N321 Care Plan 2

Lakeview College of Nursing

Tuan Nguyen

Demographics (3 points)

Date of Admission	**Patient Initials**	**Age**	**Gender**
3/5/21	T. R	66	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Retired	Divorced	N/A
Code Status	**Height**	**Weight**	
Full	174 cm (5 ft 7 in)	195.6 lbs (88.9 kg)	

Medical History (5 Points)

Past Medical History: Patient has history of altered tissue perfusion, atherosclerosis in both lower extremities, coronary artery disease, diabetic ulcers in lower extremities, hyperlipidemia, hypertensive cardiovascular disease, ischemic cardiomyopathy, type 2 diabetes mellitus, ventricular tachycardia, gangrene of right feet, peripheral artery disease.

Past Surgical History: Patient had a pacemaker on September 1, 2007; angiogram on December 1st, 2005; tonsillectomy in 1964.

Family History: Patient's mother and father have history of Alzheimer's disease. Patient's father has history of heart attack.

Social History (tobacco/alcohol/drugs): Patient smokes about four cigarettes a day. He states that he drinks wine daily and he denies drug use.

Assistive Devices: Patient wears glasses and he uses a commode, gait belt, wheelchair, and a walker in the hospital. He uses a walker, cane, and oxygen at his nursing home.

Living Situation: Patient lives alone in his bedroom at Hilltop nursing home. He describes his room as clean and tidy.

Education Level: Patient has a high school diploma. He states that he did not go to college.

Admission Assessment

Chief Complaint (2 points): Pain related to gangrene on right foot.

History of present Illness (10 points): Patient is a 66-year-old Caucasian male who was admitted on 3/5/2021 with complaints of right foot pain and swelling related to cellulitis and gangrene. He states that the onset of pain became noticeable on 3/4/2021 but got worse as time progressed. The location of pain is reported to be localized in his right foot. The pain was stated to have been ongoing since the 3rd of March including his time during hospital stay. Patient describes pain as a dull sensation that is always present but is a sharp sensation when the area around the necrotic tissue is touched. He rates the pain a 5 out of 10 on the numeric pain scale during rest and a 9 out of 10 when slight pressure is applied to affected area. Any activity involving application of pressure or weight bearing on his right foot aggravates the pain. Laying down helps reduce pressure and weight off his right foot and relieves pain. Watching TV and not thinking about his right foot also helps distract him from the pain. Patient states that he took 650 mg of acetaminophen orally every four hours back at his nursing home for the pain and he receives Norco pain medication from the nurse at Sarah Bush Lincoln.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Cellulitis

Secondary Diagnosis (if applicable): Necrotizing fasciitis

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

Pathophysiology

Cellulitis is a bacterial skin infection characterized by swelling, localized redness, warmth and pain (Hinkle & Cheever, 2018). It occurs when there are entry points in the natural skin barrier that protects the body from foreign particles, meaning that it can occur anywhere on the surface of skin provided there is a wound, ulcer, or eczema where bacteria can enter. Bacteria

or other pathogens can invade through such entry points into the subcutaneous tissue beneath and release their toxins which attract neutrophils and cytokines to the site of infection and can lead to an inflammatory-like response found in cellulitis (Brown, 2020). Common cellulitis causing bacteria include Staphylococcus aureus and Streptococcus (Hinkle & Cheever, 2018).

Signs and Symptoms

Signs and symptoms of cellulitis resemble those of inflammatory reactions such as warmth, localized erythema, swelling, and pain. Fevers, and symptoms of fevers such as chills, and sweating can also occur during a cellulitis infection. Depending on the severity of swelling that may occur, a pitting “orange peel” appearance may also be apparent (Hinkle & Cheever, 2018). Relating to the client, there were signs and symptoms resembling traditional inflammation such as erythema, swelling, pain, and erythema. Client denied symptoms of fever.

Expected Vital Signs, Laboratory Findings, and Clinical Data

One of the symptoms of cellulitis involves pain. The client rated his pain a 5 out of 10 on rest but a 9 out of 10 upon contact with the gangrenous areas. Depending on the degree of pain, it can cause an increase in vital signs such as blood pressure, respirations, and heart rate; the client’s respirations were at a consistent 18 breaths per minute throughout clinical and while within normal range, it is still on the higher end of the range. Staphylococcus aureus, one of the common causes of cellulitis was detected in a wound culture done on the client on 3/7/2021. A moderate amount of Staphylococcus aureus is suspected to have entered in one of the three wounds that are present on the shins of the lower right extremity of the client. Greenish yellow drainage was present in the wounds. An X-ray of the right foot shows tissue swelling of the right foot. Lab values shows indication of infection as evidenced by an abnormally high neutrophil count of 87.8%, and a high white blood cell count of 14.3 K/mcL.

Diagnostic Testing

Diagnosing cellulitis can be first done with a physical exam. Signs of inflammation would be looked for. Upon successful assessment of physical signs of cellulitis, a blood test can be done as one of three diagnostic tests (Bhargava, 2020). Blood tests will reveal any suspected bacteria such as Staphylococcus aureus or Streptococcus to be revealed as causes for cellulitis. X-rays reveal bone features and details of fluid changes that could reveal tissue swelling and potential infected bone underneath the tissue (Bhargava, 2020). Wound cultures can also be done in order to directly collect samples of tissue or fluid from the affected site in order to test for presence of bacteria. The client underwent an X-ray for his right foot which revealed swelling of the soft tissues around the right foot indicating inflammatory response. A wound culture was also done and detected growth of Staphylococcus aureus and diphtheroid reinforcing the diagnosis of cellulitis.

Treatment

Cellulitis can be treated with oral and intravenous antibiotics. Cellulitis can also cause necrotizing fasciitis which is an infection that results in tissue death resulting in necrotic tissue (Necrotizing Fasciitis, 2021). Necrotizing fasciitis can be treated with antibiotics, but it can spread rapidly at most times and so surgery must be done in order to prevent the bacteria from spreading further to surrounding tissue (Necrotizing fasciitis). In relation to the client, he was administered vancomycin and Zosyn intravenously in order to kill off infectious bacteria in his wound and foot. Client is also expected to go through surgery the following day most likely to get rid of necrotic great toe and little toe.

Pathophysiology References (2) (APA):

Brown BD, Hood Watson KL. Cellulitis. [Updated 2020 Aug 10]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK549770/

Bhargava, Hansa. (2020) Cellulitis. WebMD. Retrieved on March 13, 2021 from https://www.webmd.com/skin-problems-and-treatments/guide/cellulitis

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

Necrotizing Fasciitis (2019, December 31). Center for Disease Control and Prevention. Retrieved on March 13, 2021 from https://www.cdc.gov/groupastrep/diseases-public/necrotizing-fasciitis.html

Laboratory Data (15 points)

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	3.80-5.41x10^6/mcL	3.86	**N/A**	**N/A**
Hgb	11.3-15.2 g/dL	11.0	**N/A**	Patient takes aspirin which can decrease levels of hemoglobin (Pagana, 2018)
Hct	33.2-45.3%	33.6	**N/A**	**N/A**
Platelets	149-393 K/mcL	481	**N/A**	Patient is experiencing infection related to cellulitis and gangrene (Pagana, 2018).
WBC	4.0-11.7 K/mcL	14.3	**N/A**	Patient is experiencing tissue necrosis, gangrene, and an infection which can increase levels (Pagana, 2018).
Neutrophils	45.3-79.0%	87.8	**N/A**	Patient is experiencing an infection related to cellulitis and gangrene

				(Pagana, 2018).
Lymphocytes	11.8-45.9%	5.7	**N/A**	Patient is experiencing an infection related to cellulitis and gangrene (Pagana, 2018).
Monocytes	4.4-12.0%	5.9	**N/A**	**N/A**
Eosinophils	0.0-6.3%	0.1	**N/A**	**N/A**
Bands	0.0-10.0%	**N/A**	**N/A**	**N/A**

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal
Na-	136-145 mmol/L	130	136	Patient takes aspirin at home which is a nonsteroidal anti-inflammatory drug and can decrease sodium levels (Pagana, 2018)
K+	3.5-5.1 mmol/L	5.3	4.6	Release of potassium into bloodstream from cellular lysis and injury due to infection and cellulitis (Pagana, 2018).
Cl-	98-107 mmol/L	100	102	**N/A**
CO2	21-31 mmol/L	30	29	**N/A**
Glucose	74-109 mg/dL	212	221	Patient has history of type 2 diabetes mellitus and is experiencing acute stress from infection (Pagana, 2018).
BUN	7-25 mg/dL	23	25	**N/A**
Creatinine	0.70-1.30 mg/dL	0.93	0.95	**N/A**
Albumin	3.5-5.2 g/dL	3.0	N/A	Patient is experiencing inflammation due to cellulitis (Pagana, 2018).
Calcium	8.6-10.3 mg/ dL	8.2	8.4	Patient takes aspirin at home which can decrease calcium levels and has not eaten all day during hospital stay (Pagana, 2018).
Mag	1.5-2.5 mg/dL	**N/A**	**N/A**	**N/A**

Phosphate	2.4-4.5 units/L	**N/A**	**N/A**	**N/A**
Bilirubin	0.3-1.0 mg/dL	0.3	**N/A**	**N/A**
Alk Phos	34-104 units/L	136	**N/A**	Patient takes allopurinol at home which can increase Alkaline phosphate levels (Pagana, 2018).
AST	13-39 U/L	26	**N/A**	**N/A**
ALT	7-52 U/L	26	**N/A**	**N/A**
Amylase	60-100 U/dL	**N/A**	**N/A**	**N/A**
Lipase	0-160 U/L	**N/A**	**N/A**	**N/A**
Lactic Acid	0.5-1.5 mEq/L venous	**N/A**	**N/A**	**N/A**

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	1-2	**N/A**	**N/A**	**N/A**
PT	10-12 seconds	**N/A**	**N/A**	**N/A**
PTT	30-45 seconds	**N/A**	**N/A**	**N/A**
D-Dimer	Negative, less than 250 mg/mL	**N/A**	**N/A**	**N/A**
BNP	Less than 100 pg/mL	**N/A**	**N/A**	**N/A**
HDL	Less than 60 md/dL	**N/A**	**N/A**	**N/A**
LDL	Less than 100 mg/dL	**N/A**	**N/A**	**N/A**
Cholesterol	Less than 200 mg/dL	**N/A**	**N/A**	**N/A**
Triglycerides	Less than 150 mg/dL	**N/A**	**N/A**	**N/A**

Hgb A1c	Less than 5.7%	6.7	**N/A**	**N/A**
TSH	0.5-5.0	**N/A**	**N/A**	**N/A**

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow, clear	**N/A**	Yellow, clear	**N/A**
pH	5.0 – 8.0	**N/A**	**N/A**	**N/A**
Specific Gravity	1.005 – 1.034	**N/A**	**N/A**	**N/A**
Glucose	Negative	**N/A**	**N/A**	**N/A**
Protein	Negative	**N/A**	**N/A**	**N/A**
Ketones	Negative	**N/A**	**N/A**	**N/A**
WBC	0-0.5	**N/A**	**N/A**	**N/A**
RBC	0 - 3	**N/A**	**N/A**	**N/A**
Leukoesterase	Negative	**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	**N/A**	**N/A**	**N/A**
Blood Culture	Negative	**N/A**	**N/A**	**N/A**
Sputum Culture	Negative	**N/A**	**N/A**	**N/A**
Stool Culture	Negative	**N/A**	**N/A**	**N/A**

Lab Correlations Reference (1) (APA):

Lakeview College of Nursing Diagnostic Lab Value Sheet

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2018). Mosby's diagnostic and laboratory test reference (6th ed.). St. Louis, Mo. Mosby.

Sarah Bush Lincoln Center Hospital System. Medical Values

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Arterial Blood Gas

- Oxygen saturation and arterial blood pH were within normal range. Partial pressure of carbon dioxide was abnormally high at 77.8 mmHg.

Computed Tomography of Angiography Abdomen, Aorta and Runoff with Contrast

- **Aorta**: Diffuse Atherosclerosis of abdominal aorta found. No abdominal aortic aneurysms, stenosis, or dissections found.
- **Right femoral popliteal arteries:** Atherosclerosis plaque found within right common femoral artery resulting in significant stenosis.

Wound Culture

- Moderate staphylococcus aureus and diphtheroid present. Presence of few gram-positive Cocci in pairs and bacilli were also found.

X-Ray Right Foot Complete

- Diffuse soft tissue swelling of right foot present. No fractures or dislocations found.

Diagnostic Test Correlation (5 points):

1) Arterial Blood Gas (ABG) is a blood test that helps take a look at the lung's ability to provide oxygen and remove carbon dioxide from the body, and how well the kidneys are reabsorbing or excreting out bicarbonate ions in order to maintain normal body pH. Based off the results, it can provide an insight of the metabolic state and ventilation effectiveness of the body (Hinkle & Cheever, 2018). An ABG was done on the client after visible decline in consciousness was observed at 1530 hours. Tests came back with a partial pressure of carbon dioxide level of 77.8 mmHg indicating ineffective excretion of CO2 from body.
2) A computed tomography angiography with contrast utilizes components from two types of diagnostic tests to visualize and detect changes and potential issues with tissues and arterial vessels. Contrast is used to help highlight the desired vessels to observe (Hinkle & Cheever, 2018). A CT angiography with contrast was done on the client's abdomen and aorta and determined that there was presence of atherosclerosis in the abdominal aorta and in right common femoral artery. No stenosis was found in the abdominal aorta but was present in the right femoral artery due to the atherosclerosis. No aneurysms or dissection detected in either vessel. Atherosclerosis may be due to client's history of peripheral artery disease, smoking, and diabetes mellitus and could pose a risk for vessel occlusions and tissue death.
3) Wound Cultures are tests done to detect potential germs that could be living on or in a certain organ. Usually a sample of tissue, skin, or fluid is collected and placed in a substance that allows for any potential germs to grow. Visible growth indicates a positive presence of the germ (Healthwise staff, 2020). A wound culture was done on the client on 3/7/2021 which revealed moderate staphylococcus aureus, and diphtheroid growth in his

right foot. A few positive cocci pairs, and bacilli were also detected. Growth of staphylococcus aureus may indicate infection related to cellulitis, gangrene, and necrotic fasciitis (Holm, 2018).

4) X-Rays not only look at bones to see the density, texture, erosion, and overall changes, but they can also look at joints individually. Joint x-rays can show fluid accumulation, irregularities, narrowing, or spur formations in the joint structure (Hinkle & Cheever, 2018). An X-ray was done on the client to determine the damage on the right foot. Soft tissue swelling present from the shins to the foot which could hinder ability to ambulate. Atherosclerotic changes within the vessels of the foot also were noted to have increased possibly due to peripheral artery disease and exacerbated by client's history of type 2 diabetes mellitus.

Diagnostic Test Reference (1) (APA):

Healthwise Staff. (2020). Skin and Wound Cultures. Michigan Medicine University of Michigan. Retrieved on March 13, 2021 from https://www.uofmhealth.org/health-library/hw5656

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

Holm, Gretchen. (2018). Necrotizing Fasciitis (Soft Tissue Inflammation). Healthline. Retrieved on March 12, 2021 from https://www.healthline.com/health/necrotizing-soft-tissue-infection

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

Home Medications (5 required)

Brand/	**Acetaminop**	**Furosemide**	**Metformin**	**Spironolact**	**Lisinopril**

Generic	**hen TYLENOL**	**LASIX**	**GLUCOPHAGE**	**one ALDACTONE**	**PRINIVIL**
Dose	650 mg	80 mg	100 mg	25 mg	10 mg
Frequency	Q4H	Daily	BID w/meal	Daily	Daily
Route	Oral PRN	Oral	Oral	Oral	Oral
Classification	Antipyretic, nonopioid analgesic (Jones, 2020)	Antihypertensive, diuretic (Jones, 2020)	Antidiabetic (Jones, 2020)	Diuretic (Jones, 2020)	Antihypertensive (Jones, 2020)
Mechanism of Action	Reduces pain sensation by inhibiting the enzyme cyclooxygenase, blocking prostaglandin production, and by hindering pain impulse generation in the peripheral nervous system (Jones, 2020)	Increases urine output by preventing reabsorption of sodium and water in the loop of Henle. (Jones, 2020)	Promotes storage of excess glucose as glycogen in the liver, which reduces glucose production (Jones, 2020)	Attaches to distal convoluted wall receptors and competes with aldosterone to prevent reabsorption and excretion through distal convoluted tubules (Jones, 2020)	Stops conversion of angiotensin 1 to angiotensin 2 which reduces vasoconstriction (Jones, 2020)
Reason Client Taking	To relieve mild to moderate pain; reduce fever	To help client void	Reduce blood glucose level in type 2 diabetes mellitus	Help client void	To reduce hypertensive symptoms related to cardiovascular disease
Contraindications (2)	Hypersensitivity to acetaminophen; experiencing severe	Having hypersensitivity to furosemide. Having anuria	Hypersensitivity to metformin or its components;	Acute renal insufficiency; hypersensitivity to	Hypersensitivity to lisinopril and its components;

	hepatic impairment (Jones, 2020)	(Jones, 2020)	metabolic acidosis (Jones, 2020)	spironolactone or its components (Jones, 2020)	history of angioedema related to previous treatment with an ACE inhibitor (Jones, 2020)
Side Effects/Adverse Reactions (2)	Anxiety; hypertension (Jones, 2020)	Dizziness, Arrhythmias (Jones, 2020)	Hypoglycemia; thrombocytopenia (Jones, 2020)	Hypotension; Encephalopathy (Jones, 2020)	Arrythmias; hypotension (Jones, 2020)
Nursing Considerations (2)	Administer cautiously in patients with hepatic impairment or alcoholism; Monitor patient's renal function on long term therapy of acetaminophen (Jones, 2020)	Obtain patient's weight before and periodically during furosemide therapy to monitor fluid loss; know that furosemide may worsen left ventricular hypertrophy (Jones, 2020)	Give metformin tablets with food, which decreases and slightly delays absorption, thus reducing risk of GI reactions; monitor patient closely for signs and symptoms of lactic acidosis such as abdominal pain, increased somnolence, malaise, respiratory distress (Jones, 2020)	Assess blood pressure and presence of edema to determine effectiveness; monitor clients with hepatic impairment especially if they have ascites and cirrhosis since spironolactone can cause sudden alterations in fluid and electrolyte balance (Jones, 2020)	Use cautiously in patients with fluid volume deficit, heart failure, impaired renal function, or sodium depletion; Use cautiously in patients with severe aortic stenosis or hypertrophic cardiomyopathy because symptomatic hypotension may occur (Jones, 2020)

Hospital Medications (5 required)

Brand/ Generic	**Enoxaparin LOVENOX**	**Aspirin ZORPRIN**	**Carvedilol COREG**	**Amiodarone CORDARONE**	**Atorvastatin LIPITOR**
Dose	40 mg	81 mg	6.25 mg	200 mg	80 mg
Frequency	Daily	Daily	BID	Daily	HS
Route	SubQ	Oral	Oral	Oral	Oral
Classification	Anticoagulant (Jones, 2020)	NSAID (nonopioid analgesic, antiplatelet) (Jones, 2020)	Antihypertensive; heart failure treatment adjunct (Jones, 2020)	Class III antiarrhythmic (Jones, 2020)	Antihyperlipidemic (Jones, 2020)
Mechanism of Action	Prevents clotting factors by binding with antithrombin III. (Jones, 2020)	Prevents inflammation symptoms by blocking cyclooxygenase activity and prostaglandin synthesis (Jones, 2020)	Reduces cardiac output and controls tachycardia. Causes vasodilation and reduces peripheral vascular resistance. (Jones, 2020)	Acts on cell membranes, prolonging repolarization and refractory period and raising ventricular fibrillation threshold (Jones, 2020)	Stops HMG-CoA reductase and cholesterol synthesis in the liver and increases number of LDL receptors on liver cells to enhance uptake and breakdown (Jones, 2020)

Reason Client Taking	Used with aspirin to control chest pain from ventricular tachycardia	To reduce pain	To reduce hypertension	To control ventricular tachycardia	To control hyperlipidemia
Contraindications (2)	Hypersensitivity to benzyl alcohol; active major bleeding. (Jones, 2020)	Active bleeding or coagulation disorders; hypersensitivity to aspirin. (Jones, 2020)	Asthma or other related bronchospastic conditions; severe bradycardia. (Jones, 2020)	Bradycardia that causes syncope; cardiogenic shock (Jones, 2020)	Active hepatic disease; hypersensitivity to atorvastatin or its components (Jones, 2020)
Side Effects/Adverse Reactions (2)	Dyspnea, Nausea (Jones, 2020)	Confusion, Ecchymosis (Jones, 2020)	Hyperglycemia; dyspnea (Jones, 2020)	Acute respiratory distress syndrome; angioedema (Jones, 2020)	Arrythmias; hyperglycemia (Jones, 2020)
Nursing Considerations (2)	Use with caution in those with history of heparin induced thrombocytopenia (HIT); do not give to clients with prosthetic heart valves (Jones, 2020)	Do not give to children or adolescents with chickenpox or flu symptoms due to risk of Reye's syndrome; advise clients to take with or after meals since taking aspirin on an empty stomach can cause an upset (Jones, 2020)	Use cautiously in clients with peripheral vascular disease because it can aggravate symptoms of arterial insufficiency; monitor blood glucose level as ordered during administration since it can alter blood glucose levels (Jones, 2020)	Monitor serum amiodarone level, which normally ranges from 1.0 to 2.5 mcg/mL; monitor vital signs and oxygen level often during and after amiodarone administration (Jones, 2020)	Liver function tests may be ordered before and after administration as clinically necessary; use cautiously in clients who consume substantial quantities of alcohol or have a history of liver disease (Jones, 2020)

Medications Reference (1) (APA):

Jones, D. W. (2020). *Nurse's drug handbook*. (A. Barlett, Ed.) (19th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Client is lethargic but is oriented to time, place, situation, and person (x4). He appeared to be sleeping throughout assessment but is responsive to questions. He is visibly distressed when his right foot is moved or touched. Client's hair and beard appeared to be appropriately groomed and clean.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	Client's upper extremities exhibited small, round, red bruises and lesions in various sizes, approximately 2 mm to 4 mm, cover from the antecubital to the wrists bilaterally. The lower extremities both exhibit erythema from the shins down to the ankle due to cellulitis. The client's right small toe, and great toe are necrotic and appear to be black; an odor was present upon assessment. The skin around the mentioned toes are flaky and erythemic upon assessment. Three small open wounds exhibited drainage on the right lower extremity on the side of the shins; drainage was greenish yellow. There is dressing and bandages wrapped from client's right shin to his toes. Dressing and bandages changed at 1515 hours. Skin was pink, dry, warm, and intact everywhere else on the body. Skin turgor returned to original position in less than three seconds and tenting was absent. Client has Braden score of 14 and is a moderate risk for skin breakdown. He remains in the same position throughout clinical due to his right foot

	pain and lethargy.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Client's head appears to be normocephalic and midline with the neck. No bruises or lesions present on the head, nose, or ears. Nose and ears are intact and symmetrical with no drainage. Nose was clear with no deviated septum. Eyes are symmetrical and exhibited PERRLA, but eye movement was slow upon assessment of six cardinal fields. Teeth appeared to be intact, but lips appeared to be dry. Client states that his lips and mouth were dry. .
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1 and S2 heard. No S3 or S4, murmurs heard upon auscultation. Client had a regular heartbeat. Peripheral pulses were +2 in radial bilaterally, +2 at carotids bilaterally. Unable to assess lower extremities due to pain and infection. Capillary refills were less than three seconds. No edema upon assessment.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Breath sounds are clear, and no abnormal sounds were heard upon assessment. Client's respiratory rate was 18 breaths per minute. Inhalation and exhalation were shallow, but even and symmetrical. No deformity of chest or accessory muscle used. Denies coughing. Client has partial pressure of carbon dioxide of 77.8 mmHg at 1600 hours. Was given a BiPAP at 1604 hours.
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:**	Client is on a diabetic diet in the hospital and states that he is on a diabetic diet at his nursing home. Client weighs 88.9 kg (195.6 lbs) Client stands at 5'7" (174 cm) Client's bowel sounds were active with about 20 bowel sounds per minute. Client states that his last bowel movement was on 3/5/2021 shortly after admission. Denied urge to go during clinical. Abdomen was rounded and slightly hard possibly due to urine retention; client expressed relief after

Ostomy: Y ☐ N ☒ **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	straight catheter insertion at 1230 hours. No masses, pain, scars, incisions, or drainage upon assessment of abdomen. No ostomy, NG, or feeding tube present.
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Straight catheter was inserted at 1230 hours. 600 mL of urine was collected. Urine was yellow and clear. Client denied burning sensation during voiding. Abdomen was rounded and hard upon assessment before catheter insertion. Client stated that he felt better after voiding. No lesions, bumps, warts, drainage seen upon inspection of genitals. No dialysis in place upon assessment.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☒**	Neurovascular status is partially intact; client cannot feel gentle pressure applied to lower left extremity but can feel pressure applied to other extremities. Range of motion is full in upper extremities but limited in lower extremities; client could not move lower extremities on command and needed assistance. Client uses a walker, cane, gait belt, commode, and portable urinal, in the hospital. He also wears glasses Strength in upper extremities was inadequate and could not move against applied pressure (3/5). Lower extremities reacted to gentle palpation but could not move on command and required assistance (1/5). Frequent muscle twitches were observed; muscle twitches were observed in lower extremities and upper extremities. Client denies shivering or feeling cold. Client requires assistance with feeding as evidenced by “I can’t feed myself”. He has a fall risk score of 55 and is a high fall

	risk. He is currently bedbound and requires a two person assist for standing, ambulating, and commode use.
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Client has difficulties moving all extremities evenly; strength is unequal in his upper extremities with his left being stronger than his right. His lower extremities lack range of motion, strength, and cannot move evenly. Client was initially alert but became lethargic after 1530 hours and had trouble keeping eyes open. Client was still oriented to time, people, place, and situation (x4). Mental status is appropriate for age; he can respond to questions well and has adequate comprehension. Speech is slightly slurred and quiet. Sensory is intact in upper extremities but not fully in lower extremities; he cannot feel applied pressure in left leg.
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):**	Client lives in a room by himself at Hilltop nursing home. He states that he often keeps to himself when he's around the other residents at the nursing home. Client is divorced, but his children visit him from time to time. States that his room is clean and tidy. Client is not religious and says that he never believed in a god. He watches TV and speaks to his family and friends to cope with pain. His developmental level is appropriate. Does not mention or demonstrate sign or history of depression.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1157	75 bpm	134/79 mmHg	18 rpm	36.5 C	93%
0809	77 bpm	144/62 mmHg	18 rpm	36.4 C	92%

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1225	Numeric Pain Scale	Right foot	5/10	Dull	Administer Norco for pain as needed.
1545	Numeric Pain Scale	Right foot	5/10	Dull	Administer Norco for pain as needed.

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:**	Client has 18 gauge IV in his right antecubital that was inserted on 3/5/21. IV is not saline locked; vancomycin and Zosyn are being administered. IV site and dressing were intact, and clear; no signs of erythema, swelling, or drainage upon assessment. IV is patent.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Vancomycin – 50 mL Sodium Chloride – 191.6 mL **Total = 241.6 mL**	1600 mL – Void **Total = 1600 mL**

Nursing Care

Summary of Care (2 points)

Overview of care: Client care consisted of administering pain medication to control pain levels, replace old antibiotics, administering insulin, inserting straight catheter to help void, assessing and replacing dressing at the right foot, and providing comfort care. Vancomycin was

replaced at 1145 hours. 600 mL of urine was collected from a straight catheter at 1230 hours and charted. Insulin was administered at around 1400 hours, and dressing was changed at client's right foot at 1500 hours.

Procedures/testing done: Straight catheter insertion was performed at 1230 hours to aid client in voiding. Urine was collected and charted. Client had blood drawn for arterial blood gas evaluation at 1500 hours due to decreasing level of consciousness. An arterial blood gas test was done at 1545 hours due to declining level of consciousness.

Complaints/Issues: Client complained about pain in his right foot. Reported that his pain was a 5 out of 10 on numeric pain scale and was a dull sensation. He stated that he felt tired and had difficulties keeping his eyes opened. Client also complained that his lips and mouth were dry. Encouraged the client to drink more fluids.

Vital signs (stable/unstable): Vital signs stabilized as clinical progressed; client's blood pressure was 144/62 at 0809 hours and stabilized to 134/79 at 1157 hours. Heart rate, respirations, temperature, and oxygen remained unchanged.

Tolerating diet, activity, etc.: Client is currently on a diabetic diet, but has not been able to eat anything during the entire clinical. Client did drink water. He abstains from moving his legs as it hurts his right foot. He remained in his bed in one position the entire clinical.

Physician notifications: Client's provider informed the nurse that the client will have a surgery the following morning. Client should be on NPO status at midnight.

Future plans for patient: Client will go through surgery the following morning.

Discharge Planning (2 points)

Discharge location: No discharge location is determined at this time.

Home health needs (if applicable): Client must have his right foot checked frequently to monitor his cellulitis.

Equipment needs (if applicable): Client is to be provided with a cane or walker to assist with ambulation, and oxygen with a nasal cannula.

Follow up plan: No follow up plan at this time.

Education needs: Client is to be educated on how to use a nasal cannula and why it is important for his condition; he frequently takes off his cannula when he should not.

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. **Risk for falls related to high fall risk as evidenced by fall risk score of 55 and low strength score in lower extremities.**	Client has numerous factors that effect ambulation; his right foot is swollen and infected with gangrene, he experiences muscle twitches that could hinder ambulation, he is lethargic, and he lacks adequate strength and range of motion in	1. Assess level of strength in client's lower and upper extremities. 2. Provide assistance with ambulation when needed.	1. **Goal met**: Client's strength was determined to be (3/5) for upper extremities, and (1/5) for lower extremities. 2. **Goal not met**: Client did not get up to ambulate. Expressed no interest in getting up.

	lower extremities which affect ambulation. A fall score of 55 was given to the client putting him at a high fall risk.		
2. Risk for infections related to cellulitis as evidenced by gangrene and positive wound lab results.	Client has cellulitis in both lower extremities and gangrene on his right foot; odor was present at necrotic tissue. Client also has three fresh wounds near shins of his right lower extremity which exhibit drainage. Wound culture showed positive detection of staphylococcus aureus, and diphtheroid.	1. Monitor vital signs and make sure that they are stabilized. 2. Perform hand hygiene and proper aseptic and surgical technique for procedures that require it before interacting with client.	1. **Goal met**: vital signs monitored to be stabilized. No abnormal increase in vitals during clinical. 2. **Goal met**: Hand hygiene was done before every interaction with client. Gloves were donned during physical assessment and sterile technique was done during straight catheter insertion.
3. At risk for pressure sores related to bedbound status as evidenced by Braden score and client staying in the same position throughout clinical.	Client is a bedbound client who has inadequate strength and limited range of motion in lower extremities and cannot turn on his own. He also has cellulitis on both lower extremities and gangrene on his right foot which is stated to be painful and avoids moving due to pain. Client also has history of type 2 diabetes	1. Place a pad or pillow underneath bony prominences such as the heel to prevent further pressure sores. 2. Encourage client to change positions every two hours.	1. **Goal partially met**: Client expressed relief after pillow was placed under left foot. Did not place pillow underneath right foot due to client's request not to. 2. **Goal met**: Encouraged client to change position every two hours. Stated that he will try.

	mellitus and peripheral artery disease that could impair healing for sores. It would be crucial to prevent further pressure injuries.		

Other References (APA):

Swearingen, P. L., & Wright, J. D. (2019). All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health. Elsevier.

Concept Map (20 Points):

Subjective Data

Client rated his pain a 5 out of 10 on pain scale during rest.
Denied the desire to go ambulate or get up.
States that he needs help with feeding.
States that he wants to stay still and doesn't want to move his lower extremities.
Nurse says that client often takes off his nasal cannula at night when he shouldn't.

Nursing Diagnosis/Outcomes

Risk for falls related to high fall risk as evidenced by fall risk score of 55 and low strength score in lower extremities.
Outcome: Client will let the student nurse know when he needs assistance getting up and ambulating at least once during clinical.
Risk for infections related to cellulitis as evidenced by gangrene and positive wound lab results.
Outcome: Client's vitals will stabilize to normal range during clinical.
At risk for pressure sores related to bedbound status as evidenced by Braden score and client staying in the same position throughout clinical.
Outcome: Client will change positions in bed with help at least once during clinical.

Objective Data

Wound culture revealed positive staphylococcus aureus, and diphtheroid.
Gangrene exhibited odor.
X-ray showed tissue swelling in right foot.
Client's strength was determined to be (3/5) for upper extremities and (1/5) for lower extremities.
Client was observed to become lethargic after 1530 hours.
ABG evaluation revealed abnormal PaCO2 of 77.8 mmHg.

Patient Information

Client is a 66-year old Caucasian male with a history of type 2 diabetes mellitus, peripheral artery disease, atherosclerosis in both lower extremities, and coronary artery disease. Client was admitted for cellulitis in both lower extremities and main complaint was pain due to the gangrene on his right foot. He rates it a 5 out of 10 on a pain scale. He has three wounds on his right lower extremity which exhibits drainage and odor. Client has history of smoking and states that he smokes four cigarettes a day.

Nursing Interventions

Assess level of strength in client's lower and upper extremities.
Provide assistance with ambulation when needed.
Monitor vital signs and make sure that they are stabilized.
Perform hand hygiene and proper aseptic and surgical technique for procedures that require it before interacting with client.
Place a pad or pillow underneath bony prominences such as the heel to prevent further pressure sores.
Encourage client to change positions every two hours.