N321 Care Plan #3 BL

Lakeview College of Nursing

Kenny Johnson

Demographics (3 points)

Date of Admission	Patient Initials	Age	Gender
3-30-21	BL	37	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Mechanic	Married	NKDA
Code Status	**Height**	**Weight**	
Full-Code	6 ft. 3 in.	342 lbs	

Medical History (5 Points)

Past Medical History: Hyperlipidemia, Cellulitis, Sleep Apnea, Tinea Pedis, Vitamin D deficiency, Hypertension, Pneumonia, Intermittent claudication, and restless legs.

Past Surgical History: Debridement of current leg wound

Family History: Maternal grandfather has heart disease.

Social History (tobacco/alcohol/drugs): Denies tobacco or drug use and states he drinks occasionally every month (2-3 beers when he does).

Assistive Devices: CPAP machine at bedtime.

Living Situation: Lives with wife and 2 kids in a house.

Education Level: Grade 12 and mechanic certification(s).

Admission Assessment

Chief Complaint (2 points): Leg swelling

History of present Illness (10 points): The leg swelling started last Thursday in the right lower leg. The right lower extremity has stayed consistently swollen since then. Pt states that there is a dull pain up his right leg that radiates up into the right groin area. Pt states relieving factors include wrapping his leg and elevating it. Pt has sought treatment for this problem before in the form of draining, wrapping, and elevating the right lower extremity.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Cellulitis of right lower extremity

Secondary Diagnosis (if applicable): Edema of right lower extremity

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

Cellulitis is a bacterial infection of the skin. Bacteria break through the protective layers of the skin at the site of an injury like a cut or sore. Once the bacteria are inside, they multiply and cause inflammation from the chemicals that they create. Cellulitis not from a wound or catheter is normally found in the legs. Those who have edema, poor blood flow, athlete's foot, or breaks in the skin are most at risk for cellulitis (Harvard Publishing, 2018). Lots of different kinds of bacteria can cause cellulitis but the two most prominent are staphylococcus and streptococcus. Venous ultrasound of the vein in the leg is the main diagnostic test for cellulitis (Capriotti, 2020). Individuals with a higher incidence of cellulitis include males and individuals 45-64 years of age (Capriotti, 2020). If left untreated, infection can reach the lymph nodes and spread throughout the body causing sepsis. Signs and Symptoms include warm, swollen, red skin that is painful to the touch. Swollen lymph nodes Red streaks as well as a tight glossy appearance can also be seen which is caused by infection spreading to the lymph carrying blood vessels (Harvard Publishing, 2018).

The patient has all of the hallmark signs of cellulitis. He complains of dull pain in the groin area where there are lots of lymph nodes. Swollen lymph nodes are an associated manifestation of cellulitis (Harvard Publishing, 2018). He had a wound culture that tested positive for streptococcus and staphylococcus (Capriotti, 2020). The patient has a past history of tinea pedis and intermittent claudication which increases the risk of cellulitis due to cracks in the skin and poor leg circulation (Harvard Publishing, 2018). He had wound debridement and was prescribed two antibiotics to treat the infection in his right lower extremity.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Pathophysiology: introductory concepts and clinical perspectives*. F.A. Davis Company.

Harvard Publishing (n.d.). (2018). Cellulitis. Retrieved April 03, 2021, from https://www.health.harvard.edu/a_to_z/cellulitis-a-to-z#:~:text=It%20often%20develops%20where%20there,of%20bacteria%20can%20cause%20cellulitis.

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	4.35-5.65	4.64	4.82	
Hgb	14-18	13.1	14.6	Congruent with bacterial infection (Capriotti, 2020).
Hct	37-47	40.3	43.5	
Platelets	150-400	293	382	
WBC	4.1-10.9	14.3	12.2	Congruent with the primary diagnosis of cellulitis (Capriotti, 2020).
Neutrophils	1.5-8.0	11.5	8.9	Congruent with the primary diagnosis of cellulitis (Capriotti, 2020).
Lymphocytes	1-4.9	1.30	1.57	
Monocytes	0-0.9	1.25	0.89	Congruent with antibiotic therapy for bacterial infection (Capriotti, 2020).
Eosinophils	0-0.5	0.08	0.14	
Bands	0-2	0.03	0.04	

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-	135-145	141	N/A	
K+	3.5-5.5	3.6	N/A	
Cl-	95-110	104	N/A	
CO2	23-31	24	N/A	
Glucose	70-110	124	N/A	Considered pre-diabetic and consistent with past diagnosis of hyperlipidemia (Capriotti, 2020)
BUN	8-25	13	N/A	
Creatinine	0.70-1.50	0.99	N/A	
Albumin	3.5-5.0	3.5	N/A	
Calcium	8.4-10.3	9.3	N/A	
Mag	1.6-2.6	1.9	N/A	
Phosphate	2.8-4.5	N/A	N/A	
Bilirubin	0.2-1.2	1.2	N/A	
Alk Phos	40-150	125	N/A	
AST	16-40	38	N/A	
ALT	7-52	70	N/A	
Amylase	23-85	N/A	N/A	
Lipase	0-160	N/A	N/A	
Lactic Acid	4.5-19.8	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	<1.1	1.06	N/A	
PT	11-12.5	14.3	N/A	Consistent with past diagnosis of intermittent claudication (Capriotti, 2020).
PTT	25-35	33	N/A	
D-Dimer	<500	756	N/A	Consistent with past diagnosis of intermittent claudication (Capriotti, 2020) as well as inflammation related to cellulitis (Hinkle & Cheever, 2018).
BNP	<100	N/A	N/A	
HDL	40-65	36	N/A	Consistent with past diagnosis of hyperlipidemia (Capriotti, 2020)
LDL	100-129	186	N/A	Consistent with past diagnosis of hyperlipidemia (Capriotti, 2020).
Cholesterol	200-239	255	N/A	Consistent with past diagnosis of hyperlipidemia (Capriotti, 2020).
Triglycerides	<150-199	237	N/A	Consistent with past diagnosis of hyperlipidemia (Capriotti, 2020).
Hgb A1c	5.7%-6.4%	6.9%	N/A	Consistent with past diagnosis of hyperlipidemia (Capriotti, 2020).
TSH	N/A	N/A	N/A	

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow/Clear	Yellow/clear	N/A	
pH	5.5-7.5	6.0	N/A	
Specific Gravity	1.015-1.025	1.025	N/A	

Glucose	Negative	Negative	N/A	
Protein	Negative	30	N/A	Protein in the urine due to dehydration from being NPO prior to wound debridement as well as fever related to cellulitis (Capriotti, 2020).
Ketones	Negative	Negative	N/A	
WBC	Negative	Negative	N/A	
RBC	Negative	Negative	N/A	
Leukoesterase	Negative	Negative	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	X	X	X	
Blood Culture	X	X	X	
Sputum Culture	X	X	X	
Wound Culture	No Growth	Staphylococcus genus and streptococcus genus	No Growth after 48 hours	Staphylococcus and streptococcus were detected which corresponds with his increased WBC and neutrophil count that indicates that he is fighting infection (Hinkle & Cheever, 2018).

Lab Correlations Reference (1) (APA):

Capriotti, T. (2020). *Pathophysiology: introductory concepts and clinical perspectives*. F.A. Davis Company.

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

Diagnostic Imaging

All Other Diagnostic Tests (5 points): EKG 12 lead, CT lower rt leg, CT chest, CT abdomen, MRSA test, Venous doppler lower rt leg.

Diagnostic Test Correlation (5 points):

CT of lower right leg was ordered to diagnose the pt with cellulitis (Capriotti, 2020). MRSA test was taken to ensure that the staphylococcus the patient has isn't MRSA. A 12-lead EKG and a Chest CT were done to ensure that the leg edema was not related to a heart issue such as congestive heart failure since the patient has family history of heart disease. Venous doppler of lower right leg was done to rule out DVT since the pt's PT and D-dimer were high (Capriotti, 2020).

Diagnostic Test Reference (1) (APA):

Capriotti, T. (2020). *Pathophysiology: introductory concepts and clinical perspectives*. F.A. Davis Company.

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

Home Medications (5 required)

Brand/ Generic	Tylenol/ Acetaminophen	Lopressor/Metoprolol Tartrate	Ergocalciferol /Vitamin D2	Cozaar/ Losarten	Mirapex/ Pramipexole
Dose	300 mg	25 mg	1,250 mcg	50 mg	1 mg
Frequency	PRN	BID in the morning and evening	Once per day in the morning	Once per day	Once per day at bedtime
Route	PO	PO	PO	PO	PO
Classification	NSAID/Para-aminophenol derivative	Beta-adrenergic blocker	Vitamin supplement	Antihypertensive	Nonergoline dopamine agonist
Mechanism of Action	Inhibits prostaglandin production and interferes with pain impulse generation in the peripheral nervous system.	Inhibits stimulation of beta1 receptor sites in the heart, resulting in decreased cardiac output, and myocardial oxygen demand.	Supplement D2 which helps the body absorb calcium and phosphorus.	Blocks binding of angiotensin II to receptor sites. This inhibition reduces blood pressure.	Stimulation dopamine receptors easing symptoms of Parkinson's disease such as restless legs.
Reason Client Taking	Pain level at 4-6	Management of hypertension	Supplement his vitamin D deficiency**.**	Management of hypertension	Restless legs
Contraindications (2)	Severe hepatic impairment or severe active liver disease	Sick sinus syndrome or pulse less than 45 beats per minute	Kidney stones and sarcoidosis	GFR less than 60 ml/min and concurrent aliskiren therapy	Hypersensitivity and concurrent use of haloperidol
Side Effects/Adverse Reactions (2)	Hepatotoxicity and Atelectasis	Cardiovascular accident and agranulocytosis	Bone pain and excessive thirst	Hypotension and hyponatremia	Orthostatic Hypotension and edema
Nursing Considerations (2)	Monitor AST, ALT, Bilirubin, and Creatinine	Take with food at the same time every day.	Take this medication on the same day	Patients of African American	Use cautiously in patient who

	levels. Use cautiously in patients who suffer from alcoholism.	Do not stop this drug abruptly.	each week.	descent with hypertension may not benefit from Losartan. Monitor blood pressure and renal function.	have hallucination or retinal problems such as macular degeneration. Assess patient for skin changes.

Hospital Medications (5 required)

Brand/Generic	Lasix/Furosemide	Firvanq/ Vancomycin	Lotrimin/ Clotrimazole	Zosyn/ Piperacillin-Tazobactam	Zofran/Ondansetron
Dose	20 mg	1.5 g	1% topical	3.375 g	4 mg
Frequency	BID	Q8H for 5 days	BID	Q8H for 5 days	Q6H PRN r/t N/V
Route	IV	IV	Topical	IV	IV
Classification	Loop Diuretic	Glycopeptide antibiotic	Antifungals	Penicillin	5-hydroxytryptamine serotonin receptor antagoni
Mechanism of Action	Inhibits sodium and water reabsorption in the Loop of Henle.	Inhibits bacterial RNA and cell wall synthesis. This drug Also alters bacterial membranes, causing cell death.	Inhibits ergosterol synthesis by interaction with 14-alpha demethylase which is an essential	Inhibits bacterial cell wall by binding to penicillin-binding proteins	Antagonizes serotonin receptors which prevents activation y effects of emetogenic drugs and toxi

			component of the cell membrane.		
Reason Client Taking	Edema of the right lower extremity	Treatment of cellulitis	Treat tinea pedis	Bacterial infection related to primary diagnosis of cellulitis	Nausea and vomiting due t post-op.
Contraindications (2)	Hypersensitivity and Anuria.	Hypersensitivity to vancomycin or hypersensitivity to corn or corn products.	Pregnancy and Onychomycosis	Allergy to cephalosporins and do not take concurrently with allopurinol	Hypersensitivity
Side Effects/Adverse Reactions (2)	Thromboembolism and hepatocellular insufficiency.	Clostridium difficile associated diarrhea and Hypotension	Swelling and blistering	Rash and abdominal pain	Diarrhea and headache
Nursing Considerations (2)	Monitor the patient's weight and advise patient to change positions slowly	Monitor blood vancomycin concentrations. Check CBC, BUN, and creatinine levels during vancomycin therapy.	Monitor liver function. Evaluate the effectiveness of the medication**.**	Dilute in 0.9% sodium chloride when administering via IV. Assess patient or rash and signs of anaphylaxis	Assess for reports of decreased nausea and the absence of vomiting. Teach to use caution with driving while taking this medication.

Medications Reference (1) (APA):

2020 nurse's Drug Handbook. (2020). Burlington, MA: Jones & Bartlett Learning.

Frandsen, G., & Pennington, S. S. (2020). *Abrams' clinical drug therapy: Rationales for nursing practice*. Wolters Kluwer.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	AOx4 with no acute distress noted. Pt is well groomed.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** Right lower extremity **Braden Score:** 12 **Drains present: Y☐ N ☒** **Type:**	Skin is pink and warm. Skin turgor is normal. No rashes or bruises to note. There is a wrapped wound on the right lower extremity. Pt has a Braden score of 12 because he is bedfast, has moisture around his wound, and is at risk for friction and shear injuries.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck are midline. No masses to note. Lymph nodes are non-palpable. Thyroid is nontender and without nodules. Bilateral Auricles are without masses and tympanic membrane is pearly grey bilaterally. PERLA bilaterally. No lesions on external nose. Pt has good dentition.
CARDIOVASCULAR (2 points): **Heart sounds:** Normal S1 and S2 without any murmurs, rubs, or gallops. **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** Normal sinus rhythm **Peripheral Pulses:** 2+ bilaterally at carotid, radial, brachial, and pedal pulse sites. **Capillary refill:** less than 3 seconds **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☒ N ☐** **Location of Edema:** Right lower extremity	Normal S1 and S2 without any murmurs, rubs, or gallops. Normal sinus rhythm, 2+ bilaterally at carotid, radial, brachial, and pedal pulse sites. Capillary refill less than 3 seconds. No neck vein distention to note. Edema of the right lower extremity.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Breath sounds in all lobes are normal with not Ronchi, crackle, or wheeze to note.

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:**	Pt says he eats whatever he wants at home. Normal diet after post-op wound debridement. Pt is 6 ft. 3 in. and 342 lbs. Bowels sounds were normal 5-30 clicks. Pt's last BM was last night. No masses, distention, incisions, scars, drains, or wounds to note in any quadrants.
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	500 mL of tea-colored urine in the pt's urinal. Patient denies pain when urination. Genitals are dry and without lesions.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** 35 **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk** ☐	Pt has active ROM in both upper extremities and in the left lower extremity. Pt does not have ROM in right lower extremity related to cellulitis and wound debridement. Pt is at high fall risk and has a fall score of 35 due to having a secondary diagnosis and an IV/Heparin lock. The patient is immobile and uses the urinal to void.
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐**	Pt is able to move his left lower extremity more than his right lower extremity. He has equal strength in both upper extremities. Patient's

Strength Equal: Y ☐ N ☒ if no - Legs ☒ Arms ☐ Both ☐ **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	speech is conversational and he is AOx4.
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 states he likes to eat his stress away while watching good movies. He has his grade 12 as well as several mechanic certifications. He believes in god even though he doesn't attend church every Sunday. He enjoys time at home with his wife and kids.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
15:30	90	154/94	18	98.0	96%
16:30	93	155/86	16	97.8	93%

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
15:30	0-10	Right Groin	3	Dull pain	Elevate leg on Pillow
16:30	0-10	Right Groin	1	Dull pain	Make sure pt is comfortable

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 20 **Location of IV:** Right antecubital **Date on IV:** 3-30-21 **Patency of IV:** IV is temperamental, can be easily flushable **Signs of erythema, drainage, etc.:** No	Saline lock, Vancomycin, Zosyn in 500 mL sodium chloride

erythema or drainage to note. IV dressing assessment: Clean, dry, and intact.	

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
0 (was NPO for wound debridement of right lower extremity)	2850 mL

Nursing Care

Summary of Care (2 points)

Overview of care: Patient came to ER with right lower leg edema and was diagnosed with cellulitis. He was admitted and started on antibiotic therapy once MRSA was ruled out. Patient had debridement of right lower extremity wound related to cellulitis and edema of the right lower leg.

Procedures/testing done: Wound culture, CT of abdomen, CT of right lower extremity, 12-lead EKG, CT of chest, venous doppler of right lower extremity, MRSA test, CBC, Full chem panel, lipid panel.

Complaints/Issues: Pt complains of dull pain in the groin area and swelling of his right lower extremity.

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: Pt is tolerating diet but is bedfast due to debridement of his wound on the right lower extremity.

Physician notifications: Infection is not MRSA. Antibiotics seem to be working. Wound debridement to remove necrotic tissue. Continue full course of antibiotics until pt's body is able to fight off the infection.

Future plans for patient: Follow up appointment in wound clinic to check on the wound after discharge.

Discharge Planning (2 points)

Discharge location: Home to his house with his wife.

Home health needs (if applicable): N/A

Equipment needs (if applicable): N/A

Follow up plan: Follow up visit scheduled with primary care provider.

Education needs:

Cellulitis education, tinea pedis education, and antibiotic education.

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. Impaired skin integrity related to cellulitis as evidenced by edema of the right lower extremity, a wound on the right lower extremity, and	The patient just had debridement of a wound on his right lower extremity and is immobile.	**1.** Turn the patient and make sure he is comfortable every 2 hours. 2. Elevate wounded leg up on a pillow to reduce edema.	The patient was thankful to be kept comfortable while watching Law and Order: SVU. Pt states he felt less pressure on his right lower extremity when it was elevated.

being bedfast.			
2. Risk of Falls related to debridement of right lower extremity as evidenced by a Braden score of 12 and a fall score of 35.	Pt had debridement of right lower leg related to cellulitis and uses a urinal to void due to immobility.	1. Make sure the urinal and other commonly used items are close to the patient and within reach. 2.Implement fall precautions and make sure the patient has a wrist band that lets staff know that he is at risk for falls.	Pt was comfortable and watching Law and Order. I noted that the pt's urine was a tea-colored yellow.
3. Risk for infection related to cellulitis as evidenced by past wound culture positive for staphylococcus and streptococcus, high WBCs, high neutrophils, and high monocytes.	Pt's untreated cellulitis can lead to sepsis if streptococcus and staphylococcus are not killed off.	1. Administer Vancomycin intravenously. 2. Check patency of IV and administer Zosyn concurrently as the vancomycin.	Pt labs are stabilizing and WBCs and neutrophils are increased showing that they are fighting off the infection. Letting the patient rest his arm on a pillow helped the patency of the antecubital IV.

Other References (APA):

Concept Map (20 Points):

Subjective Data

"I have 3 out of 10 groin pain."
"Elevating my leg helps relieve the pressure."
"My right leg started swelling last Thursday."
"I just had surgery on my right leg."

Nursing Diagnosis/Outcomes

Impaired skin integrity related to cellulitis as evidenced by edema of the right lower extremity, a wound on the right lower extremity, and being bedfast.

Outcome: Patient has a better Braden score and a decrease in leg edema.

Risk of Falls related to debridement of right lower extremity as evidenced by a Braden score of 12 and a fall score of 35.

Outcome: Fall score of 20 or less.

Risk for infection related to cellulitis as evidenced by past wound culture positive for staphylococcus and streptococcus, swollen groin lymph node, high WBCs, high neutrophils, and high monocytes.
Outcome: Patient's body is able to fight off the infection after the 5-day course of antibiotics .

Objective Data

Edema of right lower extremity
Braden score of 12.
Fall score of 35.
WBCs elevated.
Hgb low.
Neutrophils elevated.
342 lbs.
Wound debridement.
Wound culture +staph and +strep.

Patient Information

BL
37
Hypertension
Cellulitis rt leg
Hyperlipidemia
Tinea Pedis
Intermittent claudication

Nursing Interventions

Turn the patient and make sure he is comfortable every 2 hours.

Elevate wounded leg up on pillow to reduce edema and swelling.

Make sure the urinal and other commonly used items are close to the patient and within reach.

Implement fall precautions and make sure the patient has a wrist band that lets staff know that he is at risk for falls.

Administer prescribed Vancomycin intravenously.

Check patency of IV and administer prescribed Zosyn concurrently as the vancomycin.