8 – 3.7 (Sarah Bush Lincoln, 2021). | 1.2 | 1.1 | No abnormal findings to report. |
| Monocytes | 4.4 – 12 (Sarah Bush Lincoln, | N/A | N/A | No abnormal findings to report. |

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|--------------------|-------------------------------------|-----|-----|---------------------------------|
| | 2021). | | | |
| Eosinophils | 0 – 6.3 (Sarah Bush Lincoln, 2021). | N/A | 2.0 | No abnormal findings to report. |
| Bands | 0 – 5 (Sarah Bush Lincoln, 2021). | N/A | 1.0 | No abnormal findings to report. |

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

| Lab | Normal Range | Admission Value | Today's Value | Reason For Abnormal |
|----------------|---------------------------------------|------------------------|----------------------|---|
| Na- | 136 – 145 (Sarah Bush Lincoln, 2021). | 135 | 132 | Hyponatremia can be due to excessive water, vomiting, diarrhea, GI suctioning or sweating, and the use of diuretics (Corbett & Banks, 2018). The client presented with bloody diarrhea like stools. |
| K+ | 3.5 – 5.1 (Sarah Bush Lincoln, 2021). | 4.0 | 4.4 | No abnormal findings to report. |
| Cl- | 98 – 107 (Sarah Bush Lincoln, 2021). | 104 | 101 | No abnormal findings to report. |
| CO2 | 21 – 31 (Sarah Bush Lincoln, 2021). | 28 | 26 | No abnormal findings to report. |
| Glucose | 74 – 109 (Sarah Bush Lincoln, 2021). | 105 | 100 | No abnormal findings to report. |
| BUN | 7 – 25 (Sarah Bush Lincoln, 2021). | 8 | 14 | No abnormal findings to report. |

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|-------------------|---|------|------|---|
| Creatinine | 0.7 – 1.3 (Sarah Bush Lincoln, 2021). | 0.57 | 0.79 | A decrease in serum creatinine level may indicate muscle tissue atrophy and malnutrition (Corbett & Banks, 2018). The client states that he had not eaten much or well with the loss of taste. |
| Albumin | 3.5 – 5.2 (Sarah Bush Lincoln, 2021). | 2.5 | 2.3 | A decreased albumin level is due to chronic liver dysfunction caused by cirrhosis (Corbett & Banks, 2018). The client states he drank alcohol in large quantities for several years. |
| Calcium | 8.6 – 10.3 (Sarah Bush Lincoln, 2021). | 8.0 | 7.2 | Much of serum calcium is bound to albumin, and a decrease in albumin is accompanied by hypocalcemia (Corbett & Banks, 2018). Furthermore, hypocalcemia is also commonly seen in patients with renal failure (Corbett & Banks, 2018). The client's alcohol history and decreased albumin levels would correlate with the hypocalcemia noted. |
| Mag | 1.6 – 2.4 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Phosphate | 2.5 – 4.5 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Bilirubin | 0.3 – 1 (Sarah Bush Lincoln, 2021). | 0.4 | 0.8 | No abnormal findings to report. |
| Alk Phos | 34 – 104 (Sarah Bush Lincoln, 2021). | 66 | 55 | No abnormal findings to report. |
| AST | 13 – 39 (Sarah Bush Lincoln, 2021). | 30 | 13 | No abnormal findings to report. |
| ALT | 7 – 52 (Sarah Bush Lincoln, | 18 | 7 | No abnormal findings to report. |

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|--------------------|---|-----|-----|---------------------------------|
| | 2021). | | | |
| Amylase | 6.6 – 35.2 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Lipase | 0 – 160 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Lactic Acid | 10 – 25 (Sarah Bush Lincoln, 2021). | N/A | 1.3 | No abnormal findings to report. |
| Troponin | 0 – 0.3 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| CK-MB | 0.6 – 6.3 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Total CK | 30 – 223 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |

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 | 11 – 12.5 (Sarah Bush Lincoln, 2021). | N/A | 13.7 | Studies have shown that patients with preexisting comorbidities such as obesity, hypertension, and alcoholism can lead to a hypercoagulable state (Pearson et al., 2021). As seen with this increase in INR. |
| PT | 11 – 12.5 (Sarah Bush Lincoln, | N/A | 17.5 | Studies have shown that patients with preexisting comorbidities such as obesity, hypertension, and |

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|----------------------|---|-----|------|--|
| | 2021). | | | alcoholism can lead to a hypercoagulable state (Pearson et al., 2021). As seen with this increase in PT. |
| PTT | 30 – 40 (Sarah Bush Lincoln, 2021). | N/A | 50.8 | Studies have shown that patients with preexisting comorbidities such as obesity, hypertension, and alcoholism can lead to a hypercoagulable state (Pearson et al., 2021). As seen with this increase in PTT. |
| D-Dimer | 0 – 0.62 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| BNP | 0 – 100 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| HDL | 23 – 92 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| LDL | < 100 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Cholesterol | < 199 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Triglycerides | 0 – 149 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| Hgb A1c | <6.4 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |
| TSH | 0.45 – 5.33 (Sarah Bush Lincoln, 2021). | N/A | N/A | No abnormal findings to report. |

Urinalysis **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format.

| Lab Test | Normal Range | Value on Admission | Today's Value | Reason for Abnormal |
|----------------------------|---|--------------------|---------------|---------------------------------|
| Color & Clarity | Clear/Yellow (Sarah Bush Lincoln, 2021). | Yellow & Clear | N/A | No abnormal findings to report. |
| pH | 5 – 8 (Sarah Bush Lincoln, 2021). | 6.5 | N/A | No abnormal findings to report. |
| Specific Gravity | 1.005 – 1.034 (Sarah Bush Lincoln, 2021). | 1.015 | N/A | No abnormal findings to report. |
| Glucose | Normal (Sarah Bush Lincoln, 2021). | Normal | N/A | No abnormal findings to report. |
| Protein | Negative (Sarah Bush Lincoln, 2021). | Negative | N/A | No abnormal findings to report. |
| Ketones | Negative (Sarah Bush Lincoln, 2021). | Negative | N/A | No abnormal findings to report. |
| WBC | <5 (Sarah Bush Lincoln, 2021). | 2 | N/A | No abnormal findings to report. |
| RBC | Negative (Sarah Bush Lincoln, 2021). | Negative | N/A | No abnormal findings to report. |
| Leukoesterase | Negative (Sarah Bush Lincoln, 2021). | Negative | N/A | No abnormal findings to report. |

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 | Clear/Yellow (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| PaO2 | 5 – 8 (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| PaCO2 | 1.005 – 1.034 (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| HCO3 | Normal (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| SaO2 | Negative (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |

Cultures **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format.

| Test | Normal Range | Value on Admission | Today's Value | Explanation of Findings |
|----------------------|--------------------------------------|--------------------|---------------|-------------------------|
| Urine Culture | Negative (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| Blood Culture | Negative | Negative | Negative | N/A |

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| | (Sarah Bush Lincoln, 2021). | | | |
| Sputum Culture | Negative (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |
| Stool Culture | Negative (Sarah Bush Lincoln, 2021). | N/A | N/A | N/A |

Lab Correlations Reference (1) (APA):

Corbett, J. V., & Banks, A. (2018). *Laboratory tests and diagnostic procedures with nursing diagnoses*.

Pearson, L. N., Johnson, S. A., Greene, D. N., Chambliss, A. B., Farnsworth, C. W., French, D., Herman, D. S., Kavsak, P. A., Merrill, A. E., Lo, S. (., Lyon, M. E., SoRelle, J. A., & Schmidt, R. L. (2021). Side-effects of COVID-19 on patient care: An INR story. *The Journal of Applied Laboratory Medicine*, 6(4), 953-961.

<https://doi.org/10.1093/jalm/jfab025>

Sarah Bush Lincoln. (2021). Laboratory values. *Cerner PowerChart*. Cerner.

Diagnostic Imaging

All Other Diagnostic Tests (5 points): CT abdomen and pelvis without contrast, X-ray chest one view, Ultrasound of the lower extremity legs, Hemoccult blood test.

Diagnostic Test Correlation (5 points):

The client presented with complaints of blood in the stool. Anytime a client presents with complaints of blood in their stool, the fecal occult blood test is a lab used to check stool samples for hidden (occult) blood ("Fecal occult blood test," 2020). If blood is detected through a fecal occult blood test, an additional test may be needed to determine the source of bleeding ("Fecal occult blood test," 2020). Furthermore, the client has a COVID-19 diagnosis, which warrants a cat scan. Ct scans are warranted to diagnose muscle and bone disorders, pinpoint the location of a tumor, infection, or a blood clot, detect, and monitor disease and conditions such as cancer, heart disease, and lung nodules, and liver masses ("CT scan," 2020). CT scans are used to visualize nearly all parts of the body and are used to diagnose disease or injury and plan medical, surgical, or radiation treatment ("CT scan," 2020). The client also had a chest x-ray done; if a patient presents with chest pain, a chest injury, shortness of breath, it is indicated ("Chest X-rays," 2020). Furthermore, chest x-rays help to diagnose heart problems, collapsed lungs, pneumonia, broken ribs, emphysema, cancer, or any of several other conditions ("Chest X-rays," 2020). The client warranted a chest x-ray because he had a tension pneumothorax, COVID-19 diagnosis, empyema, and shortness of breath. The client was in a hypercoagulable state, which warranted the doppler ultrasound. A doppler ultrasound is a noninvasive test that can be used to estimate the blood flow through your blood vessels by bouncing high-frequency sound waves (ultrasound) off circulating red blood cells ("Doppler ultrasound: What is it used for?" 2019). This test helps diagnose blood clots, poorly functioning valves in leg veins, heart valve defects

and congenital heart disease, a blocked artery, decreased blood circulation, and bulging arteries ("Doppler ultrasound: What is it used for?" 2019).

Diagnostic Test Reference (1) (APA):

Chest X-rays. (2020, May 2). Mayo Clinic - Mayo Clinic. <https://www.mayoclinic.org/tests-procedures/chest-x-rays/about/pac-20393494>

CT scan. (2020, February 28). Mayo Clinic - Mayo Clinic. <https://www.mayoclinic.org/tests-procedures/ct-scan/about/pac-20393675>

Doppler ultrasound: What is it used for? (2019, December 31). Mayo Clinic. <https://www.mayoclinic.org/doppler-ultrasound/expert-answers/faq-20058452>

Fecal occult blood test. (2020, May 12). Mayo Clinic - Mayo Clinic. <https://www.mayoclinic.org/tests-procedures/fecal-occult-blood-test/about/pac-20394112>

**Current Medications (10 points, 1 point per completed med)
*10 different medications must be completed***

Home Medications (5 required)

| Brand/ Generic | Hydroc done bitartrate - acetamin ophen/ Norco | Amlodipine besylate/Norv asc | Lisinopril/ Prinivil | Carvedilol/ Coreg | Guaifenesin- dextromethorph an/Mucinex |
|---------------------------|---|---|---------------------------------|------------------------------|---|
| Dose | 5mg- 325mg | 10 mg | 20 mg | 25 mg | 20 mL |

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|------------------------------|--|--|--|---|---|
| Frequency | Q4HRS/ PRN | Daily | BID | BID | Q4HRS/PRN |
| Route | Oral | Oral | Oral | Oral | Oral |
| Classification | Opioid analgesics /Opioid analgesics -para-aminophenol derivatives | Antihypertensive/Calcium channel blocker. | Antihypertensive/ACE inhibitor. | Antihypertensive/Beta-Blocker. | Glycerol guaiacolate/Expectorant |
| Mechanism of Action | Inhibits synthesis of prostaglandins and binds to opiate receptors in CNS and peripherally blocks pain impulse generation; produces antipyresis by direct action on hypothalamic heat-regulating center. | Inhibits calcium ion influx across cardiac and smooth muscle cells, dilates coronary arteries and arterioles, and decreases BP and myocardial oxygen demand. | Causes decreased production of angiotensin II and suppression of the RAAS. | Nonselective beta blocker with alpha-blocking activity. | Increases fluid and mucus removal from the upper respiratory tract by increasing the volumes of secretions and reducing their adhesiveness and surface tension. |
| Reason Client Taking | Pain | Hypertension | Hypertension | Hypertension | Cough suppression. |
| Contraindications (2) | Assess each patient's | Contraindicated in patients hypersensitive | Use cautiously in patients with | Use cautiously in patients with | Hypersensitivity to guaifenesin or its components. |

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| | <p>risk before prescribing; monitor patients for these behaviors or conditions . Drug may lead to rare but serious decrease in adrenal gland cortisol production.</p> | <p>to drug. Use cautiously in patients receiving other peripheral vasodilators.</p> | <p>impaired renal function; adjust dosage. Contraindicated in patients hypersensitive to ACE inhibitors and in those with a history of angioedema related to previous treatment with ACE inhibitor.</p> | <p>thyroid disease. Contraindicated in patients hypersensitive to drug and in those with NYHA Class IV decompensated cardiac failure requiring IV inotropic therapy.</p> | <p>Assess for use of MAO inhibitor as these may cause fatal drug interaction.</p> |
| <p>Side Effects/Adverse Reactions (2)</p> | <p>Respiratory depression. Acute airway obstruction.</p> | <p>Pulmonary edema. Dyspnea</p> | <p>Hyperkalemia. Angioedema.</p> | <p>Hypoglycemia. Lung edema.</p> | <p>Dizziness. Headache.</p> |
| <p>Nursing Considerations (2)</p> | <p>Monitor patients for respiratory depression, especially within first 24 to 72 hours of drug initiation or after dosage increase. Monitor vital</p> | <p>Monitor BP frequently during initiation of therapy. Do not open, chew, or crush extended-release capsule.</p> | <p>Monitor BP frequently. Monitor serum potassium levels periodically.</p> | <p>PO: take with food. Monitor diabetic patients closely.</p> | <p>Give liquid forms as prescribed and as appropriate. Watch for evidence of more serious condition, such as cough that lasts longer than 1 week, fever, persistent headache, and rash.</p> |

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| | signs, pain level, respiratory status, and sedation level in all patients receiving opioids. | | | | |
| Key Nursing Assessment(s)/Lab(s) Prior to Administration | Monitor patient closely for an allergic reaction, particularly those who are allergic to other opioids. | Check pulse; if less than 50 beats per minute, hold the med and contact provider. | Assess renal function test. | Monitor patient with HR for worsened conditions. Monitor LFTs. | Assess cough characteristics and frequency. |
| Client Teaching needs (2) | Instruct patient to avoid alcoholic beverages, prescription drugs, and OTC products that contain alcohol during treatment. Caution patient or caregiver of taking an opioid with a benzodiazepine, | Caution patient to report all adverse reactions and to continue taking drug, even when feeling better. Instruct patient SL nitroglycerin may be taken in times of stable angina. | Tell patient that lightheadedness can occur, especially during the first few days of therapy, to rise slowly to minimize this effect. Advise patient to report signs and symptoms of infection, such as fever and sore throat. | Do not stop abruptly; taper over 1 – 2 weeks. Educate patients on orthostatic hypotension. | Instruct patient to take each dose with a full glass of water. Tell patient to increase fluid intake to help thin secretions. |

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| | CNS depressant. | | | | |
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Hospital Medications (5 required)

| Brand/ Generic | Vancomycin hydrochloride/Vancocin | Lovenox/enoxaparin sodium | Morphine hydrochloride/Doloral | Protonix/Pantoprazole sodium | Duoneb/Ipratropium bromide and albuterol sulfate. |
|----------------------------|---|---|--|--|---|
| Dose | 2,000mg/400mL | 140mg/1.4mL | 2mg/1mL | 40 mg | 3mL/.5mg-2.5mg |
| Frequency | Q12HRS | Q12HRS | Q2HRS/ PRN Pain | BID | BID |
| Route | IV Piggyback | SubQ Injection | IV Push | Oral | Inhalation |
| Classification | Antibiotic/ Glycopeptide | Anticoagulant/low-molecular weight heparins | Opioid analgesics/Opioids | Antiulcer drug/Proton pump inhibitor | Bronchodilators/ Anticholinergics |
| Mechanism of Action | Inhibits bacterial RNA and cell wall synthesis; alters permeability of bacterial membranes, causing cell wall lysis and cell death. | Accelerates formation of antithrombin III-thrombin complex and deactivates thrombin, preventing conversion of fibrinogen to fibrin. | Binds with opioid receptors in the CNS, altering perception of and emotional response to pain. | Inhibits proton pump activity by binding to hydrogen-potassium adenosine triphosphatase, located at secretory surface of gastric parietal cells, to suppress gastric acid secretion. | A sterile inhalation solution containing albuterol and ipratropium, which are both bronchodilators that relax muscles in the airways and increase air flow to the lung. |
| Reason | Bacterial | Hypercoag | Pain | Dyspepsia/ | Pneumonia |

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| Client Taking | infection | ulable state, DVTs, PEs | | Duodenitis. | diagnosis. |
| Contraindications (2) | Hypersensitivity to corn or corn products. Hypersensitivity to vancomycin or its components. | Contraindicated in clients hypersensitive to drug, heparin, pork products or benzyl alcohol. Use cautiously in clients with history of aneurysms, cerebrovascular hemorrhage, spinal, or epidural punctures. | Contraindicated in patients hypersensitive to drug and its components. Contraindicated in clients with GI obstruction. | Contraindicated in patients hypersensitive to any component of the formulation. Contraindicated in cutaneous lupus erythematosus (CLE). | Contraindicated in patients with hypersensitivity to drug atropine, or its derivatives. Use cautiously in patients with angle-closure glaucoma, prostatic hyperplasia, or bladder-neck obstruction. |
| Side Effects/Adverse Reactions (2) | Hypotension. Anaphylaxis | Angioedema. Thrombocytopenia. | Respiratory depression. Bradycardia. | Thrombocytopenia. Leukopenia. | Headache. Stuffy nose. |
| Nursing Considerations (2) | Do not infuse with other drugs. Encourage 2L fluid intake per day. | Closely monitor for signs of bleeding. Stop medication 24 hours before surgery. | Continuous dosing is more effective than PRN: may be given by PCA. Assess each patient's risk for addiction prior to administration. | Prolonged use of PPIs may cause low magnesium levels. Monitor levels routinely. Monitor for symptoms such as abnormal HR or rhythm. | If patients uses a face mask for a nebulizer, take care to prevent leakage around the mask. Safety and effectiveness of intranasal use beyond 4 days in patients with a common cold haven't been established. |
| Key Nursing | Monitor BUN and creatinine | Monitor potassium, | Monitor for respiratory | Asses LFT, glucose, and | Monitor for use of anticholinergic |

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|--|---|--|--|---|---|
| Assessment (s)/Lab(s) Prior to Administration | levels, as this drug may influence these levels. | AST, and ALT levels. | depression. | lipids throughout therapy. | throughout therapy. |
| Client Teaching needs (2) | Instruct patient to notify clinical staff if diarrhea develops. Instruct the client to increase fluid intake. | Instruct patient and family to watch for signs of bleeding. Tell patient to avoid OTC drugs that contain aspirin or other salicylates. | Instruct patient to not take benzodiazepines throughout this drug therapy. Explain that the drug must be tapered instead of abruptly stopping. | Instruct patient to take exactly as prescribed and at the same time every day. Advise patient that drug can be taken with or without meals. | Instruct patient to wash mouthpiece once a week for 30 seconds in warm water only and let air dry. Inform patient that use of a spacer device with an MDI may improve drug delivery to lungs. |

(Wilkins, 2020)

Medications Reference (1) (APA):

Wilkins, L. W. (2020). *Nursing2021 drug handbook*. LWW.

Assessment

Physical Exam (18 points)

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| GENERAL (1 point): Alertness: | The client was alert and oriented x 4 during the assessment. The client appeared to be in slight |
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| <p>Orientation: Distress: Overall appearance:</p> | <p>distress when standing because he appeared to have shortness of breath on exertion. The client's appearance is appropriate for his setting.</p> |
| <p>INTEGUMENTARY (2 points): Skin color: Normal for race Character: Dry Temperature: Warm Turgor: <3 Rashes: Yes Bruises: None Wounds: None Braden Score: 20 Drains present: Y<input type="checkbox"/> N<input type="checkbox"/> Type: Chest tube.</p> | <p>The client's skin color was normal for his race, Caucasian American. His skin was warm, dry, and intact. The patient's skin turgor showed less than 3 seconds; the client has no bruises; however, he does have red rashes located bilaterally on the lower extremities. The rashes started about five days ago, and the client states they do not itch or irritate him. The client does have a drain present which is a chest tube on his right side. The client has a Braden score of 20.</p> |
| <p>HEENT (1 point): Head/Neck: Ears: Eyes: Nose: Teeth:</p> | <p>Upon assessment, the client's skull is normocephalic and symmetrical, with no discharge from the eyes or ears and gray tympanic membranes. PERRLA noted in the eyes; the client has no deviation or tenderness. The client's teeth are in good condition with no signs of dental caries, oral mucosa is moist and pick.</p> |
| <p>CARDIOVASCULAR (2 points): Heart sounds: S1, S2, S3, S4, murmur etc. Cardiac rhythm (if applicable): Peripheral Pulses: Capillary refill: Neck Vein Distention: Y<input type="checkbox"/> N<input checked="" type="checkbox"/> Edema Y<input checked="" type="checkbox"/> N<input type="checkbox"/> Location of Edema: Lower extremities, bilaterally, and feet.</p> | <p>The client is normal sinus rhythm; S1 and S2 sounds are both present. The client's pulses are +3 bilaterally in radial and pedal locations. The client's capillary refill is under 3 seconds; he has 2+ edema non-pitting noted bilaterally in both his feet and lower extremities—no signs of neck vein distension.</p> |
| <p>RESPIRATORY (2 points): Accessory muscle use: Y<input type="checkbox"/> N<input type="checkbox"/> Breath Sounds: Location, character</p> | <p>The client does not have accessory muscle use. However, the client developed a tension pneumothorax on 11/13/2021, thus requiring an immediate chest tube. Upon auscultation, crackles and wheezes were heard in the superior and inferior lobes of the left lung. Auscultation of the right lobe decreased breath sounds are heard with crackles. Lung aeration is greater in the left-sided lung.</p> |
| <p>GASTROINTESTINAL (2 points): Diet at home: Current Diet</p> | <p>The client's home diet is regular and regular here at the hospital. The client is 171 cm tall and weighs 136.8 kg. The client has active bowel</p> |

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| <p>Height: Weight: Auscultation Bowel sounds: Last BM: Palpation: Pain, Mass etc.: Inspection: Distention: Incisions: Scars: Drains: Wounds: Ostomy: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Nasogastric: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Size: Feeding tubes/PEG tube Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Type:</p> | <p>sounds in all four quadrants. The client's last bowel movement was 11/15/2021. Upon palpation of the stomach, the client had no pain, masses, distension, incisions, scars, drains, or wounds present. No ostomy, nasogastric tube, PEG, or feeding tubes present.</p> |
| <p>GENITOURINARY (2 Points): Color: Character: Quantity of urine: Pain with urination: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Dialysis: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Inspection of genitals: Catheter: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Type: Size:</p> | <p>The client's urine was clear yellow. The client voided 675 mL throughout the clinical time. The client reports no pain with urination, no need for dialysis, and no catheter present</p> |
| <p>MUSCULOSKELETAL (2 points): Neurovascular status: ROM: Supportive devices: Strength: ADL Assistance: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Fall Risk: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Fall Score: 55 Activity/Mobility Status: Independent (up ad lib) <input type="checkbox"/> Needs assistance with equipment <input type="checkbox"/> Needs support to stand and walk <input type="checkbox"/></p> | <p>The client is alert and oriented x4. The client moves all extremities well and has a full range of motion. The client's strength is equal bilaterally in all four extremities. The client has a fall score of 55, which places him at a high fall risk. The client needs help with ADLs because of the limiting chest tubes.</p> |
| <p>NEUROLOGICAL (2 points): MAEW: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> PERLA: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Strength Equal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no - Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/> Orientation:</p> | <p>The client is awake, alert, and oriented x 4. The client moves all extremities well. The client is PERRLA, and the client's strength is normal for age and equal bilaterally in all four extremities. The client's mental status is normal for age, and his speech is clear. The client's sensory was</p> |

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| Mental Status: Speech: Sensory: LOC: | intact, and he had no loss of consciousness. |
| PSYCHOSOCIAL/CULTURAL (2 points): Coping method(s): Developmental level: Religion & what it means to pt.: Personal/Family Data (Think about home environment, family structure, and available family support): | The client states that he tends to concentrate on peacefulness in times of stress. The client's developmental level is in the individuating phase. The client is Christian but does not attend church regularly. The client lives at home with his mother, whom he helps, and he relies on his brother as his support person. |

Vital Signs, 2 sets (5 points)

| Time | Pulse | B/P | Resp Rate | Temp | Oxygen |
|------|-------|--------|-----------|--------|------------------------------|
| 1300 | 86 | 137/73 | 20 | 37.1 C | 94 On 1L via nasal cannula. |
| 1510 | 89 | 119/66 | 20 | 37.3 C | 96% On 1L via nasal cannula. |

Vital Sign Trends: The 1300-hours vital signs are all within defined limits aside from the blood pressure. This is likely increased because the client has a history of hypertension. The 1510-hours vitals are all within defined limits.

Pain Assessment, 2 sets (2 points)

| Time | Scale | Location | Severity | Characteristics | Interventions |
|------|-----------|----------------------|----------|-----------------|---------------|
| 1300 | Numerical | Right side back pain | 6/10 | Tinge sensation | Pain Meds |

| | | | | | |
|-------------|-----------|----------------------|------|-----------------|--------------------------------|
| 1510 | Numerical | Right side back pain | 6/10 | Tinge sensation | Offered pain meds but refused. |
|-------------|-----------|----------------------|------|-----------------|--------------------------------|

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: | PICC line is in the upper right arm, with no signs of redness, tenderness, or swelling. The dressing is clean, dry, and intact. Insertion of PICC line is 11/9/2021, flushes well with good blood flow return. |

Intake and Output (2 points)

| Intake (in mL) | Output (in mL) |
|----------------|---|
| 300 mL Oral | 675mL Urine 100 mL (Chest tube drainage) |

Nursing Care

Summary of Care (2 points)

Overview of care: The main concern for this client is ensuring adequate oxygenation, the client has bilateral pneumonia, empyema that caused a tension pneumothorax. The care for this client is to stop and prevent further fluid accumulation, supplemental oxygenation, adequate fluid and nutrition intake, controlling the client's hypertension.

Procedures/testing done: Chest Xray, CT, Doppler ultrasound, IVC placement, Second chest tube placement.

Complaints/Issues: The client complained that he feels stuck from the chest tube placement.

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: The client tolerates his diet well; he states he does not want to because he does not taste it.

Physician notifications: Pulmonologist and Radiologist.

Future plans for patient: Second chest tube placement to alleviate fluid accumulation in the left lung and tension pneumothorax prevention.

Discharge Planning (2 points)

Discharge location: Home with mother.

Home health needs (if applicable): Visiting nurse to ensure the client is doing okay.

Equipment needs (if applicable): Pulse oximetry, Oxygen supplementation in case of a worsening condition.

Follow up plan: Chest x-ray to ensure proper reinflation of lungs.

Education needs: Chest Tube, COVID Syndrome, Complication associated with COVID, Blood in stool, Duodenitis, and Empyema.

Nursing Diagnosis (15 points)

Must be NANDA approved nursing diagnosis and listed in order of priority

| <p>Nursing Diagnosis</p> <ul style="list-style-type: none"> • Include full nursing diagnosis with “related to” and “as evidenced by” components | <p>Rational</p> <ul style="list-style-type: none"> • Explain why the nursing diagnosis was chosen | <p>Intervention (2 per dx)</p> | <p>Evaluation</p> <ul style="list-style-type: none"> • How did the patient/ family respond to the nurse’s actions? • Client response, status of goals and outcomes, modifications to plan. |
|---|---|--|---|
| <p>1. Ineffective airway clearance related to retained secretions as evidenced by infection and need for</p> | <p>The client has COVID-19 diagnosis that has caused empyema, bilateral pneumonia, and a tension pneumothorax.</p> | <p>1.The client has COVID-19 diagnosis that has caused empyema, bilateral pneumonia, and a tension pneumothorax.</p> | <p>Goal partially met; assessments were Q4hrs; however, the client developed a tension pneumothorax requiring the further intervention of a chest tube.</p> |

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| <p>bronchodilator medication.</p> | | <p>2. Give expectorants, bronchodilators, and other drugs, as ordered, and monitor effectiveness.</p> | <p>Goal met; the client underwent the Duoneb treatments to aid in airway dilation and proper oxygenation and perfusion.</p> |
| <p>2. Ineffective breathing pattern related to tension pneumothorax, respiratory muscle fatigue, and fatigue as evidenced by abnormal breathing pattern, altered chest excursion.</p> | <p>I chose this diagnosis because the client developed a right ling tension pneumothorax from fluid accumulation.</p> | <p>1. Perform chest physiotherapy to aid in mobilization and secretion removal. Percussion, vibration, and postural drainage enhance airway clearance and respiratory effort.</p> <p>2. Administer oxygen as needed.</p> | <p>Goal not met; the client needed a second chest tube to aid in drainage from the left lung.</p> <p>Goal met; the client was placed on 1L of oxygen supplementation to prevent hypoxemia and respiratory distress.</p> |
| <p>3. Impaired gas exchange related to assessment findings as evidenced by tension pneumothorax, oxygen supplementation, and respiratory therapy consult.</p> | <p>The client has a COVID-19 diagnosis which has caused crackles in the lungs from secretion buildup.</p> | <p>1. Perform bronchial hygiene, as ordered, including coughing, percussion, or postural drainage, and suctioning.</p> <p>2. Have the patient turn, cough, and take a deep breath every 4 hours to prevent atelectasis or fluid buildup in the lungs and enhance blood</p> | <p>Goal met; respiratory therapy assisted in postural drainage and the use of the incentive spirometer.</p> <p>Goal met; the client did the turns every 4 hours with an alarm he set on his phone.</p> |
| <p>4. Imbalanced nutrition: less than the body requirements related to insufficient dietary intake as evidenced by the</p> | <p>The client states that he does not want to eat his food, and the client only consumed about 1/4 of this meal. Furthermore, the</p> | <p>1. Maintain parenteral fluids as ordered to provide patients with needed fluids and</p> | <p>Goal met; intermittent PPN assisted the client in not wasting away.</p> |

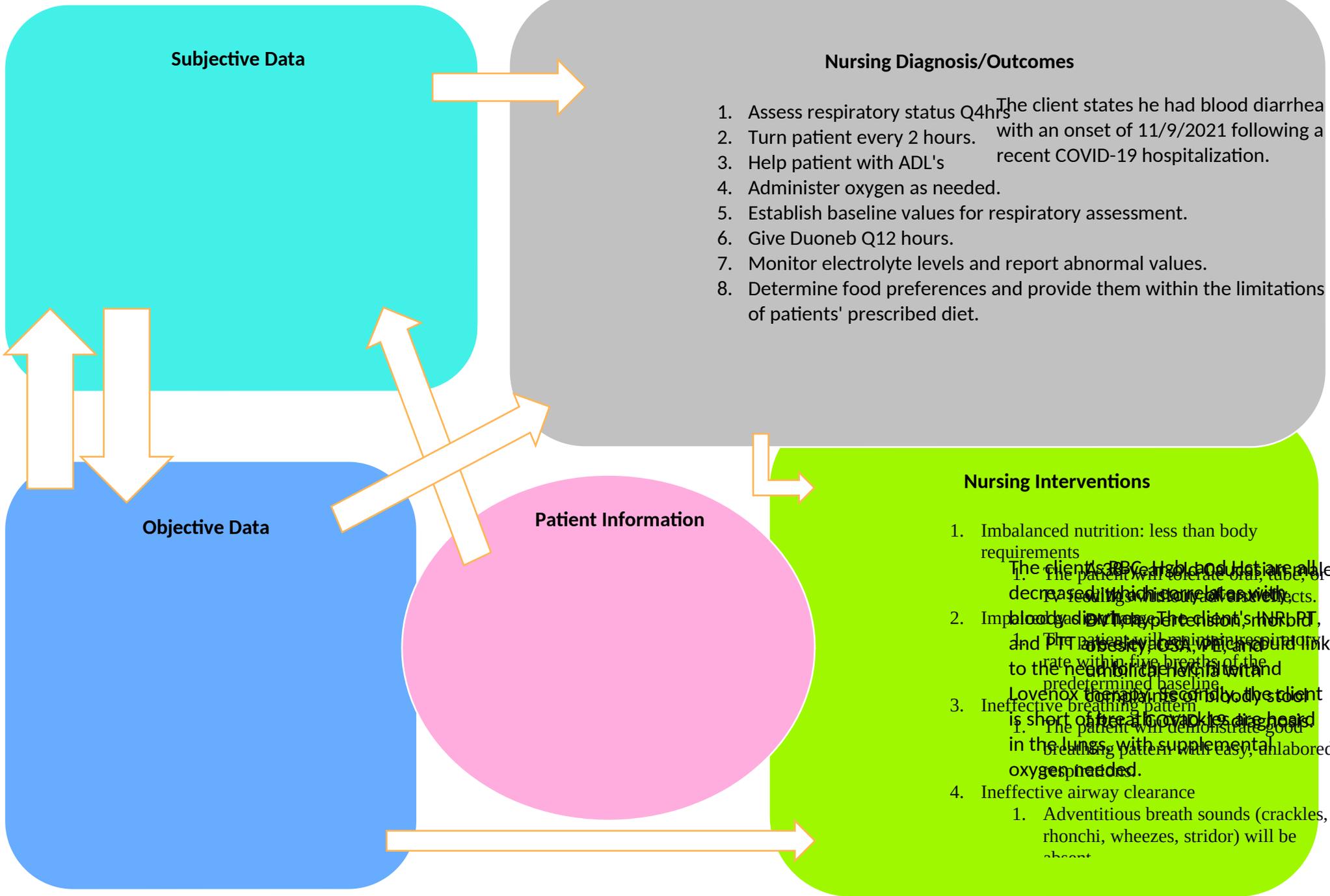
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|-----------------------------------|---|---|--|
| <p>client not wanting to eat.</p> | <p>client is working to breathe, which requires more energy, further increasing his risk.</p> | <p>electrolytes 2. Provide a diet prescribed for patient's specific condition to improve patients' nutritional status and increase weight.</p> | <p>Goal met; a liquid diet was implemented, and this helped the client maintain adequate nutrition intake.</p> |
|-----------------------------------|---|---|--|

(Phelps, 2020)

Other References (APA):

Phelps, L. (2020). *Sparks & Taylor's nursing diagnosis reference manual*. LWW.

Concept Map (20 Points):



Subjective Data

Objective Data

Patient Information

Nursing Diagnosis/Outcomes

1. Assess respiratory status Q4hrs
2. Turn patient every 2 hours.
3. Help patient with ADL's
4. Administer oxygen as needed.
5. Establish baseline values for respiratory assessment.
6. Give Duoneb Q12 hours.
7. Monitor electrolyte levels and report abnormal values.
8. Determine food preferences and provide them within the limitations of patients' prescribed diet.

Nursing Interventions

1. Imbalanced nutrition: less than body requirements
 - The client's CBC, Hgb, and Hct are all decreased, which correlates with the client's blood iron deficiency.
2. Impaired gas exchange
 - The client's RR, P, and SpO2 are within normal range. The client's RR is 18 and P is 10. The client's SpO2 is 95% on room air.
3. Ineffective breathing pattern
 - The client's RR is 18 and P is 10. The client's SpO2 is 95% on room air.
4. Ineffective airway clearance
 - Adventitious breath sounds (crackles, rhonchi, wheezes, stridor) will be absent.

