RESOURCE UTILIZATION AND COSTS BORNE BY INTERNATIONAL MEDICAL GRADUATES IN THEIR PURSUIT FOR PRACTICE LICENSE IN ONTARIO, CANADA

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ABSTRACT

Background: Many physicians immigrate to Canada to pursue postgraduate training. However, these International Medical Graduates (IMGs) face difficulties in achieving their goal. For licensing IMGs who meet 'Canadian' practice standards, the Ontario Ministry of Health and Long Term Care (MOHLTC) provided funding for establishing a program, the Ontario IMG Clearinghouse (OIMGC). Announced in January 2004, the program replaces the former programs: Ontario IMG program (OIMGP) and the Assessment Program for IMGs (APIMG). However, during this process IMGs are required to write and re-write several exams and bear the associated costs of the needed resources such as study time, exam fees, books and commuting. The main objective of this study was to estimate the resource utilization in the process of entry into OIMGP and the associated costs in relation to IMGs' annual income.

Methods: We identified a subgroup of IMGs (*n* = 21), who were fluent in English and had written Medical Council of Canada Evaluating Exam (MCCEE). Using a semi-structured questionnaire, we collected information on IMGs' demographic characteristics, resource utilization and associated costs in the process of entry into OIMGP and then estimated the percentage of IMGs' annual income spent on the utilized resources.

Results: The study time, books and commuting were the main resources utilized in the process of entering OIMGP. Most IMGs had very limited financial resources and required more than one attempt and 6 months of full time study to pass MCCEE and the like; the median percentage of annual income spent was 42% (IQR = 21%, 74%).

Conclusion: IMGs' limited financial resources in relation to the current process appear to negatively impact their pursuit for practice license in Ontario. On the other hand the process of re-testing their already 'tested' medical knowledge is counterproductive from a broad societal perspective.

KEY WORDS: International Medical Graduates, Foreign Medical Graduates, Canada, Cost, resource utilization, licensing exams.

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BACKGROUND

Canada welcomes immigrants from all over the world.[1] Many physicians immigrate to Canada in the pursuit of better opportunities for post graduate training and clinical practice compared to their home countries. However, this pursuit comes at a price as these international medical graduates (IMGs) are required to write and re-write several exams before they can be considered for a training position. Generally in Canada, the *'first step'* towards medical licensure is successful completion of the Medical Council of Canada

Evaluating Exam (MCCEE); the license could be for practicing medicine in a supervised setting (a residency or fellowship program) or an unsupervised setting. In addition to MCCEE, proficiency in the English language (French in the province of Quebec) must also be demonstrated which may require passing the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE). Thus, the eligibility criteria for issuance of a medical license to an IMG include: passing MCCEE; proof of proficiency in the English language; and offer for a clinical position from a Canadian institute. Upon meeting the first two criteria, IMGs who are sponsored by their home institutes/governments (visa trainees) may obtain offer for clinical positions with relative ease compared to immigrant 'orphan' IMGs; the latter group has limited opportunities and hereafter, we will refer to this group as 'potentially eligible IMGs'.

Many provinces in Canada have adopted policies to recruit IMGs for under-serviced areas to overcome shortage of physicians.[2,3] In British Columbia, Saskatchewan, Newfoundland, Alberta and Manitoba, 'potentially eligible IMGs' may enter residency training through the second iteration of Canadian Resident Matching Service (CaRMS). In addition, some provinces and territories may issue license without formal Canadian training for return-of-service in under-serviced areas[4] and some such as British Columbia have developed special programs.[5] In Ontario, 'potentially eligible IMGs' may obtain a practice license only through the Ontario IMG Clearinghouse (OIMGC); this program is funded by the Ontario Ministry of Health and Long term care (MOHLTC).[6] It has absorbed and expanded the former Ontario IMG Program (OIMGP)[7] and is constantly evolving in view of the recommendations made by the Canadian Task Force on licensure of IMGs[8] - hence the reader should refer to the OIMGC website for current information.[9]

Although the policy advances initiated by the MOHLTC seem very encouraging for the IMGs in Ontario, yet little is known about the demographic characteristics of these IMGs and the resources they need for successfully integrating into the Canadian Health Care System. Estimating the costs borne by IMGs would be helpful to those physicians who aspire for post graduate training and plan to immigrate to Canada for this very purpose. We therefore, report findings from our survey to fill this knowledge-gap.

METHODS

The study was a cross sectional survey of IMGs conducted between December 2002 and March 2003. Eligibility criteria were: (a) IMGs who were fluent in English (self-assessed); and IMGs who had written MCCEE. We collaborated with the Association of International Physicians and Surgeons of Ontario (AIPSO) to identify and contact IMGs. AIPSO is a non-profit organization of IMGs, which sent out an electronic memo to over 500 of its currently active members; this e-mail specified the eligibility criteria and encouraged IMGs to contact the authors if they were eligible and interested in participating in the study. This was a one time call and no reminders were sent.

We used interviewer-administered questionnaires to conduct telephone interviews. The questionnaire consisted of 6 main sections: education and clinical experience including postgraduate training; present job description, hours of work and income; closed and open-ended questions on marital status, number of dependents and sources of funding; detailed history of the number and result of attempts at TOEFL, TSE, MCCEE and OIMGP, the resources utilized - hours of study, private tuition, books, commuting, child care, and the associated costs including exam fees; closed and open-ended questions for self assessment of readiness for clinical practice and research in Canada; and open-ended questions to capture their opinion and comments on the existing pathways for licensing IMGs. Information on income included net family income in Canadian dollars from all sources and comprised of five categories: <10,000; 10,000–25,000; 25,000-40,000; 40,000–60,000; and >60,000. We pilot-tested the survey instrument

among ineligible IMGs to assess its face validity and pre-coded the closed-ended questions; it took 30 minutes to an hour to complete the questionnaire.

Our sample size calculation was based on estimating study-months needed to pass MCCEE. We calculated that 16 participants were required to estimate the average number of study-months with 95% confidence assuming a standard deviation of 2 months. The number of IMGs in Ontario was estimated to be about 3000, out of which 300 (10%) had applied to the OIMGP in 2002; thus we expected that out of 500 IMGs contacted through AIPSO, 50 will meet the eligibility criteria of this study. If we assume a response rate of 40%, 20 IMGs will participate in the study and therefore we will have sufficient numbers to achieve the desired sample size.

We trained two volunteers to collect data, which we edited for numeric and logical inconsistencies. Data processing involved converting study hours to study-months (assuming 35 hours a week as full time study), valuing study hours in dollars ($7.15 per hour), summing costs for all resource items for each participant and dichotomizing net family income using the low income cut off table of Citizenship and Immigration Canada, which specifies minimum family income as per family size.[10] To estimate the average costs borne by IMGs in relation to their annual income to be eligible to apply to OIMGP, we divided the net cost of the 'first steps' (TOEFL, TSE and MCCEE) for each participant by his/her net annual income; where income was <10,000 or >60,000 we estimated income as 10,000 or 60,000, respectively, and where it was expressed as a range, we took the midpoint of the range. All data processing and analyses were carried out using SAS (version 8.2; SAS Institute, Inc., Carey, NC).

The ethics committee of the University of Toronto reviewed and approved the study protocol and required removal of personal identifying characters from the collected data and no follow up contact with the participants other than a 'thank you' note.

RESULTS

Twenty one IMGs responded to the call that they meet the eligibility criteria and participated in the survey: 12(57%) were from the South Asian sub-continent; 4(19%) from Eastern Europe; 3(14%) from the Americas (excluding

Table-I: Demographic characteristics of study participants

Characteristics	No. (and % of respondents)
	n = 21
Sex	
Male	5 (24)
Female	16 (76)
Age, yr	
< 30	5 (24)
30-39	7 (33)
40-49	9 (43)
> 50	0 (0)
Married	
Yes	18 (86)
No	3 (14)
Dependent children	
Yes	13 (62)
No	8 (38)
Year of graduation	
after 1998	1 (5)
1998 - 1993	3 (14)
1992-1987	7 (33)
before 1987	10 (48)
Clinical Training	
Internship	20 (95)
Residency	14 (67)
Employment status	
Unemployed	9 (43)
Part time	6 (28.5)
Full time	6 (28.5)
Net family income	
< $10,000	4 (20)
$10,000-$25000	3 (15)
$25,000-$40,000	6 (30)
$40,000-$60,000	4 (20)
>$60,000	3 (15)
< cut-off[1]	8 (40)

[1] Net family income below low income cut-off defined by Citizenship and Immigration Canada.

Canada and the United States); and 1 (5%) each from Africa and the Far East. Further demographic characteristics of the participants are given in Table-I.

Out of sources of funding, on closed-ended items IMGs identified: self support (52%); savings (43%); spousal income (71%); relatives (19%); and loan (5%). These percentages do not add up to 100% as many of them had more than one source of funding, for example savings plus spousal income. On open-ended questions, one participant identified the need for emotional and moral support; this female physician reported that her husband was about to divorce her out of frustration over the time and money spent on her efforts towards obtaining a medical license [even though she passed her exams on first attempt].

Data on exams required for licensure including the number of attempts, resources utilized and costs borne by IMGs were skewed. Details are given in Table-II. The median resource utilized by IMGs to be eligible to apply to OIMGP was 42% of their annual income (IQR = 21% - 74%).

None of the IMGs indicated that they were ready for practice without any Canadian training. 14 (67%) showed interest in health-related research and 10 (47%) had some research background. 16 (76%) reported knowledge of computers, 9 (43%) were familiar with literature searches using Medline, 5 (23%) had knowledge of statistics and 3 (14%) had lab skills, while 8 (38%) reported other skills mainly interviewing. 9 (43%) of the IMGs had done some research projects and had publications. Although 13 (62%) of them indicated that they were interested in research training, only 6 (28%) had applied for admission at a Canadian college or university, out of which 3 (50%) were accepted.

Almost all IMGs expressed that OIMGP was useful but complained of limited number of training spots and reported lack of motivation and low self-esteem. One who was undergoing a clinical clerkship in OIMGP thought that clerkship was not necessary [this IMG was certified as a specialist from England].

Table-II: Reported number of attempts and result, resource utilization and costs borne by study participants for each of the exam (last attempt)

	English proficiency exams		*Medical licensing exams*		*OIMGP entry exams*	
	TOEFL ***n = 21***	***TSE*** ***n = 18***	***MCCEE*** ***n = 21***	***MCCQE-I*** ***n = 13***	***MCQ*** ***n=7***	***OSCE*** ***n= 4***
No. of attempts[a]	1 (1-4)	1 (1-3)	1 (1-6)	1 (1-2)	2 (1-3)	1 (-)
No. (%) successful	21 (100)	15 (83)	17 (80)	12 (92)	3 (43)	2 (50)
Resource utilization[b]						
Study time						
< 1 month	19 (90)	16 (88)	1 (5)	0 (0)	1 (14)	0 (0)
1-3 months	1 (5)	2 (11)	2 (9)	2 (15)	1 (14)	0 (0)
3-6 months	1 (5)	0 (0)	4 (19)	5 (38)	2 (28)	2 (50)
> 6 months	0 (0)	0 (0)	14 (66)	6 (46)	3 (43)	2 (50)
Tuition	2 (9)	2 (11)	2 (9)	1 (8)	1 (14)	2 (50)
Books	5 (24)	2 (11)	15 (71)	6 (46)	4 (57)	1 (25)
Commuting	10 (50)	8 (44)	12 (57)	6 (46)	6 (85)	1 (25)
Child-care	2 (9)	1 (5)	3 (14)	2 (15)	2 (28)	1 (25)
Costs $[a]						
Study time	100(0-4292)	7(0-2574)	8008(643-26097)	5148(1430-18268)	5219(429-26097)	5491(5148-6435)
Exam fees	171(100-171)	165(110-165)	1000(900-1000)	650(-)	200(120-200)	185(171 – 300)
Books	0(0-300)	0(0-100)	225(0-800)	100(0-1000)	100(0-500)	0(0-300)
Commuting	20(0-300)	5(0-500)	55(0-2000)	10(0-300)	250(0-500)	0(0-500)
Child-care	0(0-500)	0(0-500)	0(0-3600)	0(0-8000)	0(0-3600)	0(0-3600)

[a] Median (range)
[b] No. (%) of respondents

DISCUSSION

We targeted a subgroup of IMGs that was proficient in English language and had written MCCEE, because our aim was to estimate the costs of resources consumed by IMGs who were candidates for practice license in Canada in relation to their annual income, which to the best of our knowledge has not been previously explored. We found that in general IMGs had limited financial resources and low self esteem and often required more than one attempt to successfully complete MCCEE or the like (MCCQE-I, OIMGP entrance exam). We identified study time, books and commuting as the main resources utilized by the IMGs. Our estimate of the median resource utilization of 42% of IMGs' annual income means that on average they would need to give up 42% of their annual earnings just to complete the 'first steps'; a goal that to be accomplished by some of the IMGs, may require several years of hardship.

However, our estimates might represent an under-estimation of the 'true resource needs', as limited funds available to the IMGs likely resulted in under-utilization of needed resources. This finding from a broad societal viewpoint negates the popular belief that training IMGs is less expensive than Canadian Medical Graduates, and also suggests that turning down 'potentially eligible IMGs' results in loss of productivity.

Historically, IMGs have filled the gaps created by emigration[11] of Canadian trained physicians; in 1994, it was predicted that Canada would have a surplus of physicians if pathways leading to full licensure of the IMGs were not tightly controlled.[12] This resulted in restricting licensure for IMGs until recent years, when several programs were implemented that re-created licensing pathways for IMGs in Canada. However, without assessing the needs of its potential beneficiaries, such a program is likely to fall short of its goals. Immigrant IMGs form an important group of such beneficiaries, yet are grossly understudied; recently Crutcher and colleagues have reported characteristics of IMGs who applied to the CaRMS 2002 match.[13] However, they did not study resource utilization and costs borne by these IMGs.

Our findings are consistent with other reports in the literature: IMGs often require more than one attempt to pass licensing exams;[14] and have low self esteem and motivation.[15,16] Although our study sample was much smaller, our results are comparable to Crutcher et al, for age distribution, country of origin, percentages of the IMGs who have passed MCCQE-I and TOEFL; we had substantially higher percentage of female respondents.

Our study has the same limitations as that of Crutcher et al: the questionnaire was not validated; and the reliability of the self-reported data provided by IMGs in the questionnaire is unknown. However, we believe that this is unlikely to affect our conclusions. The low income status of unlicensed IMGs identified in our study is conceivable as they are forced to take up low paying jobs. We cross validated information on exam fees by matching self reported fees with actual fees charged for these exams. Nonetheless, it was not possible to cross validate information on study time; it is well recognized that Medical Council of Canada exams are of very high standards and require thorough preparation. Recently, the office of Continuing Medical Education at the University of Toronto has started a three months course entitled, 'International Medical Graduate Review Lectures (INT 0401; course fee = $795)'; thus it is also conceivable that IMGs may require up to six months of full time study to pass MCCEE and the like.

Since, studies have shown that knowledge-base declines over time[17] and that knowledge measured by scores on licensing exams might influence clinical competence,[18] the value of up-to-date medical knowledge is not trivial and IMGs must meet the same standards as their Canadian counterparts, in order to be licensed;[19,20] they can meet these standards with training tailored to their specific needs.[21] Therefore, it seems reasonable to ensure updated knowledge-base while incorporating 'out-of-practice' IMGs into active practice. However,

the logic of repeatedly examining 'potentially eligible IMGs' is ambiguous; visa trainee IMGs are not repeatedly 'screened' at the time of applying to residency programs.

In conclusion, limited financial resources of IMGs in relation to the number of exams they must complete appear to negatively impact their pursuit for obtaining practice license and likely counterproductive to the Canadian society. While there is a need to improve the process for fair assessment of all candidates irrespective of their financial status, physicians planning to immigrate to Canada to pursue postgraduate training and clinical practice must ensure that they have sufficient resources.

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