International Medical Graduates: Promoting Equity and Belonging
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Abstract
International medical school graduates (IMGs) play a vital role in the health care system of the United States. They constitute roughly one-quarter of the physician workforce, comprising a significant proportion of the primary care providers in high-need rural and urban areas, where they provide equal and, in some instances, better care than U.S. graduates. Nonetheless, they face a series of hurdles in entering U.S. residency programs and throughout their training experiences.

IMGs must expend significant resources to obtain Education Commission for Foreign Medical Graduates (ECFMG) certification, which includes Steps 1, 2 Clinical Knowledge and 2 Clinical Skills of the United States Medical Licensing Examination. They encounter the uncertainty of matching and, if successful, obtaining a visa to enter the United States. Once here, they need to adapt to the complexities of the health care system and familiarize themselves with the cultural nuances, professional behaviors, and communication skills of another country. They encounter biases and microaggressions and lack support groups and mentors. Those who choose an academic career are less likely to obtain leadership positions. This Perspective provides an overview of these challenges and highlights opportunities for change at local and national levels. Specifically, it identifies strategies that would assist IMGs before entry, at entry, during training, at the transition to practice, and in practice. The current COVID-19 pandemic highlights the shortage of physicians in the United States and illustrates the importance of ensuring that IMGs, who are essential health care workers, feel welcome, valued, and recognized for their contributions.

Contributions of IMGs to Health Care in the United States
Beyond the high-quality care they provide, IMGs fill important gaps in the U.S. health care system. They take primary care training positions, such as internal medicine, family medicine, and pediatrics, far in excess of their proportion in the population. For example, in the 2020 Main Residency Match, allopathic medical school seniors filled only 40.2% of the internal medicine positions, 33.1% of the family medicine positions, and 60.4% of the pediatric positions. Not surprisingly, IMGs also comprise a significant proportion of the primary care providers in practice. Using the Association of American Medical College's definition, 41% of the primary care doctors in the United States are IMGs.

It is not only what IMGs practice, but where they practice, that is noteworthy. A recent systematic review of the literature identified predictors of primary care practice locations. While there is considerable state-to-state variability, studies included in the review found that IMGs are disproportionately located in high-need rural and urban areas. Moreover, Asian and Hispanic IMGs were more likely to locate initially in areas that matched their ethnicity.

Finally, IMGs add significantly to the diversity of the physician population. Among residents who have Education Commission for Foreign Medical Graduates (ECFMG) certification, all races and ethnicities are substantially represented and, as a group, the percentage who are people of color is much higher than that of USMGs.

Entry to Training
Challenges
IMGs face a challenging path when entering residency training in the United States. The first step is ECFMG certification. This requires primary source verified completion of a medical school that meets its standards. In addition, applicants must pass USMLE Step 1 and Step 2 Clinical Knowledge (CK), which are available internationally, and Step 2 Clinical Skills (CS), which is only available in the United States. Of those IMGs who start the process, the ultimate ECFMG certification rate is less than 60%. Of those who pass, a significant proportion enter the Main Residency Match, where they again face significant barriers. In 2020, the match rate for USIMGs was 61%, and
for non-USIMGs, it was 61.1%. Once matched, IMGs must acquire a visa and this has proven increasingly difficult, especially for citizens of Muslim-majority countries. There are 2 aspects of this selection process that are particularly challenging. First, it is very expensive, and even more so factoring in exchange rates. In addition to paying the usual fees, IMGs, and especially non-USIMGs, must travel to the United States for USMLE Step 2 CS and for interviews for residency. They also need to apply to a sizeable number of residency programs to increase their odds of finding a position. Only IMGs who have considerable resources can undertake the process.

Second, IMGs seek to distinguish themselves in as many ways as possible. This is important because program directors have little firsthand knowledge of medical schools outside the United States and there is considerable variability in terms of curriculum and quality. Thus, high scores on USMLE step exams are one important way to establish some form of comparability with USMGs. However, outstanding USMLE scores do not ensure an invitation to interview or guarantee success in the match process. IMGs are often advised to take an observership in the United States and to seek letters of reference from physicians during those experiences. Research experience and publication in international journals is also recommended. A well-rounded application (e.g., outstanding USMLE scores, research experience, a practical application strategy) is critical for success. It is noteworthy that the number of IMGs taking USMLE has gone down over the years, likely as a result of these barriers. However, those taking the examinations are likely to pass on their first attempt, although this may be secondary to self-selection. Given these multiple, significant hurdles to entering residency, it is remarkable that the number of IMGs who match has increased each of the past 5 years, with 3,154 USIMGs and 4,222 non-USIMGs succeeding in 2020. Opportunities

Increase the number of training positions. Within the United States, the percentage of IMGs practicing in rural areas increased by 45% from 1981 to 2001. IMGs are more likely to be generalists and to practice in designated underserved areas than USMGs. IMGs bring diversity of clinical experience to the United States. They often have previous clinical experience, additional degrees, and unique skills (e.g., the ability to recognize and treat infectious diseases, an ability to interact with patients from minority backgrounds). The current COVID-19 crisis has underscored the physician shortage in the United States. While there have been recent attempts by the U.S. Department of State to continue processing visas for IMGs, it has been pointed out that the absence of planning for this shortage may “come back to haunt policy makers” and unfortunately the United States is living through its impact. To provide perspective, nationally, there are 3 doctors for every 1,000 U.S. residents; in Mississippi, there are only 2 doctors for every 1,000 state residents. The state also has the poorest life expectancy in the United States; the largest African American population; and the highest percentage of Caucasian doctors, resulting in a mismatch of racial composition of physicians to patients. Systematic reviews have shown significant improvements in chronic disease prevention and management in culturally diverse populations where there are multicultural health workers. Therefore, it is imperative to increase the overall number of graduate medical training positions in the country to address the shortfall of primary care physicians and to further incentivize IMGs to practice in underserved areas.

Improve the selection process. Starting in 2024, ECFMG applicants must be students or graduates of medical schools that are accredited by an agency recognized by the World Federation for Medical Education (WFME). The WFME process for recognizing accrediting agencies is based on a common set of international standards, a requirement for extensive documentation, and it includes onsite inspections by a team of experts. More than 20 agencies are currently recognized, including the Liaison Committee on Medical Education, with many more in process or having made application. Moreover, as additional data about medical schools is acquired, it will be made freely available through the World Directory of Medical Schools. Going forward, the existence of these resources should reduce the uncertainty U.S. residency program directors have about the quality of international medical schools and their graduates.

Unfortunately, the current process for the selection of residents into training is broken. Many U.S. medical schools now offer only pass–fail grades, and soon performance on USMLE Step 1 will be pass–fail as well. These developments might be good from an educational perspective, but program directors will face the daunting task of sorting through hundreds of applications without reliable information. Additionally, there is evidence that more recent assessment (USMLE Step 2 CK) is more predictive of future board certification score and that using medical school admissions (grade point average and the Medical College Admission Test) and USMLE 1 scores for resident selection may not adequately predict ultimate board certification. Consequently, with just one reliable data point, USMLE Step 2 CK, program directors may be forced to more heavily consider medical school reputation in making their initial decisions. This will have adverse consequences for equity and diversity generally, and it will be particularly disadvantageous for IMGs. The fact that the system is broken opens the opportunity for reform, and it is critical that IMGs have representation in that process so that their needs are considered.

Learning Environments

Challenges

Systems of care. The model of U.S. health care is individualistic and far different from the countries where IMGs’ medical schools are located. For example, wards with multiple patients in larger rooms and assigned nurses and staff, which function as “microcommunities,” are common in many areas of the world and result in communal health systems. While communal, these health systems often follow strict hierarchies in patient management with the doctor leading the team and the trainees and nurses following orders.

In contrast, medical teams in the United States involve several different health care professionals, including pharmacists,
physician assistants, nurse practitioners, and social workers, who have significant autonomy. Each team member contributes to the care of the patient and can question the decisions that are made. Given the hierarchical systems from which they come, IMGs tend not to question the attending physician or ask for clarifications. Additionally, functioning effectively in U.S. teams entails giving and receiving feedback to improve the quality of care. Unlike USMGs, IMGs have either limited or negative experiences related to feedback, which provokes anxiety and a fear of exposing weaknesses.

Health care regulations in the United States, such as strict federal Food and Drug Administration mandates, may be quite different than in IMGs’ countries of origin. For example, state departments of health and academic institutions encourage evidence-based medical practice (EBM). Likewise, continuing medical education is mandated by states and specialty boards, requiring a lifelong commitment to maintaining competence. IMGs may not be familiar with these regulatory practices and must acquire the skills to use EBM and social media tools to remain up to date. Transitioning across continents also means learning the generic and brand names of new medications and adapting to the units of measurement used in the United States (in contrast to the metric system).

There are a variety of other issues related to health care systems that IMGs must master to be productive in a U.S. training environment. For example, IMGs need to develop an understanding of Medicare, Medicaid, and other commercial insurances, and they must transition to electronic health care records and order placing systems. Of considerable importance is understanding legal and ethical practice guidelines. IMGs may come from cultures where “do not resuscitate” orders and end-of-life care may not be discussed with patients, and this requires further training.

**Patient population.** IMGs often come from countries where patients may be impoverished or less educated, and they may experience a change in the power differential in the doctor–patient relationship. Patients in the United States have more autonomy, are more involved in shared decision making, and expect more availability and service from their doctors. IMGs may find it surprising when patients ask about a specific medication or a test. The horizontal power differential is in sharp contrast to the hierarchical systems many IMGs come from, leading them to learn on the job that patients expect more opportunities to talk, an explanation of the diagnosis and treatment, and to be involved in shared decision making.

**Communication skills.** Good communication skills are essential for developing doctor–patient relationships and for teamwork. The ECFMG assesses the readiness of IMGs to enter residency programs in the United States and tests for competence in spoken English. This screens out individuals with obvious deficiencies, but does not take into account an understanding of the subtleties and intricacies of language. This plays itself out in unique challenges while obtaining a medical history from patients. Dorgan and colleagues, for example, studied IMGs’ perceptions of the barriers to communication with their patients from the Appalachian region of the United States and found that, despite having undertaken language instruction, trainees struggled with unfamiliar dialects and recalled the first few weeks of transition as “a nightmare.” Such variations in accents—and in local dialects and use of informal colloquialisms, idioms, and sarcasm—are present in interpersonal communication across the United States and pose difficulties to IMGs. Reciprocally, patients have difficulty understanding IMG trainees’ accents.

Obtaining a sexual history is another documented unique challenge. Sciolla and colleagues note that IMGs from countries where traditions, collectivism, and religious belief dominate social action may consider sexuality as an intensely private matter and may have difficulty obtaining complete histories.

Verbal communication is not the only form of communication with challenges. Program directors also note issues with written communication and body language issues and recommend training to improve documentation.

**Research.** IMGs usually have had no opportunity to work on major research grants such as those offered by the National Institutes of Health. They are unfamiliar with grant processes and associated regulation. The intricacies of the ethical approval by institutional review boards may also be new for them, and they have not gone through responsible conduct of research education requirements in the United States. All of these factors place them at a disadvantage as they try to ascend the academic ladder throughout their careers.

**New culture.** IMGs are often “pushed” out of their countries of origin, secondary to geopolitical and economic problems, and they seek an improved personal and professional life. It is also true that many IMGs are “pulled” to the United States and other high-income countries by offers for better salaries and improved quality of life and some may come from affluent backgrounds. Irrespective of the reasons to move to the United States, the journey is long, tedious, and expensive. Further, IMGs struggle with moving “into a culture that was new and unfamiliar” to them. They have moved to a new country and often have no family or support networks to rely on, and they face “performance pressure” at work. IMGs describe going through 3 phases on entry to the United States: (1) “Loss” of personal identity, belonging, financial autonomy, and ability to fulfill familial roles; (2) “Disorientation,” both professional and personal, and they report “feeling like aliens”; and (3) “Adaptation,” which they characterize as trying to “blend in” and “staying out of trouble.” Women IMGs in particular face additional challenges related to their cultural backgrounds, such as different norms regarding personal attire and societal expectations regarding child and elder care.

**Bias and discrimination.** IMGs describe overt and subtle forms of bias and discrimination, which begin before the match. While roughly 60% of IMGs match into a residency position, recent geopolitical factors are influencing selection, putting applicants from certain parts of the globe (predominantly Muslim countries) at a disadvantage. Common comments include suggestions that IMGs return to their country of origin or references to a “good” match being one where most residents are American graduates. In fact, programs that have more IMGs and an absence of...
USMGs are considered “weak.” IMGs get labeled as “antisocial” or FMGs (foreign medical graduates). They reconcile themselves to limitations in choice of geographic location or specialty by considering these to be a transactional cost of living in the United States or just “part of the deal.” IMGs note that they do not see people like themselves in top positions in organizations. Early in their careers, they see White residents picked for the chief resident position, and later in their careers, they do not see many IMGs in leadership positions. It is important to note that despite multiple concerns about the competence of IMGs, there is no difference in mortality of patients cared for by IMGs compared with USMGs.

### Opportunities

Table 1 summarizes the opportunities for integrating IMGs into the U.S. health care system according to time periods.

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<thead>
<tr>
<th>Time period</th>
<th>Opportunities</th>
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<tbody>
<tr>
<td>Selection</td>
<td>Immigration reform needed to address visa issues faced by IMGs GME spots need to be increased nationally to address physician shortages World Federation for Medical Education data for recognizing accredited agencies will help reduce uncertainty about quality of IMGs; needs to be built into the selection process IMGs needed on national forums to highlight selection issues they may face because of Step 1 change to pass/fail Formal certificate programs for IMGs should be available but not mandatory</td>
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<tr>
<td>Pre-entry</td>
<td>Familiarizing IMGs with nuanced U.S. professional behaviors, ethics, communications, and interactions through assignments using simulated doctor/patient video vignettes Orientation to milestones and performance evaluation tools that will be used during residency training</td>
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<tr>
<td>Entry</td>
<td>Cultural orientation and assistance with day-to-day issues (in addition to standard institutional orientation process) IMG support group IMG support group Implicit bias training for faculty, staff, and trainees Orientation to evidence-based medicine tools, responsible conduct of research, teamwork, and feedback skills</td>
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<tr>
<td>Through training</td>
<td>IMG support group Peer support group Mentorship Availability of well-being program and mental health support Fostering IMG identity formation by preventing alienation from country of origin, denigration, and by providing environment where differences can help with transformational learning Recognizing specific challenges that women IMGs face and providing them with support</td>
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<tr>
<td>Transition to practice</td>
<td>Residency program directors who understand IMG visas and waiver programs Sessions on negotiation skills and understanding contracts Incentivizing practice in underserved areas</td>
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<tr>
<td>Practice</td>
<td>Encouraging IMGs to engage in volunteerism in country of origin or global medicine program (if of interest) Creation of IMG regional and national forums led by them and connected to national accreditation bodies Building national leadership programs for IMGs National awards for IMGs for outstanding contribution to their field</td>
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Abbreviations: IMG, international medical school graduate; GME, graduate medical education.

*Position obtained in Match but waiting to join.

**Before training.** There are programs in the United States and internationally that prepare IMGs for entry to residency training. For example, the University of Washington has developed a certification program for IMGs who are interested in applying for the Match that includes a formal clinical experience with all the responsibilities of a fourth-year U.S. medical student. Such programs provide IMGs with exposure to clinical medicine and the culture before matching. The University of Nebraska has offered a pre-course for matched IMGs focusing on acculturation, addressing immediate needs before starting training.

Canada and Australia also use innovative techniques to prepare trainees for the shift in culture. Canada has used simulated doctor–patient video vignettes to highlight nuanced professional behaviors, communications, and interactions. Research from Australia provides overwhelmingly positive feedback from IMGs in an observer program, documenting an increase in confidence and perceived ability to integrate into the Australian health care system. It is important to note that only IMGs with resources would be able to use the opportunity of in-person formal training programs before securing a position. However, COVID-19 has expanded our use of virtual methods of education and training. Development of online programs would make education and training more universally accessible and enhance the ability of IMGs to integrate into graduate settings.

**During training.** Many institutions have developed curricula for IMGs that use real-life examples and focus on the local culture and its impact on language. Many institutions have developed curricula for IMGs that use real-life examples and focus on the local culture and its impact on language.

However, most of these are one-time events; it would be more useful to provide repeated interventions. Additionally, while curricula using reflection to promote learning are helpful, the use of simulation and experiential learning would go one step further in helping IMGs prepare for the cultural shift.

On entry into residency programs, day-to-day topics of need should be touched on, including getting a driver’s license, obtaining a credit card, finding a place to stay, etc. Additionally, cultural taboos (including racism), roles of members in teams, and other health care regulations can be discussed. This
helps with acclimatization to the culture of the specific health care system as well. Such training needs to take into account the heterogeneity of IMGs as the moral themes of their specific countries can lead to different types of cultural conflicts. Examples from Canada detail cultural curricula for IMGs that can serve as frameworks for others planning to undertake such programs.

During the early part of residency, a check-in with trainees about specific needs would be helpful as would the formation of support groups where IMGs can safely discuss the issues they face. An example is provided from Australia, where they have pilot tested a funded peer support group program. Of note, sufficient time needs to be built into IMGs’ training to address the psycho-social and disorientation issues they may experience.

It is important to note that IMGs do not necessarily need to accommodate all their behaviors to cultural norms. There are instances when maintaining differences have been shown to be beneficial. For example, IMGs who maintain their accents sometimes find it can be a conversation starter, helping with the doctor–patient interaction. While it is essential for IMGs to understand the U.S. culture, it is also important to be positive about the value of their culture of origin. Fostering their professional identity formation would include valuing differences, while working to impart quality medical care.

IMGs need orientation to the Accreditation Council for Graduate Medical Education milestones and the performance evaluation tools used by the residency program. Additionally, institutional training for faculty, staff, and trainees in implicit bias and microaggressions can also help improve the working environment for IMGs. Programs to help IMG well-being that focus on providing them with tools to deal with discrimination and bias also need to be considered. Similar to the general population, IMGs may have their own biases. Training in implicit bias for IMGs can help create self-awareness.

Finally, residency program directors can support IMGs by increasing their own understanding about the visa and waiver processes, thereby positioning themselves to be able to advise and advocate for IMGs. Supervising IMGs also serves as an opportunity to model cultural sensitivity and engage with them on how their culture manages sensitive topics in medicine. Mentorship impacts learners of all backgrounds, and program directors should ensure that IMGs have mentors (formally assigned as well as informal). IMGs may have significant guilt about immigrating, and faculty can support them by encouraging them to get involved in giving back to their home countries and engaging in volunteerism. Additionally, they can use their IMG connections to establish global medicine programs or electives for medical students.

**Transiting to practice.** Programs that understand the barriers faced by IMGs and deliberately foster a community of IMGs have demonstrated that their trainees pass the board exams at a high rate, go on to prestigious fellowships, and take on faculty positions at well-known programs. However, as IMGs transition to practice, they will likely have specific issues related to negotiating new positions and signing contracts that need to be addressed. Moreover, they report lower career satisfaction than USMGs, which is concerning for a variety of reasons.

In addition to what can be done at the program level, there is also a need for forums at institutional, regional, and national levels that bring together IMGs who can share experiences and help each other address their challenges and opportunities. National bodies might consider building leadership programs for IMGs, similar to those that exist for women and underrepresented minorities. National awards for IMGs for outstanding contribution to the field would allow recognition of their achievements.

**Conclusions**

In this paper, we have identified the challenges that IMGs face in the United States as well as several opportunities for addressing them. Parallels can be drawn between their experiences and those of physicians from underrepresented backgrounds in the United States (such as people of color; women; people who identify as lesbian, gay, bisexual, transgender, or queer; and people living with disabilities) who also face social isolation and difficulty in professional advancement. It is noteworthy that, despite the challenges, IMGs maintain high self-esteem and have higher scores on personal growth scales; this might be secondary to feeling energized after overcoming life’s challenges and persevering through adversity. In recognition of their broad contributions to health care in the United States, as well as fundamental principles of equity and fairness, residency programs and national organizations need to consider the specific training needs of IMGs and provide support throughout their career trajectories.

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**References**
