ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2025

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ATI Scenario: Chronic Kidney Disease

To Be Completed Before the Simulation

*****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: Chronic Kidney Disease

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

Anatomy and Physiology
Normal Structures

Kidneys are bean shaped organs located on both sides of the spine below the rib cage. The have multiple functions such as filtration, regulating fluid balance, regulating electrolyte balance, regulating acid base balance, aiding RBC production, and activating vitamin D into its active form. The structure of the kidneys include the renal cortex, renal medulla consisting of renal pyramids and the loop of Henle with collecting ducts. The renal pelvis is a funnel that collects urine from the collecting ducts. In the kidneys there are structures called nephrons. They filter blood of waste. Blood passes through the glomeruli where blood pressure makes filtrate pass through capillary walls into the bowman capsule where essential nutrients are reabsorbed. The filtrate then passes through the proximal tubule where it passes through the loop of Henle. The loop of henle dips down into the kidneys medulla which is very salty and reabsorbs more water as the water follows the salt. Then the filtrate is passed through the distal tubule where ADH hormone and the RAAS system influences how much fluid is retained based on the bodies needs. The remaining water is deemed urine and it is passed through collecting ducts and down into the ureters and is stored in the bladder until it is excreted.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

Chronic kidney disease is due to an irreversible loss of functioning nephrons in the kidneys. Because there is a loss of functioning nephrons there is a decrease in glomerular filtration rate and that is how good the kidneys can excrete waste as the glomerular filtration rate goes lower and lower the metabolic waste builds up in the body. Chronic kidney disease can be caused by multi Mary's primary and secondary causes. The most common cause of chronic kidney disease is diabetes and hypertension. In a healthy kidney there is about 1,000,000 nephrons. As the nephrons are damaged and cannot be replaced the total glomerular filtration rate decreases. The remaining nephrons try to compensate by hyperfiltration to maintain a decent glomerular filtration rate and kidney function but this adoption cannot keep up as the number of nephrons continue to decrease. The hyper filtration also damages more glow material capillaries leading to a further reduction in functional nephron numbers. As this happens the activation of the RAAS system occurs. This causes the vasoconstriction and sodium retention and hypertension that is observed in patients with chronic kidney disease. As this disease progresses the kidneys are unable to concentrate urine leading to electrolyte imbalances such as hyperphosphatemia and hyperkalemia. Sodium is held on to that may also cause hypernatremia. As the kidneys cannot filter out ammonia this may lead to metabolic acidosis.

To Be Completed Before the Simulation

Anticipated Patient Problem: Excess fluid volume

Goal 1: Lung sounds will be clear with no labored breathing RR 12-20 and O2 95%

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Monitor I&O's Qshift	Maintain fluid restriction as ordered
Assess lung sounds BID	Keep HOB elevated for SOB PRN
Assess edema at beginning and end of shift	Elevate feet while patient is laying down as tolerated throughout my time of care
Monitor weight at the start of my shift	Report weight gain over 1 kg in 24 hours to the provider PRN
Assess creatinine and BUN levels at the start of my shift	Educate patient on the importance of BUN and creatinine levels and what their current results mean at the start of my shift
Monitor BP and RR for labored breathing or dyspnea throughout my TOC	Report significant increases in blood pressure or respiratory distress to the healthcare provider

Goal 2:BP will remain 120-90 systolic and 60-80 diastolic throughout my TOC

To Be Completed Before the Simulation

Anticipated Patient Problem: Electrolyte imbalance

Goal 1: Patient will have potassium level 3.5-4.5 and sodium level 135-145 throughout my TOC

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Monitor potassium and sodium levels throughout my TOC	Administer kayexalate PRN for hyperkalemia
Monitor cardiac rhythms for arrythmias caused by sodium/ calcium/ or potassium abnormalities Q4	Maintain telemetry on patient and notify provider of arrythmias PRN
Assess for muscle twitching or pain caused by hypocalcemia Q4	Administer calcium supplements PRN
Maintain renal diet throughout my TOC	Educate on the importance of adhering to a renal diet of low sodium, potassium during my TOC
Review medication list for renal toxic medications at the start of my shift	Contact and inquire provider of renal toxic medication PRN
Assess LOC for acute confusion related to sodium imbalances Q4	Contact provider of acute confusion or altered mental status PRN

Goal 2: Patient will not experience any electrolyte induced arrythmias throughout my TOC

To Be Completed During the Simulation:

Actual Patient Problem: Excess fluid balance

Clinical Reasoning: Complains of SOB, edema present in lower extremities
Goal: Lung sounds will be clear with no labored breathing RR 12-20 and O2 95%
Met: ☐ Unmet:X
Goal: BP will remain 120-90 systolic and 60-80 diastolic throughout my TOC
Met: ☐ Unmet:X

Actual Patient Problem: Electrolyte Imbalance

Clinical Reasoning: Potassium 8,
Goal: Patient will have phosphorus level of 3.5-4 and sodium level 135-145 throughout my TOC
Met: ☐ Unmet: X
Goal: Patient will have a potassium level 3.5-4.5 with no cardiac arrythmias throughout my TOC
Met: ☐ Unmet:X

Additional Patient Problems: Deficient Knowledge

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient's response to the intervention?

Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
1	1700	RR is 22 with slightly labored breathing	1700	Higher HOB to 30 degrees	1700	2100 RR 209
1	1730	AV fistula noted in left forearm on EMR	1730	Applied limb alert bracelet	2100	Limb alert bracelet still presents
2	1800	Potassium level is 6	1800	Applied telemetry to monitor for cardiac dysrhythmias	1800	Prescence of peaked T waves on EKG strip
1	1830	Patient has +2 pitting edema in both lower extremities. Patient creatinine is 8 mg/dl	1830	Administered furosemide 40 mg	Next day	Pitting edema is not noted in lower extremities
3	1900	States "I am confused about hemodialysis"	1900	Educated on hemodialysis using an illustration	1900	States "thank you for explaining this to me, can you explain some of the complications of

						dialysis to me”
3	2100	States “thank you for explaining this to me, can you explain some of the complications of dialysis to me”	2100	Educated on the side effect of hypotension	2100	States “I understand”
2	2130	Muscle strength +3 in all extremities, no sign of neuro excitability noted. Phosphorus levels 7.5 mg/dl	2130	Administer phosphorous binder in between meals.	2200	No sign of neuro exitibility noted patient is AOx4
1	2200	Urine output 160 ml	2200	Maintained strict I&O’s and fluid restriction	2200	
1	2230	BP 182/90	2230	Contacted provider of hypertension. Administered Labetalol 20 mg IV bolus	2300	BP is 164/80
3	2300	Crying states “I feel sorry about my self”	2300	Utilized therapeutic communication. Discussed involving case management to provide transportation	2300	States “I understand” Case management notified of food insecurity and transportation difficulties
3	Next day	States “I understand my restriction on proteins but I am having trouble determining what food I can and cannot have”	Next Day	Discussed favorite food and what is permitted in a renal diet. Educated that peas, steamed broccoli and sliced radishes may be eaten during her interfaith potluck	Next Day	States “Okay thank you for helping” Denies any further questions or concerns

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV *(7)*: Reduction of Risk

Actual Labs/ Diagnostics

Creatinine/Bun levels
Sodium levels
Potassium levels
Calcium levels
Phosphorus levels

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

Signs and Symptoms

Edema
SOB
AMS
Muscle twitching/pain
Dysrhythmia
Fatigue

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

Contributing Risk Factors

Diabetes
High blood pressure
Age >60
Lower socioeconomic factor

Therapeutic Procedures

Non-surgical
Peritoneal catheter

Surgical
Av fistula surgery

NCLEX IV *(7)*: Reduction of Risk

Prevention of Complications

(Any complications associated with the client's disease process? If not what are some complications you anticipate)

Hypertension
Arrythmias
Muscle twitching
AMS
Anemia

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

Medication Management

Furosemide
IV insulin
Calcium gluconate
D5NS
Labetalol

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

Non-Pharmacologic Care Measures

Renal diet of low sodium, low potassium, and low phosphorus diet.

Raising HOB to 30 degrees

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

Stressors the client experienced?

Stress of being hospitalized
Stress of undergoing hemodialysis for the first itme

Client/Family Education

Document 3 teaching topics specific for this client.

• Educated on the process of hemodialysis
•Educated on the complications of hemodialysis such as hypotension
• Educated on the importance of a diet restriction

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

Multidisciplinary Team Involvement

(Which other disciplines were involved in caring for this client?)

Chris -RN
Rylie- Charge Nurse
Ariel- Home Health Nurse

Patient Resources

Case management
National kidney foundation
Peer support groups

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest "take away" from participating in the care of this client?
   Just because CKD is effecting the kidneys mostly doesn't mean you should always focus on the gu system. The cardiac system, neurological system and neuromuscular system can be affected. With increased BP, arrythmias, muscle pain, altered AMS and other complications of fluid overload and electrolyte imbalance.

2. What was something that surprised you in the care of this patient?
   I was surprised that she had developed anemia due to the CKD. I was aware that kidneys play a vital function in creating RBCs but I wasn't aware that anemia that requires erythropoiesis was a possibility

3. What is something you would do differently with the care of this client?
   I would make sure to educate on the importance of tracking weight to prevent fluid accumulation from going unnoticed. I would also educate on the importance of reporting SOB to a provider.

4. How will this simulation experience impact your nursing practice?
   I will pay attention to the effects of electrolyte imbalance in other body systems and not just focus on the GU system. I will make sure to put my patient on telemetry also.