Student Name ___________________________
ATI Real Life Scenario___________________

*Complete and submit to the corresponding dropbox by 1600 on the assigned clinical day.

To Be Completed Before the Simulation- Jessica Rigby

**** Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation.

Medical Diagnosis/ Disease: CKD

NCLEX IV *(8)*: **Physiological Integrity/Physiological Adaptation**

Anatomy and Physiology
Normal Structures

-Kidneys: bean shaped organs located retroperitoneally on either side of the vertebral column. The primary organ of the urinary system that functions to regulate the volume/composition of extracellular fluid and excrete waste products from the body. Kidneys also function to control BP, activate vit. D, make erythropoietin, and regulate acid-base balances. Each kidney is surrounded by a capsule that serves as protection and a shock absorber.
-Nephron: functional unit of the kidney (each kidney has 1 million nephrons). Each nephron is composed of the glomerulus, Bowman's capsule, and tubular system. The tubular system consists of the proximal convoluted tubule, loop of Henle, distal convoluted tubule, and collecting tubules.
-Urine formation: urine formation begins at the glomerulus, where blood is filtered. The glomerulus is a semipermeable membrane that allows for filtration. Hydrostatic pressure of the blood within the glomerular capillaries causes blood to be filtered and enter the Bowman's capsule. The blood then begins down the tubule (normal GFR is 125 ml/hr).
-The tubules and collecting ducts are responsible for the reabsorption of essential materials and excretion of nonessential ones. The proximal convoluted tubule reabsorbs 80% of electrolytes (glucose, amino acids, and small proteins).
-Distal convoluted tubules are responsible for the final regulation of water balance and acid-base balance. ADH is needed for water reabsorption in the kidney and is important in water balance. ADH makes the distal convoluted tubules and collecting ducts permeable to water, allowing water to be reabsorbed back into circulation.
-The kidneys participate in RBC production and BP regulation.

NCLEX IV *(7)*: **Reduction of Risk**

Pathophysiology of Disease

Chronic kidney disease involves progressive, irreversible loss of kidney function. An increase in the prevalence in CKD is linked to an aging population, increased rates of obesity, DM, and hypertension.
-Kidney disease is often not recognized until there has been considerable loss of nephrons because kidneys are highly adaptive. Most patients are often asymptomatic, resulting in CKD being underdiagnosed and untreated.
-CKD is defined as either the presence of kidney damage of GFR < 60ml/min for longer than 3 months.
-Stage 1: kidney damage w/ GFR > 90
-Stage 2: kidney damage w/ GFR 60-89
-Stage 3: GFR 45-69
-Stage 4: GFR 15-29
-Stage 5: kidney failure w/ GFR < 15
-As the kidney function worsens, every body system will be affected. Uremia is a syndrome in which kidney function declines to the point that symptoms develop on multiple body systems.
-Symptoms will arise due to retained urea, creatinine, phenols, hormones, electrolytes, and water.

Anticipated Diagnostics
Labs

-Creatinine, electrolytes, GFR, CBC, renal function tests, urinalysis, BUN
-Albumin to creatinine ratio

Additional Diagnostics

Renal biopsy, renal ultrasound, dipstick urinalysis, CT scan, H&P

NCLEX II *(3)*: **Health Promotion and Maintenance**

Contributing Risk Factors

-DM, HTN, frequent UTIs, polycystic disease, glomerulonephritis
-Frequent use of nephrotoxic medications: NSAIDS, abx, etc.

Signs and Symptoms

-Persistent proteinuria
-Edema
-SOB
-HA
-Weakness and fatigue
-Proteinuria
-GFR <60 ml/hr for more then 3 months
-Anorexia, N/V
-Anemia, prolonged bleeding
-Frequent infections
-Osteomalacia, vascular & soft tissue calcifications
-Pruritis, ecchymosis, dry/scaly skin

NCLEX IV *(7)*: **Reduction of Risk**

Possible Therapeutic Procedures

Non-surgical
-Hemodialysis or peritoneal dialysis
-Continuous renal replacement therapy (CRRT)

Surgical
Kidney transplant

Prevention of Complications
(What are some potential complications associated with this disease process)

-Drug toxicity: need to adjust dosages and frequencies (medications are more likely to accumulate within the body due to poor excretion).
-Anemia (admin epoetin to prevent)
-Hypertension (give antihypertensives)
-Dyslipidemia (give statins/fibrates

NCLEX IV *(6)*: **Pharmacological and Parenteral Therapies**

Anticipated Medication Management
-Calcium supplement and phosphate binder
-Anemia: epogen, iron supplements, folic acid supplements
-For hyperkalemia: insulin drip, IV 10% calcium gluconate, sodium bicarb, sodium polystyrene sulfonate.
-For hypertension: ACEs & ARBs, digoxin, CCB, and diuretics.
-Dyslipidemia: statins or fibrates

NCLEX IV *(5)*: **Basic Care and Comfort**

Non-Pharmacologic Care Measures
-Fluid restriction, sodium restriction
-Restrictions on dietary electrolytes like potassium, magnesium, and phosphate.
-Encourage change in lifestyle like increasing activity
-Correction of extracellular fluid volume (either overload or deficits)
-Nutritional therapy

NCLEX III *(4)*: **Psychosocial/Holistic Care Needs**

What stressors might a patient with this diagnosis be experiencing?
-Fear of the unknown, pain, anxiety, overwhelmed.

Client/Family Education

List 3 potential teaching topics/areas
• Importance of follow dietary restrictions
• Adherence to dialysis on a weekly basis until kidney transplant
•Importance of medication adherence to manage chronic disease.

NCLEX I *(1)*: **Safe and Effective Care Environment**

Multidisciplinary Team Involvement
(Which other disciplines do you expect to share in the care of this patient)

Nephrologist, PCP, lab, pharmacy, primary nurse and dialysis nurse, PT, home health.

Anticipated Patient Problems, Goals, & Interventions Based on Medical Diagnosis

** This worksheet should be completed before you begin the ATI simulation.

Problem #1: Excess fluid volume; CKD

Patient Goals:

1. Pt will maintain a UO of at least 30ml/hr during my time of care.
2. Pt will remain free of pitting edema in extremities during my time of care.

Assessments:

- Assess for pitting edema q4h, auscultate lung sounds q4h, assess I&O q2h, assess weight qshift, assess BP & HR q4h, assess for SOB w/ activity.

Interventions (In priority order):

1. Administer diuretics per MD order during my care.
2. Elevate lower extremities will pillows/wedges during my time of care.
3. Encourage ambulation of 200ft q8h during my care.
4. Maintain fluid restriction per order during my time of care.
5. Maintain low sodium diet per order during my time of care.
6. Encourage frequent repositioning q2h during my care.

Problem #2: Risk for electrolyte imbalance; CKD

Patient Goals:

1. Pt will maintain a potassium level between 3.5-5 during my time of care.
2. Pt will maintain a sodium level between 135-145 during my time of care.

Assessments:

- Assess labs q8h, assess intake & UO q2h, assess cardiac rhythm q1h,

Interventions (In priority order):

1. Administer insulin drip PRN hyperkalemia per MD order during my care.
2. Administer calcium supplement per MD order during my care.
3. Administer phosphate binder per MD order during my care.
4. Maintain sodium restriction (2-4g/day) per order during my care.
5. Maintain fluid restriction per MD order during my time of care.
6. Teach the importance of adhering to dialysis schedule during my time of care.

At this time, complete assigned ATI Real Life Simulation

Actual Patient Problems & Goals

** The following should be completed after the ATI simulation.

Problem #1: Excess fluid volume; CKD

Patient Goals:

1. PT will maintain UO of at least 30ml/hr during my time of care. Met ☑ Unmet ☐
2. Pt will remain free of pitting edema in extremities during my time of care. Met ☐ Unmet ☑

Problem #2: Risk for electrolyte imbalance; CKD

Patient Goals:

1. Pt will maintain a potassium level between 3.5-5 during my time of care. Met ☐ Unmet ☑
2. Pt will maintain a sodium level between 130-140 during my time of care. Met ☐ Unmet ☑

SOAP Notes Based on Priority Problems

Priority Patient Problem #1: Excess fluid volume

Subjective: *This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.*	**Chief Complaint:** hypervolemia, failed peritoneal dialysis, weight gain of 13.2kg in 2 days, c/o SOB and edema to lower extremities bilaterally. **PMH:** CKD, type 2 DM, hypertension, uremic pruritis, peripheral neuropathy to lower extremities bilaterally, and hyperlipemia. Has been receiving peritoneal dialysis at home for 9 months. **Allergies:** NKA **Current Medications:** Glipizide XL 20mg PO daily Aspirin 81mg PO daily Losartan 50mg PO daily Furosemide 20mg PO BID Ferric citrate 1g PO TID with meals Linagliptin 5mg PO daily Tramadol 50mg PO q6h PRN pain/discomfort Sevelamer carbonate 800mg PO TID with meals Docusate sodium 100mg PO BID Tacrolimus 0.1% topical ointment to affected areas Gentamicin 0.1% topical ointment to peritoneal dialysis catheter site daily Gabapentin 100mg PO TID Atorvastatin 20mg PO daily
Objective: *This section is your clinical observations. Include, pertinent vital signs, pertinent labs and diagnostics related to priority problem.*	**Vital Signs:** 2/10 1830: 37.2 ^{oC}, 118 bpm, RR 24, 174/94 and SpO2 94% on RA. Weight: 72.1 kg 2/10 1900: SpO2 96% 2L NC 2/10 2100: 36.8^{oC}, 114 bpm, 18 RR, 178/88, SpO2 96% 2L NC 2/10 2330: 108 bpm, 164/80 (after bolus of labetalol) **Labs:** **Admission labs 2/10 1700:** Sodium: 132 ↓ (normal 135-145) Potassium: 6.0 ↑ (normal 3.5-5) BUN: 42 ↑ (normal 10-20) Creatinine: 8 ↑(normal 0.5-1.2)

	Albumin: 3.2 ↓ (normal 3.5-5) Glucose 174 ↑ (normal 82-115) GFR: 8 ↓ (normal >90) Phosphorus: 7.5 ↑ (normal 3-4.5) **Diagnostics:** **2/10 1630 CXR:** bilateral pulmonary venous congestion with infiltrates. No cardiomegaly.
<u>A</u>ssessment: *Focused assessment on your priority problem.*	**Admission assessment 2/10:** Alert and oriented x4**. S**kin warm and dry, mucous membranes are pink & moist, scattered rhonchi in all lobes bilaterally with labored breathing and RR 24. Tachycardia notes with T wave elevation. AV fistula on left forearm is intact with bruit and thrill. +2 pitting edema in lower extremities bilaterally. Bowel sounds hypoactive. Peritoneal catheter intact to abdomen, no drainage or redness at site. C/O SOB upon exertion and stated "it has been difficult to get around lately because my lower legs feel tight".
<u>P</u>lan **<u>*Based on priority problem only</u>** *Include what your plan is for the client. What treatments or medications are needed. You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?*	**Plan:** Renal diet with 1.8 gram of sodium restriction VS q4h Strict intake and output Restrict fluids to 1L per day Daily weights Hemodialysis in AM Admin Furosemide 80mg IV bolus once, then resume PO dose of 20mg twice daily Admin Losartan 50mg PO daily Notify provider if SBP <100 or >180 mm Hg Obtain BMP 1hr after administering IV furosemide **Teaching/Resources:** pamphlets/ visual aid for hemodialysis, written discharge instructions to take home, home health nurse, and case manager to arrange transportation to dialysis 3x a week.

Priority Patient Problem #2: Risk for electrolyte imbalance

<u>S</u>ubjective: *This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.*	**Chief Complaint:** hypervolemia, failed peritoneal dialysis, weight gain of 13.2kg in 2 days, c/o SOB and edema to lower extremities bilaterally. Significant findings of hyperkalemia, hypocalcemia, and hyperphosphatemia.
<u>O</u>bjective: *This section is your clinical observations. Include vital signs, pertinent labs and diagnostics <u>related to priority problem.</u>*	**Vital Signs:** <u>2/10 1830</u>: 37.2 ^{oC}, 118 bpm (sinus tachycardia w/ T wave elevation linked to hyperkalemia) , RR 24, 174/94 and SpO2 94% on RA. Weight: 72.1 kg <u>2/10 1900</u>: SpO2 96% 2L NC <u>2/10 2100</u>: 36.8^{oC}, 114 bpm, 18 RR, 178/88, SpO2 96% 2L NC <u>2/10 2330</u>: 108 bpm, 164/80 (after bolus of labetalol) **Labs:** Sodium: 132 ↓ (normal 135-145) Potassium: 6.0 ↑(normal 3.5-5) BUN: 42 ↑ (normal 10-20) Albumin: 3.2 ↓ (normal 3.5-5) Glucose 174 ↑ (normal 82-115) GFR: 8 ↓ (normal >90) Phosphorus: 7.5 ↑ (normal 3-4.5) **Diagnostics:** Telemetry**:** Sinus tachycardia (114 bpm) with elevated t waves (due to hyperkalemia)
<u>A</u>ssessment: *Focused assessment on your priority problem.*	Alert and oriented x4. Denies pain or discomfort. Lips dry, skin warm & dry. AV fistula intact to left forearm with palpable thrill and audible bruit. Scattered rhonchi in anterior and posterior fields bilaterally. RR 18 and slightly labored. Apical HR 94 and cardiac monitor intact to chest. Abdomen nontender, bowel sounds hypoactive. Denies dysuria and report voiding. Moves all extremities symmetrically and +2 pitting edema in lower extremities bilaterally. Weakness with gait.
<u>P</u>lan	**Plan:**

***Based on priority problem only** *Include what your plan is for the client. What treatments or medications are needed. You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?*	Renal diet with 1.8 gram of sodium restriction VS q4h Strict intake and output Restrict fluids to 1L per day Daily weights Hemodialysis in AM Sevelamer carbonate 800mg PO TID w/ meals Glipizide XL 20mg PO daily Ferric citrate 1g PO TID w/ meals Linagliptin 5mg PO daily Blood glucose before meals and at bedtime Hold AM medications prior to dialysis **Teaching/Resources:** Home health teaching about dietary restrictions, outpatient dialysis 3x a week, and social worker helping to ensure she can afford prescribed medications.

Reflection:

1. Go back to your Preconference Template:
   a. Indicate (circle, star, highlight, etc.) the components of your preconference template that you saw applied to the care of this virtual patient.

2. What was your biggest "take-away" from participating in the care of this patient? How did this impact your nursing practice?

My biggest takeaway from participating in the care of this patient is that the medical diagnosis of CKD affects every aspect of a patient's life. Switching from home peritoneal dialysis to having to commute to outpatient hemodialysis 3 times a week placed a huge burden on the patient due to lack of transportation and feelings of hopelessness. The simulation reinforced the idea that patients still need assistance out in the community, not just in the hospital. Education on lifestyle management plays a major role in patient compliance with treatment, especially in the treatment of a CKD patient. This scenario reinforced the importance of empathy and actively listening to each patient in order to treatment them holistically.

Time Allocation: 8 hours