N431 Care Plan #1

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission	Client Initials	Age	Gender
1/28/2022	J.W	91 years old	Female
Race/Ethnicity Caucasian	**Occupation** Retired	**Marital Status** Widowed	**Allergies** N/A
Code Status Full	**Height** 154.94 cm	**Weight** 58.2 kg	

Medical History (5 Points)

Past Medical History: Hypercalcemia, Hypertension, Hyperlipidemia, Hypothyroidism, Previous DVT, Osteoarthritis, Osteoporosis, Coronary Artery Disease

Past Surgical History: No known past surgical history.

Family History: No known family history.

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use): Patient denies any alcohol, tobacco, or substance abuse.

Assistive Devices: Walker, gate belt

Living Situation: Patient currently lives with her son and daughter in law in Mattoon, Illinois.

Education Level: Graduated high school

Admission Assessment

Chief Complaint (2 points): Lower right leg pain, weakness

History of Present Illness – OLD CARTS (10 points):

Patient is a poor historian. She was unable to give me an apparent reason behind her reason for her hospitalization and when the pain began. History was mostly obtained from the patient's chart to get a clearer overview of what is going on.

The patient is a 91-year-old Caucasian female with a history of hypercalcemia, hyperlipidemia, hypothyroidism, previous DVT, osteoarthritis, osteoporosis, and coronary artery disease. The patient's son noticed the patient was having difficulty walking a week prior to admission. On January 28th, 2022, the patient's son took her to the emergency department to have her checked out. The patient is experiencing lower right leg pain. The son believed a week prior to admission the patient fell. The patient then admitted to a fall happening about a week ago. The patient is a poor historian and does not recall how she fell. The patient states the pain is achy only after she walks around. The patient states she use to go to physical therapy, and it would help relieve the pain a bit.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Right tibial fracture

Secondary Diagnosis (if applicable):

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

Fractures participate in the involvement of musculoskeletal trauma. When injury to a bone happens, it can cause immobility and severe complications that can inhibit the healing process from happening (Capriotti, 2020). The bones in our body go through various sources such as compression, tension, torsion, bending, and shear (Capriotti, 2020). When a bone goes outside these parameters, the risk of a fracture may occur. A fracture is known to be any incomplete, complete disruption of the bone itself. Many distinct types of fractures can happen, which is why knowing the mechanism of how this occurred is helpful. A closed or complete fracture is when a fragment of bone completely separates. There is no displacement and stays beneath the tissue (Capriotti, 2020). An open fracture is when the bone protrudes outside the body (Capriotti, 2020). A compression fracture is the crushing or compression of cancellous bone (Capriotti, 2020). A transverse fracture is when parts of the bone separate but are still near each other (Capriotti, 2020). A spiral fracture happens when a twisting force of the thigh causes a break in the shaft (Capriotti, 2020). A comminuted fracture is multiple fracture lines and bone fragments (Capriotti, 2020). A stress fracture is a break in bone by repetitive activity (Capriotti, 2020). Finally, we have an incomplete fracture in which the bone fragments are still partially joined together (Capriotti, 2020).

The tibia is a weight-bearing bone of the leg. The proximal part of the bone includes the distal section of the knee (Malik, 2021). The signs and symptoms of a bone fracture depend on the location, severity, and mechanism involved in the injury. Fractures may show signs of swelling, pain, tissue disruption, and bleeding (Capriotti, 2020). Other indications can include immobility, limited knee bending, or numbness in the foot (Capriotti, 2020). When dealing with a fracture, they may not always protrude out of the skin, so you need to focus on laboratory values to look for additional abnormalities. The physician will order a blood test to review kidney function, thyroid, calcium, and vitamin D levels. The patient has a history of hypothyroidism which can influence a disturbance in the healing process. She also has a history of hypercalcemia and osteoporosis, which can keep causing the bones to thin (Capriotti, 2020). These specific lab values are essential for the physician to review to ensure the patient receives the proper care and medication to heal the fracture.

When doing a physical exam on a patient, it is essential to review the body head to toe. When dealing with musculoskeletal trauma, the abbreviation ABCDEs can help identify abnormal findings. Starting with the airway, make sure your patient is not at risk for aspiration. Breathing and ventilation may decrease with tissue damage at the fracture site. Circulation and hemorrhage control are essential because a fracture can reduce blood flow. Disability and neurological can be impaired and present numbness, tingling, weakness in the foot, or pain (Capriotti, 2020). Lastly is exposure and environmental control, which can cause a risk for infection if exposed and cause further complications. It is also essential to complete active and passive range of motion exercises. My patient was able to complete this task with physical therapy. An x-ray identifies the fracture and identifies any dislocation of bone fragments. My patient's x-ray diagnosed the tibial fracture. A CT scan can assess the fracture pattern, size, shape, and location for surgical planning if needed (Malik, 2021). My patient also had a venous duplex ultrasound that ruled out a DVT in the right lower extremity.

Treating the tibial fracture depends on the severity of damage to the bone. My patient does not require surgery due to having a clean break in the bone and not destroying the surrounding ligaments or muscles.

Range of motion exercises with physical therapy and follow-up visits to check the progression of bone healing (Malik, 2021). My patient is taking enoxaparin for limited mobility to decrease the risk of blood clots. Tibial fractures can also treat pain management with NSAIDs and analgesics (Capriotti, 2020). My patient is taking aspirin for the pain. Education on signs and symptoms of hypertension, fall risk hazards, and consequences of immobility are essential to improve my patient's quality of life.

Pathophysiology References (2) (APA):

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

Malik, S. (2021, August 6). *Tibial Plateau fractures*. Retrieved February 4, 2022 from https://www.ncbi.nlm.nih.gov/books/NBK470593/

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 x10^6/mcL	2.43 x10^6 mcL (Low)	2.29 x10^6 mcL (Low)	A decrease in red blood cells can indicate anemia which is a result of not enough oxygen getting to the body's cells and tissues. This is also called hypoxia. Hemoglobin is responsible for carrying oxygen to red blood cells. Patient has history of CAD, which can associate with anemia (Capriotti, 2020).
Hgb	13.0 – 17.0 g/dL	8.2 g/dL (Low)	7.9 g/dL (Low)	A decrease in hemoglobin indicates the patient has a low red blood cell count. The decrease value of red blood indicates the reason for the low hemoglobin value. Patient has history of CAD, which can associate with low hemoglobin (Capriotti, 2020).
Hct	38.1 – 48.9 %	24.7 % (Low)	23.3 % (Low)	The decrease in hematocrit can indicate there is not enough supply of healthy red blood cells. The patient has a decrease in red blood cells which is the cause of low hematocrit. Patient has history of CAD, which can associate with low hematocrit (Capriotti, 2020).
Platelets	149 – 393 K/mcL	159 K/mcL	154 K/mcL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
WBC	4.0 – 11.7 K/mcL	4.2 K/mcL	4.6 K/mcL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Neutrophils	45.3 – 79.0 %	61.8 %	66.6 %	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

Lymphocytes	11.8 – 45.9%	24.8 %	20.5 %	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Monocytes	4.4 – 12 %	8.2%	6.7%	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Eosinophils	0.0 – 6.3 %	4.6%	5.6%	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Bands	0.0 – 10.0%	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

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	133 mmol/L (Low)	133 mmol/L (Low)	Hyponatremia is due fluid volume impairment. Common causes can be resulted from liver, renal, diarrhea or diuretic use. The patient is taking Aspirin, which is an NSAID. These medications can cause hyponatremia (Capriotti, 2020).
K+	3.5 – 5.1 mmol/L	4.0 mmol/L	4.2 mmol/L	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Cl-	98 – 107 mmol/L	105 mmol/L	102 mmol/L	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
CO2	21 – 31 mmol/L	24 mmol/L	28 mmol/L	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Glucose	74 – 109 mg/dL	85* mg/dL	90* mg/dL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
BUN	7 – 25 mg/dL	19 mg/dL	18 mg/dL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Creatinine	0.70 – 1.30 mg/dL	0.80 mg/dL	0.81 mg/dL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Albumin	3.4 – 5.0 g/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah

				Bush Lincoln Health Center, 2022).
Calcium	8.6 – 10.3 mg/dL	10.8 mg/dL (High)	11.0 mg/dL (High)	Hypercalcemia is when the amount of calcium that enters the ECF exceeds the amount of calcium excreting from the kidneys. Patient has a history of hypercalcemia which can cause this lab value to be high (Capriotti, 2020).
Mag	1.6-2.6 mg/dL	N/A	1.7 mg/dL	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Phosphate	45 – 117 units/L	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Bilirubin	0.2 – 1.0 mg/dL	0.4 mg/dL	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Alk Phos	34 – 104 units/L	82 units/L	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
AST	5 – 40 unit/L	13 unit/L	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
ALT	7 – 56 unit/L	7 unit/L	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Amylase	30 – 110 U/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Lipase	0 – 160 U/L	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Lactic Acid	0.5 – 2.0 mmol/L	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Troponin	0 – 0.04 ng/mL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
CK-MB	0.60 – 6.30 ng/mL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Total CK	30 – 223 unit/L	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

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	Normal: 1 Therapeutic 2.0 – 3.0	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
PT	10 – 12 seconds	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
PTT	30 – 45 seconds	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
D-Dimer	Negative, < 250 mg/mL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
BNP	0 - 100 pq/mL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
HDL	< 60 md/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
LDL	< 100 mg/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Cholesterol	125 - 200 mg/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Triglycerides	< 150 mg/dL	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Hgb A1c	< 5.7%	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
TSH	0.5 – 5.0	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

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	Clear Light	N/A	N/A	There are no abnormal values. The

	Yellow			lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
pH	5.0 – 8.0	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Specific Gravity	1.003 – 1.030	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Glucose	0-0.8 mmol/ L	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Protein	NEGATIVE	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Ketones	NEGATIVE	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
WBC	0 - 5	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
RBC	0 - 5	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Leukoesterase	NEGATIVE	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

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	7.35 – 7.45	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
PaO2	80- 100 mmHg	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

PaCO2	40.0 – 50.0 mmHg	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
HCO3	22 - 26	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
SaO2	95 – 100 %	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

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	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Blood Culture	Negative	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Sputum Culture	Negative	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).
Stool Culture	Negative	N/A	N/A	There are no abnormal values. The lab is within normal range (Sarah Bush Lincoln Health Center, 2022).

Lab Correlations Reference (1) (APA):

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

Sarah Bush Lincoln Health Center. (2022). Cerner. https://www.sarahbush.org/

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

On admission:

X-ray of tibia/ fibula right lower extremity

The x-ray displays proximal fibular shaft fracture. Findings minimally displaced fracture involving the proximal fibular shaft with mild lateral cortical buckling range (Sarah Bush Lincoln Health Center, 2022).

Venous duplex ultrasound

The venous duplex ultrasound rules out a DVT in the right lower extremity. Findings present no evidence of a DVT range (Sarah Bush Lincoln Health Center, 2022).

Diagnostic Test Correlation (5 points):

The x-ray of tibia/fibula right lower extremity was performed on admission due to the patient having right lower leg pain. The x-ray is used to detect any broken bones or other injuries (Capriotti, 2020).

The venous duplex ultrasound was performed on admission due to the patient having right lower leg pain. The diagnostic test is to determine if the patient has a DVT (Capriotti, 2020).

Diagnostic Test Reference (1) (APA):

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

Sarah Bush Lincoln Health Center. (2022). Cerner. https://www.sarahbush.org/

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

Home Medications (5 required)

Brand/Generic	Aspirin (Acetylsalicylic acid)	Atorvastatin (Lipitor)	Levothyroxine (Synthroid)	Vitamin D3 (Cholecalciferol)	Metoprolol Tartrate (Lopressor)
Dose	81 mg	20 mg	25 mcg (0.025 mg)	25 mcg (0.025 mg)	25 mg
Frequency	Daily	HS	Daily	Daily	Daily
Route	Oral	Oral	Oral	Oral	Oral
Classification	Pharmacological: Salicylate Therapeutic: NSAID	Pharmacological :HMG-CoA Reductase inhibitor Therapeutic: Antihyperlipidemic	Pharmacologic: Synthetic Therapeutic: Thyroid hormone replacement	Pharmacologic: Vitamin D analogs Therapeutic: Nutritive agent	Pharmacologic: Beta Blocker Therapeutic: Antihypertensive
Mechanism of Action	Blocks the activity of cyclooxygen, which is needed for prostaglandin synthesis. Prostaglandins are essential for mediating the inflammatory response which causes the pain and swelling to	Blocks HMG-CoA reductase which is a liver enzyme that the body needs for production of low-density lipoproteins. The medication prevents plaque deposits to accumulate on the walls of the artery, which makes them narrow. This	Replacement of endogenous thyroid hormone, which can be effective by controlling DNA transcription and protein synthesis. This drug aids in the	Calcitriol exerts its effects on the body by activating and binding on to vitamin D receptors. The activation causes vitamin D receptors to bind to cellular	Inhibits stimulation of beta receptor sites in the heart to decrease cardiac excitability, cardiac output, and myocardial oxygen demand.

	occur.	reduces the risk of atherosclerosis complications like chest pain and heart attack.	regulation of differentiation and proliferation of stem cells.	DNA and control gene expression which triggers a biological response.	
Reason Client Taking	The patient is taking this medication due to significant past medical history of cardiac issues.	This patient is taking this medication to prevent strokes, heart attacks and heart disease.	This patient is taking this medication to due significant past medical history of hypothyroidism.	This patient is taking this medication due to being over the age of 65 and past medical history of cardiovascular conditions. It is also to aid in support of brittle and weak bones.	The patient has significant past medical history of cardiovascular issues and hypertension.
Contraindications (2)	1.coagulation disorders 2.decreased blood platelets	1.Unexplained persistent rise in serum transaminase level 2. Active hepatic disease	1.Acute MI 2. uncorrected adrenal insufficiency	1.Hypercalcemia 2. Decreased kidney function	1. Acute heart failure 2. Peripheral vascular disease
Side Effects/Adverse Reactions (2)	1.CNS depression 2. Thrombocytopenia	1.memory problems 2. joint pain	1. Heart failure 2. decreased bone material density	1. Chest pain, shortness of breath 2.Excessive amounts of drug can cause: nausea, vomiting,	1. memory loss 2. constipation

				constipation, loss of appetite	
Nursing Considerations (2)	1.Do not crush timed-release or controlled release unless directed 2.Monitor for tinnitus-indication of blood aspirin level reaches or exceeds maximum dose	1.Assess any muscle pain, weakness, or tenderness, especially when in combination with dark-colored urine or malaise. 2.Monitor renal function	1. Use medication cautiously in elderly patients and underlying cardiovascular disease. 2. Keep in mind when interpreting TBG levels, many disorders and medications can decrease concentration which can cause TBG deficiency.	1. This medication needs frequent blood tests 2. Monitor manifestation of hypercalcemia	1. Use cautiously in patients with hypertension or angina because effects can further depress myocardial contractility 2. If a patient with heart failure develops symptomatic bradycardia - the dose should be decreased
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	For long-term use of medication, monitor liver function lab tests including ALT, AST, creatinine, and bilirubin due to possibility of liver damage.	Liver function lab tests prior to administration of atorvastatin then clinically after if necessary	Patient is taking enoxaparin which is an anticoagulant. PT levels need to be checked prior and on-going during medication use for dosage adjustment.	Patient needs a baseline and periodic lab values of calcium, phosphorus, magnesium, and alkaline phosphate. Patient has history of hypercalcemia, if occurs this	Make sure prior to administration to check blood pressure and apical pulse rate to determine if drug needs to be held.

				medication needs to be withheld until calcium levels are within normal range.	
Client Teaching Needs (2)	1.Tell patient to not take aspirin if it has a strong vinegar odor 2.Instruct patient to take aspirin with food or after meals	1. Avoid foods in high fat or cholesterol, drug will not be as effective. 2.Instruct the patient to report any sign of muscle weakness which is an indication of rhabdomyolysis.	1. Instruct the patient to take drug at least 30 minutes before breakfast because drug absorption is increased on an empty stomach. 2. Must rake drug with a full glass of water to avoid chocking, tablet sticking to throat and developing heart burn after ingesting.	1. Instruct patient to not take medication is experiencing signs and symptoms of hypercalcemia. Make sure patient is aware of what those signs and symptoms are. 2. Take medication as prescribed to avoid overdose od medication- these indications can include hypercalcemia. Call the doctor.	1. Teach patient how to take blood pressure and pulse rate and to monitor before taking medication. If pulse rate is below 60 bpm call the provider before taking medication. 2. Take with food and at same time each day

Hospital Medications (5 required)

Brand/Generic	Levothyroxine (Synthroid)	Cefdinir (Omnicef)	Doxycycline (Oracea)	Enoxaparin (Lovenox)	Metoprolol (Lopressor)
Dose	25 mcg 1 tab	300 mg 1 cap	100 mg 1 cap	40 mg (0.4 mL)	25 mg 1 tab
Frequency	Daily	Every 12 hours	BID	Daily	BID
Route	Oral	Oral	Oral	SQ injection	Oral
Classification	Pharmacological: HMG-CoA Reductase inhibitor Therapeutic: Antihyperlipidemic	Pharmacological: Cephalosporin antibiotics Therapeutic: third generation cephalosporin	Pharmacological: Antibiotic Therapeutic: Tetracycline antibiotic	Pharmacological: Low-molecular heparin Therapeutic: Anticoagulant	Pharmacologic: Beta Blocker Therapeutic: Antihypertensive
Mechanism of Action	Replacement of endogenous thyroid hormone, which can be effective by controlling DNA transcription and protein synthesis. This drug aids in the regulation of differentiation and proliferation of stem cells.	Exerts a broad-spectrum activity against multiple gram-negative and gram-positive bacterial infections. It interferes by reacting to the cell wall synthesis.	Exerts a broad-spectrum activity against multiple gram-negative and gram-positive bacterial infections. It interferes by reacting to the cell wall synthesis.	Potentiates the action of antithrombin III, which is a coagulation inhibitor. When binding this inhibitor enoxaparin rapidly inactivates clothing factors.	Inhibits stimulation of beta receptor sites in the heart to decrease cardiac excitability, cardiac output, and myocardial oxygen demand.

Reason Client Taking	This patient is taking this medication to due significant past medical history of hypothyroidis m.	The patient is taking this medication due to the fracture. This medication is used during the healing process to prevent or treat an infection.	The patient is taking this medication due to the fracture. This medication is used during the healing process to prevent or treat an infection.	The patient is taking this medication to prevent deep vein thrombosis due to the fracture in the leg which prevents active mobility.	The patient has significant past medical history of cardiovascul ar issues and hypertensio n.
Contraindicati ons (2)	1.Acute MI 2. uncorrected adrenal insufficiency	1. severe renal impairment 2. patients with history of cephalospori n hypersensiti vity	1. hypersensitiv ity to doxycycline, other tetracyclines, or their components 2. recent colitis caused by antibiotic use	1. Active major bleeding 2. history of heparin induced thrombocyto penia	1. Acute heart failure 2. Peripheral vascular disease
Side Effects/Advers e Reactions (2)	1. Heart failure 2. decreased bone material density	1. dark colored urine 2. severe stomach pain	1. thrombocyto penia 2. hepatoxicity	1. peripheral edema 2. osteoporosis	1. memory loss 2. constipation
Nursing Considerations (2)	1. Use medication cautiously in elderly patients and underlying cardiovascula r disease. 2. Keep in mind when interpreting	1. Give with small meal, to avoid GI complicatio ns. 2. Make sure other drugs like antacids and iron supplements are taking 2	1. Expect to change or adjust the dosage of the medication for patient who have hepatic disease to avoid drug accumulation .	1. Expect to give drug with aspirin to patients with unstable angina or STEMI. To reduce risk of bleeding after vascular procedures.	1. Use cautiously in patients with hypertensio n or angina because effects can further depress myocardial contractility

	TBG levels, many disorders and medications can decrease concentration which can cause TBG deficiency.	hours from the cefdinir dose.	2. Monitor patient for adverse skin reactions, this drug can cause severe skin reactions that could be life threating.	2. Keep protamine sulfate nearby in case of accidental overdose.	2. If a patient with heart failure develops symptomatic bradycardia- the dose should be decreased
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	Patient is taking enoxaparin which is an anticoagulant. PT levels need to be checked prior and on-going during medication use for dosage adjustment.	Make sure to order a culture and sensitivity test before the drug therapy begins and during to see if infection has resolved. Make sure to assess WBC count, temperature, respiration, and pulse before first dose as well.	Prior to administration the nurse should monitor for signs of hypersensitivity. The nurse should listen to breath sounds and monitor respiratory vitals.	Prior to administration it is important to check serum potassium levels for elevation and watching closely for bleeding. Monitor complete blood count especially, platelet count and notify provider if platelets are below 100,000/mm. Also check when last dose was given and the site.	Make sure prior to administration to check blood pressure and apical pulse rate to determine if drug needs to be held.
Client Teaching Needs (2)	1. Instruct the patient to take drug at least 30 minutes before breakfast because drug	1. Make sure to take full course of drug even if you feel better before the	1. Advise patients to avoid antiacids containing aluminum, calcium, or	1. Teach the patient how to properly inject subcutaneously and make sure to rotate	1. Teach patient how to take blood pressure and pulse rate and to

	absorption is increased on an empty stomach. 2. Must rake drug with a full glass of water to avoid chocking, tablet sticking to throat and developing heart burn after ingesting.	completion of treatment. 2. Monitor side effects of medication, make indicate new infection: call your doctor immediately if you have diarrhea that is watery or bloody.	magnesium 2. Inform the patient their urine a dark yellow or brown color during drug therapy.	sites. 2. Instruct the patient to call the provider if the site presents any signs of infection.	monitor before taking medication. If pulse rate is below 60 bpm call the provider before taking medication. 2. Take with food and at same time each day

Medications Reference (1) (APA): (Only medications on chart for patient for current admission)

Jones & Bartlett learning: 2020 nurse's drug handbook.

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:**	Patient is alert and oriented x 3. Patient identified themselves, place, and situation. Patient not fully oriented with time. Patient does not display any distress and responds appropriately. Patient is

Overall appearance:	cooperative, well groomed, cooperative and has a clean appearance. Patient has clear speech but took some time to respond to questions.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** 19 **Drains present: Y☐ N ☒** **Type:**	The skin color of the patient was pale. The character of the skin displayed dry on the arms, legs, heels, and feet. The temperature of the skin was warm on upper extremities. The temperature on the right calve in the lower extremities was cooler to the touch. The other lower extremities were warm. Turgor displayed elasticity. The patient had no rashes present but had 4 small bruises on the anterior side of right forearm. The patient had a stage 1 pressure ulcer on coccyx area. Braden Score of 19. The patient had no drains present.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	The patients head and neck display active range of motion. The head displays no abnormalities. No presence of jugular vein distention, masses, and non- tender in the neck. The ears are bilateral and symmetrical. No sign of drainage present. Tympanic membrane is pearly gray bilaterally. Patients' eyes display pupils equal, round, and reactive to light and accommodation. No presences of conjunctiva. The patients' nose is clear, no drainage or polyps present. Nose is symmetrical and no deviated septum. Teeth shows browning near the gum line. Mouth is pink, moist oral mucosa membranes. .
CARDIOVASCULAR: **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 with no adventitious. S3 and S4 shows no presence of gallops or murmurs. Peripheral pulses: Right and left radial 3+, right and left brachial 3+, right and left popliteal 3+. Right and left posterior tibial 3+, left dorsal pedis 3+ (detectable, full, easily palpable). Right dorsal pedis 2+, slightly diminished pulse. Capillary refill is less than 3 seconds for upper and lower extremities on both sides. The patient shows no sign of edema on upper or lower extremities on both sides.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Breath sounds are clear/ diminished and equal bilaterally anterior and posterior. No use of accessory muscle, regular, non-labored breathing. Patient was on room air.

GASTROINTESTINAL: **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:**	Patient is on a regular die at home. Patient is on a regular diet currently. Height: 154.94 cm Weight: 58.2 kg Bowel sounds were active in all 4 quadrants. Last bowel movement: 1/31/22 at 1500. Abdomen is soft and non-distended. No presences no masses. No distention No incisions No scars No drains No wounds No ostomy No nasogastric tube No feeding tubes
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y** ☐ **N** ☒ **Dialysis: Y** ☐ **N** ☒ **Inspection of genitals:** **Catheter: Y** ☐ **N** ☒ **Type:** **Size:**	Urine was a slight dark yellow color with no presence of odor. Voided x2: unable to measure output Patient denies any pain with urination or difficulties. No dialysis No abnormalities of genitals No catheter
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y**☐ **N** ☒ **Fall Risk: Y** ☒ **N**☐ **Fall Score**: 85 **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk** ☐	The patient's skin was warm on upper extremities. The temperature on the right calve in the lower extremities was cooler to the touch. The other lower extremities were warm. Patient has active range of motion in upper and lower extremities bilaterally. Patient shows equal strength in upper and lower extremities bilaterally. The patient uses a walker and is up with one assist with a gait belt. The patient is a fall risk with a score of 85. The patient has slightly limited mobility, has a challenging time lifting herself up and turning over. Patient needs assistance with equipment and support when walking.
NEUROLOGICAL:	

MAEW: Y ☐ N☒ **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Patient is alert and oriented x 3. Patient identified themselves, place, and situation. Patient not fully oriented with time. Patient's cognition slightly impaired. Patient's speech is clear, but slow in response. Patient has sensation in right and left upper/lower extremities equally. Level of consciousness patient is alert, awake and responsive.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient states her son and her daughter in law are immensely helpful, which helps her cope. The patient states she graduated high school and went straight to work in an office after. Patient is Christian. Patient states she was raised a Christian that is why she is. The patient currently lives in Mattoon, Illinois. The patient lives with her son and daughter in law. She states they are her biggest support since her husband died years ago.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0835	90 bpm	120/72	18	36.4 C	93%
1114	78 bpm	118/60	18	36.5 C	93%

Vital Sign Trends: Patient did not show any significant trends. Vital signs stayed consistent throughout the day. Patient took Metoprolol at 0900, which could influence a drop in the pulse rate.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0815	Numeric	right leg	2 out of 10	Patient states	Sitting,

				feels a bit achy	elevating the leg on a pillow
1158	Numeric	Right leg	0 out of 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:**	Peripheral 20- gauge intravenous Right AC 1/29/22 Patent No sign of phlebitis, infiltration, redness, swelling, or pain. IV was intact, clear, and dry.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
0900: coffee with MiraLAX 240 mL	Void x2 Bowel movement x1

Nursing Care

Summary of Care (2 points)

Overview of care: The patient was very cooperative and calm throughout the day. The patient was interactive during the assessment. Her answers to questions showed signs of slight delay. The patient has little to no pain, rating her worst pain a 2 out of 10 in the morning. Towards the evening patient rated her pain a 0 out of 10. The vitals stayed within a consistent stable range. The patient saw physical therapy and completed her range of motion exercises. Physical therapy noticed she has a challenging time understanding how to use the walker. The patient got up to eat both breakfast and lunch in the chair walking with one assist. The physician did not have any notes for the patient. The nurse is planning to discharge the patient today.

Procedures/testing done located in paragraph above

Complaints/Issues: located in paragraph above

Vital signs (stable/unstable): located in paragraph above

Tolerating diet, activity, etc.: located in paragraph above

Physician notifications: located in paragraph above

Future plans for client: located in paragraph above

Discharge Planning (2 points)

Discharge location: The patient is being discharged back to her home in Mattoon, Illinois.

Home health needs (if applicable): The nurse is waiting on case management about Carle home health. If they are unable then Lincolnland home care will take over.

Equipment needs (if applicable): The patient will be going home with a walker and gait belt.

Follow up plan: The patient is planned to follow up in two weeks with ortho due to no surgery for the fracture.

Education needs: The patient will be educated on how to properly turn and use the of a walker. She will be educated on infection prevention techniques. The patient will also learn how to manage and identify signs of hypertension.

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

Nursing Diagnosis	Rationale	Interventions	Outcome	Evaluation

• Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	• Explain why the nursing diagnosis was chosen	**(2 per dx)**	**Goal (1 per dx)**	• How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for falls related to the tibial fracture in the right leg as evidence by fall risk score 85.	I chose this nursing diagnosis because being an elevated risk for falls can cause further damage to the patient and even death.	**1.**Assist the patient with ambulation with use of assistive devices (Hinkle & Cheever, 2018) **2.**Ensure the patient is wearing a fall risk band, non-skid socks and the bed is in the lowest position to reduce risk of fall (Hinkle & Cheever, 2018)	**1.** The patient will not experience a fall during hospitalization	The patient did have a fall risk band, non-skid socks, and bed in the lowest position. These interventions aided in ensuring they had the proper equipment to prevent falls. The patient was able to go to the bathroom using assistive devices such as a gait belt walker with my assistance. The patient and daughter-in-law were very thankful for all the help and education the nurse, and I provided to decrease fall risks. The patient experienced no falls during the hospital stay.
2. Impaired mobility related to tibial fracture	I chose this nursing diagnosis because it is	**1.** Reposition the patient every two hours (Hinkle &	1. The patient will be able to prevent skin breakdown or	The patient was repositioned every two hours and participated in a

as evidence by patient's inability to ambulate without assistance.	essential for physical and cognitive health in older adults.	Cheever, 2018) **2.**Encourage range of motion exercises and physical mobility (Hinkle & Cheever, 2018)	blood clotting due to active movement.	range of motion exercises. The patient also wanted to go to the bathroom instead of the bedside commode. The patient stated she was determined to get out of bed and use the bathroom. The patient's daughter-in-law was thrilled to see a spark in her mother-in-law. The patient struggled to ambulate due to weakness but managed to meet both goals and interventions for the day.
3. Risk for fluid and electrolyte imbalance related to trauma injury as evidence by hypercalcemia	I chose this nursing diagnosis because too much calcium in the bones can cause weakness, interfere with the blood levels and how your brain works.	**1.** Assess the patient's level of consciousness and neurological status throughout the shift to notice shifts in cognition or muscular strength (Hinkle & Cheever, 2018) **2** Monitor the input and output (Hinkle & Cheever, 2018)	**1.** The patient will be able to show muscle strength and improvement in cognitive status.	The patient's daughter-in-law was happy to see her mother-in-law's further education and care. The patient's muscles were weak but showed efforts to try and ambulate as much as possible. She was still responding at a slower pace, but towards the end of the shift, she started responding a bit faster. The patient was constipated throughout the

				day but could make a bowel movement toward the end of the shift.
4. Acute pain related to movement of fractured leg as evidence by reports of pain while ambulating	I chose this nursing diagnosis because the patient would deny pain but show weakness when ambulating	**1.** Elevating the affected extremity after ambulation to reduce pain and promote venous return (Hinkle & Cheever, 2018) **2.** Provide emotional support and encouragement so the patient feels comfortable to vocalize pain (Hinkle & Cheever, 2018)	**1.** The patient can vocalize when in pain and relive discomfort	The patient was able to express relief when elevating the affected leg. I connected with the patient, and she started to be more vocal about her aggravating factors. The daughter-in-law was thrilled to see her opening up a bit more. The daughter-in-law just wants to make sure the patient is okay. The patient was about to slightly meet the goal by slowly opening up to the idea of being more vocal about her pain.

Other References (APA):

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of Medical-Surgical Nursing*. Wolters Kluwer.

Concept Map (20 Points):

Subjective Data

Patient states "My pain is about a 2 out of 10"

Patient states "My leg pain has been going on for a while"

Patient states "I feel an achy pain after I walk"

Nursing Diagnosis/Outcomes

1. Risk for falls related to the tibial fracture in the right leg as evidence by fall risk score 85. Outcome: Goal met: The patient did have a fall risk band, non-skid socks, and bed in the lowest position. The patient was able to go to the bathroom using assistive devices such as a gait belt walker with my assistance.
2. Impaired mobility related to tibial fracture as evidence by patient's inability to ambulate without assistance. Outcome: Goal met: The patient was repositioned every two hours and participated in a range of motion exercises.
3. Risk for fluid and electrolyte imbalance related to trauma injury as evidence by hypercalcemia. Outcome: Goal partially met: The patient's muscles were weak but showed efforts to try and ambulate as much as possible. She was still responding at a slower pace, but towards the end of the shift, she started responding a bit faster.
4. Acute pain related to movement of fractured leg as evidence by reports of pain while ambulating. Outcome: Goal partially met: The patient was able to express relief when elevating the affected leg. I connected with the patient, and she started to be more vocal about her aggravating factors.

Objective Data

Labs:
Calcium: 11.0 mg/dL
Hct: 23.3%
Hgb: 7.9%
RBC: 2.29x10^6/mcL
The temperature on the right lower leg was Cooler to the touch compared to the other extremities.

Client Information

a 91-year-old Caucasian female with a history of hypercalcemia, hyperlipidemia, hypothyroidism, previous DVT, osteoarthritis, osteoporosis, and coronary artery disease. The patient's son noticed the patient was having difficulty walking a week prior to admission. On January 28th, 2022, the patient's son took her to the emergency department to have her checked out. The patient is experiencing lower right leg pain.

Nursing Interventions

1. Assist the patient with ambulation with use of assistive devices .Ensure the patient is wearing a fall risk band, non-skid socks and the bed is in the lowest position to reduce risk of fall
2. Reposition the patient every two hours Encourage range of motion exercises and physical mobility
3. Assess the patient's level of consciousness and neurological status throughout the shift to notice shifts in cognition or muscular strength. Monitor the input and output
4. Elevating the affected extremity after ambulation to reduce pain and promote venous return
 Provide emotional support and encouragement so the patient feels comfortable to vocalize pain