

## Nephrology Levels of Care

PROCEDURE/SKILL	LEVEL OF CARE	SUPERVISION	MILESTONE/COMPETENCY
<b>Interventional Nephrology:</b>			
Places tunneled and non-tunneled hemodialysis catheters, peritoneal dialysis catheters, triple lumen tunneled and non-tunneled catheters, tunneled port catheters in patients	PGY 4and 5	Direct	MK, PC, PBL, ICS, SBP, P
Performs angiograms of arterio-venous fistulas and grafts used for hemodialysis, proceeds to angioplasty, stent placement, accessory vein ligation or coiling when required	PGY 4and 5	Direct	MK, PC, PBL, ICS, SBP, P
Performs thrombolysis of clotted arterio-venous fistulas and grafts, proceeds to perform angioplasty and stent placement when needed	PGY4and5	Direct	MK, PC, PBL, ICS, SBP, P
Performs venograms of peripheral and central veins and proceeds with angioplasty and stent placement when necessary	PGY4 and5	Direct	MK, PC, PBL, ICS, SBP, P
Introduces him/herself to the patient	PGY4and5	Indirect	PC, ICS
Performs a focused history and physical on patients prior to the procedure	PGY4and 5	Indirect	MK, PC, PBL, ICS, P
Explains the procedure and potential complications to the patient	PGY4and 5	Indirect	MK, PBL, ICS, P
Obtains consent from the patient/caregiver prior to the procedure	PGY 5	Indirect	MK, PC, PBL, ICS, P
Discusses with the attending physician clinical information and procedure plans	PGY 5	Indirect	MK, PBL, ICS
Obtains and reviews prior procedures pertinent to the current procedure	PGY 5	Oversight	MK, PBL, SBP
Documents the procedure, findings, and plans after discussion with the attending staff	PGY 5	Oversight	MK, PBL, SBP
<b>Nephrology Continuity Clinic:</b>			
Reviews the history, physical examination, laboratory tests, differential diagnosis, assessment, recommendations from previous encounters	PGY 5	Direct	MK, PC, PBL, SBP
Elicits pertinent components of the history and physical examination and communicate the findings and recommendations to the patient or caregiver	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Introduce him/herself to the patient	PGY 5	Indirect	
Perform a history, physical examination, review the chart and laboratory tests, generate a differential diagnosis, make an assessment with recommendations	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
After discussions with the supervising physician gives recommendations to the referring resident	PGY 5	Indirect	MK, PC, PBL, ICS, SBP

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Write appropriate drug prescriptions and explain them to the patient/caregiver	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Reviews and analyzes data collected from patient encounters	PGY 5	Oversight	MK, PBL, SBP
Communicates the results of the diagnostic tests and treatment to the patient and caregiver and arrange appropriate follow-up	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
<b>Conferences:</b>			
Presents topics and participates in discussions for Nephrology Grand Rounds, patient cases for Morbidity and Mortality Conference, patient cases at the Renal Pathology Conference, research at the Research Conference, Renal Book Chapter discussions at the Salt and Water Conference, Journal article discussion at the Journal Club Conference, and topic discussion at the NephSap Conference	PGY 5	Direct	MK, ICS
Holds discussions with faculty mentors in preparation for a slide presentation, selecting a topic for research, guidance with the research protocol, obtaining approval from the IRB, guidance with preparation for any of the conferences mentioned in the first column	PGY 5	Indirect	MK, PC, PBL
Discussions with faculty mentors in preparation for a slide presentation, selecting a topic for research, guidance with the research protocol, obtaining approval from the IRB, guidance with preparation for any of the conferences mentioned in the first column	PGY 5	Oversight	MK, PC, PBL
<b>Peritoneal Dialysis Clinic:</b>			
Reviews the history, physical examination, laboratory tests	PGY 5	Direct	MK, PBL, SBP
Elicits pertinent components of the history and physical examination and communicate the findings and recommendations to the patient or caregiver	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Discusses the case with the attending physician	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Makes changes in treatment and peritoneal dialysis prescription when required	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Reviews the history, physical examination, laboratory tests	PGY 5	Indirect	MK, PBL, SBP
Elicits pertinent components of the history and physical examination and communicate the findings and recommendations to the patient or caregiver	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Discusses the case with the attending physician by telephone	PGY 5	Indirect	MK, PBL, ICS

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Answers and treats peritoneal dialysis-related problems of patients with dialysis nurses over the telephone and discuss them with the attending when necessary	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
<b>Hemodialysis Service:</b>			
Reviews the history, physical examination, laboratory tests	PGY 5	Direct	MK, PC, PBL, ICS
Elicits pertinent components of the history and physical examination and communicate the findings and recommendations to the patient or caregiver	PGY 5	Direct	MK, PC, SBP, P
Discusses the case with the attending physician	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Makes changes in treatment and dialysis prescription when required	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
<b>Consult Service:</b>			
Reviews the history, physical examination, laboratory tests, differential diagnosis, assessment, recommendations	PGY 5	Direct	MK, PBL, SBP
• Elicits pertinent components of the history and physical examination and communicate the findings and recommendations to the patient or caregiver (1,2,3,4,5,6)	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Discusses the case with the referring physician or resident	PGY 5	Direct	MK, PC, PBL, ICS, SBP
Discusses reasons for consultation with the referring physician	PGY 5	Indirect	MK, PC, PBL, ICS, SBP
Introduces him/herself to the patient	PGY 5	Indirect	PC, ICS, P
Performs a history, physical examination, review the chart and laboratory tests, generate a differential diagnosis, make an assessment with recommendations	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
After discussions with the supervising physician the resident gives recommendations to the referring resident	PGY 5	Indirect	MK, PBL, ICS, SBP
Writes orders unique to the specialty of Nephrology such as HD orders	PGY 5	Indirect	MK, PBL, ICS, SBP
Reviews and analyzes data collected from patient encounters	PGY 5	Oversight	MK, PBL, SBP
Communicates the results of the diagnostic tests and treatment to the patient and caregiver and arrange appropriate follow-up	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
<b>Kidney Biopsy:</b>			
Performs a percutaneous biopsy of the kidney using an automated biopsy needle with ultrasound guidance	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P

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Reviews the light, immunofluorescence, and electron microscopy of renal tissue with the Pathologist	PGY 5	Direct	MK, PBL, ICS, SBP
Performs and documents the history and physical examination	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Develops and documents a differential diagnosis	PGY 5	Indirect	MK, ICS, SBP
Orders and interprets blood and urine tests	PGY 5	Indirect	MK, ICS, SBP
Orders pre-biopsy medications	PGY 5	Indirect	MK, PC, PBL, ICS, SBP
Orders appropriate consults	PGY 5	Indirect	MK, PBL, ICS, SBP
Explains how the procedure is done to patient/caregiver	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Discusses the potential complications of the biopsy and what is done to minimize these complications with patient/caregiver	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Documents consent for the procedure on a consent form	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Writes post-biopsy orders	PGY 5	Indirect	MK, PC, PBL, SBP
Checks post-biopsy blood tests	PGY 5	Indirect	MK, PC, PBL, SBP
Reviews and analyzes data collected from patient encounters	PGY 5	Oversight	MK, PBL, ICS
Obtains and reviews renal biopsy results	PGY 5	Oversight	MK, PBL, ICS
Communicates biopsy results with the patient and/or caregiver	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
Formulates a treatment plan	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
<b>Temporary Catheter for Hemodialysis:</b>			
Places dual or triple lumen dialysis catheter in a central vein using ultrasound guidance	PGY 5	Direct	MK, PC, PBL, ICS, SBP, P
Obtains a focused history and physical examination as it pertains to central venous catheter placement	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Orders and interprets blood tests before catheter placement	PGY 5	Indirect	MK, PC, PBL, SBP
Informs the patient/caregiver the reasons for catheter placement	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Explains how the procedure will be performed to patient/caregiver	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Discusses the potential complications of central venous catheter placement and steps taken to minimize these complications	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Obtains informed consent from the patient	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Uses ultrasound guidance to locate the best possible site for central venous catheter placement	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Writes orders for catheter use following placement	PGY 5	Indirect	MK, PC, PBL, ICS

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Informs the patient about need for dialysis, length of catheter use, and prognosis of renal failure	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P
<b>Hemodialysis &amp; Peritoneal Dialysis:</b>			
Reviews the indication for dialysis therapy and writes appropriate orders	PGY 5	Direct	MK, PC, PBL, SBP
Explains to the patient/care giver indications for dialysis, the dialysis procedure, and the duration of dialysis temporary or permanent	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Obtains a consent for performing dialysis	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Takes care of complications that arise during the dialysis procedure	PGY 5	Indirect	MK, PC, PBL, ICS, SBP, P
Takes care of post dialysis complications when they occur	PGY 5	Oversight	MK, PC, PBL, ICS, SBP, P

<b>KEY</b>
<b>* Supervision:</b>
<b>Direct</b> -the supervising physician is physically present with the resident and patient.
*A faculty physician, other than another resident, is physically present during the key portions of the procedure or is immediately available.
<b>Indirect</b> -the supervising physician is physically within the hospital or other site of patient care and is immediately available to provide direct supervision.
<b>Oversight</b> - the supervising physician is available to provide review of procedures/encounters with feedback after care is provided.
<b>**Core Competencies:</b>
1. Patient Care (PC)
2. Medical Knowledge (MK)
3. Practice-Based Learning & Improvement (PBL)
4. Systems-Based Practice (SBP)
5. Interpersonal & Communication Skills (IC)
6. Professionalism (P)