

Improving the Nephrology Match: the Path Forward

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ABSTRACT

The Fellowship Match process was designed to provide applicants and program directors with an opportunity to consider all their options before making decisions about post-residency training. In a Match, applicants can choose the programs that best suit their career goals, and program directors can consider all candidates before preparing a rank order list. The Match is a contract, requiring obligations of both programs and applicants to achieve success, ensure uniformity, and standardize participation.

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While the belief that the USA will need more services for kidney-related conditions appears accurate, changes in the delivery system and changes in reimbursement policies may mean that increased service needs may not necessarily translate into the same increase in the demand for Nephrologists as was previously forecast. It is important to look beyond today's marketplace to assess the number of Nephrologists that will be appropriate for future needs. Although beyond the scope of the Task Force, these crucial questions are being addressed by the ASN Workforce Committee and the research team at George Washington University.

Nephrology Match participation by fellowship applicants has declined significantly since 2010, yet the number of training opportunities has increased. Match participation fell to an all-time low in 2015 and this has generated widespread concern about the future of the profession (Table 1).

An increasing number of programs have not placed their fellowship slots in the Match, raising concerns that programs

may be filling them outside the Match. Position offers outside the Match may exert undue pressure on applicants to make early decisions, and degrade the confidence of program directors in the integrity of the Match process. In addition to the increasing pressure to fill fellowship positions in general, some programs have filled research positions outside the Match. A misconception exists among some Nephrology program directors that if a suitable candidate for a research position does not match, the slot remains unfilled. On the contrary, the Match allows for a pre-specified number of positions in a research track that can be "reverted" (donated) to clinical program tracks when the matching algorithm is processed. Thus, there is no need for programs to fill research positions outside the Match. Many other specialties have successfully used the Match to fill subspecialty positions in specialized research tracks.

To help address the declining interest in Nephrology, the American Society of

Nephrology (ASN) and individual training programs have begun highlighting the attractiveness of the profession to medical students and residents. Going forward, the Nephrology community as a whole must work to revitalize the subspecialty. However, recent concerns about the future of the Nephrology workforce^a have been exacerbated by the low rates of Match participation.^b To address those issues, ASN, the sponsor of the Nephrology Match, convened a Nephrology Match Task Force in January 2015 to review the principles and practices of the Match and to recommend improvements that will ensure applicants to Nephrology fellowship programs equal and fair access to a variety of programs and allow individual programs to attract the most qualified candidates.

To best reflect the Nephrology training community, the Task Force was composed of ASN members from a wide geographic area, a broad array of program types, and diverse educational roles: training program directors, division chiefs, and recent Nephrology fellows (Table 2). Importantly, the Task Force also included program directors

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Table 1. Changes in the Number of Fellowship Programs, Slots and Applicants

	2000	2013
Number of Nephrology Fellows in first or second year training	626	930
Number of Nephrology Fellowship Programs	127	147
Number of Nephrology Fellowship Applicants	2010 Match 576	2015 Match 254

who had not recently participated in the Match. The Task Force met by weekly conference call from the end of January until mid-March 2015. This review summarizes the discussions, conclusions, resolutions, and suggestions resulting from these efforts.

The ASN Council charged the Task Force with four objectives:

- (1) Provide a recommendation to the ASN Council regarding whether Nephrology should continue its relationship with the National Resident Matching Program's (NRMP's) Specialties Match Service (SMS) (https://www.asn-online.org/education/training/workforce/ASN_NRMP_SMS_2015_Analysis.pdf).
- (2) If Nephrology continues its relationship with SMS, provide a recommendation to the ASN Council as to whether the Society should advocate to the NRMP Board of Directors for "all-in" participation in SMS.
- (3) Provide recommendations to the ASN Council regarding the use of tracks within the Nephrology Match process.
- (4) Identify resources to help institutions better assess the appropriate number of slots for their training programs.

SHOULD NEPHROLOGY CONTINUE ITS RELATIONSHIP WITH THE NRMP SMS?

In the years immediately prior to implementation of the Match in Nephrology, applicants and training program directors experienced widespread dissatisfaction with the recruitment process. Applicants were often pressured to accept or reject offers before interviewing at all programs in which they were interested or before receiving decisions from programs more highly ranked by the applicants. Similarly, program directors often felt compelled to offer positions to marginal applicants (and then threaten to rescind such offers) before interviewing all applicants.

Experience from other specialties strongly suggests that if Nephrology ends its relationship with the NRMP SMS, the rate of decrease in the number of Nephrology applicants is likely to accelerate.¹ Deborah D. Proctor, MD, Professor of Medicine, Yale University School of Medicine, met with Task Force members and presented data regarding the large decline in applications experienced by Gastroenterology during the years when it had withdrawn from its participation in the Match, the dissatisfaction among Gastroenterology fellowship applicants and program directors during the period without the Match, and the subsequent increase in applications when Gastroenterology rejoined the Match.²

Discussions over several weeks centered on how to serve the interests of applicants, identify the premier candidates, ensure the best fit between programs and candidates, and help diverse institutions address the variety of challenges involved in training Nephrologists. Task Force members unanimously concluded that continued participation in the Match offers the best way to protect the right of the applicants to freely investigate all program options and to help all programs benefit from a "level playing field." Moreover, because the NRMP closely monitors the Match and penalizes programs and applicants who violate its policies, the Match promotes integrity and helps

Table 2. ASN Nephrology Match Task Force

Chair:

Raymond C. Harris, MD, FASN
Ann and Roscoe Robinson Professor of Medicine
Chief, Division of Nephrology and Hypertension
Vanderbilt University School of Medicine

Members:

Nancy Day Adams, MD
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Table 2. Continued

Michael J. Ross, MD, FASN Associate Professor of Medicine Nephrology Training Program Director Icahn School of Medicine at Mount Sinai Chief of Nephrology, James J. Peters VA Medical Center
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ensure that applicants and programs honor their mutual commitments.

SHOULD NEPHROLOGY ADOPT AN “ALL-IN” POLICY?

In recent years, the number of Nephrology fellowship applicants has declined, and the number of Nephrology positions filled outside the Match has increased, which has engendered frustration among training program directors. Undermining the trust of applicants and program directors in the Match can exacerbate declines in Match participation. Task Force discussions centered on the need to protect the interests of applicants and also carefully considered the concerns of diverse training programs.

To understand the dynamics influencing fellowship recruitment, the Task Force crafted survey questions that were sent to training program directors and fellows, and those survey results were helpful in subsequent deliberations. The Task Force’s vote also was informed by the willingness of NRMP to support an “all-in policy,” monitor compliance and, if necessary, apply sanctions.

After vigorous discussion, the Task Force unanimously agreed that Nephrology

should adopt an “all-in” policy, where all accredited training programs participate and all positions must be filled in the NRMP Match. This “all-in” policy will apply to both external and internal candidates. The Task Force determined that the bold move of advocating an “all-in” policy would best serve both the fellowship applicants and the training programs and was in the best interest of the discipline. The Task Force drafted a resolution in support of an “all-in” policy (Table 3) that was unanimously approved by the ASN Council. ASN has direct authority over the Nephrology Match and can therefore designate NRMP to implement this “all-in” policy; NRMP sanctions are administered to programs, institutions and/or applicants according to the NRMP Sanctions Guideline (<http://www.nrmp.org/wp-content/uploads/2013/10/Sanctions-Guideline-FINAL-for-WWW.pdf>). In addition, beginning in July 2016, Nephrology training programs must be registered with NRMP in order to comply with established ASN policy and access applications through the Electronic Residency Application Service (ERAS).

SHOULD TRAINING PROGRAMS CONTINUE THE USE OF TRACKS?

Wide variability exists among internal medicine specialties in the use of program tracks in the Match. Task Force discussions centered on whether offering too many tracks would create confusion for applicants in assessing programs and preparing rank lists. Task Force members determined that preserving the ability of training programs to offer multiple tracks would enable programs to limit the number of applicants who match to specialized research or clinical programs (often supported by limited resources). Moreover, some Nephrology fellows provided feedback that the availability of multiple tracks demonstrated a program’s commitment to provide a differentiated training experience.

Noting that programs can use the NRMP system to “revert” unfilled positions to be filled from their rank list for their clinical track, the Task Force determined that Nephrology should maintain

the flexibility of multiple tracks. However, the Task Force unanimously recommended reducing the number of tracks to three: “Clinical,” “Research,” and “Other” to minimize confusion.

WHAT IS THE BEST APPROACH FOR ASSESSING THE APPROPRIATE NUMBER OF TRAINING SLOTS?

One of the most complex issues addressed by the Task Force centered on how individual programs and institutions determine the appropriate number of slots for training. Considerable time was spent on this issue, and Task Force members discussed whether ASN might provide general recommendations regarding the Nephrology training experience, or guidance in responding to administrative concerns, especially given pressures to maintain slots to fill clinical service needs.

Efforts to increase the appeal of Nephrology and the number of applicants are essential to building and revitalizing the profession. However, it is equally important to maintain the highest quality of applicants and training experiences. For many programs, the key to success is increasing the ratio of applicants to slots. The mismatch in this ratio is a result of the substantial decline in the number of applicants interested in Nephrology and a considerable expansion in the number of training slots in the country.

The primary goal of training programs is to provide a high-quality education for future Nephrologists. Many institutions rely on fellows to fill clinical needs, but to improve patient care over the long term, the Task Force strongly recommends that short-term clinical census needs must be dissociated from the mission of training the next generation of practicing Nephrologists.

No single regulatory body mandates the number of fellowship positions. The Accreditation Council for Graduate Medical Education (ACGME) sets minimum resource requirements for programs and monitors compliance, but does not regulate the total number

Table 3. ASN resolution regarding the Nephrology Fellowship Match

This resolution concerns:
<ul style="list-style-type: none"> ● the conditions surrounding Nephrology fellowship offers to applicants ● acceptance by applicants of such offers, and ● participation by applicants and programs in the Nephrology Fellowship Match.
<p>BACKGROUND</p> <p>Our recent experience with the Nephrology Match has demonstrated that recruitment of subspecialty fellows outside the Match results in unfavorable experiences for applicants and program directors that may ultimately discourage applicants from applying to our specialty. Position offers to applicants outside the Match have the potential to exert pressure upon applicants and degrade the confidence of other program directors in the integrity of the Match process. The Match is designed to ensure uniformity of the policy governing offers to applicants, fair participation, and protection of the ability of applicants to choose the program(s) that best suit their career goals and protection of the ability of program directors to choose the best applicants for their programs.</p> <p>Many other specialties in addition to nephrology have successfully used the Match to fill subspecialty positions in specialized research tracks. If programs wish to appoint a limited number of research fellows, the match algorithm allows them to offer a pre-specified number of positions in a research track and revert (donate) unfilled research positions to be filled in clinical tracks. Thus, there is no need for programs to fill research fellowship positions outside of the Match.</p> <p>Applications are submitted by applicants using the AAMC-sponsored ERAS software system. Programs begin to review the application pool in mid-July, inviting candidates for interviews. The Match opens in late July, with dates over the autumn for entering the rank order list, changing the quota of positions to be offered, and certifying a rank order list for both the program and the applicant. The Match is a contract requiring obligations of both program and applicant in the event of a successful match.</p> <p>The guiding principle of this resolution is to give applicants the opportunity to consider all programs as well as to provide uniform and widely acceptable rules that protect both applicants and fellowship programs. If an applicant ranks a program first on the rank order list and the program ranks the applicant within its quota of positions offered in the Match, it is certain the applicant and program will be matched to each other. When all participants comply with this resolution, all positions will be offered through the Match in an orderly fashion and will be filled through the Match or afterward.</p> <p>RESOLUTION</p> <p>This resolution applies to all nephrology fellowship positions in all ACGME-accredited nephrology fellowship programs and to all applicants for these positions (i.e., the Nephrology Match will be changed to one that is "all in").</p> <p>FELLOWSHIP TRAINING PROGRAM RESPONSIBILITIES</p> <p>All ACGME-accredited nephrology training programs will participate in the NRMP Match and offer all positions through the Match. Each applicant should participate in the Match and be able to consider all programs before making a decision. Applicants and programs should understand the rules for accepting and offering fellowship positions, and know that those participating in the Match are contractually bound by its results.</p> <p>All positions should be filled through the Match or after Match Day. Therefore, all positions will remain available to be filled through the Match and not withdrawn in advance of it.</p> <p>Early offers and acceptances, and offers outside of the Match, violate the rules and this resolution. Any applicant may participate by registering for ERAS to interview, and may consider all participating programs.</p> <p>Outcomes of the Match are contractually binding, in accordance with NRMP/SMS Match Participation Agreement. Additionally, in accordance with NRMP policy, a program participating in the match must ensure post-Match offers are not made to applicants who have a binding match commitment to another program.</p> <p>NRMP will monitor compliance and sanctions will be applied in accordance with the Match Participation Agreement.</p> <p>APPLICANT RESPONSIBILITIES</p> <p>Nephrology fellowship applicants are expected to register for ERAS and the Match. All applicants can expect that all training programs will be participating in the Match and thus, applicants should not accept an offer prior to, or outside of, the Match.</p> <p>All positions should be filled through the Match or after Match Day. Failure to abide by these rules or to accept the results of the Match is a violation of the NRMP/SMS Match Participation Agreement, and sanctions may be levied against the program and applicant in accordance with the NRMP/SMS Violations Policy.</p> <p>To facilitate mutual compliance, a copy of this resolution shall be distributed by each fellowship program to all applicants. The American Society of Nephrology (ASN) will distribute this resolution to all Nephrology Fellowship Training Program Directors, and Internal Medicine Residency Program Directors, during the nephrology fellowship interview season.</p>

of positions in a field. ASN provides the framework for national collaboration among fellowship programs, but it cannot legislate program sizes. Consequently, the collective determination of training program directors and their associated faculties will be required to meet the goals of

attracting the best candidates and providing them a robust educational experience. For the community to better evaluate these issues, ASN has commissioned a multi-year study of the Nephrology workforce that will yield the data required to predict long-term workforce needs.³

Programs need a minimum number of resources (faculty, patient volume and diversity and curriculum content) and must adhere to ACGME accreditation standards. Division chiefs and training program directors should consider the number of fellows the program can

Table 4. Questions for Nephrology Training Program self-assessment

1. Is the size of the fellowship program justified more by clinical service workload or by the educational opportunities provided by the program?
2. Does the fellowship support local, regional or national efforts to enhance nephrology workforce diversity and/or reduce health care disparities?
3. Does the fellowship serve local or regional needs for access to care, and/or participate in unique offerings such as Urban Service or Rural Service tracks with the parent specialty program or the school?
4. Are the physician investigator graduates of the program successful in obtaining independent research funding and do they sustain careers in investigation?
5. Are most graduating fellows from the program able to find jobs that are consistent with their career and personal objectives?
6. Does the program have adequate diversity and quantity of clinical experiences (including kidney transplantation, peritoneal and home hemodialysis, and opportunity for invasive and non-invasive procedures) to provide optimal training for all fellows?
7. Does the program have adequate institutional support and sufficient numbers of quality clinical and research faculty to provide optimal training for all fellows?
8. What percentage of the program matriculates in the last five years passed their Internal Medicine boards on the first attempt, and subsequently passed Nephrology boards on the first attempt?
9. Has your program filled all of its positions that were allocated in the Match for each of the last three years?

maintain and still provide the optimum educational experience. As a template for each Nephrology program to assess “right-sizing” its number of fellowship slots, the Task Force developed nine self-assessment questions (Table 4), adapted in part from a much longer fellowship program analysis created by Jeffrey Berns, MD, FASN, and Stuart Linus, MD, FASN (personal communication).

Crucial to any program’s deliberation is a determination of whether its size is driven by service needs or educational resources. Programs should assess their allocation of care providers and decide whether, in some instances, fellows are *primarily* serving the purpose of “keeping everything covered.” Feedback from fellows or faculty that certain rotations lack adequate supervision, provide inadequate breadth of teaching/learning experiences, or reflect excessive service commitments should be carefully evaluated. In such situations, programs and institutions must examine opportunities to maintain patient care through other methods such as increased utilization of attending coverage and advanced practitioners (including physician assistants or nurse practitioners).

The leaders of training programs also must evaluate whether programs address vital local or regional needs. For example, some rural states have only one fellowship training program. Often, fellows form networks and attachments in the area and pursue permanent employment in practice situations that otherwise experience difficult recruitment. Other programs may attract an unusually diverse

mix of fellows and provide care for important underserved populations.

Early career success of graduates provides an indication of program quality and strength. Programs that consistently produce research-oriented graduates who subsequently struggle to maintain successful academic careers must re-evaluate their mission and perhaps their program size. Programs whose graduates have trouble finding employment must be more introspective about the number of fellows they are training.

Finally, no matter how good the resources are at a specific institution, some programs have consistently failed to fill positions over a period of several years or have filled positions with inferior quality applicants, trainees they likely would not have considered in years past. Although an imperfect surrogate for applicant quality, the pass rates of a program’s fellows on both Internal Medicine and Nephrology boards is one approach to assess this issue. Programs that consistently accept inferior quality applicants are helping neither themselves nor the future of Nephrology.

The decision to adopt an “all-in” policy for the Match places Nephrology as a leader among Internal Medicine specialties. Given that a number of other specialties are also considering this option, it will be up to the NRMP Board of Directors to decide if they will continue their current policy to allow individual Internal Medicine specialties to adopt an “all-in” policy or will mandate it for all specialties.

Nephrologists provide highly specialized care to patients facing some of the

most complex challenges in medicine, and continued provision of this care requires high-caliber training opportunities for physicians and researchers. Concerns over the future of our specialty’s workforce abound and Match participation and training program self-review address two facets of these concerns.⁴ Although changes to the Match that have resulted from this task force’s deliberations will not in themselves address the underlying problem of a limited pool of applicants, if the Match continues to erode, or vanishes entirely, the resulting chaos and stressful competition will drive away even more potential applicants. To enhance the profession, Nephrology must provide a fair and equitable system for applicants and the programs that train them.

ACKNOWLEDGMENTS

The enthusiasm, dedication and seriousness with which the members of the ASN Nephrology March Task Force tackled extremely complex issues and crafted excellent recommendations will help Nephrology advance, and attract the best candidates.

We would also like to gratefully acknowledge the superb editorial assistance of Adrienne Lea.

DISCLOSURES

Raymond C. Harris: *Consultancy:* Amgen, Lilly, Prometic; *Research funding:* Bristol Myers Squibb, NIH/NIDDK, Prometic, Veterans Administration; *Scientific Advisory Board:* Eli Lilly, Prometic;

Editorial Board, Journal of Clinical Investigation; *Study Section*: NIH-PBKD, JDRF Innovation.

Mark G. Parker: Chair, American Society of Nephrology Workforce Committee.

Rebecca J. Schmidt: *Ownership interest*: Joint venture with Fresenius Medical Care; President and Member, Board of Directors – Renal Physicians Association; Member, ESRD Network 5 Medical Review Board; Member, American Association of Kidney Patients Medical Advisory Board.

FOOTNOTES

^aThe issues of training an appropriate number of Nephrologists to meet the demand for Nephrology care and the attractiveness of the specialty to clinicians and physician/scientists are related. The recent increase in the number of fellowship positions at a time when Medicare, the major source of funding for Nephrology care, has been taking steps to

constrain rising costs of care appears to have led to a softening job market for new Nephrologists. This in turn has led to concerns about the resulting contribution to a decrease in applications to Nephrology fellowship programs; recent surveys have indicated that both residents and Nephrology fellows have significant anxiety about job opportunities and appropriate compensation in Nephrology.

^bThe recent decrease in Nephrology applicants has also coincided with the decision to move Match Day for Internal Medicine subspecialties from June of postgraduate year 2 to December of postgraduate year 3. Because Nephrology fellowship applicants include a significant number of International Medical graduates with H-1B or J1 visas, concerns have been raised that the contracted time between acceptance and initiation of fellowship training might prove difficult to meet the requirements for change of work venue required by the visas and could therefore discourage potential applicants from applying. Because there are no data available

at present to prove or disprove this hypothesis, the Task Force did not directly address this issue. However, this is a question that will need to be addressed.

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