N321 Care Plan #1

Lakeview College of Nursing

Michaela Hallett

Demographics (3 points)

Date of Admission	Patient Initials	Age	Gender
6/2/2020	R.F.B	59 yo	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian, Hispanic	Goodwill, prior Cpt at Danville Prison	Married	Penicillin, adhesive tape
Code Status	**Height**	**Weight**	
Full	5'9	214 lbs	

Medical History (5 Points)

Past Medical History: Carcinoma, Prostate CA, Migraines, DVT

Past Surgical History: Fasciotomy (6/7/2020), Above knee amputation (6/5/2020), Pleural scarification, transurethral incision of prostate

Family History: Brother had multiple DVTs, most recently 2013. No Mat/Pat hx given.

Social History (tobacco/alcohol/drugs): Former smoker quit 1/1/2008, has been smoking a pack per week. No drug use or use of smokeless tobacco. Drinks alcohol occasionally.

Assistive Devices: Glasses

Living Situation: Lives with spouse.

Education Level: High School

Admission Assessment

Chief Complaint (2 points): L leg pain one week, aching/pressure, no fever.

History of present Illness (10 points): 59-year-old male presents with complaints of leg swelling, bruising, tenderness, and pain. Pt was seen in ED yesterday (6/1) with similar symptoms and was noted to have elevated D-dimer of 7323. Pt was given dose of Lovenox and order to return for venous doppler. Pt had doppler, positive for DVT from groin-ankle. Pt denies recent surgery, immobility, history of DVT. Pt reports prostate cancer with surgery.

Primary Diagnosis

Primary Diagnosis on Admission (2 points):Pulmonary Embolism

Secondary Diagnosis (if applicable):Left calf four compartment fasciotomies

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

Compartment syndrome, a potentially life-threatening condition, the pressure increases within a confined space. Which, in return, compromises blood flow and tissue perfusion. This condition can occur in any compartment, such as the hand, forearm, upper arm, abdomen, buttock, thigh, but most commonly occurs in the leg's anterior chamber. Progression of this syndrome can lead to tissue ischemia, necrosis, and functional impairment. The renal excretion of these breakdown products can cause nephron tubule dysfunction. Renal failure and death can occur if the patient is not treated. Diagnosis of compartment syndrome is based on clinical assessment of the six P's (pain, pallor, paresthesia, pulselessness, poikilothermia, and paralysis. The earliest indication of developing compartment syndrome is pain that seems out of proportion to the injury and strain on the passive stretch of other muscles in the immobilized limb. Edema, pallor, and paresthesias in the affected area and distally will be apparent. Besides, weak distal pulses or pulselessness can be found. Often a doppler is used to detect weak pulses, this test uses high-frequency waves to measure blood flow through your arteries and veins, usually those that supply blood to your arms and legs. Compartment pressures can be objectively measured as more significant than 30mm Hg. Treatment for compartment syndrome is surgical fasciotomy. This corresponds to the patient I cared for. He had lower leg pain for a week and a half before being seen in the emergency department. When discussing the pain, he described that the pain would be subtle at nighttime when elevated and first thing in the morning. After being on his feet for multiple hours, the

swelling, warm to the touch, and pain would kick in. Since the patient avoiding these symptoms for far too long, the pressure built up inside his lower left leg affecting all four compartments. In order to feel relief, a surgical fasciotomy was performed.

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J.P. (2016) Pathophysiology: Introductory Concepts and Clinical Perspectives. F.A. Davis Company.

Hinkle, J.L. & Cheever, K.H. (2018). Brunner & Suddarth's Textbook of Medical-Surgical Nursing. (14th ed.). Wolters Kluwer.

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	**4.4-5.8**	**4.36**	**3.54**	**Blood loss due to surgery.**
Hgb	**13-16.5**	**13**	**10.6**	**Blood loss due to surgery.**
Hct	**38-50**	**39.3**	**32.1**	**Blood loss due to surgery.**
Platelets	**140-440**	**191**	**165**	
WBC	**4-12**	**4.2**	**7.2**	
Neutrophils	**40-60%**	**64.4**	**N/A**	**Indicts bacterial infection, compartment syndrome.**
Lymphocytes	**19-49%**	**23**	**N/A**	
Monocytes	**3-13%**	**7.3**	**N/A**	

Eosinophils	**0-0.5**	**0.2**	**N/A**	
Bands	**N/A**	**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-	**133-144**	**140**	**137**	
K+	**3.5-5.1**	**3.9**	**4.5**	
Cl-	**98-107**	**107**	**103**	
CO2	**21-31**	**28**	**24**	
Glucose	**70-100**	**108**	**118**	**Overweight, prediabetic**
BUN	**7-25**	**16**	**11**	
Creatinine	**0.5-1.2**	**0.92**	**0.8**	
Albumin	**3.5-5.7**	**3.6**	**3.7**	
Calcium	**8.6-10.3**	**8.8**	**8.3**	**Due to low protein in blood.**
Mag	**N/A**	**N/A**	**N/A**	
Phosphate	**N/A**	**N/A**	**N/A**	
Bilirubin	**0.2-0.8**	**0.4**	**0.5**	
Alk Phos	**34-104**	**65**	**63**	
AST	**13-39**	**21**	**25**	
ALT	**7-52**	**19**	**28**	

Amylase	**N/A**	**N/A**	**N/A**	
Lipase	**N/A**	**N/A**	**N/A**	
Lactic Acid	**N/A**	**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	**0.8-1.1**	**1.0**	**N/A**	
PT	**10.1-13.1**	**12.1**	**N/A**	
PTT	**25-36**	**31**	**66**	**Pt is on Heparin drip.**
D-Dimer	**0.622**	**7323**	**N/A**	**Pt positive for DVT groin-ankle.**
BNP	**N/A**	**N/A**	**N/A**	
HDL	**N/A**	**N/A**	**N/A**	
LDL	**N/A**	**N/A**	**N/A**	
Cholesterol	**N/A**	**N/A**	**N/A**	
Triglycerides	**N/A**	**N/A**	**N/A**	
Hgb A1c	**N/A**	**N/A**	**N/A**	
TSH	**N/A**	**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	**N/A**	**N/A**	**N/A**	
pH	**N/A**	**N/A**	**N/A**	

Specific Gravity	**N/A**	**N/A**	**N/A**	
Glucose	**N/A**	**N/A**	**N/A**	
Protein	**N/A**	**N/A**	**N/A**	
Ketones	**N/A**	**N/A**	**N/A**	
WBC	**N/A**	**N/A**	**N/A**	
RBC	**N/A**	**N/A**	**N/A**	
Leukoesterase	**N/A**	**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	**N/A**	**N/A**	**N/A**	
Blood Culture	**N/A**	**N/A**	**N/A**	
Sputum Culture	**N/A**	**N/A**	**N/A**	
Stool Culture	**N/A**	**N/A**	**N/A**	

Lab Correlations Reference (APA):

Anderson, D. (2018). *Lab values: Everything you need to know about laboratory medicine and its importance in the diagnosis of diseases*. United States: Medical Creations.

Lab ranges are from OSF HMMC, each institution may have varying lab ranges.

Diagnostic Imaging

All Other Diagnostic Tests (5 points): US Doppler

Diagnostic Test Correlation (5 points): Relates to patient occlusion of blood flow to lower extremities.

Diagnostic Test Reference (APA):

Venous Doppler Exam | Section of Vascular Surgery | Washington University in St. Louis. (2020). Washington University School of Medicine in St. Louis. https://vascularsurgery.wustl.edu/patient-care/venous-doppler-exam/

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

Home Medications (5 required)

Brand/Generic	**Miralax lactulose**	**Epanova omega 3 carboxylic**	**Calcitriol vitamin D3**	**Niac vitamin B complex**	**Tylenol acetaminophen**
Dose	**17g**	**4 mg**	**400 IU**	**20 mg**	**650 mg**
Frequency	**qd-PRN**	**qd**	**qd**	**qd**	**Q4 hr PRN**
Route	**PO**	**PO**	**PO**	**PO**	**PO**
Classification	**Colonic acidifier**	**Antilipemic**	**Antihypocalcemic**	**Vitamin B**	**Antipyretic**
Mechanism of Action	**Breaks down into lactic acid and small amounts of acetic and formic acids**	**Possibly reduce synthesis of triglycerides in the liver.**	**Bind to specific receptors on intestinal mucosa to increase calcium absorption**	**Niacin is necessary for adequate cellular metabolism**	**Inhibits enzyme cycloxygenase**
Reason Client Taking	**Constipation**	**Reduce triglyceride levels**	**Bone health**	**Boost brain function**	**Mild pain**
Contraindications (2)	**Low-galactose diet Hypersensitivity to lactulose**	**Hypersensitivity to omega-3 carboxylic or its components**	**Hypercalcemia Hypersensitivity to calcitriol**	**Peptic ulcer disease Active hepatic disease**	**Severe active liver disease Hypersensitivity to acetaminophen**

Side Effects/Adverse Reactions (2)	**Hypokalemia Flatulence**	**Fatigue Constipation**	**Rash Pruritus**	**Flushing PUD**	**Hypotension Muscle spasm**
Nursing Considerations (2)	**Check electrolyte levels in elderly pt Monitor blood ammonia level in pt with hepatic encephalopathy**	**Monitor LDL levels Use cautiously in pt with fish or shellfish allergy**	**Warn pt to not take other vitamin D forms Instruct pt to take missed dose as soon as possible**	**Monitor uric acid and blood glucose**	**Use catiously in patients with hepatic impairment Know the before and during therapy including liver function**

Hospital Medications (5 required)

Brand/ Generic	**Heparin Leo(CAN) heparin**	**Flexeril cyclobenzaprine**	**Norco Hydrocodone-acetaminophen**	**Zofran-ODT ondansetron**	**Xarelto rivaroxaban**
Dose	**36mL/hr 25,000 units**	**5 mg**	**10 mg**	**16 mg**	**15 mg**
Frequency	**Drip-Hourly**	**Q 8 hr**	**Q 4hr- PRN**	**Q 12 hr-PRN**	**BID w/meals**
Route	**IV**	**PO**	**PO**	**Sublingual**	**PO**
Classification	**Anticoagulant**	**Skeletal muscle relaxant**	**Opioid analgesic**	**Antiemetic**	**To treat DVT or PE**
Mechanism of Action	**Enhances antithrombin III's inactivation of the coagulation enzymes thrombin and factors Xa and Xia.**	**Acts in the brain stem to reduce or abolish tonic muscle hyperactivity.**	**Binds to and activates opioid receptors at sites in the peri adequate and periventricular gray matter.**	**Blocks serotonin receptors centrally in the chemoreceptors trigger zone and peripherally at vagal nerve in the intestine.**	**Selectively blocks the active site of factor Xa, which plays a central role in the cascade of blood coagulation.**
Reason Client Taking	**To prevent post-operative thromboembolism**	**Muscle spasms**	**Moderate pain**	**Nausea- 1st line**	**Venous thromboembolism**

Contraindications (2)	**DIC(disseminated intravascular coagulation) Severe thrombocytopenia**	**Acute recovery phase of MI; arrhythmias**	**Acute or severe bronchial asthma Suspected paralytic ileus**	**Concomitant use of apomorphine Hypersensitivity to ondansetron**	**Active pathological bleeding Hypersensitivity to rivaroxaban**
Side Effects/Adverse Reactions (2)	**Delayed onset of heparin-induced thrombocytopenia Hematemesis**	**Arrhythmias Seizures**	**Nausea Dizziness**	**Hypotension Altered taste**	**Muscle spasm GI bleeding**
Nursing Considerations (2)	**Use cautiously in alcoholics Patients over age 60**	**Avoid giving drug to elderly pts Take safety precautions to prevent falls if pt. is confused, dizzy or weak.**	**Risk for abuse, addiction and misuse Use extreme cation when administering to COPD pt.**	**Place immediately on pt. tongue after opening package Monitor electrocardiogram**	**Used to reduce risk of stroke Do not give to pt. with prostatic heart valves**

Medications Reference (APA):

Jones & Bartlett Learning. (2019). *2020 Nurse's Drug Handbook* (19th ed.). Burlington, MA:

Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL (1 point): Alertness: Orientation: Distress: Overall appearance:	**Alert and oriented x3 time, place, person. Overall comfortable, doesn't appear distressed. Appears well nourished. Well groomed.**
INTEGUMENTARY (2 points): Skin color: Character:	**Skin pink, warm ,dry and elastic. No lesions. Bruising on R ankle. R arm fold, near IV.**

Temperature: **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 14** **Drains present: Y☐ N ☒** **Type:**	**Incision on L leg knee to ankle.**
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Head symmetrically round, hard and smooth without lesions or bumps. Hair appears well maintained. Ears normal. TM pearly grey. Negative for congestion, ear drainage, ear pain, hearing loss, tinnitus. Eyes normal. Sclera white. Conjunctiva pink. Negative for blurred vision, double vision, photophobia, pain. Nose normal. Nasal passage pink and moist. Negative for nose bleeds, nasal drainage. Teeth are symmetrical. Mouth/Throat normal. Oropharynx is clear and moist.**
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: Left leg below knee**	**No S3 or S4. No gallop. Negative for chest pain, PND, palpitations. Normal heart rate, rhythm, heart sounds. No murmur. Pulses bilaterally 2+ brachial, ulnar, radial, popliteal, dorsalis pedis, posterior tibial. Strong carotid pulse. Cap refill normal.**
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**Clear normal breath sounds. No wheezing or rails. No respiratory distress.**
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height: 5'9** **Weight: 214 lbs** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:**	**Hypoactive bowel sounds. No distension, incisions, scar, drains or wounds present. Negative for diarrhea, heartburn, nausea, vomiting. Positive for flatulence and abdominal pain.** **Current diet and inpatient diet no restrictions.**

Incisions: **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	
GENITOURINARY (2 Points): **Color: Yellow** **Character: Clear** **Quantity of urine: 1 occurance** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**Negative for dysuria, frequency, and urgency. Urine is clear, yellow.**
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 12** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	**Negative for back pain and myalgia. ROM is normal on R side. L leg is limited due to incision, exhibits moderate pain when sitting on side of bed, and using walker to ambulate. Steady with one assist. Will use supportive device when discharged.**
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☒ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**Unable to bend L leg due to dressing over incision. Cannot put weight on L leg. Negative for LOC.**
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s): Cigarettes**	**Negative for depression, memory loss, hallucinations, substance abuse, suicide ideas. Coping mechanism is smoking.**

Developmental level: Generativity **Religion & what it means to pt.: Catholic** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**Supportive spouse whom pt resides with. Practice Catholic religion.**

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	**67**	**133/87**	**16**	**98.1**	**97%**
1100	**87**	**147/79**	**18**	**98.6**	**96%**

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	**4/10**	**L lower leg, behind knee**	**Moderate**	**Throbbing**	**Norco in 30 minutes**
1200	**8/10**	**L ankle**	**Excruciating**	**Aching, throbbing, tingling**	**Unwrapped dressing to check venous flow w/doppler.**

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV:	18 Gauge
Location of IV:	R cubital
Date on IV:	6/6/2020
Patency of IV:	Open
Signs of erythema, drainage, etc.:	None
IV dressing assessment:	Clean, dry, adhere securely around the skin

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
200 IV 75%	**2 occurrences urine**

300mL coffee **240mL apple juice** **90% breakfast**	**1 occurrence BM** **450 mL**

Nursing Care

Summary of Care (2 points)

Overview of care: Ongoing

Procedures/testing done: D-dimer, Doppler, Fasciotomy

Complaints/Issues: N/A

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: Yes

Physician notifications: Discontinue heparin, begin Xarelto today (6/8/2020)

Future plans for patient: To transfer to rehab department for one week prior to discharge. Needs to learn to manage stairs with crutches/walker.

Discharge Planning (2 points)

Discharge location: Home

Home health needs (if applicable): Home therapy to rebuild leg strength

Equipment needs (if applicable): Crutches or Walker

Follow up plan: Genetic testing for DVT/PE

Education needs: New medication: Xarelto

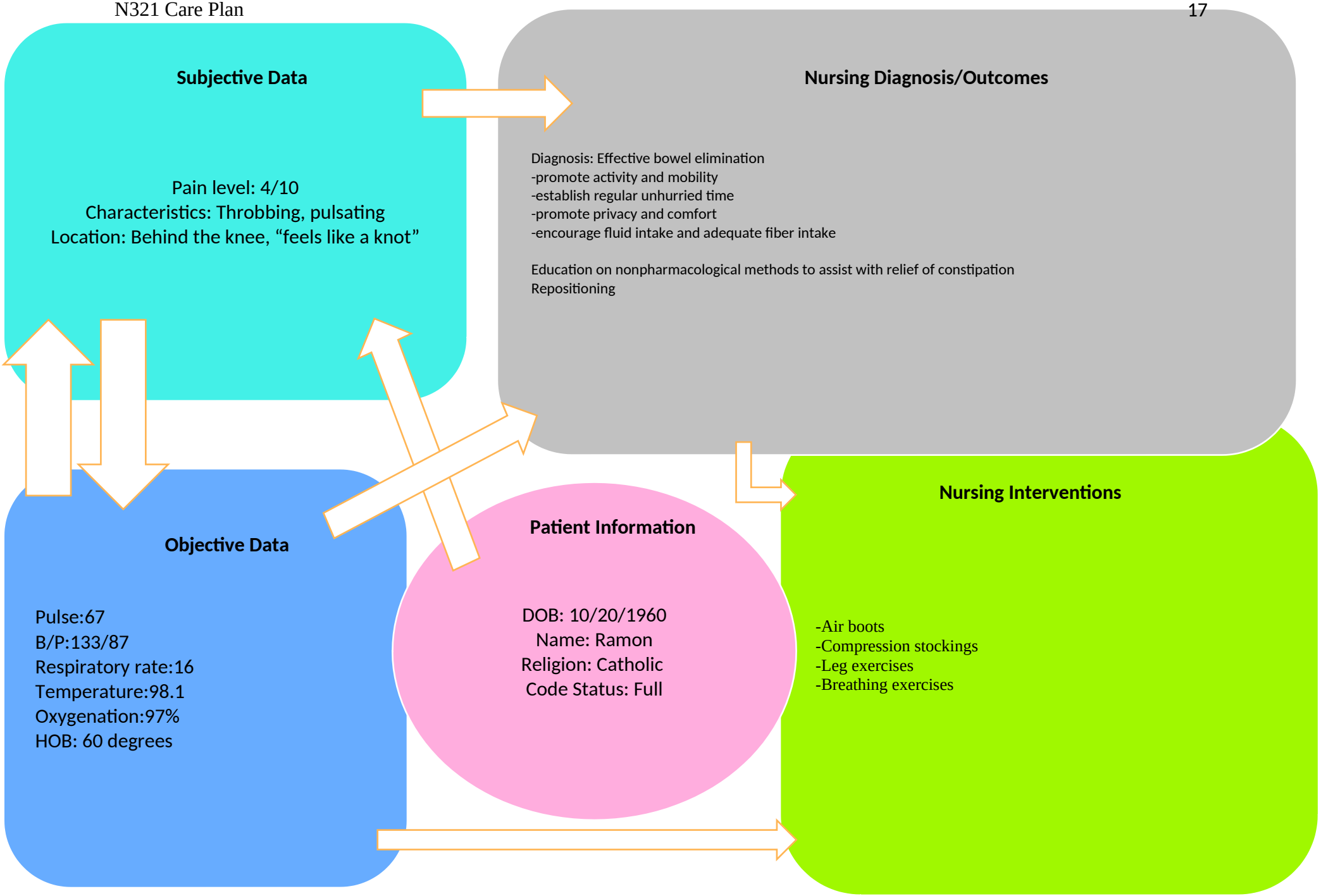
Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

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. Infection "related to" compartment syndrome "as evidence by" elevated neutrophils	**Severe pain related to infection within the lower leg.**	**1.Moniotr anticoagulant therapy to ensure therapeutic level** **2.Promote early mobilization, encourage both passive and active leg exercises.**	**Pt responded well to first ambulation and plan of action.** **Goal: absence of nosocomial infection** **Readiness for transition of care.**
2. Altered gas exchange "related to" perfusion of the pulmonary capillaries "as evidence by" decreased PO2.	**Due to not being out of bed for several days, the secretions in the lungs are not moving.**	**1. Monitor fluid balance** **2.Promote HOB elevation to minimize ventricular perfusion mismatch**	**Patient elevates HOB 60 degrees or greater when eating and awake.** **Goal: Optimize oxygenation**
3. Constipation "related to" bowel elimination impaired "as evidence by" hypoactive bowel sounds.	**Decreased physical activity. Lack of privacy. Straining to defecate, decreased bowel sounds, number of stools less than normal.**	**1.Miralax** **2Privacy for defecation**	**Patient received laxatives and Miralax.** **Goal: Optimal comfort/ well being.**

Other References (APA):

Swearingen, P. L., & Wright, J. D. (2019). All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health. St. Louis, MO: Elsevier.

Concept Map (20 Points):


Subjective Data
Pain level: 4/10
Characteristics: Throbbing, pulsating
Location: Behind the knee, “feels like a knot”
Nursing Diagnosis/Outcomes
Diagnosis: Effective bowel elimination
-promote activity and mobility
-establish regular unhurried time
-promote privacy and comfort
-encourage fluid intake and adequate fiber intake
Education on nonpharmacological methods to assist with relief of constipation
Repositioning
Objective Data
Pulse:67
B/P:133/87
Respiratory rate:16
Temperature:98.1
Oxygenation:97%
HOB: 60 degrees
Patient Information
DOB: 10/20/1960
Name: Ramon
Religion: Catholic
Code Status: Full
Nursing Interventions
-Air boots
-Compression stockings
-Leg exercises
-Breathing exercises