ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2025

Student Name: Hannah Collins

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: Stage V CKD

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

Anatomy and Physiology

Normal Structures

Kidneys are the main organs of the urinary system. The main functions of the kidneys are regulating extracellular fluid and excreting waste products from the body. The kidneys also play a key role in BP regulation, erythropoietin production, activating vitamin D, and regulating acid-base balance. The kidneys are located on each side of the T12 vertebrae to the L3 vertebrae. The weight of each kidney is roughly 4-6 oz and are 5 inches in size. Each kidney has an adrenal gland located on top of them. Fat and connective tissue surround the kidneys to maintain the position. The capsule is the shock absorber that protects the kidneys from trauma. On the medial side of the kidneys, the hilus is the entry point for the renal artery and nerves; the renal vein and ureter also exit here. The tissue of the kidneys is called the parenchyma. The parenchyma also has layers: the cortex which is the outer layer and the medulla which is the inner layer. The medulla has pyramids in which urine passes through, into the calyces. The minor calyces widen and merge to the major calyces which form the renal pelvis. Urine is transported through the calyces to the renal pelvis, it then drains into the ureters to the bladder and is excreted through the urethra. The renal pelvis can hold up to 5 mL of urine as well. The functional unit of the kidney the facilitates diffusion and reabsorption of solutes is the nephron. The kidneys receive a large amount of blood in addition to urine. Roughly 1200 mL of blood flows to the kidneys per minute and accounts for 20-25% of CO. Urine

Physiology: Urine is formed from filtration, reabsorption, secretion, and excretion of water,

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

Chronic kidney disease is defined as the presence of kidney damage or a decreased GFR less than 60 mL/min for >3 months. In the early stages, pts do not report any change in UO. As GFR decreases, BUN and creatinine levels increase. Impaired glucose metabolism from cellular insensitivity to normal action of insulin causes defective carb metabolism. Hyperkalemia is a serious electrolyte disorder r/t CKD. Hyperkalemia results from the kidneys excreting less potassium. Anemia can be common in CKD d/t decreased erythropoietin production. The most common cause of death in CKD is CVD. The CNS system becomes depressed leading to lethargy, apathy, fatigue, irritability. The glomeruli, tubules, and blood vessels are damage with CKD. Kidney scaring is progressive, which leads to a loss of kidney function- eventually this decreased will lead to kidney failure.

electrolytes, and metabolic waste products. The primary function of the kidneys is to filter waste and maintain interstitial homeostasis. Urine formation begins in the glomerulus where blood is also filtered. Hydrostatic pressure of blood in the capillaries of glomerulus causes blood to filter across the Bowman capsule's semipermeable membrane. The amount of blood filtered each minute by the glomeruli is the GFR. A normal GFR is 125 mL/minute however, only 1 mL/min is excreted as urine. Reabsorption of essential material occurs in the tubules and collecting ducts. 80% of electrolytes are reabsorbed in the proximal convoluted tubules. The kidneys also produce RBCs and regulate the BP. Erythropoietin made in the kidneys stimulate RBCs in the bone marrow. Renin also secreted by the kidneys regulates the BP by increasing it through the RAAS system if BP is low, and renal perfusion is decreased.		

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for electrolyte imbalance

Goal 1: Pt will have electrolytes (K, Na, Ca) within normal changes during my time of care

Goal 2: Pt will not have arrythmias during my time of care

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?
Assess CMP Q8 hours	Maintain continuous cardiac monitoring Administer dextrose, insulin, calcium gluconate, kayexalate
Assess cardiac rhythm continuously	Administer antiarrhythmic
Assess heart sounds Q4 hr	Administer antiarrhythmic Administer necessary med to correct electrolyte imbalance
Monitor I&O	Maintain IVF Insert foley for strict monitoring
Assess respiration quality and rate with every encounter	Apply O2 PRN
Assess dietary intake with each meal	Educate on proper diet regimen for electrolyte regulation (ie: decreased Na diet)

To Be Completed Before the Simulation

Anticipated Patient Problem: Impaired urinary elimination

Goal 1: Pt will have UO >/= 30 mL/hr during my time of care

Goal 2: Pt will verbalize urinary urges during my time of care

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 strict I&O Q8hr	Insert/maintain foley Administer IV Lasix
Monitor BUN, Crt	Administer IVF Perform dialysis
Assess ability to recognize urinary urges at beginning of shift and throughout care	Create a bladder training schedule
Assess voiding patterns	Administer IV Lasix
Palpate bladder for distention Q4 hr	Straight cath pt
Bladder scan Pt PRN	Straight cath pt

To Be Completed During the Simulation:

Actual Patient Problem: Electrolyte imbalance (1)

Clinical Reasoning: Peaked T waves on EKG, K: 6, Ca: 7.8, Na: 132
Goal: Pt will maintain normal sinus rhythm during my time of care Met: ☐ Unmet:☑

Goal: Pt will have a potassium level of 3.5-5 during my time of care Met: ☐ Unmet:☑

Actual Patient Problem: **Excess fluid volume (2)**

Clinical Reasoning: Edema in lower extremities, SOB, Bilat pulmonary venous congestion on CXR, weight gain, decreased UO
Goal: Pt will have UO of >/= 30 mL/hr during my time of care Met: ☐ Unmet:☑

Goal: Pt will have vesicular breath sounds during my time of care Met: ☐ Unmet:☑

Additional Patient Problems: Deficient knowledge (3), impaired gas exchange (4)

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, 2	Admission 2100	Stage V CKD, Crt: 8, BUN: 42, Na: 132, K: 6 "Today moving around is difficult, my legs feel so tight" Edema of lower extremities bilaterally UO: 150 mL Ronchi auscultated	2130	Applied continuous cardiac monitoring Administered Lasix IVP	2145	Peaked T waves UO: 160 mL Ronchi auscultated
2, 4	2100	SOB Bilateral pulmonary venous congestion with infiltrates shown on CXR Spo2: 94% on RA	2105	Applied O2 at 2 L via NC	2107	Spo2: 96% on 2 L NC

3	2230	"My doctor has been discussing hemodialysis with me, but I am a little confused, can you explain this to me"	2240	RN Chris provided illustration about hemodialysis Chris educated on potential complications of hemodialysis	2300	Stated, "I see, thank you for explaining this to me" Identified that hemodialysis can cause a decreased in BP
1	2300	Sinus tachycardia with peaked T waves on EKG HR: 114 BPM K: 5.9, Na: 132, Ca: 7.8	2330	Administered IV Ca gluconate, regular insulin, 50% dextrose	2400	BP: 182/90 HR: 112 BPM Sinus tachycardia with peaked T waves on EKG
1	Next day 0700	Bruit auscultated over L AV fistula	0730	Hemodialysis performed	1100	Stated, "It was not as bad as I thought it would be, but I am very tired"
3	1130	Pt crying States, "I just feel sorry for myself, this is just so overwhelming" "I do not feel like I have control anymore"	1140	RN contacted case manager RN provided resources regarding hemodialysis	1145	BG: 68
3	After D/C 1000	States, "I understand I am supposed to restrict proteins, but I am struggling to select foods I am supposed to eat" "I hate the thought of giving up certain foods, they are a part of my family Hx"	1030	Home health nurse considers culture while assisting pt in creating a food plan	1100	States, "Thanks to you I feel more comfortable with selecting foods, and I able to still attend my potluck"

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
CBC, CMP, cardiac monitoring, CXR, urinalysis

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

Signs and Symptoms
Edema lower extremities, K: 6, Ca: 7.8, Na: 132, BUN: 42, Crt: 8, decreased UO

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

Contributing Risk Factors
DM
HTN
Age

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures
Non-surgical
Hemodialysis

Surgical
AV fistula placement

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

Hypervolemia, hyperkalemia, hypocalcemia, cardiac arrhythmias

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

Medication Management
Diuretics
50% dextrose
Regular insulin
Calcium gluconate
Phosphate binder
Antihypertensive
Erythropoietic growth factors
Oxygen

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

Non-Pharmacologic Care Measures
Elevate HOB
Therapeutic communication
Provide deliverable resources

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

Stressors the client experienced?
Lack of transportation
Access to foods that adhere to regimen

Client/Family Education

Document 3 teaching topics specific for this client.
- Education on process of hemodialysis
- Education of diet regimen
- Education on dialysis regimen

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

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
Physician, in-patient nurse, lab technician, dietician, case manager, home health nurse, dialysis nurse

Patient Resources
Transportation van to dialysis appointments, home healthcare, food assistance program

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest "take away" from participating in the care of this client?
   My biggest takeaway is that you have to be very cautious of cardiac arrythmias with CKD as electrolytes are affected greatly.

2. What was something that surprised you in the care of this patient?
   Something that surprised me was how frequent hemodialysis Tx are required.

3. What is something you would do differently with the care of this client?
   Something that I would do differently with the care of the patient is ask their feelings about new course of Tx. The nurses in the simulation did not do this and feelings festered up within Mrs. Swisher and she was very upset about starting hemodialysis.

4. How will this simulation experience impact your nursing practice?
   This simulation will impact my nursing practice in the fact to keep culture in mind. In the case of Mrs. Swisher, her diet related to her culture is important to her- so when creating a diet plan you must consider these factors.