Addressing the Physician Shortage with International Medical Graduates: The Current Situation and Solutions
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Citation

Abstract
Recent physician trends including increased retirement rates, reduced work loads, and the "brain drain" pulling young doctors into the US, have aggravated physician shortages facing Canadians. As physician demand outgrows their supply, it is vital to critically investigate viable methods for addressing this situation. This paper explores the option of recruiting international medical graduates (IMGs) in order to compensate for the lack of domestically trained physicians. It looks to a variety of literature to explore the ways our current system may help or hinder the integration of IMGs. Specifically, the paper investigates whether simply increasing enrollment of students into medical schools is a plausible solution to the physician shortage. Next, the paper explores the impact of current medical licensing procedures on the number of IMGs allowed to practice in Canada. Finally, Canada's current practices for recruiting IMGs is examined, including the funding available to these foreign trained physicians.

INTRODUCTION
Canadians in many parts of the country including urban, rural, and remote areas face physician shortages (Scully & Tyrrell, 1999). Shortages can be based on current vacancies, current vacancies plus past vacancies (vacancies that sat unfilled for so long they were removed from the list), the number of physicians needed based on past utilization rates and current population, or the number of physicians needed based on estimated needs (Buske, 2008). Given the variability in defining vacancies, it is very difficult to quantify physician shortages by province. One way to answering the shortage of physicians would be a better use of the International Medical Graduates. This paper will explore the advantages and disadvantages of such an approach as well as the reasons why it is not used as much as it should be.

CONTEXTUAL FRAMEWORK
Between 2003 and 2006, the number of communities in Ontario designated as underserviced for general and family physicians increased (OHRC, 2007). It has been estimated that the shortage in Ontario exceeds 2,000 physicians, Quebec is short 1,000 specialists, and 150,000 people in British Columbia are without a family doctor (OHRC, 2007). Ontario data currently indicates having more than a million residents without access to a family doctor, and the Ontario Medical Association projects Ontario will be short 3,000 doctors, affecting 1.7 million patients, by 2010 (Bendo, 2005). The current physician supply will not keep pace with the physician need. It has been stated that the ratio of physicians to population should not decrease below 1.9/1000 (Tyrrell & Dauphinee, 1999). In 1999 the ratio was 1.85/1000, and it will decrease to 1.4/1000 by 2021 based on the current physician supply (Scully & Tyrrell, 1999). Not only does this adversely affect patients, but doctors themselves are feeling the pressure.

Making matters worse, an increase in physicians' average age, the growing number of female physicians, and the reduced workloads of younger physicians are all contributing to the need for more physicians (OHRC, 2007). Increasing age of physicians is marked by higher retirement rates, and fewer hours of work per week. More doctors are needed to replace the retiring doctors, and to make up the slack from older doctor's reduced work weeks. The growing number of female physicians causes similar issues because they tend to practice less intensively during certain periods of their life (Task Force Two, 2003), and on average see fewer patients per year than their male counterparts. Younger physicians are more likely to leave than older physicians (Task Force Two, 2003). This departure of younger physician is compounded since it leaves Canada with an older physician population which is more likely to
Addressing the Physician Shortage with International Medical Graduates: The Current Situation and Solutions

retire or decrease its workloads.

To help ease the problem of doctor shortages in Canada, there is an increasing focus on recruiting international medical graduates (IMGs) to provide needed services. International medical graduates have an important role in health care delivery in Canada, especially in remote regions (Nasmith, 2000). Remote areas are greatly benefited by IMGs because these physicians tend to be more willing to live in rural and remote areas where Canadian-born doctors do not wish to live and practice medicine.

By 2002, IMGs represented 22.7 percent of physicians in Canada, which made up 22.5 percent of family physicians and 22.8 percent of specialists. Although IMGs are clearly a valuable resource, an extensive untapped pool of IMGs remains with as many as 4,000 IMGs eligible for post-MD training (Task Force Two, 2003). With such a drastic physician shortage faced by all provinces within Canada, ensuring all IMGs be used to their fullest potential should be a top priority for Canadian policymakers.

QUESTIONS TO BE ADDRESSED

1. Will increasing medical school enrollment solve Canada’s doctor supply deficiency?

2. Is the MCC (or any other medical qualifying examination) a way of standardizing the delivery of health care?

3. Is the MCC a way of deterring IMG’s from entering practice in Canada?

4. What is Canada doing to recruit doctors from foreign countries?

5. What funding is available for IMG’s?

METHODOLOGY

This paper is based on a multifactoral framework examining possible causes and solutions to the doctor shortage in Canada. More specifically, secondary sources including: journal articles, reports, and other scholarly documents were used to compile the data. A full listing of resources can be found at the end of this paper on the works cited page.

ANALYSIS

ENROLLMENT IN MEDICAL SCHOOLS

Enrollment in Canadian medical schools saw a slight sustained decrease for almost two decades from 1980-81 to 1998-99. Then from 1998-99 to 2002-03 the number of students enrolled in medical school rose from 1,581 to 2,026, resulting in an average annual increase of 7.0%. The increase was significantly higher for female students (Figure 1) (Task Force Two, 2005).

Figure 1

Figure 1: First Year Enrollment in Canadian Medical Schools, 1980-81 to 2002-03

(Source: Task Force Two, 2005)

However, these enrollment increases are not enough according to the Canadian Medical Association, which argues the shortage of physicians is continuing to worsen. The supply deficit is largely blamed on a 10% first year enrollment reduction from 1993-94. The reduction was based on a 1991 recommendation to stabilize physician supply. Since it takes at least 6 years to train a physician after entry into medical school, the full effects of the reduction were not felt until recent years (Stoddart, 1999). Furthermore, first year medical school opportunities in Canada (7.1/100,000) are nearly half of that available in Great Britain (12.9/100,000), and are far worse than that of the US and Australia (Scully & Tyrrell, 1999). Thus, an increase in enrollment may help correct past reductions, bring Canada more inline with the rates of other countries, and over a decade or two, increase the number of trained doctors in Canada.
In Canada there are currently 16 medical schools, providing approximately 2,500 first year medical school positions annually. Table 1 provides a list of Ontario medical schools, the number of applicants in 2006, and the number of students who will be accepted for 2007. Even when one recognizes the fact that students apply to multiple medical schools, there are between 3 to 4 times the number of qualified applicants (Buske, 2008). Overall, given the high demand for enrollment there should be no difficulty filling increased positions into Canadian medical schools (OMSAS, 2007).

MEDICAL SCHOOL GRADUATES

When considering the shortage of doctors one must examine the number of medical school graduates entering into active practice in Canada. Figure 2 reveals that there is an almost consistent decrease in the rate of entry into practice from 1988 to 1995, after which point on the numbers remain variable (Physician Workforce in Canada 21).

Part of the reason for the decline in graduates actively practicing medicine could involve difficulties in retaining physicians in Canada. As Table 2 shows, from 1992 to 1998 Canada had a net average loss of 412 physicians annually to the United States. Moreover, to date there are approximately 8,000 Canadian medical school graduates practicing in the United States. Of these, only 2,400 maintain active licenses in Canada (Tyrell & Dauphinee, 1999).

CHOICE OF MEDICAL SPECIALTY

Another method to forecast the supply of physicians is to examine the specialties they wish to pursue and how well these intentions can be met. Figure 3 gives a detailed listing of all medical specialties, as well as the percent of first choices for Canadian medical graduates. The three most frequent first choice program selections are family medicine, surgery, and internal medicine (Task Force Two, 2005).
Furthermore, the Canadian Resident Matching Services uses an algorithm to fit the ranked choices of desired residency position to the ranked choice of the program for which directors preferred the applicant. When the process is complete, some applicants have not been matched to their preferred program, and some programs may not have filled vacant positions. Vacancies and unmatched choices therefore indicate the competitive desirability of the specialty. Table 3 shows the most notable difference between vacancies and first choice. Accordingly, each of these specialties requires some attention in terms of ensuring a future supply of doctors (Task Force Two, 2005).

EXAMINATIONS, LICENSING AND INTERNATIONAL MEDICAL GRADUATES

Since Canada is having difficulty retaining some of its own Canadian medical school graduates, it may consider another source of physicians. One possibility is international medical graduates. Hundreds of individuals arrive in Canada indicating medicine as their intended occupation, as exemplified in Table 4. Utilizing the skills of these physicians could help alleviate the doctor shortage in Canada (Tyrell & Dauphinee, 1999). The unmatched vacant positions may also present opportunities to international medical graduates to train and qualify in Canada.
There are a total of six steps that IMG's must pass through in order to obtain a full license to practice medicine in Canada. The first of these steps involves obtaining an acceptable medical degree granted by an approved university; a list of these schools can be found within the International Medical Education Directory (IMED - http://imed.ecfmg.org/) published by the Foundation for the Advancement of International Medical Education and Research (FAIMER). (Faimer, 2006).

The second step in the process involves passing the equivalency exams. In addition to having an acceptable medical degree, IMG's are required to demonstrate medical knowledge and language/communication proficiency. The objective of the exams “is to assure that candidates possess and are able to demonstrate the knowledge, skills and attitudes that all physicians are expected to have as they enter independent medical practice. They must be able to practice medicine in a safe, efficient and caring manner” (Canadian Information Centre for International Medical Graduates, 2007).

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Step 4 in the process is the Licentiate of the Medical Council of Canada (LMCC) and is usually completed during the initial residency training. The LMCC is also one of the requirements to obtain an independent license to practice medicine in Canada. In order to write the two exams involved in this step, the MCC Qualifying Examination Part I and the MCC Qualifying Examination Part II, a pass standing on the MCCEE is required as well as a valid Medical Degree. In addition, in order to be eligible to write the MCCQE Part II a minimum of twelve months of residency training must have been completed (Canadian Information Centre for International Medical Graduates, 2007).

Step five of the process involves certification. All physicians must be certified in either family medicine or a specialty in order to be fully licensed. Family physicians must pass the College of Family Physicians of Canada Certification exam while other specialists must pass the Royal College of Physicians and Surgeons of Canada Certification exam specific to their specialty (Canadian Information Centre for International Medical Graduates, 2007). The College of Family Physicians of Canada Certification exam is available two times per year (The College of Family Physicians of Canada, 2007).
complicated than the process for family physicians as there are many different specialties with different exam processes and procedures. It should be noted; however, that for IMG's there is a process of assessment of training and credentials prior to exam enrolment (The Royal College of Physicians and Surgeons of Canada, 2007).

The last step in the process, step 6, is Provincial/Territorial registration. Each province/territory is responsible for the regulation of the practice of medicine in their respective jurisdiction and therefore, each individual should consult the appropriate authority in regards to the most recent licensure information and provisions that may be available as they progress through the steps outlined above (Canadian Information Centre for International Medical Graduates, 2007).

Canadian graduates are not required to pass the MCCEE, a test that requires a mark of 93% or above to pass. Looking at Figures 4 and 5 below, it is evident there is a variation between Canadian graduates and international graduates in the ability to pass through the exams with minimal difficulty. The bluntness of this relationship makes one wonder why such a large gap exists. Several potential causes have been identified including age (time from medical school until they challenge the exam), language and cultural issues, and the differences in the quality of the medical school training (Task Force Two, 2003).

Figure 8
Figure 4: Comparison of Exam Passing Rate between IMGs and Canadian Graduates

RECRUITMENT
Surprisingly, in the face of starving needs for medical practitioners, Canada is not actively recruiting foreign physicians. There is rigid control over the recruitment process of international medical graduates (IMGs), largely aimed by the government at curbing costs. The physician licensing process varies from province to province, and is not transferable across provinces. As a result, provinces with lax requirements receive abundant IMGs, whereas provinces with strict requirements fall short of applicants. For example, Newfoundland and Labrador issues far more licenses to IMGs, whereas Quebec very few. In turn, licensed IMGs constitute more than 50 per cent of the physician workforce in the former and only eight per cent in the latter (Audas, 2005).

There are two general classes of licensing: full and
Addressing the Physician Shortage with International Medical Graduates: The Current Situation and Solutions

provisional (Audas, 2005). Figure 6 illustrates the proportions of fully licensed versus provisionally licensed IMGs in Canada varying by province (Audas, 2005). One predominant obstacle for obtaining a full physician license is the standard requirement for the completion of postgraduate medical training in Canada (Audas, 2005). Provisionally licensed IMGs are often "hired to meet an immediate shortfall of physicians and tend to fill positions that Canadian medical graduates will not take," such as positions in under-serviced, remote areas of Canada (Audas, 2005). Many IMGs have accepted relocation as a transition phase to obtaining full licensure and practicing in their preferred location, and take advantage of mobility once they obtain full licensure. This creates a serious problem of regular and rapid turnover of physicians in many communities. Evidence suggests that "continuity of care is highly correlated with a patient's satisfaction with the physician, and, as such, the relationship with a family physician is ideally long-term" (Audas, 2005).

Figure 6
Figure 6: Proportion of Provisionally Licensed IMGs vs. Fully Licensed IMGs

As a temporary solution, “entry point” provinces that face constant and continuing problems in recruiting physicians contract IMGs with provisional licenses to work fixed terms. These terms normally last 2 years, which is the usual time required for provisional physicians to qualify for full licensure. However, recruitment of new physicians, especially from overseas is expensive. The cost of replacing physicians every two years corrodes financial capital that would otherwise be spent more efficiently on the actual provision of health care services (Audas, 2005).

Moreover, there still remains the problem of retaining physicians to work long-term in rural and remote regions.

FUNDING

WHAT FUNDING IS AVAILABLE FOR IMG’S?

There are a significant number of foreign sponsored students entering medical schools.

Nearly all of these sponsored trainees return to their sponsoring country after completing training (Buske, 2008). This is a significant source of funding for several medical schools. However, given appropriate salary support for the International trainees and compensatory funds to the medical schools, these residency positions could potentially be used by International students who want to practice in Canada. Aside from these sponsored postgraduate trainees, most IMGs come to Canada as immigrants, supported by their own savings. It would be useful to discuss the issue of funding in depth, however, there appears to be insufficient data, and the information is largely confidential, as suggested by Brad Corbett, RDC Analyst of Statistics Canada.

DISCUSSION AND CONCLUSIONS

While increasing enrollment into medical schools will increase the number of physicians, as exemplified earlier, many of Canada's doctors are migrating to the United States. Accordingly, increasing enrollment of Canadian applicants may not be a sufficient solution for the doctor shortage. Moreover, there are many specialties that remain vacant, exacerbating the deficit situation in some areas of medicine. For these reasons new solutions need to be considered to increase patient access to doctors. One such solution is to utilize the skills of physicians who have immigrated to Canada from counties outside Canada and the United States. These eligible international medical graduates have educational degrees and practical experience. These opportunities could entail allowing IMG’s to work as physicians assistants in a supervised setting. This option has the benefit of increasing the number of individuals currently available for health care delivery. In addition, it would also give IMG’s experience in Canadian health care settings that will increase their probability of success during testing and assessment. Overall, more international physicians would be able to practice medicine faster, helping to alleviate the doctor shortage (The College of Physicians and Surgeons of Ontario, 2004).
Concerning the problem of balancing physicians that choose one area of practice over another, a long term outlook must be taken. Much attention is currently focused on the shortage of family physicians. Unfortunately, rapidly shifting the number of vacancies and training positions available may cause unexpected under representation in other areas and medical specialties. The Human Resource planning body therefore must analyze the long term forecast of medical school graduates and population demographics in coming up with a rational, effective plan to solve specialty shortages (The College of Physicians and Surgeons of Ontario, 2004). This would more easily enable them to move into family medicine if they decide on that later in their career. While the number of available positions for family medicine has increased over the years to accommodate for shortages, entry into other categories from this field will continue to be a barrier. Flexibility between fields of practice should be considered to alleviate shortages and vacancies in the future (The College of Physicians and Surgeons of Ontario, 2004).

As stated earlier, there has been pressure from provincial governments, licensing authorities and the general public for the licensing bodies to respond to physician workforce shortages by speeding up the assessment process for foreign trained specialists (Task Force Two, 2003). Several provinces are already working at introducing programs to assess the skills of graduates in a timelier manner. Ontario has instituted a program whereby candidates admitted to the provincial IMG program are given an intensive seven day orientation which emphasizes cross cultural and communication issues likely to be faced by IMG's as they enter the Canadian health care system. More provinces need programs like these and the introduction of a common program across provinces could show major benefits and increase the consistencies across Canada. A major problem now is the differences in legislation across jurisdictions. The process for IMG's would certainly become easier and much less complicated if these differences were minimized.

In line with this last suggestion regarding the increased facilitation of movement between jurisdictions in Canada, the recognition of screening examinations taken in the United States and the United Kingdom should also be considered. Standards set by these examinations are equivalent to our own standards so they should be recognized accordingly. This would help to speed up the assessment process for IMG's as well as offering other benefits.

It also seems reasonable that the scarce resource of postgraduate training positions be used for physicians who intend to work in Canada. Those “for profit” postgraduate positions that are filled by trainees funded by sponsoring countries should perhaps be used to upgrade the training of IMG's. Since these positions are for two to five years of training, it is possible that fewer years are needed for foreign trained IMG specialists to achieve certification, thus allowing more than one IMG to fill one of these “for profit” slots. This transition would require funding for the salaries of the IMG postgraduate trainees and for compensation of the medical schools that have come to rely on the tuitions charged to the sponsored IMG's.

The final recommendation for the licensing process involves legal and ethical training for IMG's. The development and implementation of web-based educational and assessment tools to teach legal and ethical issues and language and communications skills to potential Canadian physicians should be facilitated. The training and practice experience of IMG's is often very different from the practice of medicine in Canada. This extends to the ethical and legal aspects of practice, as well as to clinical performance. It has been proposed that, to assist IMG's to prepare for assessment in Canada, e-based legal and ethical training tools should be developed that IMG's could use on their own time (The College of Physicians and Surgeons of Ontario, 2004). The recognition of screening examinations taken in United States and the United Kingdom should also be considered. Standards set by these examinations are equivalent to our own standards so they should be recognized accordingly. This would help to speed up the assessment process for IMG's as well as offering other benefits.

In addition to issues regarding practicing in Canada, IMG's also face issues of adapting to Canadian culture. These include obstacles in language proficiency, cultural adjustment, credentials assessment, finite personal capability, and supporting a family (Task Force Two, 2003). All across Canada, Citizenship and Immigration Canada institutes Language Instruction for Newcomers to Canada (LINC) program, free of charge and open to everyone (Service Canada, 2007). Another problem IMG's face is symbolic discrimination on the basis of their country of origin. Researchers such as Janet...
Salaff point out that “[p]rofessions in various countries view the stages in a professional career differently - career milestones are not universally valued because professions are embedded in social structure” (2006). In other words, the achievements and credentials of professionals are only recognized and therefore applicable in their own social environment, their countries of origin. Mattoo suggests that “immigrants obtain a lower return on their aggregate education and experience than that obtained by host country citizens” (2005). Furthermore, the same level of education and credentials are interpreted differently simply because some immigrants’ country of origin is favored over others. Among IMG's with identical age, experience and nominal education, those coming from Latin America and Eastern Europe have the lowest probability of obtaining a professional job, while immigrants from ex-British colonies are especially successful (Mattoo, 2005). As Mattoo has made clear, “ostensibly identical educational degrees are not treated equally (2005)” Additionally, the employment of foreign professionals is affected by gender (Boyd &amp; Grieco, 2003). As a result, female IMG's “run up against two institutional barriers: a career path that lacks legitimacy, and an unrecognized match between gender and occupation” (Salaff, 2006).

Canadian employers still view new immigrants as lacking skills that are required to perform on the job. Many risk-aversive employers feel uncertain and unfamiliar with foreign job seekers, and may not fully recognize the human capitals job seekers offer (Salaff, 2006). It seems to us that the compatibility of educational and professional systems between Canada and the countries of origin may be the main reason of differential treatment. The current policy of “non-recognition of foreign qualifications and licenses” is one of the main barriers to entry into skilled jobs such as those in the medical profession (Mattoo, 2005). In this case, professionals who immigrate to Canada to pursue the same medical career are punished by the rules and regulations. These individuals must start their career training over, therefore disrupting their career path (Salaff, 2006).

The denial to automatically be an accredited doctor in Canada may be needed in cases where training at home is inadequate. However, by refusing to recognize all foreign qualifications, we also pass up the qualified candidates that may be a key source in helping to ease the shortage of medical professionals. In either case, there is more that needs to be done.

It is necessary for Canada to make major institutional changes to utilize the capabilities and skills of IMG's. The government should establish a structured way to assess medical qualifications from other countries, and give recognition to those whose credentials match Canadian needs and absorb them into Canadian society. As leaders in solving the problem of doctor and nurse shortage, the European Union and Israel spent considerable effort in assessing and licensing professionals as well as building a network of countries, where their training and experience are recognized (Salaff, 2006).

CONCLUSION

Filling the shortage of doctors in Canada is a serious situation that must be addressed. And as exemplified in the preceding paragraphs IMG’s could be a valuable resource for the country. Unfortunately, the proper steps to utilize these resources are not in place. Canada prides itself on its ability to provide health care to all its citizens. If it cannot fulfill its promise into the future, its standards will surely decrease.

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