

ACKD

International Medical Graduates in Nephrology: A Guide for Trainees and Programs

Javier A. Neyra, Maria Clarissa Tio, and Silvia Ferrè

A significant portion of the nephrology workforce has traditionally consisted of non-United States (US) citizen international medical graduates and international research trainees. Although international medical graduates are offered opportunities for training and professional growth that are beyond those available in their countries of origin, they typically encounter barriers to transition from training to practice and early-stage career development. In this article, we describe the exchange visitor and temporary worker visas granted to foreign trainees in the United States, focusing on the transition from training to nephrology practice and/or research. While we provide general recommendations on how to navigate this tedious and unpredictable process for both programs and trainees, consultation with immigration attorneys is indispensable for a successful outcome. Trainees are therefore encouraged to seek continuous support from their programs/sponsors and assistance from immigration representatives at their training institutions. We provide a positive message to emphasize that there are many pathways to arrive at the desired post-training destination.

© 2020 by the National Kidney Foundation, Inc. All rights reserved.

Key Words: International Medical Graduate, Workforce, Nephrology, Visas, Immigration

Non-United States (US) citizen international medical graduates (IMGs) and research trainees receive their medical degrees (Fig 1) and Doctor of Philosophy degrees outside of the US. They come to the US on various visas for further clinical and research training.^{1,2} Apart from fulfilling their clinical and research duties, they must navigate complex immigration processes to maintain their legal presence during their training period and overcome hurdles to transition from training programs to clinical practice in the US.³⁻⁵

In accordance with the American Society of Nephrology 2019 Nephrology Fellow Survey results (50.2% response rate, $n = 498$ of 988 fellows), approximately 1 of 4 fellows reported having an exchange visitor (eg, J-1) or temporary worker (eg, H-1B) status.⁶ A large number of nephrologists who are visa holders have reported difficulties in finding “satisfactory” postfellowship positions compared with US medical graduates, 48.9% vs 27.1%, respectively.⁶⁻⁹ Overall, IMGs reported more difficulties in finding jobs in desired locations and practice settings.⁶ IMGs also disclosed inadequate salary/compensation as a common reason of being dissatisfied with postfellowship job opportunities.⁶ Among adult nephrology fellows, IMGs expressed difficulties in finding academic nephrology positions (clinical educator or basic/clinical research positions) as opposed to US medical graduates (67.9% vs 32.1%, respectively). Only 15 fellows reported entering J-1 visa waiver programs after fellowship.

Despite these challenges, IMGs and research trainees are offered opportunities for training and professional growth beyond those available in their countries of origin, allowing them to develop novel clinical or research programs back home and contribute to these programs in the US. In this article, we describe the common US exchange visitor and temporary worker visas for IMGs and research trainees, focusing on the transition from training to nephrology practice or nephrology research. We provide suggestions to both trainees and program leaders based on our own experiences and interactions with others

who have navigated the system. This article does not intend to provide legal guidance as individualized consultation with immigration attorneys is necessary. The main goal of this article is to provide an overview of pathways for IMGs, research trainees, and sponsors.

THE J-1 ALIEN PHYSICIAN VISA FOR CLINICAL TRAINING

IMGs applying for graduate medical education or clinical training in the US require visa sponsorship that allows for clinical training activities. One option is a temporary nonimmigrant visa called the J-1 exchange visitor visa (Fig 1).¹⁰ This visa is reserved for participants in the US Department of State’s Exchange Visitor Program, which was developed to accommodate cultural and educational exchange between the US and other countries. One requirement for J-1 physicians is to return to their countries of origin for at least 2 years after their training before being eligible for a more permanent visa status. The Department of State designated the Educational Commission for Foreign Medical Graduates (ECFMG) as the sponsor of J-1 physicians training in the US.

Standard requirements for J-1 visa sponsorship include the following: (1) Passing the United States Medical Licensing Examination (USMLE) Steps 1 and 2 Clinical

From the Division of Nephrology, Bone and Mineral Metabolism, Department of Internal Medicine, University of Kentucky, Lexington, KY; Division of Renal Medicine, Department of Medicine, Brigham and Women’s Hospital, Boston, MA; and National Kidney Foundation, New York, NY.

Financial Disclosure: All authors considered themselves international medical graduates and entered the US for training on either J-1 or H-1B visas. All authors have no conflicts of interest to disclose.

Support: See Acknowledgment(s) on page 8.

Address correspondence to Javier A. Neyra, MD, MSCS, University of Kentucky Medical Center, 800 Rose St, MN668, Lexington, KY 40536. E-mail: javier.neyra@uky.edu

© 2020 by the National Kidney Foundation, Inc. All rights reserved.

1548-5595/\$36.00

<https://doi.org/10.1053/j.ackd.2020.05.003>

Knowledge/Clinical Skills or the former equivalent examinations; (2) A contract or an official letter of offer for a position in an accredited training clinical program by the Accreditation Council for Graduate Medical Education; (3) A "Statement of Need" from the Ministry of Health in the country of citizenship or most recent legal permanent residence; and (4) An ECFMG certification.

Training institutions designate program liaisons to facilitate the sponsorship process through the ECFMG. Sponsorship through the ECFMG for graduate medical education participation is limited to the time required to complete training requirements as determined by the American Board of Medical Specialties. As a general rule, the duration of sponsorship is typically limited to a maximum of 7 years. Extensions beyond this are approved on a case by case basis by the ECFMG.

Transition from Training to Practice

A change of status from J-1 to H-1B through a waiver is an option for foreign physicians who desire to stay and work in the US after training.^{11,12} The H-1B visa is an employment visa that allows concurrent permanent citizenship application by the holder (further discussed in the following; Fig 1).

However, J-1 visas sponsored by the ECFMG are subject to a return-to-home-residency requirement at the end of training for a 2-year period. There are several avenues by which this requirement can be waived – which will be described in the following paragraphs.

This transition period can significantly affect career development for clinician scientists or educators interested in pursuing careers in academic medicine. Several factors contribute to this challenge. Commonly, IMGs face the possibility of prematurely leaving their training institutions (abandoning research projects and niche that have been developed) to practice as clinicians in underserved areas to fulfill waiver obligations with limited to no protected time for career advancement.⁹ Furthermore, federal funding for research is commonly restricted to individuals who are citizens or permanent residents (eg, career development awards – with some exceptions; refer to Table 1). This context generates a challenging scenario for J-1 visa holders to become independent clinician-investigators in academia after training.

For a private practice career after training, the J-1 waiver requirement limits the options to specific geographic locations and clinical settings. At times, this hinders the J-1 physician's ability to negotiate contracts, benefits, and partnerships.

Brief Overview of the J-1 Physician Waiver Process

After completing graduate medical training in the US, an IMG on a J-1 visa must return to their home country for

at least 2 years before attempting to practice in the US.¹⁰ This requirement is part of US law, in the Immigration and Nationality Act, Section 212(e).¹⁸ To bypass this requirement, an IMG on a J-1 visa must successfully obtain a waiver in one of the following categories¹⁸: (1) persecution, (2) exceptional hardship to a US citizen or lawful permanent resident spouse or child, (3) request by an interested US federal government agency, and (4) request by a designated state public health department or its equivalent (Conrad State 30 Program). This review will focus on waivers granted through government agencies and the Conrad State 30 Program.

Conrad 30 Program. This constitutes the most common option for IMGs on J-1 visas to obtain a waiver.¹⁹ Trainees request sponsorship from a state public health department and complete the corresponding application. Regardless of the number of applicants, only 30 applications will be approved by each state. Therefore, it is critical that applications are submitted in a timely manner (Fig 2). Eligibility criteria consist of the following: (1) full-time employment in an H-1B nonimmigrant status at a healthcare facility located in a health professional shortage area, medically underserved area, or medically underserved population; (2) an executed contract; and (3) commencement of employment within 90 days of receiving the waiver and proper work authorization from the US Citizenship and Immigration Services (USCIS). It is important to note that each state public health department administers the Conrad 30 program at their own discretion (e.g., FLEX waivers).

Once the waiver is granted, the next step is to obtain an H-1B visa. A physician who obtained H-1B status through the Conrad 30 Program can only practice medicine at a health professional shortage area, medically underserved area, or medically underserved population–designated healthcare facility for a minimum of 3 years.¹⁹

Appalachian Regional Commission and Delta Regional Authority. The Appalachian Regional Commission (13 states, ie, Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia) and the Delta Regional Authority (8 states, ie, Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee) permit primary care physicians and specialists on a J-1 visa to apply (Fig 1).²⁰ Applicants who are specialists are only considered when there is a specific need for that subspecialty in the area.^{20,21} It is important to note that only certain counties in these states are located in areas where a waiver could be completed.

CLINICAL SUMMARY

- The field of nephrology has a significant presence of IMGs.
- IMGs and international research trainees typically encounter barriers to transition from training to practice.
- Different visas are issued to IMGs pursuing clinical and/or research training in the United States.
- Sponsors and professional organizations should advocate for trainees to facilitate a successful transition to practice and early-stage career development.

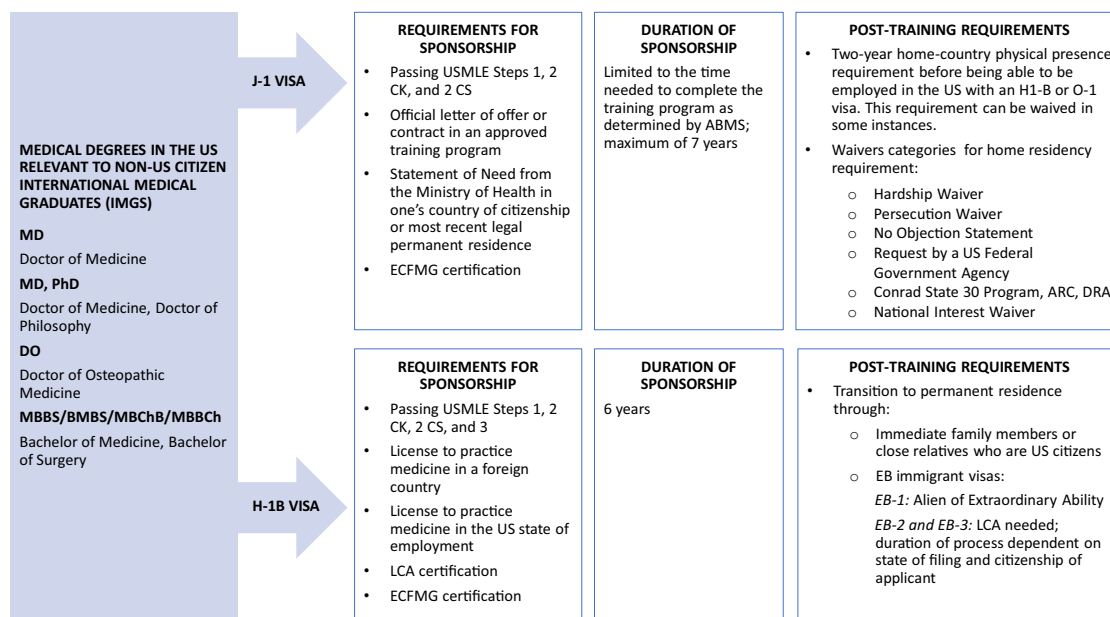


Figure 1. Pathways to clinical training in the United States for IMGs. USMLE, United States Medical Licensure Examination; CK, Clinical Knowledge; CS, Clinical Skills; ECFMG, Educational Commission for Foreign Medical Graduates; ABMS, American Board of Medical Specialties; LCA, Labor Condition Application; EB, Employment-Based; IMG, international medical graduate.

Department of Veterans Affairs. The Department of Veteran Affairs can offer waiver positions; however, US citizens and permanent residents are given priority for employment positions before J-1 IMGs.

THE J-1 RESEARCH VISA FOR RESEARCH TRAINEES

The Exchange Visitor Program also sponsors J-1 visas for research trainees who plan to train in the US.^{10,22} Potential applicants should first contact the principal investigator at the institution of interest (sponsor). The designated sponsor then supervises the application process and is the main point of contact. A standard requirement for research J-1 visa sponsorship is to provide US degree equivalency of the applicant's degree via credential assessment services, such as Global Credential Evaluators, Inc. Once the Form DS-2019 is provided by the sponsor, a visa stamp can be obtained at the nearest US embassy or consulate. The spouse and/or dependents of the J-1 visa applicant can enter and stay in the US by directly applying for visas in the exchange visitor J-2 category. Some exchange visitors with J-1 research visas are subject to the 2-year home-country physical presence requirement at the end of training.^{10,18} To bypass this requirement, a J-1 foreign researcher must successfully obtain a waiver in one of the following categories: (1) No Objection Statement, (2) Persecution, and (3) Exceptional hardship to a US citizen or lawful permanent resident spouse or child. The Department of Homeland Security must approve the waiver before the applicant can change status in the US, eg, being sponsored for H-1B or apply for a change of status to O-1 visa.

Transition from Training to a Career in Academic Nephrology for the J-1 Researcher

J-1 researchers who intend to pursue a career in academic nephrology in the US after training should consider applying for grants and awards sponsored by professional societies and organizations during their postdoctoral training (Table 1). These research grants include awards from the American Society of Nephrology,¹³ American Kidney Foundation (for clinical fellows),²³ American Diabetes Association,¹⁵ National Kidney Foundation,¹⁴ and Polycystic Kidney Disease Foundation.¹⁷ The American Heart Association is also an option, but the applicant must be on an H-1B visa or equivalent by the time of the award activation date. An important goal of the fellowship period is to receive excellent training, show continuous productivity, and be recognized by the scientific community in the field as a promising trainee who generates solid and reproducible data. It is important that J-1 researchers seek out mentors, sponsors, and peer groups to help guide their career development early. They should remain diligent by engaging in scholarly activities and submitting research findings to peer-reviewed journals preferable as first-author publications. As seniority is acquired, it is important for trainees to be included among the corresponding authors. While manuscripts are being submitted and/or accepted for publication, it is advisable to start transitioning to an H-1B visa, if possible. Ultimately, being a permanent resident will increase the number of career development grant opportunities. For example, the National Institutes of Health requires individuals to be citizens or noncitizen nationals of the US (eg, individuals from US possessions such as Puerto Rico, Guam, American

Table 1. Potential Grants for International Trainees on Visas Who Are in Transition to Independence in Academic Nephrology in the United States

Agency or Society	Grant Name	Category	Eligibility
Federal Agencies			
National Institute of Health	• K99/R00	Transition to Independence	Must be allowed to stay in the United States for the duration of the award period; J-1 or H1-B visa status. Must hold a Ph.D., M.D., or equivalent degree.
	• K01	Research Scientist Development Award	By the time of award, the individual must be a citizen or a noncitizen national of the United States or have been lawfully admitted for permanent residence. Must hold a Ph.D. degree, comparable nonclinical doctoral degree, or clinical doctorate from another country.
	• K08	Mentored Clinical Scientist Research Career Development Award	By the time of award, the individual must be a citizen or a noncitizen national of the United States or have been lawfully admitted for permanent residence. Must hold an M.D. degree.
Professional Societies			
American Society of Nephrology ¹³	• Joseph V. Bonventre Research Scholar Grant	Transition to Independence	Must be within seven (7) y of initial faculty appointment at the time of the award activation. Must be working in North or Central America during the grant period.
	• Carl W. Gottschalk Research Scholar Grant		
	• John Merrill Grant in Transplantation		
• Norman Siegel Research Scholar Grant in Pediatrics	Research Fellowship	Cannot have or have had at any time a nephrology-related or basic science faculty position at any academic institution; instructor level positions are permitted. Must be working in North or Central America during the fellowship period.	
• Oxalosis & Hyperoxaluria Foundation-KidneyCure Grant			
	• Ben J. Lipps Research Fellowship Program		
	• William and Sandra Bennett Clinical Scholars Program	Clinician Educator Grant	Must be within 7 y of initial faculty appointment at the time of the award activation. Must be working in North or Central America during the funding period.
American Kidney Foundation	• Clinical Scientist in Nephrology Program	Research Fellowship	Must be a nephrology fellow in a US institution.
National Kidney Foundation ¹⁴	• Three NKF Young Investigator Grants	Young Investigator Research Grant	Must hold a full-time faculty appointment at a university or an equivalent position as a scientist on the staff of a research-oriented institution in the United States.
	• One Satellite Healthcare Clinical Investigator Grant		
	• One Chastain Renal Research Grant – open to applicants from Arkansas		
	• One Krainin Memorial Young Investigator Award - open to applicants from the National Capital Area		

(Continued)

Table 1. Potential Grants for International Trainees on Visas Who Are in Transition to Independence in Academic Nephrology in the United States (Continued)

Agency or Society	Grant Name	Category	Eligibility
American Diabetes Association ¹⁵	• Innovative Basic Science	Research Award	Must have authorization to work in the United States or US possessions.
	• Innovative Clinical or Translational Science	Development Award	
	• Junior Faculty Development	Training Award	
American Heart Association ¹⁶	• Minority Junior Faculty Development		At the time of application, the applicant must hold an M.D., Ph.D., D.O., D.V.M., D.D.S., or equivalent postbaccalaureate doctoral degree. The applicant must have one of the following designations: <ul style="list-style-type: none"> • US citizen • Permanent resident • Pending permanent resident (any resident who has an approved I-765 form and has submitted an I-485 application with the United States Citizenship and Immigration Services). • E-3 – specialty occupation worker • H-1B Visa • J-1 Visa – exchange visitor. Note: Applicants must have an H-1B or equivalent by the award activation date. If the H-1B or equivalent is not received by the award activation date, the award must be relinquished. • O-1 Visa – temporary worker with extraordinary abilities in the sciences. • TN Visa – North American Free Trade Agreement professional. • G-4 Visa – family member of employee of international organizations.
	• Postdoctoral Fellowship		
	• Minority Postdoctoral Fellowship		
	• Minority Undergraduate Internship		
	N/A	Career Development Grant	
	N/A	Postdoctoral Fellowship	Must hold a Ph.D. degree or equivalent, or a doctoral-level clinical degree, such as M.D., D.O., D.V.M., Pharm.D., D.D.S., Dr.Ph, Ph.D. in nursing, public health, or other clinical health science, or equivalent clinical health science doctoral student who seeks research training with a sponsor prior to embarking upon a research career (Similar to aforementioned for visa)
Polycystic Kidney Disease Foundation ¹⁷	N/A	Fellowship	Must hold an M.D. or Ph.D. or the equivalent degree.
	N/A	Research Grant	Must hold an M.D., Ph.D. or equivalent degree and hold a faculty appointment at the institution where the research will be conducted.

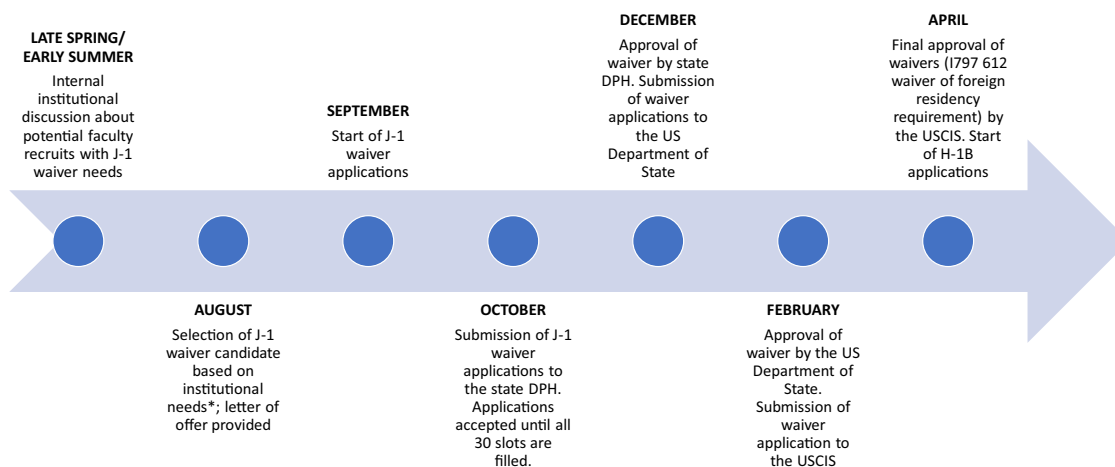


Figure 2. Example of timeline of events for the Conrad 30 waiver application. This may be different for specific states. *Sponsoring institution should be able to provide full-time employment at a healthcare facility located in a health professional shortage area, medically underserved area, or a medically underserved population. DPH, Department of Public Health; USCIS, US Citizenship and Immigration Services.

Samoa, the US Virgin Islands, and the North Mariana Islands) or be permanent lawful residents by the time of the award (eg, possess a current and valid Permanent Resident Card USCIS Form I-551 or other legal verification of such status). Table 1 lists some career development grants that visa holders can apply to without permanent residency restrictions. It is important to note that most of these grants require a faculty position appointment starting from the instructor level at the time of award start date. Whether J-1 researchers decide to start their faculty career in the same institution where they trained or move to another institution, they should communicate their goals and challenges (including immigration challenges) to the sponsors and mentors that support them while waiting for permanent residence status.

In summary, J-1 research trainees who plan to transition to faculty in the US may do so through the H-1B visa pathway. It is important to note that some countries require a 2-year home residency requirement before this transition can be made, and specific waivers are needed to bypass this requirement. During this process, J-1 researchers are highly encouraged to apply for foundational grants, as only US citizens and permanent residents are eligible for National Institutes of Health support. The process of transitioning to an H-1B visa may take up to 6 months to a year, so visa candidates should be diligent about meeting the requirement deadlines and ensure that sponsors file the H-1B applications in a timely manner.

THE H-1B VISA FOR CLINICAL TRAINING

The H-1B visa is a more attractive option for IMGs as it is not subject to the 2-year foreign residency required for J-1 foreign physicians (Fig 1).^{3,11} Established in the 1950s, the H-1 visa category allowed foreign individuals to enter the US to work in specialty occupations. Initially, foreign physicians on an H-1B visa could only teach or conduct research, with patient care as ancillary to these primary activities. With the Immigration Act of 1990 and the 1991 amend-

ments, the H-1B visa was revised to allow IMGs to enter the US to provide direct patient care. At present, IMGs may enter the US using an H-1B visa to participate in patient care if the following conditions are met: (1) The physician must have passed the USMLE steps 1, 2, and 3 or prior examination equivalents; (2) The physician must have passed the English language proficiency test conducted by the ECFMG; (3) The physician must have a full and unrestricted license to practice medicine in a foreign country or have graduated from a medical school in a foreign country; and (4) The physician must have a license or authorization to practice medicine from the state in the US in which the physician will be employed. Certain exceptions are made for foreign physicians of international renown.

The H-1B visa pathway has several differences and potential disadvantages compared with the J-1 physician visa pathway (Fig 1).^{3,11,12} While an IMG can be on a J-1 physician visa for up to 7 years (extensions beyond this period are assessed in a case-by-case basis), the H-1B status allows for at most 6 years of legal presence: an initial maximum stay of 3 years, followed by extensions for a maximum of 3 additional years. Apart from some exceptions, an IMG reaching the 6-year limit is then expected to live abroad for 1 year before returning to the US in the same H-1B status. Another disadvantage of the H-1B visa is the complex process for both the applicant and the employer. While J-1 physician visa applicants must only pass the USMLE steps 1 and 2, H-1B applicants must pass USMLE steps 1, 2, and 3. Securing a J-1 sponsorship, which is a prerequisite in applying for a J-1 visa stamp, is also simpler than the steps needed to be completed before an H-1B visa can be issued. The following steps must be fulfilled before an IMG can attain H-1B status: (1) The employer must obtain a Labor Condition Application from the Department of Labor. This is then submitted with the H-1B petition to the USCIS, (2) The USCIS must approve the H-1B petition. Important components of the application include salary

specifications, dates of intended employment, and description of job duties to show that the position to be filled by the IMG is a specialty position, and (3) Once the H-1B petition is approved, the IMG can apply for a visa stamp in a US consulate or embassy.

Despite the aforementioned disadvantages, the H-1B visa pathway may still be preferred as it allows for visa holders to have “dual intent”: an IMGs may reside in the US temporarily but at the same time pursue lawful permanent residence in the process. This allows an individual to reside in the US under H-1B status even if the application for permanent residence is in progress.

H1-B Transition from Training to Practice

While permanent residence can be attained by an H-1B visa holder through immediate family members or close relatives who are US citizens, this review will focus on transition to permanent residence through the Employment-Based (EB) Immigrant Visa.^{3,11} The EB categories relevant to H-1B physicians include EB-1 (first preference), EB-2 (second preference), and EB-3 (third preference). There are 2 to 3 major steps in applying for EB permanent residence status: (1) most EB-2 and all EB-3 applicants need a Labor Certification to be filed by their employers with the Department of Labor. EB-1 applicants and EB-2 applicants with National Interest Waiver (NIW) are exempt from this; (2) filing of the Immigration Petition; and (3) application for permanent residence status, either at a US consulate or adjusting the status from within the US.

The EB visa status is filed by the employer on behalf of the foreign physician. In most cases, foreign physicians go through the EB-2 and EB-3 pathways wherein the employer must file for Labor Certification, which can take as long as 3 years in some cases. Through this process, employers must prove to the US Department of Labor that the given job has been advertised, US physicians who may be qualified have been interviewed, and that in the end, no US physician was ready or qualified to fill this position. Once this is approved by the Department of Labor, the employer can then file a petition for the foreign physician to USCIS, showing proof of employment offer without a definite end date and the ability to pay the full salary of the foreign physician.

Applying for the EB-1 visa (“alien of extraordinary ability”) or a NIW (subcategory of EB-2) can bypass the Labor Certification step. To be an “alien of extraordinary ability,” one must show “extraordinary ability in the sciences...” with evidence of national and international renown. The applicant will continue to “work in the area of extraordinary ability” and whose “entry into the US will substantially benefit prospectively the US.” To meet the criteria of the NIW, it must be shown that (1) the applicant’s “proposed endeavor has substantial merit and national importance,” (2) the applicant is able to advance this endeavor, and (3) it would benefit the US to waive the Labor Certification requirement. This application requires specific documentation such as, but not limited to, letters of support from the applicant’s employer describing the importance of the applicant’s work, applicant’s record of scientific productivity (publications, grants, patents,

licensed technology, and so on), and attestation of the applicant’s work by experts in the field.

RECOMMENDATIONS FOR NEPHROLOGY FELLOWSHIP PROGRAMS

The leadership of Nephrology fellowship programs should be familiar with the most common immigration processes that IMG trainees navigate. They should consult with their program liaisons and International Office representatives to discuss individual needs of their trainees. Specialized legal consultation is advised for specific questions or concerns. It is also critical to provide continuous mentorship and sponsorship not only during training but, importantly, during transition to practice as trainees will be ambassadors of their respective programs.

RECOMMENDATIONS FOR IMGs

IMGs are encouraged to seek continuous support from their sponsors and assistance from immigration representatives at their training institutions. It is important to emphasize that there are many pathways to arrive to the desired post-training destination. Some recommendations and encouragement to navigate the process are listed in [Table 2](#). Finally, trainees should know that they are not

Table 2. Recommendations for Navigating the Transition From Training to Practice for International Trainees on Visas in the United States

- 1) **Work Hard.** It is important for international trainees to prove that they are assets to any team they join. Submit the findings of your research to peer-reviewed journals. You must be recognized by the scientific community in your field.
- 2) **Know Your Visa.** Know the immigration rules that apply to your visa status and the visa status of your significant other/ spouse/children, if applicable. Work with the International Office and other relevant administrators at your institution to keep up with the paperwork and deadlines.
- 3) **Network.** Go to conferences, initiate collaborations with investigators in other US institutions, serve on committees, contact program officers before applying for funding, use social media (Twitter, LinkedIn) wisely.
- 4) **Find Mentors.** Find mentor(s) who understand your goals and is (are) willing to guide you while giving you the space to grow and develop your own ideas.
- 5) **Communicate Well.** Communicate your goals and challenges (including immigration challenges) to your mentor(s) and peers and seek out criticism and advice.
- 6) **Be Unique.** Find your clinical or research niche and stay focused. Develop new research lines that tackle important unanswered questions. The topic might involve international collaborations with your professional network in your country of origin.
- 7) **Apply to Grants.** Apply to all grants that your immigration status allows. Have your mentors and peers review your grants far in advance before the deadline. Language barriers sometimes may impair a successful delivery of the message, and both mentors and peers (especially if native English speakers) can be valuable teachers.
- 8) **Be Resilient.** Learn from every mistake and failure. Help others in the process. Cultivate teamwork. And remember, you are not alone.

alone and should seek assistance from peers who have previously navigated this process and can provide valuable advice.

CONCLUSIONS

We outlined characteristics of common visas used by IMGs pursuing clinical and/or research training in the US. Furthermore, we described common pathways navigated by these individuals for transition from training to practice in both academic and private sectors, focusing on enhancing the nephrology workforce. It is important for both trainees and sponsors to understand the immigration processes, especially in a field such as nephrology where there is a significant presence of IMGs. Trainees should be proactive in obtaining legal consultation and sponsors should assist in the transition from training to practice. While institutions usually employ a systematic approach in sponsoring IMG trainees, sponsors should also try to be flexible and supportive of the needs and goals of the IMG. Finally, professional organizations should be knowledgeable about the immigration process and have the means to advocate for their respective trainees to facilitate a successful transition to practice.

ACKNOWLEDGMENTS

The authors would like to thank Michelle A. Zupancic (Faculty Resource Immigration Consultant at the University of Kentucky) and Radu C. Vasilescu (Immigration Attorney at Jeffries & Corigliano, LLP) for their valuable review, comments and feedback during the preparation of this manuscript. Dr. Neyra is currently supported by an Early Career Pilot Grant from the National Center for Advancing Translational Sciences (NCATS), National Institutes of Health (NIH), through Grant UL1 TR001998.

REFERENCES

- Mullan F, Politzer RM, Davis CH. Medical migration and the physician workforce. *Int Med graduates Am Med.* 1995;273(19):1521-1527. JAMA.
- Pinsky WW. The importance of international medical graduates in the United States. *Ann Intern Med.* 2017;166(11):840-841.
- Austin T, Fragomen J, Shannon C, Montalvo D. *Immigration Employment Compliance Handbook.* Chapters 1 and 4, Eagan, MN: Thomson Reuters, Westlaw; 2020.
- Majeed MH, Saeed F. Denying visas to Doctors in the United States. *N Engl J Med.* 2017;376(9):889-890.
- Meghani SH, Rajput V. Perspective: the need for practice socialization of international medical graduates—an exemplar from pain medicine. *Acad Med.* 2011;86(5):571-574.
- American Society of Nephrology. Nephrology fellows' Survey. <https://www.asn-online.org/workforce/>. Accessed April 12, 2020.
- AJKD Blog. Nephrology workforce Crisis: Don't Forget international medical graduates (IMG). <https://ajkdblog.org/2014/12/11/nephrology-workforce-crisis-dont-forget-international-medical-graduates-img/>. Accessed April 12, 2020.
- American Society of Nephrology. Why are international medical graduates not choosing nephrology? <https://www.kidneynews.org/kidney-news/learning-continuum/why-are-international-medical-graduates-not-choosing-nephrology>. Accessed April 12, 2020.
- Berns JS, Ghosn M, Altamirano RR. International medical graduates in nephrology: Roles, rules, and Future Risks. *Am J Kidney Dis.* 2018;72(1):113-117.
- US Department of State. J-1 visa. <https://j1visa.state.gov/>. Accessed April 12, 2020.
- Austin T, Fragomen J, Shannon C, Montalvo D. *H-1B Handbook.* Chapters 1 - 5, Eagan, MN: Thomson Reuters, Westlaw; 2020.
- Kennedy A. The Politics of Skilled immigration: Explaining the ups and Downs of the US H-1B visa program. *Int Migration Rev.* 2019;53(2):346-370.
- American Society of Nephrology. Grants and funding: transition to independence. <https://www.asn-online.org/grants/tig/>. Accessed April 12, 2020.
- National Kidney Foundation. Research grants. <https://www.kidney.org/professionals/research/awards>. Accessed April 12, 2020.
- American Diabetes Association. Research and grants. <https://professional.diabetes.org/research-grants>. Accessed April 12, 2020.
- American Heart Association. Research programs. https://professional.heart.org/professional/ResearchPrograms/UCM_316889_Research.jsp. Accessed April 12, 2020.
- Polycystic Kidney Disease Foundation. Research funding. <https://pkdcure.org/research-medical-professionals/research-funding/apply-for-funding/>. Accessed April 12, 2020.
- U.S. Citizenship and Immigration Services. Chapter 45 Waiver of Section 212(e) Foreign Residence Requirement. <https://www.uscis.gov/ilink/docView/AFM/HTML/AFM/0-0-0-1/0-0-0-19459.html>. Accessed April 12, 2020.
- Citizenship US, Immigration Services. Conrad 30 waiver program. <https://www.uscis.gov/working-united-states/students-and-exchange-visitors/conrad-30-waiver-program>. Accessed April 12, 2020.
- Appalachian Regional Commission. J-1 visa waivers. https://www.arc.gov/program_areas/J1VisaWaivers.asp. Accessed April 12, 2020.
- Delta Regional Authority. Delta Doctors. <https://dra.gov/initiatives/promoting-a-healthy-delta/delta-doctors-how-to-apply/>. Accessed April 12, 2020.
- US Department of State. Research scholar program. <https://j1visa.state.gov/programs/research-scholar>. Accessed April 12, 2020.
- American Kidney Foundation. Clinical scientist in nephrology program. <https://www.kidneyfund.org/training/clinical-scientist-in-nephrology/#learn-more-about-the-CSN-program>. Accessed April 12, 2020.