N311 Care Plan #2

Lakeview College of Nursing

Dakota Clayton

Demographics (5 points)

Date of Admission	**Client Initials**	**Age**	**Gender**
5/3/22	J.J.	79	M
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Retired military	Divorced	Morphine – hypotension Vancomycin – rash
Code Status	**Height**	**Weight**	
Full code	75 in.	122.1 kg (269.2 lbs.)	

Medical History (5 Points)

Past Medical History: Type II Diabetes Mellitus (patient did not report date)

Peripheral Artery Disease (patient did not report date)

Hypertension (patient did not report date)

Anemia (patient did not report date)

Past Surgical History: Gastrointestinal cancer removal (2010)

Skin cancer removal (various years)

Right knee reconstruction (2010)

Family History: Esophagus cancer (Father)

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use):

Patient reports they do not currently use any tobacco, alcohol, or other drugs.

Admission Assessment

Chief Complaint (2 points): Diabetic foot ulcer on right heel

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

Patient reported he has been dealing with current right heel ulcer for approximately 6 months, but has had issues with right heel for over 1.5 years. Location of ulcer is posterior on right heel and on the inferior pedal portion of right heel. Patient does not report any pain with ulcer due to

peripheral neuropathy causing numbness. Patient reports that pressure and increased temperatures negatively impact ulcer healing, and rest helps ulcer healing. Patient has been treated for right heel related wounds for approximately 1.5 years.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Diabetic ulcer on right heel

Secondary Diagnosis (if applicable): Anemia

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

According to Capriotti and Frizzell (2020), Diabetes mellitus (DM) is a chronic disorder that most notably affects the body's ability to use or produce insulin, resulting in high blood glucose levels. DM is most commonly classified into two types – Type 1 DM (T1DM) and Type 2 DM (T2DM) (Capriotti & Frizzell, 2020). Capriotti and Frizzell (2020), explain that T1DM is classified as the insulin-deficient type, and T2DM is classified as the insulin-resistant type. Both forms of DM (along with other, less common forms) are very common in the United States, with over 30 million individuals being impacted by the condition (Capriotti & Frizzell, 2020). While T1DM is an autoimmune condition, T2DM is largely preventable – major risk factors for the condition including obesity, diet, physical activity, and smoking are modifiable (Capriotti & Frizzell, 2020). DM continues to increase in prevalence in the United States, and the CDC predicts that DM diagnoses will rise 165% by 2050 (Capriotti & Frizzell, 2020).

In both types of DM, the inability of insulin to maintain proper blood glucose levels leads to chronic of high blood glucose, or hyperglycemia (Capriotti & Frizzell, 2020). Capriotti and Frizzell (2020) further discuss that prolonged, uncontrolled DM has an extremely detrimental effect on the body's arterial blood vessel system. Results of prolonged damage from DM include blood vessel injury, peripheral neuropathy, and notably – diabetic foot ulcers (Capriotti &

Frizzell, 2020). Oliver and Mutluoglu (2022) explain that diabetic foot ulcers are due to a variety of different complications stemming from DM, including inadequate foot care, hyperglycemia, neuropathy, and peripheral vascular disease (para. 1). Khan (2020) explains that diabetes-related foot ulcers and wounds are exceedingly common in individuals with DM, and that nearly 25% of individuals with DM will develop one. Among the individuals with diabetic foot ulcers, approximately 50% will experience infection of the ulcer, and approximately 20% will require amputation to some extent (Khan, 2020).

According to Oliver and Mutluoglu (2022), signs and symptoms of diabetic foot ulcers begin with a detailed health history from the individual. Oliver and Mutluoglu (2022) explain that the health history provides details of the patient's DM diagnosis and treatment that are pertinent to the development of foot ulcers, such as blood glucose control, neuropathy development, and foot care routines. Other signs of a potential diabetic foot ulcer also include fever, pain, current presence of a callus, past ulcers, and poor footwear (Oliver & Mutluoglu, 2022). As the ulcer develops, the most obvious sign and symptom is going to be an open wound on the foot. After the ulcer has developed, symptoms include delayed wound healing and wound infection (Oliver & Mutluoglu, 2022).

While the main diagnostic testing for diabetic foot ulcers is going to be by physical assessment, there are other diagnostic tests related to DM and diabetic foot ulcers. For DM, the A1c test is the gold standard for diagnosis, with a value of 6.5% or higher indicating DM (Capriotti & Frizzell, 2020). Capriotti and Frizzell (2020) also state that there are other tests for DM, including the fasting blood glucose test (positive result of 126 mg/dL or higher), and the random plasma glucose test (positive result of 200 mg/dL or higher). Oliver and Mutluoglu (2022) explain that individuals with diabetic foot ulcers will most commonly already have a DM

diagnosis, but other diagnostic tests will be completed including a complete blood count, erythrocyte sedimentation rate, and wound culture. X-rays and/or MRIs may also be done to further investigate the wound and surrounding area (Oliver & Mutluoglu, 2022). My patient had fasting blood glucose labs, a wound culture, and an MRI completed in relation to the diabetic ulcer found on his foot.

Khan (2020) describes treatment approaches for diabetic foot ulcers, which include interventions like moist dressings, wound offloading, antibiotic therapy, and surgery, if necessary. Khan (2020) further explains that improved control of DM also contributes to treating diabetic foot ulcers. For treatment, my patient had a moist dressing on the ulcer and soft boot on his right heel, to keep the wound moist and to decrease the risk for further damage. He also had regular visits from the wound doctor to monitor and document the wound progression. Lastly, my patient was having his feet checked regularly to prevent the development of new diabetic foot ulcers.

Pathophysiology References (2) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Khan, Tanzim (2020). Diabetic foot ulcers. *Medscape.* https://emedicine.medscape.com/article/460282-overview

Oliver, T.I. & Mutluoglu, M. (2022, May 10). *Diabetic foot ulcer*. StatPearls. https://www.ncbi.nlm.nih.gov/books/NBK537328/

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	4.5 – 5.5 x10^6/ mcL (Males)	N/A	2.36 x10^6/ mcL	Common causes of anemia in older adults are nutritional deficiencies and chronic diseases (Capriotti & Frizzell, 2020).
Hgb	13 – 18 g/dL (Males)	N/A	7.5 g/dL	Anemia from nutritional deficiencies and chronic diseases presents with associated decreases in hemoglobin (hgb) (Van Luuewen & Bladh, 2021).
Hct	45 – 52% (Males)	N/A	22.3%	Anemia from nutritional deficiencies and chronic diseases present with associated decreases in hematocrit (hct) (Van Luuewen & Bladh, 2021).
Platelets	150 - 400 K/mcL	N/A	67 K/mcL	Decreased platelet counts are associated with various anemia diagnoses and recent bacterial infections (Van Luuewen & Bladh, 2021).
WBC	4 – 10 KmcL	N/A	4.0 KmcL	
Neutrophils	40 – 80%	N/A	54.2%	
Lymphocytes	20 – 40%	N/A	33%	
Monocytes	2 – 10%	N/A	8.5%	
Eosinophils	1 – 7%	N/A	4.0%	
Bands	0 -10%	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 mmol/L	N/A	135 mmol/L	

K+	3.5 – 5.2 mmol/L	N/A	4.6 mmol/L	
Cl-	95 – 105 mmol/L	N/A	101 mmol/L	
CO2	35 – 45 mmol/L	N/A	31 mmol/L	Causes of respiratory alkalosis include infection and anxiety (Capriotti & Frizzell, 2020).
Glucose	< 100 mg/dL	N/A	207 mg/dL	Increased glucose levels are key identifiers of a diabetes diagnosis (Van Luuewen & Bladh, 2021).
BUN	8 – 25 mg/dL	N/A	19 mg/dL	
Creatinine	0.6 – 1.3 mg/dL	N/A	0.95 mg/dL	
Albumin	3.2 – 4.6 g/dL (older adults)	N/A	3.2 g/dL	
Calcium	8.7 – 10 mg/dL	N/A	8.3 mg/dL	
Mag	1.5 – 2.5 mg/dL	N/A	N/A	
Phosphate	2.5 – 4.5 mg/dL	N/A	N/A	
Bilirubin	0.3 – 1.0 mg/dL	N/A	0.4 mg/dL	
Alk Phos	35 – 150 units/mL	N/A	64 units/mL	

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	Pale yellow and clear	N/A	N/A	*Urinalysis was not completed
pH	4.5- 7.8	N/A	N/A	*Urinalysis was not completed
Specific Gravity	1.005 – 1.03	N/A	N/A	*Urinalysis was not completed
Glucose	Normal	N/A	N/A	*Urinalysis was not completed
Protein	Negative	N/A	N/A	*Urinalysis was not completed

Ketones	Negative	N/A	N/A	*Urinalysis was not completed
WBC	< 5	N/A	N/A	*Urinalysis was not completed
RBC	< 5	N/A	N/A	*Urinalysis was not completed
Leukoesterase	Negative	N/A	N/A	*Urinalysis was not completed

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	*Urine culture was not completed
Blood Culture	Negative	N/A	N/A	*Blood culture was not completed
Sputum Culture	Negative	N/A	N/A	*Sputum culture was not completed
Stool Culture	Negative	N/A	N/A	*Stool culture was not completed
Wound Culture	Negative	N/A	Positive – Methicillin-resistant Staphylococcus Aureus (MRSA)	Positive MRSA would cultures are indicative of a critical finding and warrant immediate follow-up (Van Luuewen & Bladh, 2021).

Lab Correlations Reference (1) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Van Leeuwen, A. M., & Bladh, M. L. (2021). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implication* (9th ed.). F. A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

MRI: On 5/1/22, during the patient's hospital stay, magnetic resonance imaging (MRI) was completed. According to Oliver and Mutluoglu (2022), an MRI is the preferred test to rule-out osteomyelitis and other underlying issues related to diabetic foot ulcers. According to the Mayo Clinic (2020), osteomyelitis is a bone infection which is common in chronic diseases like DM. The findings from the patient's MRI ruled-out osteomyelitis and/or bone fracture, and confirmed soft tissue swelling surrounding the foot ulcer.

Diagnostic Imaging Reference (1) (APA):

Oliver, T.I. & Mutluoglu, M. (2022, May 10). *Diabetic foot ulcer*. StatPearls. https://www.ncbi.nlm.nih.gov/books/NBK537328/

Mayo Clinic. (2020). *Osteomyelitis*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/osteomyelitis/symptoms-causes/syc-20375913

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

Medications (5 required)

Brand/ Generic	Aldactone/ Spironolactone	Cozaar/ Losartan	Lasix/ Furosemide	Ultram/ Tramadol	Zorprin/ Aspirin
Dose	25 mg	25 mg	20 mg	81 mg	50 mg
Frequency	Daily	Daily	Daily	Daily	QID
Route	PO	PO	PO	PO	PO
Classification (Thera. / pharm.)	T: Diuretic P: potassium-sparring diuretic (Vallerand & Sanoski, 2023).	T: Anti - hypertensive P: Angiotensin II receptor antagonist (Vallerand & Sanoski, 2023).	T: Diuretic P: Loop diuretic (Vallerand & Sanoski, 2023).	T: Analgesic P: Opioid analgesic (Vallerand & Sanoski, 2023).	T: anti-platelet agent P: salicylate (Vallerand & Sanoski, 2023).
Mechanism of Action	Medication stops sodium reabsorption in renal system while maintaining potassium levels; Spironolactone does this by lowering aldosterone receptor activation (Vallerand & Sanoski, 2023).	"Blocks vasoconstrictor and aldosterone-producing effects of angiotensin II at receptor sites, including vascular smooth muscle and adrenal glands" (Vallerand & Sanoski, 2023, p. 161).	Medication increases rate of renal and urinary excretion of water and multiple electrolytes (Vallerand & Sanoski, 2023).	Medication slows reabsorption of serotonin and norepinephrine in the central nervous system; medication effect is pain management (Vallerand & Sanoski, 2023).	Medication opposes the production of prostaglandins, reducing fever and inflammation (Vallerand & Sanoski, 2023).
Reason Client Taking	Maintain proper fluid levels	Hypertension control	Maintain proper fluid levels	Pain management	Reduce inflammation
Contraindications (2)	1. Hyperkalemi	1. Renal impairment	1. Anuria 2. Alcohol	1. Bronchial asthma	1. Bleeding disorders

	a 2. Renal impairment (Vallerand & Sanoski, 2023).	2. Pregnancy (Vallerand & Sanoski, 2023).	intolerance (Vallerand & Sanoski, 2023).	2. GI obstruction (Vallerand & Sanoski, 2023).	2. Pregnancy (Vallerand & Sanoski, 2023).
Side Effects/Adverse Reactions (2)	1. Heart arrythmias 2. Erectile dysfunction (Vallerand & Sanoski, 2023).	1. Hypotension 2. Edema (Vallerand & Sanoski, 2023).	1. Aplastic anemia 2. Dizziness (Vallerand & Sanoski, 2023).	1. Constipation 2. Seizures (Vallerand & Sanoski, 2023).	1. GI bleeding 2. Vomiting (Vallerand & Sanoski, 2023).

Medications Reference (1) (APA):

Vallerand, A. H., & Sanoski, C. A. (2023). *Davis's Drug Guide for Nurses* (18th ed.). F.A. Davis Company.

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	A&O x4. Patient was alert, calm, and resting in his wheelchair. Overall appearance was well-groomed and healthy. Patient was open to all parts of assessment and open to student observation.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 17** **Drains present: Y☐ N ☒** **Type:**	Patient's skin was warm, with color appropriate for ethnicity. Patient had recently put on lotion before the assessment, so the skin was moist. Skin on the bilateral upper extremities was loose, with scarring from various skin cancer removals. Skin on the lower extremities was loose, with a scar on the right knee from a previous reconstructive surgery. Patient had a covered wound on his right heel that was not assessed. Skin turgor returned to place promptly. Capillary refill was <3 seconds. Patient had no rashes or drains noted. Patient's Braden score was 17 which indicates a mild-to-low risk for pressure ulcers.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patient's head and neck are symmetrical with trachea midline without deviation. Auricles symmetrical bilaterally with no visible or palpable lumps, lesions, or deformities bilaterally. No visible drainage from ears. Patient's sclera are white bilaterally and conjunctiva pink and moist bilaterally. No noted drainage from eyes. Eye lids pink and moist with no noted lesions. PERRLA bilaterally. EOMs intact bilaterally. Nose is symmetrical with septum midline. No noted drainage or bleeding from nose. Patient has one tooth implant on maxillary, and overall dentition is good. Patient's tonsils were absent and patient noted they were removed as a child. Overall oral mucosa pink and moist with no noted drainage or lesions.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1 and S2 heart sounds auscultated with no S3, S4, or murmurs noted. Cardiac rate as expected and rhythm normal. Carotid and radial pulses palpable bilaterally and 2+ bilaterally. Capillary refill <3 seconds. No neck vein distention noted. Patient was not displaying any edema.

RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Anterior and posterior landmarks were auscultated on the lungs, with clear, expected lung sounds heard over all lobes. No accessory muscle use was noted. No chest deformities noted, and no cough or other respiratory symptoms noted.
GASTROINTESTINAL: **Diet at home:** **Current Diet:** No restrictions **Height:** 75 in **Weight:** 122.1 Kg **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:**	*Gastrointestinal was not assessed
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	*Genitourinary was not assessed
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** Wheelchair **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: <u>65 (high risk)</u>** **Activity/Mobility Status:** **Independent (up ad lib)**	*Musculoskeletal was not assessed

Needs assistance with equipment **Needs support to stand and walk <u>X</u>**	
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** A and O x4 **Mental Status:** **Speech:** Clear **Sensory:** **LOC:** No	*Neurological was not assessed
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):**	*Psychosocial/cultural was not assessed

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0915	74 bpm	122/80	12	36.7 C	96%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0910	Numerical	Right heel	0	N/A	N/A

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
100% of breakfast	Patient voided 1x

240 mL milk 240 mL coffee 120 mL orange juice 350 mL (12 oz) Diet Coke	No BM witnessed

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

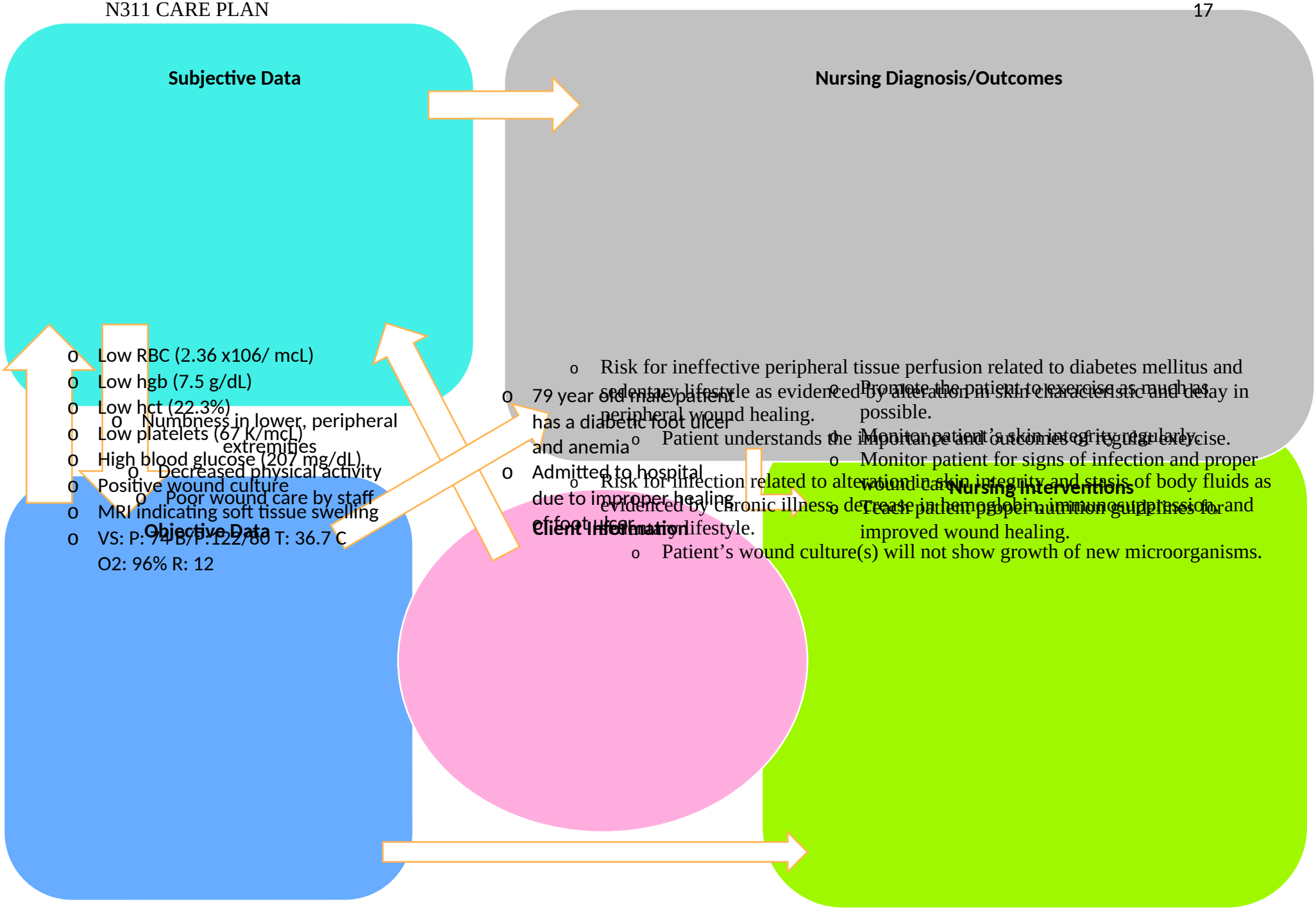
Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for ineffective peripheral tissue perfusion related to diabetes mellitus and sedentary lifestyle as evidenced by alteration in skin characteristic and delay in peripheral wound healing.	This nursing diagnosis was given due to the patients' increased risk for circulatory issues and further diabetes-related peripheral injuries.	1. Promote the patient to exercise as much as possible. 2. Monitor patient's skin integrity regularly.	1. Patient understands the importance and outcomes of regular exercise.	Patient was generally apprehensive to the idea of increased physical activity, but exhibited understanding of the benefits of increased exercise.
2. Risk for infection related to alteration in skin integrity and stasis	This nursing diagnosis was given due to the open	1. Monitor patient for signs of infection and	1. Patient's wound culture(s) will not show growth of new microorganisms.	Patient responded well to nursing action and the

of body fluids as evidenced by chronic illness, decrease in hemoglobin, immunosuppression, and sedentary lifestyle.	wound the patient has been experiencing for approximately the last 6 months, which is impacting his quality of life.	proper wound care. 2. Teach patient proper nutrition guidelines for improved wound healing.		proposed treatment goals. Patient was grateful that wound care and healing was made a priority in his plan of care.

Other References (APA):

Phelps, L. L. (2020). *Sparks and Taylor's nursing diagnosis reference manual* (11th ed.) Wolters Kluwer.

Concept Map (20 Points):


Subjective Data
Numbness in lower, peripheral extremities
Decreased physical activity
Poor wound care by staff
Objective Data
Low RBC (2.36 x106/ mcL)
Low hgb (7.5 g/dL)
Low hct (22.3%)
Low platelets (67 K/mcL)
High blood glucose (207 mg/dL)
Positive wound culture
MRI indicating soft tissue swelling
VS: P: 74 B/P: 122/80 T: 36.7 C
O2: 96% R: 12
79 year old male patient has a diabetic foot ulcer and anemia
Admitted to hospital due to improper healing of foot ulcer
Client Information
Nursing Diagnosis/Outcomes
Risk for ineffective peripheral tissue perfusion related to diabetes mellitus and sedentary lifestyle as evidenced by alteration in skin characteristic and delay in peripheral wound healing.
Patient understands the importance and outcomes of regular exercise.
Risk for infection related to alteration in skin integrity and stasis of body fluids as evidenced by chronic illness, decrease in hemoglobin, immunosuppression, and sedentary lifestyle.
Patient's wound culture(s) will not show growth of new microorganisms.
Nursing Interventions
Promote the patient to exercise as much as possible.
Monitor patient's skin integrity regularly.
Monitor patient for signs of infection and proper wound care.
Teach patient proper nutrition guidelines for improved wound healing.