N441 Week 12 Renal Assignment

Partner A- Breanna Schoonover: (pages 1-3)

Topic:	Pathophysiology	Manifestations (Including lab findings)	Nursing interventions	Patient Education
Chronic Kidney Disease (CKD) - Progressive, irreversible kidney disease.	The pathophysiology of CKD is not fully understood. However, it is believed to be caused by prolonged acute inflammation that is not specific to organ. Therefore, CKD has subtle systemic symptoms. Patients in the earlier phase can show no signs or symptoms of having the disease. Also, in the early phase of CKD it can cause significant damage to kidneys.	As CKD progresses, manifestations become apparent. • Nausea • Fatigue • Depression • Lethargy • Involuntary leg movement • Intractable hiccups • Decreased skin turgor • HTN • Anemia • Pallor • Weakness • Dizziness • Tachypnea • Fluid overload • Dysrhythmia • Slurred Speech • Tremors **Labs:** BUN & Creatinine: Increased Electrolytes: Na & Ca-Decreased K, Ph, Mg- Increased CBD (H&H): Decreased UA: Hematuria & Proteinuria Urine Specific Gravity-decreased	• Monitor Irregular findings • Monitor Vascular access • Assess and monitor Peritoneal dialysis insertion site • Obtain detailed past medical history- Medications. • High carb, moderate fat diet • Prepare for hemodialysis • Encourage them to ask questions • Administer medications as prescribed • Balance activity and rest • Monitor Urine output characteristics • Monitor Vitals- blood pressure may be increased or decreased • Monitor daily weight and weight gain	• Restrict dietary sodium, potassium, phosphorous and magnesium. • High carbohydrate, moderate fat diet • Educate on hemodialysis, peritoneal dialysis, and hemofiltration • Encourage them to ask questions • Drink at least two liters of fluids a day. • Smoking cessation • Limit alcohol intake • Use diet and exercise to manage weight and prevent/control hypertension and diabetes. • Adhere to medication guideline to prevent kidney damage • Annual check for albumen in the urine. • Take the FULL-COURSE of antibiotics • Limit intake of NSAIDS

			trends • Restrict fluid intake- based on UO • Protect from injury	
Topic:	**Indications**	**Nursing Interventions (pre)**	**Nursing Interventions (post)**	**Patient Education**
Kidney biopsy Sample of tissue removed by incision or needle aspiration- for cytological (histological) exam	• Unexplained acute kidney injury • Persistent proteinuria • Persistent hematuria • Transplant rejection • Glomerulopathies	1. Obtain informed consent o Nurse witnesses' signature 2. Obtain a urine specimen 3. Review coagulation studies o Notify provider of any abnormalities. o Identifies the risk of any post bleeding 4. NPO 4-6 hours o Notify provider if not followed. 5. Obtain baseline vitals and labs (H & H) 6. Provide adequate education and encourage patient to ask any question. 7. Provide support. 8. Place patient in prone position with a sandbag under the	1.Vital Signs- Monitor for 24 hours • Detect s/s of infection or bleeding 2.Assess dressing changes- Monitor for signs of infection 3. urinary output- Monitor for hematuria. 4. Review H & H values. 5. Administer analgesics for pain as prescribed. 6. Monitor for complications • Hemorrhage • Cloudy, foul smelling urine • Urgency • Urine positive for leukocyte esterase and nitrites, sediments and RBCs. 7.Monitor for signs and symptoms of internal bleeding	• Educate NPO status for 4-6 hours prior to surgery • Assess for understanding of procedure • Encourage any questions they have regarding the procedure • If a needle biopsy is being performed, patient is instructed to breath in and hold breath. • Education on symptoms associated with bleeding to notify provider • Flank pain • Dizziness • Educate on how important bed rest is after the procedure

		abdomen (Needle biopsy)	• Pallor • Dizziness • Flank or back pain	

Topic:	Indications	Contraindications	Manifestations of rejection
Kidney transplant -A life-sustaining treatment option for a patient, when the kidneys are no longer able to function – End stage renal disease.	1. Anuria 2. Proteinuria 3. Marked azotemia o Elevated BUN & Creatinine 4. Severe electrolyte imbalance o Hyperkalemia o Hypernatremia 5. Fluid volume excess conditions 6. Uremic lung	1. Recent Malignancy 2. Active or chronic infection 3. Severe, irreversible extrarenal disease o Inoperable cardiac disease o Chronic lung disease o Severe peripheral vascular disease 4. Active infection • HIV • Hepatitis B, or C. 5. Class 2 Obesity • BMI>35 6. Current substance abuse 7. Inability to give informed consent 8. History of nonadherence to treatment regimens.	**Hyperacute** -Occurs within 48 hours after surgery. **Manifestations** o Fever o Hypertension o Pain at the transplant site **Acute** **-**Occurs one week to two years after surgery. **Manifestations** o Oliguria o Anuria o Low grade fever o Hypertension o Tenderness over the transplanted kidney o Lethargy o Azotemia

			o Fluid retention **Chronic** **-**Occurs gradually over months to years. **Manifestations** **o** Gradual return of azotemia **o** Fluid retention **o** Electrolyte imbalance **o** Fatigue

Partner B **Abby**

Erickson

Using your textbooks and lecture PowerPoint, complete the following tables.

Topic:	Pathophysiology	Manifestations (Including lab findings)	Nursing interventions	Patient Education
Acute Kidney Injury (AKI)	Cessation of renal function that occurs when blood flow to the kidneys is significantly compromised Types: Prerenal- Occurs due to volume depletion and	Expected findings: • Fluid overload • Dysrhythmias • Crackles • Decreased oxygenation • SOB • Normal renal scan or excessive UO • Possible hematuria • Lethargy • Muscle twitching • Seizures • Dry skin and mucous	• Identify and assist with correcting the underlying cause • Monitor CVP and hypotension/tachycardia • Monitor I & O • Review lab results • Assess for edema or manifestations of HF • Restrict fluid intake if prescribed • Assess for flank	• Avoid using nephrotoxic medications • Weigh daily • High-protein diet • Take all antibiotics as prescribed • Control diabetes and HTN to

	prolonged reduction of blood flow to the kidneys. Occurs before damage to the kidney. Intrarenal- Occurs as a result of direct damage to the kidney from lack of oxygen. Postrenal- Occurs as result of bilateral obstruction of structures leaving the kidney	membranes <u>Laboratory tests:</u> • Increased Creatinine • Increased BUN • Urine specific gravity varies • Hyponatremia/ hypernatremia • Hyperkalemia • Hyperphosphatemia • Hypocalcemia • Decreased Hct • Presence of sediments in the UA • Metabolic acidosis	pain or N/V • Monitor ECG for dysrhythmias • Monitor daily weights • Implement potassium, phosphate, sodium and magnesium restrictions if prescribed	prevent complications • Stop smoking • Drink at least 2L of water a day (if there is no fluid restriction)

Partner B
Erickson

Abby

Topic:	Types	Uses	How does the system work	Patient Education
Dialysis (Include hemodialysis and peritoneal dialysis) Functions: • Rids the body of excess fluids and electrolytes • Achieves acid-base balance • Eliminates waste products • Restores internal homeostasis by osmosis, diffusion, and ultrafiltration	Hemodialysis- Blood is pumped out of your body into an artificial kidney machine, and returned to the body through tubes Has to have vascular access Peritoneal dialysis- Inside lining of the stomach is used as a natural filter	Hemodialysis- Indications: • Renal insufficiency • AKI • CKD • Drug OD • Persistent hyperkalemia • Hypervolemia that does not respond to diuretics Peritoneal dialysis- *Treatment of choice for older adults Treats clients that: • Are unable to tolerate anticoagulation • Have	Hemodialysis- Shunts blood from the body into a dialyzer and back into circulation. The provider inserts two needles, one into an artery and one into a vein. Peritoneal dialysis- Instillation of hypertonic dialysate solution into the peritoneal cavity and subsequent dwell times. Drain the dialysate solution that includes the waste products. The peritoneum serves as the filtration system. The client should	Hemodialysis- PREPROCEDURE: • Inform the client that they will need hemodialysis 3 times a week for 3 to 5 hours INTRAPROCEDURE • Advise client to notify the nurse of headache, nausea, or dizziness during dialysis • Advise the client not to eat during dialysis POSTPROCEDURE • Perform exercises that promote fistula

		difficulty with vascular access • Have chronic infections or are unstable • Have chronic diseases	have an intact peritoneum without adhesions from infection or multiple surgeries.	maturation • Avoiding sleeping on affected extremity • Eat well-balanced meals • Avoiding lifting heavy objects • Check site periodically during dialysis • Alert nurse of early signs of disequilibrium • Monitor site for signs of infection <u>Peritoneal Dialysis-</u> PREPROCEDURE: • Inform client that may feel fullness/discomfort POSTPROCEDURE:

				• Home care of the access site • Info on support groups • Take essential minerals and vitamins • Body image can be a concern for clients

Partner B Abby Erickson				
Topic:	**Pathophysiology**	**Manifestations (Including lab findings)**	**Nursing interventions**	**Patient Education**

End stage renal disease (ESRD) Indications: ▪ Anuria ▪ Proteinuria ▪ Marked azotemia ▪ Severe electrolyte imbalances ▪ Fluid volume excess ▪ Uremic lung	The kidneys no longer function. They lose their filtering capabilities. This causes fluid, electrolytes, and wastes to build up. Dialysis or a kidney transplant is the only treatment.	Expected findings- • Anorexia • Fatigue • Numbness or tingling of extremities • SOB • Dry, itchy skin • Metallic taste in mouth • Muscle cramping • Decreased attention span • Seizures • Tremor • Heart failure • Edema • Dyspnea • JVD • Anemia • Vomiting • Pulmonary edema • HTN • Dysrhythmias • Pallor • Bruising	• Auscultate heart sounds • Monitor vital signs • Strictly monitor I & O • Monitor electrolytes • Prepare for dialysis • Palpate bladder • Observe for signs of infection • Provide emotional support	▪ Emphasize importance of a well-balanced diet ▪ Monitor site for infection ▪ Adhere to medication regimen ▪ Educate client on the complications of transplant 1. Organ rejection 2. Ischemia 3. Renal artery stenosis 4. Thrombosis 5. Infection

		• Halitosis • Diminished or dark-colored urine <u>Laboratory data-</u> • Proteinuria • Hematuria • Elevated BUN • Elevated creatinine • Decreased GFR • Decreased H & H • Elevated potassium and phosphorus • Metabolic acidosis		