N431 Care Plan #1

Lakeview College of Nursing

Tresne McCarty

Demographics (3 points)

Date of Admission 10/01/2021	Patient Initials MP	Age 52	Gender Female
Race/Ethnicity Caucasian	Occupation Disabled	Marital Status Divorced	Allergies Demerol HCl meperidine
Code Status Full	Height 157.48 cm 5ft 2 inches	Weight 92.5 kg 203.5 lb	

Medical History (5 Points)

Past Medical History: Cellulitis, Diabetes Mellitus Type 2, Obstructive Sleep Apnea, Heart Failure, Coronary Artery Disease, Asthma, Cardiomyopathy, Fibromyalgia, and Degenerative Disc Disease.

Past Surgical History: Cesarean section (c-section) 25 years ago, Cholecystectomy, amputation of the 2nd and 3rd metatarsals, bilateral cataract surgery, double bypass CABG, right patellar arthroplasty, and an implantation of a defibrillator device.

Family History: Mom (alive) → no known health problems, father (deceased) → diabetes mellitus type 2 and a myocardial infarction (MI), brother (alive) → depression and anxiety, daughter (alive) → no known health problems, and grandfather (deceased) → colon cancer.

Social History (tobacco/alcohol/drugs): Pt denied use of tobacco products or alcohol. She uses recreational marijuana approximately once a month on occasion.

Assistive Devices: Pt uses a boot on her left foot for walking, non-prescription reading glasses, a wheelchair, and a gait belt.

Living Situation: Pt lives alone in an apartment located in Charleston, IL.

Education Level: Pt's education level is a bachelor's degree.

Admission Assessment

Chief Complaint (2 points): Pt stated, "I have a wound on the bottom that I found. My mom took me to the walk-in clinic, and they sent me here."

History of present Illness (10 points): a 52-year-old Caucasian female with a history of diabetes mellitus type 2, cellulitis, cardiomyopathy, fibromyalgia, heart failure (HF), double bypass cardiac surgery, an implantable cardiac converter, peripheral neuropathy, and coronary artery disease (CAD) presents to the emergency department (ED) for a right foot ulcer, Pt states her mom noticed the ulcer and made her come to the walk-in clinic. The clinic advised pt to be evaluated at the ED. She denied any pain and states she did not notice it. She also stated she did extensive walking on a trip to Chicago the weekend before.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Cellulitis

Secondary Diagnosis (if applicable):Right foot ulceration, diabetes mellitus type 2, peripheral neuropathy, CAD, fibromyalgia, and asthma.

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

As our main protective barrier, our skin also has a normal flora which consists of different microbial bacteria, including Staphylococcus aureus and Streptococcus pyogenes (Brown & Hood-Watson, 2020). When the skin breaks, it poses the risk of the normal flora entering as an opportunistic infection. The bacteria cause a superficial infection within the dermis and subcutaneous tissue leading to cellulitis (Brown & Hood-Watson, 2020). Opportunities for skin breakdown occur from injuries, insect bites, animal bites, surgery incisions, cuts, scrapes, or burns (Brown & Hood-Watson, 2020). Other opportunities for risk of skin

integrity come from comorbidities such as diabetes mellitus, coronary artery disease, peripheral artery disease, or neuropathy. This patient had a history of diabetes mellitus type 2, coronary artery disease, and peripheral neuropathy, making her susceptible to skin breakdown.

When cellulitis is present, manifestations include warmth, erythema, edema, and skin tenderness (Brown & Hood-Watson, 2020). This immune response is due to cytokines and neutrophils populating the area to produce antimicrobial peptides, which presents postulated causing the skin to appear in such a manner (Brown & Hood-Watson, 2020). This patient had significant edema to the right foot with an ulcer located on the bottom of her foot, including the great toe. When assessing a patient with cellulitis, it is essential to gather information concerning events before noticing the problem (Brown & Hood-Watson, 2020). When assessing this patient, she stated she visited Chicago, IL, and walked extensively with her family. Her mother noticed the open wound when she got home and advised her to go to the walk-in clinic. Upon evaluation, the walk-in clinic directed her to the emergency department for further treatment. A thorough past medical history will reveal critical chronic conditions such as diabetes mellitus, coronary artery disease, and peripheral neuropathy. It is important to note past medical history because it will lead clinical personnel to the root cause. For this patient, it was a domino effect. Her blood glucose and lipid levels were uncontrolled, leading to diabetes mellitus type 2 and coronary artery disease. Uncontrolled blood glucose levels cause vascular damage, especially in the peripheral nerves, arteries, and veins. When blood contains high levels of glucose and fat, oxygen cannot perfuse properly in the extremities. Increased glucose in the blood causes the cells to become hypoxic. As a result, there is reduced circulation and nerve response in

the extremities. The patient's constant walking increased the incidence of impaired skin integrity, causing the normal flora of the skin to enter the body.

Two of the four criteria must be met when diagnosing cellulitis: warmth, edema, tenderness, or erythema (Brown & Hood-Watson, 2020). The criteria for this patient were met via inspection. Due to the presence of cellulitis, an ultrasound is needed to determine if the presenting characteristic were due to a deep vein thrombosis (DVT). Using ultrasound is done because cellulitis and DVT's often share the same signs and symptoms (Brown & Hood-Watson, 2020). Treatment of cellulitis includes broad-spectrum antibiotics (Brown & Hood-Watson, 2020). The patient was treated with vancomycin and piperacillin-tazobactam until discharge.

Pathophysiology References (2) (APA):

Brown, B.D. & K. L., Hood-Watson (2020). Cellulitis. *StatPearls.*

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 (10/01/21)	Today's Value (10/04/21)	Reason for Abnormal Value
RBC	3.80 – 5.41	3.44	3.41	Decreased levels indicate chronic illness or a dietary deficiency (Pagana et al., 2019).
Hgb	11.3 – 15.2	10.0	9.8	Decreased levels indicate possible anemia, a nutritional deficiency, or kidney disease (Pagana et al., 2019).
Hct	33.2 – 45.3	30	29.5	Decreased levels indicate a dietary deficiency or possible anemia (Pagana et al., 2019).
Platelets	149 – 393	434	450	Increased levels indicate an iron deficiency or rheumatoid arthritis (Pagana et al., 2019).
WBC	4.0 – 11.7	10.5	7.9	N/A

Neutrophils	**45.3 – 79.0**	**64.6**	**60.4**	**N/A**
Lymphocytes	**11.8 – 45.9**	**24.9**	**25.2**	**N/A**
Monocytes	**4.4 – 12.0**	**7.5**	**9.0**	**N/A**
Eosinophils	**0 – 6.3**	**2.2**	**4.3**	**N/A**
Bands	**3 – 5**	**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**	**134**	**140**	**Decreased levels indicate deficient sodium intake, congestive heart failure (CHF), or diarrhea (Pagana et al., 2019).**
K+	**3.5 – 5.1**	**3.6**	**3.7**	**N/A**
Cl-	**98 – 107**	**96**	**103**	**Decreased levels indicate congestive heart failure (Pagana et al., 2019).**
CO2	**21 – 31**	**29**	**29**	
Glucose	**74 – 109**	**189**	**179**	**Increased levels indicate diabetes mellitus, hyperglycemia, or an acute stress response (Pagana et al., 2019).**
BUN	**7 – 25**	**34**	**23**	**Increased levels indicate CHF or dehydration (Pagana et al., 2019).**
Creatinine	**0.6 – 1.2**	**1.19**	**0.90**	**N/A**
Albumin	**3.5 – 5.2**	**N/A**	**3.9**	**N/A**
Calcium	**8.6 – 10.3**	**N/A**	**9.4**	**N/A**
Mag	**1.6 – 2.4**	**N/A**	**1.9**	**N/A**
Phosphate	**2.5 – 4.5**	**N/A**	**N/A**	**N/A**
Bilirubin	**0.3 – 1.0**	**N/A**	**0.5**	**N/A**

Alk Phos	**34 – 104**	**N/A**	**83**	**N/A**
AST	**13 – 39**	**N/A**	**12**	**Decreased levels can indicate a B6 vitamin deficiency secondary to a poor nutritional intake (Pagana et al., 2019).**
ALT	**7 – 52**	**N/A**	**9**	**N/A**
Amylase	**30 – 220**	**N/A**	**N/A**	**N/A**
Lipase	**0 – 160**	**N/A**	**N/A**	**N/A**
Lactic Acid	**5 – 20**	**N/A**	**N/A**	**N/A**
Troponin	**< 0.1 ng/mL**	**N/A**	**N/A**	**N/A**
CK-MB	**3 - 5**	**N/A**	**N/A**	**N/A**
Total CK	**20 – 200**	**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	**1.5 – 3.0**	**N/A**	**N/A**	**N/A**
PT	**11 – 13 seconds**	**N/A**	**N/A**	**N/A**
PTT	**25 – 36 seconds**	**N/A**	**N/A**	**N/A**
D-Dimer	**< 0.05**	**N/A**	**N/A**	**N/A**
BNP	**< 100 pg/mL**	**N/A**	**N/A**	**N/A**
HDL	**> 55 mg/dL**	**N/A**	**N/A**	**N/A**
LDL	**< 130 mg/dL**	**N/A**	**N/A**	**N/A**
Cholesterol	**<200 mg/dL**	**N/A**	**N/A**	**N/A**
Triglycerides	**33 – 135**	**N/A**	**N/A**	**N/A**

Hgb A1c	**≤ 6.4**	**8.3**	**N/A**	**Elevated levels indicate hyperglycemia or diabetes mellitus (Pagana et al., 2019).**
TSH	**2 – 10**	**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**	**N/A**	**N/A**
pH	**4.8 – 6.0**	**N/A**	**N/A**	**N/A**
Specific Gravity	**1.005 – 1.03**	**N/A**	**N/A**	**N/A**
Glucose	**Negative**	**N/A**	**N/A**	**N/A**
Protein	**0 – 8 mg/dL**	**N/A**	**N/A**	**N/A**
Ketones	**Negative**	**N/A**	**N/A**	**N/A**
WBC	**0 – 4**	**N/A**	**N/A**	**N/A**
RBC	**≤ 2**	**N/A**	**N/A**	**N/A**
Leukoesterase	**Negative**	**N/A**	**N/A**	**N/A**

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	**7.31 – 7.41**	**N/A**	**N/A**	**N/A**
PaO2	**40 – 50**	**N/A**	**N/A**	**N/A**
PaCO2	**40 – 50**	**N/A**	**N/A**	**N/A**

HCO3	**22 – 26**	**N/A**	**N/A**	**N/A**
SaO2	**60 -75**	**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 No growth**	**N/A**	**N/A**	**N/A**
Blood Culture (10/2/21)	**Negative No growth**	**In progress**	**In progress**	**Test was done 10/2/21. There was no growth after 1 day. Test is still in progress.**
Sputum Culture	**Negative**	**N/A**	**N/A**	**N/A**
Stool Culture	**Negative No growth**	**N/A**	**N/A**	**N/A**

Lab Correlations Reference (1) (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

X-ray of right foot with 3 or greater views indicated a diabetic foot ulcer, newly diagnosed compared to the last x-ray done on 07/27/2018. Atherosclerotic changes with diffuse soft tissue swelling with focal ulceration medial to first metatarsophalangeal joint.

Us venous doppler lower right extremity showed no evidence of a deep vein thrombosis (DVT). Normal flow & compressibility in the common femoral vein was noted.

A wound culture of the ulcer located on the right foot was done on 10/2/21 and is still in progress. Few staphylococci aureus was shown growing after one day. Another wound culture was done 10/4/21 and shows gram positive cocci in pairs. No other results were located.

Diagnostic Test Correlation (5 points):

An x-ray is usually ordered to determine any deformities, soft tissue gas, or bony destructions (Kavitha et al., 2018). For this pt an x-ray was ordered to determine the level of damage the ulcer caused. If there was bone damage, the x-ray would indicate so. Atherosclerotic changes with soft tissue swelling means the vascular system in the right foot has further damage since the last x-ray done on 07/27/28.

Ultrasound doppler is used to determine the blood flow velocity in an extremity (Suresh & Sukesh, 2020). In diabetic feet, the ultrasound will determine the level of blood flow to the feet including any indications for a DVT. No DVT was found in the lower extremity and normal blood flow from the femoral vein remained intact.

A wound culture will determine if there's any pathogen growth, the type of pathogen, and what possible antibiotics should be used. Since the pt had an open wound to her foot, it is best practice to culture the wound to determine the presence of infection.

Diagnostic Test Reference (1) (APA):

Kavitha, K.V., Tathare, S., Kumbhar, V., Bidaye, A., Panse, R., Maheshwari, S., Gavankar, A., & Unnikrishnan, A.G. (2018) Role of radiology in the management of diabetic foot infections: A report of three cases. *Clinical Research on Foot and Ankle*, *6*(267). DOI: 10.4172/2329-910X.1000267

Pagana K., Pagana, T., Pagana T. (2021). *Mosby's diagnostic & laboratory test reference* (15TH ed.). ELSEVIER.

Suresh, K.S. & Sukesh, K. A. (2020). Assessment of diabetic foot through the developmental stages of lower limb abnormalities using ultrasound. *IntechOpen*. DOI: 10.5772/intechopen.92431S

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

Home Medications (5 required)

Brand/Generic	**Atorvastatin Lipitor**	**Gabapentin Neurontin**	**Insulin lispro HumaLOG**	**Clopidogrel Plavix**	**Tramadol**
Dose	**80 mg**	**600 mg**	**20 units**	**75 mg**	**50 mg**
Frequency	**Every night**	**TID**	**TID AC**	**Every night**	**BID PRN**
Route	**Oral**	**Oral**	**Subcutaneous**	**Oral**	**Oral**
Classification	**Antilipemics HMG-CoA reductase inhibitor**	**Anticonvulsant GABA structural analogue**	**Antidiabetics Insulin**	**Antiplatelet Platelet aggregation inhibitor**	**Analgesic Synthetic centrally active analgesic Controlled substance schedule IV**
Mechanism of Action	**Inhibits HMG-CoA reduftase which an early step in cholesterol biosynthesis**	**Mechanism of action is unknown. It is structurally related to GAGA but does not**	**Regulates glucose metabolism by binding to insulin receptor to facilitate**	**Inhibits the binding to platelet receptors to reduce platelet aggregation and reverses the platelet ADP**	**Unknown. Textbook suggests it binds to the opioid receptors and inhibit the reuptake of**

	(Jones & Bartlett Learning, 2020).	**interact with its receptors, does not act on GABA agonists, or inhibit the reuptake (Jones & Bartlett Learning, 2020).**	**cellular uptake of glucose (Jones & Bartlett Learning, 2020).**	**receptor. (Jones & Bartlett Learning, 2020).**	**norepinephrine and serotonin. (Jones & Bartlett Learning, 2020)**
Reason Client Taking	**Pt currently has coronary artery disease.**	**Pt has diagnosis of diabetic neuropathy.**	**Pt is diagnosed with diabetes mellitus type 2.**	**Pt has diagnosis of coronary artery disease.**	**Pt has diagnosis of diabetic neuropathy, cellulitis, and receives debridement for the ulcer.**
Contraindications (2)	**Hypersensitivity, heavy alcohol use, or active liver disease (Jones & Bartlett Learning, 2020).**	**Elderly pts or those who are hypersensitive to the drug (Jones & Bartlett Learning, 2020).**	**During episodes of hypoglycemia or hypokalemia. Use cautiously in elderly pts. (Jones & Bartlett Learning, 2020)**	**Hypersensitive pts or pts going under elective CABG surgery (Jones & Bartlett Learning, 2020).**	**Contraindicated in pts with hypersensitivity, hepatic impairment, suicidal thoughts, or those with acute intoxication of alcohol or psychotropic drugs (Jones & Bartlett Learning, 2020).**
Side Effects/Adverse Reactions (2)	**Insomnia, diarrhea, rhabdomyolysis, myalgia, or rash (Jones & Bartlett Learning, 2020).**	**Leukopenia, ataxia, constipation, or diarrhea (Jones & Bartlett Learning, 2020).**	**Hypoglycemia, hypokalemia, or an allergic reaction (Jones & Bartlett Learning, 2020).**	**Fatal intracranial bleeding, hemorrhage, purpura, or angioedema (Jones & Bartlett Learning, 2020).**	**Seizures, dizziness, respiratory depression, euphoria, or anxiety (Jones & Bartlett Learning, 2020).**
Nursing Considerations (2)	**Pt should follow a cholesterol-lowering diet. Watch for signs of myopathy. (Jones &**	**Closely monitor for changes in behavior or thoughts of suicide. Do not**	**Do not mix combination insulin with other insulins. Rotate injection sites.**	**Drug may cause fatal thrombotic thrombocytopenic purpura. Do not confuse with Paxil. (Jones &**	**Medication exposes the risk for addiction, abuse, & misuse. Monitor vital signs &**

	Bartlett Learning, 2020).	**suddenly withdraw from the drug. (Jones & Bartlett Learning, 2020)**	**Observe injection sites for reactions like redness, swelling, itching, or burning. (Jones & Bartlett Learning, 2020)**	**Bartlett Learning, 2020).**	**respirations. Do not stop drug abruptly. (Jones & Bartlett Learning, 2020)**
Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Assess pt for allergies or previous reactions to "statins" prior to administration.**	**A mental health assessment for usage other than diabetic neuropathy should be assessed. No other labs needed prior to administration.**	**Assess blood glucose levels via accucheck prior to administration.**	**Hemoglobin & hematocrit should be drawn prior to administration. Nurse should assess for bleeding disorders prior to administration. Inspect the skin for signs of bleeding.**	**Obtain baseline respirations before administration. Assess for suspected drug abuse or alcohol use prior to administration.**
Client Teaching needs (2)	**Teach proper weight control, dietary management, & exercise. Advise pt to avoid alcohol. (Jones & Bartlett Learning, 2020).**	**Take extended-release tablets with food. Advise pts to avoid driving or heavy living. Advise not to take medication with alcohol. (Jones & Bartlett Learning, 2020)**	**Do not mix insulin combination with other insulins. Do not share multidose pen with other people. Keep a log of glucose levels. (Jones & Bartlett Learning, 2020)**	**Notify the provider for signs of unusual bleeding or bruising. The drug may be taken with or without meals. (Jones & Bartlett Learning, 2020).**	**Alert the nurse immediately if experiencing unresponsiveness, extreme sleepiness, or difficulty breathing. Keep drug away from children. (Jones & Bartlett Learning, 2020)**

Hospital Medications (5 required)

Brand/ Generic	Enoxaparin Lovenox	Piperacillin-tazobactam Zosyn	Vancomycin Vancocin	Torsemide Demadex	Insulin Aspart NovoLog
Dose	0.4 mL	50 mL	1000 mg	40 mg	Sliding scale
Frequency	Daily	Q6H	Q12H over 60 mins	Daily	AC HS
Route	Subcutaneous	IV piggyback	IV piggyback	Oral	Subcutaneous
Classification	Anticoagulants Low-molecular weight heparins	Antibiotics Extended-spectrum penicillins-beta-lactamase inhibitor	Antibiotic Glycopeptide	Diuretic Loop diuretic	Antidiabetic Insulin
Mechanism of Action	Accelerates formation of antithrombin and deactivates thrombin to prevent the conversion of fibrinogen to fibrin. (Jones & Bartlett Learning, 2020).	Inhibits cell wall synthesis (Jones & Bartlett Learning, 2020).	Hinders bacterial cell-wall synthesis by causing damage to the plasma membrane (Jones & Bartlett Learning, 2020).	Enhances excretion of sodium, chloride, & water on the loop of Henle (Jones & Bartlett Learning, 2020).	Regulates glucose metabolism by binding to insulin receptor to facilitate cellular uptake of glucose (Jones & Bartlett Learning, 2020).
Reason Client Taking	Pt has diagnosis of coronary artery disease. The drug is also used prophylactically in the hospital setting to reduce incidents of DVT/PE.	Pt's wound culture was positive for staph aureus and she also has cellulitis.	Pt's wound culture tested positive for staph aureus and she also has cellulitis.	Pt has diagnosis of cellulitis & CHF.	Pt is diagnosed with diabetes mellitus type 2.
Contraindications (2)	Pts hypersensitive to pork products, actively bleeding, and with heparin-induced	Hypersensitivity to penicillin or cephalosporins. Use cautiously in pts with	Contraindicated in pts with hypersensitivity. Use cautiously in pt receiving	Use cautiously in pts with hepatic disease, ascites, sudden changes in fluid balance,	During episodes of hypoglycemia or hypokalemia. Use cautiously in elderly pts.

	thrombocytopenia (Jones & Bartlett Learning, 2020).	**bleeding tendencies, hypokalemia, or uremia. (Jones & Bartlett Learning, 2020)**	**neurotoxic, nephrotoxic, or ototoxic drugs. (Jones & Bartlett Learning, 2020)**	**& in those with a hypersensitivity. (Jones & Bartlett Learning, 2020)**	**(Jones & Bartlett Learning, 2020)**
Side Effects/ Adverse Reactions (2)	**Thrombocytopenia, hemorrhage, angioedema, fever, or confusion (Jones & Bartlett Learning, 2020).**	**Seizures, arrhythmia, leukopenia, pseudomembranous colitis, and anaphylaxis. (Jones & Bartlett Learning, 2020)**	**Fever, dyspnea, headache, and fatigue (Jones & Bartlett Learning, 2020).**	**Asthenia, rhinitis, hypokalemia, dehydration, and hypomagnesemia. (Jones & Bartlett Learning, 2020)**	**Hypoglycemia, hypokalemia, or an allergic reaction (Jones & Bartlett Learning, 2020).**
Nursing Considerations (2)	**Achieve hemostasis at the puncture site. Pt who has an epidural or spinal anesthesia is at risk for hematomas. (Jones & Bartlett Learning, 2020).**	**Serious skin reactions can occur. Additional doses may be needed after each dialysis period. Monitor pt's sodium intake & electrolyte levels. (Jones & Bartlett Learning, 2020)**	**Obtain hearing evaluation before & after therapy. Monitor pt's fluid balance. Monitor for oliguria and cloudy urine. (Jones & Bartlett Learning, 2020)**	**Monitor fluid intake and output. Watch for signs of hypokalemia. Monitor elder pts who are susceptible to excessive diuresis. (Jones & Bartlett Learning, 2020)**	**Do not mix combination insulin with other insulins. Rotate injection sites. Observe injection sites for reactions like redness, swelling, itching, or burning. (Jones & Bartlett Learning, 2020)**
Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Assess aPTT, hemoglobin, hematocrit, & platelet levels prior to administration. Assess for signs of bleeding prior to administration.**	**Obtain baseline vitals prior to administration. Check pt's chart for CMP or BMP prior to administration for any electrolyte imbalances. Cultures should be completed prior to administration.**	**Hearing assessment prior to administration, fluid balance labs, obtain baseline vitals prior to administration, and conduct neuro checks prior to administration.**	**Assess electrolyte levels prior to administration. Assess CBC levels prior to administration, decreased levels could indicate dehydration. Assess heart sounds & obtain baseline vitals.**	**Assess blood glucose levels via accucheck prior to administration.**
Client	**Advise pt to report**	**Tell pt to report**	**Advise pt to take**	**Take the drug in**	**Do not mix insulin**

Teaching needs (2)	**signs of bleeding, avoid OTC drugs, & to consult the provider before usage of herbal supplements. (Jones & Bartlett Learning, 2020).**	**adverse reactions immediately. Pt should report discomfort at the IV insertion site. (Jones & Bartlett Learning, 2020)**	**the entire amount exactly as directed. Pt should report ringing in the ears. (Jones & Bartlett Learning, 2020)**	**the morning to prevent nocturia. Change positions slowly. Report ringing in the ears immediately. (Jones & Bartlett Learning, 2020)**	**combination with other insulins. Do not share multidose pen with other people. Keep a log of glucose levels. (Jones & Bartlett Learning, 2020)**

Medications Reference (1) (APA):

2020 Nurse's drug handbook (2020). Jones & Bartlett

Learning.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Pt is A&O x4. Pt appears content, in no distress. Pt's overall appearance is clean.**
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** .	**Pt's skin is pink, warm, & intact with normal turgor. No rashes or bruises observed. Pt has an ulcer located on the right foot inferior to the great toe. Pt's braden score is 18. Pt is at a mild risk for developing a pressure ulcer. No other wounds were observed.**

Braden Score: **Drains present: Y☐ N ☒** **Type:**	
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Pt's head, neck, and nose are symmetrical wit no septum deviation present. Eyes PERLA, sclera is white. Ears clean of debris or wounds. Teeth are intact with no evidence of chipped or broken teeth. Tongue is pink and moist.**
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 & S2 are audible upon auscultion. Cardiac rhythm is normal. Pt has an ICD on the left side of the chest. Peripheral pulses palpable with cap refill of 3+ in the upper extremities and 4+ in the lower extremities due to CAD. No neck vein distention observed. Pt has edema located on the right lower extremity due to cellulitis.**
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**Breath sounds are vesicular upon inhalation & exhalation in all lobes including the right lower lobe. The chest rises & falls symmetrically.**
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:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	**Diet at home is regular. Current diet in the hospital is a low carb diet. Current weight is 92.5 kg & height is 157.48 cm. Bowels sounds are active in all 4 quadrants. Last BM was 10/4/2021. No pain or masses upon palpation. Abdomen was non-distended with no incisions, scars, drains, or wounds present. Pt independently fed herself without difficulty.**
GENITOURINARY (2 Points): **Color:**	**Pt toilets independently & only needs assistance with transferring from wheelchair**

Character: **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**to toilet. Pt describes urine to be yellow & non-cloudy. Usual amount is 300 mL. Pt does not receive dialysis treatment or have a urinary catheter.**
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 60** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☒** **Needs support to stand and walk☒**	**Equal strength is all extremities. Pt able to perform ROM in all extremities except the right foot which has an ulcer dressing. Pt is advised to remain off the right foot until ulcer has healed. Pt is advised to remain light-load bearing due to placement of de-fibrillatory. Pt uses a wheelchair, orthotic boot, & gait belt for ambulation with assistance. Fall score is 60. Pt is at risk for falling due to ulcer on the right foot. Pt does not need assistance with bathing, grooming, dressing, or feeding.**
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☒ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**Pt is A&O x4 and MAEW. Eyes PERLA. Pt has equal strength in her upper extremities. In the lower extremities the right leg is weaker than the left due to a foot ulcer and cellulitis. Pt has diabetic neuropathy due to diabetes mellitus type 2 and CAD. Pt responds coherently with no indications of any mental changes, changes in consciousness, or developmental disabilities. Pt has sensory deficits in the lower extremities.**
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):**	**Pt is Baptist. She lives alone & enjoys watching tv or listening to music. She is a part of a close-knit family that visits frequently.**

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1106	**85**	**114/71 right**	**18**	**36.7 C**	**99 RA**

		arm			
1529	**94**	**132/66** **Right arm**	**18**	**37.3 C**	**99 RA**

Vital Sign Trends: Pt's vitals remained within normal limits (WNL) during clinical. There was a minor fluctuation in her systolic blood pressure but remained WNL. Her pulse increased slightly but remained WNL. Minor fluctuation reasoning could not be determined.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1106	**Numeric**	**N/A**	**0/10**	**N/A**	**N/A**
1529	**Numeric**	**N/A**	**0/10**	**N/A**	**N/A**

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:**	Pt has a 20 gauge in the right forearm inserted 10/1/2021. Upon inspection on 10/4/2021, the IV flushed easy & is saline locked with no signs of erythema, drainage, or infiltration. The transparent dressing is dry & intact.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
480 mL oral	**900 mL**

50 mL antibiotic (Vancomycin) infusion **2 x 10mL NS flushes (between times 1130 & 1600)**	

Nursing Care

Summary of Care (2 points)

Overview of care: During the pt's hospital stay, the main focuses were infection control and blood glucose control. An x-ray and ultrasound were used to confirm the ulcer & possible tissue damage. Antibiotic treatment using vancomycin was given to the pt as a broad-spectrum treatment for cellulitis and wound cultures which were positive for staph aureus. Torsemide was used to reduce edema in the lower extremities. Daily glucose accuchecks were performed to monitor glucose levels. The pt did not have discharge instructions ordered from the provider but could possibly be discharged soon. Home health was a topic of possibility discussed with the nurses.

Procedures/testing done: Wound cultures are still in process with one showing positive for staph aureus after 1 day of growth. No other testing or procedures will be done for this pt.

Complaints/Issues: The pt has no complaints or issues. During assessment, the pt's foot became saturated with blood within 1 hour of her dressing change. After the saturated dressing was changed, another dressing was saturated within 30 minutes. Wound care was notified who advised who re-dressed the ulcer more effectively. The pt complained of no pain.

Vital signs (stable/unstable): The pt's vitals remained stable with a slight fluctuation in her systolic blood pressure and pulse during 1529 vitals. Vitals remained WNL.

Tolerating diet, activity, etc.: The pt is on a low-carb diet and tolerates well. Pt is unable to ambulate independently but requires a 1 assist. Pt was advised not to bear weight on her upper extremities due to the implantable de-fibrillatory device but had to anyway to transfer herself into the wheelchair. She has been advised not to use the walker. Pt can move pivot herself into the wheelchair, sitting chair, and bed. Pt tolerates activity well and can re-position herself independently.

Physician notifications: No physician notifications were needed. Pt will be continuously monitored for glucose levels and progress of the right foot ulcer.

Future plans for patient: Plans include diabetic management compliance, returning home, & diabetic foot management.

Discharge Planning (2 points)

Discharge location: Pt hopes to return home, no discharge location was in place at the time.

Home health needs (if applicable): The pt needs home health wound care for the ulcer. She may also need occupation or physical therapy services to maintain ADL's and current mobility status.

Equipment needs (if applicable): The pt will need a wheelchair, walker, orthotic boot, and possibly a rolling scooter to assist with ambulation.

Follow up plan: This pt will need to follow up with her primary or endocrinologist to maintain diabetic management compliance. She will also need a follow up with wound care for the ulcer.

Education needs: Education needs include diabetic foot management, recognizing signs of infection, basic wound care instructions, and the importance of diabetic management adherence.

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 sepsis related to impaired skin integrity as evidenced by an ulcer on the pt's right foot.	**The pt having cellulitis poses a risk for the infection to enter into the bloodstream causing sepsis.**	**1.Assess wound dressing Q4H for signs of infection.** **2.Administer ABX therapy Q6H as prescribed.**	**Pt tolerated treatment well with no adverse reactions. The goal's outcome could not be determined as met due to current processing of wound cultures. The pt had positive responses to treatment.**
2. Impaired circulation related to uncontrolled blood glucose levels as evidenced by pt having an A1c of 8.3.	**Elevated HgA1c levels reduce the blood's ability to circulate probably posing a risk for impaired circulation.**	**1. Perform POCT accuchecks before & after meals.** **2.Perform neurovascular & cap refill checks Q4H during vitals.**	**Pt responded well to treatment plan. She was cooperative for POCT glucose checks & understood the importance of glucose control. Pt tolerated VS checks Q4H.**
3. Impaired mobility related to decreased transferability as evidenced by an ulcer on the right foot.	**The pt is unable to ambulate properly due to a wound dressing & ulcer on the right foot posing a risk for possible immobility.**	**1. Perform ROM exercises as tolerated during assessments every shift.** **2. Elevate pt's lower extremities with**	**Pt tolerated ROM exercises well. Pt understood the importance of the need for elevation of the lower extremities. Goal was in constant progress during my clinical & will remain until discharge.**

		pillows while sitting or lying down to prevent further swelling.	
4. Impaired skin integrity related to insufficient nutritional status as evidenced by the pt's uncontrolled blood glucose levels.	**Uncontrolled blood glucose levels jeopardize the skin's integrity by delaying healing.**	**1. Encourage a diet low in fat and carbs. Increase nutritional intake protein.** **2. Encourage 2-3 L of fluid daily.**	**Pt understood the importance of a well-controlled diet to reduce blood glucose levels. Pt remained hydrated with water during my clinical. This goal was met & will be a continual goal for the pt post-discharge.**

Other References (APA):

Concept Map (20 Points):

Subjective Data

Pt denied pain during admission into the hospital and during assessment on 10/4/2021

The pt stated she went to Chicago & walked extensively causing an ulcer on the right foot.

Pt stated she was unable to feel pain during assessment & during the dressing change
Pt provided PMH of CAD, DM Type 2, fibromyalgia, asthma, cardiomyopathy, & neuropathy.

Nursing Diagnosis/Outcomes

Risk for sepsis related to impaired skin integrity as evidenced by an ulcer on the pt's right foot.
Outcomes: Pt will be infection-free by discharge. Pt will demonstrate proper wound care by discharge.
Impaired circulation related to uncontrolled blood glucose levels as evidenced by pt having an HgA1c of 8.3.
Pt will have an HgA1c less than 6.0 after 3 months post-discharge. Pt will maintain POCT glucose levels WNL during each shift.
Impaired mobility related to decreased transferability as evidenced by an ulcer on the right foot.
Pt will use the call light daily as needed for ambulation or transfers. Pt will be non-weight bearing on ulcerated foot until discharge.
Impaired skin integrity related to insufficient nutritional status as evidenced by the pt's uncontrolled blood glucose levels.
Pt will adhere to low-fat, low-carb diet until discharge.
Pt will intake 2-3 L of fluid daily.

Objective Data

RBC = 3.41
Hgb = 9.8
Hct = 29.5
Glucose = 179
HgA1c = 8.3
Wound culture positive for staph aureus
US doppler on right lower extremity negative for DVT
Pt receiving Lovenox, Zosyn, Vancomcin, Torsemide, & Novolog in the hospital
VS are WNL

Patient Information

52-year-old Caucasian female with a history of diabetes mellitus type 2, cellulitis, cardiomyopathy, fibromyalgia, heart failure (HF), double bypass cardiac surgery, an implantable cardiac converter, peripheral neuropathy, and coronary artery disease (CAD) presents to the emergency department (ED) for a right foot ulcer, Pt states her mom noticed the ulcer and made her come to the walk-in clinic. The clinic advised pt to be evaluated at the ED. She denied any pain and states she did not notice it. She also stated she did extensive walking on a trip to Chicago the weekend before

Nursing Interventions

Assess wound dressing Q4H for signs of infection.

2.Administer ABX therapy Q6H as prescribed.
Perform POCT accuchecks before & after meals.

2.Perform neurovascular & cap refill checks Q4H during vitals.
Perform ROM exercises as tolerated during assessments every shift.

Elevate pt's lower extremities with pillows while sitting or lying down to prevent further swelling.
Encourage a diet low in fat and carbs. Increase nutritional intake protein.

Encourage 2-3 L of fluid daily.