

Creating Nephrology Nurse Externships and Internships: Task Force Recommendations

Nephrology Nursing Summit Task Force on Education



In March, 2003, ANNA convened an invitational summit to bring members of the renal community together to discuss issues concerning the shortage of nurses in dialysis and to create a detailed national plan to address the recruitment of nurses into nephrology and the retention of experienced nephrology nurses. Summit attendees included representatives from major providers of dialysis services, nephrology-related professional organizations, and government agencies. The content of the Summit presentations and the group work accomplished at the Summit was published in the August 2003 issue of the *Nephrology Nursing Journal*.

As a result of the Summit, several task forces were created to address both short and long-term solutions to opportunities identified by Summit participants to recruit and retain qualified registered nurses in nephrology. The task forces were also designed to bring together Summit participants and other experts and interested stakeholders to implement the Summit work group outcomes, priorities, and action plans. Each task force was co-chaired by an ANNA representative and another Summit representative and was also assigned an ANNA Board member as an advisor.

One of those task forces was the Educational Task Force co-chaired by Charlotte Thomas Hawkins, PhD, RN, CNN, Assistant Professor, Rutgers University College of Nursing, and Mignon Early, BSN, RN, Senior Vice President, Operations, National Nephrology Associates. That task force has been working diligently to create strategies for nephrology providers to use to link with schools of nursing and nursing students. We are pleased to present the results of their work in this issue of the *Nephrology Nursing Journal* and to make additional resources created by the task force (such as externship application and reference forms) available on the ANNA and NNJ web sites (www.annanurse.org and www.nephrologynursingjournal.net).



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The major objective of the Education Task Force was to develop a plan to create linkages between schools of nursing and hemodialysis settings to increase student nurses' knowledge of and experiences in nephrology nursing. The rationale for this objective was that student nurse experiences in hemodialysis settings create opportunities for students to see nephrology nurses in action and pique their interest in pursuing jobs in dialysis settings after completion of their nursing programs. Traditionally, student nurses do not spend extended clinical experiences in dialysis settings. Additionally, dialysis units in the past have required a period of medical-surgical nursing or intensive care nursing experiences for employment in dialysis units.

The committee developed three documents that can serve as templates for providers of dialysis services and ANNA Chapters to encourage student nurse experiences in dialysis settings and the entry of newly graduated nurses in dialysis settings: (1) an invitation letter to schools of nursing that encourages the use of dialysis settings for student nurse clinical experiences; (2) a student nurse externship program; and (3) a nurse internship program. These templates can be used by providers of hemodialysis services who are interested in student nurse experiences in their dialysis units, creation of student nurse externship programs; or developing an orientation program that is tailored to the role of the professional nurse in dialysis settings.

Charlotte Thomas-Hawkins, PhD, RN, CNN and Mignon Early, BSN, RN served as co-chairpersons of the committee. Mary Brattich, BSN, RN, CNN and Mary Schira, PhD, APRN, BC, ACNP served as committee members.

Referring Policy/Skill		Didactic Hours	Clinical Hours
	Demonstrate performing bacterial culturing of water treatment system.	2.00	
	Demonstrate performing water treatment system disinfect procedure.	2.00	
	Demonstrate rinsing water treatment system free of disinfectant.	1.00	
	Discuss reporting to the charge nurse/administrator and technical dept. water treatment deviations and abnormal quality test results.	0.25	
	Reading Assignment	1.00	
	<i>Nephrology Nursing Standards of Practice and Guidelines for Care, Chronic Kidney Disease, Stages 1-4 pages 19-32</i>		
	<i>Amgen Core Curriculum for the Dialysis Technician Module Seven, pages 3-39 & post test</i>		
	Total Hours Day 14	9.50	0.50
DAY 15			
	Bicarbonate Mixing Procedures		4.25
	Demonstrate preparing bicarbonate concentrate with bicarbonate mixer.	0.50	
	Demonstrate cleaning and disinfecting bicarbonate mixer and containers.	0.50	
	Discuss storage and distribution of acid concentrate.	0.50	
	Demonstrate manual conductivity test of dialysate.	0.25	
	Demonstrate obtaining manual temperature of dialysate.	0.25	
	Demonstrate performing manual pH testing of dialysate.	0.25	
	Demonstrate performing presence test for bleach.	0.25	
	Demonstrate performing bacterial culturing of dialysis delivery system (if applicable).	1.00	
	Demonstrate performing bacterial culturing of bicarbonate mixer (if applicable).	0.75	
	Reading Assignment	1.50	
	<i>Amgen Core Curriculum for the Dialysis Technician, Module Seven, pages 3-39 & posttest</i>		
	Total Hours Day 15	5.75	4.25
	TOTALS Days 1-15	120.85	29.15
DAYS 16-42			
	Attend Theory Class with Education Coordinator.	80	
	Study for Final Exam.	10	
	Work with Preceptor practicing hands-on skills, and improving efficiencies and time management.		
	Days 16 - 19: One patient assigned with direct Preceptor assistance and monitoring.		40
	Day 20 - 23: Two patients assigned with direct Preceptor assistance and monitoring.		40

Referring Policy/Skill		Didactic Hours	Clinical Hours
	Day 24 - 27: Three patients assigned with direct Preceptor assistance and monitoring.		40
	Day 28 - 42: Four patients assigned with direct Preceptor assistance and monitoring.		40
	Total	90	160
Day 43: Final Exam			
	Certificate issued if passed all competencies and exam.		
Additional Procedures			
Double lumen catheter (DLC) initiation	Demonstrate performs pre-dialysis CVC care.	1.00	
Changing central catheter dressing	Demonstrate changing CVC dressing.	1.00	
DLC discontinuation	Demonstrate discontinuing dialysis with CVC.	1.00	
Applicable policies	Demonstrate initiating treatment with CVC.	1.00	
Applicable policies	Demonstrate obtaining specimen for blood cultures.	0.50	
Applicable policies	Demonstrate use of the hemocult slide.	0.25	
	Demonstrate obtaining the heart sounds.	0.25	
Applicable policies	Demonstrate obtaining breath sounds.	0.25	
Applicable policies	Demonstrate observing for peripheral edema (absent or present).	0.25	
	Demonstrate obtaining blood specimen for transfusion.	0.50	
	Review of dialysis specific laboratory values.	1.00	
Company-specific			
	Age-specific competencies: Adults	0.60	
	Age-specific competencies: Infants to adolescents	0.60	
	Blood product administration	1.00	
	Anemia management	7.00	
	Volume assessment	2.00	
	Bone management	2.00	
	Dialysis adequacy	2.00	
	Vascular access management	2.00	
Professional Development			
	Review the role of the nephrology nurse and the value of professional association membership in an organization such as ANNA.	0.50	
	Review the value of participation in the externship program as the student nurse returns to school.	0.50	

Introductory Letter To A School of Nursing

Note: Two versions of the letter, one designed for use by dialysis providers and one for ANNA chapters, are available for download from the ANNA and NNJ web sites as Word documents so they can be adapted to meet the needs of individual groups. The letter example below is for dialysis providers.

Dear Dean/Assistant Dean _____:

_____(provider name) is a health care organization that provides outpatient dialysis treatment and services to individuals with chronic kidney failure. We would like to increase your awareness of potential learning and employment opportunities for nursing students within the nephrology patient care environment and offer our organization as a potential student learning environment in the local health care community.

Chronic kidney disease affects over 334 per million people in the United States. The therapy of individuals with chronic kidney disease encompasses the coordination of therapy not only for kidney disease (dialysis and transplantation), but also the causes of kidney disease (i.e., 50% of the patients have diabetes) and the complications of kidney disease (anemia, bone disease, cardiovascular disease). The majority of health care provided for these individuals occurs in community-based systems, including outpatient clinics and dialysis centers by interdisciplinary health care teams that include Registered Nurses, Advanced Practice Nurses, Physicians, Social Workers, Dietitians, and Unlicensed Assistive Personnel. We believe that the nephrology care environment provides a unique integrated learning experience for students and includes a variety of learning and clinical experience opportunities for nursing students at all levels of their nursing education.

Clinical experiences in dialysis centers and nephrology clinics provide students with the following:

- delivery of high technological, high touch health care;
- provision of care to patients with chronic illness and numerous comorbid conditions;
- critical thinking as students and staff solve complex patient care issues;
- the opportunity to work within an interdisciplinary team;
- the chance to practice in an environment that uses outcomes data to make changes in care and where data are provided to national databases and regional quality assurance networks;
- patient and family education and support;
- the opportunity to work with and manage unlicensed assistive personnel;
- the chance to experience a “live” professional environment that provides holistic care to address physiologic, psychological, and social issues;
- discussions regarding treatment/therapy options, including end-of-life care; and
- an environment that demonstrates the daily impact of federal, state, and local funding limits and regulations on care delivery and practice models.

Classes within your curriculum that may benefit from clinical experiences in the nephrology treatment environment include:

- community-based nursing courses,
- nursing care of patients with complex needs,
- health promotion and disease prevention courses,
- nursing management courses that address the coordination of care among multiple disciplines and/or the supervision of other licensed (e.g., vocational/practical nurses) and unlicensed assistive personnel, and
- management courses that address health care policy, payment, and quality assurance content.

In addition to exploring the placement of students in our organization, members of our Registered Nurse staff may be available to provide class/lecture content and/or serve as resources for current information regarding kidney disease and therapies. Finally, we would welcome the opportunity to talk with your students regarding employment opportunities within the field of nephrology nursing.

I would like to discuss learning (and employment – as appropriate) opportunities for students more fully with you at your convenience. Please feel free to contact me at _____(phone number/email)_____. I look forward to talking with you in the near future about the many opportunities available for learning and professional nursing practice in nephrology patient care.

Respectfully,

(Name)

Nephrology Student Nurse Externship For Hemodialysis Units

Note: The following template for a Nephrology Student Nurse Externship Program for hemodialysis units and all associated forms are available for download from the ANNA and NNJ web sites as Word documents so they can be adapted to meet the needs of individual groups.

Description

The nephrology nurse externship program is a ___-week program for nursing students who are currently enrolled and classified as seniors in accredited registered nursing programs. This program will provide an opportunity for the student nurse to increase his or her nursing knowledge in a supportive and challenging environment. It offers a unique opportunity to build on clinical skill sets in a real world environment.

The program is designed to build on the student nurse's acquired knowledge from nursing school by providing didactic and clinical experience related to the care of individuals with chronic kidney failure. Students will work one on one with experienced, highly-skilled nurses and provide hands-on care to patients with chronic kidney disease. The goal is to develop the student's proficiency and confidence in specific basic nursing and interpersonal skills as they relate to the care of the patient with chronic renal failure. Furthermore, it is the goal of the Nephrology Student Nurse Externship program to stimulate the interest of the student nurse to work in the dialysis setting upon graduation.



Prerequisites

- Successful completion of at least two clinical courses in caring for adults on a medical-surgical unit in an acute care setting with completion of the junior, or equivalent, year in an accredited nursing program
- Grade point average of 2.75 or greater (out of 4.0 possible)
- Current CPR certification

Curriculum

After completion of the program, students will be able to perform various nursing skills, including venipuncture, sterile and non-sterile dressing changes, and blood glucose monitoring, and participate in chronic therapy management (i.e., management of anemia, bone disease, diabetes, etc). All clinical experiences are provided under the direct supervision and mentorship of an experienced RN preceptor.

Compensation

In addition to gaining valuable experience, the student nurse will be compensated for participation in the program. The student nurse will be hired on a temporary status for ___ weeks, ___ hours per week, and receive a base pay of \$____ per hour. Student Nurse Externs are eligible for shift differentials and are paid for the clinical and classroom portions of the program. No other benefits are offered.

Uniforms

A uniform specific to the student nurse externship program will be required, according to the specifications of the nursing school and agreed upon by the externship provider. [*A description of what that uniform will be should be listed, i.e. white scrub bottoms and light blue tops. Should also include where they can be purchased.*] More details will be given once the externship participants are chosen.

Housing

Student Nurse Externs are responsible for their own housing.

Application

The Extern Program application materials include the following:

1. **Student Nurse Extern Application** – This serves as our base record for the program. If your permanent and school addresses are different, we need to know which address and phone number to use to contact you to schedule an interview and confirm your acceptance. Include your e-mail address.
2. **Personal History Form** – Please complete this form to give us some background about you and your interests and goals.
3. **Academic Advisor Form** – This is your official verification of student status.
4. **Letters of Reference (2)** – These are to be completed by clinical faculty. Please ask them to return the letters to you so you can include them with your application. You may wish to give faculty envelopes in which to return the recommendation to you.
5. **Official Transcript** – Request that an official transcript from the registrar's office of your nursing program be mailed to: (Name of Providing Facility, Contact Name, Mailing Address.)

Use the checklist on the application to verify that you are returning all required forms. Application materials (ITEMS 1, 2, 3, and 4) should be mailed together to: (Name of Providing Facility, Contact Name, Mailing Address.)

An interview is required. A personal interview is preferred, but phone interviews can be arranged. You will be contacted to schedule an interview as soon as all the application materials are received.

Applications are due by _____. Applications received after that date will be reviewed on a space-available basis. Applications will be processed as they are received. There are a limited number of spaces available. Admission to the program is based on the contents of the application, transcript, and references, and on your personal interview.

Notification of Acceptance

Students will be notified of acceptance once the application and selection processes are completed. All applicants whose materials are complete by _____ will be notified of their selection status by _____. If you are offered a position as an Extern, a physical exam will be scheduled. The pre-employment physical, which includes a drug screen, is required prior to the start of the program. Employment is contingent on passing the physical exam.

Questions

Program questions may be addressed to _____ at (phone number/email address).

Nephrology Student Nurse Externship



Nephrology Student Nurse Externship Template For Hemodialysis Units

Note: The following template for a Nephrology Student Nurse Externship Program for hemodialysis units and the accompanying Skills Checklist are available for download from the ANNA and NNJ web sites as Word documents so they can be adapted to meet the needs of individual groups.

Referring Policy/Skill		Didactic Hours	Clinical Hours
DAY 1			
	Introduction to company	0.25	
	Orientation to the clinic telephone system	0.25	
	Review results of employment labs (if applicable)	0.25	
	Review job description	0.25	
	Discuss employee skills checklist	0.25	
	Discuss patient and staff shifts	0.25	
	Introduction to Team Members (Renal Dietitian [RD], Social Worker [SW], Unit Secretary [US], Biomedical Tech [BT], Physician)	0.50	
	Orientation to physical plant: locker room, kitchen supply room, offices, medication room, lab room, biohazard room, bathrooms, crash cart, oxygen supplies, employee bulletin boards, location of MSDS book, fire alarm locations, fire extinguishers locations, emergency exits, location of PPE, location of policy and procedure manuals	1.00	
HIPAA	Discuss confidentiality of medical records	0.25	
Read employee handbook	Discuss employee handbook	0.25	
Electrical failure	Discuss and demonstrate performing the hand crank during a power failure	0.25	
Disposal of needles and sharps	Demonstrate sharp instrument and needle precautions	0.25	
Infection control	Discuss high-risk procedure precautions	0.50	
Hand washing	Demonstrate proper hand-washing technique	0.50	
Universal precautions	Discuss Universal Precautions	0.50	
Infection control	Discuss general infection control measures	0.50	
	Reading Assignment	0.50	
	<i>Contemporary Nephrology Nursing</i> , Chapter 1: Professional Nephrology Nursing. Note: All <i>Contemporary Nephrology Nursing</i> Chapters are listed as they appear in the 2 nd Edition which is currently In Press and will be published in early 2006.		
	Company Videos/Other AV	0.50	
	Standard Precautions: Blood and Body Fluids		
	Computer Training (if applicable)	1.00	
	Introduction to computer based training	1.00	
	Welcome to company	1.00	
	Employee orientation	10.00	
	Total Hours Day 1		

Referring Policy/Skill		Didactic Hours	Clinical Hours
	DAY 2		
	Emergency Procedures		
Emergency disconnect	Discuss and/or demonstrate performing the emergency termination of dialysis.	0.25	
ER equipment and evacuation	Discuss and exhibit the contents of the emergency evacuation kit.	0.50	
Bomb threat	Discuss response to a bomb threat.	0.25	
Disaster plan	Demonstrate or verbalize disaster and emergency readiness.	0.50	
Disaster plan	Discuss patient evacuation procedure.	0.25	
Fire drill procedure	Discuss a facility fire.	0.50	
Fire drill procedure	Discuss the fire drill procedure.	0.25	
Fire extinguisher	Demonstrate proper use of the fire extinguisher.	0.50	
ER transfer of patients	Discuss emergency transfer of patients to the hospital from the clinic.	0.50	
	Manual Blood Pressure		
Blood pressures	Demonstrate how to take manual blood pressure (BP).	0.50	
Patient treatment monitoring	Discuss monitoring the blood pressure using manual cuff to verify accuracy of abnormal readings.	0.25	
Blood pressure - Pedal	Demonstrate how to take a pedal BP.	0.50	
Blood pressure - Doppler	Demonstrate how to take a BP with doppler.	0.50	
	Monitoring During Dialysis		
Patient treatment monitoring	Discuss monitoring heart rate and rhythm.	0.25	
Patient treatment monitoring	Demonstrate monitoring heparinization.	0.25	
Fluid replacement	Discuss observing for need of fluid replacement.	0.25	
Patient treatment monitoring	Demonstrate observing vascular access and all bloodline connections.	0.25	
Patient treatment monitoring	Demonstrate monitoring patient status and recording subjective comments.	0.25	
Patient treatment monitoring	Demonstrate documentation of blood flow rate, dialysate flow rate, transmembrane pressure (TMP), ultrafiltration rate (UFR), and arterial and venous pressures.	1.00	
Patient Treatment Monitoring	Demonstrate checking blood leak detector and checking air/foam detector.	0.50	
Patient Treatment Monitoring	Discuss documentation of findings and reporting abnormal findings to the charge nurse. Instruct extern to compare data to previous findings.	0.25	
	Discuss endorsing over patient assignment before leaving the floor in a consistent manner.	0.25	
	Reading Assignment	0.50	
	<i>Contemporary Nephrology Nursing</i> , Chapter 23: Hemodialysis Technology.		

Referring Policy/Skill		Didactic Hours	Clinical Hours
	Company Video/Other AV		
	Emergency preparedness	0.50	
	General safety	0.25	
	Fire safety	0.25	
	Total Hours Day 2	10.00	
	DAY 3		
	Set-up and Safety Checks		
Priming dry hollow fiber dialyzer	Demonstrate NS prime of dry pack dialyzer.	2.00	
Machine alarms	Discuss verifying prescription and performing safety check.	0.50	
Machine alarms	Demonstrate how to perform manual pressure holding test (if applicable).	0.25	
Machine alarms	Demonstrate machine alarm systems function test.	0.50	
	Conductivity and pH		
Conductivity testing	Demonstrate how to perform manual conductivity test.	0.50	
Machine testing	Demonstrate how to perform manual temperature test.	0.50	
pH testing	Demonstrate how to perform manual pH test.	0.25	
Conductivity testing	Demonstrate operating, standardizing, and maintaining conductivity meter.	0.50	
	Charting Guidelines		
Medical records	Demonstrate proper documentation in the medical record.	0.50	
	Patient Discharge		
Patient weights	Demonstrate obtaining post-dialysis weight.	0.25	
Cleaning dialysis equipment	Demonstrate appropriate cleaning and disinfecting of surfaces and equipment.	0.25	
Exposure control plan	Demonstrate body fluids spill disinfection procedure.	0.25	
Exposure control plan	Discuss disposal of contaminated or infectious waste.	0.25	
Aseptic technique	Demonstrate aseptic technique.	0.50	
	Reading Assignment	1.50	
	<i>ANNA Core Curriculum for Nephrology Nursing Section 22, The History of Nephrology Nursing, pages 627 - 639</i>		
	<i>Amgen Core Curriculum for the Dialysis Technician, Module One, pages 7-20</i>		
	Company Video/Other AV		
	Preventing Slips, Trips, and Falls	0.50	
	Working Safely and Your Back	0.50	
	Lifting and Transporting Patients	0.50	
	Total Hours Day 3	10.00	

Referring Policy/Skill		Didactic Hours	Clinical Hours
DAY 4			
Termination of Dialysis			
Treatment Termination	Demonstrate terminating dialysis.	1.00	
Recirculation	Demonstrate recirculating blood.	0.50	
Post Dialysis Blood Specimens			
Kinetic Modeling	Demonstrate obtaining blood specimens for URR and KT/V determinations.	0.50	
Machine Troubleshooting	Demonstrate basic machine operator troubleshooting.	3.00	
Post Dialysis Assessment			
	Demonstrate observing vascular access patency and ensuring access is properly dressed post dialysis.	0.25	
	Demonstrate post dialysis vascular access care.	0.50	
	Demonstrate obtaining post dialysis weight of patient, post dialysis temperature, post dialysis apical heart rate and rhythm, post dialysis the standing blood pressure, post dialysis the sitting or supine blood pressure, and the post dialysis patient's statement of well-being.	1.50	
	Discuss observing the mental status.	0.25	
	Discuss observing the ambulatory status.	0.25	
	Discuss/demonstrate documenting findings and reporting abnormal observations/findings to the charge nurse. Instruct extern to compare data to previous findings.	0.75	
Reading Assignment		1.50	
	<i>ANNA Core Curriculum for Nephrology Nursing - Sections 1, Renal Anatomy and Physiology, pages 1 – 31, and Section 4, Renal Disorders, pages 83 – 115</i>		
	<i>Amgen Core Curriculum for the Dialysis Technician, Module Two, pages 10-36</i>		
Total Hours Day 4		10.00	
DAY 5			
Pre-dialysis Assessment			
Admitting a patient for treatment	Demonstrate obtaining pre-dialysis weight of patient, pre-dialysis temperature, pre-dialysis apical heart rate and rhythm, pre-dialysis respiration rate, pre-dialysis the standing blood pressure, pre-dialysis the sitting or supine blood pressure, and pre-dialysis patient's statement of well-being.	1.75	
Pre-dialysis assessment parameters	Demonstrate assessing the vascular access.	0.25	
Pre-dialysis assessment parameters	Discuss observing the mental status.	0.25	
Pre-dialysis assessment parameters	Discuss observing the ambulatory status.	0.25	
Pre-dialysis assessment parameters	Discuss/demonstrate documenting findings and reporting abnormal observations/findings to the charge nurse. Instruct extern to compare data to previous findings.	0.25	
Blood Work	Demonstrate obtaining pre-dialysis blood specimens per procedure.	0.50	

Referring Policy/Skill		Didactic Hours	Clinical Hours
	Fluid Removal Calculations		
	Demonstrate calculating fluid replacement per procedure.	0.50	
	Demonstrate performing fluid removal calculations.	0.50	
	Pre-dialysis Lab Draws		
	Demonstrate acceptable aseptic and isolation technique for blood specimens.	0.50	
	Demonstrate labeling specimens.	0.25	
	Demonstrate filling out lab forms.	0.25	
	Demonstrate good technique when collecting specimen.	0.25	
	Demonstrate obtaining specimen from arterial blood line port.	0.25	
	Demonstrate obtaining specimen from venous blood line port.	0.25	
	Demonstrate obtaining specimen from vascular access.	0.25	
	Demonstrate packing and preparing specimens for transport.	0.25	
	Initiating Treatment		
Treatment initiation	Demonstrate initiating a treatment.	1.50	
Blood work	Demonstrate proper procedure for obtaining pre-dialysis blood specimens.	0.50	
Priming procedure	Demonstrate dumping saline prime in lines prior to connecting patient to machine.	0.50	
	Reading Assignment	1.00	
	<i>ANNA Core Curriculum for Nephrology Nursing, Section 5, Systematic Manifestations of Renal Failure, pages 117 - 158</i>		
	<i>Contemporary Nephrology Nursing, Chapter 24: Vascular Access for Hemodialysis.</i>		
	<i>Amgen Core Curriculum for the Dialysis Technician, Module Two, pages 37-65 and post test</i>		
	Total for Day 5	10.00	
DAY 6			
	Complications of Dialysis and Troubleshooting		4.50
Fluid replacement	Demonstrate administration normal saline per policy/procedure.	0.50	
Fluid replacement	Discuss precautions during normal saline administration.	0.25	
Fluid replacement	Discuss the signs and symptoms of fluid volume overload.	0.25	
Fluid replacement	Discuss the systemic effects of normal saline.	0.25	
Hypotension	Discuss and/or demonstrate responding to hypotension.	0.50	
Chest Pain	Discuss and respond to patient complaints of chest pain.	0.50	
Cramping	Discuss and respond to patient cramps.	0.25	
Nausea and vomiting	Discuss and/or respond to patient complaints of nausea and vomiting.	0.50	
Pruritis	Discuss and/or respond to pruritis.	0.25	

Referring Policy/Skill		Didactic Hours	Clinical Hours
	Reading Assignment	1.00	
	<i>ANNA Core Curriculum for Nephrology Nursing</i> Section 10, Hemodialysis, pages 255 - 303		
	<i>Contemporary Nephrology Nursing</i> , Chapter 25: Hemodialysis_Prevention & Management of Treatment Complications.		
	<i>Amgen Core Curriculum for the Dialysis Technician</i> , Module Three, pages 3-22 and posttest		
	Company Video/Other AV		
	Latex Allergy Overview	0.50	
	Ethics and Compliance Program	0.75	
	Total Hours Day 6	5.50	4.50
DAY 7			
	Isolation Precautions		1.00
Isolation precautions	Instruct on isolation procedure.	0.50	
Isolation precautions	Discuss obtaining and handling isolation blood specimens.	0.25	
Airborne precautions	Explain airborne precautions.	0.25	
Contact precautions	Explain contact precautions.	0.25	
	Machine Start-up		.50
Machine start-up	Demonstrate dialysis system start-up procedure.	0.50	
	Sodium Variation		1.50
Sodium variation system	Demonstrate using the Sodium Variation system.	0.50	
Ultrafiltration	Demonstrate using the Ultrafiltration Profiling System.	0.50	
	Demonstrate initiating sequential ultrafiltration.	0.50	
	Demonstrate terminating sequential ultrafiltration.	0.50	
Recirculating system	Demonstrate recirculating saline procedure.	0.50	
	Reading Assignment	1.50	
	<i>Nephrology Nursing Standards of Practice and Guidelines for Care</i> , Infection Control pages 55-60		
	<i>Amgen Core Curriculum for the Dialysis Technician</i> , Module Four, pages 3-17 & 23-39		
	Company Video/Other AV		
	Transmission Precautions: Airborne	0.75	
	Transmission Precautions: Contact and Droplet	0.50	
	Total Hours Day 7	7.00	3.00

Referring Policy/Skill		Didactic Hours	Clinical Hours
DAY 8			
Medication Administration			4.15
Nurse Practice Act	Review and follow state nursing practice rules and regulations about RN supervision of a student nurse related to medication administration and central line care/access.	0.25	
Medication administration	Demonstrate verifying the medication prescription and patient.	0.50	
Medication administration	Demonstrate obtaining appropriate supplies and correct needle and syringe for medication administration.	0.25	
Medication administration	Demonstrate reading and checking medication label three times.	0.50	
Medication administration	Discuss the five rights of administering medications.	0.25	
Medication administration	Demonstrate documenting the administration of medications on flow sheet.	0.25	
Medication administration	Demonstrate proper aseptic technique preparing and administering medications.	0.50	
Medication administration	Discuss signs and symptoms of adverse reactions to medications.	0.50	
Reading Assignment		1.00	
<i>ANNA Core Curriculum for Nephrology Nursing Section 9, Pharmacologic Aspects of Renal Failure, pages 221 - 254</i>			
<i>Amgen Core Curriculum for the Dialysis Technician, Module Five, pages 10-55</i>			
Company Video/Other AV			
Working with Hazardous Chemicals		0.75	
Diversity in the Workplace		0.75	
Electrical Safety		0.35	
Total Hours Day 8		5.85	4.15
DAY 9			
Vascular Access Cannulation			1.50
Venipuncture	Demonstrate cleansing needle sites with appropriate disinfectant.	0.50	
Fistula cannulation	Demonstrate cannulating fistula at 30 degree angle.	1.00	
Graft cannulation	Demonstrate cannulating an AV graft at 45 degree angle.	1.00	
Cannulation with safe needles	Demonstrate use of safety guards provided on needles.	0.50	
Butterfly taping	Demonstrate butterfly taping.	0.25	
Medication Administration			1.50
Local anesthetic administration	Discuss indications for use of intradermal (ID) Xylocaine® precannulaion.	0.25	
IV, SC medication administration	Demonstrate administering intradermal Xylocaine® (as applicable).	0.25	
Heparin administration	Demonstrate aspirating blood prior to injection of medication.	0.25	
Heparin administration	Discuss indications for heparin use during hemodialysis.	0.25	
Heparin administration	Discuss methods of heparin administration.	1.00	

Referring Policy/Skill		Didactic Hours	Clinical Hours
Heparin administration	Demonstrate administration of heparin bolus through venous needle line.	0.25	
	Discuss need and purpose of waiting 3 minutes after bolus administration prior to treatment initiation.	0.25	
	Discuss completing extra assignments in a timely manner.	0.25	
	Reading Assignment	1.00	
	<i>ANNA Core Curriculum for Nephrology Nursing</i> , Section 11, Circulatory Access for Hemodialysis, pages 305 - 322		
	<i>Nephrology Nursing Standards of Practice and Guidelines for Care</i> , Hemodialysis pages 61-72		
	Total Hours Day 9	7.00	3.00
DAY 10			
	Infection Control		
Post exposure	Explain post-exposure follow-up policy.	0.50	
TB exposure control plan	Discuss TB exposure control plan.	0.50	
	Restraints		
Patient restraints	Demonstrate proper patient restraint procedures (as applicable).	0.50	
	Blood Glucose Monitoring		1.00
	Demonstrate performing blood glucose monitor calibration.	0.50	
	Demonstrate performing blood glucose monitoring.	0.50	
	Demonstrate performing glucose meter operator maintenance procedures.	0.50	
	Emergency Equipment		2.00
EKG	Demonstrate operating, maintaining, and inspecting EKG machine.	0.50	
CPR	Explain appropriate use of respiratory resuscitation equipment during cardiac and respiratory arrests.	0.25	
ER equipment and meds	Discuss location and contents of crash cart.	0.50	
AED	Demonstrate use of the AED.	0.50	
	Medical Records		
HIPAA	Discuss confidentiality of medical records.	0.25	
Incident reports	Demonstrate proper use of the Incident Reporting System.	0.75	
Medical records	Discuss release of information from patient medical record.	0.25	
	Reading Assignment	1.00	
	<i>Contemporary Nephrology Nursing</i> , Chapter 19: Infections in the Hemodialysis Unit.		
	<i>Amgen Core Curriculum for the Dialysis Technician</i> , Module Six, pages 10-34 & posttest		
	Total Hours Day 10	7.00	3.00

Referring Policy/Skill		Didactic Hours	Clinical Hours
	DAY 11		
	Post Dialysis Machine Procedures		6.25
Chemical rinse	Demonstrate how to initiate chemical disinfect procedure and labeling machine with RTK sign (Right-to-know label for chemical).	0.25	
Chemical rinse	Demonstrate how to test for residual disinfectant after disinfectant dwell.	0.25	
Machine disinfection	Demonstrate heat disinfect procedure.	0.25	
Chemical rinse	Demonstrate standard rinse procedure.	0.25	
Acid cleaning	Demonstrate acetic acid rinse procedure.	0.25	
Chemical rinse	Demonstrate bleach rinse procedure.	0.25	
	Instruct on how to document disinfect procedures performed and results.	0.25	
	Reading Assignment	1.00	
	<i>Nephrology Nursing Standards of Practice and Guidelines for Care, Universal Guidelines for Nephrology Nursing Care pages 33-54</i>		
	<i>Amgen Core Curriculum for the Dialysis Technician Module Five, pages 56-81</i>		
	Company Videos/Other AV		
	Security and Workplace Violence	0.50	
	Sexual Harassment in the Workplace	0.50	
	Total Hours Day 11	3.75	6.25
	DAY 12		
	Complications of Dialysis		
Needle insertion	Discuss and/or demonstrate how to handle difficulty with needle insertion.	1.00	
Disequilibrium syndrome	Discuss and/or respond to disequilibrium syndrome.	0.25	
Disequilibrium syndrome	Discuss and/or respond to hypertension.	0.25	
Disequilibrium syndrome	Discuss and/or respond to hypoglycemia.	0.25	
Disequilibrium syndrome	Discuss and/or respond to a reaction of undetermined cause.	0.50	
Disequilibrium syndrome	Discuss and/or respond to a rising venous pressure.	0.50	
Disequilibrium syndrome	Discuss and/or respond to shortness of breath.	0.50	
Disequilibrium syndrome	Discuss and/or respond to a dialyzer reaction.	0.50	
Disequilibrium syndrome	Discuss and/or respond to transfusion reaction.	0.50	
Disequilibrium syndrome	Discuss and/or respond to a seizure.	0.50	
Disequilibrium syndrome	Discuss and/or demonstrate evaluating a clotted dialyzer.	0.50	
Disequilibrium syndrome	Discuss and/or demonstrate evaluating a dialyzer blood leak.	0.50	
Disequilibrium syndrome	Discuss causes and response to changes in arterial blood pressure.	0.50	
Disequilibrium syndrome	Discuss and/or demonstrate changing a venous blood line.	0.75	

Referring Policy/Skill		Didactic Hours	Clinical Hours
Disequilibrium syndrome	Discuss and/or demonstrate replacing a clotted dialyzer.	1.00	
Disequilibrium syndrome	Discuss and/or respond to hematoma formation or infiltration.	0.50	
Disequilibrium syndrome	Discuss and/or respond to blood flow problems.	0.50	
	Reading Assignment	1.00	
	<i>Amgen Core Curriculum for the Dialysis Technician</i> , Module Five, pages 96-102		
	Total Hours Day 12	10.00	
DAY 13			
	Medical Complications of Dialysis		0.75
Air embolus	Discuss response to an air embolism.	1.00	
Anaphylactic reactions	Discuss and/or respond to anaphylactic reactions.	0.50	
CPR	Discuss response to cardiac/respiratory arrest.	1.00	
Hemolysis	Discuss response to hemolysis.	0.50	
Access Care	Discuss access care: infection, patency, etc.	0.50	
Allergic reactions	Discuss and/or respond to an allergic reaction due to a medication.	0.50	
Pyrogenic reaction	Discuss and/or demonstrate identifying fever source.	0.50	
Pyrogenic reaction	Discuss and/or respond to a pyrogen reaction.	0.50	
Angina	Discuss and/or respond to angina.	0.50	
Arrhythmias	Discuss and/or respond to arrhythmias.	0.50	
Back pain	Discuss and/or respond to back pain.	0.50	
Blood loss	Discuss and/or respond to a blood loss.	0.50	
Crenation	Discuss response to crenation.	0.25	
	Reading Assignment		
	<i>Contemporary Nephrology Nursing</i> , Chapter 19, Hemodialysis	2.00	
	<i>Amgen Core Curriculum for the Dialysis Technician</i> , Module Five, pages 103-108 & posttest		
	Total Hours Day 13	9.25	0.75
DAY 14			
	Water Treatment System		0.50
	Demonstrate performing RO System start-up procedure.	1.25	
	Demonstrate performing the chlorine/chloramine tests.	0.25	
	Demonstrate reading the total dissolved solutes meter (TDS Test).	0.25	
	Demonstrate reading pressure drops.	0.25	
	Demonstrate recording RO rejection and product flow rates.	0.25	
	Demonstrate documenting performance and operating parameters for water system.	0.50	
	Demonstrate performing RO System shut down procedure.	0.50	

Student Nurse — Preceptorship Hemodialysis Skills Checklist

Name: _____ Clinic: _____

Date Started Training: _____ Date Completed Training: _____

Instructions for use:

- All hemodialysis procedure skills listed in the first column will be explained and/or demonstrated to the student nurse by the preceptor. After completion of the demonstration, the trainer will initial and date the second column.
- The student nurse will then explain and demonstrate the procedural skill to the preceptor while being corrected and re-instructed as needed. After completion, the third column will be initialed and dated by the preceptor.
- After sufficient guidance and practice of the procedure, the student nurse will be rated on the performance of the procedure by the preceptor. All procedures must receive a satisfactory rating or will be repeated until a satisfactory rating is obtained. After a satisfactory performance of the skill, the trainer will date and initial the fourth column.
- Skills determined by the (name of organization) as not assigned to the student nurse by the clinic will be indicated by a "N/A" (not authorized) placed by the procedure in column 2 and initialed and dated by the Facility Manager and a representative of the School of Nursing.
- Upon satisfactory completion of the preceptor program, the student nurse will be eligible to work as a dialysis technician.

Preceptor Name: _____ Preceptor Initials: _____

Note: Below is a sample of the Student Nurse-Preceptor Hemodialysis Skills Checklist. The complete checklist can be found on the ANNA and NNJ websites.

Infection Control Universal Precautions	Date of Demonstration by Preceptor	Preceptor Initials	Date of Return Demonstration by Trainee	Preceptor Initials	Date of Satisfactory Performance by Trainee	Preceptor Initials
1. Demonstrates appropriate use of barrier precautions						
2. Recalls and demonstrates sharp instrument and needle precautions						
3. Recalls high-risk procedure precautions						
4. Recalls appropriate use of respiratory resuscitation equipment during cardiac and respiratory arrests						
5. Properly demonstrates appropriate cleaning and disinfecting of surfaces and equipment						
6. Properly performs body fluids spill disinfection procedure						
7. Properly disposes of contaminated or infectious waste						
8. Recalls isolation procedure						
9. Properly demonstrates appropriate hand-washing technique						
10. Properly performs isolation procedure for patient care during dialysis						
11. Properly obtains and handles isolation blood specimens						
12. Properly performs and/or verbalizes airborne precautions						
13. Properly performs and/or verbalizes contact precautions						
14. Properly performs and/or verbalizes general infection control measures						
15. Demonstrates aseptic technique						
16. Verbalizes understanding of post-exposure follow-up policy						
17. Verbalizes understanding TB Exposure Control Plan						

Nephrology Nurse Internship Program Template For Hemodialysis Units

Note: The following template for a Nephrology Nurse Internship Program For Hemodialysis Units is available for download from the ANNA and NNJ web sites as a Word document so it can be adapted to meet the needs of individual groups.

WEEK 1

Classroom Module: Facility Orientation

- Introduction to dialysis organization
- Introduction to patient and staff shifts
- Introduction to team members
- Orientation to physical plant: Locker room, kitchen, supply room, offices, medication room, laboratory, bathroom, crash cart, oxygen supplies, employee bulletin boards, location of MSDS book, fire alarm locations, fire extinguisher locations, emergency exits, location of PPE, location of policy and procedure manuals
- Review employee handbook/manual
- Review of emergency procedures and equipment: Fire drill procedure, fire extinguisher, emergency disconnect, ER equipment and evacuation, bomb threat, disaster plan, ER transfer of patients
- Review of job description
- CPR certification
- Infection control: Preventing the spread of infections in dialysis units (OSHA and CDC guidelines), exposure to blood borne pathogens and post exposure plan
- Worker's compensation
- Orientation to computer system and documentation
- HIPPA policies
- Review company specific compliance policies
- Review reporting of adverse occurrences
- General Safety: Emergency preparedness, general safety; fire safety, standard precautions, preventing slips, trips, and falls; working safely and your back; lifting and transporting patients; latex allergies; transmission precautions

Clinical Experience with Nurse Preceptor

- Observation in clinical area
- Demonstrate crash cart check and complete appropriate documentation
- Discuss and demonstrate performing hand crank during electrical failure
- Observe implementation of hemodialysis infection control practices in the clinical area
- Discuss the fire drill procedure
- Discuss and/or demonstrate performing the emergency termination of dialysis
- Discuss and exhibit the contents of the emergency evacuation kit
- Discuss response to a bomb threat
- Demonstrate or verbalize disaster and emergency readiness
- Discuss patient evacuation procedure
- Demonstrate proper use of the fire extinguisher
- Discuss a facility fire
- Discuss emergency transfer of patients to the hospital from the clinic

WEEK 2

Classroom Module: Principles of Hemodialysis

- Hemodialysis principles
 - Concepts related to solute removal
 - Concepts related to water removal
 - Components of the system
 - Anticoagulation
 - Sodium variation
 - Sequential ultrafiltration
 - Water treatment
 - Monitoring systems of hemodialysis machines

WEEK 2 (continued)

- Dialysis procedure
- Dialysis adequacy
 - Kidney Dialysis Outcome Indicators (KDOQI) Adequacy Guidelines
- Patient initiation, monitoring, and termination of dialysis treatment
- Hand washing/PPE

Clinical Experience with Nurse Preceptor

- Read unit practices/policies related to predialysis nursing assessment; equipment assessment, initiation of treatment, intradialytic monitoring, termination of treatment
- Predialysis nursing assessment (Observe first clinical day; perform second clinical day)
 - Patient history since last treatment
 - State of well-being
 - Degree and level of activity/exercise since last treatment
 - Vital signs
 - Volume status (weight, respiratory rate (RR), auscultation of lungs, assessment of neck vein distention, presence/absence of edema)
 - Bruising/bleeding
 - Vascular access assessment
 - Compare data to previous findings
 - Notify MD of any significant changes or findings
 - Adjust treatment plan based on assessment data
- Implement appropriate nursing interventions based on assessment data
- Predialysis equipment assessment, the nurse will assess
 - Equipment suitability for prescribed therapy, disinfected per facility protocol, and free of residual disinfectant
 - Integrity of dialyzer membrane and blood tubing
 - Prescribed dialyzer: Follow manufacturer's instructions, AAMI standards, and unit policies and procedures
 - Prescribed dialysate fluid composition
 - Conductivity and pH of dialysate
 - Temperature of dialysate
 - Absence of residual reprocessing agents in dialysate delivery system and/or the extracorporeal blood circuit
 - Proper occlusion of the blood pump
 - Proper function of equipment alarms
 - Water treatment system quality checks
- Intervention
 - Implement modifications to the treatment plan based on assessment findings
 - Assure correction of problems related to delivery system prior to initiation of treatment
- Initiation of treatment
 - Observe preparation of the vascular access for initiation of the treatment and according to established protocol with attention to hand washing and access site prep
 - Collect, label, and appropriately prepare blood specimens
 - Administer anticoagulant therapy according to treatment prescription
 - Elicit history of injuries, bleeding, bruising, menses, surgical procedures, or gastrointestinal bleeding
 - Review anticoagulation regimen from previous treatment
 - Assess for ecchymosis, hematomas, or previous injury
 - Review previous hemoglobin/hematocrit or bleeding studies
 - Review medication history noting pharmacologic agents affecting anticoagulation, including over the counter medication and non-traditional medication
 - Adjust anticoagulation regimen based on clotting results, if available, patient's condition, patency of extracorporeal circuit, response to previous anticoagulation, postdialysis bleeding of cannulation site, and MD order
 - Administer or discard prime solution as indicated and according to established protocol
 - Set blood flow rate, ultrafiltrate (UF) rate, and sodium modeling rate as prescribed
 - Activate all alarms and set limits to maximize patient safety
 - Monitor integrity of dialysate circuit
 - Monitor patient's response to initiation of treatment

WEEK 2 (continued)

- Intradialytic monitoring: Read unit practices/policies related to intradialytic monitoring. Continue skills from previous weeks.
 - Assess vital signs, BP monitoring
 - Assess volume status
 - Vascular access patency and visible to staff
 - Needles or connections in place and secure
 - Site clean and dry
 - Venous pressure
 - Arterial pressure
 - Signs and symptoms of recirculation
 - Signs and symptoms of infiltration
 - Anticoagulation effectiveness
 - Well-being; level of consciousness
 - Delivery of dialysis prescription
 - Response to treatment
 - Delivery system
 - Integrity of extracorporeal circuit
 - Pressure monitor readings
 - Anticoagulation delivery
 - Blood flow rate
 - Alarm limits and/or condition
 - Modify treatment plan based on patient's response
 - Notify patient's MD of any significant change or problem
 - Implement strategies to minimize intradialytic hypotension such as variable sodium modeling per MD order
- Termination of treatment:
 - Read unit practices/policies related to termination of treatment.
 - Assure prescribed treatment time has been delivered.
 - Assemble supplies and equipment for termination of treatment
 - Following unit policies and procedures:
 - Return blood in extracorporeal circuit
 - Monitor vital signs
 - Provide post-treatment access care
 - Perform post-dialysis patient response to treatment assessment
 - Have patient wash hands prior to leaving
 - Dispose of supplies as appropriate
 - Clean and disinfect equipment and treatment area
 - Notify MD of significant events/findings

WEEK 3

Classroom Module: Circulatory Access for Hemodialysis

- KDOQI Vascular access guidelines
- Arterio-venous fistula (AVF) (indications, advantages, disadvantages, placement, nursing management)
- Arterio-venous graft (AVG) (indications, advantages, disadvantages, placement, nursing management)
- Central venous catheter (CVC)
- Femoral catheters
- Cannulation technique and practice (dummy arm)

Clinical Experience with Nurse Preceptor (Continue skills from previous week)

- Proper hand washing/PPE
- Predialysis nursing assessment
 - Patient history since last treatment
 - State of well-being
 - Degree and level of activity/exercise since last treatment
 - Vital signs

WEEK 3 (continued)

- Volume status (weight, RR, auscultation of lungs, assessment of neck vein distention, presence/absence of edema)
- Bruising/bleeding
- Vascular access assessment
- Compare data to previous findings
- Notify physician of any significant changes or findings
- Adjust treatment plan based on assessment data
- UF calculation, assess need for volume replacement
- Predialysis equipment assessment,
 - Equipment suitability for prescribed therapy, disinfected per facility protocol, and free of residual disinfectant
 - Integrity of dialyzer membrane and blood tubing
 - Prescribed dialyzer: Follow manufacturer's instructions, AAMI standards, and unit policies and procedures
 - Prescribed dialysate fluid composition
 - Conductivity and pH of dialysate
 - Temperature of dialysate
 - Absence of residual reprocessing agents in dialysate delivery system and/or the extracorporeal blood circuit
 - Proper occlusion of the blood pump
 - Proper function of equipment alarms
 - Water treatment system quality checks
 - Intervention
 - Implement modifications to the treatment plan based on assessment findings
 - Assure correction of problems related to delivery system prior to initiation of treatment
- Initiation of Treatment
 - Prepare the vascular access for initiation of the treatment based on predialysis assessment and according to established protocol
 - Assess vascular access for patency and evidence of complications
 - Establish direction of flow for internal access
 - Prior to first use of CVC, verify proper position with chest X-ray/interventional radiology
 - Cannulate vascular access according to protocol; access CVC according to established protocol
 - Utilize KDOQI guidelines for vascular access as resource for vascular access care
 - Collect, label, and appropriately prepare blood specimens
 - Administer anticoagulant therapy according to treatment prescription
 - Administer or discard prime solution as indicated and according to established protocol
 - Set blood flow rate, UF rate, and sodium modeling rate as prescribed
 - Activate all alarms and set limits to maximize patient safety
 - Monitor integrity of dialysate circuit
 - Monitor patient's response to initiation of treatment
 - Keep access visible to staff
- Intradialytic monitoring
 - Assess vital signs
 - Assess volume status
 - Assess vascular access patency:
 - Needles or connections in place and secure
 - Site clean and dry
 - Venous pressure
 - Arterial pressure
 - Signs and symptoms of recirculation
 - Signs and symptoms of infiltration
 - Anticoagulation effectiveness
 - Well-being; level of consciousness
 - Delivery of dialysis prescription
 - Response to treatment
 - Assess delivery system
 - Integrity of extracorporeal circuit
 - Pressure monitor readings
 - Anticoagulation delivery
 - Blood flow rate

WEEK 3 (continued)

- Alarm limits and/or condition
- Modify treatment plan based on patient's response
- Notify patient's physician of any significant change or problem
- Implement strategies to minimize intradialytic hypotension such as variable sodium modeling per physician order
- Have patient wash hands prior to leaving
- Termination of Treatment
 - Read unit practices/policies related to termination of treatment
 - Assure prescribed treatment time has been delivered
 - Assemble supplies and equipment for termination of treatment
 - Following unit policies and procedures:
 - Return blood in extracorporeal circuit
 - Monitor vital signs (including postural BP)
 - Provide post-treatment access care
 - Perform post-dialysis patient response to treatment assessment
 - Assess weight/volume status
 - Assess volume replacement during treatment and patient's response
 - Assess vascular access condition
 - Assess patient's sense of well-being and mental status
 - Assess other conditions or complications
 - Dispose of supplies as appropriate
 - Clean and disinfect equipment and treatment area
 - Notify MD of significant events/findings

WEEK 4

Classroom Module: Acute Complications of Dialysis

- Discuss causes, signs and symptoms, prevention, and treatment for following complications: Hypotension, disequilibrium, hypertension, fever/pyrogenic reactions, angina, muscle cramps, rising venous pressures, shortness of breath, transfusion reaction, seizures, clotted dialyzer, blood leaks, arterial pressures, changing blood lines, arterial blood flow interruption, air embolus, cardiac arrest, anaphylactic reactions, hemolysis, arrhythmias, back pain, blood loss, crenation, hypoglycemia
- Power failure
- Interruption of water services

Classroom Module: Oversight of the ESRD Medicare Program in the U.S.

- Review ESRD conditions of coverage
- Review state specific requirements or regulations for ESRD
- Review role of ESRD Networks
- Review survey and certification process for outpatient dialysis programs
- Review dialysis compare

Classroom Module: ANNA

- Discuss importance of professional association membership
- Review resources available to an ANNA member
- Discuss opportunities for certification in nephrology nursing specialty

Clinical Experience with Nurse Preceptor

- Continue activities from previous weeks
- Discuss and respond to dialysis complications

WEEK 5

Classroom Module: Dialysis and Drug Therapy

- Discuss dialyzability of drugs, alterations in dosage and frequency of common drugs

Classroom Module: Anemia Management

- KDOQI guidelines
- Review facility specific guidelines

Classroom Module: Medication Documentation

Medication Administration Test

Clinical Experience with Nurse Preceptor

- Continue preassessment, initiation of treatment, intradialytic monitoring, termination of treatment
- Read unit practices/policies related to medication administration
- Review appropriate lab values and compare to previous values
- Notify MD as appropriate
- Administer assigned patient medications according to unit policy
- Document medication administration and patient response according to unit policy

WEEK 6

Classroom Module: Renal Osteodystrophy

- Pathophysiology
- Review KDOQI for bone and mineral management
- Lab values and X-rays studies (calcium, phosphorus, calcium/phosphorus product, alkaline phosphatase, parathyroid hormone (PTH), aluminum, bone biopsy, hand films)
- Mobility limitations
- Dietary modifications
- Phosphate binding agents and vitamin D supplements
- Hyperparathyroidism

Clinical Experience

- Administer medications as prescribed
- If on vitamin D metabolite or analog therapy, monitor drug regimen and response to therapy
- Assess patient's muscle strength, gait, and range of motion, noting limitations in movement
- Assess joints for enlargement, swelling, stiffness, and tenderness
- Review lab values and X-ray studies
- Assess patient's psychological and behavioral response to current mobility limitations
- Assess patient's understanding of the dietary modifications necessary for phosphorus and calcium control
- Evaluate use of phosphate binding agents and calcium and vitamin D supplements
- Assess patient's understanding of the effects of calcium on PTH secretion
- Assess patient's dietary adherence
- Administer medications or therapies as prescribed
- If on vitamin D metabolite or analog therapy, monitor drug regimen and response to therapy

WEEK 7

Classroom Module: Adequacy of Hemodialysis

- Review KDOQI adequacy guidelines
- Review procedure for drawing BUN samples
- Discuss reasons for deviation from prescribed dialysis dose

Clinical Experience with Nurse Preceptor

- Assure that laboratory specimens/data used to determine delivered dose of hemodialysis are collected correctly following facility protocol
- Assess the patient's understanding of the importance of the delivered dose and their role in meeting the target level
 - If delivered dose of dialysis is below target level, assess potential reasons for deviation: Dialyzer clearance, treatment time, prescription, patient adherence to treatment time, incorrect needle placement or reversal of lines, incorrect blood sampling techniques
- Initiate measures to decrease intradialytic complications:
 - Review estimated dry weight (EDW)
 - Reduce ultrafiltration rate
 - Review intradialytic weight gain (IDWG) with patient
 - Evaluate current dialysate sodium concentration

Clinical Experience: Care Planning

- Review facility specific procedures for patient care planning
- Review short-term and long-term plans for assigned patients
- Participate in the care planning process of new and existing patients
- Attend Care Planning Conferences

WEEK 8

Classroom Module: Delegation of Responsibility to Unlicensed Assistive Personnel

- Review Nurse Practice Act (NPA) for RNs specific to state
- Review regulations and role parameters for RNs that conform with state regulations. Resource: National Council of State Boards of Nursing Delegation documents (www.ncsbn.org/regulation/uap_delegation).
 - Role Development: Critical components of delegation curriculum outline
 - Five rights of delegation
 - Delegation decision-making tree
 - Delegation decision-making grid
 - Selected references: delegation and unlicensed assistive personnel
- Review ANA code for nurses; ANNA Nephrology Nursing Standards of Practice and Guidelines for Care, ANNA position statement on delegation
- Review various roles of health care workers in facility
- Review level of patient care responsibilities that can be assigned to unlicensed staff and LPN/LVNs
- Evaluate skill level of unlicensed personnel before assigning tasks
- Assign only those tasks that the health care worker is legally responsible to carry out
- Give specific directions to health care worker regarding the client information you wish reported and how you wish to receive it (i.e., verbal and/or written)
- Provide current information to health care worker in a timely manner as it impacts their care of the patient (e.g., change in dialyzer order)

Classroom Module: Standards of Nephrology Nursing Practice and Professional Performance

- Definition and role of standards
- Standards of Care: Assessment, diagnosis, outcome identification, planning, implementation, and evaluation
- Standards of Professional Performance: Quality of Care, performance appraisal, education, collegiality, ethics, collaboration, research, and resource utilization

WEEK 9

Classroom Module: Principles of Patient Education

- Assess patient's current level of knowledge related to disease, diet, medication, current treatment plan
- Evaluate patient's ability and readiness to learn through assessment of the following: Ability to communicate, physical condition, psychological status, degree of motivation, developmental stage, literacy level
- Identify potential barriers to learning that may include: Physical condition, psychological status, environmental situation, cultural beliefs/practices, and language
- Evaluate effectiveness of teaching and level of learning using: Verbal feedback, return demonstration, and written test as appropriate
- Involve patient in the development of multidisciplinary teaching plan
- Use culturally sensitive and ethnically appropriate educational materials
- Use teaching techniques and materials that are appropriate for the patient's developmental stage and/or disabilities
- Involve support person/family in teaching process
- Refer patient to other resources for assistance in the learning process
- Reinforce teaching as necessary using multiple teaching approaches, return demonstration, and verbal and written feedback
- Promote age-appropriate self-care

WEEKS 9-24

Additional Modules for Consideration

Classroom Module: Patient Choices

- Modality information

Classroom Module: Peritoneal Dialysis

- Initial evaluation
- Patient education
- Ongoing monitoring
- Acute and chronic peritoneal dialysis
 - Predialysis assessment
 - Initiation of treatment
 - Intradialytic monitoring
 - Termination of treatment and postdialysis assessment
- Peritoneal catheter placement
 - Preoperative care
 - Intraoperative care
 - Postoperative care
- Adequacy of peritoneal dialysis
- Complications
- Clinical experience in peritoneal dialysis training with preceptor/PD nurse

Classroom Module: Renal Transplantation

- Deceased donors
- Living donors
- Universal postop guidelines for care of donors and recipients
- Recipient
 - Pretransplant evaluation
 - Perioperative education and discharge plan
 - Allograft dysfunction

Classroom Module: CKD

- Review stages of CKD
- Review intervention of stages of CKD

Classroom Module: Continuous Quality Improvement

- Identification of aspects of care important for quality monitoring
- Analysis of outcome and process data to identify opportunities for improving care
- Development of policies, procedures, and practice guidelines to improve quality of care
- Identification of indicators used to monitor quality and effectiveness of nursing care
- Collection of data to monitor quality and effectiveness of nursing care
- Formulation of recommendations to improve nursing practice or patient outcomes
- Implementation of activities to enhance the quality of nursing practice
- Participation on interdisciplinary teams that evaluate clinical practice or health services
- Use of clinical outcome findings to initiate changes in nursing practice
- Use of results of quality of care activities to initiate changes throughout the health care delivery system as appropriate

Classroom Module: Palliative Care - End of Life

- Review materials available to assist patients and families to make end-of-life decisions

Classroom Module: Research Utilization Process

- Use of best available evidence, preferably research data, to develop plan of care and interventions
- Participation in research activities as appropriate to nurse's education and positions including: Identifying clinical problems suitable for research, participating in data collection, participating in unit, organization, or community research committee or program, critiquing research for application to practice, and using research findings in the development of policies, procedures, and practice guidelines for care.

Classroom Module: Activity and Rehabilitation

- Assessment
 - Assess previous, actual, possible, and desired level of activity
 - Assess physical, psychological, and economic factors contributing to activity limitation
 - Discuss patient's activity preferences
 - Assess clinical indicators that may potentially affect patient's level of activity
 - Assess expected activity for age and level of development
 - Assess patient's perceptions of physiologic limitations
 - Assess family expectations for their role in patient's activity and rehabilitation
- Intervention
 - Collaborate with health care team in planning for appropriate interventions including employment, exercise, as well as ongoing encouragement and evaluation
 - Encourage patient to participate in activities of preference as appropriate
 - Assist patient and family to plan activities that minimize fatigue
 - Encourage school attendance or home-based education as appropriate
 - Identify sources of social, physical, and vocational support and assistance
 - Develop/implement a standardized activity assessment instrument
 - Encourage patient to report activities that increase fatigue
 - Encourage participative play
 - Provide activity/rehabilitation resources
- Patient teaching
 - Teach/reinforce the benefits of medication, exercise, diet therapy
 - Reinforce activities/sports as appropriate
 - Teach patient how to develop a rest/activity/treatment pattern that will maximize patient's energy level