

# Selecting international medical graduates (IMGs) for training in US surgical residencies

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TRAINING INDIVIDUALS who completed their medical education outside the United States, the so-called "International Medical Graduates" (IMGs), is an issue of growing importance. IMGs continue to fill vital positions not taken by US medical school graduates. In fact, Whitcomb et al<sup>1</sup> reported that 12% of general surgery residency programs were "IMG dependent." In the 2005 match, 9% of the 2382 general surgery positions were filled by IMGs (7% of the categorical positions and 12% of the preliminary positions).<sup>2</sup> Many IMGs are talented, knowledgeable, and highly motivated physicians who do very well in US residency programs. From the perspective of the American surgical workforce, 9% of IMG surgery graduates who remain in the United States enter academic practice, a percentage that compares favorably with the 13% of US residents who enter academic practice.<sup>3</sup> For their native country they can represent either a major loss ("brain drain") when they remain in the US, or a major gain when they return to their country of origin and set up new programs and systems. Graduates who return usually become prominent members of academic or community practices and, because of their advanced surgical education, reach positions of influence within their society. This allows the US to influence health care in developing nations and adds another dimension to the perspectives discussed above: that of continued leadership, relevance, and respect in the world at large.

The training of IMGs also has the potential to impact individuals and residency programs in a very negative way. For example, IMGs lack an opportunity to acquire valid clinical experience in the US prior to their residency application, and programs can suffer without a base of reference to assess candidates' abilities. Thus, the candidates face a substantial risk of personal loss, and the programs that accept them accept face the risk of hiring individuals who, for a number of reasons, may never be able to fulfill their training or do so at an extraordinary expense of faculty time and effort. This paper discusses the current state of affairs with particular emphasis on the applicant and the program perspectives and describes the development and implementation of a system that substantially reduces the risks of failure.

## CURRENT STATE OF AFFAIRS

**The applicant's perspective.** Once an IMG decides to pursue residency training in the United States, she or he has a number of barriers to overcome. The first obstacle is that of acquiring a visa and certification from the Educational Commission for Foreign Medical Graduates (ECFMG). Obtaining ECFMG certification in the United States has been estimated to cost \$3445, excluding travel, hotel and living costs, and takes a minimum of one year, though more commonly two or three years, to complete all the exams. This amount of money is equivalent to (and in many instances far greater than) one year's salary in Third World countries. Most often, family members support the IMG in their pursuit by sending money or providing room and board. In addition, many IMGs must work at a second job on nights and weekends. Another obstacle is that of establishing a relationship with a potential mentor in the United States, which is considered by many to be an important step in obtaining a US residency position. The traditional mode of exposure to US medicine is through an observership or a research lab. For a variety of

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reasons, this exposure is less than ideal for the IMG. Along with the financial hardship, these barriers put pressure on the IMG to succeed as quickly as possible. Thus, the stakes are high, but the motivation to succeed is also high.

Some IMGs come to the United States with prior training and clinical experience that gives them an advantage. They also add diversity to our residency programs and offer different perspectives about the US health care system.<sup>4</sup> However, even these IMGs face some potential disadvantages. The training environment in the United States varies substantially from place to place, ranging from small, community hospital programs based at 1 or 2 institutions to large university programs where residents can travel to as many as 5 to even 10 different hospitals. One environment provides a closely mentored, stable environment whereas the other provides a fast-paced system requiring the need for rapid acclimatization to new hospital systems every few months. In fact, US graduates self-select themselves for a larger program rather than a smaller, more intimate residency program based on advice from mentors or through their own self-awareness and "gut instinct" while on the interview trail. The IMGs don't have these advantages. They are anxious to take any opportunity provided and thus have a greater chance ending up with a bad fit.

Furthermore, they're asked to step right into a highly complex, fast-paced, US health care system with no preparation. Absolute requirements for success are computer facility, expert receptive and expressive English language capabilities, organization, and the ability to effectively multitask. They are expected to have acquired a certain standard of medical knowledge, patient presentation skills, understanding of standard abbreviations, order writing and data synthesis abilities, some of which may be unique to the United States. Whereas US medical graduates are gradually immersed into this system during medical school, the IMG does not have this option. This puts them at a disadvantage from the first day of residency. Despite steady improvement, some never catch up to their peers. Even when an IMG has been able to negotiate the first hurdle of being selected for residency training, the person faces a substantial risk of failure. Although bad for the residency program, it is certainly devastating for the IMG who is unlikely to be given another chance in the United States.

**Residency program perspective.** The key question asked by residency program directors is "Can this person do the job in my program?" Despite IMGs' reported success in their country of origin, equivalent performance results in the United States

are not guaranteed. One problem US program directors face is that they have no way to accurately evaluate records from foreign institutions. The new Clinical Skills Assessment (CSA) exam, instituted by the ECFMG in July 1998, was designed as a rigorous assessment of clinical skills, such as history-taking, physical examinations, and ability to communicate with patients in spoken English.<sup>5</sup> A number of studies have validated the CSA and demonstrated that it assesses proficiencies distinct from those assessed by the USMLE components.<sup>3,6</sup> However, concerns about clinical and interpersonal skills and language, which should be less common and less severe with the CSA exam, are still more likely among IMGs than US graduates.<sup>7,8,9</sup> In fact, although the 1998 CSA requirements have improved applicant quality,<sup>5</sup> a recent study found that there were still problems with many of the IMGs entering their residency program.<sup>10</sup> In the same study, USMLE Step 1 and Step 2 scores neither predicted clinical performance nor future ABSITE scores. Some of the reasons for poor residency performance included inadequate command of the English language, a low level of basic medical/surgical knowledge, cultural differences, attitude problems, poor time-management and multitasking techniques, and lack of understanding of technology developments and procedures unique to the US hospital systems (Table I). Although the current system for IMG entrance into US medicine through observerships and laboratory work can permit evaluation of some of these skills, they are usually insufficient to determine a candidate's suitability for residency training. We have always assumed that it is just as worthy of our efforts to train those IMGs who will stay in the United States and provide high-quality care to the US public as it is to invest our resources into training those who will go back to other countries and contribute there. The key element is to recognize and bring into the system those IMGs who will succeed in a US training system. To that end we have developed a program that addresses some of the shortcomings of the current system.

**Predicting who will succeed in a US surgical residency.** In August 2002, we developed a Certificate Program for IMGs that has now enrolled 29 physicians from every continent except Australia and Antarctica. This program enrolls 4 to 10 IMGs per year into an intensive 8-week surgical subinternship program giving the IMG firsthand clinical experience in a US hospital setting.<sup>10</sup> A notable difference from the US fourth year medical student subinternship is an emphasis on intern level floor/clinic activities and minimal OR exposure for Cer-

**Table I.** Factors associated with failing a US residency

<i>Reasons for Failure</i>
I. Credential issues
II. Poor performance
A. Knowledge-related problems
1. Inadequate level of medical/surgical knowledge
2. Poor command of English, both receptive and expressive
3. Difficulty in adapting to the technology/procedures in US hospitals
4. Poor time management and multitasking techniques
5. Poor synthetic reasoning skills and inability to understand how to execute standard surgical algorithms in patient evaluation and management
B. Personal/cultural problems
1. Interpersonal difficulties with faculty, residents, and staff
2. Lack of acceptance of deficiencies and inability to accept constructive criticism
3. Poor work ethic
4. Poor adjustment to the fast pace of residency training in large, multihospital systems

tificate Program participants. IMGs are required to take full responsibility for clinical activities under direct supervision of residents and attendings. By the end of the 8 weeks, the IMG is expected to function at the level of an intern. During the program, the IMG is able to learn about the US health care system, and test their abilities to multitask and prioritize work. The residents and faculty are able to evaluate the IMGs' fund of medical/surgical knowledge, work ethic, initiative, ability to accept constructive feedback, both receptive and expressive issues with English, and any interpersonal problems. Successful graduates receive 16 CME credits, a certificate of completion, and letters of recommendation from the faculty. Thus we have moved away from "observerships" and from requiring IMGs to work in a laboratory setting, neither of which provided us with the ability to evaluate their suitability for residency training and which did not provide the IMG with anything at the end of the day. Instead, we have created a system that makes the IMGs function as residents and exposes them to the "real thing." This allows faculty to evaluate the IMGs' traits as potential trainees, and it provides the IMG with a wealth of experience and a certificate, both of which are worthy of their time, effort and expense.

Over the past 4 years, we have found that our Certificate Program provides IMGs with a rich educational experience and enough practice to successfully integrate into a US residency. It provides the program enough time to correct deficiencies, to get to know the IMG, and to identify those with chances to succeed. Of the 29 participants, 15 have joined our residency program as preliminary residents and 3 entered residency training elsewhere. All who have entered our residency program are functioning on par with our US medical school graduates. Furthermore, despite low to modest Step 1 and Step 2 scores, the performance of this group on the ABSITE exams has been uniformly outstanding. This strong pool of preliminary residents will be available to move into vacant categorical openings throughout the United States. A number have already filled such positions in our program.

The other value of this program is to identify early those who do not have the necessary abilities or desire to succeed in the United States. Although most can do well in a US surgical residency program, others do not have the basic knowledge, focus, or synthetic abilities required to practice surgery in our system. It is known that, "The use of inductive reasoning in making clinical judgments, assumed in Western culture, is not a part of all cultures or educational systems."<sup>11</sup> For these doctors, we're now able to counsel them at an earlier stage before significant emotional and financial resources have been invested. Of our cohort of 29 Certificate Program graduates, 11 returned to their own countries. Two physicians were offered a preliminary position in our program, but after the Program's intense immersion into the US system they reevaluated their goals and decided to return to their own country for family and lifestyle reasons. Finally, 9 IMGs were counseled that they were not competitive for training in our program specifically because of performance difficulties during the program.

## CONCLUSION

Wider application of a more formalized educational and evaluative process for IMGs is recommended. This would provide a significant pool of applicants with a rich educational experience and enough practice to successfully integrate into a US residency and identify those with better chances to succeed. It is essential that IMGs be set up to succeed in their preliminary years so that they are able to move into open categorical positions and continue in graduate medical education. Wide application of a Certificate Program for IMGs and

exchange of information among program directors should facilitate recruitment and provide the number of residents needed to fill critical positions in the United States and improve health care not only in the United States, but also in many other parts of the world.

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