

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2025

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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: Chronic Kidney Disease

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

Upper Urinary System: 2 kidneys and 2 ureters
Lower Urinary System: urinary bladder and urethra *urine formed in the kidneys, drains through the ureters to be stored in the bladder, and then passes out of the body through the urethra.

Kidneys: 2 bean shaped organs located on either side of the spine, below the rib cage. *filter waste products and excess substances from the blood to the urine. Nephrons are the functional unit.

Glomerular Filtration: blood enters through glomerulus (network of capillaries with fenestrated endothelium (tiny pores)), high pressure of the glomerulus forces water, electrolytes, small molecules, and waste products out of the blood and into the Bowman's capsule. Large molecules not filtered because of size.

Filtration Membrane: 3 layers: fenestrated endothelium of the glomerular capillaries, the basement membrane, and the podocytes (cells with foot like extensions) of the Bowman's capsule. These layers allow smaller molecules to filter through and retain large ones. Selective **Reabsorption:** filtrate (tubular fluid) moves through renal tubule where essential substances (glucose, amino acids, water) are reabsorbed back into the bloodstream *maintains fluid balance

Secretion: secrete certain substances from the blood into tubular fluid, eliminates waste products. Formation of **Urine:** fluid that reaches collecting ducts is concentrated and adjusted to the body's needs, creating urine as the final product, which is drained into the renal pelvis and transported to the bladder.

Bladder: hollow, muscular organ located in the pelvis, behind the pelvic bone. *Stores urine until it is expelled from the body by the detrusor muscle contracting. Bladder walls are connective tissue and elastic fibers that stretch containing receptors to signal to brain when the bladder is full (400/600 mL)

Ureters: *transport urine from the kidneys to the bladder through peristaltic contractions. Prevent urine from backflowing into the kidneys by the presence of one-way valves where they enter the bladder.

Urethra: a tube connecting the bladder to the outside of the body. In males it is the passageway of urine and semen. In females it is shorter and is only the passageway of urine. Contains two sphincters, internal and external, which control the flow of urine from the bladder out of the body. Internal sphincter relaxes involuntary during urination, but external sphincter relaxes voluntary to allow urine to pass through.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

Chronic Kidney Disease: a kidney abnormality, either structural or functional, that has been present for at least 3 months. Includes 5 progressive stages based on GFR, including **stage 1** (≥ 90 mL/min), **stage 2** (60-89 mL/min), **stage 3** (30-59 mL/min), **stage 4** (15-29 mL/min), and **stage 5** (GFR < 15 mL/min). CKD can also be staged based on albuminuria. **Stage 1** is an albumin-to-creatinine ratio < 30 mg/g, **stage 2** is an albumin-to-creatinine ratio of 30-300 mg/g, and **stage 3** is an albumin-to-creatinine ratio > 300 mg/g.

CKD affects 9.1% of the global population. Most common in older adults, with the highest incidence in those over 60.

During the early stages of CKD, symptoms may not be seen, but are progressive as CKD advances. If uncontrolled, CKD can progress to generalized progressive deterioration of kidney tissue and function. end-stage kidney failure.

The exact pathophysiology of the disease depends on the cause, however, CKD is a generalized progressive deterioration of kidney tissue and function.

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for Impaired Cardiac Output

Goal 1: The patient will exhibit adequate cardiac output as evidenced by a heart rate between 60-100 bpm during my time of care.

Goal 2: The patient will maintain strong peripheral pulses and capillary refill less than three seconds 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 blood pressure and heart rate q4hr and PRN during my time of care.	Administer inotropic agents as ordered by the provider.
Assess skin temperature and peripheral pulses q2hr and PRN during my time of care.	Encourage oral intake PRN during my time of care.
Assess level of consciousness Q1hr and PRN during my time of care.	Administer intravenous continuous or bolus fluids as ordered by the provider.
Monitor for dysrhythmias on continuous cardiac monitoring PRN during my time of care.	Administer antiarrhythmic agents as ordered by the provider PRN for cardiac dysrhythmias.
Monitor oxygen saturation using continuous pulse oximetry PRN during my time of care.	Administer oxygen as needed during my time of care.
Auscultate heart sounds and lung sounds for adventitious breath sounds or S3 q4hr and PRN during my time of care.	Consult dialysis team to perform bedside dialysis PRN during time of care.

To Be Completed Before the Simulation

Anticipated Patient Problem: Excessive Fluid Volume

Goal 1: The patient's bilateral anterior and posterior lung fields will remain clear to auscultation during my time of care.

Goal 2: The patient's systolic blood pressure will remain between 100-140 mmHg 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 blood pressure and heart rate q4hr and PRN during my time of care.	Administer antihypertensive medication as ordered by the provider PRN during my time of care.
Auscultate bilateral anterior and posterior lung fields q4hr and PRN during my time of care.	Administer diuretic medication as ordered by the provider PRN during my time of care.
Assess for pitting edema in lower extremities and over sacral region q12hr and PRN.	Elevate lower extremities and float bony prominences PRN during my time of care.
Assess weight daily and PRN.	Instruct the patient to use ice chips or moistened swabs to aid in dry mouth PRN during my time of care.
Assess lab values including electrolytes and CBC PRN for new lab draws.	Administer electrolyte supplements as ordered by the provider PRN during my time of care.
Assess the patient's adherence to fluid and nutritional restrictions at home.	Educate on important to nutritional and fluid restrictions, including what foods can be eaten.

To Be Completed During the Simulation:

Actual Patient Problem: Excessive Fluid Volume

Clinical Reasoning: reports weight gain over last few days, bilateral pitting edema +2 in lower extremities, SOB with increased WOB, SpO2 94% RA, crackles in bilateral lower lung bases, history of stage 5 CKD requiring peritoneal dialysis, blood pressure 178/76, HR 118.

Goal: The patient will maintain a urine output equal to or greater than 30 mL/hr during my time of care.

Met: Unmet:

Goal: The patient’s systolic blood pressure will be below 160 mm Hg by the end of my time of care.

Met: Unmet:

Actual Patient Problem: Electrolyte Imbalance

Clinical Reasoning: history of stage 5 CKD requiring peritoneal dialysis, potassium 6, sodium 132, calcium 8, and phosphorus 7.5 on admission lab draw.

Goal: The patient will not experience any cardiac dysrhythmia during my time of care. Met: Unmet:

Goal: The patient’s potassium will be within the range of 3.5-5.2 by the end of my time of care. Met:

Unmet:

Additional Patient Problems: Deficient Knowledge: dialysis, Deficient Knowledge: nutrition, Impaired Urinary Elimination, Ineffective Coping

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
Excessive Fluid Volume, Electrolyte Imbalance	1800	Reports gaining weight over the last two days. History of stage 5 CKD, on peritoneal dialysis. Creatinine 8 and BUN 42 on lab draw.	1805	Admit to medical surgical unit. Peritoneal dialysis discontinued and scheduled inpatient hemodialysis.	2000	“The doctor came and spoke with me about hemodialysis, but I am still confused.”
					1400 (next day)	Discharged home. Creatinine 6.7, BUN 37.
Excessive Fluid Volume	1820	“Moving around by myself is very difficult at times.” SOB and tachypneic.	1825	Raised HOB and assisted to upright sitting position.	1830	Relaxed state on face, RR 24, SpO2 94%.
Excessive Fluid Volume	1830	RR 24, SpO2 94%.	1 and BUN 42 835	Applied 2 L NC.	1845	SpO2 96% on 2L NC.
Electrolyte Imbalance	1900	Potassium level 6 on lab draw.	1905	Applied cardiac monitoring.	1915	Cardiac monitoring shows peaked T waves on strip.
					1400 (next day)	No cardiac dysrhythmias during my time of care.

Excessive Fluid Volume	1940	Blood pressure 170/90, pulse 118. Voided 152 mL. Pitting edema +2 in lower extremities. Crackles auscultated in lower lung fields. S1 and S2 noted.	1950	Administered Furosemide 80 mg IV bolus as ordered by the provider. Educated on adverse effects, tinnitus.	2125	Blood Pressure 178/86, pulse 110. Voided 170 mL in 1 hour. Pitting edema +2 in lower extremities.
Deficient Knowledge: dialysis	2000	"The doctor came and spoke with me about hemodialysis, but I am still confused."	2005	Educated on the process and side effects of hemodialysis, using pictures.	2010	"Thank you for taking the time to help me, I understand it much better now."
Electrolyte Imbalance	2100	Potassium 6, sodium 132, calcium 8, and phosphorus 7.5.	2110	Updated plan of care to monitor for manifestations of electrolyte imbalances, including a positive Chvostek sign, and anticipated medications like insulin, dextrose, and calcium gluconate to be ordered.	1400 (next day)	Potassium 4.7 at discharge.
Excessive Fluid Volume	0000 (next day)	Blood Pressure 178/86, pulse 110.	0030 (next day)	Administered labetalol 20 mg IV bolus as ordered by the provider.	0700 (next day)	BP 156/80, HR 108.
Excessive Fluid Volume	0730 (next day)	Sitting up in chair at the bedside. On 1L NC, RR 18 slightly labored. SpO2 97%.	0734 (next day)	Maintained 1L NC and promoted periods of rest.	0745 (next day)	SpO2 96% on 1L NC.
Excessive Fluid Volume	0745 (next day)	SpO2 96% on 1L NC. Lungs sounds clear to auscultation, s1 and s2 noted. Bilateral pitting edema +2.	0800 (next day)	Removed NC and encouraged deep breathing.	0815 (next day)	SpO2 97% on RA. Lungs sounds clear to auscultation, s1 and s2 noted. Bilateral pitting edema +2.
Ineffective Coping	0900 (next day)	Crying at bedside. Expresses frustration and sadness regarding dialysis and changing of routine and life.	0905 1000 (next day)	Supported at bedside and referred a case manager. Case manager arranged transportation to dialysis.	0915 (next day)	"Thank you for talking to me, that would be nice."
Impaired Urinary Elimination	1400 (next day)	Discharged home and resumed peritoneal dialysis per previous schedule.	1800 (next day)	Home health nurse performed at home visit.	1830 (next day)	Peritoneal dialysis catheter rated a 2.
Electrolyte Imbalance, Deficient Knowledge: nutrition	1200 (3 days later)	"I have some concerns with my new diet. I feel like I cant eat any of my favorite foods that are apart of my culture."	1205 (3 days later)	Counseled on favorite foods that align with dietary restrictions and what foods are low in potassium, sodium, and sugar.	1210 (3 days later)	"Thank you for talking to me, this makes me feel better about 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
 BUN 42, Creatinine 8, Potassium 6,
 Phosphorus 7.5, Calcium 8, Sodium 132

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
 Anxiety, hypertension (BP 170/90), hyperlipidemia,
 anemia, fatigue, pulmonary edema (crackles in lower
 lung bases), pruritis, peripheral neuropathy

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Older age, history of diabetes,
 obesity, and hypertension.

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical
 Peritoneal dialysis,
 hemodialysis

Surgical
 Fistula placement in left
 arm

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

 Anemia, nerve damage, electrolyte
 imbalances, and fluid imbalances.

 *Not seen but possible:
 cardiovascular disease, bone and
 mineral disorders, hypovolemia.

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
 Furosemide 20 mg oral
 Furosemide 20 mg IV push
 Labetalol
 Calcium Gluconate
 Regular insulin
 Dextrose 50%

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 Provided periods of rest and
 relaxation, supplemental oxygen,
 raised HOB, assisted in ADL's,
 provided emotional support, provided
 nutritional counseling, cardiac
 monitoring, and educated on chronic
 disease and therapies.

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
 Anxiety, frustration, worry due
 to lack of transportation, anger
 with loss on control over daily
 function and previous routine.

Client/Family Education

Document 3 teaching topics specific for this client.
 • Foods low in potassium, sodium, and sugar.
 • How hemodialysis is performed through the fistula in the left arm.
 • Side effects of hemodialysis therapy, including a decrease in blood pressure during procedure.

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines were involved in caring for this client?)
 Charge nurse, assistive personnel, outpatient dialysis team, in patient dialysis team, provider, pharmacy, case management, home health nursing.

Patient Resources
 Case management to arrange for transportation to outpatient dialysis appointments. Home health nursing for outpatient dialysis follow up.

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 the care of this client was the importance of recognizing social determinants of health. With a chronic condition, it is important for the patient to have access to the health care they require to manage their illness. However, when caring for this client, it was evident that she lacked proper transportation to her dialysis appointments and experienced trouble with nutrition. These factors are incredibly important to manage her care and prevent her from having another acute onset of her chronic condition.

2. What was something that surprised you in the care of this patient?

When caring for this patient, their lack of knowledge on their chronic condition had surprised me. In the past I had always assumed that those with chronic conditions were experts in their condition. However, this patient still had many questions and concerns regarding the treatments they were receiving and their dietary restrictions. This is an important reminder that even those with chronic conditions may not fully understand all that encompasses it.

3. What is something you would do differently with the care of this client?

In the care of this client, I would perform a more focused assessment on the cardiac system. As this patient had been previously managed on peritoneal dialysis for 9 months, but came in with acute hypervolemia despite receiving dialysis, I would be concerned with their cardiac function. Especially as the furosemide wasn't effective in lowering blood pressure, but the patient responded great to labetalol, which works by decreasing their preload and afterload. This leads me to believe that the patient's acute condition may be affected by their cardiac function.

4. How will this simulation experience impact your nursing practice?

This simulation will impact my nursing practice as it is a reminder that many patients who suffer from a chronic illness, may still have questions and concerns. Although this patient had been receiving dialysis for 9 months, 3 days a week, they still had many questions and concerns about managing their chronic disease. This is a reminder to always continue to educate in my future nursing practice and allow the client to ask questions and remain engaged in their care.