

N321 Care Plan #2

Lakeview College of Nursing

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Professor Kristal Henry

March 30, 2023

**Demographics (3 points)**

|                                                                    |                                 |                                  |                                        |
|--------------------------------------------------------------------|---------------------------------|----------------------------------|----------------------------------------|
| <b>Date of Admission</b><br>03/24/2023                             | <b>Client Initials</b><br>CN    | <b>Age</b><br>65 years old       | <b>Gender</b><br>Female                |
| <b>Race/Ethnicity</b><br>White/Caucasian Not<br>Hispanic or Latino | <b>Occupation</b><br>unemployed | <b>Marital Status</b><br>Widowed | <b>Allergies</b><br>No known allergies |
| <b>Code Status</b><br>Full                                         | <b>Height</b><br>5'3 (160 cm)   | <b>Weight</b><br>130 lbs (59 kg) |                                        |

**Medical History (5 Points)**

**Past Medical History:** Anxiety, Arthritis, Atrial Fibrillation, Congestive heart failure, hypertension, congestive pulmonary disease, diabetes mellitus, hyperlipidemia, hypertension, insomnia, pseudocyst of pancreas, thyroid disease

**Past Surgical History:** Fasciotomy, endoscopy, colon diagnostic and exploratory of abdomen

**Family History:** Father-Congestive Heart failure, and diabetes Mother-diabetes, Brother- none

**Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use):**

Used tobacco from 1979-1998: cigarettes a few a day, 5 packs a year, patient stated mostly a social smoker.

Current drug use- marijuana: 2-3 gummies per week. No smokeless tobacco, No alcohol use.

**Assistive Devices:** glasses, walker

**Living Situation:** Lives at home alone

**Education Level:** Highschool, no learning barriers

**Admission Assessment**

**Chief Complaint (2 points):** Leg swollen

**History of Present Illness – OLD CARTS (10 points):** The patient stated on 03/24/2023 early in the morning she noticed her lower left leg was swollen. By the afternoon it was worse and cramping, and throbbing. The patient said the pain was a severity of 8, on a numerical scale 0-10.

The patient stated walking made it worse and she could barely walk and no relieving factors. She said, “my leg felt hard like a baseball”. She had not sought any other treatment prior to walking into the emergency room in 03/24/2023 evening.

### **Primary Diagnosis**

**Primary Diagnosis on Admission (2 points): Compartment Syndrome of lower leg**

**Secondary Diagnosis (if applicable): N/A**

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

"Compartment syndrome occurs when tissue pressure exceeds perfusion pressure in a closed anatomical space" (Capriotti, 2020). The compartments consist of groups of muscles, nerves, and blood vessels within a space that is contained by a tough fascial membrane. Pressure arises around the muscles and is painful and can be dangerous. This most often occurs in the lower leg but can also occur in the feet, arms, hands, abdomen, and buttocks. This can be caused by a blood clot, crush injury, burn, overly tight bandaging, sepsis, or trauma.

Symptoms of compartment syndrome include bulging of the muscle, swelling, numbness, pain, and tightness in the muscle. Usually, a doctor or nurse will suspect compartment syndrome based on the chief complaint and symptoms and will first complete a physical exam. The five cardinal clinical manifestations that help diagnose compartment syndrome include pain, paralysis, pulselessness, paresthesia, and pallor.

The physical exam will mainly diagnose compartment syndrome and often has findings like muscle palpitation, which will be swollen and stiff with the skin taut and shiny. A handheld device can be used by inserting a needle and measuring the pressure. Labs and other diagnostic tests may be done but are not prominent or required in diagnosing compartment syndrome. The goal of treatment is to prevent permanent damage and surgery is needed right away (Hinkle et

al., 2021). A surgeon will complete a fasciotomy to relieve the pressure by cutting the fascia. In more severe cases the surgeon may not be able to close the incision and will need skin grafting in order to cover the wound. Without treatment compartment syndrome can lead to muscle contracture, permanent damage to the muscles, permanent disability, a need for amputation, and potentially death.

The patient presented with the complaint of her lower left leg being swollen. She had stated it felt "as hard as a baseball." She had pain that had become more severe from morning to afternoon. Labs were completed but not required for the diagnosis, like a complete blood count, comprehensive metabolic panel, and a d-dimer. The d-dimer helped the medical team know if a blood clot was present. The doctor did a fasciotomy with two incisions, one medial and one lateral, of the lower left leg, with the insertion of two hemovac drains. These drains will help remove any blood or other fluids or pressure building up in the area.

The injury was in the lower left extremity therefore, the patient had to have minimal weight bearing on the injured leg and use a walker. Therefore, physical therapists are a part of the treatment plan to help the patient become mobile with the injury. Education was provided in order for the patient to be aware of how to keep the wounds clean and reduce the risk of falls in the home. The patient will need to go home with a walker to remove clutter, use night lights to see at night, handrails, and not use the stairs unless necessary. The patient was very motivated to gain strength but was provided education on how rest and mobility are needed for healing.

**Pathophysiology References (2) (APA):**

Capriotti, T. (2020). *Davis Advantage for Pathophysiology: Introductory Concepts and Clinical Perspectives* (2nd ed.). F. A. Davis Company.

Hinkle, J. L., Cheever, K. H., & Overbaugh, K. (2021). *Brunner and Suddarth's Textbook of Medical-Surgical Nursing* (K. H. Cheever, K. Overbaugh, & J. L. Hinkle, Eds.). Lippincott Williams & Wilkins.

### Laboratory Data (15 points)

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

| Lab         | Normal Range | Admission Value | Today's Value | Reason for Abnormal Value                                                                                                                                               |
|-------------|--------------|-----------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RBC         | 4.40-5.80 mL | 4.15 mL         | 2.88 mL       | Diabetes can also cause a low red blood count. The patient is on prophylaxis antibiotics which can also cause a decrease in red blood count. (Pagana et al., 2019).     |
| Hgb         | 13-16.5 g/dL | 12.1 g/dL       | 8.3 g/dL      | A low red blood count causes low hemoglobin, the patients prophylactic antibiotic can cause this low hemoglobin. Diabetes can cause this as well (Pagana et al., 2019). |
| Hct         | 38.0%-50.0%  | 36.5%           | 25.7%         | Antibiotics like Cefazolin can cause a decrease in hematocrit levels. The patient could also have some anemia (Pagana et al., 2019).                                    |
| Platelets   | 140-440 mL   | 203 mL          | 167 mL        | Within normal limits                                                                                                                                                    |
| WBC         | 4-12 mL      | 8.30 mL         | 7.80 mL       | Within normal limits                                                                                                                                                    |
| Neutrophils | 40-68%       | 78.8%           | 82.4%         | The reason for an elevated neutrophil could be due to a start of infection or the patient's injury and inflammation (Pagana et al., 2019).                              |
| Lymphocytes | 19-49%       | 14.4%           | 10%           | An elevated lymphocyte level could be caused from an infection or stress and inflammation (Pagana et al., 2019).                                                        |
| Monocytes   | 3-13%        | 5.3%            | 7.1%          | Within normal limits                                                                                                                                                    |
| Eosinophils | 0-8%         | 1.0%            | 0.2%          | Within normal limits                                                                                                                                                    |
| Bands       | 0-5%         | N/A             | N/A           | Within normal limits                                                                                                                                                    |

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-        | 133-144 mmol/L        | 139 mmol/L      | 141 mmol/L    | Within normal limits                                                                                                                                                                               |
| K+         | 3.5-5.1 mmol/L        | 4.2 mmol/L      | 4.1 mmol/L    | Within normal limits                                                                                                                                                                               |
| Cl-        | 98-107 mmol/L         | 106 mmol/L      | 112 mmol/L    | Within normal limits                                                                                                                                                                               |
| CO2        | 21-31 mmol/L          | 46 mmol/L       | 19 mmol/L     | Within normal limits                                                                                                                                                                               |
| Glucose    | 70-99 mg/dL           | 307 mg/dL       | 241 mg/dL     | The patient has diabetes mellitus, and this is causing the patients glucose to be elevated (Pagana et al., 2019).                                                                                  |
| BUN        | 7-25 mg/dL            | 33 mg/dL        | 31 mg/dL      | The high BUN level could be due to an underlying kidney problem not yet diagnosed, due to the congestive heart failure. Also, the antibiotic cefazolin can raise BUN levels (Pagana et al., 2019). |
| Creatinine | 0.50-1.20 mg/dL       | 1.37 g/dL       | 1.19 g/dL     | Diabetes, heart failure and the patient's hypertension can raise the creatinine level. Also, the antibiotic cefazolin is known to raise creatinine (Pagana et al., 2019).                          |
| Albumin    | 3.5-5.7 g/dL          | 3.6 g/dL        | 2.9 g/dL      | Surgery can cause a low albumin level, Also diabetes and heart failure. This patient may have an underlying kidney problem starting to happen as well (Pagana et al., 2019).                       |
| Calcium    | 8.8-10.2 mg/dL        | 9.5 mg/dL       | 8.7 mg/dL     | Within normal limits                                                                                                                                                                               |
| Mag        | 1.3-2.1 mEq/L         | N/A             | N/A           | Within normal limits                                                                                                                                                                               |
| Phosphate  | 3.0-4.5 mg/dL         | N/A             | N/A           | Within normal limits                                                                                                                                                                               |
| Bilirubin  | 0.2-0.8 mg/dL         | 0.5 mg/dL       | 0.3 mg/dL     | Within normal limits                                                                                                                                                                               |
| Alk Phos   | 30-120 U/L<br>0.5-2.0 | 62 units/L      | 46 units/L    | Within normal limits                                                                                                                                                                               |

|                    |                        |                      |                   |                                                                                                                                                                                                   |
|--------------------|------------------------|----------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AST</b>         | <b>5-35 units/L</b>    | <b>&lt;3 units/L</b> | <b>17 units/L</b> | The patient has diabetes and congestive heart failure can be associated with low ALT levels. This patient may have an underlying kidney problem starting to happen as well (Pagana et al., 2019). |
| <b>ALT</b>         | <b>4-36 units/L</b>    | <b>13 units/L</b>    | <b>7 units/L</b>  | Within normal limits                                                                                                                                                                              |
| <b>Amylase</b>     | <b>60-120 units/dL</b> | <b>N/A</b>           | <b>N/A</b>        | Test not performed                                                                                                                                                                                |
| <b>Lipase</b>      | <b>0-160 units/L</b>   | <b>N/A</b>           | <b>N/A</b>        | Test not performed                                                                                                                                                                                |
| <b>Lactic Acid</b> | <b>0.7-2.0 mmol/L</b>  | <b>N/A</b>           | <b>N/A</b>        | Test not performed                                                                                                                                                                                |

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

| <b>Lab Test</b>      | <b>Normal Range</b>                              | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Reason for Abnormal</b> |
|----------------------|--------------------------------------------------|---------------------------|----------------------|----------------------------|
| <b>INR</b>           | <b>0.8-1.1 secs</b>                              | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>PT</b>            | <b>60-70 secs</b>                                | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>PTT</b>           | <b>30-40 secs</b>                                | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>D-Dimer</b>       | <b>&lt;250 ng/mL<br/>&lt;0.4mcg/mL</b>           | <b>277 mcg/mL</b>         | <b>N/A</b>           | Within normal limits.      |
| <b>BNP</b>           | <b>&lt;100 pg/mL</b>                             | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>HDL</b>           | <b>&gt;45 mg/dL female<br/>&gt;55 mg/dL male</b> | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>LDL</b>           | <b>&lt;130 mg/dL</b>                             | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Cholesterol</b>   | <b>&lt;200 mg/dL</b>                             | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Triglycerides</b> | <b>Male 40-160 mg/dL<br/>Female 35-135 mg/dL</b> | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Hgb A1c</b>       | <b>Nondiabetic</b>                               | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |

|            |                                                                                                |            |            |                    |
|------------|------------------------------------------------------------------------------------------------|------------|------------|--------------------|
|            | <b>4%to 5.9%<br/>Good<br/>diabetic<br/>control &lt;7%<br/>Fair 8%to<br/>9%<br/>Poor &gt;9%</b> |            |            |                    |
| <b>TSH</b> | <b>2-10 mU/L</b>                                                                               | <b>N/A</b> | <b>N/A</b> | Test not performed |

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

| <b>Lab Test</b>            | <b>Normal Range</b>     | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Reason for Abnormal</b> |
|----------------------------|-------------------------|---------------------------|----------------------|----------------------------|
| <b>Color &amp; Clarity</b> | <b>Yellow or clear</b>  | <b>yellow</b>             | <b>yellow</b>        | Within normal limits.      |
| <b>pH</b>                  | <b>5.0-9.0 units</b>    | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Specific Gravity</b>    | <b>1.003-1.030units</b> | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Glucose</b>             | <b>Neg</b>              | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Protein</b>             | <b>Neg</b>              | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Ketones</b>             | <b>Neg</b>              | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>WBC</b>                 | <b>Neg 0-5 hpf</b>      | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>RBC</b>                 | <b>Neg 0-2 hpf</b>      | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |
| <b>Leukoesterase</b>       | <b>negative</b>         | <b>N/A</b>                | <b>N/A</b>           | Test not performed         |

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

| <b>Test</b>          | <b>Normal Range</b>                                 | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Explanation of Findings</b> |
|----------------------|-----------------------------------------------------|---------------------------|----------------------|--------------------------------|
| <b>Urine Culture</b> | <b>Negative &lt;10,000<br/>Positive &gt;100,000</b> | <b>N/A</b>                | <b>N/A</b>           | Test not performed             |
| <b>Blood Culture</b> | <b>Negative</b>                                     | <b>N/A</b>                | <b>N/A</b>           | Test not performed             |

|                       |                                       |            |            |                    |
|-----------------------|---------------------------------------|------------|------------|--------------------|
| <b>Sputum Culture</b> | <b>Normal upper respiratory tract</b> | <b>N/A</b> | <b>N/A</b> | Test not performed |
| <b>Stool Culture</b>  | <b>Normal intestinal flora</b>        | <b>N/A</b> | <b>N/A</b> | Test not performed |

**Lab Correlations Reference (1) (APA):**

Pagana, K. D., Pagana, T. J., & Pagaana, T. N. (2019). In *Mosby's Diagnostic and Laboratory Test Reference* (14th ed., p. 1088). Elsevier.

**Diagnostic Imaging**

**All Other Diagnostic Tests (5 points): N/A**

**Diagnostic Test Correlation (5 points): N/A**

**Diagnostic Test Reference (1) (APA): N/A**

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

**Home Medications (5 required)**

| <b>Brand/<br/>Generic</b>  | Eliquis/<br>apixaban                                                           | Jardiance/<br>empagliflozin                                                                           | Trilipix/<br>fenofibrat<br>e choline                                 | Synthroid/<br>levothyroxine<br>sodium                                                         | Lopressor/<br>metoprolol<br>tartrate                                                                |
|----------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Dose</b>                | 5 mg                                                                           | 25 mg                                                                                                 | 135 g<br>(delayed<br>release<br>capsule)                             | 25 mcg                                                                                        | 25 mg                                                                                               |
| <b>Frequency</b>           | 1 tab, 2<br>times daily                                                        | 1x daily                                                                                              | 1x daily                                                             | 1x daily                                                                                      | 1x daily                                                                                            |
| <b>Route</b>               | Oral                                                                           | Oral                                                                                                  | Oral                                                                 | Oral                                                                                          | Oral                                                                                                |
| <b>Classificatio<br/>n</b> | Pharmacol<br>ogic:<br>Factor Xa<br>inhibitor<br>Therapeuti<br>c:<br>Anticoagul | Pharmacologic:<br>Sodium<br>Glucose co-<br>transporter 2<br>inhibitor<br>Therapeutic:<br>Antidiabetic | Pharmacol<br>ogic:<br>Fibrate<br>Therapeut<br>ic:<br>Antilipem<br>ic | Pharmacologic:<br>Synthetic<br>thyroxine<br>Therapeutic:<br>Thyroid<br>hormone<br>replacement | Pharmacologi<br>c: Beta-<br>adrenergic<br>blocker<br>Therapeutic:<br>Antianginal,<br>antihypertensi |

|                              |                                                                                                                                                                                                                                                       |                                                                                                                                                                                   |                                                                                                                                                                                                                                                          |                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                              | ant                                                                                                                                                                                                                                                   |                                                                                                                                                                                   |                                                                                                                                                                                                                                                          |                                                                                                                                                                                     | ve                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Mechanism of Action</b>   | <p>“Inhibits free and clot-bound factor Xa and prothrombinase activity. Although apixaban has no direct effect on platelet aggregation, it does directly inhibit platelet aggregation induced by thrombin” (Jones &amp; Bartlett Learning, 2023).</p> | <p>“Inhibits sodium glucose co-transporter 2 in the kidneys, which prevents glucose reabsorption. This decreases blood glucose levels” (Jones &amp; Bartlett Learning, 2023).</p> | <p>“May increase the lipolysis of triglyceride-rich lipoproteins and decrease the synthesis of fatty acids and triglycerides by enhancing the activation of lipoprotein lipase and acyl-coenzyme A synthetase (Jones &amp; Bartlett Learning, 2023).</p> | <p>“Replaces endogenous thyroid hormone, which may exert its physiologic effects by controlling DNA transcription and protein synthesis” (Jones &amp; Bartlett Learning, 2023).</p> | <p>“Inhibits stimulation of beta receptor sites, located mainly in the heart, resulting in decreased cardiac excitability, cardiac output, and myocardial oxygen demand. These effects help relieve angina, minimize cardiac tissue damage from a myocardial infarction, and help relieve symptoms of heart failure. Metoprolol also helps reduce blood pressure by decreasing renal release of renin” (Jones &amp; Bartlett Learning, 2023).</p> |
| <b>Reason Client Taking</b>  | Atrial Fibrillation                                                                                                                                                                                                                                   | Diabetes Mellitus                                                                                                                                                                 | Hyperlipidemia                                                                                                                                                                                                                                           | Hypothyroidism                                                                                                                                                                      | Hypertension                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Contraindications (2)</b> | Active pathological                                                                                                                                                                                                                                   | Dialysis therapy, end stage renal                                                                                                                                                 | Active liver disease,                                                                                                                                                                                                                                    | Uncorrected renal insufficiency,                                                                                                                                                    | Systolic blood pressure less than 100                                                                                                                                                                                                                                                                                                                                                                                                             |

|                                           |                                                                                                                               |                                                                                                                                                                                                        |                                                                                                                |                                                                                                                                                                             |                                                                                                                                                                                                             |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | bleeding, hepatic disease                                                                                                     | disease                                                                                                                                                                                                | gallbladder disease                                                                                            | Acute myocardial infection                                                                                                                                                  | mmHg, decompensated heart failure                                                                                                                                                                           |
| <b>Side Effects/Adverse Reactions (2)</b> | Hemorrhagic stroke, angioedema                                                                                                | Urosepsis, pyelonephritis                                                                                                                                                                              | Deep vein thrombosis, cirrhosis                                                                                | Seizures, heart failure                                                                                                                                                     | Hepatitis, leukopenia                                                                                                                                                                                       |
| <b>Nursing Considerations (2)</b>         | Monitor patient closely for bleeding, Follow manufacturer guidelines if patient is switching from or to other anticoagulants. | Obtain serum creatine level, as ordered, prior to starting empagliflozin therapy because it can cause adverse renal effects. Monitor patients blood pressure and cholesterol level throughout therapy. | Watch patient closely for evidence of deep vein thrombosis. Monitor results of liver and renal function tests. | Monitor blood glucose level of diabetic patient because drug may worsen glycemic control. Monitor PT of patients receiving anticoagulants, dosage adjustment may be needed. | Monitor patient for evidence of worsening heart failure during dosage increases. Check for signs of poor glucose control because it can interfere the therapeutic effects of insulin or antidiabetic drugs. |

### Hospital Medications (5 required)

|                       |                      |                     |                                             |                                                 |                             |
|-----------------------|----------------------|---------------------|---------------------------------------------|-------------------------------------------------|-----------------------------|
| <b>Brand/Generic</b>  | Cefazolin sodium     | Glucotrol/glipizide | Apresoline/hydralazine hydrochloride        | Norco/hydrocodone bitartrate with acetaminophen | Zofran/ondansetron          |
| <b>Dose</b>           | 2,000 mg             | 5 mg                | 10 mg                                       | 5-325 mg                                        | 4 mg                        |
| <b>Frequency</b>      | Every 8 hours        | 2x daily            | Every 4 hours PRN as needed if SBP>180 mmHg | 1-2 tablets every 6 hours PRN as needed         | Every 6 hours PRN as needed |
| <b>Route</b>          | Intravenous          | Oral                | Intravenous                                 | Oral                                            | Oral                        |
| <b>Classification</b> | Pharmacologic: first | Pharmacologic:      | Pharmacologic:                              | Hydrocodone Bitartrate                          | Pharmacologic: Selective    |

|                            |                                                                                                                                                                |                                                                                                                                                                                                                                                                         |                                                                                                                                                                       |                                                                                                                                                                                                                      |                                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | generation cephalosporin<br>Therapeutic : Antibiotic                                                                                                           | Sulfonylurea<br>Therapeutic : Antidiabetic                                                                                                                                                                                                                              | Vasodilator<br>Therapeutic: Antihypertensive                                                                                                                          | Pharmacologic : Opioid<br>Therapeutic: Opioid analgesic<br>Controlled Substance: II<br>Acetaminophen-<br>Pharmacologic : nonsalicylate, para-aminophenol derivative<br>Therapeutic: Antipyretic, nonopioid analgesic | serotonin receptor antagonist<br>Therapeutic: Antiemetic                                                                                                               |
| <b>Mechanism of Action</b> | “Interferes with bacterial cell wall synthesis by inhibiting the final step in the cross-linking of peptidoglycan strands.” (Jones & Bartlett Learning, 2023). | “Stimulates insulin release from beta cells in pancreas. Glipizide also increases peripheral tissue sensitivity to insulin, either by increasing insulin binding to cellular receptors or by increasing number of insulin receptors” (Jones & Bartlett Learning, 2023). | “May act in a manner that resembles organic nitrates and sodium nitroprusside , except that hydralazine is selective for arteries” (Jones & Bartlett Learning, 2023). | “Binds to and activates opioid receptors at site in the periaqueductal and periventricular gray matter, the ventromedial medulla, and the spinal cord to produce pain relief” (Jones & Bartlett Learning, 2023).     | “Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve terminals in the intestine” (Jones & Bartlett Learning, 2023). |

|                                           |                                                                                                                             |                                                                                                                  |                                                                                                                                                       |                                                                                                                                                                               |                                                                                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reason Client Taking</b>               | Prophylaxis for infection                                                                                                   | To help control glucose in diabetes mellitus                                                                     | Hypertension                                                                                                                                          | Pain                                                                                                                                                                          | Nausea                                                                                                                                            |
| <b>Contraindications (2)</b>              | Diabetes mellitus, renal failure                                                                                            | Diabetic ketoacidosis, hemolytic anemia                                                                          | Coronary heart disease, mitral valvular rheumatic heart disease                                                                                       | Known or suspected gastrointestinal obstruction, active or severe asthma in unmanufactured setting or respiratory depression                                                  | Concomitant use of apomorphine, congenital long QT syndrome                                                                                       |
| <b>Side Effects/Adverse Reactions (2)</b> | Neutropenia, nephrotoxicity                                                                                                 | Hepatitis, hypoglycemia                                                                                          | Peripheral neuritis, constipation                                                                                                                     | CNS depression, hypokalemia                                                                                                                                                   | Stridor, intestinal obstruction                                                                                                                   |
| <b>Nursing Considerations (2)</b>         | Monitor BUN and serum creatinine for signs of nephrotoxicity. Monitor IV site for irritation, phlebitis, and extravasation. | Check blood glucose at least times daily for a patient switching from insulin to glipizide. Monitor CBC closely. | Monitor blood pressure and pulse rate regularly and weigh patient daily. Monitor for lupus-like symptoms and expect to discontinue drug if it occurs. | Monitor for respiratory depression, constipation, and adrenal insufficiency. Monitor effectiveness in relieving pain and patient's intake of drug closely for signs of abuse. | Know if hypokalemia or hypomagnesemia is present due to increased risk of QT interval prolongation. Monitor patient for decreased bowel activity. |

### Medications Reference (1) (APA):

Jones & Bartlett Learning. (2023). *2022 Nurse's Drug Handbook* (Jones & Bartlett Learning, Ed.; 21st ed.). Jones & Bartlett Learning, LLC.

### Assessment

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

|                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GENERAL:</b><br>Alertness: alert and responsive<br>Orientation: a/o x4<br>Distress: no acute distress<br>Overall appearance: well groomed                                                                                                                                                                                                                                 | Patient alert and responsive with orientation to person, time, place, and situation. Patient appears in no acute distress and is well groomed.                                                                                                                                                                                     |
| <b>INTEGUMENTARY:</b><br>Skin color: white<br>Character: dry, no edema<br>Temperature: warm<br>Turgor: elastic with great mobility<br>Rashes: none<br>Bruises: incision/bruise<br>Wounds: LLE<br>Braden Score: 19<br>Drains present: Y <input checked="" type="checkbox"/> N <input type="checkbox"/><br>Type: Hemovac x2                                                    | Skin is white without discoloration, warm and dry upon palpitation without edema. Skin temperature is warm, no rashes, or scars. Patient has a wound with 2 closed suction hemovac drains in the left lower leg, one medial and one lateral. Drainage is serosanguinous and not measured or emptied at this time. Braden score 19. |
| <b>HEENT:</b><br>Head/Neck: symmetrical<br>Ears: without lesions or lumps<br>Eyes: PERRLA<br>Nose: septum midline<br>Teeth: good dentition                                                                                                                                                                                                                                   | Head and neck are symmetrical, trachea is midline with no swollen lymph nodes. Eyes are PERRLA bilaterally, pupils are +3 bilaterally. Ears are symmetrical with no lesions, lumps, or masses bilaterally. Septum is midline and teeth are well approximated.                                                                      |
| <b>CARDIOVASCULAR:</b><br>Heart sounds: Clear S1 and S2<br>S1, S2, S3, S4, murmur etc.<br>Cardiac rhythm (if applicable):<br>Peripheral Pulses: +3<br>Capillary refill: <3 seconds<br>Neck Vein Distention: Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br>Edema Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br>Location of Edema: | Clear S1 and S2 heart sounds present, without murmurs, gallops or rubs. Peripheral pulses are +3 bilaterally, carotids +2 bilaterally. Capillary refill is less than 3 seconds. No neck vein distention. No edema noted, patient has a wound in lower left extremity with drain and has no abnormal edema.                         |
| <b>RESPIRATORY:</b><br>Accessory muscle use: Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br>Breath Sounds: Location, character                                                                                                                                                                                                                          | Breath sounds anterior and posterior are clear bilaterally without crackles, wheezes, or rhonchi noted. Respirations are regular and unlabored without accessory muscle use. Respiratory pattern is regular 18 breaths per minute.                                                                                                 |
| <b>GASTROINTESTINAL:</b><br>Diet at home: Anything                                                                                                                                                                                                                                                                                                                           | Diet as home is anything the patient would like to eat, and current general diet. Height is 5'3,                                                                                                                                                                                                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <p><b>Current Diet:</b> General<br/> <b>Height:</b> 5'3<br/> <b>Weight:</b> 130 lbs<br/> <b>Auscultation Bowel sounds:</b> normoactive<br/> <b>Last BM:</b> Morning of 3/24/23<br/> <b>Palpation:</b> Pain, Mass etc.: No pain or masses<br/> <b>Inspection:</b><br/>             <b>Distention:</b> none<br/>             <b>Incisions:</b> none<br/>             <b>Scars:</b> none<br/>             <b>Drains:</b> none<br/>             <b>Wounds:</b> none<br/> <b>Ostomy:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Nasogastric:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>             <b>Size:</b><br/> <b>Feeding tubes/PEG tube</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>             <b>Type:</b></p> | <p>weight 130 lbs. Bowel sounds are normal and active in all four quadrants. <b>Last bowel movement 03/24/2023 in the morning.</b> No tenderness noted upon light palpitation in all four quadrants. No distention, incisions, scars, or drains noted. No gastrointestinal wound. No ostomy, no nasogastric or feeding tubes.</p>                                                                         |
| <p><b>GENITOURINARY:</b><br/> <b>Color:</b> yellow<br/> <b>Character:</b> clear without cloudiness<br/> <b>Quantity of urine:</b> unmeasured, 4 occurrences<br/> <b>Pain with urination:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Dialysis:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Inspection of genitals:</b> Not assessed<br/> <b>Catheter:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>             <b>Type:</b><br/>             <b>Size:</b></p>                                                                                                                                                                                                                                                       | <p>Urine is yellow and clear. Patient had 4 urine occurrences Patient stated no pain with urination. No dialysis. Inspection of genitals was not assessed at this time. No urinary catheter.</p>                                                                                                                                                                                                          |
| <p><b>MUSCULOSKELETAL:</b><br/> <b>Neurovascular status:</b> nails smooth and clear<br/> <b>ROM:</b> active<br/> <b>Supportive devices:</b> walker<br/> <b>Strength:</b> equal and active strength<br/> <b>ADL Assistance:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/><br/> <b>Fall Risk:</b> Y <input type="checkbox"/> N <input type="checkbox"/><br/> <b>Fall Score:</b> 89<br/> <b>Activity/Mobility Status:</b><br/> <b>Independent (up ad lib)</b> <input type="checkbox"/><br/> <b>Needs assistance with equipment</b> <input checked="" type="checkbox"/><br/> <b>Needs support to stand and walk</b> <input checked="" type="checkbox"/></p>                                                                                                                                     | <p>Nails are smooth and clear without clubbing or cyanosis. <b>ROM and strength is active and full in all extremities besides the left lower extremity due to drains and wound. The lower left leg can move but patient applies minimal weight. Patient does not need ADL assistance but is a fall risk with a score of 89. Patient is independent with one assist but requires a walker for now.</b></p> |
| <p><b>NEUROLOGICAL:</b><br/> <b>MAEW:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> except LLE</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>The patient moves all extremities well, <b>the left lower leg does not have normal strength but</b></p>                                                                                                                                                                                                                                                                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PERLA: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b><br><b>Strength Equal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no -</b><br><b>Legs <input type="checkbox"/> except LLE Arms <input checked="" type="checkbox"/> Both <input type="checkbox"/></b><br><b>Orientation: x4</b><br><b>Mental Status: normal cognition</b><br><b>Speech: clear</b><br><b>Sensory: intact bilaterally</b><br><b>LOC: alert, awake, and answers questions appropriately</b> | <b>does move well for wound. PERRLA bilaterally. Strength is equal in both arms, with left leg weak strength due to wound and right leg normal strength. Orientated to person, place, situation, and time with normal cognition. Speech is clear, sensory is intact bilaterally. Patient is alert, awake, responding and answering questions appropriately and compliant.</b>                                                                                                                                   |
| <b>PSYCHOSOCIAL/CULTURAL:</b><br><b>Coping method(s): friends</b><br><b>Developmental level: appropriate,</b><br><b>Integrity vs Despair</b><br><b>Religion &amp; what it means to pt.: Christian</b><br><b>Personal/Family Data (Think about home environment, family structure, and available family support):</b>                                                                                                                                                                                           | <b>Patient stated she has several friends she talks to and spends time with for coping. She also watches television and spends time with her cat. Patient can read, write and talk clearly in appropriate manner. Highest level of education is a high school diploma. Eriksons stage of development is integrity vs despair. She has no strict religious values, but she stated she does believe in religion. She does not have children or many family, but has many friends and a boyfriend for support.</b> |

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

| Time | Pulse | B/P    | Resp Rate | Temp          | Oxygen        |
|------|-------|--------|-----------|---------------|---------------|
| 0744 | 92    | 160/70 | 18        | 96.8 temporal | 99% room air  |
| 1108 | 88    | 163/66 | 18        | 97.3 temporal | 100% room air |

**Pain Assessment, 2 sets (2 points)**

| Time | Scale   | Location | Severity | Characteristics               | Interventions       |
|------|---------|----------|----------|-------------------------------|---------------------|
| 0744 | Numeric | N/A      | 0        | N/A                           | N/A                 |
| 1108 | Numeric | Numeric  | 2        | Cramping, aching from walking | Rest and elevation. |

**IV Assessment (2 Points)**

| IV Assessment | Fluid Type/Rate or Saline Lock |
|---------------|--------------------------------|
|---------------|--------------------------------|

|                                                                                                                                                                                                                                                                  |                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Size of IV: 20 gauge</b><br><b>Location of IV: left distal forearm</b><br><b>Date on IV: 03/24/23</b><br><b>Patency of IV: patent</b><br><b>Signs of erythema, drainage, etc.: none</b><br><b>IV dressing assessment: transparent, clean, dry, and intact</b> | Patient has a saline lock. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|

### Intake and Output (2 points)

| Intake (in mL) | Output (in mL)       |
|----------------|----------------------|
| 360 (water) mL | x4 urine occurrences |

### Nursing Care

#### Summary of Care (2 points)

**Overview of care:** At 0744 this student nurse introduced self, completed vitals, and helped patient to restroom and provided a menu to order breakfast. Around 0900, medications were administered and the consent to receive blood was signed. Around 1000, this student completed a head to toe assessment. At 1108, this student nurse completed the last set of vitals.

**Procedures/testing done:** No procedures done. A type and cross blood test were performed, not resulted yet.

**Complaints/Issues:** None

**Vital signs (stable/unstable):** Vitals are stable. Patients glucose is relatively high but normal for patient.

**Tolerating diet, activity, etc.:** Diet is tolerated well. Activity is tolerated well with some discomfort and pain with minimal weight bearing on the left leg, but the patient is motivated. Patient has not had a bowel movement since 03/24 but received a stool softener to help.

**Physician notifications:** None

**Future plans for client:** Patient will need to receive blood and have her hemoglobin levels monitored. She will also continue working with physical therapy to gain strength on left extremity. She is waiting for the lower left leg wounds to heal and to be able to have her drains removed.

### Discharge Planning (2 points)

**Discharge location:** Patient stated she plans on going to stay at her boyfriends for support and help.

**Home health needs (if applicable):** N/A

**Equipment needs (if applicable):** Walker

**Follow up plan:** Follow up with Doctor for assessment of wound and healing.

**Education needs:** How to prevent falls in the house like removing non-slip rugs, removing clutter, adding rails to stairs and grab bars in the bathroom, and adding lights to see at night. Monitor for swelling, redness, drainage, and warmth of wounds on leg.

### Nursing Diagnosis (15 points)

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

| <b>Nursing Diagnosis</b>                                                                                                                                                                                                                    | <b>Rationale</b>                                                                                 | <b>Interventions<br/>(2 per dx)</b> | <b>Outcome Goal<br/>(1 per dx)</b> | <b>Evaluation</b>                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Include full nursing diagnosis with “related to” and “as evidenced by” components</li> <li>• Listed in order by priority – highest priority to lowest priority pertinent to this client</li> </ul> | <ul style="list-style-type: none"> <li>• Explain why the nursing diagnosis was chosen</li> </ul> |                                     |                                    | <ul style="list-style-type: none"> <li>• How did the client/family respond to the nurse’s actions?</li> <li>• Client response, status of goals and outcomes, modifications to plan.</li> </ul> |
| <b>1. Risk for</b>                                                                                                                                                                                                                          | <b>Patient has</b>                                                                               | <b>1. Monitor</b>                   | <b>1. Patient will</b>             | <b>Patient was</b>                                                                                                                                                                             |

|                                                                                                                                  |                                                                                                    |                                                                                                                                                              |                                                                                         |                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| shock related to patient receiving blood as evidence by hemoglobin level of 7.                                                   | hypovolemia and will be receiving blood. Blood transfusions cause and increase risk for reactions. | blood pressure, heart rate and oxygen saturation.<br><br>2. Remain in patients room for first 10 to 15 minutes to observe patient.                           | maintain adequate blood pressure and not experience complications .                     | compliant and signed consent to receive blood and understood risks. Patient had not yet received blood to evaluate response to transfusion.                                         |
| 1. Risk for infection related to new wound as evidence by need for fasciotomy of lower left extremity.                           | Patient at increased risk after surgery and has a closed wound with two drains.                    | 1. Wash hands before and after providing care and wearing gloves when needed like wound dressings.<br><br>2. Monitor temperature every 4 hours and document. | 1. Patient will remain infection free and vital signs will remain within normal limits. | Patient remained infection free with stable vitals. Patient understood the importance of hand hygiene and preventative measures to reduce infection.                                |
| 1. Risk for impaired skin integrity related to decreased mobility as evidence by new surgical incisions with increased bed rest. | Patient has decreased activity due to lower left leg wound causing a risk for skin breakdown.      | 1. Assess the overall condition of the skin, looking for areas of redness, tissue change, warmth or swelling.<br><br>2. Encourage mobility as tolerated.     | 1. Patient will not exhibit skin breakdown.                                             | Patients skin remains intact and patient doesn't experience skin breakdown or other complications. Patient was compliant and understand the importance of skin assessment and care. |

Other References (APA):

Phelps, L. L. (2020). *Sparks & Taylor's Nursing Diagnosis Reference Manual* (11th ed.).  
Wolters Kluwer.

Swearingen, P. L. (2018). *All-in-one Nursing Care Planning Resource: Medical-surgical,  
Pediatric, Maternity, and Psychiatric-mental Health* (P. L. Swearingen & J. Wright,  
Eds.). Elsevier.

**Concept Map (20 Points):**

## Subjective Data

No known allergies  
 Height-5'3  
 Patient has many friends and a boyfriend for a great support system.  
 Weight-130 lbs.  
 RBC-2.88 mCL  
 Patient stated lives at home by self with cat.  
 Hgb-8.3 g/dL  
 Patient stated no alcohol use  
 Hct-25.7%  
 No current tobacco use  
 Glucose-241 mg/dL

## Objective Data

## Nursing Diagnosis/Outcomes

Monitor blood pressure, heart rate and oxygen saturation.

1. Diagnosis- Risk for shock related to patient receiving blood as evidence by hemoglobin level of 7. Outcomes- Patient will maintain adequate blood pressure and not experience complications.  
 2. Diagnosis- Risk for infection related to new wound as evidence by need for fasciotomy of lower left extremity. Patient will remain infection free and vital signs will remain within normal limits.  
 3. Diagnosis- Risk for impaired skin integrity related to decreased mobility as evidence by new surgical incisions with increased bed rest. Patient will not exhibit skin breakdown.

Wash hands before and after providing care and wearing gloves when needed like wound dressings. Monitor temperature every 4 hours and document.

## Nursing Interventions

Assess the overall condition of the skin, looking for areas of redness, tissue change, warmth or swelling. Encourage mobility as tolerated.

## Client Information

Height-5'3 Weight-130 lbs



