

UC Irvine

Mediterranean Journal of Emergency Medicine & Acute Care

Title

The International Medical Graduate

Permalink

<https://escholarship.org/uc/item/6jc8t7cx>

Journal

Mediterranean Journal of Emergency Medicine & Acute Care, 1(2)

ISSN

2642-7168

Authors

Cheaito, Mohamad Ali
Kazzi, Brigitte
Hitti, Eveline
[et al.](#)

Publication Date

2020

Peer reviewed

The International Medical Graduate

Mohamad Ali Cheaito¹, Brigitte Kazzi², Eveline Hitti¹, Kamal Badr³, Salah Zeineldine³, Ziad Kazzi^{1,4}, Amin Kazzi¹

¹Department of Emergency Medicine, American University of Beirut Medical Center, Beirut, Lebanon

²Columbia University Vagelos College of Physicians and Surgeons, New York City, New York, United States

³Department of Internal Medicine, American University of Beirut Medical Center, Beirut, Lebanon

⁴Department of Emergency Medicine, Emory University, Atlanta, Georgia, United States

ABSTRACT

International medical graduates (IMGs) are graduates of medical schools located outside the United States (U.S.) and Canada. IMGs face various challenges on the road to U.S. residency training. These challenges include sitting for the United States Medical Licensing Examinations (USMLEs) to obtain certification from the Educational Commission for Foreign Medical Graduates (ECFMG). After that, IMGs are faced with a foreign application process whereby they must apply for and secure a position in a residency program through the Electronic Residency Application System (ERAS) and the National Resident Matching Program (NRMP). Once accepted into a residency program, IMGs who are not US citizens or legal permanent residents are challenged with securing a visa to be able to practice in the U.S. In this article, we elaborate on these processes and highlight the challenges IMGs may face along the way.

Keywords: Emergency Medicine, International Medical Graduates, National Residency Matching Program, Match, Residency, Visa, Educational Commission for Foreign Medical Graduates, USMLE, Foreign Medical Graduates

INTRODUCTION

International medical graduates (IMGs), formerly known as foreign medical graduates, are physicians who have received their degree from an international medical school listed in the International Medical Education Directory (IMED) and located outside the United States and Canada. IMG classification relies solely on the country of medical study rather than the country of citizenship. Accordingly, IMGs can be classified into U.S. IMGs (if they are U.S. citizens) and non-U.S. IMGs (if they are not U.S. citizens). International graduates of medical schools in the U.S. and Canada are not classified as IMGs.¹⁻⁵ Many IMGs apply to the Match in the U.S. Acceptance into a residency program, however, is challenging. In fact, the 2019

PGY-1 match rates for U.S. IMGs and non-U.S. IMGs were 59% and 58.6%, respectively. This is compared to an overall match rate of 79.6% (U.S. Seniors, U.S. grads, IMGs, osteopathic, Canadian and 5-year pathway) and a match rate of 93.9% for U.S. seniors. Nonetheless, these match rates are the highest for IMGs since the early 1990s.^{4,5}

The Road to Residency in the U.S.

Many IMGs opt to pursue residency in the U.S. for various reasons, including the aspiration to receive high quality training with no resource constraints, the opportunity to earn higher wages, and/or desire to secure employment and have foreseeable career paths.⁶⁻⁸ Challenges are many and start from the moment they decide to apply for residency in the U.S. The first step of the process is obtaining the Educational Commission for Foreign Medical Graduates (ECFMG) certification. It is followed by the submission of residency applications using the Electronic Residency Application System (ERAS) and application to the National Resident Matching Program (NRMP). Once matched into a program, many IMGs need a visa to be able to join the program and practice in the U.S.^{6,9} IMGs continue to face various challenges even after starting residency,

Correspondence to:

Amin Kazzi
Department of Emergency Medicine
American University of Beirut Medical Center
Email: ak63@aub.edu.lb
PO Box 11-0236
Riad El Solh 1107 2020, Beirut, Lebanon
Tel: 961-1-350000

which include cultural barriers, biased perceptions and communication difficulties.¹⁰⁻¹²

ECFMG certification

To apply for residency in the U.S., IMGs are required to have ECFMG certification. This is needed to evaluate their suitability when applying to programs accredited by the Accreditation Council for Graduate Medical Education (ACGME). ECFMG certification requires the completion of the United States Medical Licensing Examinations (USMLEs): USMLE Step 1 exam, USMLE Step 2 Clinical Knowledge (CK) exam and USMLE Step 2 Clinical Skills exam. The mean USMLE Step 1 and 2 CK scores for matched U.S. allopathic seniors, U.S. IMGs, and non-U.S. IMGs are displayed in **Table 1**.¹³ Additionally, the ECFMG requires IMGs to have obtained their diplomas from institutions listed in the World Directory of Medical Schools, indicating that the medical school complies with the ECFMG requirements.^{6,9,14} As of 2023, however, IMGs applying to the US must be graduates of a medical school accredited by an organization authorized to accredit medical programs by the World Federation for Medical Education (WFME).¹⁵

Table 1 The mean USMLE Step 1 and 2 CK scores for matched U.S. allopathic seniors, U.S. IMGs, and non-U.S. IMGs.¹³

Type of Applicant	Mean (SD) USMLE scores	
	Step 1	Step 2 CK
U.S. allopathic seniors	232.8 (17.5)	245.6 (15.0)
U.S. IMGs	222.5 (16.1)	232.2 (14.2)
Non-U.S. IMGs	234.1 (16.4)	239.7 (15.0)

ERAS and NRMP

All applicants to residency in the U.S., including IMGs, need a residency token from ECFMG to be able to register for the ERAS. ERAS has four separate portals. The first is MyERAS, where applicants complete their applications: a personal statement, curriculum vitae, examination transcripts, and personal picture. Applicants select the programs to which they want their applications submitted. ERAS also includes the Dean's Office WorkStation (DWS), where the medical school performance evaluations (MSPEs) and medical school transcripts

are submitted. Additionally, there is the Letter of Recommendation Portal (LoRP), where authors upload the letters of recommendation. Program directors receive and review the applications through the Program Director's WorkStation (PDWS).^{6,16}

Applicants are also expected to register for the NRMP, which is at a later stage to rank the programs that have interviewed at in order of preference.⁶⁻¹⁷

Statistics

IMGs currently constitute a quarter of physicians practicing in the US.¹⁸⁻²¹ In 2019, the number of registered non-U.S. IMGs was the lowest since 2005, and the number of active non-U.S. IMGs was the lowest since 2012. Nevertheless, non-U.S. IMGs had a 58.6% match rate to PGY-1 positions, registering the highest match rate since 1990.⁵

Table 2 2019 Match Data for All Specialties (PGY-1 Positions)⁵

Total Number of	Number
Programs that participated	4,780
Positions offered	32,194
Unfilled programs	569

In 2019, around two-thirds of IMGs matched in primary care disciplines such as the categorical track of internal medicine, family medicine, and the categorical track of pediatrics with more than half matching to their preferred specialty.⁵ Over the past 5 rounds of the match, more IMGs are matching in neurology while less IMGs are matching in obstetrics and gynecology as well as the preliminary track of surgery.⁵ Match rates were higher for U.S. IMGs than non-U.S. IMGs for all specialties except dermatology, internal medicine, child neurology, neurology, psychiatry and pathology.⁴ **Table 2** provides a summary of the 2019 Match data for all specialties (PGY-1 positions).⁵ **Table 3** outlines the 2018 charting outcomes in the 2018 match for international medical graduates.²² **Table 4** compares of the 2018 match rates of U.S. Seniors, U.S. IMGs and non-U.S. IMGs in select specialties.^{4,23}

The Supplementary Offer and Acceptance Program (SOAP)

The SOAP is the process that facilitates the complementation of unmatched residency positions with unmatched residency applicants during Match Week.²⁴ In the 2019 SOAP, the match rate was 8%.⁵

Table 3 Charting Outcomes for the 2018 Match for IMGs*²²

Total Number of	Applicants	Accepted	Percentage
U.S. IMGs that participated	4,238	2,248	53.0%
Non-U.S. IMGs that participated	6,206	3,269	52.7%
Total IMGs that participated	10,444	5,517	52.8%

*The 2019 Match charting outcomes for IMGs are still not available.

Table 4 Comparison of the 2018 Match Rates of U.S. Seniors, U.S. IMGs and Non-U.S. IMGs in Select Specialties.^{4,23}

Specialty	Offered positions	IMGs		U.S. Seniors		U.S. IMGs		Non-U.S. IMGs	
		Number matched	Match Rate	Number matched	Match Rate	Number matched	Match Rate	Number matched	Match Rate
Internal Medicine	7,542	2,828	57.5%	3,195	85.5%	911	56.9%	1,917	57.7%
Emergency Medicine	2,278	99	47.1%	1,606	87.4%	72	48.6%	27	43.5%
Family Medicine	3,629	759	48.7%	1,628	83.8%	519	53.1%	240	41.2%
Pediatrics	2,768	477	67.2%	1,764	90.3%	189	73.8%	288	63.4%
General Surgery	1,319	123	29.4%	1,005	74.4%	61	33.3%	62	26.4%
Neurology	552	228	56.2%	280	55.9%	60	55.5%	168	56.4%
Obstetrics & Gynecology	1,336	93	40.3%	1,051	85.6%	57	46.7%	36	33%
Anesthesiology	1,253	229	65.1%	861	73%	114	67%	115	63.2%

IMGs constituted more than two-thirds of SOAP-eligible applicants in 2019 (67.4%).^{5,23} Table 5 summarizes the 2019 SOAP data for all specialties (PGY-1 positions).⁵

Visa

To be able to practice in the U.S., IMGs who are not US citizens or legal permanent residents (green card holders) need a visa. Getting accepted into a program does not guarantee a visa. There are several visa options available, the most commonly pursued being the J-1 and H-1B visas. Table 6 highlights the differences between the J-1 and H-1B visas. The number of residencies non-U.S. IMGs can apply to is limited by the number of institutions able to offer work visas (J-1, H-1B, or O1).^{6,25}

Cultural Challenges

During residency training, IMGs are presented with cultural challenges that include biased perceptions and communication difficulties.¹⁰⁻¹² In a systematic review of the literature on intercultural issues of IMGs, many IMGs were found to describe

the approach to healthcare in the U.S. as different from their home country, with a major shift to patient-centered care in the U.S. They also discuss a lower hierarchy between different stages of medical training as well as between physicians and their patients. Many study participants discussed coming from areas where physicians are treated with immense respect and almost regarded to be ‘godlike’ and not finding the same degree of respect in the U.S. Finally, one major challenge is the loss of status in society and the clinical environment.¹² IMGs also face many communication barriers including the subtleties of foreign language, the comfort with idioms and slangs, as well as non-verbal communication.¹⁰

Program Directors View

According to the 2018 NRMP Program director survey, the percentage of programs that interview and rank U.S. IMGs and non-U.S. IMGs is 59% and 42%, respectively. Programs give visa status a 4.1 mean importance rating [on a scale from 1 (not at all important) to 5 (very important)] in selecting

applicants to interview and a 4.0 mean importance rating in ranking applicants.²⁶

Table 5 2019 SOAP Data for all Specialties (PGY-1 positions).⁵

Total Number of	Number
Programs participating	589
Positions offered	1,652
Programs filled	403
Positions filled	1,310
Eligible applicants	12,472

Additional Tips

An important way to strengthen applications for IMGs includes attempting to secure observerships, electives, or sub-internships in the US. These rotations are vital for establishing connections with U.S physicians and obtain their support in residency applications. It is not currently known whether most IMGs end up ranking higher, or matching, at sites where they completed away electives. Non-U.S. IMGs are also required to secure a B1 visa to

partake in these rotations, to take the Step 2 Clinical Skills Exam, and to participate in interviews. After graduating, and before applying to the residency training, some IMGs also spend research years internationally or in the U.S. to strengthen their applications.

How Do IMGs Compare to U.S. Seniors and Graduates?

It is best to conclude this article with the available studies that compare IMGs’s post-residency professional practice with that of US seniors and graduates. In one study of 20% sample data from Medicare fee-for-service beneficiaries aged 65 years or older, patients treated by IMG internists had more chronic conditions and lower mortality when compared with US medical graduates.²⁷ Similarly, a study comparing outcomes of care between IMGs and graduates of U.S. medical schools did not find significant mortality difference in populations of congestive heart failure or acute

Table 6 Differences Between the J-1 and H-1B Visas.^{6,25}

	J-1 Visa	H-1B Visa
Sponsor Purpose Validity	ECFMG Restricted to training Lasts as long as the resident is in training.	Institution Allowed to work Granted for up to three years initially.
	Yearly renewal to a maximum of seven years.	Renewal up to a maximum of six years is allowed.
Legal Status	Non-immigrant visa. Holders are not permitted to change their legal status.	Non-immigrant visa. Holders can apply for permanent residency status.
Home Residency Requirement	Has a 2-year home residency requirement, which necessitates that the physicians return to their home countries for two years before they are allowed to apply for any other U.S. visa status*.	No 2-year home residency requirement. However, unless they change their legal status to permanent residents during the training period, physicians are required to return back to their home country for at least one year before being eligible to reapply for another visa.
USMLE step 3	Not required	Required

**Waivers to the "two-year home requirement" are available.*

myocardial infarction.²⁸ Additionally, IMGs are more often reported as caring for patients with public insurance.²⁹

Despite the lower matching rates when compared to US Seniors, IMGs maintain a high interest in applying to the domestic training programs. It is evident that the path for IMGs to the US based

residency training programs is complex and challenging at many levels. The selected IMGs have at least comparable skills to US Seniors. The Question remains; are the non-selected less qualified or they are just the victims of their IMG status? Future studies comparing the non-selected IMGs to the selected US Seniors are needed.

Future of IMGs in the USA

Despite the large increase in US medical schools and graduates, as well as the expanding number of medical schools in the Caribbean and Grenada, the US healthcare system still requires IMGs to fill about 25% of residency spots.³⁰ This is largely due to the parallel increase in insured US citizens requiring primary and advanced medical care following enactment of the Affordable Care Act. As the deadline of 2023 approaches, at which time IMGs applying to the US must be graduates of a medical school accredited by an organization authorized to accredit medical programs by WFME, the number of IMGs eligible to apply for US residency spots may fall precipitously. This is because the majority of IMGs are from India, Pakistan, and the Asian sub-continent, where, at the present time, there are few if any WFME-authorized accrediting bodies. How the US will deal with the potentially large gap between demand and supply in 2023 and beyond remains unclear. This is among the many challenges that face IMGs and the US health system in the years to come.¹⁵

REFERENCES

- Majeed MH, Ali AA, Saeed F. International medical graduates: from brain drain to potential gain. *International journal of medical education*. 2017;8:37.
- Eckhert NL, van Zanten M. US-citizen international medical graduates—a boon for the workforce. *N Engl J Med*. 2015 Apr 30;372(18):1686-7.
- Ranasinghe PD. International medical graduates in the US physician workforce. *J Am Osteopath Assoc*. 2015 Apr 1;115(4):236-41.
- Charting Outcomes in the Match: International Medical Graduates [Internet]. National Resident Matching Program (NRMP); [cited 2018Dec3]. Available from: <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-IMGs.pdf>
- National Resident Matching Program (The Match). Results and data: 2019 main residency match. Washington, DC: National Resident Matching Program; 2019
- Applying for Residency as an International Medical Graduate [Internet]. NEJM Knowledge. 2019 [cited 2019Oct13]. Available from: <https://knowledgeplus.nejm.org/blog/applying-for-residency-as-an-international-medical-graduate/>
- Pinsky WW. The importance of international medical graduates in the United States. *Annals of internal medicine*. 2017 Jun 6;166(11):840-1.
- Traverso G, McMahon GT. Residency training and international medical graduates: coming to America no more. *Jama*. 2012 Dec 5;308(21):2193-4.
- Residency Application Requirements for International Medical Graduates [Internet]. The American Academy of Family Physicians; 2013 [cited 2019Oct21]. Available from: <https://www.aafp.org/medical-school-residency/residency/apply/img.html>
- International Medical Graduates - Strengths and Weaknesses of International Medical Graduates in U.S. Programs: A Chairperson's Perspective [Internet]. The American College of Physicians; [cited 2019Oct21]. Available from: <https://www.acponline.org/about-acp/acp-international/for-international-medical-graduates/training-in-the-us/international-medical-graduates-strengths-and-weaknesses-of-international-medical-graduates-in-us>
- Bourne S. What are the biggest challenges international medical graduates face when starting work in the NHS?. *BMJ*. 2018 Feb 20;360:j5618.
- Michalski K, Farhan N, Motschall E, Vach W, Boeker M. Dealing with foreign cultural paradigms: A systematic review on intercultural challenges of international medical graduates. *PLoS one*. 2017 Jul 17;12(7):e0181330.
- A Comparison of the Characteristics and Examination Performances of U.S. and Non-U.S. Citizen International Medical Graduates who sought Educational Commission for Foreign Medical Graduates Certification: 1995–2004
- How to Confirm That a Medical School Meets Eligibility Requirements for ECFMG Certification [Internet]. The Educational Commission for Foreign Medical Graduates (ECFMG); [cited 2019Oct22]. Available from: <https://www.ecfm.org/resources/medical-school-reqs.pdf>
- Certification [Internet]. The Educational Commission for Foreign Medical Graduates (ECFMG); [cited 2019Nov19]. Available from: <https://www.ecfm.org/accreditation/>
- ERAS Applications [Internet]. [cited 2019Oct13]. Available from: <https://students-residents.aamc.org/applying-residency/article/about-eras/>
- Intro to Main Residency Match [Internet]. The Match, National Resident Matching Program. [cited 2019Oct13]. Available from: <http://www.nrmp.org/intro-to-main-residency-match/>
- Active Physicians Who Are International Medical Graduates (IMGs) by Specialty, 2017 [Internet]. The Association of American Medical Colleges (AAMC); [cited 2019Oct13]. Available from: <https://www.aamc.org/data-reports/workforce/interactive-data/active-physicians-who-are-international-medical-graduates-imgs-specialty-2017>
- ACGME Residents and Fellows Who Are International Medical Graduates (IMGs) by Specialty, 2017 [Internet]. The Association of American Medical Colleges (AAMC); [cited 2019Oct13]. Available from: <https://www.aamc.org/data-reports/workforce/interactive-data/acgme-residents->

and-fellows-who-are-international-medical-graduates-imgs-specialty-2017

20. Ahmed AA, Hwang WT, Thomas Jr CR, Deville Jr C. International medical graduates in the US physician workforce and graduate medical education: current and historical trends. *Journal of graduate medical education*. 2018 Apr;10(2):214-8.
21. Ranasinghe PD. International medical graduates in the US physician workforce. *J Am Osteopath Assoc*. 2015 Apr 1;115(4):236-41.
22. Charting Outcomes in the Match: International Medical Graduates [Internet]. The National Resident Matching Program (NRMP); [cited 2019Oct13]. Available from: <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-IMGs.pdf>
23. National Resident Matching Program (The Match). Results and data: 2018 main residency match. Washington, DC: National Resident Matching Program; 2018
24. NRMP's Supplemental Offer and Acceptance Program (SOAP) [Internet]. The Educational Commission for Foreign Medical Graduates (ECFMG); [cited 2019Oct13]. Available from: <https://www.ecfmg.org/echo/nrmp-soap.html>
25. Abou Dagher G, Lewandowski C, Ali SS, Barsky C, Kazzi B, Cheaito MA, Lotfipour S, Kazzi A, Kazzi Z. The International Medical Graduate & Emergency Medicine. *The Journal of Emergency Medicine*. Forthcoming 2019
26. Results of the 2018 NRMP Program Director Survey [Internet]. The National Resident Matching Program (NRMP); [cited 2019Oct13]. Available from: <https://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>
27. Tsugawa Y, Jena AB, Orav EJ, Jha AK. Quality of care delivered by general internists in US hospitals who graduated from foreign versus US medical schools: observational study. *bmj*. 2017 Feb 3;356:j273.
28. Norcini JJ, Boulet JR, Dauphinee WD, Opalek A, Krantz ID, Anderson ST. Evaluating the quality of care provided by graduates of international medical schools. *Health Affairs*. 2010 Aug 1;29(8):1461-8.
29. Katakam SK, Frintner MP, Pelaez-Velez C, Chakraborty R. Work Experiences and Satisfaction of International Medical School Graduates. *Pediatrics*. 2019 Jan 1;143(1):e20181953.
30. Tips for Researching U.S. Residency Programs [Internet]. Kaplan; 2019 [cited 2019Nov21]. Available from: <https://www.kaptestglobal.com/usmle/blog/tips-researching-us-residency-programs>