N431 Care Plan # 2

Lakeview College of Nursing

Andrea Cook

Demographics (3 points)

Date of Admission 3-4-2020	**Patient Initials** B.M.	**Age** 38	**Gender** Female
Race/Ethnicity Caucasian	**Occupation** Nurse	**Marital Status** Married	**Allergies** Morphine sulfate/Ragweed
Code Status Full	**Height** 5'1"	**Weight** 123	

Medical History (5 Points)

Past Medical History:

- Hypertension
- Urinary Tract Infections
- Kidney Stones

Past Surgical History:

- Cesarean section
- Cholecystectomy in 2012

Family History:

- MotherDiabetes
- Brother-Diabetes
- Father-MI

Social History (tobacco/alcohol/drugs):

The patient smokes a pack of cigarettes a day for ten years. Drinks alcohol 1 to 2 times per month. The patient denies drug use.

Assistive Devices:

No noted assistive devices

Living Situation:

She lives at home with husband and eight children.

Education Level:

The client has a Bachelor's degree in nursing.

Admission Assessment

Chief Complaint (2 points):

"Redness, swelling, and pain to the RLE"

History of present Illness (10 points):.

The onset of the symptoms stated by the client was, "I was playing with my children outdoors and tripped over a rock and fell and skinned my knee on the pavement." Location/radiation is in the RLE. The duration and character of the pain are unknown. No aggravating and relieving factors. The timing and severity of the discomfort are unidentified.

Primary Diagnosis

Primary Diagnosis on Admission (2 points):

- Cellulitis

Secondary Diagnosis (if applicable):

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NA

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

The bacterial infection of the skin called Cellulitis can be deadly. There are many different aspects to this infection. "Cellulitis usually affects the skin on the lower legs, but it can occur in the face, arms, and other areas. It occurs when a crack or break in your skin allows bacteria to enter" (Cellulitis, 2020, para. 2). It is essential to understand the infection on a cellular level, next to know the manifestations, followed by the diagnostic and laboratory finding, and lastly, what the client's tests that diagnosed the Cellulitis.

Cellulitis is a type of bacterial infection of the skin tissue. "Cellulitis refers to an infection of the tissue just below the skin surface" (Fundukian, 2011, p. 888). The infection's pathophysiology is described in terms of how bacteria infect the body. "Once past the skin surface, the warmth, moisture, and nutrients allow bacteria to grow rapidly. Disease-causing bacteria release proteins called enzymes that cause tissue damage" (Fundukian, 2011, p. 888). As a consequence, the bacteria can spread to other systems in the body. "An untreated infection may spread to the lymphatic system, the lymph nodes, the bloodstream, or into deeper tissues" (Fundukian, 2011, p. 888). The most common bacteria are streptococcus and staphylococcus. "Cellulitis occurs when bacteria, most commonly streptococcus and staphylococcus, enter through a crack or break in your skin" (Cellulitis, 2020, para. 6). There are several manifestations seen in Cellulitis.

The manifestations of Cellulitis are typical, with any infection involving inflammation. "The body's reaction to damage is inflammation, which is characterized by pain, redness, heat, and swelling" (Fundukian, 2011, p. 888). The appearance of the infection is different from the typical appearance of inflammation. "The infected area appears as a red patch that gets larger rapidly within the

first 24 hours" (Fundukian, 2011, p. 888). There are other symptoms that are an overall sick feeling, fever, chills, fatigue, and aching muscles (Fundukian, 2011, p. 888). There are some diagnostic and labs used to confirm the diagnosis of Cellulitis.

The diagnostic measures needed to confirm Cellulitis are primary on the symptoms the patient is exhibiting. "The diagnosis of cellulitis is based mainly on the patient's symptoms" (Fundukian, 2011, p. 889). The laboratory testing will help with the choice of antibiotic. "Laboratory tests may be done to determine which kind of bacteria is causing the infection" (Fundukian, 2011, p. 889). A wound culture might be ordered. "If there is no obvious skin injury, a needle may be used to inject a small amount of sterile salt solution into the infected skin, and then the solution is withdrawn" (Fundukian, 2011, p. 889). The infection can be severe and develop into the blood. "A blood sample may be taken from the patient's arm to see if bacteria have entered the bloodstream" (Fundukian, 2011, p. 889). A CBC will be ordered, and they will mainly look at PCT, WBC, CRP, and ESR to see if they are increased, which are indicative of showing inflammation. The venous Doppler might be ordered to see the function of the blood flow to the extremity. "A Doppler ultrasound is a noninvasive test that can be used to estimate the blood flow through your blood vessels by bouncing high-frequency sound waves (ultrasound) off circulating red blood cells" (Sheldon & Sheps, 2019, para. 1).

The patient needed numerous tests performed to distinguish the diagnosis. The client had a right foot x-ray that did not show any abnormalities. The CBC blood test showed that there were elevated white blood cells to confirm an infection. There was a venous Doppler performed to verify that the patient did not have a DVT that then developed into Cellulitis. "Patients with a warm, swollen, tender leg should be evaluated for both cellulitis and DVT because patients with primary DVT often develop secondary cellulitis"

(Deep Venous Thrombosis (DVT) Differential Diagnoses, 2019, para. 2). The primary diagnosis was the symptoms the patient exhibited.

To conclude, it is essential to understand the infection on a cellular level, next to know the manifestations, followed by the diagnostic and laboratory findings, and lastly, what the client's tests diagnosed the Cellulitis. "Left untreated, the infection can spread to your lymph nodes and bloodstream and rapidly become life-threatening. It isn't usually spread from person to person" (Cellulitis, 2020, para. 3).

Pathophysiology References (2) (APA):

Cellulitis. (2020, February 6). Retrieved from https://www.mayoclinic.org/diseases-conditions/cellulitis/symptoms-causes/syc-20370762

Deep Venous Thrombosis (DVT) Differential Diagnoses. (2019, November 10). Retrieved from https://emedicine.medscape.com/article/1911303-differential

Fundukian, L. J. (2011). *The Gale encyclopedia of medicine* (Fourth, Vol. 2). Detroit: Gale.

Sheldon G. Sheps, M. D. (2019, December 31). *Doppler ultrasound: What is it used for?* Retrieved from https://www.mayoclinic.org/doppler-ultrasound/expert-answers/faq-20058452

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 3/2	Today's Value	Reason for Abnormal Value
RBC	Females: 4.2 to 5.4 million/ uL Males: 4.7 to 6.1	NA	NA	
Hgb	Females: 12 to 16 g/dL Males: 14 to 18 g/dL Elderly: levels slightly decreased	**8.8 Low**	NA	This patient could be anemic or have some absorption issues. The client is taking prenatal vitamins daily and has eight kids, and the information presented doesn't state when her last pregnancy was.(Pagana & Pagana, 2011).
Hct	Females: 37 to 47% Males: 42 to 52% Elderly: Levels slightly decreased	NA	NA	
Platelets	150,000 to 400,000 mm^3	NA	NA	
WBC	5,000 to	**17.4**	NA	The client has elevated levels in WBC

	10,000/mm^3	**High**		from the cellulitis infection in her RLE (Pagana & Pagana, 2011).
Neutrophils	45%75% (Normal Lab Values - Common Laboratory Values)	NA	NA	
Lymphocytes	20%-40% (Normal Lab Values - Common Laboratory Values)	NA	NA	
Monocytes	4.4-12% (Normal Lab Values - Common Laboratory Values)	NA	NA	
Eosinophils	Less than 7% (Normal Lab Values - Common Laboratory Values)	NA	NA	
Bands	< x 10^9/L (Normal Lab Values - Common Laboratory Values)	NA	NA	

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 to 145 mEq/L	138	NA	
K+	3.5 to 5.0 mEq/L	3.6	NA	
Cl-	98 to 106 mEq/L	NA	NA	
CO2	21-34 (Normal Lab Values - Common Laboratory Values)	NA	NA	
Glucose	70-105 mg/dL	86	NA	
BUN	10-20 mg/dL	10	NA	
Creatinine	Females: 0.5-1.1 mgdL Males: 0.6-1.2 mg/dL (ATI)	**1.67**	NA	The patient could was dehydrated (Pagana & Pagana, 2011).
Albumin	3.5 to 5 g/dL	NA	NA	

Calcium	9.0-10.5 mg/dL (ATI)	NA	NA	
Mag	1.3 to 2.1 mEq/L	NA	NA	
Phosphate	2.5-4.5 (ATI) (Cleveland Clinic Cancer).	NA	NA	
Bilirubin	0.3 to 1 mg/dL	NA	NA	
Alk Phos	30 to 120 units/L	NA	NA	
AST	0 to 35 units/L	NA	NA	
ALT	4 to 36 units/L	NA	NA	
Amylase	30 to 220 units/L	NA	NA	
Lipase	0 to 160 units/L	NA	NA	
Lactic Acid	0.4-2.3 (Normal Lab Values - Common Laboratory Values)	NA	NA	
Troponin	0-0.4 ng/mL (ATI)	NA	NA	
CK-MB	3-5% or 5-25 IU/L	NA	NA	

	(Cabaniss CD. Creatine Kinase)			
Total CK	22-198 u/L (ATI)	NA	NA	

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	0.8 to 1.1 (desired goal of 2 to 3 on warfarin therapy)	NA	NA	
PT	11 to 12.5 seconds, 85 to 100% or 1:1.1 client-control ratio	NA	NA	
PTT	30 to 40 seconds (1.5 to 2.5 times the control value if receiving heparin therapy	NA	NA	
D-Dimer	Less than 0.4 mcg/mL	NA	NA	

BNP	>125 pg/mL for patients aged 0-74 years Less than 450 pg/mL if older (NT-proB-type Natriuretic Peptide)	NA	NA	
HDL	More than 45 mg/dL (ATI)	NA	NA	
LDL	Less than 100mg/dL (ATI)	NA	NA	
Cholesterol	3-5.5 (Normal Lab Values - Common Laboratory Values)	NA	NA	
Triglycerides	50-150 (ATI) (Normal Lab Values - Common Laboratory Values)	NA	NA	
Hgb A1c	5.7% or less indicates not DM 7% indicated good control	NA	NA	

	8% to 9% fain DM control 9% or greater indicates poor control			
TSH	0.4-5.5 (Thyroid Blood Tests)	NA	NA	
T4	4-12 mcg/dL. (ATI)	NA	NA	

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	Straw (Normal Lab Values - Common Laboratory Values)	NA	NA	
pH	4.6 to 8 (ATI)	NA	NA	
Specific Gravity	0.003-0.040 (Normal Lab Values - Common Laboratory	NA	NA	

	Values)			
Glucose	Less than 0.5 g/day(ATI)	NA	NA	
Protein	0.8 mg/dL (ATI)	NA	NA	
Ketones	None	NA	NA	
WBC	Males: 0-3 Females: 0-5 High-power field (ATI)	NA	NA	
RBC	0-5 (Urinalysis)	NA	NA	
Leukoesterase	None (Urinalysis)	NA	NA	

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 (MedlinePlus Medical Encyclopedia)	NA	NA	
PaO2	75-100 mm hg (MedlinePlus Medical Encyclopedia)	NA	NA	

PaCO2	38-42 mm hg (MedlinePlus Medical Encyclopedia)	NA	NA	
HCO3	22-26 mEq/L (ATI)	NA	NA	
SaO2	94%-100% (MedlinePlus Medical Encyclopedia)	NA	NA	

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	4.5 - 7.2 normal range (Laboratory Test Interpretation, n.d.).	NA	NA	
Blood Culture	None (Blood Culture)	NA	NA	
Sputum Culture	None (Bacterial Sputum Culture)	NA	NA	
Stool Culture	Negative (Stool	NA	NA	

	Culture)			

Lab Correlations Reference (APA):

Assessment Technologies Institute, LLC. (2017). *Pn adult medical surgical nursing: content mastery series review module*. Leawood, KS.

Bacterial Sputum Culture. (n.d.). Retrieved from https://labtestsonline.org/tests/sputum-culture-*Type equation here* .bacterial

Blood Culture. (n.d.). Retrieved from https://labtestsonline.org/tests/blood-culture

Blood gases: MedlinePlus Medical Encyclopedia. (n.d.). Retrieved from https://medlineplus.gov/ency/article/003855.htm.

Cabaniss CD. Creatine Kinase. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd edition. Boston: Butterworths; 1990. Chapter 32. Available from: https://www.ncbi.nlm.nih.gov/books/NBK352/

Cholesterol Levels: What You Need to Know. (2019, April 18). Retrieved from https://medlineplus.gov/cholesterollevelswhatyouneedtoknow.html.

Laboratory Test Interpretation. (n.d.). Retrieved from https://www.nurseslearning.com/courses/nrp/labtest/course/section5/index.htm.

Normal Lab Values - Common Laboratory Values. (n.d.). Retrieved from

NT-proB-type Natriuretic Peptide (BNP). (n.d.). Retrieved from https://my.clevelandclinic.org/health/diagnostics/16814-nt-prob-type-natriuretic-peptide-bnp

Pagana, K. D., & Pagana, T. J. (2011). *Mosbys diagnostic and laboratory test reference* (14th ed.). St. Louis, MO: Elsevier Mosby.

Stool Culture. (n.d.). Retrieved from https://www.uofmhealth.org/health-library/hw5738.

Thyroid Blood Tests. (n.d.). Retrieved from https://my.clevelandclinic.org/health/diagnostics/17556-thyroid-blood-tests.

Troponin. (n.d.). Retrieved from https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=167&contentid=troponin.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

There was an EKG completed that shows normal sinus rhythm and no noted abnormalities. “To check the health of the heart when other diseases or conditions are present, such as high blood pressure, high cholesterol, cigarette smoking, diabetes or heart disease” (Rathsam, n.d., para. 3). The patient also had a chest x-ray to show the size of the heart. “A chest X-ray can show if your heart has become larger than normal” (Chest X-ray, n.d., para. 1). The client has hypertension and smokes a pack a day for an extended period. Therefore, this patient is at risk for further cardiac complications, and these tests were to rule out other comorbidities.

Diagnostic Test Correlation (5 points):

The hospital ordered a right foot x-ray that was negative for acute abnormalities. “X-rays can help to determine whether the skin infection has spread to the bone” (Harvard Health Publishing, n.d., para. 10). The venous Doppler of the RLE rules out a DVT because a DVT resembles cellulitis if severe enough. “Severe signs of DVT can resemble cellulitis” (Harding, 2015, para. 9). These diagnostic tests were to detect how far the infection spread and to rule out other complications that have similar symptoms.

Diagnostic Test Reference (APA):

Chest X-ray. (n.d.). Retrieved from https://www.phauk.org/what-is-ph/tests-you-might-have/chest-x-ray/

Harding, M. (2015, July 31). Deep Vein Thrombosis. DVT information. Patient. Retrieved from https://patient.info/doctor/deep-vein-thrombosis-pro

Harvard Health Publishing. (n.d.). Cellulitis. Retrieved from https://www.health.harvard.edu/a_to_z/cellulitis-a-to-z

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

Home Medications (5 required)

Brand/Generic	**Lortab/ Hydrocodone-Acetaminophen**	**Zestril/ Lisinopril**	**Claritin/ Loratadine**	**Flomax/ Tamsulosin**	**Prenatal Multivitamins (Prenatal multivitamins Uses, Side Effects & Warnings, n.d.)**
Dose	**5/325 mg**	**20 mg**	**10 mg**	**0.4 mg**	**2 Chewable**
Frequency	**Q6H/PRN**	**Daily**	**Daily**	**Daily**	**Daily**
Route	**PO**	**PO**	**PO**	**PO**	**CTB**
Classification	**Narcotic analgesic; antitussive/Nonn**	**Antihypertensive: Angiotensi**	**Non-Sedating antihistam**	**Alpha-Adrenergic receptor**	**Multivitamins for prenatal.**

	arcotic analgesic, antipyretic	**n-Convertin g Enzyme (ACE) Inhibitor**	**ine; H1-receptor antagonist**	**Antagonist**	
Mechanism of Action	**CNS depressant with moderate to moderate to serve relief of pain. Suppresses cough reflex by direct action on cough center in medulla /Produces analgesia by elevation of the pain threshold**	**Lowers BP by specific inhibition of ACE. This interrupt conversion sequences initiated by rein that form angiotensi n II, a potent vasoconstr ictor. ACE inhibition alters hemodyna mics without compensat ory reflex tachycardi a or changes in cardiac output. Improves cardiac output and exercise tolerance. Aldosteron e is also**	**Long-acting non-sedating antihistam ine with selective peripheral H1-Receptor antagonis m, thus blocking histamine release. Loratadine diminishes capillary permeabili ty, edema formation, and constrictio n of respirator y, GI, and vascular smooth muscle. Effective in relieving allergic reaction related to histamine**	**Antagonist of the alpha-adrenergic receptors located in the prostate. This blockage can cause smooth muscles in the bladder outlet and the prostate gland to relax, resulting in improvem ent in urinary flow and a reduction in symptom of BPH. Effectivene ss is indicated by improved**	**Multivitamins are used to provide vitamins that are not taken in through the diet. Multivitamins are also used to treat vitamin deficiencies (lack of vitamins) caused by illness, pregnancy, poor nutrition, digestive disorders, and many other conditions. (Multivitamins Uses, Side Effects & Warnings, n.d., para. 2)**

		reduced, thus permitting a potassium-sparing effect/ Migraine prophylaxis.	**release.**	**voiding. Improves symptoms related to benign prostatic hypertrophy related to bladder outlet obstruction.**	
Reason Client Taking	**Cellulitis**	**Hypertension**	**Allergy relief**	**To a help pass kidney stones**	**To provide vitamins that are not provided through diet.**
Contraindications (2)	**Hydrocodone: upper airway obstruction/Bronchitis; Acetaminophen: Acute liver failure/hypersensitivity to acetaminophen Hydrocodone**	**1.ACE inhibitor hypersensitivity 2.Pregnancy**	**1.Hypersensitivity to loratadine 2.Structurally related antihistamines.**	**1.Women 2.Lactation**	**1.There are some food interactions and I would need to consult the doctor further. 2. Too much Iron can lead to poisoning.**
Side Effects/Adverse Reactions (2)	**Hydrocodone: 1. Dry mouth 2.Light-headedness; Acetaminophen: 1. Neutropenia 2.renal damage**	**1.CNS: Headache, dizziness, fatigue 2.GI: Nausea, Vomiting, diarrhea, anorexia, constipation, intestinal angioedema.**	**1.CNS: Dizziness, Dry mouth, fatigue, headache 2.CV: hypotension, hypertension, palpitation, syncope, tachycardi**	**1.CNS: Headache, Dizziness, insomnia 2.GI: Diarrhea and nausea**	**1.Black tarry or bloody stools 2. Fever**

			a.		
Nursing Considerations (2)	**Hydrocodone: 1. Monitor respiratory status. 2.Monitor bowel eliminations; Acetaminophen: 1. Monitor for S&S of hepatotoxicity. 2. Evaluate the other medications being used to make sure the doses don't exceed 4000 mg per day.**	**1.Measure BP prior to dosing to determine whether satisfactory control is being maintained for 24 h. 2.Monitor closely for angioedema.**	**1.Monitor cardiovascular status and report significant changes in BP and palpitations or tachycardia. 2.Assess carefully for and report distressing or dangerous S&S that occur after initiation of the drug.**	**1.Monitor for signs of orthostatic hypotension. 2.Monitor PT on warfarin therapy closely.**	**1.Monitor for signs and symptoms of allergic reaction. 2. Verify the patient is taking the vitamin as suggested.**
Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Hydrocodone: Monitor for respiratory depression; Acetaminophen: Check all other medications to verify that they don't contain acetaminophen to verify that the client doesn't take more than 4000 mg per day.**	**Check the clients BP before administration. Also, Monitor serum sodium and serum potassium levels for hyponatremia and hyperkalemia.**	**Monitor cardiovascular status and report significant changes in BP and palpitations or tachycardia.**	**Monitor BP**	**Check the minerals before giving to the patient to verify the patient will not overdose. Specifically check the IRON labs: H & H.**
Client Teaching	**Hydrocodone:1.**	**1.Women**	**1.Dru may**	**1. Make**	**1.Know the signs**

needs (2)	**Avoid hazardous activities until response to drug is determined. 2.Do not use alcohol or other CNS depressant; Acetaminophen: 1. Do not take other medications containing acetaminophen without medical advice 2.Do not self-medicate adults for pain more than 10 days**	**should use reliable means of contraception throughout therapy. 2.Report immediately to prescriber if a pregnancy occurs**	**cause significant drowsiness in those with liver or kidney impairment. 2. Concurrent use of alcohol and other CNS depressants may have an additive effect.**	**position changes slowly to minimize orthostatic hypotension. 2.Report dizziness, vertigo, or Fainting to prescriber.**	**and symptoms of an allergic reaction. 2. Take as suggested so you don't overdose.**

Hospital Medications (5 required)

Brand/ Generic	**Normal Saline/ Sodium Chloride (Normal Saline (Sodium Chloride Injection): Uses, Dosage, Side Effects,**	**Cleocin/ Clindamycin**	**Colace/ Docusate**	**Dilaudid/ Hydromorphone**	**Tylenol/ Acetaminophen**

	Interactions, Warning, 2010)				
Dose	**100mL/hr**	**200 mg**	**100 mg**	**0.5 mg**	**650 mg**
Frequency	**100mL/hr**	**Q6h**	**BID PRN**	**Q4H/PRN**	**Q6H/PRN**
Route	**IV**	**IV**	**PO**	**IV**	**PO**
Classification	**Nonpyrogenic solution for fluid and electrolyte replenishment.**	**Lincosamide Antibiotic**	**Stool softener**	**Narcotic (Opiate agonist); Analgesic**	**Nonnarcotic analgesic, Antipyretic**
Mechanism of Action	**Is a sterile, nonpyrogenic solution for fluid and electrolyte replenishment in single dose containers for intravenous administration. It contains no antimicrobial agents. The nominal pH is 5.5 (4.5 to 7.0). Composition, osmolarity, and ionic concentration are shown below:**	**Semisynthetic derivative of lincomycin that suppresses protein synthesis by binding to 50 S subunits of bacterial ribosomes, and, therefore, inhibits other antibiotics that act at the stie. Particularly effective against susceptible strains of anaerobic streptococci as well as**	**Anionic surface-active agent with emulsifying and wetting properties. Detergent action lowers surface tension, permitting water and fats to penetrate and soften stools for easier passage.**	**Potent opiate receptor agonist that does not alter pain threshold but changes the perception of pain in the CNS. An effective narcotic analgesic that controls mild to moderate pain. Also, antitussive properties.**	**Produces analgesia by elevation of the pain threshold. Reduces fever by inhibiting the action of endogenous pyrogens on the heat -regulation centers in the brain by blocking the formation and release of prostaglandins.**

		aerobic gram-positive cocci.			
Reason Client Taking	**Electrolyte replenishment.**	**Cellulitis**	**Constipation is a side effect of opioid analgesics.**	**Severe Pain**	**Mild pain and fever**
Contraindications (2)	**1.Diuresis 2.Corticosteroids**	**1.History of hypersensitivity to clindamycin. 2.History of ulcerative colitis.**	**1.Atonic constipation, 2.Use of docusate sodium inpatients on sodium restriction**	**1.Intolerance to opiate agonists. 2.Severe respiratory depression.**	**1.Acute liver failure. 2. Hypersensitivity to acetaminophen or phenacetin.**
Side Effects/Adverse Reactions (2)	**1.Fibrile 2.Hypervolimia**	**1.CV: Hypotension, cardiac arrest (rapid IV) 2.Hematologic: Leukopenia, eosinophilia.**	**1.GI: Occasional mild abdominal cramps, diarrhea, nausea, bitter taste. 2.Throat irritation, rash**	**1.GI: Nausea, vomiting, constipation. 2. CNS: Euphoria, dizziness, drowsiness.**	**1.Hepatic coma, acute renal failure. 2.Chronic ingestion: Neutropenia, pancytopenia, Leukopenia, thrombocytopenic purpura, hepatotoxicity in alcoholics, renal damage.**
Nursing Considerations (2)	**1.Assess fluid balance. 2.Assess symptoms of hyponatremia.**	**1.Monitor BP and pulse in patients receiving drug parenterally. 2.Be alert for anaphylactoid reaction.**	**1.Withhold drug if diarrhea develops and notify prescriber 2.Therapeutic effectiveness: Usually**	**1.Monitor for respiratory distress. 2.Assess effectiveness of pain relief 30 min after medication administration.**	**1. Do not take other medications containing acetaminophen. 2.Addison's disease.**

			apparent 1-3 days after first dose.		
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	**Look at the all electrolyte labs. Specifically sodium. Also, listen to the lungs to verify there isn't fluid volume overload. Also, check the extremities for edema.**	**Check PB and pulse. Monitor Labs: Baseline C&S; CBC differential LFTs, and renal function.**	**Listen and check the activity of the bowel sounds.**	**Check the respiratory status.**	**Monitor for signs and symptoms of hepatotoxicity.**
Client Teaching needs (2)	**1.Explain to the client why they are taking the intravenous solution. 2. Explain the signs & symptoms of hypervolemia.**	**1. Report loose stools or diarrhea promptly. 2.Do not self-medicate with antidiarrheal preparations.**	**1.Do not take concomitantly with mineral oil. 2.Do not take for prolonged periods in lieu of proper dietary management or treatment of underlying causes of constipation.**	**1.Request medication at the onset of the pain and do not wait until pain is severe. 2.Avoid alcohol and other CNS depressants while taking this drug.**	**1.Do not take other medications containing acetaminophen. 2.Do not self-medicate adults' pain more than 10 days.**

Medications Reference (APA):

Multivitamins Uses, Side Effects & Warnings. (n.d.). Retrieved from https://www.drugs.com/mtm/multivitamins.html

Normal Saline (Sodium Chloride Injection): Uses, Dosage, Side Effects, Interactions, Warning. (2010, December 2). Retrieved from https://www.rxlist.com/normal-saline-drug.htm#description

Prenatal multivitamins Uses, Side Effects & Warnings. (n.d.). Retrieved from https://www.drugs.com/mtm/prenatal-multivitamins.html

Shields, K. M., Fox, K. L., & Liebrecht, C. (2018). *Pearson nurses drug guide 2018*. Boston: Pearson.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Patient exhibits no signs of impaired memory and is oriented to person, place, time, and situation. A & O x 4. Patient is awake and alert.** **Patient is responsive to stimuli. The Patient's speech is clear and regular.**

INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	**The skin was normal pale pink and warm — no noted edema. Pulses were felt and were strong at 3+ each. There was reddened, swollen and pain to the RLE on the patellar area. Skin breakdown on the RLE. The extremity pulses were all detected at 3+. No abnormal dermal sensations detected. Her handgrip strength was normal equal bilateral. The lower extremity flex strength was normal equal bilateral. No rashes or drainage noticed during the inspection of the skin. The skin was dry — Braden scale on 22. The skin had good turgor with some tenting.** **No drains or ports were present on this patient.**
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Hair is thick, brown, and evenly distributed. Eyes: Conjunctiva is pink; sclera is white. Pupils are 3 mm equal, round, and reactive to light with 2 step method bilaterally. Accommodation with convergence and constriction bilaterally. EOMs are intact bilaterally. Patient eyes had normal conjunctiva, no scleral icterus bilaterally. Ears: Soft and no cerumen noticeable in both ears bilaterally. Nose: No deviations present. The mucosa is pink and moist. The patient reports no nose bleeds. Mouth: Lips are symmetrical and dry. Oral mucosa is moist and pink. All teeth were visible. Neck: Trachea appears midline. Thyroid was not**

	palpable along with tonsillar, submandibular, and submental lymph nodes. No pulsations present bilaterally.
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐** **Edema Y ☐ N ☐** **Location of Edema:**	**Heart sounds were heard while auscultating in the aortic, mitral, tricuspid, Erb's point, and pulmonic. Heart sounds were heard clearly as Lub Dub. There wasn't a murmur or gallop detected. Capillary refill is less than 3 seconds on all extremities bilaterally. . Radial, Brachial, carotid, popliteal, dorsal pedal, and tibialis posterior pulses were all felt and strong bilateral at 3+. No abnormal neck distention. No edema on all extremities bilaterally.**
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	**Breathing is regular, with normal expansion seen bilaterally. Posterior and anterior lung sounds were clear bilaterally. No accessory muscles were used.**
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:**	**The patient is on a heart-healthy diet. The abdomen is flat, soft, and non-tender when palpated — no masses or abnormalities. Bowel sounds were active in all four quadrants. The patient is slightly overweight and is 5'1"and 123 lbs. No pain in the abdomen. No scars drain, or wounds seen at the time of assessment. The patient's last BM was in the morning and was normal.** **No incisions were visible. The patient had a wound on her RLE.**

Wounds: **Ostomy: Y ☐ N ☐** **Nasogastric: Y ☐ N ☐** **Size:** **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	**No ostomy was present.** **No feeding or nasogastric tubes were implemented.**
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	**Urine color is clear and yellow. No pain when urinating. No Dialysis. No catheter was implemented.**
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☐ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	**Her hand grip was normal bilateral. Foot flex was normal bilateral. She has a mobile with assistance and has a good ROM. However, she classifies as a Morse fall risk of 25. The patient is independent. The patient does not need assistance or equipment. No support needed to stand or walk.**
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐**	**Patient exhibits no signs of impaired memory and is oriented to person, place, time, and situation. A & O x 4. Patient is awake and**

Strength Equal: Y ☐ N ☐ if no - Legs ☐ Arms ☐ Both ☐ **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**alert.** **Patient is responsive to stimuli. The Patient's speech is clear and regular.** **Pupils are 3 mm equal, round, and reactive to light with a 2-step method bilaterally. Accommodation with convergence and constriction bilaterally. EOMs are intact bilaterally. Patient eyes had normal conjunctiva, no scleral icterus.** **Arms and legs were equal strength bilaterally.** **Speech was normal. Mental status was normal.**
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):**	**The patient coping method was smoking cigarettes daily. She has a bachelor's degree in nursing. She has a good support system and lives at home with her husband and eight children.**

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	**76**	**126/68**	**16**	**36.5**	**98%**

		Hypertension			
1100	**68**	**118/62**	**16**	**36.8**	**97%**

Vital Sign Trends:

The vital sign trend showed that the BP was elevated at 0700 and then lowered to the normal range at 1100. The pulse, respirations, temperature, and oxygen saturation were all within normal limits with both times of getting the vital signs. The BP was likely elevated because the lisinopril was not administered until 0800. Therefore, the medication was able to metabolize and lower the blood pressure by 1100 VS.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	**Numeric**	**RLE**	**6/10**	**Generalized pain**	**Administration of Tylenol**
1100	**Numeric**	**RLE**	**2/10**	**Generalized Pain**	**There was no intervention implemented.**

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:**	20g on the left AC dated 3/8/2020. The IV site was clear, dry, and intact. There were no signs of erythema or drainage at the IV site.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
NS 400mL over 4 hr/ 240 mL PO/ Apple juice 120 mL= 760 mL	Urine 1750 mL total voided during 4 hrs. 2 voided stools during the 4 hrs of care.

Nursing Care

Summary of Care (2 points)

Overview of care:

The overview of care started with introducing myself and getting the first set of vital signs. I then explained then administered the medications prescribed. I later came in and got the patient some water. Next, I did a head to toe assessment, and there wasn't anything out of the normal. Lastly, I obtained the last set of vital signs and thanked the patient for letting me take care of him for four hours.

Procedures/testing done:

During the time I was with the patient did not have any testing or procedures done.

Complaints/Issues:

There were no complaints or issues during the four hours.

Vital signs (stable/unstable):

The VS were stable. However, the BP was slightly elevated at the first set of VS. They came down to normal levels after administering the ACE inhibitor.

Tolerating diet, activity, etc.:

The patient didn't have any dietary or activity restrictions at the time of care.

Physician notifications:

The physician notified the nurse in the care of the patient that she will be discharged later that day.

Future plans for patient:

The patient needs to monitor the infection and continue taking the prescriptions as ordered by the physician.

Discharge Planning (2 points)

Discharge location:

The patient will be discharged at home with her husband and children.

Home health needs (if applicable):

There were no noted home health needs.

N431 Care Plan

Equipment needs (if applicable):

The patient will need a pcp to manage the pain.

Follow up plan:

The facility will follow up with the patient about a PCP 1 week after discharge.

Education needs:

The patient needs to be educated on the cessation of smoking.

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. Ineffective protection related to the infection on the RLE as	**The patient had an infection in RLE that was diagnosed as cellulitis.**	**1. The patient will have cool, moist packs to the site every 2 to 4 hours.**	**The cellulitis will be healed within seven days of starting the treatment.**

evidenced by cellulitis.		**2. The patient will receive education on the prevention of recurrent episodes.**	**The patient will be able to demonstrate how to check his feet and legs for infection daily by discharge.**
2. Ineffective peripheral tissue perfusion related inflammatory response secondary to cellulitis as evidenced by right lower extremities pain.	**The patient has inflammation of the RLE and has elevated WBC.**	**1. The patient will have the dorsalis pedis, and tibial pulses checked every four hours.** **2. The nurse will check the RLE and will assess every shift for healing.**	**The patient's RLE will show signs of healing in the first 48 hours.** **The patient will know how to prevent the recurrence of the infection by the time of discharge.**
3. Impaired skin integrity related to altered primary defenses as evidenced by cellulitis.	**The skin was impaired when she skinned her knee.**	**1.Keep the wound clean and dry.** **2.Use the correct protection barrier.**	**The wound will heal appropriately within ten days from discharge.** **The RLE will be infection-free within seven days.**
4. Risk for situational low self-esteem related to disturbed body image	**The appearance of her RLE has been altered because of the cellulitis.**	**1.Develop a relationship where the patient feels open to discuss her concerns with the altered look of the**	**Patients verbalized feelings of increased self-esteem.** **The RLE will return to the original state.**

related to the RLE infection.		**RLE.** **2. Work with wound care to develop a plan to have the best outcome in healing.**	

Other References (APA):

Swearingen, P. L. (2015). *All-In-One Care Planning Resource*. Mosby.

Concept Map (20 Points):

Subjective Data

The patient rated her pain as a 6/10 and 2/10 on a numeric scale.

Nursing Diagnosis/Outcomes

Ineffective protection related to the infection on the RLE as evidenced by cellulitis.
cellulitis will be healed within seven days of starting the treatment.
The patient will be able to demonstrate how to check his feet and legs for infection daily by discharge.
Ineffective peripheral tissue perfusion related inflammatory response secondary to cellulitis as evidenced by right lower extremities pain.
The patient's RLE will show signs of healing in the first 48 hours.
The patient will know how to prevent the recurrence of the infection by the time of discharge.
Impaired skin integrity related to altered primary defenses as evidenced by cellulitis.
The wound will heal appropriately within ten days from discharge.
The RLE will be infection-free within seven days.
Risk for situational low self-esteem related to disturbed body image related to the RLE infection.
Patients verbalized feelings of increased self-esteem.
The RLE will return to the original state.

Objective Data

The VS showed that the BP was elevated 126/68.
The CBC showed WBC elevated to 17.4. For an indication of an infection. The hmg was low at 8.8 which is a sign of anemia.
Creatinine was at 1.67 to show dehydration.
The EKG showed normal sinus rhythm with no abnormalities.
The chest x-ray was negative for any abnormalities.
The right foot x-ray showed that it was negative for any abnormalities.
There was a Venous Doppler on the RLE performed to rule out DVT which has similar S&S as cellulitis.

Patient Information

The patient is a 38 year old female. The onset of the symptoms stated by the client was, "I was playing with my children outdoors and tripped over a rock and fell and skinned my knee on the pavement." Location/radiation is in the RLE. The duration and character of the pain are unknown. No aggravating and relieving factors. The timing and severity of the discomfort are unidentified.

Nursing Interventions

Ineffective protection
The patient will have cool, moist packs to the site every 2 to 4 hours.
The patient will receive education on the prevention of recurrent episodes.
Ineffective peripheral tissue perfusion
The patient will have the dorsalis pedis, and tibial pulses checked every four hours.
The nurse will check the RLE and will assess every shift for healing.
Impaired skin integrity
Keep the wound clean and dry.
Use the correct protection barrier.
Risk for situational low self-estseem.
Develop a relationship where the patient feels open to discuss her concerns with the altered look of the RLE.
Work with wound care to develop a plan to have the best outcome in healing.