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Author(s): Evan Watts, Joel Davies, David Metcalfe

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Brief Report

The Canadian International Medical Graduate Bottleneck: A New Problem for New Doctors

Evan Watts,¹ Joel C. Davies,² and David Metcalfe³

¹Warwick Medical School, Coventry, United Kingdom

²Faculty of Medicine, University of Toronto, Canada

³Kingston Hospital, London, United Kingdom

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Abstract

Background: A growing population of Canadian students are travelling outside of Canada for medical training. The purpose of this study was to assess the opportunity for Canadians studying medicine abroad (CSAs) to secure post-graduate medical residency positions as International medical graduates (IMGs) in Canada.

Methods: Current statistics on IMG applicants into the Canadian Residency Matching Service (CaRMS) will be compared to the number of CSAs applying to return to Canada.

Results: In 2010, 75% (1232) of IMG applicants were unmatched following application to CaRMS, despite a doubling in positions reserved for IMGs from 2003. An estimated 3750 CSAs are currently attending over 55 medical schools globally; a six-fold increase since first reports in 2006. Between 2012 and 2014, it is estimated that 72.8% of CSAs will graduate, with 90.4% hoping to return to Canada for post-graduate residency training.

Discussion: The increasing population of CSAs poses a significant risk for future IMGs attempting to secure postgraduate training positions in Canada. From this perspective, we have coined the term 'Canadian IMG Bottleneck' – which describes the funnelling effect that has been created by the growing number of CSAs and the limited number of IMG residency positions available in Canada.

Correspondence: Evan Watts, Warwick Medical School, Coventry, UK; E-mail: E.Watts@warwick.ac.uk

Introduction

Every year, thousands of students attending universities across Canada write the medical college application test, write essays, participate in lengthy online pre-interview assessments and pay application fees in the hope of securing a place at a medical school. There is, however, a significant mismatch between the number of applicants and medical school positions. In 2009, there were 10945 applicants for only 2740 positions at the 17 Canadian medical schools.¹ The inevitable consequence of this mismatch is that most students, despite investing time, money and career aspirations, are frustrated in their attempts to become a medical doctor in Canada.

Many Canadian applicants have sought alternative routes to obtain their medical degrees. While some students may have opted to pursue their education overseas as an opportunity to experience a new country or culture, the most frequently cited reason, based on a recent survey of Canadians studying medicine abroad (CSAs) undertaken by the Canadian Residency Matching Service (CaRMS), was that students felt they would be unable to secure a place in a Canadian school.² Ireland, Australia, and the Caribbean are marketed as operating established medical schools with curricula that are comparable to those in North America. These schools regularly accept, and in some cases even cater towards, students from Canada.^{2,3} In the same 2010 report by CaRMS, an estimated 3750 Canadians were found to be studying at 55 medical schools in 23 different countries.² To place these numbers in perspective, this current estimate of 3750 CSAs is equivalent to one third of the 10518 Canadian students currently studying medicine in Canada.¹

Three potential issues arising from this vast number of CSAs have been identified:

1. Is the Canadian healthcare system aware of the influx of students who intend to return to Canada as IMGs for postgraduate medical training?
2. As doctors have specialized skill sets, what will be the outcome for Canadian IMGs unable to match for postgraduate training in Canada?

3. Is there a need to monitor the number of Canadians travelling abroad for medical training?

The purpose of the present review was to identify the opportunity for CSAs to secure post-graduate medical residency positions as IMGs in Canada and, from this prospective, to coin the term 'Canadian IMG Bottleneck'.

The influx of Canadian IMGs

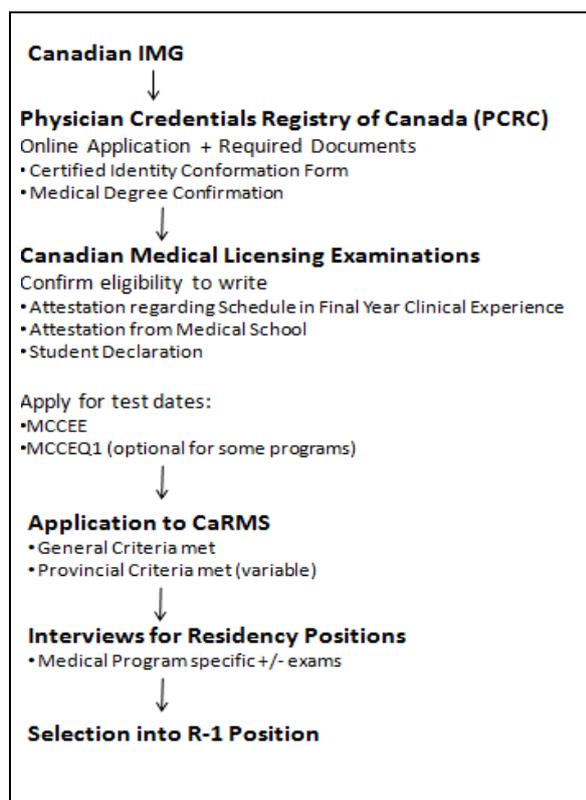
The latest estimate of 3570 CSAs represents a six-fold increase since the medical community first focussed their attention on the number of CSAs in 2006.⁴ Even this marked increase in CSAs may be underestimating the total number. For example, no data were collected from the United Kingdom in the most recent survey completed by CaRMS. In a subsequent informal survey of the 33 medical schools in the United Kingdom, 13 schools responded and 137 CSAs were identified.¹⁴ While this represents an isolated example, it indicates that current estimates may not be fully identifying the extent of the issue.

Regardless of these estimates, it appears that the Canadian healthcare system does not have the capacity to accommodate the influx of students intending to return to Canada. Over the last five years, provincial governments have increased the number of entry level residency positions (R1) available for all IMGs. Working alongside CaRMS, the number of residency positions reserved for IMGs has increased from 197 in 2003 to 373 in 2010: an almost two-fold expansion.⁵ This response, however, has not been comparable to the growing number of CSAs. Given that over this period of time a six-fold increase in the number of CSAs was observed, the number of residency training positions seems to be insufficient to accommodate all the CSAs hoping to return to Canada for postgraduate training.^{2,4}

A number of steps must be taken by CSAs prior to applying for post-graduate training (Figure 1). All Canadian IMGs must successfully pass the Medical Council of Canada Evaluating and Qualifying Examinations to be eligible to apply for residency positions in Canada. In exchange for residency training for those that match, five out of the eight provinces (Ontario, Manitoba, Newfoundland, Nova Scotia and British Columbia) require IMGs to sign a

return of service (ROS) agreement.⁶ An ROS agreement restricts the location in which IMGs can practice medicine following the completion of residency training.⁶ In Ontario, a standard five year ROS is required of all IMGs that completed their residency training in Ontario, regardless of the specialty of residency. The regulatory body of Canada has implemented these stipulations to resolve the problem of physician shortages, largely in underserved areas.⁷

Figure 1. IMG Residency Application Pathway



Outcomes for unmatched CSAs

In 2010, 1497 IMGs applied for the first year of their postgraduate medical training (R-1).⁸ According to this report, 1124 (75%) IMGs were unmatched. While these results did not distinguish between Canadian and non-Canadian IMG applicants, they offered a unique look into the problem. For example, between the years 2007 to 2010, the number of 'new graduate' applicants registered with CaRMS increased from 99 to 215.⁸⁻¹¹ Given that 90.3% of the currently estimated 3750 CSAs intend to return to Canada for residency training, it can be predicted that the number of new IMG applicants will continue to rise. Moreover, this may also increase the number of IMGs that are unsuccessful in previous years and

are reapplying to CARMS. According to CARMS data, 'previous graduate' IMGs represent the largest population of applications to CARMS. For example, from 2008 to 2010 the number of 'previous graduate' IMGs increased from 1214 to 1338.⁹⁻¹¹ With a rise in the number 'new graduate' applicants, those IMGs that are unsuccessful, and still intended to return to Canada, may further increase this cohort of 'previous graduate' IMGs. Therefore, the opportunity for IMGs to secure a residency position in Canada may prove to be much more difficult in the near future.

Canadian IMGs unable to obtain a residency training position in Canada have few options. One potential route into Canadian medical practice is to seek postgraduate training in the United States. It is unclear how many Canadian IMGs have successfully used this strategy or how many continue practicing medicine within the US. United States IMG postgraduate matching data show that, last year, 7246 non-US IMGs applied for postgraduate residency training and, of these, 39.8% matched to a residency training program.¹² When these statistics are compared to the 25% match rate for IMGs seeking Canadian residency training, it appears that neither route offers a positive outlook for Canadian IMGs hoping to secure postgraduate training.⁸ Furthermore, between 2003 and 2010, the percentage of non-US IMGs that matched to US residency training programs decreased by 15.9%.¹² If the trend continues, this alternative route to postgraduate medical training might also succumb to a bottleneck similar to that occurring within Canada.

A second possibility for unmatched Canadian IMGs is to apply for residency training in the countries where they studied medicine. However, a number of potential barriers exist. Many medical schools in the Caribbean do not have postgraduate clinical residency programs and many Canadian IMGs are denied the option of applying for residency where they were trained.² Similarly, in countries such as Australia and Ireland, residency positions are prioritized by a national selection process, and with recent shortages in internship placements, many Canadian IMGs may be turned away.^{2,13}

The Canadian response

At present, the decision to pursue a medical education abroad is one that rests with the

individual applicants. There is no organization with the power to regulate or accurately monitor the number of CSAs leaving Canada. Therefore, CSAs represent an unregulated, free market of consumers of medical education, which makes it difficult to predict the number of CSAs applying to return for postgraduate training in Canada.²

Due to the uncertainty inherent in this process, many CSAs are faced with the hardship of financial strains without strong job prospects. In the CaRMS CSA 2010 report, 44% of CSAs reported that their total funding to attend medical school was from a bank loan and 69% were part-funded by Canadian banks.² Given that the average debt for an IMG is approximately \$160,000CAD, this raises the possibility of financial hardship for many of Canada's highly educated citizens.² These reports on postgraduate applications have identified important trends with respect to the growing number of CSAs. They suggest a number of CSAs that hope to return to Canada for postgraduate training may be unsuccessful. This raises the possibility of a bottleneck which threatens to overwhelm the IMG system and leave newly qualified Canadian doctors unemployed.

At the crux of this mismatch is an increasing population of Canadian students seeking alternative routes to obtain medical training. Each year, as the bottleneck goes unreported, more aspiring Canadian students will continue to pursue training overseas. In the absence of information about this worsening situation, however, such students may be pursuing a dream that the Canadian healthcare system is unable to support. It is important that measures are taken to address this problem before the bottleneck worsens.

Is there a place for monitoring CSA's?

While the number of residency positions for IMGs continues to increase, the rising number of CSAs has been much more substantial. Without an organization to monitor and regulate the number of CSAs, the current approach to increase residency numbers might risk calling for a bucket instead of repairing the leak.

As international medicine is a free market for medical training, it would be unethical to establish a regulatory body to inhibit Canadians from studying abroad. A registry to monitor the number of CSAs may help provincial and federal

governments, along with potential students, to plan and forecast the job market for internationally trained medical doctors.

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