N321 Care Plan #1

Lakeview College of Nursing

Ashley Matusiak

Demographics (3 points)

Date of Admission 9/30/21	**Patient Initials** E.L.D	**Age** 74 y/o	**Gender** Female
Race/Ethnicity White	**Occupation** Retired/Disabled: hazardous equipment operator	**Marital Status** Married	**Allergies** Penicillins: severe reaction Codeine: nausea & itching Demerol HCL: nausea Keflex: vomiting & diarrhea Latex: rash Oxycodone: nausea Oxycontin: nausea
Code Status Full Code	**Height** 163 cm	**Weight** 101 kg	

Medical History (5 Points)

Past Medical History: acid reflux, hypothyroidism, anxiety, back spasm, CAD, childhood asthma, type 2 diabetes, diverticulosis, HTN, hypertensive cardiovascular disease, knee pain, lumbar back pain, mixed hyperlipidemia, morbid obesity, OSA, osteoarthritis, restless leg syndrome, severe recurrent major depression, skin lesions, SOB, tachycardia, urge incontinence, vitamin D deficiency

Past Surgical History: left heart catheterization: 6/8/18, Total knee arthroplasty: at 62 y/o, revision at 71 y/o, revision at 73 y/o

Family History: Mother: depression, Father/Brother: heart attack

Social History (tobacco/alcohol/drugs): Tobacco: former smoker, Alcohol: once a week, 1-2 glasses of wine, Drugs: N/A

Assistive Devices: walker, cane, CPAP, BiPAP

Living Situation: Lives in house with her spouse

Education Level: College educated

Admission Assessment

Chief Complaint (2 points): Knee pain- swelling, fever, arm pain- swelling, septic joint

History of present Illness (10 points): Onset: On Thursday September 30th, a 74 y/o female with a past surgical history of a total right knee arthroplasty, arrived at SBLHC with right knee pain with swelling. Location: The patient stated, “my knee was all swollen, and painful to move”. Duration: The patient reports that she has had knee pain for a “long time” however, this most recent pain began “after my third knee surgery about a year ago”. Characteristics: The patient describes her knee pain as feeling “tight and makes is hard to bend it” she also had accompanying fever symptoms. Aggravating factors: Patient stated that walking around too much would cause her knee to swell up more. Relieving factors: The patient reports that elevating her right leg helps a bit and avoiding walking on the leg helps with the pain. Treatment: The patient did not treat her knee pain with anything, she only continued taking her prescribed medications. Severity: The patient reported her knee pain as being a 3 out of 10 on the numeric scale.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Septic right knee joint

Secondary Diagnosis (if applicable): N/A

Pathophysiology of the Disease, APA format (20 points): The knee joint is the most common site for joint infection and inflammation, especially in individuals with knee prosthesis such as the patient I treated in clinical (Capriotti, 2020). During implant surgery the joint becomes extra vulnerable to infection because bacteria can be introduced into the joint (Capriotti, 2020).

Implanted prosthetic materials also facilitate infection by acting as binding sites for various bacteria, because these materials do not contain the same bacterial resistance as normal human tissues (Capriotti, 2020). Joint infections are very serious and can also spread through contiguous, lymphatic, and hematologic routes, making early detection and treatment a priority (Capriotti, 2020).

Invasion of the joint can be caused by viruses, fungi, and bacteria, although bacteria is the most likely culprit (Capriotti, 2020). The most common way to get a joint infection is through the bloodstream, however in the patient I treated, the organisms most likely were introduced during direct penetration or in other terms her knee arthroplasty surgery (Capriotti, 2020). Some common types of bacterial septic joints include, nongonococcal and gonococcal (Capriotti, 2020). Gonococcal means the patient had an STI which was the cause of the joint sepsis, and nongonococcal means the patient has a different type of bacteria (Capriotti, 2020) The patient I treated had nongonococcal joint sepsis, caused by a non-STI bacteria called *S. aureus,* which is the most common cause of joint sepsis (Capriotti, 2020). Once this bacterium is introduced it invades the joint space, and the vascular sections of the synovial membrane become infected (Capriotti, 2020). WBC's synthesize cytokines along with other inflammatory products, leading to the deterioration of essential knee collagen and cartilage (Capriotti, 2020). This inflammatory process can cause joint effusion (excess fluid), creating swelling that stops blood and nutrient delivery to the joint (Capriotti, 2020). This process can ultimately lead to bone infection if not treated promptly (Capriotti, 2020).

Some common signs and symptoms of joint infection include extreme discomfort, difficulty using the affected joint, swelling, redness, warmth, and fever (Mayo Clinic, 2021). In patients with knee prosthesis infection and swelling may occur months to even a year after

surgery (Mayo Clinic, 2021). The patient I treated had this, where her infection did not become problematic until a substantial amount of time had passed since her surgery a year ago. She also had fever symptoms, swelling, and poor range of motion in her right knee. When diagnosing joint infection, reviewing the patient's history of surgeries is helpful in investigating recent problems that may have allowed microorganisms to enter and multiply within the joint structure (Capriotti, 2020). An X-ray may be useful to show swelling, but it is not enough to diagnose a joint infection (Capriotti, 2020). The patient I treated had an X-ray done first. An ultrasound, radionuclide bone scan, MRI, and CT scan can also be utilized to show inflammation, however these tests do not distinguish infectious swelling from noninfectious swelling (Capriotti, 2020). A true diagnosis of joint infection requires the identification of bacteria from blood or synovial fluid by gram stain or culture, which often requires aspiration of the joint and the analysis of the synovial fluid for crystals or microorganisms (Capriotti, 2020). If an STI-caused joint infection is suspected, cervical or urethral discharge should also be cultured (Capriotti, 2020). The patient I treated had a synovial biopsy to diagnose her joint infection, which showed her infection to be caused by *S. aureus.* Treatment for joint infection includes draining the joint (aspiration procedure), short term immobilization, and antibiotic administration (Capriotti, 2020). For individuals with joint prosthetic infection the term for antibiotic therapy is normally around 6 weeks and might involve the removal of prosthesis and replacement once infection clears (Capriotti, 2020). The patient I cared for had an aspiration done to reduce swelling and was placed on antibiotics(cefazolin) to clear up the infection.

Pathophysiology References (2) (APA):

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

Mayo Foundation for Medical Education and Research. (2021, February 5). *Septic arthritis*. Mayo Clinic. Retrieved October 9, 2021, from https://www.mayoclinic.org/diseases-conditions/bone-and-joint-infections/symptoms-causes/syc-20350755.

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	3.90-4.98 (mill/cumm)	3.68	3.72	A low RBC level can be due to thyroid disorders, and the patient has hypothyroidism which can cause anemia (Cafasso, 2018).
Hgb	12.0-15.5 (gm/dL)	10.2	10.1	A low Hgb can also be caused by hypothyroidism, or a potential blood loss, such as a GI bleed from diverticulosis (Mayo Clinic, 2020).
Hct	35-45%	31.1	31.4	A low Hct can indicate a large number of white blood cells due to long-term infection, such as joint sepsis of the patient's right knee (Mayo Clinic, 2021).
Platelets	140-400 (1000/mm3)	554	492	A high platelet count can be due to surgery or trauma, such as the patient's knee synovial biopsy. Another cause for the increase could also be the patient's knee infection (Mayo Clinic, 2020).
WBC	4.0-9.0 (10x3/ uL)	8.9	8.1	
Neutrophils	40-60%	69.6	57.8	A high neutrophil level indicates infection, specifically a bacterial infection, such as the patient's staphylococcus aureus (Morris, 2018).
Lymphocytes	20-40%	21.9	31.4	
Monocytes	2-8%	6.0	7.0	
Eosinophils	1-4%	1.7	2.8	
Bands	8-21 (mg/dL)	**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-	135-145 (mEq/L)	138	139	

K+	3.5-5.1 (mEq/L)	3.8	3.9	
Cl-	98-107 (mEq/L)	100	102	
CO2	22-29 (mEq/L)	29	28	
Glucose	70-99 (mg/dL)	93	102	Glucose levels can be elevated in diabetics, as well as individuals undergoing surgery or trauma, and even individuals taking steroids (Cleveland Clinic, 2020).
BUN	6-20 (mg/dL)	10	8	
Creatinine	0.50-1.00 (mg/dL)	0.80	0.84	
Albumin	3.5-5.2 (gm/dL)	2.8	2.7	A common cause of low albumin is having inflammation throughout the body, from things like sepsis, or surgery (Jewell, 2018).
Calcium	8.4-10.5 (mg/dL)	8.3	8.2	Calcium levels may be lowered in those taking steroids to treat other conditions. Calcium may also be low in people who are vitamin D deficient, which this patient also has a history of (Kahn, 2019).
Mag	1.6-2.6 (mg/dL)	**N/A**	**N/A**	
Phosphate	3.4-4.5 (mg/dL)	**N/A**	**N/A**	
Bilirubin	0.0-1.2 (mg/dL)	0.9	0.6	
Alk Phos	35-105 (U/L)	207	195	High Alk Phos may indicate infection, but it is also common in liver and bone conditions (Huizen, 2018).
AST	0-32 (U/L)	23	22	
ALT	0-33 (U/L)	6	5	
Amylase	40-140 (U/L)	**N/A**	**N/A**	
Lipase	0-160 (U/L)	**N/A**	**N/A**	
Lactic Acid	0.5-1 (mmol/L)	**N/A**	**N/A**	

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0.81-1.20	**N/A**	**N/A**	
PT	11.5-15.0 (sec)	**N/A**	**N/A**	
PTT	25-35 (sec)	**N/A**	**N/A**	
D-Dimer	<0.50 (g/L)	**N/A**	**N/A**	
BNP	<125 (pg/mL)	**N/A**	**N/A**	
HDL	>40 (mg/dL)	**N/A**	**N/A**	
LDL	<100 (mg/dL)	**N/A**	**N/A**	
Cholesterol	<200 (mg/dL)	**N/A**	**N/A**	
Triglycerides	<150 (mg/dL)	**N/A**	**N/A**	
Hgb A1c	4-5.6%	**N/A**	**N/A**	
TSH	0.5-5.0 (U/L)	**N/A**	**N/A**	

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Clear-light yellow	**N/A**	**N/A**	
pH	4.5-8.0	**N/A**	**N/A**	
Specific Gravity	1.005-1.030	**N/A**	**N/A**	
Glucose	0-0.8 (mmol/L)	**N/A**	**N/A**	
Protein	0-14 (mg/dL)	**N/A**	**N/A**	
Ketones	Negative	**N/A**	**N/A**	

WBC	Negative	**N/A**	**N/A**	
RBC	Negative	**N/A**	**N/A**	
Leukoesterase	Negative	**N/A**	**N/A**	

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Negative	**N/A**	**N/A**	
Blood Culture	Negative	**N/A**	**N/A**	
Sputum Culture	Negative	**N/A**	**N/A**	
Stool Culture	Negative	**N/A**	**N/A**	
Wound Culture	Negative	Positive: Staphylococcus aureus	**N/A**	Staphylococcus is a group of bacteria that commonly cause infection. This can lead to sepsis in the joint (Bush, 2021).

Lab Correlations Reference (APA):

Bush, L. M. (2021, March). *Staphylococcal infections - infectious diseases*. Merck Manuals Professional Edition. Retrieved October 8, 2021, from https://www.merckmanuals.com/professional/infectious-diseases/gram-positive-cocci/staphylococcal-infections.

Cafasso, J. (2018, November 2). *Red Blood Cell Count (RBC): Purpose, procedure, and preparation*. Healthline. Retrieved October 7, 2021, from https://www.healthline.com/health/rbc-count#low-count.

Huizen, J. (2018, May 30). *Alkaline phosphatase (ALP) level test: High and Low Levels*. Medical News Today. Retrieved October 8, 2021, from https://www.medicalnewstoday.com/articles/321984#results.

Hyperglycemia: Causes, symptoms, treatments & prevention. Cleveland Clinic. (2020, December 2). Retrieved October 7, 2021, from https://my.clevelandclinic.org/health/diseases/9815-hyperglycemia-high-blood-sugar.

Jewell, T. (2018, September 2). *Hypoalbuminemia: Causes, treatment, and more*. Healthline. Retrieved October 7, 2021, from https://www.healthline.com/health/hypoalbuminemia#causes-and-risk-factors.

Kahn, A. (2019, July 31). *Hypocalcemia: Causes, symptoms, and treatment*. Healthline. Retrieved October 8, 2021, from https://www.healthline.com/health/calcium-deficiency-disease#symptoms.

Mayo Foundation for Medical Education and Research. (2020, October 27). *Thrombocytosis*. Mayo Clinic. Retrieved October 7, 2021, from https://www.mayoclinic.org/diseases-conditions/thrombocytosis/symptoms-causes/syc-20378315.

Mayo Foundation for Medical Education and Research. (2020, September 22). *Low hemoglobin count causes*. Mayo Clinic. Retrieved October 7, 2021, from https://www.mayoclinic.org/symptoms/low-hemoglobin/basics/causes/sym-20050760.

Mayo Foundation for Medical Education and Research. (2021, July 22). *Hematocrit Test*. Mayo Clinic. Retrieved October 7, 2021, from https://www.mayoclinic.org/tests-procedures/hematocrit/about/pac-20384728.

Morris, S. Y. (2018, September 29). *Neutrophils: Definition, counts, and more*. Healthline. Retrieved October 7, 2021, from https://www.healthline.com/health/neutrophils#outlook.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

1.) **Right knee X-ray:** A knee X-ray is performed to show soft tissue swelling around the joint and a possible widened joint space from joint effusion (or excess fluid in or around the joint), which is a common symptom of joint sepsis or infection. It is also possible to see any joint narrowing on a knee X-ray (Atahualpa, 2021)

2.) **Right knee synovium biopsy:** This diagnostic procedure involves the removal of a piece of tissue lining a joint for examination. In this patient they reported severe acute and chronic synovitis with detritus (this is inflammation and proliferation of synovial tissues, especially

around foreign bodies like joint protheses), and they also found greater than 20 neutrophils per high power field, which can indicate joint sepsis (UCSF Health, 2020)

3.) **Right knee orthopedic explants:** This procedure was the revision of the patient's knee implant, where they found visible signs of sepsis in the total right knee (Foran, 2021)

Diagnostic Test Correlation (5 points): A septic joint, such as the patient's right knee, is diagnosed with the synovium biopsy procedure, along with blood tests, and cultures. The knee X-ray is mostly performed to view swelling, and the knee orthopedic explant showed the visible signs of joint sepsis. All together these diagnostic procedures point to the patient's diagnosis of joint sepsis (Johns Hopkins Medicine, 2021).

Diagnostic Test Reference (1) (APA):

Atahualpa, L. N. (2021, September 24). *Septic arthritis imaging: Practice essentials, radiography, ultrasonography*. Septic Arthritis Imaging: Practice Essentials, Radiography, Ultrasonography. Retrieved October 8, 2021, from https://emedicine.medscape.com/article/395381-overview.

Foran, J., & Cross, M. (2021, May). *Revision total knee replacement - orthoinfo - aaos*. OrthoInfo. Retrieved October 8, 2021, from https://orthoinfo.aaos.org/en/treatment/revision-total-knee-replacement/.

Septic arthritis. Johns Hopkins Medicine. (2021). Retrieved October 8, 2021, from https://www.hopkinsmedicine.org/health/conditions-and-diseases/arthritis/septic-arthritis.

Synovial biopsy. ucsfhealth.org. (2020, October 6). Retrieved October 8, 2021, from https://www.ucsfhealth.org/medical-tests/synovial-biopsy.

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

<u>Home Medications (5 required)</u>

Brand/Generic	Breo Ellipta/ fluticasone-vilanterol	Protonix/ pantoprazole	Nitrocot/ nitroglycerin	Rifadin/ rifampin	AccuNeb/ albuterol
Dose	1 puff	40 mg	0.4 mg	450 mg	2 puff(s)
Frequency	Once a day	Twice a day	Up to 5 times daily, PRN	Twice a day	PRN
Route	Inhalation Aerosol	Oral	Sublingual	Oral	Inhalation Powder
Classification	**Pharm:** Corticosteroid **Thera:** Antiasthmatic, anti-inflammatory	**Pharm:** Proton pump inhibitor **Thera:** Antiulcer	**Pharm:** Nitrate **Thera:** Antianginal, vasodilator	**Pharm:** Semisynthetic rifamycin **Thera:** Antimycobacterial antitubercular	**Pharm:** Adrenergic **Thera:** bronchodilator
Mechanism of Action	Inhibits cells involved in the inflammatory response of asthma, such as basophils. It also inhibits production or secretion of chemical mediators such as histamines.	Interferes with gastric acid secretion by inhibiting the proton pump in gastric parietal cells, which inhibits the final step in gastric acid production.	Increases cGMP levels which causes relaxation of vascular smooth muscles by forcing calcium out, causing vasodilation, also reduces preload and afterload, decreasing myocardial workload and oxygen demand. It also dilates coronary arteries, increasing blood flow to ischemic myocardial tissue.	Inhibits bacterial and mycobacterial RNA synthesis by binding to DNA-dependent RNA polymerase, blocking RNA transcription. Highly effective against rapidly dividing bacilli in extracellular cavitary lesions.	Attaches to beta2 receptors on bronchial cell membranes, stimulates enzyme adenylate cyclase to convert ATP to cAMP, which decreases intracellular calcium levels, and increases cAMP levels. The effects relax bronchial smooth-muscle cells and inhibit histamine release.
Reason Client Taking	The pt takes this to control her asthma, and difficulty breathing.	This med treats the pts acid reflux and helps heal erosive esophagitis.	This med treats pts angina pain, and CAD symptoms like SOB.	This med treats staph infections, such as the pts knee infection. Since at home med, likely to prevent infection after knee replacement.	The pt takes this to control her asthma, especially to prevent bronchospasms.
Contraindications (2)	-Hypersensitivity to fluticasone or milk proteins -Have an untreated nasal mucosal infection	-Concurrent therapy with rilpivirine containing products (HIV preventative drugs) -Hypersensitivity to pantoprazole or substituted benzimidazoles	-Acute MI -Orthostatic hypotension	-Hypersensitivity to rifampin -Concurrent use of protease inhibitors	-Hypersensitivity to albuterol -Overactive thyroid gland

		(round worm treatment)			
Side Effects/Adverse Reactions (2)	-CNS: dizziness, fatigue, headache -GI: abdominal pain, nausea, vomiting	-GI: clostridium difficle-associated diarrhea, vomiting, constipation -ENDO: hyperglycemia	-CV: arrhythmias, hypotension, edema -CNS: headache, weakness, anxiety	-CV: hypotension, myopathy -ENDO: adrenal insufficiency, hypoglycemia in diabetic pts	-CV: angina, arrhythmias, hypotension -RESP: bronchospasm, pulmonary edema, cough
Nursing Considerations (2)	-A spacer can be used to administer the dose over a longer period -Instruct pt to gargle and rinse mouth after use to prevent yeast growth	-Instruct pt to swallow tablets whole, not chew or crush -This med should be taken 30 min before a meal	-Check BP, hypotension common especially in elderly -To avoid tolerance plan nitro-free period of ten hrs each day	-Monitor liver enzymes every 2-4 wks -Use cautiously in pts with diabetes because therapy may make management of glucose levels difficult	-Monitor serum potassium level, albuterol may cause transient hypokalemia -Drug tolerance can develop with prolonged use

Hospital Medications (5 required)

Brand/Generic	Lopressor/ metoprolol	Kefzol/ cefazolin	Colace/ docusate	Atarax/ hydroxyzine	Effexor/ venlafaxine
Dose	50 mg	2,000 mg	100 mg	20 mg	75 mg
Frequency	Twice a day	Once a day	Once a day	Three times a day	Once a day
Route	Oral	IV	Oral	Oral	Oral
Classification	**Pharm:** Beta-adrenergic blocker **Thera:** Antianginal, antihypertensive	**Pharm:** First-generation cephalosporin **Thera:** Antibiotic	**Pharm:** Surfactant **Thera:** laxative, stool softener	**Pharm:** Piperazine derivative **Thera:** Anxiolytic, antiemetic, antihistamine, sedative-hypnotic	**Pharm:** Selective serotonin and norepinephrine reuptake inhibitor **Thera:** Antidepressant
Mechanism of Action	Inhibits stimulation of beta receptor sites located mainly in heart, resulting in decreased cardiac excitability, cardiac output, and myocardial oxygen demand. Relieves angina, lessons cardiac tissue damage from MI, helps relieve Hf symptoms. Reduces BP by decreasing renin release.	Interferes with bacterial cell wall synthesis by inhibiting the final step in the cross-linking of peptidoglycan strands, which make cell membranes ridged and protective, without it bacterial cells rupture and die.	Softens stool by decreasing surface tension between oil and water in feces. Allows more fluid to penetrate stool, forming a softer fecal mass.	Competes for histamine receptor sites on surfaces of effector cells. Suppresses results of histamine activity, including edema, flare, and pruritus. Sedative actions occur at subcortical level of CNS and are dose related.	Inhibits neuronal reuptake of norepinephrine and serotonin, along with its active metabolite, O-desmethylvenlafaxine. This raises norepinephrine and serotonin levels at nerve synapses, elevating mood and reducing depression
Reason Client	Pt takes med to	Pt takes this med	Pt takes this	Pt takes this med	Pt takes this med to

Taking	control her BP and treat her HTN.	to treat her septic right knee joint.	med to avoid constipation.	to control her nausea.	control her depression.
Contraindications (2)	-Acute heart failure -Pulse less than 45 beats/min	-Hypersensitivity to cefazolin -While on loop diuretics	- Fecal impaction -Intestinal obstruction like nausea or vomiting	-Hypersensitivity hydroxyzine -Prolonged QT interval	-Use of MOA inhibitor within 14 days -Use with NSAIDs may increase bleeding risk
Side Effects/Adverse Reactions (2)	-CNS: CVA, depression, fatigue, headache -CV: arrhythmias, arterial insufficiency, cardiac arrest	-GU: nephrotoxicity, renal failure -HEME: hemolytic anemia, neutropenia	-CNS: dizziness, syncope -GI: abdominal cramps, diarrhea	- CNS: seizures, tremor, headache -CV: prolonged QT interval, torsades de pointes	-HEME: abnormal bleeding, aplastic anemia -CNS: cerebral ischemia, fever, delirium
Nursing Considerations (2)	-Pts undergoing surgeries should discontinue use or lower use -Assess ECG because pt may be at risk for AV block	-Use caution in pts with renal failure -Use caution in pts with hypersensitivity to penicillin -Pt needs to report bloody stools	-Long-term use can cause dependance -Pt should take with full cup of water or milk -Pt should increase fiber + water	-Don't give IV or SubQ route due to tissue necrosis -Pt should avoid alcohol consumption	-Monitor Bp often, med can cause increase -Pt should avoid alcohol -Pt should avoid chewing or crushing med

Medications Reference (APA):

Jones & Bartlett Learning. (2020). *Nurse's Drug Handbook* (19th ed.).

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 **Alert and oriented to time, place, and person X3** **No distress** **Well-groomed and appropriately dressed**
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 **Pink** **Dry/normal** **Warm** **Normal turgor 2+** **None** **Rt knee bruising: Around surgical site** **Rt knee surgical incisions** **20**
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 **Head and neck symmetrical, normal cephalic** **Pts ears free of discharge, no difficulty hearing** **Eyes symmetrical EOM, nose symmetry, no deviation, teeth clean, gums pink and moist, no dentures**
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 normal S1 and S2, no murmurs, gallops, or rubs detected in S3 and S4, tachycardia rhythm, cap refill less than 3 seconds. Peripheral pulses 2+ symmetric. No neck vein distention. Edema in lower legs, especially right knee area**
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**Respirations are regular, even and nonlabored, symmetrical, no wheezes or crackles noted**
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet**	 **Low sodium cardiac diet** **Regular hospital 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:**	**163 cm** **101 kg** **Bowel sounds are normoactive in all 4 quadrants** **That morning** **No CVA tenderness** **No abnormalities found upon inspection for distention, incisions, scars, drains, and wounds**
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**Yellow** **Not cloudy but clear** **Voided x1**
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☐**	**limited ROM** **Strength in both upper extremities, lower extremities weak** **Uses walker or cane sometimes** **Strength in both arms, legs weaker especially right side** **Fall score: 85** **Does require assistance from 1 with equipment** **Needs support walking**
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☒ Arms ☐ Both ☐**	**Weak right leg, strong arms**

Orientation: **Mental Status:** **Speech:** **Sensory:** **LOC:**	**Cognitive of space, time, and location** **Articulative speech** **Mature and cognitive** **Alert** **No gross focal neurological deficits**
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**Pt has gotten together with friends every Wednesday with wine** **Mature** **Non-denominational** **Lives at home with support from her spouse**

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	**84 beats/min**	**130/72**	**18 respirations/ min**	**36.1 C**	**99%**
0900	**80 beats/min**	**130/70**	**18 Respirations/min**	**36.6 C**	**99%**

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	**0-10 numeric scale**	**Right knee**	**2**	**swelling/tightness**	**Pt wanted nothing for pain**
0900	**0-10 numeric scale**	**Right knee**	**3**	**Swelling/tightness**	**Med was given for pain**

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: **Location of IV:** **Date on IV:**	Central line (PICC) Left upper arm, 5 Fr cath 10/3/21

Patency of IV:	No complications
Signs of erythema, drainage, etc.:	No redness or drainage
IV dressing assessment:	Dressing clean/dry/intact

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
100 ml water **75% of breakfast**	**Voided x1 (mL unknown, pt voided alone)** **Emesis x1**

Nursing Care

Summary of Care (2 points)

Overview of care: Passing meds, assessing knee pain, assessing nausea

Procedures/testing done: Pt had respiratory therapist in room at 0700 for nebulizer treatment. Pt also had visit for depression consult.

Complaints/Issues: Only knee pain

Vital signs (stable/unstable): Vital signs are stable, Bp is high but that's the norm for her

Tolerating diet, activity, etc.: Activity with her knee is limited, tolerating food well but she does get nausea

Physician notifications: N/A

Future plans for patient: Pt should be discharged home soon unless further infection developments

Discharge Planning (2 points)

Discharge location: Her home

Home health needs (if applicable): Husband help with bathing and ADLs

Equipment needs (if applicable): shower chair, walker

Follow up plan: N/A

Education needs: Infection prevention, antibiotic use

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for infection	**Related to pts septic joint, as evidenced by right knee synovium biopsy.**	**1.Maintaining sterile technique during dressing change, and IV med administration** **2.Educate on how to take antibiotics**	**Goal met: Pt was happy to talk for awhile and learn more about IV's and how we flush and keep them clean, also checked incision during dressing change. Pt also reports that she will "take the full prescription of her antibiotics" and was taught about gut flora and probiotics**
2. Risk for falls	**Related to pts knee immobility, as evidenced by the pt struggling to move from bed to chair, and her history of urge incontinence.**	**1. Bed in lowest setting, call light in reach, floor free of clutter** **2.Non-skid socks placed on pt**	**Goal met: Pt put on her skid socks before moving to chair, and had her call light in reach**
3. Acute pain	**Related to pts joint sepsis as evidenced by pt stating "it feels**	**1.Deep breathing exercises to decrease pain**	**Goal met: Pt suffers from chronic knee pain and already uses breathing techniques to**

	tight and hard to bend".	**2Medication administration**	**help with that. She also requested medication at 0900 for pain, pain went from a 3 to a 2.**

Concept Map (20 Points):

Subjective Data

Her knee felt “hard to bend” and swollen, painful to put weight on. Fever symptoms were also present.

Nursing Diagnosis/Outcomes

Risk for infections: Related to pts septic joint, as evidenced by right knee synovium biopsy.

Risk for Falls: Related to pts knee immobility, as evidenced by the pt struggling to move from bed to chair, and her history of urge incontinence.

Acute Pain: Related to pts joint sepsis as evidenced by pt stating “it feels tight and hard to bend”.

Outcomes:

-Goal met: Pt was happy to talk for a while and learn more about IV’s and how we flush and keep them clean, also checked incision during dressing change. Pt also reports that she will “take the full prescription of her antibiotics” and was taught about gut flora and probiotics

- Goal met: Pt put on her skid socks before moving to chair, and had her call light in reach

- Goal met: Pt suffers from chronic knee pain and already uses breathing techniques to help with that. She also requested medication at 0900 for pain, pain went from a 3 to a 2.

Objective Data

Knee x-ray showed swelling

Right knee synovium biopsy: showed joint sepsis

Right knee orthopedic explant: physical signs of joint sepsis

Vitals:

P:84 beats/min

B/P: 130/72

RR:18

T: 36.1 C

Oxygen:99%

Labs:

Positive wound culture: Staphylococcus aureus, high alk phos, high neutrophil level

Patient Information

A 74 y/o female with a past surgical history of a total right knee arthroplasty, arrived at SBLHC with right knee pain with swelling

Nursing Interventions

-Maintaining sterile technique during dressing changes and IV med administration

-Educated on antibiotic use

-Bed in lowest setting, call light in reach, no floor clutter

-Non-skid socks applied

-Deep breathing exercise education

-Meds given for pain relief