

Is nephrology specialty at risk?



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Interest in nephrology as a career choice has been steadily waning among internal medicine residents. This decline is reflected in a significant increment in unfilled fellowship training spots for several years. Interventional nephrology can help to reinvigorate an interest in nephrology as a whole.

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Today, the basic and recurring message is that nephrology is facing a challenge to its very existence.¹ Declining interest has been manifest in declining applicants to available fellowship positions as well as a reduction in first-year renal fellowship starts.² This is a point of surprise and frustration to many of us currently practicing at academic medical centers as well as private nephrology practices. The allure of nephrology has long been the fascination with the intricacies of renal physiology that results in the maintenance of balance of the metabolic milieu. In addition, the striking and oddly aesthetic pathology of glomerular diseases allows a wonderful blend of art and science to provide meaningful care for those afflicted by these devastating intrinsic disorders. Over time, however, the actual practice of nephrology has become increasingly mired in a numbers game of how many patients can be seen to maximize revenue. This is an unfortunate reality of medical care that is to be accepted in today's environment of shrinking reimbursements. In contrast to many other specialties, where interest remains despite an overall reduction in reimbursements, this has, at least in part, led to a decrease in interest in nephrology.

So the question arises, how do the specialties that remain popular do so in the face of decreasing reimbursements? Although the answer is much more complex, we propose that specialties that remain the most popular do so partly because of the balance in practice possibilities (i.e., balance of procedural and medical aspects of practice). We cannot shrug off the procedural aspects of the care of our patients, especially when so many of our patients require hemodialysis or peritoneal dialysis and will invariably need some sort of intervention to maintain or create an access that is needed to provide optimal delivery of dialysis treatment. To borrow a term from business, we in the nephrology community need to seriously consider what our “value added” is in the management of patients with renal issues. Of course the evaluation and establishment of a diagnosis with associated treatment plan are critical in many aspects of nephrologic disorders; also directly contributing to any procedural care that our patients may need will only increase our value to them. In addition, residents who are considering which specialty to pursue are in part asking this question: what is the specialists’ “value added” in the care of my patient? It is critically important to mention that students and residents today are much more attuned to procedural aspects of care. Jhaveri *et al.* found that more than 25% of subspecialty fellows surveyed reported that a lack of procedural opportunities was a reason for not selecting nephrology as a career choice.² This is in part due to a general shift from invasive

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surgical interventions to more minimally invasive approaches. Also, the new generation is much more adjusted to the incorporation of technology into everyday life and this extends into their expectations of their working life as well. In this context, recognition of advances in technology and the generation that is attuned to this dimension is important.

There have been two important papers regarding the overall issue of the survival of nephrology and the issue of procedures in nephrology. Berns has been the lead author of these manuscripts. The first of the two addressed the actual percentage of nephrologists performing procedures.³ Several interesting points were raised by this survey. First, only 62% of academic centers that were contacted responded. This may be a natural finding in survey analysis, but it also may have a component of intentional omission: centers not wanting to acknowledge the decline in procedural training. Second, there is a disconnect between the placement of temporary hemodialysis catheters and percutaneous kidney biopsy and the other procedures related to nephrology. Nearly 70% to 99% of institutions report fellow experience in the former but <25% with the latter, and, interestingly, only 11% of institutions were teaching bedside ultrasound of the kidneys despite the incredible general availability of portable ultrasounds, the ease of the procedure, and the wealth of information that this procedure may provide. Finally, despite the high rate of temporary hemodialysis catheter and percutaneous kidney biopsy training, it is well known that few if any nephrologists are performing these procedures if they enter private practice. In their second article, Berns and O'Neill have subsequently addressed the larger issue of the declining interest in nephrology in the past year.⁴ Rightly so, a major emphasis was placed on the increase in scholarship activity in nephrology training programs. This would not only rekindle the interest among residents and medical students, but also reclaim ownership of the complex medical disorders once exclusively managed by nephrologists. Along with this, procedural competence was identified as a major concern regarding training of future nephrologists.⁴ They highlight how relinquishing the procedural aspect of nephrology has led to the decrement in care to the patients with nephrologic issues and has diminished the role of the nephrologist in the care of our own patients. This has contributed to the attrition of interest in nephrology by medical students and residents. However, there was little mention of how, at least from the procedural aspects, this problem could be remedied. An important step toward improving this would be the establishment of strict procedural guidelines to measure fellow trainee competency. An additional problem that has been raised is the general competence of nephrologists in performing our basic procedure of temporary line placement. Recently, McQuillan and colleagues performed a single center evaluation of temporary hemodialysis catheter line placement competence evaluation and found, that at baseline, attending nephrologists scored similarly to the trainees on a checklist test using a simulation model for line placement.⁵ This raises the question, then, of who is available to train our nephrology fellows in these basic nephrology procedures.

To this end, we propose that the academic nephrology community needs to consider the incorporation of interventional nephrology training into our nephrology training programs. Interventional nephrology was borne out of the need to improve procedural aspects of renal care by nephrologists.^{6–8} Endovascular dialysis access procedures performed by nephrologists were pioneered by Dr. Gerald Beathard.⁷ Over the years, centers of interventional nephrology have been established throughout the country, but the training opportunities remain limited and scattered, particularly in academic medical centers. Although the prospect of broadening the availability of interventional nephrology among available fellowship programs clearly is easier said than done, the effort placed now will almost certainly serve to attract and retain stronger candidates who will also practice general nephrology. This is by no means a new idea. This model has worked well for cardiology, gastroenterology, and now even neurology. In regards to our own specialty, the American Society for Diagnostic and Interventional Nephrology (www.asdin.org) has provided guidance in this regard, and summary papers have been written on the subject.⁹ There are nearly 200 nephrologists certified in interventional nephrology in the United States; accessing these nephrologists to assist in training the next generation of fellows will be critical, and, we expect, will help reinvigorate an interest in our specialty.

The advances in knowledge base of nephrology have truly been phenomenal and are owed to the many scientists and clinicians who have carefully studied and cared for the various diseases that are particular to the kidneys. This has manifested in the reduction in morbidity and mortality related to chronic kidney disease, end-stage renal disease, and the myriad of parenchymal renal disease and electrolyte and acid base disorders. Berns and colleagues³ importantly highlight the need for greater scholarship in our field to continue the advances in the care we provide to our patients. And, to this end, there are clear and specific steps that need to be taken to increase the interest in the care of patients with nephrologic disorders. Although our quest to find more effective therapies for these disorders continues, it is reasonable to explore an approach that provides a more comprehensive care to our patients. This not only will serve to demonstrate more clearly an “added value” to the potential recruit, but, more importantly, will provide better and timelier care to our patients. The issue of attractiveness to the potential recruit may seem superficial, but, as the data reported² suggest, having an adequate work practice balance is an important consideration for those thinking about nephrology as a career. Embracing interventional nephrology and formally incorporating it into our training programs may be a critical step in helping our specialty attract more highly qualified trainees.

DISCLOSURE

AA currently serves as the Chair of the Clinical Practice Committee of the American Society of Diagnostic and Interventional Nephrology

(ASDIN). He is also a former President of ASDIN. All the other authors declared no competing interest.

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