BACKGROUNDER:
INTERNATIONAL MEDICAL GRADUATES (IMGs) AND THE CANADIAN HEALTH CARE SYSTEM

A Joint Project of the Committee on Health Policy and the Committee of Medical Education

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I. THE BASICS

Who are IMGs?

International medical graduates (IMGs) are individuals who have completed, or will complete, medical training and/or residency outside of Canada or the United States. They are graduates of schools that have not been accredited by the Association of Faculties of Medicine of Canada the Licensing Committee on Medical Education. The IMG designation is strictly a description of educational training and does not describe citizenship or legal status in Canada. As such, IMGs can be:

1. Canadian citizens who have studied medicine internationally. This is also known as International Medical Graduates of Canadian Origin (IMGCs) or Canadians studying abroad (CSAs).
2. Immigrant physicians who immigrated to Canada after completing their MD, and possibly residency, abroad. Frequently these individuals were practicing physicians in their country of origin or education.
3. Visa trainees whose post-graduate education is sponsored by their country of origin. These individuals apply directly to Canadian medical students and do not need to go through the Canadian Resident Matching Service (CaRMS). Although visa trainees do not directly compete with the two other categories of IMGs above, many of them take up the same positions and resources as IMGs for training and working in Canada.\(^1,2\)

The countries from which immigrant IMGs move to Canada – also known as source countries or countries of origin – have changed in the last several decades.\(^3,4\) In the 1970s to 1980s, the India, UK, Poland, Ireland, Egypt and South Africa were the main contributors of IMG applicants. Recently, more IMGs are arriving from Saudi Arabia, Pakistan, Romania, Libya and Iran.\(^5\) In 2014, most participants of the CaRMS residency match were from Central America & Caribbean, Europe, and Asia, with many of those matched at the first iteration coming from Europe and Central America / Caribbean.\(^4\)

In recent years, a growing number of IMGs accepted into residency positions are comprised of Canadians studying abroad (IMGCs) who wish to practice in Canada.

How many Canadians are studying medicine abroad?

In 2010 an estimated 3,750 Canadian citizens were studying medicine abroad, many from the Caribbean (56%), Ireland (18%), Australia (15%) and also in Poland and the Middle East.\(^2\) In contrast, approximately 11,000 students are enrolled in undergraduate medical education in Canada.\(^6\) Out of 1000 students surveyed in 2010, the majority (77.6%) reported that they chose to study abroad due to their inability to obtain a placement in a Canadian medical school.\(^2\) Most of these students (90%) hope to return to Canada for at least a part of their postgraduate training.\(^7\)
Why do IMGs choose to practice in Canada?

For immigrant IMGs, the choice to live and work in Canada as a physician is largely due to various push and pull factors. Push factors are conditions in the countries of origins that compel IMGs to leave. These include a lack of security, scarce work opportunities, or unfavorable working / living conditions at home. A study on IMGs show that family-related issues, such as marriage to a Canadian, better education for children, are the major factors for wanting to leave their country and move to Canada. Other push factors include the socio-economic and/or political situation at home, better physician remuneration, and improved opportunities for professional development. One of the main pull factors for wanting to live and work in Canada is the Canadian health care system.

How many IMG physicians are currently training or practicing in Canada? Where do they practice?

In 2014 IMGs constitute about 18,531 (24%) of the 77,479 total physicians in Canada. This has decreased from the peak of 30 years ago, where IMGs accounted for 33%.

In absolute terms most IMGs practice in Ontario, which offers 200 new training and assessment spots each year for IMGs. This is followed by Alberta and British Columbia. Provinces with substantial rural populations, rely heavily on IMGs and employ a higher proportion of them relative to Canadian graduates. About 41% of physicians in Newfoundland and Labrador are IMGs, as well as 54% in Saskatchewan.

The proportion of IMGs completing their post-MD training in specific specialties are similar to that of CMGs. Between 2003-2007, 699 (37%) of IMGs pursued family medicine for residency compared to 2921 (38%) of CMGs. 645 (34%) of IMGs entered into medical specialties, 313 (17%) into surgical specialties, 141 (8%) into pediatric specialties, and 81 (4%) into lab medicine. These are comparable to CMGs, of whom 2863 (37%) were in medical specialties, 1397 (18%) were in surgical specialties, 420 (5%) in pediatric specialties, and 133 (2%) in lab medicine.

How do IMGs obtain a medical license to able to practice in Canada?

Becoming a fully-licensed physician in Canada as an IMG is a long, arduous, and expensive process. Moreover, the specific steps and requirements vary according to each province.

There are two main routes available for IMGs to become practicing physicians in Canada: 1) entry-to-residency or 2) entry-to-practice.

The entry-to-residency route requires preparing specific documents before arriving to Canada. This involves confirming that one’s medical degree is from a recognized WHO / FAIMER medical school, using the International Medical Education Directory (IMED) database. Applicants will then take the Self-Administered Evaluating Examination (SAE EE) to estimate their peer-related performance in the MCC Evaluating Exams (MCC EE), before submitting their final medical diploma and other related portfolio through the MCC.
Physicians Credentials Repository. After this, one must then take the Medical Council of Canada Evaluating Exam (MCC EE) and National Assessment Collaboration OSCE (NAC OSCE). Exceptions for the MCC EE may apply for those with Canadian or American Board specialty certification. Depending on the province or territory, the IMG may be asked to take further assessments and meet additional eligibility requirements to qualify for residency. These include taking the National Assessment Collaboration (NAC) exam, the MCC Qualifying (MCC QE) Part I and Part II.  

Most IMGs, including many who were practicing physicians in their country of origin, are required to go through the Canadian residency program (CaRMS). If the applicant meets the required qualifications, he/she will be interviewed for a postgraduate residency training program. It is important to note that depending on the province, IMGs may be given positions after CMGs have matched, during the second CaRMS iteration, or they may compete in a separate parallel stream. Once accepted, the applicant will complete the chosen program and, as with CMGs, will register under the licensing provincial college and will take exams for certification by the CFPC or RCPSC. Those who enter residency may also be eligible to shorten the duration of their residency, if they have already acquired certain competencies abroad. This is facilitated by the university and the Medical Regulatory Activity (MRA). For the most part, residents who enter through ministry-sponsored training programs must work in designated underserviced communities under a 5-year return-of-service contract. (Appendix)

The eligibility-to-practice route allows physicians to practice medicine within certain limits and requirements, such as having a sponsoring organization and a supervisor approved by the provincial college. This route is for IMGs who have had at least one year of postgraduate training in their specialties and need between one to four years of training. There are slight differences in acquiring full licensure, depending on the medical regulatory authority & the requirements of the international medical graduate program of the province / territory that they choose to practice. This is evaluated through the Practice Ready Assessment (PRA) of their Provincial Regulatory Authority, except in Ontario, where IMGs apply through CEHPEA. Those who have graduated from a US-accredited school can compete directly with CMGs for residency positions. Otherwise, IMGs will need to apply for limited IMG-specific spots, which are few and often associated with return-of-service contracts that determine where they may post-residency.

All jurisdictions will require at least two years of postgraduate training to obtain licensure. Only when the MCC QE Part II is passed will the IMG be awarded the Licentiate of the Medical Council of Canada.

II. CMGs, IMGs AND RESIDENCY POSITIONS

How many residency positions are available each year for Canadian and international medical graduates?
A total of 3321 residency positions were available in across Canada in 2015. In the first round of CaRMs interviews and matching, 29.9% (2984) of these were open to CMG applicants and 10.1% (337) were open to IMG applicants. All unfilled positions are bumped to a second round of CaRMs interviews, for which both CMG and IMG applicants are equally eligible.

It is challenging to compare these numbers historically, as parallel streams for CMGs and IMGs have only recently been introduced in some parts of the country. Previously, IMGs were predominantly only eligible to apply to the second round of CaRMs matches to positions which had remained unfilled after the first round.

Who determines the number of residency positions available?

Provincial and territorial Ministries of Health determine the total number of residency positions available, the specialties in which they are available, and the proportion open to CMGs and IMGs. The ministries also fund these positions.

How many IMG applicants apply to CaRMS each year for a residency position?

The number of IMG applicants to CaRMs has more than doubled in the last decade. In fact, in 2013 the number of IMGs who participated in CaRMs (2962) surpassed CMGs (2837) for the first time in history. Several factors, outlined below, have contributed to the increasing number of IMG applicants.

Firstly, in the last decade the CaRMs application process moved online making it more easy and accessible to all applicants.

Secondly, until recently physicians trained outside Canada were able to immigrate here under the Federal Skilled Worker program. Unfortunately, many have been unable to obtain licensure or a residency spot and these immigrant IMGs still constitute the majority of IMG applicants.

Finally, an increasing number of Canadians are studying medicine abroad and the majority hope to return to Canada to practice medicine. In 2006, an estimated 1500 Canadians were studying medicine abroad. In 2011, this estimate more than doubled to 3,750.

Are the number of residency positions awarded to IMGs increasing?

While an increasing number of IMGs are starting residency in Canada each year, so are an increasing number of Canadian students. So while the total number of IMG R-1s nearly doubled from 268 in 2005 to 496 in 2013, the proportion of IMGs to CMGs has stayed largely the same: since 2005 the proportion of IMGs starting residency rose from 13% to a peak of 17% in 2009, and subsequently has steadily declined to a low of 14% in 2014.

Are CMGs and IMGs in competition for the same CaRMs positions?

Yes and no. With respect to the CaRMs matching process, CMGs and IMGs for the most part are not competing directly with one another. In a first round of residency matches, CMG and IMG applicants apply to parallel streams with an pre-allotted quota of positions.
each stream stream. In 2015 for example, out of a total of 3321 residency positions 2984 (89.9%) were CMG-specific and 337 (10.1%) were IMG-specific.\textsuperscript{20}

Positions not filled during this round of interviews are bumped to a second round, at which time both IMGs and CMGs apply in the same stream and are in competition with one another. Of the 3321 positions available in 2015, 3105 were filled in the first round and 216 remained open for a second round of interviews. 164 CMG applicants and 1137 IMG applicants competed in this second round.\textsuperscript{20}

**What are the respective matching rates of IMGs and CMGs?**

In 2015 match rates for IMGs and CMGs respectively were 21.2% and 95.2%.\textsuperscript{20} These match rates have been consistent for the last 10 years with minor fluctuation.

Though the rate of matching has remained largely consistent over the last decade, the total number of unmatched students has increased given the increase in total number of applicants, i.e. CMG applicants increased two-fold in the last decade from 1405 to 2862.\textsuperscript{20}

Most recently, a substantial number of IMGs match to family medicine, followed by internal medicine, psychiatry, and pediatrics. The most common matches were at University of Toronto, UBC, University of Ottawa, and McMaster University.\textsuperscript{25}

**Do Canadian IMGs and immigrant IMGs have the same matching rates for CaRMs?**

No. While Canadian IMGs represented approximately a quarter of the applicant pool in 2011, they received about half of the available positions.\textsuperscript{26} Immigrant IMGs have a much lower match rate than Canadian IMG applicants, respectively 6% and 20.9% in 2011.\textsuperscript{26}

The proportion of immigrant IMGs to Canadian IMGs accepted into residencies continues to decrease. In 2005, immigrant IMGs represented 65.9% of all IMGs in post-MD training. By 2011, their proportions dropped to 48.7%.\textsuperscript{27}

**What concerns, if any, exist about IMGs and the CaRMs matching process?**

The relatively fewer number of IMG positions available is controversial issue (see socasma.com for a perspective from Canadians Studying Abroad, as well as the articles linked below in further resources). Not all specialties reserve positions for IMGs in the first round of CaRMs. An ethical controversy arose recently when the Tyee exposed a 2013 decision by UBC to ostensibly hold a CMG position for a favored IMG candidate--one who had both physicians in the family who were also advocating for more IMG positions politically (see http://thetyee.ca/News/2015/02/06/Former-Cabinet-Minister-Wins-UBC-Residency/).

**III. CONSIDERATIONS AND CONTROVERSIES**

**What are the ethical considerations of recruiting IMGs?**

*a. Brain-drain Considerations*
With increased globalization, the world has witnessed the migration of health care workers from rural to urban centres, from developing to developed countries, and from public to private sectors, which is commonly referred to as the ‘brain drain.’ The reasons for health care worker migration are multifaceted and include a lack of opportunity, an oppressive political climate, and overall poor quality of life (Misau et al. 2010; 4).

In the 1970’s, much of the IMGs migrating to Canada were from Ireland and the United Kingdom. This is no longer the case. The top two source countries currently for IMG migration to Canada are South Africa and India – countries that are facing their own severe health care worker shortages (4). This was publically demonstrated in the early 2000’s when the South African High Commissioner to Canada asked the Canadian government to refrain from its current recruitment of South African physicians (Dauphinee, 2005; Dove, 2009). Developing countries, such as South Africa and India, invest millions of dollars into the training of physicians in order to better equip their own health care needs; and hence, the recruitment of doctors from such fragile situations raises many ethical concerns.

b. Return-of-Service Agreements

In order to improve physician shortages within rural and remote areas of Canada, it has become common practice for IMGs to be required to sign a return-of-service agreement to an underserviced area within Canada, in exchange for a residency position. This is often the only way for IMGs to become practicing physicians within the Canadian health care system. Urban areas tend to have more ethnic diversity, which can make the move to an underserviced area a difficult one and often holds more challenges for IMGs than it does for those raised in Canada (Walsh et al., 2010). Additionally, IMGs are more likely to move to more urban areas after their rural agreement has been completed and are statistically less likely to stay long term in smaller communities than their Canadian trained counterparts (3,4).

c. Sustainability and Human Health Resources

Relying on immigrant IMGs and Canadian IMGs to improve physician shortages within Canada, particularly in rural communities, is not a sustainable approach. It is imperative that underlying issues within Canadian medical education are addressed, in order to improve human health resource shortages.

What are the challenges for IMGs studying and working in Canada?

One of the largest challenges for both immigrant and Canadian IMGs is obtaining a valid medical license in Canada. The licensing of physicians is dependent on each provincial regulatory authority, in which there is much variation across the provinces (Dove, 2009). There is a lack of resources to help support IMGs in understanding and navigating the licensure processes within Canada, further exacerbating this issue (Foster, 2008).

In addition to licensure barriers, four foundational orientation barriers for IMGs have been identified by Walsh et al. (2010) which include: (1) oral and written English or French
proficiency; (2) a lack of communication skills, in particular, non-medical language; (3) cultural differences; and (4) a lack of understanding around the expectations of behaviors in a team-based environment, especially the understanding of allied health professionals’ roles. In order to better address these needs, some faculties of medicine have pre-residency orientation programs; however, not all provinces offer such training programs, making the transition into the Canadian health care system quite difficult for many IMGs (Walsh et al., 2010).

Studies have also demonstrated that IMGs on average are 10 years older than their Canadian trained counterparts and may have more obligations to partners and children. IMGs also tend to have less professional and social networks to draw support from, and often have tighter financial constraints (Walsh et al., 2010).

Much of the above research has centered on immigrant IMGs and less is known about the specific challenges, or relative privilege, of Canadian IMGs. This latter group has quickly become the majority of IMGs accepted into residencies. In 2005, Canadian IMGs represented 34.1% of all IMGs in post-MD training. By 2011, that proportion grew to 51.3% and continues to grow (24).

What considerations and controversies exist specifically with regards to the increasing number of Canadian IMGs?

There are several reasons for IMGCs not wanting to return to Canada to practice, which include: preference not to do return of service work, first choice of residency is difficult to obtain in Canada, opportunity to do postgraduate training in preferred location is limited, and belief that they do not have reasonable chance to match in Canada (CaRMS Report). Most of these reasons relate to the competitive nature and low match rates for medical students studying abroad. Hence, IMGCs have asked for special consideration with regards to residency matching, as they are Canadian citizens. The Society of Canadians Studying Medicine Abroad (SOCASMA) has been vocal about what they consider to be unfair treatment and prejudice against Canadians studying abroad and believe, “that all Canadians who passed the national exams have the right to compete for residency positions currently reserved for Canadian and American medical school graduates” (SOCASMA, http://socasma.com/about/mission/). In agreeance, some authors have proposed that better integration of IMGCs into the Canadian health care system may be a viable strategy to improve the current physician shortage (4).

However, with any consideration of incorporating IMGs and IMGCs in the Canadian health care system there are legal and human rights implications. Although IMGCs have mobilized as a political group, both IMGs and IMGCs have participated in medical training at universities that are not accredited in accordance with Canadian standards and hence, any attempt to treat these two groups differently invites human rights challenges. Policies that differentiate between IMGs and IMGCs invite calls of discrimination based on country of origin.

How do IMGs perform compared to Canadian graduates in assessments, licensing exams, and clinical work?
Several studies have investigated the performance of IMGs compared to CMGS in relation to assessments, licensing, and clinical work. One small study conducted between 2006-2008 showed that IMGs residents tend to perform favorably at in-training evaluation reports, but not in passing the certification in Family Medicine (CCFP) exams.(25) Likewise, another study investigating performance in objective structured clinical exams (OSCEs), showed that CMGs performed favorably over IMGs.(28) In fact, IMG success rates on the pre-residency clinical examinations were below 50% in 2001-2008, with success rates of 56% in passing the CCFP exams (compared to 93.5% for Canadian and American medical graduates).(26)

Clinically, there is evidence showing that IMGs and CMGs perform comparably. One retrospective study revealed that risk-adjusted mortality rates of patients with acute myocardial infarction were statistically similar regardless of whether they were treated by IMGs or CMGs.(27) These patients also had comparable likelihood of receiving secondary prevention medications at 3 months and cardiac invasive procedures at 1 year.(27)

Given the complexity of this issue, a systematic review of the evidence is needed to properly describe the differences in performance between IMGs and CMGs, so that appropriate policy measures to improve resident performance in various indicators could be implemented.

V. ACKNOWLEDGEMENTS

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VII. REFERENCES

7. 2014 R-1 Match. Table 50: IMGs by Region of Graduation. http://www.carms.ca/assets/upload/Match%20reports/2014%20R-


VIII. APPENDIX

IMG Physician Routes to Practice
Figure 1

PGY 1 Pathway to Certification

1. Physiciansapply.ca
2. Medical Council of Canada Evaluating Exam (MCC EE)
3. National Assessment Collaboration Objective Structured Clinical Examination (NAC OSCE)
4. Application to the Canadian Residency Matching Service (CaRMS)
5. Medical School Interviews for Postgraduate Residency Training Programs
6. Acceptance into Postgraduate Training Program
7. Completion of Postgraduate Residency Training
8. Registration with the College of Physician and Surgeons of Ontario ( CPSO)
9. Certification through Examination via CFPC or RCPSC
10. Fulfill 5-year Return of Service Contract

*Not required to apply to CaRMS

Figure 2.