

N321 Care Plan # 1
Lakeview College of Nursing
Hannah Nowlin

Demographics (3 points)

Date of Admission 02/20/21	Patient Initials B.D.	Age 62	Gender Male
Race/Ethnicity White	Occupation Unemployed	Marital Status Married	Allergies NKA
Code Status Full	Height 6'2"	Weight 95.3 kg	

Medical History (5 Points)

Past Medical History: Pt has a medical history of type 2 diabetes mellitus, hypertension, hyperlipidemia, depression, hypothyroidism, arthritis, and obesity.

Past Surgical History: Pt has a surgical history of a toe amputation done on February 5th, 2021.

Family History: Pt has a family history of arthritis, hyperlipidemia, and hypertension on his mother's side. Pt has a family history of lung cancer on his father's side.

Social History (tobacco/alcohol/drugs): Pt denied use of alcohol and drugs. Pt is a previous smoker, he quit 9 years ago but used to smoke 3 packs a week for 20+ years.

Assistive Devices: Pt uses a walker and cane at home.

Living Situation: Pt lives with his wife and granddaughter in their house.

Education Level: Pt has an associate's degree in electronics.

Admission Assessment

Chief Complaint (2 points): Pt states that he has pain in his left knee following a fall at home.

History of present Illness (10 points): Pt came in with left knee pain following a fall at home on February 20th. The pain is only in the left knee and pt stated that the pain does not radiate. Pt described the pain as sharp and achy. Pt says that he put a bag of frozen peas on his knee to relieve the pain and that it made it worse. Pt stated that he did not take any medication to relieve

the pain and that he feels best when his knee is propped up. Pt also has diabetes type 2 and after further investigation, was admitted for a great toe amputation.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Osteomyelitis

Secondary Diagnosis (if applicable): Left knee pain

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

Osteomyelitis is an infection of the bone that is mostly caused by a bacteria microorganism. Trauma and surgery can often disrupt the bone integrity, which can lead to the onset of bone infection (Capriotti, 2020). My patient had surgery recently which put him at risk for a bone infection. *S. aureus* is the most common bacterium that causes osteomyelitis. Osteomyelitis has three different categories that are distinct. This includes hematogenous, contiguous, and chronic. My patient most likely has contiguous osteomyelitis. Contiguous osteomyelitis results from direct bacterial infection of bone that is common after a trauma or surgery. Diabetes mellitus predisposes individuals to osteomyelitis because of impaired blood flow, and this patient has diabetes. Osteomyelitis often develops when a foot lesion becomes infected.

Signs and symptoms of osteomyelitis can include chills, fever, and malaise. The patient may also experience localized tenderness, erythema, edema, and pain when the extremity is moved (Birt, 2016). Whenever we would move the patients left lower extremity, it would cause him pain. Loss of range of motion can also occur in these patients, which occurred with my patient. Diabetic patients may experience less pain in the affected area than a typical patient because they have lack of sensation in their peripheral extremities.

To diagnose osteomyelitis, we want to look at patient history to see where the patient may have been exposed to a pathogen. This can include recent trauma, an animal bite, a puncture wound, or any surgical procedure. The diagnosing of this disease can be difficult because lab tests and cultures may not pick up on an infection. Lab analysis is not a direct diagnostic but it is helpful. A CBC can tell us of an increase in WBC count, telling us there is infection. X-rays can be helpful to diagnosis osteomyelitis, but not until the patient is later in the disease.

Treatment for osteomyelitis includes antibiotic therapy for 2-6 weeks to get rid of the infection. Also, getting rid of any necrotic tissue can aide in treating the patient faster. We also want to put these patients on oxygen since they are put on antibiotics.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis Company.

Birt, M. C., Anderson, D. W., Bruce Toby, E., & Wang, J. (2016). Osteomyelitis: Recent advances in pathophysiology and therapeutic strategies. *Journal of orthopaedics*, 14(1), 45–52. <https://doi.org/10.1016/j.jor.2016.10.004>

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	4.28-5.56 mcL	4.51	4.65	
Hgb	13.0-17.0 g/dL	12.8 (L)	13.3	Patient recently had surgery
Hct	38.1%-48.9%	39.8	39.8	
Platelets	149-393 /mcL	187	215	

WBC	4.0-11.7 /mcL	17.7 (H)	15.1 (H)	Patient has an infection in his toe
Neutrophils	45.3-79.0 /L	83.0 (H)	81.4 (H)	Patient has an infection in his toe
Lymphocytes	11.8-45.9 /L	4.8 (L)	5.1 (L)	Patient has an infection in his toe
Monocytes	4.4-12.0 /L	10.9	12.8 (H)	Patient has an infection in his toe
Eosinophils	0.0-6.3 /L	0.1	0.3	
Bands	0.0-5.0 /L	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 mEq/L	136	134 (L)	Patient is on pain medication
K+	3.5-5.1 mEq/L	2.9 (L)	2.8 (L)	Patient has hypertension, hyperlipidemia, and diabetes
Cl-	98-107 mEq/L	103	98	
CO2	21-31 mEq/L	18 (L)	25	
Glucose	74-109 mg/dL	136 (H)	194 (H)	Patient has diabetes
BUN	7-25 mg/dL	24	16	
Creatinine	0.70-1.30 mg/dL	0.74	0.66 (L)	Patient has muscle stiffness
Albumin	3.4-5.4 mg/dL	N/A	N/A	
Calcium	8.6-10.3 mg/dL	8.0 (L)	7.6 (L)	Patient has hyperlipidemia
Mag	1.6-2.4 mg/dL	2.0	N/A	
Phosphate	2.8-4.5 mg/dL	N/A	N/A	
Bilirubin	0.3-1.2 mg/dL	N/A	N/A	
Alk Phos	44-147 units/L	N/A	N/A	

AST	5-40 units/L	N/A	N/A	
ALT	29-33 units/L	N/A	N/A	
Amylase	30-110 units/L	N/A	N/A	
Lipase	0-160 units/L	N/A	N/A	
Lactic Acid	4.5-19.8 mg/dL	N/A	N/A	

Other Tests **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format. **No labs done**

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR				
PT				
PTT				
D-Dimer				
BNP				
HDL				
LDL				
Cholesterol				
Triglycerides				
Hgb A1c				
TSH				

Urinalysis **Highlight All Abnormal Labs**—Explanations must be in complete sentences and contain in-text citations in APA format. **No labs done**

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
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Color & Clarity				
pH				
Specific Gravity				
Glucose				
Protein				
Ketones				
WBC				
RBC				
Leukoesterase				

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	
Blood Culture	Negative	N/A	Negative	
Sputum Culture	Negative	N/A	N/A	
Stool Culture	Negative	N/A	N/A	

Lab Correlations Reference (1) (APA): Sarah Bush Reference Manual

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

X-ray of the left knee: No acute fracture or malalignment; moderate joint effusion

X-ray of the left foot: No acute fracture or malalignment; extensive soft tissue edema surrounding the great toe distal phalanx stump

Diagnostic Test Correlation (5 points): An X-ray of the left knee was done because the patient came in reporting left knee pain following a fall. An X-ray of the left foot was done to see the progression of healing following a toe amputation.

Diagnostic Test Reference (1) (APA): Sarah Bush Reference Manual

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

Home Medications (5 required) (Home medications are highlighted)

Brand/Generic	Cardizem CD diltiazem	Duramorh PF morphine	Lotensin benazepril	Norvasc amlodipine	Microzide hydrochlorothiazide
Dose	100 mL	2 mg = 1 mL	20 mg	10 mg	25 mg
Frequency	10 mL/hr continuous	Q6H PRN	BID	BID	BID
Route	IV drip	IV push	Oral	Oral	Oral
Classification	Calcium-channel blocker	Opiate agonist	ACE inhibitor	Dihydropyridine calcium channel blocker	Antihypertensive
Mechanism of Action	Inhibits inflow of Ca ⁺ into the cardiac smooth muscle during depolarization.	Selective for the mu-receptor. These receptors can mediate some pharmacologic affects including analgesia, sedation, nausea, and decrease in GI motility.	Inhibits ACE, reducing angiotensin II formation, which leads to decrease vasopressor activity and decrease aldosterone secretion.	Inhibits the influx of Ca ⁺ into vascular smooth muscle and myocardial cells, resulting in decreased vascular resistance and a reduction of the heart rate.	Inhibits the reabsorption of Na ⁺ and Cl ⁻ in the distal renal tubule, resulting in diuresis.
Reason Client Taking	A. Fibb	Pain	History of hypertension	History of hypertension	History of hypertension

Contraindications (2)	Hypotension, heart failure	Respiratory depression, bleeding	Hypersensitivity to ACE, angioedema	Hypotension, pregnancy	Hypersensitivity to active component, anuria
Side Effects/Adverse Reactions (2)	Slow heartbeat, nausea	Drowsiness, fever	Headache, dizziness	Edema, rash	Electrolyte imbalance, respiratory distress
Nursing Considerations (2)	Monitor blood pressure, monitor output	Pain assessments, recognition of respiratory distress	Light-headedness, decreased blood pressure	Monitor blood pressure, monitor cardiac rhythm	Give with food, reduce dosages of other antihypertensives

Hospital Medications (5 required)

Brand/Generic	Levemir insulin detemir	Gralise gabapentin	Zosyn piperacillin-tazobactam	Flolipid simvastatin	Synthroid levothyroxine
Dose	20 units or 0.2 mL	100 mg	3.375 g or 50 mL	20 mg	50 mcg
Frequency	HS	Every 8 Hours	Every 6 Hours	HS	Daily
Route	SubQ	Oral	IV Piggyback	Oral	Oral
Classification	Insulin	Gabapentin Antiepileptic Agent	Penicillin	Statin	Thyroid Hormone
Mechanism of Action	Stimulates peripheral glucose uptake by skeletal muscle and fat.	Has an effect on voltage-gated ion channels which are presynaptic mechanisms that can enhance GABAergic inhibition.	Inhibits bacterial septum formation and cell wall synthesis.	Inhibits endogenous cholesterol production by competitive inhibition of HMG-CoA reductase.	When a deficiency of thyroid hormone is present, this drug will maintain normal T4 levels.
Reason Client Taking	Diabetes	Diabetes	Infection in the toe	High cholesterol	Hypothyroidism
Contraindications (2)	Hypersensitivity to insulin, renal failure	Hypersensitivity to active component, depression	Vancomycin, seizures	Liver disease, pregnancy	Overactive thyroid gland, osteoporosis

Side Effects/Adverse Reactions (2)	Pruritus, hypoglycemia	Facial edema, acne	Diarrhea, seizures	Myalgia, constipation	Headache, tremors
Nursing Considerations (2)	Assess skin lesions, blood glucose levels	Give with food, suicidal ideations	Seizure precautions, diarrhea	Give in the evening, ensure the patient has tried a low cholesterol diet for 3-6 months before	Take with water, do not add IV doses

Medications Reference (1) (APA): Sarah Busch Reference Manual

Assessment

Physical Exam (18 points)

GENERAL (1 point): Alertness: Orientation: Distress: Overall appearance:	A&O x4 to person, place, time, and year Pt was in no distress Well groomed, put together nicely
INTEGUMENTARY (2 points): Skin color: Character: Temperature:	Normal for ethnicity, pink/nude Moist, intact Warm

<p>Turgor: Rashes: Bruises: Wounds: Braden Score: Drains present: Y <input type="checkbox"/> N <input type="checkbox"/> Type:</p>	<p>Adequate skin turgor No rashes No bruises Pt had an amputated toe, open wound 17 No drains present</p>
<p>HEENT (1 point): Head/Neck: Ears: Eyes: Nose: Teeth:</p>	<p>Facial symmetry, no tracheal deviation No hearing changes Slight yellowing, PERRLA No septal deviation, moist mucous membranes No cavities, normal in color</p>
<p>CARDIOVASCULAR (2 points): Heart sounds: S1, S2, S3, S4, murmur etc. Cardiac rhythm (if applicable): Peripheral Pulses: Capillary refill: Neck Vein Distention: Y <input type="checkbox"/> N <input type="checkbox"/> Edema Y <input type="checkbox"/> N <input type="checkbox"/> Location of Edema:</p>	<p>. S1 and S2 sounds present Not applicable Strong peripheral pulses Capillary refill less than 3 seconds None None None</p>
<p>RESPIRATORY (2 points): Accessory muscle use: Y <input type="checkbox"/> N <input type="checkbox"/> Breath Sounds: Location, character</p>	<p>. No Bronchial/Vesicular breath sounds present, no wheezing or crackles in upper or lower lobes</p>
<p>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 <input type="checkbox"/> N <input type="checkbox"/> Nasogastric: Y <input type="checkbox"/> N <input type="checkbox"/> Size: Feeding tubes/PEG tube Y <input type="checkbox"/> N <input type="checkbox"/></p>	<p>. Regular Cardiac diabetic diet 6'2" 95.3 kg Present/Active bowel sounds 02/21/21 No pain, no masses None None None None None No No No</p>

<p>Type:</p>	
<p>GENITOURINARY (2 Points): Color: Character: Quantity of urine: Pain with urination: Y <input type="checkbox"/> N <input type="checkbox"/> Dialysis: Y <input type="checkbox"/> N <input type="checkbox"/> Inspection of genitals: Catheter: Y <input type="checkbox"/> N <input type="checkbox"/> Type: Size:</p>	<p>Pale yellow No odor, transparent 200 cc No No No</p>
<p>MUSCULOSKELETAL (2 points): Neurovascular status: ROM: Supportive devices: Strength: ADL Assistance: Y <input type="checkbox"/> N <input type="checkbox"/> Fall Risk: Y <input type="checkbox"/> N <input type="checkbox"/> Fall Score: Activity/Mobility Status: Independent (up ad lib) <input type="checkbox"/> Needs assistance with equipment <input type="checkbox"/> Needs support to stand and walk <input type="checkbox"/></p>	<p>. Alert, oriented Active ROM of upper extremities, no ROM of lower Walker, gait belt, cane +5 No Yes 80 Needs support to stand and walk, gait belt and walker</p>
<p>NEUROLOGICAL (2 points): MAEW: Y <input type="checkbox"/> N <input type="checkbox"/> PERLA: Y <input type="checkbox"/> N <input type="checkbox"/> Strength Equal: Y <input type="checkbox"/> N <input type="checkbox"/> if no - Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/> Orientation: Mental Status: Speech: Sensory: LOC:</p>	<p>. Yes Yes No Legs Oriented to name, place, time, and year Alert Not slurred, clear Sensitive to touch Conscious</p>
<p>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):</p>	<p>. None College graduate Baptist; no serious connection/relationship Caring and loving home environment with his wife and granddaughter</p>

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	91 BPM	119/65 mmHg	18 RR	37.3 C	95%
1000	109 BPM	124/66 mmHg	18 RR	36.6 C	94%

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0900	Numeric	Left Knee	9/10	Sharp, aching	Morphine
1000	Numeric	Left Knee	7/10	Aching	Norco

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 20 gauge Location of IV: Left peripheral wrist Date on IV: 02/21/21 Patency of IV: Patent Signs of erythema, drainage, etc.: None IV dressing assessment: Transparent, dry, intact	NaCl 75 mL/hr Diltiazem 100 mL/hr

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
2250 mL	1325 mL

Nursing Care

Summary of Care (2 points)

Overview of care: Pt is hospitalized for an infection of the great toe that was amputated.

Pt came in from a fall that caused major left knee pain. Pt continues to have left knee pain.

Procedures/testing done: Pt has an X-ray and toe amputation so far within his care.

Complaints/Issues: None

Vital signs (stable/unstable): Patients vitals were stable.

Tolerating diet, activity, etc.: Patient was on a cardiac diabetic diet, pt was also bedrest.

Physician notifications: N/A

Future plans for patient: N/A

Discharge Planning (2 points)

Discharge location: Home with his wife and granddaughter

Home health needs (if applicable): PT/OT

Equipment needs (if applicable): Walker, cane

Follow up plan: N/A

Education needs: Diabetic management education, proper wound hygiene

Nursing Diagnosis (15 points)

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

Nursing Diagnosis	Rational	Intervention (2 per dx)	Evaluation
<ul style="list-style-type: none"> • Include full nursing diagnosis with “related to” and 	<ul style="list-style-type: none"> • Explain why the nursing diagnosis was chosen 		<ul style="list-style-type: none"> • How did the patient/family respond to the nurse’s actions?

<p>“as evidenced by” components</p>			<ul style="list-style-type: none"> Client response, status of goals and outcomes, modifications to plan.
<p>1. Patient is at risk for infection related to the amputation of his left toe.</p>	<p>This nursing diagnosis was chosen because after surgery of any kind, the patients are at risk for infection. This patient is extremely at risk for infection because it can be hard to reach down and have proper foot hygiene.</p>	<ol style="list-style-type: none"> Proper wound dressing once the first dressing becomes saturated. Assessing the dressing frequently when entering the patient room. 	<p>The patient experienced pain when touching the greater toe, but appreciated the willingness to help. The patient was willing to let us assess the site of amputation and understood that it needed to be done.</p>
<p>2. Patient is at risk for blood clots related to his bedrest activity status.</p>	<p>This nursing diagnosis was chosen because the client’s bedrest activity status prevents the client from getting the blood flow and blood return that is needed. The patients risk for blood pooling in the legs is high, making risk for a blood clot high.</p>	<ol style="list-style-type: none"> Turn the patient every 2 hours or encourage frequent weight shift. Place the client on SCD’s to keep the blood flowing. 	<p>The patient agreed to let us shift his weight. The patient experienced some pain when moving him up in bed due to the left knee injury. The patient understood that the placement of SCD’s and frequent weight shift was needed.</p>
<p>3. Patient is at risk for acute pain related to the left knee injury.</p>	<p>This nursing diagnosis was chosen because although the client was admitted for his toe amputation, he still had a recent fall that caused a knee injury.</p>	<ol style="list-style-type: none"> We limited the movement of the left knee when it was possible to do so. Patient was put on bedrest so that he would not be in any pain while walking. 	<p>The patient was more than willing to limit the amount of movement of the left leg as well as limiting the time he was allowed to get out of bed. However, the patient did not enjoy having to use a urinal. The client understood that it was in his best interest to remain in bed.</p>

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Concept Map (20 Points):

Subjective Data

Patient states that he has pain in his left knee due to a fall at home
Patient states that he has no pain in his left great toe

Patient is at risk for infection related to the amputation of his left toe.
Patient experienced pain when touching the greater toe, but appreciated the willingness to help.
The patient was willing to let us assess the site of amputation and understood that it needed to be done.
Patient is at risk for blood clots related to his bedrest activity status.
The patient agreed to let us shift his weight. The patient experienced some pain when moving him up in bed due to the left knee injury.
The patient understood that the placement of SCD's and frequent weight shift was needed.
Patient is at risk for acute pain related to the left knee injury.
The patient was more than willing to limit the amount of movement of the left leg as well as limiting the time he was allowed to get out of bed. However, the patient did not enjoy having to use a urinal. The client understood that it was in his best interest to remain in bed.

Objective Data

Patient states that his left knee pain is a 9/10 on a numerical scale
Patient had a pulse of 91 BPM, a blood pressure of 119/65 mmHg, a respiratory rate of 18, a temperature of 37.3 C, and an oxygen saturation of 95%

Patient Information

Patient is a 62 year old Caucasian male
Patient has a medical history of diabetes, hypertension, hyperlipidemia, depression, arthritis, and obesity
Patient recently had a great toe amputation

Nursing Interventions

Proper wound dressing once the first dressing becomes saturated.
Assessing the dressing frequently when entering the patient room.
Turn the patient every 2 hours or encourage frequent weight shift.
Place the client on SCD's to keep the blood flowing.
We limited the movement of the left knee when it was possible to do so.
Patient was put on bedrest so that he would not be in any pain while walking.

Nursing Diagnosis/Outcomes



