

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

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ATI Scenario: 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

NCLEX IV (7): Reduction of Risk

<u>Anatomy and Physiology</u> <u>Normal Structures</u>	<u>Pathophysiology of Disease</u>
<ul style="list-style-type: none"> - Two bean shaped organs that sit in the back of the abdomen. - Right kidney is smaller than the left kidney due to the liver - Primary function of the kidneys is to filter blood, remove waste, and balance fluids within the body - The kidney consists of the adrenal gland, kidney, ureter, and bladder. There is also a renal artery, renal vein, and tiny vessels that filter blood. The kidney filter about 200 quarts of fluid every day - Removes waste via urine - Common waste products that are removed from the kidneys such as nitrogen waste (urea) and muscle waste (creatinine) - Help balance body fluids including water and electrolytes such as sodium and potassium. - Blood flows into your kidneys through a large blood vessel called the renal artery. - Tiny blood vessels in your kidney filter the blood. - The filtered blood returns to your bloodstream through a large blood vessel called the renal vein. - Pee travels through tubes of muscle called ureters to your bladder. - Bladder stores pee until you release it through urination. <p><u>Other functions of the kidneys include</u></p> <ul style="list-style-type: none"> - Control the acid-base balance (PH) - Make glucose if blood doesn't have enough - Make protein called renin that increases blood pressure - Produces hormones calcitriol and erythropoietin <p>On top of the kidney sits adrenal glands which produces hormones and cortisol. The kidney has more than a million nephrons.</p> <ul style="list-style-type: none"> - Nephrons consist of glomeruli which are tiny blood vessels that help filter blood and pass substances through the renal tubules. - Renal tubules return water, nutrients, and minerals to the body. The tubules also remove waste from the body through 	<p>CKD involves progressive and irreversible loss of kidney function. CKD can be defined 2 different ways. First, it can show kidney damage through markers such as BUN/Creatinine/GFR or can show a low GFR <60ml/min for 3 months or longer. Disease staging is based on the GFR. Normal GFR is 125ml/min (creatinine clearance) and the last stage of kidney failure/CKD is GFR <15ml/min. The acronym RIFLE is used in CKD to determine the kidney function and see how well they are perfusing. The prognosis and course is variable. Loss can either be gradual or severe</p> <p>Most common causes</p> <ul style="list-style-type: none"> - Diabetes - HTN - Nephrotoxic drugs/NSAIDS - Glomerulonephritis - Smoking - Obesity - African American has a higher risk <p>Clinical manifestations result from retained urea, creatinine, phenols, hormones, electrolyte, and water. CKD can affect all body systems. Symptoms include anxiety, depression, fatigue, headache, hypertension, HF, CAD, PAD, pericarditis, nausea, vomiting, hyperparathyroidism, polyuria, oliguria, anuria, electrolyte imbalances anemia, bleeding and much more. Some people do not know they have the disease until it is advanced. One of the most common complications of CKD includes fluid retention.</p> <p>Broken down into stages</p> <p>Stage 1: Mild kidney damage, eGFR 90 or higher Stage 2: Mild loss of kidney function, eGFR 60-89 Stage 3: Moderate loss of kidney function, eGFR 30-59 Stage 4: Severe loss of kidney function, eGFR 15-29 Stage 5: Kidney failure or close to failure, eGFR less than 15</p>

diffusion.

Renal capsule: consists of three layers of connective tissue/fat. Protects the kidneys from injury, increases their stability.

- The parts of the kidney include the renal artery, the renal cortex, the renal medulla, renal papilla, renal pelvis, and renal vein.
- **Renal artery** is a large blood vessel that controls blood flow into your kidneys.
- **Renal cortex** is the outer layer of your kidney. It helps filter blood, also creates the erythropoietin. The renal medulla is the inner part of the kidney. Most of the nephrons and glomeruli and renal tubules are located here.
- **Renal papilla** transfers urine to the ureters. The renal pelvis collects urine and passes it down two ureters and is stored in the bladder
- **Renal vein** is the main blood vessel that carries filtered blood out of your kidneys and back to your heart.

To Be Completed Before the Simulation**Anticipated Patient Problem: Excess Fluid Volume**

Goal 1: Patient will remain free of edema, maintain clear lung sounds without dyspnea or use of accessory muscles during my time of care

Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include timeframes	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Assess risk factors for CKD such as history of renal disease, HTN, diabetes, frequent UTI's on admission/daily	Educate on non-modifiable vs modifiable risk factors daily
Assess BP & HR q4hrs/prn	Administer Digitals (Digoxin), CCB (Diltiazem or Amlodipine) as ordered by provider
Assess weight, intake & output q8hrs/daily	Introduce a fluid and sodium restriction daily during all meals
Assess Cr, BUN, K+ levels daily/prn	Administer diuretics (Furosemide) as ordered by provider
Assess lung sounds for crackles/wheezing q4hrs	Encourage deep breathing and coughing q1hr
Assess edema q8hrs/prn	Encourage to keep lower extremities elevated and wear EPCs while in bed prn

Goal 2: Patient will maintain balanced intake and output during my time of care

To Be Completed Before the Simulation**Anticipated Patient Problem: Deficient Knowledge**

Goal 1: Patient will verbalize understanding of CKD and the treatment regimen of the disease during my time of care

Goal 2: Patient will identify modifiable risk factors as well as lifestyle changes to help with those risk factors during my time of care

Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include timeframes	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Assess the motivation and willingness to learn daily	Educate importance of becoming motivated in learning about CKD, progression, risk factors, and treatment daily
Assess emotional status/readiness before each educational sessions/prn	Educate importance of being teachable about CKD. If patient is too emotional, provide teaching at another point prn
Assess presence of anxiety before each educational sessions/prn	Provide distraction techniques prior to educational session or administer a low dose of antianxiety medication prn
Assess the clients learning style or the way that they prefer to learn before each educational sessions/prn	Provide multiple types of educational resources including visual and auditory prn
Assess any barriers to learning before each educational sessions/prn	Provide strategies or equipment needed to remove the barrier before educational session prn
Assess environment before each educational sessions/prn	Provide a quiet and calm environment during all educational sessions prn

To Be Completed During the Simulation:

Actual Patient Problem: Excess Fluid Volume

Clinical Reasoning: Admitted with hyperkalemia, hyperphosphatemia, hypocalcemia, weight gain of 13.2kg over two days, failed peritoneal dialysis, SOB, edema on lower extremities. Diagnosed with CKD stage V. Creatinine 6.9, BUN 37, Glucose 126, Phosphorus 5.5. Secondary diagnosis of hypertension, hyperlipidemia, diabetes

Goal: AS will void at least 30ml/hr during my time of care Met: Unmet:

Goal: AS will maintain a low sodium, low protein diet during my time of care Met: Unmet:

Actual Patient Problem: Anxiety

Clinical Reasoning: Seen crying, states “feels sorry for herself, feeling overwhelmed, 3x a week and sitting there for hours is just a waste of my time, and disruption to my normal routine. My life is changing, and I don’t see any light at the end of this tunnel”

Goal: AS will acknowledge and discuss fears and concerns related to hemodialysis during my time of care Met: Unmet:

Goal: AS will identify resources and demonstrate problem solving techniques related to CKD and hemodialysis during my time of care Met: Unmet:

Additional Patient Problems:

- 4. Deficient Knowledge
- 5. Risk for bleeding
- 6. Risk for unstable blood pressure
- 7. Fatigue

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
1,5,7	1740	Admitted from clinic. Finding include hypervolemia, hyperkalemia, hyperphosphatemia, hypocalcemia, failed peritoneal dialysis, weight gain of 13.2kg over 2 days, sob, and edema to lower extremities. Comorbidities include hyperlipidemia, electrolyte imbalances, diabetic neuropathy, uremic pruitus	1745	Applied telemetry monitor, plan for hemodialysis for in the morning with administration of epoetin alfa 50 units/kg 3x weekly IV bolus during dialysis for Hgb less than 11	1750	States “I am just so tired, moving is very difficult at times, my legs just feel so tight” Spo2 96% on 2L NC, voided 150ml. Was supposed to have peritoneal dialysis today but was admitted to hospital instead
1,6	2250	Hx of hypertension	2250	Administered labetalol 20mg IV bolus x1 now	2300	Daily medications ordered by provider including Losartan 50mg PO daily and Atorvastatin 20mg

						PO daily. Will administer in am
5	Next day 2/11 1630	CBC/CMP ordered	1630	Educated may need to give epoetin alfa if Hgb is <11	2/12 0400	RBC 3.1 (low) Hgb 10 (low) Hct 30% (low)
1,5	0630	Low rbc, hgb, hct	0645	Administered epoetin alfa 50 units/kg	0700	Will redraw labs weekly before dialysis treatment
1	0700	BUN elevated: 37, Creatinine elevated: 6.9, glucose elevated: 126, phosphorus elevated 5.5	0730	Administered furosemide 20mg PO 2x daily	0900	Evaluated effectiveness of furosemide, BP remained stable overnight preparing for dialysis in am
1,2	0900	States she does not understand hemodialysis or how the fistula works	0930	Provided hemodialysis education include time frame of 3-4hrs, accessing av fistula, pulling blood into dialyzer and venous needle returns clean blood from the dialyzer by filtering wastes, toxins, and excess fluid as dialysate is shunted away from body. Educated hypotension is a common side effect	0940	Was thankful for the education, pt seemed more calm. Anxiety levels have decreased since admission
1,2	1300	Dialysis finished	1315	Checked on pt after dialysis stated "went very well, not very hungry, very tired, having chills/cold" extra blanket given to pt	1320	Pt seen crying, "feels sorry for herself, feeling overwhelmed", "3x a week and sitting there for hrs is just a waste of my time, disruption to normal routine", doesn't feel like she has control and feels like her "life is changing". "I don't see any light at the end of this tunnel". Explained that she will be discharged home with HH to have support once she is discharged from the hospital
1,2,4	Next day 2/130	States she "feels fine, a lot to take at once, a van picks me up and takes me home	915	Explained it is good to have someone who can pick her up	0945	Stats she is thankful for the help as well as her neighbors help

	900	from dialysis since I can't drive"		and take her home during a difficult time		for going to the grocery store for her
2,4	0915	States "I am concerned about my peritoneal catheter and infection"	0930	Educated that she is doing a good job maintaining the catheter site by cleaning it everyday & covering it with gauze	1000	Was glad to hear that she was doing what she was supposed to do in order to keep the site clean
1,2,4	1000	Asks about her daily diet including protein restriction, foods she can have, foods she can't have, and what to eat during her potluck at her interfaith center.	1015	Educated to eat things like steamed broccoli, roasted chicken thighs, sliced radishes during her weekly potluck	1030	Explains she likes to eat chili lime, roasted asparagus, gazpacho with veg soup made w tomato sauce, sautéed onions, peas, chilies, baked sweet potato

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 Maintenance

NCLEX II (3): Health Promotion and

Actual Labs/ Diagnostics
 CBC (weekly, RBC low, Hgb low, Hct low)
 CMP (weekly)

Signs and Symptoms
 Hypervolemia
 Rhonchi
 Tachypnea
 Pitting Edema
 Weight gain of 13.2kg over 2 days
 Hyperkalemia
 SOB
 Edema to lower extremities
 Hypocalcemia
 Hyperphosphatemia

NCLEX II (3): Health Promotion and Maintenance

NCLEX IV (7): Reduction of Risk

Contributing Risk Factors
 Type 2 diabetes
 HTN
 Hyperlipidemia
 Electrolyte imbalance
 Diabetic neuropathy
 Uremic Pruitus

Therapeutic Procedures
Non-surgical
 Peritoneal Dialysis
 Hemodialysis 3x week
 Cardiac monitoring (hyperkalemia)
Surgical

Prevention of Complications
 (Any complications associated with the client's disease process? If not what are some complications you anticipate)
 Infection (peritoneal catheter site)
 Retention
 Pericarditis
 Pregnancy complications

NCLEX IV (6): Pharmacological and Psychosocial/Holistic Parenteral Therapies Care Needs

NCLEX IV (5): Basic Care and Comfort NCLEX III (4):

Medication Management
 Glipizide XL 20mg PO daily
 Aspirin 81mg PO daily
 Losartan 50mg PO daily
 Furosemide 20mg PO 2x daily
 Ferric Citrate 1g PO 3x daily
 Linagliptin 5mg PO daily
 Sevelamer Carbonate 800mg PO 3x daily with meals
 Gabapentin 100mg PO TID
 Atorvastatin 20mg PO daily
 Docusate sodium 100mg PO 2x daily
 Gentamicin 0.1% ointment apply to peritoneal dialysis catheter site daily
 Epoetin 50 units/kg IV during dialysis 3x per week for hemoglobin <11g/dl
 Tramadol 50mg PO q12hrs PRN pain/discomfort

Non-Pharmacologic Care Measures
 1000ml fluid restriction ordered on admission
 Strict I&O
 Follow up in 2wks to have peritoneal dialysis catheter removed until then clean every day and place gauze over site
 D/C diet: Renal 1800mg sodium, low potassium/fat
 Outpatient dietary consult

Stressors the client experienced?
 Anxiety of new dialysis routine
 Feeling overwhelmed
 Does not understand how the fistula works
 Feels sorry for herself, feels like she is wasting her time
 New diet regimen that may affect her potluck at the faith center

Client/Family Education Environment

NCLEX I (1): Safe and Effective Care

Document 3 teaching topics specific for this client.

- Educate importance of adhering to a low sodium, fluid restriction diet
- Educate importance of adhering to treatment regimen of dialysis 3x a week
- Educate hypotension is likely after receiving hemodialysis, changes positions slowly

Multidisciplinary Team Involvement

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

- PCP
- Nephrologist
- RN
- Home Health

Patient Resources

- National kidney foundation
- Diet regimen
- Local CKD support
- Mental health support
- Medicare/Medicaid

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” from participating in the care of this client was that dialysis is a medical treatment that is life changing not only for the patient but also for the people who are around the patient as well. In this case, Ana who was the client was already supposed to be receiving peritoneal dialysis at home for 9 months however, we learned very early in the scenario that she was unable to perform the peritoneal dialysis. She stated that she was having trouble with her catheter. Ana stated “I am just so tired, moving is very difficult at time, my leg just feel so tight”. Dialysis is a medical treatment that can truly take a toll on both the patients physical and mental health. At the scenario continued, Ana was switched from peritoneal dialysis to hemodialysis. The nurse explained the process of hemodialysis which Ana was thankful for however, in this type of situation it is hard for a patient to completely understand the process when the patient is feeling overwhelmed. After dialysis, Ana was seen crying, states “feels sorry for herself, feeling overwhelmed, 3x a week sitting there for hrs is just a waste of my time, and disruption to normal routine”. She feels like she has no control over her life anymore and states “I don’t see any light at the end of this tunnel” due to the dialysis treatment. Even though I have never had dialysis, I can see where she is coming from and why she is feeling the way that she is. Dialysis 3 times a week is a hard adjustment to get used too. She cannot drive so her neighbor goes to the store for which probably makes her feel like she cant do anything for herself which can be very upsetting to the patient as well. I think it is important that every medical treatment not just dialysis can be overwhelming to a patient even if you don’t think it may be. It is important to justify how the patient is feeling especially for a new medical diagnosis or treatment that they were not expecting.
2. What was something that surprised you in the care of this patient?

Something that surprised me in the care of this patient was she was performing peritoneal dialysis at home but was still admitted with hyperkalemia, weight gain, edema in her legs, and SOB. These symptoms are probably because she was not performing the dialysis at home or she was doing them correctly. This is most likely do to her being overwhelmed. I think it is surprising to me that patients do not follow the care or treatment regimen like they are supposed to. I know that it happens all the time but, it would have made a world of difference if they would follow their treatment regimen to prevent further complication like in this scenario.
3. What is something you would do differently with the care of this client?

Something that I would have done differently with the care of this client would be giving her further directions on how to clean her peritoneal catheter site. During the scenario and in her chart, there was not really any guidelines or directions on what to clean it with, how many times a day, or what to cover it with. I think with her being overwhelmed with the care that she was already getting, it would have been a lot easier if it was all laid out for her rather than having to ask the HH nurse if she was doing it correctly.
4. How will this simulation experience impact your nursing practice?

This simulation experience will impact me in my nursing practice because even though it may seem like it is a normal workday for me and I am super busy as nurse with a million tasks to do for multiple patients but, for any of the patients that I encounter, this is most likely big day in their life. They are in the hospital for a reason, and I think if I take time out of my day just for 5-10 minutes to sit down and just be there support person I think it will make a huge difference in their life. I think it is more important to support and be there for the patient rather than treating them like a medical diagnosis and just trying to complete their med pass or tasks. If I do that, I know that the patient will remember who I am and the care that they received which at the end of the day, that is always most important.