N311 Care Plan #4

Lakeview College of Nursing

Deb Hemsouvanh

Demographics (5 points)

Date of Admission 11/02/20	Patient Initials C.S	Age 82	Gender Female
Race/Ethnicity Caucasian	Occupation Homemaker	Marital Status Widowed	Allergies NKA (no known allergies)
Code Status FULL	Height 5'5" ft	Weight 178 lbs	

Medical History (5 Points)

Past Medical History: Hypertension, hyperlipidemia, GERD, paroxysmal atrial fibrillation, and osteoarthritis.

Past Surgical History: Bladder suspension, hysterectomy, appendectomy, cataract removal, tonsillectomy, pro neuroplasty and/or transposition; ulnar nerve at elbow-lt; and cubital tunnel release.

Family History: No history of any contagious or hereditary disease in family.

Social History (tobacco/alcohol/drugs): Patient reports she has never smoked, nor used smokeless tobacco and she does not drink alcohol or use drugs.

Admission Assessment

Chief Complaint (2 points): Pain with right knee arthroplasty

History of present Illness (10 points):. On November 2, an 82-year-old, widowed, female was admitted to OSF hospital for physical therapy and pain control following a right knee arthroplasty. Patient seen Dr. Kolb outpatient because of chronic right knee pain limiting her functional capacity. Patient stated that she has had "right knee pain for about a year and it kept getting worse" she also stated that "it was hard to walk on and I moved very slow". Patient stated that she had "gel injections in my knee" and requested for surgery after pain was not relived from injections. Patient had a right knee arthroplasty, is in postoperatively, she rated her pain a 9

on a 0-10 scale and stated that she was in “intense pain”. She is admitted for physical therapy and pain control.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Right knee arthroplasty

Secondary Diagnosis (if applicable):.

Pathophysiology of the Disease, APA format (20 points): Osteoarthritis is defined as a slowly progressive. degenerative, and inflammatory disease (Capriotti, 2020). It occurs when various inflammatory mediators and metalloproteases are released into the joint and degrade the cartilage (Capriotti, 2020). In this case, in weight bearing joints such as the knees, a greater loss of joint space occurs because of the great pressures these joints endure. This causes an erosion of the damaged cartilage in an osteoarthritic joint progresses until it exposes the underlying bone (Capriotti, 2020). The subchondral bone (bone that sits underneath cartilage in a joint (Zelman, 2020), becomes exposed and responds, inflammation increases, and the joint becomes thickened and dense at areas of pressure (Capriotti, 2020).

Osteoarthritis commonly occurs in individuals older than age 40 years and is the most common form of arthritis and the leading cause of chronic disability in the United States (Capriotti, 2020). Risk factors for osteoarthritis include aging, obesity, history of participation in team sports, history of trauma or overuse of a joint, and heavy occupational work (Capriotti, 2020). According to Capriotti, the patient’s occupation and recreational activity should be investigated because these activities often increase susceptibility through OA through repetitive use or injury of certain joints (Capriotti, 2020). In this case, the patient worked as wedding cake decorator for decades which contributes to her history of osteoarthritis and explanation of an overuse of her weight bearing joints and resulting in her pain.

Common signs and symptoms of osteoarthritis includes complaints of deep, aching joint pain, occurring especially after exercise or weight bearing, morning stiffness, a burning sensation felt in the associated muscles and tendons or experience muscle spasm and contractions in the tendons with motion (Capriotti, 2020). The patient said she had “right knee pain for about a year and it kept getting worse” she also stated that “it was hard to walk on and I moved very slow”.

Diagnostic testing used to confirm osteoarthritis are x-rays. OA is characterized on x-ray by joint space narrowing and with the presence of osteophyte and subchondral sclerosis (Capriotti, 2020). In addition to x-rays, biochemical markers such as serum osteocalcin and hyaluronic acid levels can reflect the presence of synovitis in earlier stages of the disorder (Capriotti, 2020).

Treatment goals for osteoarthritis are to relieve pain, maintain mobility and minimize disability. Treatment also includes exercise and lifestyle modification, use of medication, supportive measures to reduce stress on the affected joint, and in some cases surgery. In this case, the patient stated that she had “gel injections in my knee” and her pain was not relived and opted for a knee replacement. Joint arthroplasty is a common procedure in which the deteriorated bone is removed and replaced with a prosthetic appliance (Capriotti, 2020).

Pathophysiology References (2) (APA):

Capriotti, Theresa M. and Frizzell, Joan Parker, "Pathophysiology: Introductory Concepts and Clinical Perspectives" (2020).

Zelman, D. (2020, August 06). Subchondral Sclerosis? Causes, Symptoms, and Treatment. Retrieved November 09, 2020, from https://www.webmd.com/osteoarthritis/osteoarthritis-subchondral-sclerosis

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

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	4.10 - 5.70		Not able to obtain *	
Hgb	12.0 - 8.0		12.0	Hgb is within normal range.
Hct	37.0 - 51.0%		35.6	Hct is lowered because patient has arthritis.
Platelets	140 - 400		Not able to obtain*	
WBC	4.00 – 11.00		*	
Neutrophils	40 - 70		*	
Lymphocytes	10 - 20		*	
Monocytes			*	
Eosinophils			*	
Bands			*	

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		136	Na- is within normal range.
K+	3.5 – 5.1		3.4	K+ is lowered because patient is taking diuretics.
Cl-	98 - 107		101	Cl- is within normal range.

CO2	**22 - 29**		**27**	**CO2 is within normal range.**
Glucose	**70 - 99**		**145**	**Glucose is elevated because many forms of stress such as general anesthesia causes an increase serum glucose level.**
BUN	**6 - 20**		**16**	**BUN is within normal range.**
Creatinine	**0.50 – 1.00**		**0.56**	**Creatinine is within normal range.**
Albumin	**3.5 – 5.2**			
Calcium	**8.4 – 10.5**		**9.3**	**Calcium is within normal range.**
Mag	**1.6 – 2.6**		**Not able to obtain***	
Phosphate			*	
Bilirubin	**0.0 – 1.2**		*	
Alk Phos	**35 - 105**		*	

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			**Urinalysis was not taken***	
pH	**5.0 – 9.0**		*	
Specific Gravity	**1.003-1.030**		*	
Glucose	**Negative**		*	
Protein	**Negative**		*	
Ketones	**Negative**		*	

WBC	**Negative 0-5/hpf**		*****	
RBC	**Negative 0-2/hpf**		*****	
Leukoesterase	**Negative**		*****	

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			**No cultures were taken***	
Blood Culture			*****	
Sputum Culture			*****	
Stool Culture			*****	

Lab Correlations Reference (APA):

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2019). Mosby's diagnostic and laboratory test reference. St. Louis, MO: Elsevier.

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

X-ray Right Knee Post Op:

Right knee demonstrates a right knee arthroplasty has been performed. Tibial and femoral components are normally been aligned. There is chondromalacia of the patella. Amorphous calcification posteriorly, which may be calcification of the popliteal artery or a calcified lymph

node. Status post right knee are arthroplasty. Tibial and femoral components are normally aligned.

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/Generic	**Norvasc/ Amlodipine**	**Lipitor/ Atorvastatin**	**Cozaar/ Losartan**	**Hydrochlorothiazide**	**Xarelto/ Rivaroxaban**
Dose	**5 mg**	**20 mg**	**50 mg**	**12.5 mg**	**20 mg**
Frequency	**Daily**	**Nightly**	**2x Daily**	**2x Daily**	**Daily w/ Dinner**
Route	**PO**	**PO**	**PO**	**PO**	**PO**
Classification	**Antianginal antihypertensive**	**Antihyperlipidemic**	**Antihypertensive**	**Diuretic**	**Anticoagulant**
Mechanism of Action	**Inhibits smooth-muscle cell contractions and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance, and reducing systolic and diastolic blood pressure.**	**Reduces plasms cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of LDL receptors on liver cells to enhance LDL uptake and breakdown.**	**Inhibiting effects of angiotensin II reduce blood pressure. Decreases left ventricular mass index in patient with left ventricular hypertrophy who also have hypertension. By targeting the RAAS, a renoprotective action occurs through the lowering of the albumin excretion rate in patients with type 2 diabetes.**	**It may decrease cardiac output, extracellular fluid volume, or plasma volume, which helps explain blood pressure reduction. It also may reduce blood pressure by direct arterial dilation.**	**Selectively blocks the active site of factor Xa, which plays a central role in the cascade of blood coagulation. Without the action of factor Xa, blood clotting is impaired.**

Reason Client Taking	**To control hypertension**	**To control lipid levels**	**To manage hypertension**	**To manage hypertension**	**To reduce risk of stroke**
Contraindications (2)	**Hypersensitivity to amlodipine or its components**	**Active hepatic disease, breastfeeding hypersensitivity to atorvastatin or its components, pregnancy, unexplained persistent rise in serum transaminase level.**	**Concurrent aliskiren therapy (in patients with diabetes or renal impairment [GFR less than 60 ml/min]), hypersensitivity to losartan or its components.**	**Anuria; hyper Sensitivity to hydrocholorothiazide, other thiazides, sulfonamide derivatives, or their components.**	**Active pathological bleeding, hypersensitivity to rivaroxaban or its components.**
Side Effects/Adverse Reactions (2)	**Arrhythmias, pancreatitis**	**Headache, hyperglycemia**	**Hypotension, back pain**	**Dizziness, constipation**	**Syncope abdominal pain**

Medications Reference (APA):

J., B. (2020). *2020 Nurse's drug handbook* (19th ed.). Burlington, MA, MA: Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Alert and oriented to time, place and person x3** **In distress, patient is in intense pain** **Groomed and appropriately dressed**
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	 **Pink** **Dry/Normal** **Warm** **Normal turgor 2+** **No rashes** **No bruises** **No wounds** **20 Braden Score**
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 **Head and neck are symmetrical, trachea is midline, no deviation** **Patients ears are free of discharge** **Bilateral sclera white, cornea clear, conjunctiva pink with no drainage** **Patient wears glasses** **Turbinates are pink and moist bilaterally, no visible bleeding or polyps.** **Patient wears dentures and are within normal limits**
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:**	 **Heart sounds are normal, S1 and S2 present** **No murmurs, gallops, or rubs** **Pulses are 2+ throughout bilaterally** **Capillary refill less than 3 seconds in fingers and toes** **No neck vein distention** **No signs of edema in all extremities**

RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	. **Patient lung sounds are clear bilaterally.** **Respirations are regular, even and nonlabored.** **No wheezes, crackles or rhonchi noted.**
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:**	. **General diet at home** **Current diet is non-restricted** **5'5"** **178 lbs** **Bowel sounds hypoactive in lower quadrants and hyperactive in upper quadrants** **No CVA tenderness** **Last bowel movement 11/01/20** **Abdomen was soft and nontender** **No abnormalities were found upon inspection for distention, scars, drains, or wounds.** **Unable to visualize the appearance of the incision. No local redness or heat near incision.** **Dressing is dry and intact with no visible drainage.**
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**Patient is continent** **Voided 1x** **Urine was clear, yellow and non-odorous**

MUSCULOSKELETAL: **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 x☐** **Needs support to stand and walk x☐**	. **Patient is post op right knee arthroplasty** **Limited ROM** **Patient is able to get up with one assist, gait belt and walker.** **Strength bilateral upper extremities** **Right leg weakness, right knee post op** **Flexion and extension of right leg is impaired** **Fall Risk** **10 Fall Score**
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☒ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	. **Arms strong, weak right leg** **Cognitive of space, time, and location** **Articulative speech** **Mature and cognitive** **Alert** **No gross facial neurological deficits**
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):**	. **Family** **Mature** **Baptist** **Patient is widowed, lives at home by herself and is mainly independent but daughter will stay with her until she is fully recovered.**

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1040	**68** **Pulse oximetry**	**146/71** **Left arm Head of bed elevated 30 degrees**	**14**	**98.6 F Oral**	**93% room air** **(Nurse rechecked patients' oxygen)**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1040	**0-10**	**Right knee**	**9/10**	**Intense**	**Was given pain medication**

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
220 mL **Water = 220 mL** **Food:** **Pancakes with syrup** **Ate 100% of breakfast**	**Voided 1x** **BM: 0x during shift**

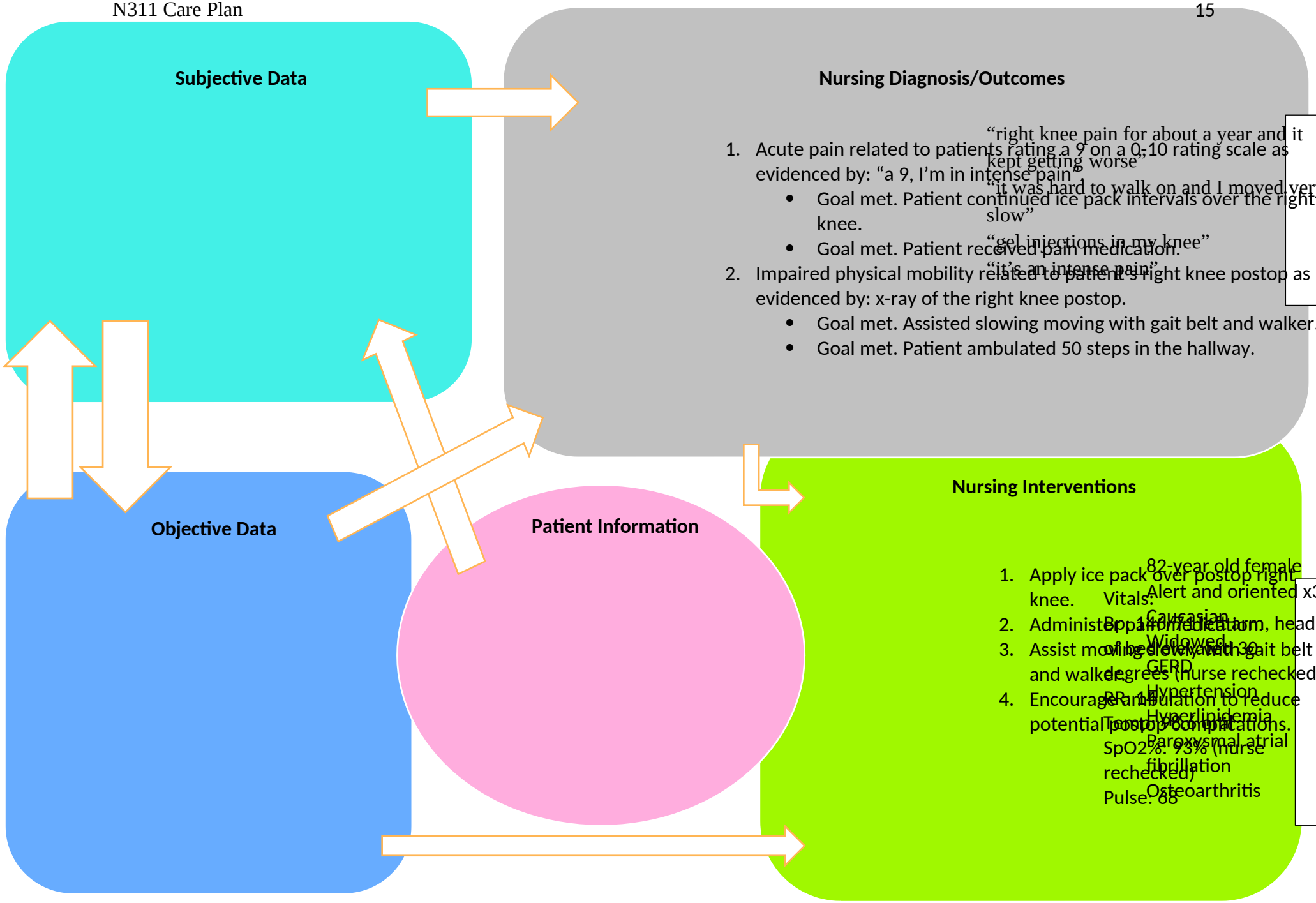
Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

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. Acute pain	**Related to patients rating pain a 9 on a 0-10 scale as evidenced by: "I'm in intense pain".**	**1. Apply ice pack over right knee.** **2. Administer pain medication.**	**Goal met. Patient continued ice pack intervals over the right knee.** **Goal met. Pain medications were administered.**
2. Impaired physical	**Related to patient's right**	**1. Assist with moving slowly**	**Goal met. Assisted with gait and walker.**

mobility	**knee postop as evidenced by: x-ray of the right knee post op.**	**with gait belt and walker.** **2. Encourage ambulation to reduce the potential for post op complications.**	**Goal met. Patient ambulated 50 steps in the hallway.**

Other References (APA):

Concept Map (20 Points):


Subjective Data
"right knee pain for about a year and it kept getting worse"
"it was hard to walk on and I moved very slow"
"gel injections in my knee"
"it's an intense pain"
Nursing Diagnosis/Outcomes
1. Acute pain related to patients rating a 9 on a 0-10 rating scale as evidenced by: "a 9, I'm in intense pain"
• Goal met. Patient continued ice pack intervals over the right knee.
• Goal met. Patient received pain medication.
2. Impaired physical mobility related to patient's right knee postop as evidenced by: x-ray of the right knee postop.
• Goal met. Assisted slowing moving with gait belt and walker.
• Goal met. Patient ambulated 50 steps in the hallway.
Objective Data
Vitals:
BP: 144/68
Widowed
GERD
RR: 18
Hypertension
Hyperlipidemia
Paroxysmal atrial fibrillation
Osteoarthritis
SpO2%: 93% (nurse rechecked)
Pulse: 88
Patient Information
82-year old female
Alert and oriented x3
Caucasian
Lives alone in 1 level home, head of bed elevated 30 degrees (nurse rechecked)
Tonsillectomy
Nursing Interventions
1. Apply ice pack over postop right knee.
2. Administer pain medication.
3. Assist moving slowly with gait belt and walker.
4. Encourage ambulation to reduce potential postop complications.