N311 Care Plan # 1

Lakeview College of Nursing

Name: Jamario Jeffries

Demographics (5 points)

Date of Admission 04/11/2019	Patient Initials R.H	Age 51	Gender Female
Race/Ethnicity White/Caucasian	Occupation Volunteer Fire Fighter	Marital Status Single	Allergies Aspartame, Cephalexin, and Saccharin
Code Status Full Code	Height 165.1 cm	Weight 240.0 lbs	

Medical History (5 Points)

Past Medical History: End-Stage Renal Disease, Type II Diabetes, Bilateral Deep Vein Thrombosis, Hypotension, Hyperlipidemia (HLD), and Obesity.

Past Surgical History: Fistula, Cataract Surgery (right eye), Laser eye surgery.

Family History: Father: Heart attack

Mother: Breast Cancer, Type II Diabetes mellitus

Brother: Hodgkin's Disease

Social History (tobacco/alcohol/drugs): Patient denied any alcohol usage, no tobacco used

Admission Assessment

Chief Complaint (2 points): The patient presents with a follow-up evaluation for the end-stage-renal disease.

History of present Illness (10 points): None

Primary Diagnosis

Primary Diagnosis on Admission (3 points): End-Stage Renal Disease

Secondary Diagnosis (if applicable): Type II Diabetes

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

Chronic renal failure or end-stage renal disease which our patient has been diagnosed with has five stages that the patients progress through (Capriotti & Frizzell, 2016, p. 504). Stage 1 is characterized by kidney damage with normal or increased glomerular filtration rate (greater than 90 mL/min) (Capriotti & Parker Frizzell, 2020). However, the kidney (Capriotti & Frizzell, 2016, p. 504). Mild kidney damage is characterized in stages 1 and 2, where no filtration problems occur (Capriotti & Frizzell, 2016, p. 504). In stage 3, the patient starts to show symptoms because less than 50% of the nephrons are functioning (Capriotti & Frizzell, 2016, p. 504). In stage 3 serum creatinine and BUN begin to rise (Capriotti & Frizzell, 2016, p. 504). Stage 4 is characterized by renal insufficiency and less than 20% of the nephrons are functioning, and the patient is restricted in their fluid intake ((Capriotti & Frizzell, 2016, p. 504). Stage 5 is present when the glomerular filtration rate (GFR) falls below 5% of normal functionality ((Capriotti & Frizzell, 2016, p. 504). In stage 5 the patient's kidney varied functions such as erythropoietin synthesis, blood pressure maintenance, electrolyte, and acid-base balance are lost (Capriotti & Frizzell, 2016, p. 504). Prolonged stage 5 can progress to end-stage-renal-disease, which is characterized by uremia, meaning urine in the bloodstream (). Patients experiencing ESRD, must immediately limit fluid intake and start dialysis (Capriotti & Frizzell, 2016, p. 504). ESRD has systemic complications over the body ((Capriotti & Frizzell, 2016, p. 504). Which are as follows, Encephalopathy, thrombocytopenia, electrolyte imbalance, anemia, high blood urea nitrogen (BUN), edema, hypertension, heart failure, peripheral neuropathy, hyperparathyroidism (Capriotti & Frizzell, 2016, p. 504). To properly diagnose ESRD, a series of three diagnostic tests must be completed: a blood pressure measurement, a spot check for protein or albumin in

the urine, and a calculation of glomerular filtration rate based on the creatinine clearance (Robinson J., 2014). An elevated blood pressure, a GFR lower than 15 mL/min, and elevated serum creatinine levels are all indicative of ESRD. (Robinson J., 2014). The patients most recent lab values completed on 2/6/2020, showed 6.93 creatinine level with the average being 0.7-1.30, and the patients' blood pressure was 106/51 mm hG which isn't conclusive of ESRD, however, the GFR is estimated to be lower than 15 mL/min, because of the elevated creatinine levels (Sarah Bush Lincoln Health Center, 2020). Treatment for ESRD can consist of pharmacologic and nutritional therapies, dialysis and kidney transplant (Robinson J., 2014). Some of the pharmacologic therapies are calcium and phosphorus binder, antihypertensive and cardiovascular agents, anti-seizure, and erythropoietin (Belleza M., 2016). Nutritional therapies consist of regulating protein intake, fluid intake, sodium intake, and restriction of potassium. Lastly, dialysis to allow the patient to sustain a reasonable lifestyle (Belleza M., 2016). The patient is treated with dialysis three times a week on Monday, Wednesday, and Friday. The patient's fluid intake is limited to 32 ounces a day and no added salts in the diet.

Pathophysiology References (2) (APA):

Sarah Bush Lincoln Health Center (2020). *Reference range (lab values)*. Mattoon, IL.

Capriotti, T., & Frizzell, J.P. (2016) *Pathophysiology: Introductory concepts and clinical perspectives.* (1st ed.). Philadelphia, PA: F.A. Davis Company.

Belleza, M., & R.N. (2016, November 10). *Chronic Renal Failure Nursing Care and Management: Study Guide*. Nurseslabs. https://nurseslabs.com/chronic-renal-failure/

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	**4.2-5.4**	**n/a**	**3.6 (low)**	**The patient's kidneys are damaged and can no longer produce erythropoietin and lead to a decrease in red blood cell count, (Anemia in ESRD)**
Hgb	**12.0- 16.0**	**n/a**	**11.9 (low)**	**The patient's kidneys are no longer functioning properly and not producing much erythropoietin which signals the body to make more red blood cells and this function is lost in ESRD (Anemia in ESRD, 2019)**
Hct	**37.0-47.0**	**n/a**	**36.6 (low)**	**The patient's hematocrit value is low because of the kidney's inability to function properly and produce erythropoietin leading to a decrease in total red blood cells (Kaw & Malhotra, 2006).**
Platelets	**140.0-440.0**	**n/a**	**184**	**Normal**
WBC	**4.0-10.0**	**n/a**	**3.5 (low)**	**The patient is an older adult and she has progressive chronic kidney disease which causes a decrease in the production of WBC's**
Neutrophils	**36.0-88.0**	**n/a**	**62.2**	**Normal**
Lymphocytes	**24.0-44.0**	**n/a**	**21.0 (low)**	**ESRD can cause a diffuse reduction of B-cell subpopulations leading to a decrease in lymphocyte production (Pahl et al., 2009).**

Monocytes	**0.0-8.0**	**n/a**	**9.0 (high)**	**The patient has an elevated monocyte count due to chronic kidney disease infection because of their immune responsivity (Hénaut et al., 2019).**
Eosinophils	**0.0-4.0**	**n/a**	**7.4 (high)**	**The patient has an elevated level because of their immune response to organ damage and being that the patient is the latter part of renal disease, ESRD (Kaw & Malhotra, 2006).**
Bands	**n/a**	**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-	**136-145**	**n/a**	**136**	**Normal**
K+	**3.5-5.1**	**n/a**	**4.4**	**Normal**
Cl-	**98-107**	**n/a**	**97 (low)**	**The levels are low because the kidneys are responsible for electrolyte balance. After all, the kidneys are not functioning properly (Dhondup & Qian, 2017).**
CO2	**21-31**	**n/a**	**31**	**Normal**
Glucose	**74-109**	**n/a**	**168 (extremely high)**	**The patient experiences insulin resistance and therefore the blood sugar cannot be stored for energy and continuously throughout the blood (Descombes & Fellay, 2000).**
BUN	**7-25**	**n/a**	**34 (high)**	**The kidneys are not functioning properly, therefore, they cannot properly remove nitrogen from the blood (Descombes & Fellay, 2000).**

Creatinine	**0.7-1.30**	**n/a**	**6.93 (extremely high)**	**This is elevated because the patient's kidney cannot properly filter creatinine and will lead to increased arterial levels (Descombes & Fellay, 2000).**
Albumin	**3.5-5.7**	**n/a**	**4.34**	**Normal**
Calcium	**8.6-10.3**	**n/a**	**9.8**	**Normal**
Bilirubin	**0.3-1.0**	**n/a**	**0.9**	**Normal**
Alk Phos	**34-104**	**n/a**	**70**	**Normal**

Lab Correlations Reference (APA):

Belleza, M., & R.N. (2016, November 10). *Chronic Renal Failure Nursing Care and Management: Study Guide*. Nurseslabs. https://nurseslabs.com/chronic-renal-failure/

Descombes, E., & Fellay, G. (2000). END-STAGE RENAL FAILURE AFTER IRBESARTAN PRESCRIPTION IN A DIABETIC PATIENT WITH PREVIOUSLY STABLE CHRONIC RENAL INSUFFICIENCY. *Renal Failure*, *22*(6), 815–821. https://doi.org/10.1081/jdi-100101967

Dhondup, T., & Qian, Q. (2017). Electrolyte and Acid-Base Disorders in Chronic Kidney Disease and End-Stage Kidney Failure. *Blood Purification*, *43*(1–3), 179–188. https://doi.org/10.1159/000452725

Guthoff, M., Wagner, R., Vosseler, D., Peter, A., Nadalin, S., Häring, H.-U., Fritsche, A., & Heyne, N. (2017). Impact of end-stage renal disease on glucose metabolism—a matched cohort analysis. *Nephrology Dialysis Transplantation*, *32*(4), 670–676. https://doi.org/10.1093/ndt/gfx018

Hénaut, L., Candellier, A., Boudot, C., Grissi, M., Mentaverri, R., Choukroun, G., Brazier, M., Kamel, S., & Massy, Z. A. (2019). New Insights into the Roles of Monocytes/Macrophages in Cardiovascular Calcification Associated with Chronic Kidney Disease. *Toxins*, *11*(9). https://doi.org/10.3390/toxins11090529

Kaw, D., & Malhotra, D. (2006). HEMATOLOGY: ISSUES IN THE DIALYSIS PATIENT: Platelet Dysfunction and End-Stage Renal Disease. *Seminars in Dialysis*, *19*(4), 317–322. https://doi.org/10.1111/j.1525-139x.2006.00179.x

Pahl, M. V., Gollapudi, S., Sepassi, L., Gollapudi, P., Elahimehr, R., & Vaziri, N. D. (2009). Effect of end-stage renal disease on B-lymphocyte subpopulations, IL-7, BAFF and BAFF receptor expression. *Nephrology Dialysis Transplantation*, *25*(1), 205–212. https://doi.org/10.1093/ndt/gfp397

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

Medications (5 required):

Brand/ Generic	**Warfarin Sodium/Coumadin**	**Aspirin/ Bayer**	**Tylenol/ Acetaminophen**	**Basaglar Kwikpen/Insulin glargine**	**Atorvastatin/ Lipitor**
Dose	**5.0 mg**	**81 mg**	**650 mg**	**20 units**	**80 mg**
Frequency	**Daily**	**Daily**	**Daily (evening)**	**Daily (evening)**	**Daily**
Route	**Po**	**Po**	**Po**	**Subcutaneously**	**Po**
Classification	**Anticoagulant**	**Anti-inflammatory**	**Antipyretic, nonopioid analgesic**	**Antidiabetic**	**Antihyperlipidemic**
Mechanism of Action	**Interferes with the**	**Blocks the activity of cyclooxyge**	**It inhibits the enzyme cyclooxyge**	**Lower blood glucose by**	**Reduces plasma cholesterol**

	liver's ability to synthesize vitamin K-dependent clotting factors, depleting clotting factors II (prothrombin), VII, IX, and X. This action, in turn, interferes with the clotting cascade. By depleting vitamin K-dependent clotting factors and interfering with the clotting cascade, warfarin prevents coagulation.	**nase, the enzyme needed for prostaglandin synthesis. Prostaglandins, important mediators in the inflammatory response, cause local vasodilation with swelling and pain.**	**nase, blocking prostaglandin production and interfering with pain impulse generation in the peripheral nervous system. Also Acts directly on temperature-regulating center in the hypothalamus by inhibiting the synthesis of prostaglandins E_2.**	**stimulating peripheral glucose uptake by fat and skeletal muscle and inhibiting hepatic glucose production.**	**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.**
Reason Client Taking	**History of DVTs.**	**History of DVTs.**	**PRN pain.**	**The patient has Type II diabetes.**	**High Blood Sugar levels.**
Contraindications (2)	**Dissecting Aneurysm or Diverticulitis eclampsia.**	**Active Bleeding or Clotting disorders.**	**Hypersensitivity to acetaminophen or its components, severe hepatic impairment, severe active liver disease.**	**Chronic lung disease. Hypersensitivity to regular human insulin or any of its components.**	**Active hepatic disease, breastfeeding, hypersensitivity to atorvastatin or its components, pregnancy, unexplained persistent rise in serum**

					transaminase levels.
Side Effects/ Adverse Reactions (2)	**Hypotension, our patient already has hypotension, and this could lead to even more detrimental effects. Such as loss of consciousness. Intracranial hemorrhage.**	**Gastrointestinal bleeding. Ecchymosis.**	**Hypotension. Hepatoxicity.**	**Hypoglycemia. Angioedema.**	**Arrhythmias. Hypoglycemia.**

(*2020 Nurse's drug handbook.*, 2020b)

Medications Reference (APA): *2020 Nurse's drug handbook*. (2020b). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness: AnL x3** **Orientation: AnL x3** **Distress: none** **Overall appearance: Groomed and well-manicured**	
INTEGUMENTARY: **Skin color: Normal for the race, besides the right arm due to fistula placement.** **Character: Normal upper body and dry and flaky on her legs.** **Temperature:** **Turgor: Normal, 2 seconds.** **Rashes: No rashes.**	

Bruises: ® arm, DVT, spider bite, belly, lower belly. **Wounds: Rt. Heel, started as pressure sore and progressed into an ulcer.** **Braden Score: 40** **Drains present: Y☐ N ☒** **Type:none**	
HEENT: **Head/Neck: Right tonsil slightly enlarged; thyroid appeared normal** **Ears: Symmetrical, left ear showed signs of cerumen collection.** **Eyes: Left eye shrinking due to blindness and cataract formation** **Nose: Symmetrical** **Teeth: The patient appears to have stage 3-4 periodontal disease. The patient was able to wiggle her two lower front teeth about 1cm forward and backward.**	.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur, etc.** **Cardiac rhythm (if applicable): S1** **Peripheral Pulses: All peripheral pulses were felt beside the posterior tibials and the dorsal pedis on the right foot due to her diabetic pressure ulcer.** **Capillary refill: Patients' fingernails were patented, so we couldn't complete the test on her fingers. However, on her left foot, the refill time was normal for 2 seconds.** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☒ N ☐** **Location of Edema: Right forearm, caused by the placement of the fistula.**	.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**Breathing is at a regular pace.** **We noticed a slight wheeze, and once noted patient stated that she has asthma.**
GASTROINTESTINAL: **Diet at home: Normal foods, no added salts.** **Current Diet:** **Height: 165. cm**	.

Weight: 140 lbs **Auscultation bowel sounds: Normal movement sounds** **Last BM: Yesterday morning 3/2/2020** **Palpation: Pain, Mass, etc.: None noticed** **Inspection:** **Distention:** **Incisions:** **Scars: Rt foot from the burn on** **Drains:** **Wounds: Rt foot from the burn on highway.** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size: None** **Feeding tubes/PEG tube Y ☐ N ☒** **Type: None**	
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☒ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**The patient does not urinate being that she is on dialysis and is limited to an intake of 32 fluid ounces daily. The patient stated that she does not always drink the complete 32 ounces. Since that the patient has urinated by herself since 2016, she doesn't know the color, smell and character of her urine for the examination.**
MUSCULOSKELETAL: **Neurovascular status: Good** **ROM: The patient has good ROM, all except her right arm cannot elevate more than her chest.** **Supportive devices: Wheelchair and walker** **Strength: Patients entire right side of the body is weaker than her left side. But the patient has a strong left side.** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 40, The patient is a moderate fall risk.** **Activity/Mobility Status: Independent.** **Independent (up ad lib) ☐** **Needs assistance with equipment ☒** **Needs support to stand and walker☒**	.

NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☒** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☒ Both ☐** **Orientation: AnL x3** **Mental Status: Good** **Speech: Good** **Sensory: Good** **LOC: Good**	**PERLA: The patient is legally blind out of her left eye due to cataract and underuse of the eye.**
PSYCHOSOCIAL/CULTURAL: **Coping method(s): Watching tv, and playing bingo on Tuesday, Thursday, and Saturday.** **Developmental level:** **Religion & what it means to pt: Christian Church** **Personal/Family Data (Think about home environment, family structure, and available family support): The patient's cousin and uncles will come to visit her 3 times a week. She has lots of families back home, but she misses them often**	.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1300	**75 bpm**	**106/51 mm Hg**	**18 breathe/ min**	**36.23 °C (A)**	**99% O_2 Stat**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0950	**Numeric**	**n/a**	**0**	**None**	**Took pain meds**

Intake and Output (2 points)

Intake (in mL)	Output (in mL)

32 Fluid ounces per day, but normally don't consume all of it. She eats ice chips daily.	**The patient has not urinated since 2016 because she is on dialysis.**

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, the status of goals and outcomes, modifications to plan.
1. Chronic kidney disease as evidenced by edema, peritoneal dialysis.	**This diagnosis was chosen because the patient has edema on their lower extremities. The lab values of the creatinine, BUN, and RBC numbers of 6.93, 34 and 3.6, respectively, which are all indicative of Chronic Kidney Disease (ESRD)**	**1.Provide scheduled skincare and position changes for patients with edema (Swearingen, P., p.230, 2019)** **2.Administer packed red blood cells as prescribed (Swearingen, P., p. 232, 2019)**	• **The patient responded well to the skincare routine and is even doing the treatment on their own.** • **The patient has more energy after getting blood and is no longer experiencing bouts of fatigue and tiredness.**
2. The patient shows signs of diabetes as evidenced by the patient's obesity level and numbness in both feet.	**This diagnosis was concluded from the patient's diabetic ulcer on the right foot that progressed into a pressure ulcer. Also, the patient's blood glucose lab value of 168, which is extremely**	**1. Monitor peripheral pulses, comparing quality bilaterally (Swearingen, P., p. 371, 2019)** **2. Inspect feet daily for the presence of erythema,**	• **The patient is not too fond of the peripheral pulse check every day, however, they stated if their favorite patient care technician does it, they're okay with going through with it.**

	higher than the average blood glucose level.	**discoloration, or trauma, using mirrors as necessary for adequate visualization (Swearingen, P., p. 372, 2019)**	• **The patient is very adamant about the foot checks being that they've already had a diabetic pressure ulcer and they cannot reach their feet.**

Other References (APA):

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

Concept Map (20 Points)

Subjective Data

The patient states that she isn't in any pain and that her only concern is her diabetic foot ulcer.

Nursing Diagnosis/Outcomes

- **Edema and diabetic pressure ulcer on the right foot as evidenced by "I have a hole on my foot that the doctor comes to look at and keep clean"**
  - **Dressing changes as prescribed by the physician. Partially met, the staff sometimes don't have enough time to change her dressing.**
  - **Elevation from a hard surface. Met, the patient foot is in a protective device that allows the proper circulation and prevention of any further ulcers.**
- **Tiredness and fatigue from the lack of RBC's**

Objective Data

Chief complaint. The patient has to swell in her lower extremities and renal disease.
Vitals:
BP: 106/51
RR: 18
Temp: 36.2 C
SpO_2%: 99%
Pulse: 75

Patient Information

"51-year-old female patient with a history of chronic kidney disease (ESRD) as well as DM type II. The patient has a history of Bilateral DVTs, hypotension, hyperlipidemia (HLD), and extreme obesity. The patient has

Nursing Interventions

- Provide scheduled skincare and position changes for patients with edema (Swearingen, P., p.230, 2019)
- Administer packed red blood cells as prescribed (Swearingen, P., p. 232, 2019)
- Monitor peripheral pulses, comparing quality bilaterally (Swearingen, P., p. 371, 2019)
- 2. Inspect feet daily for the presence of erythema, discoloration, or trauma, using mirrors as necessary for adequate visualization (Swearingen, P., p. 372, 2019)

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