

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

Student Name: _____Kali Barnes_____

ATI Scenario: _____Chronic Kidney Disease (CKD)_____

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: _____CKD_____

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

The urinary system is made up of 2 bilateral bean shaped organs, protected by a thick layer of fat and a thin capsule, the two beans are kidneys, which are connected to 2 ureters, a bladder, and a urethra. This system is sterile and regulates the volume/consumptions of ECF and excretes waste products, it also helps with BP, erythropoietin, activate vitamin D, and regulate acid base balances. For urine formation blood comes into the kidneys through the renal artery, through the hilus, to the functional unit of the kidneys, the nephron which is in the cortex of the kidney (inner part). The blood is filtered by the glomerulus in the nephron. Blood components are kept out by the semipermeable membrane of the glomerulus, while small molecules like minerals, waste, and water can pass through. The blood components go back out via the renal vein, while everything else continues its journey. It goes from the glomerulus into the Bowman's capsule where it starts reabsorption, substances from tubules to capillaries, and secretion, substances from capillaries to tubules. Once urine is formed the urine passes through the medulla, calyx, and renal pelvis, down the ureters, to be held in the bladder. Once full the urine goes out the urethra.

Reabsorption and secretion of parts of the nephron:

- Proximal tubule: Reabsorbs 80% of electrolytes, water, glucose. Amino acids, HCO₃⁻. Secretes H⁺ and creatinine.
- Loop of Henle: Concentration of filtrate, reabsorption of Na⁺/Cl⁻ in ascending limb, reabsorption of water in descending loop.
- Distal tubule: (ADH makes tubule permeable to water allowing reabsorption, Na⁺ comes in, K⁺ leaves) reabsorption of water (regulated by ADH) and HCO₃⁻. Regulation of calcium and phosphate by PTH. Regulation of Na⁺/K⁺ by aldosterone. Secretion of K⁺, H⁺ and ammonia.
- Collecting duct: Reabsorption of water (requires ADH).
- From the collecting duct it empties into the medulla, then calyx, then renal pelvis of the kidneys, down, to the ureters, to be held in the bladder, once 200-250mL is in the bladder they get the urge to urinate and it goes through the urethra.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

- CKD is a progressive and gradual loss of kidney function that can take months to years, measured by GFR.
- Results in less and less elimination of urine, ending with dialysis to get rid of waste.
- Results in a gradual elevation of BUN, creatinine, and electrolytes.
- There are five stages that focus on GFR and the GFR continues to decline as the disease gets worse. Stage 1: GRF is 90 and kidney damage is present, Stage 2: GFR is 60-89 and kidney damage is present, Stage 3a: GFR 45-59, Stage 3b: GFR 30-44, Stage 4: GFR 15-29 severe loss of function, Stage 5: GFR less than 15 this is kidney failure.
- Risk factors: HTN, diabetes, heart disease, smoking, obesity, race, NSAIDs.
- Causes: Diabetes, decreased blood flow, HTN, glomerulonephritis, interstitial nephritis, polycystic kidney disease, prolonged obstruction of urinary tract, vesicoureteral, and recurrent kidney infections.
- S/sx: N/V, loss of appetite, urinating more or less, swelling, high blood pressure, SOB.
- Complications: Anemia, hyperkalemic, fluid retention, CHF.

To Be Completed Before the Simulation

Anticipated Patient Problem: Excessive fluid volume

Goal 1: Patient will have a urinary output of 30mL/hr during my time of care.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Weigh qshift.	Encourage walking to move fluids prn.
Auscultate breath and heart sounds q4hr.	Administer diuretics as ordered.
Strict I&Os qhr.	Maintain fluid restriction of 1000mL/day or 600 + output in last 24hrs, daily.
Assess for edema in all extremities q4hr.	Elevate legs and arms as tolerated. Apply EPCs as tolerated.
Assess electrolyte levels, creatinine, and BUN levels qshift.	Prepare for dialysis as ordered. Maintain renal diet daily. Educate on limiting sodium intake daily.
Assess VS- HR, BP, RR, q4hr.	Administer BP medication as ordered.

Goal 2: Patient will have lungs that sound clear during my time of care, with no presences of crackles.

To Be Completed Before the Simulation

Anticipated Patient Problem: Impaired gas exchange

Goal 1: Patient will have and SpO2 at 92% or above during my time of care.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess lung sounds and SOB q4hr.	Maintain HOB 30 degrees or higher.
Assess positioning prn. Assess respiratory effort q4hr.	Encourage to lay/sit in a position that is most optimal for them to breath effectively and that is comfortable, prn.
Assess SpO2 q4hr.	Apply oxygen prn.
Assess WOB while moving prn.	Encourage rest periods prn. Provide assistive devices prn.
Assess patient knowledge of breathing techniques qshift.	Educate on pursed lip breathing, cough and deep breathing prn.
Assess if supplemental oxygen is typically used in and out of hospital qshift.	Educate that the goal is to get liters of oxygen, necessary to receive an oxygen level of 92% or better, back to baseline.

Goal 2: Patient will not require more than 2L NC at rest and when active during my time of care.

To Be Completed During the Simulation:

Actual Patient Problem: Excessive fluid volume

Clinical Reasoning: Weight gain, swelling, SOB

Goal: A.S. will have a urine output of 30mL/hr during my time of care. Met: Unmet:

Goal: A.S. will have clear lungs without presence of crackles during my time of care. Met: Unmet:

Goal: A.S. will return to baseline weight by the end of her hospitalization. Met: Unmet:

Actual Patient Problem: Risk for imbalance electrolytes

Clinical Reasoning: Hyperkalemic, Hyperphosphatemia, Hypocalcemia

Goal: A.S. will maintain a normal potassium of 3.5-5 during my time of care. Met: Unmet:

Goal: A.S. will maintain a normal calcium of 9-10.5 during my time of car Met: Unmet:

Additional Patient Problem:

#3 Impaired gas exchange

#4 Risk for unstable blood pressure

#5 Readiness for enhanced health management

#6 Risk for infection

#7 Hopelessness

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	Day 1: 0900	Chris got report from Rylie on Anna, stage 5 CKD patient of Dr. Lanzo, admitted from nephrology clinic for hyperkalemia, peritoneal dialysis, catheter trouble, gained 13.2kg in two days.	0900	Admitted due to weight gain, hyperkalemia, electrolytes. creatinine, and BUN.	0900	Chris did admission questions.

1,3	0900	Anna's legs swollen, SOB.	0900	Chris raised HOB.	0900	Anna stated, "That feels better."
1,3	0915	AV fistula on left arm, was scheduled for hemodialysis in replacement of peritoneal dialysis.	0915	Chris applied a do not use wrist band to left arm, applied 2L NC, assisted Anna to void.	0915	SpO2 96%, voided 150 mL amber and cloudy urine, observing overnight due to hemodialysis being unavailable.
2	0930	Anna's potassium level high at 6.0.	0930	Chris applied telemetry device and explained what that the device monitors heart rhythms. Chris inserted an IV.	0930	Anna stated she had no questions. Peaked T waves on EKG.
1	0930	Weight gain of 13.2kg.	0930	Administered furosemide and was cautious of the fact the Anna's kidney may not be able to excrete the medication and is vigilant of ototoxicity.	0930	Urinary output: 310mL amber cloudy urine.
5	1000	Anna expressed that she is confused about hemodialysis.	1000	Chris educated Anna about hemodialysis using an illustration, he stated that two needles are placed in the fistula, the arterial one takes it to the dialyzer to be cleansed and the venous needle returns the clean blood back to the body, and also mentioned that Dr. Lanzo can also answers some question she may have.	1000	Anna stated "I see, can you explain some complications for me."
1,4,5	1000	Anna asked to be educated about complications of hemodialysis.	1000	Chris educated that hypotension can be a complication.	1000	Anna understood.
2	1030	Potassium 6.0, Chris wants to understand how to	1030	Chris performs research that calcium gluconate,	1030	Chris shares this nurse with Rylie, he also identifies

		treat hyperkalemia.		insulin, and 50% dextrose can be used for CKD patients to lower potassium levels.		that other electrolyte imbalances and fluid shifts can occur.
1,2,4	1100	Calcium level is 7.8. Chris reviews his plan of care with Rylie, assessing for tetany, muscle weakness, and administering phosphate binders. Assesses VS HR 112, BP 182/90, urine output 60mL, 310 urinary output all day, 302 intake all day.	1100	Chris reports BP and administered BP medication.	1100	BP came down to 164/80.
1,2,3	Day 2: 0900	Sam performs assessment, Anna is on 1L NC, RR 18, HR 94, she states she is tired, peritoneal catheter intact, +2 pitting edema lower extremities bilateral, +3 pulses bilateral, gait is weak, weight 72.6kg.	0900	Hemodialysis was performed.	0900	Anna stated, "I am really tired."
5,7	1000	Anna crying, Sam asking Anna to explain more, Anna stated "I feel that I do not have any control over anything anymore and that my life is changing." Anna upset that dialysis is three times a week.	1000	Sam stated she will help Anna find ways to help this not disrupt her life and that she will talk to case management.	1000	Anna Stated "Yes, thank you." Anna recognizes that the blood sugar may cause depression and anxiety.
5,7	1200	Sam assessed that food security, cost of medication, and ability to attend dialysis sessions may be a problem.	1200	Sam talked to case management about concerns.	1200	Case management stated they will come review Anna's case. Kim got Anna transportation to

						and from dialysis.
1	1230	RBC 3.1.	1230	Sam advocated for erythropoietic growth factor ordered for Anna.	1230	Anna is on erythropoietic growth factor.
4,5,6	Day 3: 0900	Anna expressed concerns to Ariel about peritoneal catheter and how the three times a week hemodialysis is going. Anna is 69.9kg, BP 146/88, HR 88, SpO2 97% on RA, peritoneal dialysis catheter is tender.	0900	Ariel educated that Dr. Lanzo will get the peritoneal catheter out as soon as possible to prevent infection.	0900	Anna stated “Yes, she said she would get it out in a few days.”
5	1000	Ariel assessed Anna’s normal diet, such as chili lime, roasted asparagus, gazpacho, etc. Anna expressed not liking the limitation.	1000	Ariel educated on the ingredients involved and possible substitutes, such as ½ cup raw green peas.	1000	Anna stated, “I will give it a try.”
5	Day 4: 0900	Anna expresses concerns after going to dietitian that she may not be able to attend her potluck.	0900	Ariel educated on the foods Anna may be able to eat at the potluck, such as steamed broccoli, roasted chicken, and sliced radishes.	0900	Anna stated she understood.
2,5	Day 5: 0900	Anna expressed that she has appreciated Ariel and everyone’s help, she has made new friends at dialysis, and her lab work has improved.	0900	Educated that the dialysis is helping.	0900	Anna said, “Yes, it is.”

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

- GFR: 8
- RBC: 3.1
- Hgb: 10.2
- Hct: 32%
- WBC: 14
- Potassium: 6
- BUN: 42
- Cr: 8.0
- Glucose 174
- Calcium: 8.0
- Phosphorus: 7.5
- Urine: Amber and cloudy

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms

- Oliguria
- Decreased urinary output
- Fluid retention
- Fatigue
- Confusion
- Weakness
- Chest pain

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors

- HTN
- Diabetes
- Heart disease
- Smoking
- Obesity
- Race
- NSAIDs

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures

Non-surgical
Dialysis

Surgical
Kidney transplant

Prevention of Complications
(Any complications associated with the client's disease process? If not what are some complications you anticipate)
CHF, Anemia, Hyperkalemia, imbalanced electrolytes, no urine output

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
Calcium gluconate, IV fluids, phosphate binding agents, diuretics (furosemide), insulin, dextrose 50%, polystyrene sulfonate, erythropoietin growth factor

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care

Measures

- 1000mL fluid restriction
- Dietary restrictions (Ca+, K+, phosphate)
- Restore fluid balance
- Relieve symptoms

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?

- How to get to dialysis
- New kidney?
- Anxiety
- Cost of medications and treatments

Client/Family Education

Document 3 teaching topics specific for this client.

- Dietary restrictions
- Different types of dialysis
- Fluid restrictions

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
Nurse, urologist, dialysis, nutrition, PCP, case management, home health

Patient Resources

- Support group
- Dietary consult
- Home Health
- Transportation 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 take away is that CKD patients are very complicated. The disease is progressive and that some form of dialysis is necessary to stay in homeostasis.
2. What was something that surprised you in the care of this patient?
Something that surprised me is how scared and upset she became after needing to switch to hemodialysis. I understand that hemodialysis can be scary, but it was good to see how a nurse would handle that situation.
3. What is something you would do differently with the care of this client?
Nothing, the nurse and healthcare team did a great job.
4. How will this simulation experience impact your nursing practice?
This simulation has impacted my nursing care by looking at all aspects of a person’s life in and out of the hospital. I taught me to look into how a patient may get to their appointments, how will they get their medications, or how are they coping with the changes, such as a change in the way they get their dialysis. Nursing is all about focusing on the whole person in the hospital, but sometimes we may forget about the home and outside obstacles that prevent good healthcare.