N311 Care Plan #5

Lakeview College of Nursing

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Demographics (5 points)

Date of Admission	Patient Initials	Age	Gender
01/08/XX	R.J.	60	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
African American	N/A (not assessed)	Not assessed (Single)	Sulfa
Code Status	**Height**	**Weight**	
Full Code	182.9 cm (72 inches)	230 lbs	

Medical History (5 Points)

Past Medical History: Atrial fibrillation, Kidney disease, Type II Diabetes, Peripheral vascular disease, Coronary Artery Disease

Past Surgical History: none

Family History: none

Social History (tobacco/alcohol/drugs): Client smokes one pack of cigarettes a day, consumes 3-5 alcoholic drinks per week, and has difficulty adhering to his diabetic management plan

Admission Assessment

Chief Complaint (2 points): SOB and weakness

History of present Illness (10 points):A very pleasant African American 60-year-old male presents to the clinic today with complaints of difficulty of breathing while he was lying in bed at his home. Client called 911 just before admission which was at 0400 on 01/08. Client reported pain in his chest from the shortness of breath. The pain was constant after it started and then was made worse when lying flat. Client reported that sitting in the tripod position would help to better his breathing.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Chronic Kidney disease

Secondary Diagnosis (if applicable): Pneumonia in right upper lobe of right lung

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

Kidneys are at risk for injury because they are an organ in our body that requires a large blood flow in order to function. This organ processes potentially toxic waste products from our body. Our kidneys need a high rate of blood flow in order to keep the kidney's from showing signs of ischemia. If not enough pressure is involved, then the kidneys may not be able to push the tubule fluid out the ureter. The causes of Kidney dysfunction are separated into three different categories. According to the pathophysiology introductory concepts and clinical perspectives, the first is known as the "prerenal dysfunction: causes by decreased blood flow and perfusion to the kidney. The second is intrarenal dysfunction: develops secondary to actual injuries to the kidney itself. The third is postrenal dysfunction: related to obstruction of urine outflow from the kidney's (Capriotti & Frizzell 2016)."

When kidney injury progresses, it will progress into the chronic renal failure stage. This is an irreversible, progressive disease process with a gradual onset that "affects most 90% to 95% of nephrons (Capriotti & Frizzell 2016 page 503)." This chronic renal stage usually develops into end stage renal disease.

End Stage Renal Disease, also known as Chronic Renal Failure, is a disease that normally progresses in 5 different stages. Stage one starts with kidney damage with normal or increased glomerular filtration rate (GFR) which would be anything greater than 90 mL/min. The body can still function a great deal in this stage due to the body producing an overload of nephrons, so if the body only had one kidney the body would still be able to function with normal filtration. Stage two is a mild reduction in GFR which would be anywhere from 60 to 89 mL/min. With mild kidney damage, the damage usually occurs in

stages 1 and 2 but no filtration problems usually occur. Stage three is moderate reduction in GFR (30 to 59 mL/min). This is the stage where there is diminished renal function and symptoms are more prominent. This is when 50 percent of the nephrons are functioning, and the other 50 percent are not. This is when the BUN levels begin to rise, and creatinine clearance starts to decrease. In this client the BUN levels were extremely high with a level of 44 when normal range is between 7-25. This client's creatinine levels are also elevated due to the kidney disease. The normal is 0.70-1.30 and this client have a creatinine level of 3.0. This is the stage where normally client's begin to come to the realization that dialysis could likely be a near option for them in their condition and specifically this client as well. In stage four there is severe reduction in GFR (15 to 29 mL/min). This is when a stage of renal insufficiency is present and instead of there being 50% of nephrons there is now less than 20% of nephrons left. This is when the patient needs to start restricting dietary protein because the remaining 20% of healthy nephrons would have difficulty removing the waste from the body. In the last stage, also called stage 5, the renal failure develops and GFR falls lower than 5% of normal. This is when the patient can no longer void their urine and the kidneys are slowly becoming atrophied. Uremia (which is urine in the blood) then becomes an issue when stage 5 occurs.

According to the pathophysiology introductory concepts and clinical perspectives, the following are signs and symptoms of chronic renal failure: "Confusion, stupor, coma caused by high nitrogenous wastes affecting the brain, bruising caused from thrombocytopenia, fatigue, dyspnea, edema caused by fluid overload, lack of urine output, muscle spasms or seizures caused by hypocalcemia, amenorrhea, male and female infertility caused by back of excretion of sex hormones, sex hormones negatively feedback to organs (Capriotti & Frizzell 2016 page 508)."

Some expected findings for a health assessment for a person with chronic kidneys disease would be high blood pressure, oliguria, and edema which would be from fluid buildup that the body is having trouble filtrating. There would also be expected findings of pallor, dyspnea, and seizures (Capriotti & Frizzell, 2016). Some signs and symptoms that would go along with this disease would be: "Anemia, blood in urine, dark urine, decreased mental alertness, decreased urine output, edema, hypertension, insomnia, itchy skin, loss of appetite, male inability to get or maintain an erection, more frequent urination, especially at night, muscle cramps, muscle twitches, nausea, pain on the side or mid to lower back, panting (shortness of breath), protein in urine, sudden change in bodyweight, unexplained headaches (Newman, T. 2017 paragraph 7)."

Diagnosing chronic renal failure can be done by obtaining a CBC. The CBC would show " the serum electrolytes, serum creatinine, total albumin, BUN, and urinalysis to show any abnormalities that may indicate renal failure (Capriotti & Frizzell, 2016 page 504)." A urinalysis could also be done on the patient to show protein, RBCs and WBCs. A 24-hour urine collection could also be done for protein and creatinine clearance will show excessive loss of protein.

When treating this disease, it is essential to push fluids and electrolytes. BP medications and erythropoietin-stimulating medications would also be given to the client. Before the client has reached the full stage of end stage renal disease, it is important to treat their symptoms. For example, if you client were to be suffering from hypervolemia, it is important to treat those symptoms first. Finally, dialysis would be the lost option to try to treat end stage renal disease. After the GFR is lower than 10-20mL/min the client would be put on dialysis and evaluated for a kidney transplant.

Pathophysiology References (2) (APA):

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

Newman, T. (2017). *Symptoms, causes, and treatment of chronic kidney disease.* Medical new today. Retrieved on April 13th, 2020, from https://www.medicalnewstoday.com/articles/172179

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	Today's Value	Reason for Abnormal Value
RBC	**4.2-5.4**	**2.7 (Low)**	**Because the client has kidney failure which causes a decreased production in erythropoietin (AACC 2020)**
Hgb	**12.0-16.0**	**9.3**	
Hct	**37.0-47.0**	**28.2 (Low)**	**This client has low Hct because of the decrease in RBC level (NIDDK 2014)**
Platelets	**150,000-450,000**	**162,000**	
WBC	**4,000-11,000**	**16,100 (high)**	**This client has elevated WBC because of the kidney failure. The body is trying to fight off the infection, therefore the WBC will be elevated (NCBI 2018).**
Neutrophils	**36.0-88.0 (SBLH Center 2020).**	**93 (high)**	**This client has elevated neutrophil levels because he has an infection from his kidney failure. (Morris 2017).**

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

Lab	Normal Range	Today's Value	Reason For Abnormal
Na-	136-145	128 (Low)	The client has low sodium level from excess of water because his body is not filtrating the fluid as it should. (Lewis, J. 2018).
K+	3.5-5.1	5.1	
Glucose	74-109	71 (low)	The client has low sodium level because his "kidney failure is causing changes in his diet and the insulin and other medications remain in the system longer because of the decreased kidney clearance (Davita 2020)"
BUN	7-25	44 (High)	This client has high levels of BUN because his kidneys are not filtering out the urea nitrogen as a healthy kidney would, indicating that his kidneys are failing (National Kidney Foundation 2020)
Creatinine	0.7-1.30	8.7 (High)	This client has high levels of creatinine because his kidneys are not filtering out the normal waste product as it should, indicating that his kidneys are failing (National Kidney Foundation 2020)
Calcium	8.6-10.3	8.7	
Bilirubin	0.3-1.0 (SBLH Center 2020).	2.8 (High)	This client has elevated bilirubin levels from the body trying to protect itself from kidney damage and dysfunction (NCBI 2017)

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

- ***A Urinalysis was not done on this client***

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

- ***Cultures were not assessed on this client***

Lab Correlations Reference (APA):

Lewis, J. (2018). *Hyponatremia.* Merck Manuals. Retrieved on April 13th, 2020, from https://www.merckmanuals.com/professional/endocrine-and-metabolic-disorders/electrolyte-disorders/hyponatremia

Morris, S. (2017). *Understanding neutrophils: function, counts, and more.* Healthline. Retrieved on April 13th, 2020, from https://www.healthline.com/health/neutrophils

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

(2014). *Anemia in Chronic Kidney Disease.* National institute of diabetes and digestive and kidney disease. Retrieved on April 13th, 2020, from https://www.niddk.nih.gov/health-information/kidney-disease/anemia

(2017). *Elevated bilirubin levels are associated with a better renal prognosis and ameliorate kidney fibrosis.* NCBI. Retrieved on April 13th, 2020 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5321406/

(2020). *Low blood sugar and chronic kidney disease.* Davita kidney care. Retrieved on April 13th, 2020, from https://www.davita.com/education/kidney-disease/low-blood-sugar-and-chronic-kidney-disease#

(2018). *Low white blood cell count is independently associated with chronic kidney disease progression in the elderly: the CKD-ROUTE study.* NCBI. Retrieved on April 13th, 2020, from https://www.ncbi.nlm.nih.gov/pubmed/28699033

(2020). *Red blood cell count (RBC).* AACC. Retrieved on April 13th, 2020, from https://labtestsonline.org/tests/red-blood-cell-count-rbc

(2020). *Understanding your lab values.* National Kidney Foundation. Retrieved on April 13th, 2020, from https://www.kidney.org/atoz/content/understanding-your-lab-values

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Chest X-Ray: Opacity in right upper anterior lobe of lung with scant opacity in left lung noted.

Findings: Consistent with right upper lobe pneumonia.

ECG: findings: atrial fibrillation

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

Medications (5 required)

Brand/ Generic	**Aspirin/ Bayer**	**Acetaminophen/ Tylenol**	**Albuterol/ Proair HFA**	**Gabapentin/ Neurontin**	**Glipizide/ Glucotrol**
Dose	**81 mg**	**650 mg**	**2.5 mg nebulizer**	**400 mg**	**10 mg**
Frequency	**Daily**	**PRN every 4 hours**	**PRN every 2 hours upon shortness of breath**	**TID**	**BID**

Route	**PO**	**PO**	**PO**	**PO**	**PO**
Classification	**NSAID (Anti-inflammatory, antiplatelet, antipyretic, nonopioid analgesic)**	**Antipyretic, nonopioid analgesic**	**Bronchodilator**	**Anticonvulsant**	**Antidiabetic**
Mechanism of Action	**Blocks the activity of cyclooxygenase the enzyme needed for Prostaglandin synthesis. Important mediators in the inflammatory response caused local vasodilation with swelling and pain. Prostaglandin plays a role in pain transmission from the periphery to the spinal cord aspirin inhibits platelet aggregation. Aspirin acts on the heat-regulating center in the hypothalamus and**	**Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in the peripheral nervous system. Acetaminophen also act directly on temperature-regulating center in the hypothalamus by inhibiting synthesis of prostaglandin E2.**	**Albuterol attaches to beta 2 receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate. This reaction decreases intracellular levels of cAMP. Together, these effects relax bronchial smooth muscle cells and inhibit histamine release.**	**Gabapentin is structured just as Gamma-aminobutyric acid (GABA). Although Gabapentin's exact mechanism of action is unknown, GABA inhibits the rapid firing of neurons associated with seizures. It also may prevent exaggerated responses to painful stimuli and pain-related responses to a normal innocuous stimulus to account for its effectiveness in relieving**	**Stimulates insulin release from beta cells in pancreas. It also increases peripheral tissue sensitivity to insulin, either by increasing insulin binding to cellular receptors or by increasing number of insulin receptors.**

	causes peripheral vasodilation, diaphoresis, and heat loss.			**postherpetic neuralgia and restless legs syndrome symptoms.**	
Reason Client Taking	**Because the client has CAD and peripheral vascular disease**	**To relieve pain when needed for client's chest pain and SOB**	**Client has SOB from the build up of fluid on his lungs**	**To relieve clients nerve pain because the client has Afib.**	**Client has type II DM so client uses this to control blood glucose level**
Contraindications (2)	**Active bleeding or coagulation disorders current or recent G.I. bleed or ulcers hypersensitivity y to aspirin Aspirin products**	**Hypersensitivity to acetaminophen or its components, severe hepatic impairment, severe active liver disease.**	**Hypersensitivity to albuterol or its components**	**Hypersensitivity to gabapentin or its components**	**Hypersensitivity to glipizide, sulfonylureas, or their components; ketoacidosis**
Side Effects/Adverse Reactions (2)	**CNs depression, GI bleeding, bronchospasm, angioedema, prolonged bleeding time**	**Hypotension, hepatotoxicity, pulmonary edema, hypokalemia**	**Angina, arrhythmias, bronchospasms, metabolic acidosis**	**CNS tumors, intracranial hemorrhage, seizures, hepatitis, melena, hyponatremia**	**CV: arrhythmias, ENDO: hypoglycemia, hepatitis, pancytopenia**

Medications Reference (APA):

Jones and Bartlett. (2020). Nurses Drug Handbook (19th e.d.)

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** A&O X3 **Orientation:** Client is aware of his situation and what his condition is. He is aware of where he is at and what his name and date or birth is. **Distress:** Yes, client is having trouble breathing **Overall appearance:** Client is well kept.	
INTEGUMENTARY: **Skin color:** Normal for race **Character:** Smooth and soft **Temperature:** hot and sweaty **Turgor:** Longer than three seconds **Rashes:** none **Bruises:** none **Wounds:** Right foot ulcer on heal; stage 3 **Braden Score:** Low risk 22 **Drains present: Y☐ N ☒** **Type:**	**-Client has decreased sensory feeling in right foot, especially by the toes.**
HEENT: **Head/Neck:** Lymph nodes were assessed and all were normal. No neck distention was noted. All was normal. **Ears:** Ears were symmetrical, and TM was noted. No buildup of earwax. **Eyes:** Eyes were symmetrical and PERLA was assessed, no jaundice or irregular discharge was noted **Nose:** No drainage or pullups were noted and Turbinate's were assessed. **Teeth:** Teeth look normal and no broke or chipped teeth were found.	.
CARDIOVASCULAR: **Heart sounds:** Irregular heart rate; Ventricular tachycardia. **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** Irregular heart rate; Atrial Fibrillation **Peripheral Pulses:** Client's pulses were all	**-Client feels as if heart is racing but denies chest discomfort, numbness, or tingling.**

assessed and were present and strong. **Capillary refill:** Capillary refill was less than 3 seconds; normal **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character** Client has crackles in the lungs and oxygen saturation is 88% on 2L so we increased it to 3L.	**-Client has crackles in his lungs.** **-Client states he "just can't seem to catch a need breath." So furosemide was given to help pull fluid off of the lungs.** **-After furosemide was given the oxygen saturation was increased so oxygen was reduced back down.**
GASTROINTESTINAL: **Diet at home:** Client has decreased sodium intake to keep the fluid off of the client's lungs. **Current Diet:** Decreased sodium intake **Height:** 182.9cm (72 inches) **Weight:** 230 lbs **Auscultation Bowel sounds:** yes, present in all four quadrants **Last BM:** 1830 on 01/08 **Palpation: Pain, Mass etc.:** no pain or masses were assessed when examining the abdomen. All was normal. **Inspection:** **Distention:** none **Incisions:** none **Scars:** none **Drains:** none **Wounds:** No abdominal wounds **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	.
GENITOURINARY: **Color:** Amber **Character:** Cloudy **Quantity of urine:** Client is not outputting what the client is taking in.	**-Scant amount of urine in bladder**

Pain with urination: Y ☐ N ☒ **Dialysis: Y ☐ N ☒** **Inspection of genitals:** Not assessed **Catheter: Y ☒ N ☒** **Type: Central Line (catheter)** **Size:**	
MUSCULOSKELETAL: **Neurovascular status:** normal **ROM:** Client has able to move all extremities well. **Supportive devices:** Client does not use any supportive devices **Strength:** Client has adequate strength **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒** **Fall Score:** 35 moderate risk **Activity/Mobility Status:** Client is able to majority of ADL's on his own, when client was in his worst condition in the hospital he needed assistance getting back into bed from the commode but is normally very independent. Client also has trouble with sensory feeling when his right foot becomes numb, as evidenced by the pressure ulcer. **Independent (up ad lib)** ☐ Client is very close to being independent however, some activities require assistance. **Needs assistance with equipment** ☐ No **Needs support to stand and walk** ☐ No	**-Client did state that he needed help getting back into bed after use of the commode, however client is normally very independent.**
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** Client is A&O X3 **Mental Status:** Client is fully aware of his situation and what is going on in his life. He is open to his treatment methods. **Speech:** Clear **Sensory:** Client has decreased sensory feeling in right foot, especially near the toes. **LOC:** Client is fully orientated X3	**-Client is able to move all extremities however he has a loss of sensation in right foot.**
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** No coping methods were identified.	.

Developmental level: Client is knowledgeable about his condition and what he needs to do for his condition. **Religion & what it means to pt.:** not assessed, no religious standpoints were identified. **Personal/Family Data (Think about home environment, family structure, and available family support):** Client did not state anything about a support system. Client seems to live alone.	

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0400	**164**	**80/62**	**30**	**99.0 F (37.23 C)**	**88% RA to 2L**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0400 ***THIS WAS NOT ACTUALLY ASSESSED IN THE VIDEO, I MADE THIS PORTION UP ***	**numerical**	**Chest pain**	**7/10**	**Client states it feels as if a brick on my chest**	**Increase clients O2 rate to increase the amount of oxygen the client is taking in**

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
2,610 mL	**650 mL**

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. Excess Fluid volume related to kidney failure as evidence by SOB, crackles in the lungs, and dark urine in urinal	**This nursing diagnosis was chose because the client was having difficulty breathing and crackles were heard in his lungs.**	**1.Monitor fluid intake of client and make sure client is outputting what is being taken in.** **2.Limit sodium intake because water loves sodium which causes excess fluid build up.**	**The client responded with a pleasant attitude when client was told the interventions that they would like to try. Client does not want to be stuck in the hospital so he is open to treatment ideas.**
2. Impaired skin integrity related to type II DM as evidence by stage 3 pressure ulcer on right foot.	**The client was hospitalized previously and because of his deteriorating sensation in his foot, he was not able to feel the pressure ulcer that was forming. Client formed a pressure ulcer which indicated**	**1. Keep a pillow under foot and be sure to move the foot away from any pressure points.** **2.Provide wound care for the client weekly to dress the wound.**	**The client was happy with both interventions and is willing to work with the doctors and nurses on increasing his health.**

	his loss of sensation in right foot.		

Other References (APA):

Concept Map (20 Points):

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Subjective Data

-Client states he feels as if he cannot breathe and feels as if he is going to pass out

Nursing Diagnosis/Outcomes

Excess Fluid volume related to kidney failure as evidence by SOB, crackles in the lungs, and dark urine in urinal
The outcome of this nursing diagnosis is that client has excess fluid and his body will begin to try to overwork itself if not dealt with.
Impaired skin integrity related to type II DM as evidence by stage 3 pressure ulcer on right foot.
Client could form an infection and become sepsis from the pressure ulcer not being treated.

Objective Data

-Client has crackles in his lungs
-Client has elevated BUN, Creatinine, potassium and sodium levels.
-Client has stage 3 pressure ulcer

Patient Information

A pleasant but slightly distressed 60 year old African American male presents to the clinic with SOB and weakness. Client started feeling this while lying in bed at home with no sort of exertion applied.

Nursing Interventions

Nursing interventions for the excess fluid volume would be:
Monitor fluid intake of client and make sure client is outputting what is being taken in.
Limit sodium intake because water loves sodium which causes excess fluid build up.
mpaired skin integrity related to type II DM as vidence by stage 3 pressure ulcer on right foot.
Keep a pillow under foot and be sure to move the foot away from any pressure points.
Provide wound care for the client weekly to dress the wound.

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