

Planning Your Future: Assessing Nephrology Training Programs

Every nephrology training program is different. As two long-time nephrology educators and Nephrology Fellowship Program Directors, we understand that it may be difficult for fellowship applicants to know exactly what to consider when evaluating fellowship training programs.

All programs are required to provide you with the opportunities to become skillful in caring for patients with a wide variety of kidney diseases, and teach the basic procedures that are part of the scope of the practice of nephrology (acute and chronic hemodialysis, continuous renal replacement therapy, peritoneal dialysis, urinalysis, kidney biopsy, dialysis catheter placement, etc.). How this is accomplished varies from program to program.

Upon completion of training, you should have the knowledge, skills, and attitudes necessary to successfully practice as nephrologists independently and without direct supervision. Hopefully this list will help you assess the educational experiences and other aspects of training provided by different training programs, and determine the programs that best fit your individual needs and interests, whether you plan to become a clinician, educator, or researcher.

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Program Leadership and Faculty

1. How old is the fellowship program? How long has the program director been in that position?
2. Is the program director a regionally or nationally recognized expert in specific areas of clinical nephrology, scholarly research, quality/patient safety, or medical education?
3. Does the program have teaching faculty who are regionally or nationally recognized experts in specific areas of clinical nephrology, scholarly research, or medical education?
4. Who are the key clinical faculty for the program? What is their training and clinical background? What are the primary clinical, research, and educational roles of these faculty?
5. Who among the key clinical faculty demonstrate evidence of productivity in scholarship, specifically via peer-reviewed funding and/or publication of original research, review articles, editorials, or case reports in peer-reviewed journals, or chapters in textbooks? Can the program provide some examples of this scholarly work? Do fellows contribute to this work?

Resources

6. Is there an on-site pathologist with expertise/fellowship training in renal pathology? Are renal biopsies (native and transplant) read in-house or sent out? Will you review biopsies directly with the pathologist? How soon after a biopsy is this available?
7. If fellows rotate to more than one hospital, who are the supervising faculty at each?
8. Does the program utilize midlevel practitioners such as Advanced Practice Nurses or Physician Assistants? What is the responsibility/relationship of the fellows to these providers?

Educational Experiences

9. What education will you receive in physiology, pathology, immunology/transplantation, clinical pharmacology, ethics/palliative care, renal imaging? Who provides this education?
10. What simulation experiences will you participate in?
11. What education and clinical training will you receive in vascular access and peritoneal dialysis access?
12. How does the program prepare you for the business aspects of your professional life (private practice, academics, dialysis unit medical directorship)?
13. What is provided for your education in the principles, practice, and technology of dialysis? Who provides this education?
14. How many in-center hemodialysis, peritoneal dialysis, nocturnal hemodialysis and home hemodialysis patients are cared for by the program's primary teaching faculty? What clinical experience will you receive in the care of each of these types of dialysis? Who oversees the teaching of fellows in each dialysis modality? What is the continuity experience with the care of patients with each modality? Will you follow your own

- cohort of chronic dialysis patients? If so, for how long and in what capacity? How will you demonstrate competency in care of patients with each dialysis modality?
15. Are kidney transplants performed at the program's hospital(s)? If so, how many transplants are done per year and what is extent of the experience and role of the fellow in the care of transplant patients (a) at the time of transplant, (b) post-transplant outpatient, (c) when hospitalized post-transplant? What is the continuity experience with transplant patients? How will you demonstrate competency in the care of pre- and post-transplant patients?
 16. If transplant is not performed at the program's hospital(s), where will you go for the experience and what is the structure of the away rotation? If transplant is not done at the program's hospital(s), what experience will you receive for education and clinical care of patients pre- and post-transplant? Who provides this education and supervision?
 17. How many kidney biopsies are typically performed with supervision by each fellow (native and transplant)? Who performs the biopsies (i.e. nephrologist or radiologist)? What is the hands-on experience you will have when doing supervised biopsies? How is competency in performing biopsies determined?
 18. How many dialysis catheters are typically placed by each fellow during the course of a day/week/month/year? Who supervises this? How is it determined that you might be able to do this with only indirect supervision?
 19. What ICU clinical experience will the program provide you? Does the program have clinical faculty with specific interest and/or expertise in the care of ICU patients? What is the experience provided with CRRT?
 20. What is the experience provided in interpretation of urinalysis, renal imaging, and renal pathology? How will you demonstrate competency?
 21. What types of patients will you see during your continuity clinic experience? To what extent will you have primary responsibility for ambulatory continuity clinic patients? Will you see patients similar to or different from those seen by teaching faculty? What is the teaching/supervision structure for this clinic experience? Who does the teaching?
 22. What is the experience with the care of kidney diseases in specific populations such as women during pregnancy, children transitioning from pediatric to adult nephrology care, patients with advanced malignancy and/or who are treated with newer therapies, patients with kidney disease and non-renal transplants?
 23. What specialty clinics/referral clinics does the program have (i.e. complex hypertension, GN/SLE/renal vasculitis, stones, PCKD, other genetic renal diseases, etc)? What will your clinical experience be related to the care of patients with such diseases in in-patient and ambulatory settings? Does the program have regionally or nationally recognized experts in any of these specific areas?
 24. What is the educational and clinical experience provided in plasmapheresis? Who supervises your clinical experience?
 25. Does the program offer a renal palliative care didactic and/or clinical experience?

Scholarly Activities

26. Does the program have a research requirement for fellows in a 2-year clinical track? What are the expectations you need to meet? Who supervises this experience? How are mentors determined? Is there protected time for research? If so, during which years, how much time, how will your time be allocated and structured?
27. Does the program have a bibliography of scholarly work by fellows? Of such work, how much is published in peer-reviewed journals? How much is abstracts and/or case reports/case series?
28. Does the program offer extended research track positions beyond 2 years of fellowship? Are fellows guaranteed a third and other additional years for research if productive during the first research year? What requirements are there for receiving research support for a third or other additional years of research? How are research fellows funded? Is there a training grant available for eligible fellows?
29. How is it determined who the fellows work with during their research years? How many basic and clinical research scientists are in the Division? Are fellows able to do research with scientists who are not members of the Division?
30. Is there a research mentoring committee? What is the role of the committee?
31. Does the program require you to complete courses in research design, methods, statistics and ethics? Are there tuition costs for these courses?

Miscellaneous

32. Does the program provide a Clinician Educator Track or offer Master's Degrees programs to fellows? What courses, experiences, advanced degrees are offered?
33. What sorts of quality improvement and/or patient safety activities are expected of fellows?
34. What do fellows do after graduation from the program and where do they go?
35. Do the clinical faculty in the program use "tele-health" in patient care? If yes, what opportunities will you have to participate in providing "tele-health" services?

Practical considerations

36. Does the program provide clear information about benefits, call, money for dues, subscriptions, books?
37. Is there support for meeting travel?

The American Society of Nephrology (ASN) thanks Dr. Berns and Dr. Linas for taking the time to share their expertise and prepare this valuable document. ASN welcomes your suggestions regarding additional areas for training program candidates to assess: please send those to nephrologymatch@asn-online.org