ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

Student Name: _Sophia Fitler_____

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

Anatomy and Physiology

Normal Structures

The kidneys main functions are to filter and clean your blood, regulate pH, regulate BP, and eliminate waste. The structure of the kidney involves multiple layers. The outer layer is known as the cortex. The middle layer is known as the medulla. The pelvis is known as the inner layer. The kidney plays the role in homeostasis and "cleaning" the blood that comes from your heart. The medulla involves nephrons which are the functional unit of the kidney which allows for filtration, reabsorption, secretion, and elimination. The kidneys remove urea from the blood through tiny filtering units called nephrons. Each nephron consists of a ball formed of small blood capillaries, called a glomerulus, and a small tube called a renal tubule. Urea, together with water and other waste substances, forms the urine as it passes through the nephrons and down the renal tubules of the kidney. The two ureters carry urine from the kidneys to the bladder. Muscles in the ureter walls continually tighten and relax forcing urine downward, away from the kidneys. If urine backs up, or is allowed to stand still, a kidney infection can develop. About every 10 to 15 seconds, small amounts of urine are emptied into the bladder from the ureters.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

CKD involves the progressive, irreversible loss of kidney function and affects more than 26 million American adults. The increasing risk of CKD compared to AKI is thought to be related to increased risk factors such as aging population, obesity, diabetes, and hypertension. The kidneys are highly adaptive, so kidney disease is often not recognized until there is considerable loss of nephrons. Therefore, about 70% of people with CKD are unaware that they have it as they are often asymptomatic. CKD is clinically defined as the presence of kidney disease or a decreased GFR less than 60mL/min/1.73m^2 for longer than 3 months. CKD can affect the body's homeostasis and everybody system. There are 5 stages associated with CKD. Stage 1: kidney damage with normal or increased GFR (>/= 90). The plan for someone with Stage 1 CKD would require diagnosis and treatment, risk reduction and methods to slow the progression. Stage 2: kidney damage with mild to low GFR (60-89). The action plan would be to estimate the progression. Stage 3 is broken in 3a and 3b. Stage 3a: moderate to low GFR (45-59). The action plan would be to evaluate and treat complications. Stage 3b: also moderate to low GFR (30-44). The action plan would be more aggressive treatment of complications. Stage 4: Severe to low GFR (15-29). The action plan would be to prepare for renal replacement therapy such as dialysis or a kidney transplant. Stage 5: Considered end-stage renal disease (ESRD) or kidney failure with a GFR <15 (or dialysis). The action plan would be renal replacement therapy (if uremia is present and patient desires treatment). In this stage, RRT would be required to maintain life. Even though many are receiving treatment, ESRD comes with a high mortality rate. In regard to the pathophysiology of CKD-MBD, it would first start with kidney failure which can branch off two possible ways. The first being a decreased GFR

		leading to a decreased PO4 excretion then leading to an increased serum PO4 and then lastly vascular and soft tissue calcifications. The other being a decreased activation of vitamin D, then an impaired calcium absorption from the gut, a decreased serum calcium, an increased PTH (leading to osteitis fibrosa), bone demineralization (leading to osteomalacia), and then finally an increased calcium and PO4 and again, vascular soft tissue calcifications.

To Be Completed Before the Simulation

Anticipated Patient Problem: Excess Fluid Volume

Goal 1: The patient will have normal vital signs as shown with a BP of 110-120/60-80 mmHg, HR of 60-100bpm, RR 12-20bpm, elastic skin turgor, BUN/Cr and GFR near baseline level, and lungs will be clear when auscultated during my time of care.

Goal 2: The patient will have a UO of >30mL/hr as indicated by a balance in intake and output 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 BP, HR, and RR q4hours	Administer anti-hypertensive medications as ordered by MD or PRN during time of care.
Assess lung sounds for wheezes or crackles and SOB upon exacerbation q4hours	Elevate HOB above 30 degrees to aid in lung expansion
Assess UO q1hour and PRN	Administer diuretic therapy as ordered by MD
Assess skin turgor q6hr and PRN	Elevate lower extremities using pillows placed underneath the calves
Assess BUN, Cr, and GFR after each lab draw	Maintain normovolemic status at all times during my time of care by restricting fluids and encourage frequent toileting if applicable
Assess dietary and fluid restrictions q shift	Maintain low sodium diet and fluid intake as ordered by MD

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for electrolyte imbalance

Goal 1: The patient will have electrolytes WNL as evidenced by serum Ca of 8.3-10.5 mg/dL, Na of 133-145 mmol/L, and K of 3.5-5 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 electrolyte levels after each lab draw	Educate signs of electrolyte abnormalities as evidenced by dysrhythmias, diarrhea, constipation, fatigue or headaches
Assess for dysrhythmias upon cardiac monitoring at all times during care	Administer Lactulose or Kayexalate as ordered by MD if potassium is elevated (above 5.0).
Assess for the need of new serum electrolyte level upon onset of symptoms of imbalanced electrolytes	Administer supplemental electrolytes PO or IV per MD orders
Assess mental status q4hours	Administer NS or LR based on MD orders to maintain hydration status
Monitor intake and output q1-2hours	Perform daily weights at same time wearing same clothing per MD orders
Assess the need for dialysis based on kidney function and electrolytes qshift.	Educate about what dialysis is and how it works; prepare the patient for what is to come with decreasing kidney function

Goal 2: The patient will be free of dysrhythmias based on continuous cardiac monitoring during my time of care.

To Be Completed During the Simulation:

Actual Patient Problem: Excess fluid volume

Clinical Reasoning: Dx of CKD;
Goal: A.S. will have normal vital signs as shown with a BP of 110-120/60-80 mmHg, HR of 60-100bpm, RR 12-20bpm, elastic skin turgor, BUN/Cr and GFR near baseline level, and lungs will be clear when auscultated during my time of care. Met: ☐ Unmet: ☐
Goal: The patient will have a UO of >30mL/hr as indicated by a balance in intake and output during my time of care. Met: ☐ Unmet: ☐

Actual Patient Problem: **Risk for electrolyte imbalance**

Clinical Reasoning: Dx of CKD; serum electrolytes not WNL upon initial lab draw;

Goal: A.S. will be free of dysrhythmias evidenced by the use of continuous cardiac monitoring during my time of care. Met: ☐ Unmet: ☐
Goal: A.S. will have electrolytes WNL as evidenced by serum Ca of 8.3-10.5 mg/dL, Na of 133-145 mmol/L, and K of 3.5-5 during my time of care. Met: ☐ Unmet: ☐

Additional Patient Problems: 3. Risk for unstable blood pressure; 4. Anxiety; 5. Readiness for enhanced knowledge; 6. Readiness for enhanced nutrition

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	1830	Complaints of difficulty moving around from legs feeling "tight"; SOB while walking from chair to bet	1830	Raised HOB	1830	Vital signs: Temp 98.9F, HR 118, RR 24, BP 174/94, pain 2/10, UO 150mL
1	1850	SpO2 94% on RA	1850	Applied 2L/min oxygen via nasal cannula	1850	SpO2 96%
2, 3	1910	Potassium 6.0	1910	Applied continuous cardiac monitoring. Administered Furosemide 80mg IV bolus; Educated about possible tinnitus as an adverse reaction	2045	Potassium 5.9 BP 170/90 UO 100mL
4, 5	1930	Anxious about new hemodialysis plan through AV fistula rather than previous peritoneal dialysis as she has received before	1930	Educated about hemodialysis pathway used for the AV fistula	1930	Concerned about the possible complications of hemodialysis
1, 2	2040	T 98.6F, HR 110, RR 22, BP 170/90, SpO2 96% at	2110	Administered calcium gluconate, regular	2125	Na 132, K 5.9, BUN 42, Cr 8.0, Glucose

		2L NC, pain 1/10, intake total 30mL, UO 100mL Showing sinus tachycardia with peaked T waves at 114 bpm		insulin, and 50% dextrose		166, Ca 7.8, Phos 7.5 T 98.2, HR 110, RR 20, BP 178/86, SpO2 96% on 2L NC, pain 0/10, intake total 100mL
1	Day 2 0715	AV fistula intact to L forearm with palpable thrill and audible bruit noted; Scattered rhonchi anterior and posterior fields bilat. RR 18, on 1L O2 via NC, HR 94, +2 pitting edema lower ext bilat, pedal pulses +3 bilat	0800	First round of hemodialysis completed	0900	Reporting generalized fatigue and nausea, HA 2/10 pain
1, 6	Day 3	T 97.8F, HR 88, RR 16, BP 146/88, SpO2 97% on RA, pain 0/10	Day 3 (home)	Discharged to home with orders to complete hemodialysis x3 a week; dietary consulted and home health follow up x2 a week	Day 3 (home)	Consult with dietitian; appears to be greatful to be able to include many cultural foods in new diet

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
UA- Cloudy, amber, Specific gravity- 0.998, Protein 80 mg/dL
BUN 42 mg/dL
Cr 8.0 mg/dL
GFR- 8mL/min
Serum electrolytes:
Sodium- 132
Potassium- 6.0
Total protein- 6.1
Glucose- 174
Calcium- 8.0
Phosphorous- 7.5
CXR showing bilateral pulmonary venous congestion with infiltrates; no cardiomegaly

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

Signs and Symptoms
Recent weight gain of 6.6lbs
SOB with non-productive cough
Pitting edema to lower extremities
General fatigue and malaise
Occasional blurred vision
Decreased appetite
Increased BUN, Cr, K, Na, Phos
HTN
Anemia
Peripheral neuropathy
Hypocalcemia
Uremic frost

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

Contributing Risk Factors
CKD
Type 2 DM
HTN
Uremic pruritis
Peripheral neuropathy
Hyperlipidemia

Therapeutic Procedures
Non-surgical
Hemodialysis

Surgical
Placement of AV fistula

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)

Complete dependability on dialysis

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

Medication Management
Glipizide
Losartan
Furosemide
Gabapentin
Atorvastatin

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

Non-Pharmacologic Care Measures

Cardiac monitoring
Dietary restrictions
Dialysis

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

Stressors the client experienced?
Anxiety with experiencing new hemodialysis treatment plan
Anxiety with having to change her diet

Client/Family Education

Document 3 teaching topics specific for this client.
- Medication regimen adherence
- Infection prevention with AV fistula
- Dietary restrictions based on cultural diet

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

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
RN
MD
Dialysis team
Dietitian/ Nutrition
Home health

Patient Resources
Dietary restrictions pamphlet
Weekly visits to dialysis
Weekly visits by home health nurse

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 in participating in the care of this patient would be learning how much dialysis can impact a patient’s life. This simulation made me realize that many patients many not have the resources needed in order to keep up with their care needed to sustain life. Of all the information nurses and doctors give out to the patients as they are getting discharged it is important to ensure they are going home to a safe setting that will support their illness, and not land them back into the hospital.

2. What was something that surprised you in the care of this patient?
   Something that surprised me during this simulation was how much a kidney disease can affect almost every other organ in your body. During the later stages, dialysis is needed in order to maintain labs and some organ functions. I enjoyed getting to see how CKD affects the electrolytes and vital signs to ready me for the future when I am overviewing my patient’s labs and vitals. I also enjoyed Nurse Chris getting a second opinion on the care plan and other questions he had from the other nurses. I like the open communication aspect and not being nervous or scared to ask a question.

3. What is something you would do differently with the care of this client?
   Something I would have done differently would be sitting to talk with Ms. S about her previous dialysis treatments and how they made her feel psychologically. Since she is widowed, I feel it would be nice for her to be able to express any concerns or factors of her care that make her anxious.

4. How will this simulation experience impact your nursing practice?
   This simulation experience will impact my nursing practice by allowing me to have a different perspective on someone that may be going through dialysis or even a kidney disease. A patient in this situation would have my respect for not giving up/ wanting to continue treatment even will the toll that dialysis may take on your body.