

Facilitating the Path to Licensure and Practice: International Medical Graduates in Canada

Ilona Bartman, MA; Claire Touchie, MD, MHPE, FRCPC; Maureen Topps, MB ChB, FCFP, MBA, FRCPC (Hon); John R. Boulet, PhD, FSSH

ABSTRACT: Canada relies heavily on foreign-trained physicians. As a Federation, with health care being a Provincial jurisdiction, this often translates into varied processes that international medical graduates (IMGs) must undertake to obtain a Canadian medical license. Two decades ago, several government officials and representatives of many physician organizations, including regulatory bodies, met and proposed 6 recommendations to make the processes standardized, simpler, and more transparent to aid internationally trained physicians in their pursuit of Canadian medical licenses.

The Medical Council of Canada (MCC) was one of the organizations at the 2002 meeting in Calgary, Alberta. As an organization responsible for the assessment of physicians' knowledge and skills and the issuer of the Licentiate of the MCC (LMCC), a prerequisite for Canadian medical license, the MCC was one of the institutions tasked with implementation of the recommendations.

The purpose of this manuscript is to evaluate how well the recommendations were met. To do this, we explored whether the IMGs' journey to obtain Canadian medical licenses in 2022 is more challenging or less challenging than in 2002. The MCC's role in helping to effect changes in the licensing process was highlighted.

Introduction

Canada has a large intake of immigrants. In 2021, Canada accepted over 400,000 permanent residents.¹ The growth of Canadian population largely depends on immigration.² The rapidly growing population requires an expansion of social services, including healthcare facilities, and the workers to populate them. The physician workforce in Canada has historically relied on internationally trained physicians who currently make up approximately 25% of Canadian physicians.³ Though Canada has always relied on international medical graduates (IMGs), it can be difficult for them to integrate into Canadian medical practice. Provincial and territorial requirements for licensure have always been burdensome for IMGs with local variations and redundancies for those wishing to apply in multiple jurisdictions. To address these issues, a national meeting on internationally trained doctors in Canada took place in Calgary, Alberta in 2002. As a result, the Canadian Task Force on Licensure of International Medical Graduates was established. Its mandate was "to aid in the integration of qualified internationally trained physicians into the Canadian physician workforce."⁴

Little more than a year later, the Task Force released 6 recommendations for the licensure of IMGs. The recommendations were: (1) increase capacity to assess/train IMGs, (2) standardize licensure processes and requirements, (3) expand/develop programs to assist IMGs with licensure and requirements, (4) develop orientation programs to assist faculty working with IMGs, (5) develop capacity to track and recruit IMGs, (6) develop a national research program and evaluation of IMG strategy.

The 2004 Report of the Canadian Task Force on Licensure of International Medical Graduates expanded on those 6 recommendations and suggested that work on different recommendations be led by specific organizations. As a result, many provincial and national organizations have become involved in improving the pathways to licensure for IMGs. The Medical Council of Canada (MCC) was among the organizations called to action. This paper will reflect on one national organization's contributions, in collaboration with Pan-Canadian stakeholders, to help fulfill the 6 recommendations and to propose next steps in aiding IMGs to integrate into the Canadian workforce.

The MCC is a national organization that develops and administers licensing examinations, the MCC Qualifying Examination (MCCQE) Part I, and in previous years the MCCQE Part II, to assess physicians' knowledge, skills, and abilities required for practice. The MCC grants a qualification in medicine known as the Licentiate of the Medical Council of Canada (LMCC) to physicians who have met the requirements. The Licentiate is a prerequisite for most provincial and territorial medical licensure in Canada.

Following the release of the 2004 Task Force report, the MCC agreed to oversee the establishment of a Pan-Canadian governing body, the National Assessment Central Coordinating Committee (NAC³) to address the recommendations. The NAC³ is an alliance of Canadian organizations that streamlined the assessment process for IMGs seeking a license to practice medicine in Canada.

The MCC and the NAC³, with numerous other organizations, embarked on a journey to fulfill the 6 recommendations. We highlight the MCC's role in helping to effect changes in the licensing process.

Recommendations

Recommendation 1: Increase capacity to assess and train IMGs

The MCC has been assessing IMGs since the 1970s. The transition of immigration influx from the Commonwealth to Asia, Africa, and Eastern Europe in the 1970s prompted a discussion on the assessments of foreign-trained physicians.⁵ As a result, the MCC offered the first examination for IMGs, the MCC Evaluating Examination (MCCEE).⁶ It was originally offered both domestically and internationally. At that time, international delivery included eight centers outside Canada (Abu Dhabi, Hong Kong, London, New Delhi, Oman, Paris, Riyadh, and Tokyo). While the first administration of the MCCEE took place in 1977 and was taken by only 25 candidates, over 2,000 candidates per year were sitting for the exam by the mid-1980s.

Although increasing the capacity to train IMGs would fall on the provincial governments and faculties of medicine, the MCC responded to the call for increased testing capacity (Recommendation 1 and echoed in Recommendation 3) by transitioning the MCCEE to a computer-based delivery model offered in 80 different countries and 500 test centres. The 2008 launch of the online version of the MCCEE facilitated IMGs' access to this assessment.

In the past, the MCCEE was a prerequisite for the MCCQE. However, in recent decades, Canada has witnessed an array of public policy and legislation put in place to tackle employment equity ranging from the Employment Equity Act, the Access to the Professions and Trades (APT) initiatives, and the Fair Access to Regulated Professions Act.⁷ Issues of fairness were noted, prompting the MCC to cease offering the MCCEE in 2018. As of 2019, IMGs can attempt the MCCQE Part I without first passing the MCCEE. Prior to 2019, the MCCQE Part I exam was administered only in Canada. To ensure broader access, a new delivery method of the MCCQE Part I was adopted to enable international delivery.⁸ The examination is now offered in over 80 countries around the world, allowing IMGs to sit the exam in their home country.

In 2020, in response to the COVID-19 pandemic, the MCC allowed the administration of the MCCQE Part I using a remote proctor.⁹ This virtual delivery method allows candidates to take the examination in the comfort of their home from anywhere in the world. In 2020 and 2021, one-third of the IMGs attempting the MCCQE Part I did so via remote proctoring.

The Therapeutic Decision-Making (TDM) Examination is an applied knowledge assessment developed by the MCC. The main purpose of the TDM Examination is to select candidates for a Practice-Ready Assessment (PRA) program, a pathway for internationally trained physicians to practice medicine in Canada. This examination aims to assess the competence of candidates at the level required of a family physician practicing independently and safely in Canada. It is a computer-based examination that can be taken via remote proctoring or at one of the vendor's many international test centers. TDM Examination results are transferable from one province to another. This greatly assists IMGs in their application for PRA positions across provinces.

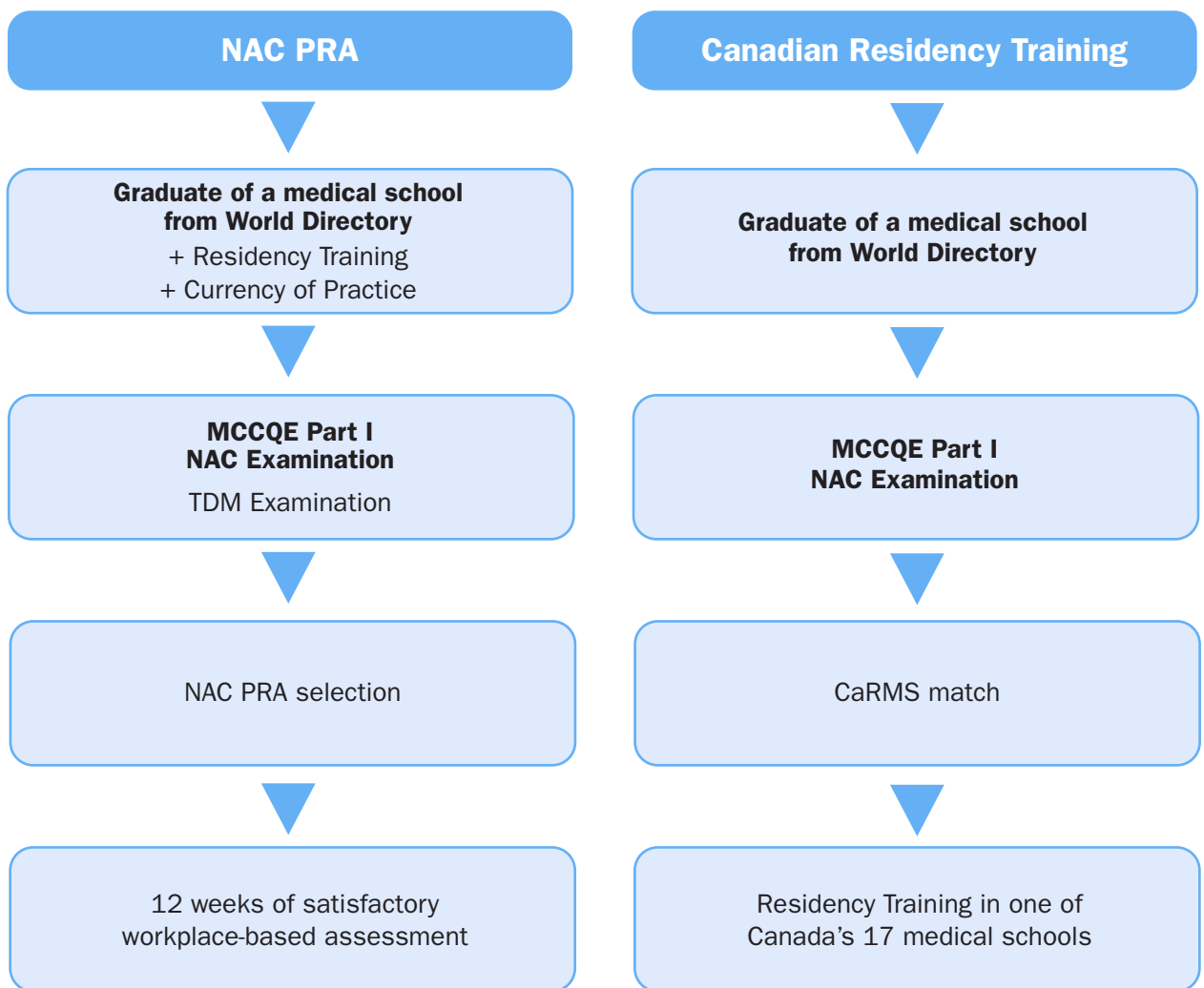
As noted in the 2004 Task Force report, Canada had a somewhat fragmented approach to assessing and integrating IMGs. For example, IMGs had to pass multiple examinations if applying to several jurisdictions. The cost, inconvenience, and infrequent administrations were barriers that candidates were forced to navigate. Although the MCCEE and the MCCQE Part I offered a national, transferable assessment of medical knowledge, there was a need for an examination to assess a candidate's clinical skills. To further assist IMGs in the pursuit of integration into the Canadian physician

workforce, the National Assessment Collaboration (NAC) Examination was created. The NAC Examination is a Pan-Canadian objective structured clinical examination (OSCE) that assesses an IMG's clinical skills at the level of recent Canadian medical graduates (CMG). This national examination was developed to avoid duplication of examinations that were historically administered by provincial IMG assessment programs. In addition to being acceptable to provincial IMG jurisdictions, the results assist Canadian medical school residency

programs in selecting IMGs. The NAC Examination is delivered in multiple locations across Canada.

Figure 1 illustrates the main two pathways for IMGs to enter the Canadian physician workforce. One of the pathways is meant for physicians who completed post-graduate training in another country, the other pathway is for physicians who completed their medical degree abroad and plan to enter a residency program in Canada.

Figure 1
Most common pathways for IMGs to enter the Canadian physician workforce



NAC PRA – National Assessment Collaboration Practice Ready Assessment
 MCCQE Part I – Medical Council of Canada Qualifying Examination Part I
 NAC Examination – National Assessment Collaboration Examination
 TDM Examination – Therapeutic Decision-Making Examination
 CaRMS – Canadian Residency Matching Service

Recommendation 2: Standardize licensure processes and requirements

Physicians, as many other healthcare occupations, set their own standards of practice. In Canada, healthcare professions are regulated by the provincial and territorial regulatory authorities.¹⁰ To obtain a license in one of the provinces or territories, physicians are expected to have the LMCC qualification. Furthermore, the regulatory authorities may require other documentation and credentials for licensing purposes. Before applying for a medical license, these credentials must undergo a foreign credential recognition process where the education, training, and job experience obtained in another country are verified to be equivalent to the standards established for Canadian workers.¹¹

Prior to 2004, IMGs had to undertake the verification process in every Canadian jurisdiction where they wished to apply for a license to practice. The process was paper-based, time-consuming, and

THE LMCC IS A PREREQUISITE FOR MOST PROVINCIAL AND TERRITORIAL MEDICAL LICENSURE IN CANADA.

expensive. The IMG Task Force's second recommendation focused on standardizing the processes by developing and utilizing a central credential verification service to validate the documents required for licensure and certification, and to maintain a record of applicants' credentials.

The recommendation to shift to centralized credential verification led to two joint projects between the Federation of Medical Regulatory Authorities of Canada (FMRAC), its members, the MCC, and the Government of Canada. First, the MCC developed the Physician Credential Registry of Canada (PCRC) as an online service. IMGs could submit their credentials for primary source verification using a "one-stop shop" and then share their credentials electronically with health-related organizations across Canada, including most regulatory authorities. This service was later upgraded to a web-based portal called physiciansapply.ca and it is utilized by all physicians, IMGs, and CMGs. This portal acts as a conduit for the unrestricted flow of critical information for licensing decisions and application for registration to a provincial or territorial jurisdiction. In addition to the storage and verification of documents submitted by IMGs, the

portal offers trusted translation services, addressing previous challenges encountered with translated documents submitted by candidates. This centralized process has helped standardize and facilitate the licensure process for IMGs.

Since medical regulatory authorities have distinct requirements for medical licensure within their respective jurisdictions, whether it be a provisional or full license, identifying and promoting the adoption of common licensure screening criteria and verification tools is part of the second recommendation. This is evident in the work of the NAC PRA Working Group, a Pan-Canadian group overseen by the MCC. For internationally trained physicians, the NAC PRA initiative is a pathway to medical practice involving examinations and an in-practice clinical assessment (see Figure 1). This pathway ascertains whether IMGs are safe and competent to practice medicine in Canada without having to repeat their postgraduate residency training in Canada. To promote fairness, accessibility, and transportability, the NAC PRA Steering Committee, with other stakeholder input, created a set of common standards for assessing IMGs. The standards were built on best practices, leveraged common resources, and reduced duplications. Furthermore, they allowed for the mobility of applicants across provincial and territorial jurisdictions. Given that most Canadian PRA programs follow consistent and comparable processes, a successful PRA candidate from one jurisdiction will find it easier to apply for a license in another jurisdiction. The importance of this initiative is especially salient to rural and remote communities as many of the IMGs who complete the NAC PRA serve those areas.¹²

Recommendation 3: Expand/develop programs to assist IMGs with licensure and requirements

Migrating to another country often means learning not only a new language, but also new cultural norms and nuances for interacting with others. The 2004 Task Force report mentions that IMGs often struggle with understanding how medicine is organized in Canada, the relationships between professional colleagues, therapeutic protocols, legal/ethical requirements, gender, and communication expectations. In a meta-ethnographic study on IMGs, Al-Haddad and colleagues found the transition to a new country for IMGs was very challenging; IMGs found themselves in an unfamiliar environment and often experienced "culture shock and disorientation at the workplace once they commenced their posts."¹³ Furthermore, many IMGs

had to complete assessments that incorporated methods that were unfamiliar to them. The third recommendation points to expanding and developing programs that assist IMGs with understanding the practice of medicine in Canada and the associated requirements.

Multiple self-education modules were developed for physicians to learn about communication and cultural competences required in Canada. These modules are designed for IMGs who arrive from different parts of the world where both communication skills and cultural competencies may be defined differently than in Canada. The topics covered include communication skills, consent and confidentiality, cross-cultural communication, communicating with adolescents, Indigenous

THE 2004 TASK FORCE REPORT MENTIONS THAT IMGs OFTEN STRUGGLE WITH UNDERSTANDING HOW MEDICINE IS ORGANIZED IN CANADA, THE RELATIONSHIPS BETWEEN PROFESSIONAL COLLEAGUES, THERAPEUTIC PROTOCOLS, LEGAL/ETHICAL REQUIREMENTS, GENDER, AND COMMUNICATION EXPECTATIONS.

health, mental health, complexities of care of the elderly, and professional challenges.¹⁴ The online modules were developed through a collaboration with medical educators, community experts, and the MCC with funding obtained from Health Canada. To ensure accessibility, these modules are publicly available and free of charge. The physician portal also offers a module outlining the routes to licensure. The orientation portal is interactive, and includes videos, self-reflection questions, self-assessment, and follow-up resources. A focus group took place in Winnipeg, Manitoba on November 25, 2015, and included 19 IMGs.¹⁵ According to participants of this focus group, whose purpose was to evaluate the usefulness of the module, the orientation portal does exactly that. It presents practical physician practice information for IMGs that, in many cases, may differ from physician practice norms in their country of origin.

Since 2017, online preparatory materials have been available to assist candidates in preparation for the MCCQE Part I. These resources include exam

platform demonstration videos, sample questions (both multiple-choice questions [MCQ] and clinical decision-making [CDM] questions), instructional videos (CDM tips, online demo, etc.), a list of resources by medical specialty area, and the MCC Objectives.¹⁶ In addition to the preparatory material, the MCC has developed a suite of practice exams. These exams mimic parts of the MCCQE Part I, allowing the candidate to gauge their knowledge before registering for this exam. This is particularly helpful to IMGs as they can assess their readiness to begin the licensure process in Canada or, even before that, to begin the immigration process.

Recommendation 4: Develop orientation programs to assist faculty working with IMGs

As noted in the 2004 Task Force report, many educators and residents who work with IMGs are at times frustrated because IMGs often require more supervision than their Canadian-educated counterparts.

As part of the NAC PRA project, there is an initiative to address the differences across the country in assessing IMGs for readiness to enter the Canadian physician workforce. The candidates undertake a clinical field assessment over a period of 12 weeks. During that period, they are observed and evaluated by physician assessors. To standardize the evaluation process, tools were developed to train assessors who observe and evaluate a candidate's performance. Although many of the Canadian medical faculty members are trained for assessing medical students' or residents' performance, it was important that instructional materials be created for those who are assessing IMGs as their medical education would likely differ from that provided in Canadian medical schools or residency programs.

Training modules were created to offer a comprehensive clinical assessor program for both face-to-face and online education. Working with workplace-based assessment experts, the MCC has made meaningful pedagogical contributions to programs that assist faculty working with, assessing, and supervising IMGs.

Recommendation 5: Develop capacity to track and recruit IMGs

The richest data on IMGs in Canada is collected by the Canadian Post-MD Education Registry (CAPER). As part of their mandate, CAPER assists in the interpretation and use of information gathered to maximize its utility for those involved

in postgraduate training, research, and health human resources planning.¹⁷ The MCC contributes to this database to ensure a better understanding of trends in IMGs attempting to practice medicine in Canada.

The MCC's role for this recommendation evolves around tracking the IMG cohorts to understand their journey to medical practice in Canada. In the world of globalization and the internationalization of

AS PART OF THE NAC PRA PROJECT, THERE IS AN INITIATIVE TO ADDRESS THE DIFFERENCES ACROSS THE COUNTRY IN ASSESSING IMGs FOR READINESS TO ENTER THE CANADIAN PHYSICIAN WORKFORCE.

medical education, it is crucial, from a workforce policy perspective, to have the ability to track physicians coming into the system and practicing in Canada. According to the Thomson report, "There are in effect two groups of IMGs. One is immigrant IMGs who obtained their medical degrees abroad, and in many cases practiced abroad, before immigrating to Canada. The other is Canadians who studied abroad (CSAs). CSAs are Canadian citizens or permanent residents who left Canada to obtain a medical degree abroad. While some CSAs are also immigrants, the distinction is that they came to Canada before obtaining their medical degrees."¹⁸ Furthermore, the Thomson report specifically indicated that, "holders of statistical data on IMGs should increase efforts to provide breakdowns for CSAs versus immigrant IMGs and for the extent to which IMGs follow various routes into practice." As of 2016, the MCC, to help enumerate the contribution of IMGs to the diversity of the physician workforce, can provide this data.

In 2021, over 1,100 CSAs attempted the MCCQE Part I. Of these, only 53% were born in Canada. The others were born in 82 different countries. CSAs have been a part of the physician workforce in Canada for many years and their diversity and educational backgrounds change as much as that of the immigrant IMGs.

Recommendation 6: Develop national research program and evaluation of IMG strategy

The last Task Force recommendation called for a national research program and an evaluation of the IMG strategy. Although the report suggested that

organizations such as the Advisory Committee on Health Delivery and Human Resources, the Canadian Institute for Health Information, and the Canadian Health Services Research Foundation take lead on the national research, the MCC also conducted studies relating to IMGs.

Research was conducted to better understand the population of IMGs taking the MCC's exams. Bartman and colleagues¹⁹ found the majority of MCCEE candidates came from Asia. After launching the computer-based version of the MCCEE, Bartman and Lafortune found that candidates who took the computer-based version were younger, the proportion of female examinees was higher, and the candidates wrote the exam closer to graduation than candidates who took the paper-and-pencil version of the exam.²⁰ In 2014, the MCC began a CSA-focused research collaboration with the Educational Commission for Foreign Medical Graduates (ECFMG). One-third of CSAs did not secure residency training in either Canada or the US.²¹ These analyses and research studies led to an understanding of the IMG population including where they come from, where they received their education and training, and their gender and age.

The MCC also conducted research to better understand how IMGs take and succeed on the licensing exams. This research is important to help inform IMG workforce strategy. The performance of IMGs on the MCC examinations is a focus area because these individuals fill practice gaps in Canada.

Until 2020, candidates had to pass two parts of the MCCQE. One of the MCC studies looked at the IMG success rate on the MCCQE Part I based on their performance on the MCCEE. Of those who passed the MCCEE on their first attempt, 73% passed the MCCQE Part I. Of those, 65% went on to pass the clinical skills component, the MCCQE Part II.²² This information was important to IMGs as it helped them decide whether to emigrate.

A 2009 study by Wenghofer and colleagues focused on the MCC's examinations as predictors of physician complaints later in practice. One of the factors considered was whether the physician was an IMG.²³ The study concluded the MCCQE Part I was a significant predictor of quality-of-care problems later in practice, regardless of whether the physician was an IMG or CMG. An additional study focusing on the success rate of IMGs was conducted in 2014 by De Champlain and colleagues.²⁴ This study found that younger, female PRA candidates who did well on the MCCQE Part I tended to score significantly

higher on the short-answer management problems (SAMPs) component of the family medicine certification exam than their older, male counterparts with lower scores on the MCCQE Part I. These studies provided the IMG community and the directors of postgraduate training programs with insight into rates of successful completion of the assessments required for licensure. They also show, in general, that the assessment processes for IMGs are valid.

Discussion

Given that one-quarter of Canadian workers are foreign-born, providing an efficient pathway for IMGs to become licensed and serve the Canadian population is a logical step towards enriching the health services provided to Canadians.²⁵ Including physicians with multiple languages and a variety of cultural backgrounds, and who also possess the knowledge and skills required of physicians educated in Canada, helps to develop a diverse and competent physician workforce.²⁶

The goal of this paper was to reflect on the MCC's work to address the recommendations of the 2004 IMG Task Force as we near the 20-year anniversary of the Calgary conference. The MCC's efforts are just a piece of a larger strategic plan to improve the pathway to licensure for IMGs. There are numerous other stakeholders whose role in aiding with the integration of qualified internationally trained physicians into the Canadian physician workforce

THE GOAL OF THIS PAPER WAS TO REFLECT ON THE MCC'S WORK TO ADDRESS THE RECOMMENDATIONS OF THE 2004 IMG TASK FORCE AS WE NEAR THE 20-YEAR ANNIVERSARY OF THE CALGARY CONFERENCE.

has been substantial over the past two decades. Nevertheless, 20 years on, many IMGs still feel the requirements for becoming a practicing physician in Canada are far too cumbersome. The lack of dedicated residency positions and ongoing issues of fairness in obtaining those that are available are just some of the remaining barriers.^{27,28}

As stated in the Thomson report,¹⁸ some of the work outlined in the 2004 Task Force report was completed. The Task Force report created a blueprint for change, with the main developments being the creation of PCRC, the NAC Examination, the

national IMG database, and pilot programs for faculty development. Examples of innovative initiatives by other stakeholders include the creation of the IMG-Ontario program (2003-2007) and the later launch of the Centre for the Evaluation of Health Professionals Educated Abroad (CEHPEA) in 2007.²⁹

National examinations play an important role in the licensure of IMGs.³⁰ The MCC's role in developing and delivering these assessments is still at the forefront of the integration of IMGs into the Canadian physician workforce. How these assessments should be structured in the future to ensure

THE TASK FORCE REPORT CREATED A BLUE-PRINT FOR CHANGE, WITH THE MAIN DEVELOPMENTS BEING THE CREATION OF PCRC, THE NAC EXAMINATION, THE NATIONAL IMG DATABASE, AND PILOT PROGRAMS FOR FACULTY DEVELOPMENT.

the competency of IMGs will demand research, both on the nature of evolving physician competencies and the technologies that can expand the measurement domain. Just as CMGs will require new skills to ensure proper patient care, so too will IMGs. While planning for the movement of new IMGs to the Canadian physician workforce, it is important to remember the responsibilities towards Canadian society. As outlined by the Government of Canada in their 2004 report, "Health Human Resources: Balancing Supply and Demand," protecting public safety by ensuring that IMGs meet identified standards of practice and competence is the most important concern.³¹

Over the past 20 years, the MCC has helped IMGs navigate the pathway to medical practice in Canada. More frequent and convenient testing, combined with practice examinations, provides IMGs with opportunities to challenge the licensure examination process in a fair and meaningful way. Centralized credentialing decreases duplication and allows for more simplified application processes. Educational resources for IMGs help ensure that ethno-cultural issues, including patient provider norms, are not a major impediment to success. Training modules for IMG assessors help safeguard the fairness of practice ready assessments. Research on IMGs, including tracking their characteristics and numbers, helps dispel myths, validates the assess-

ment process, and can inform potential physician immigrants of their likelihood of success.

Even with the efforts of the MCC and other organizations, there is still work to be done. The COVID-19 pandemic shed light on the need for more physicians in Canada and barriers to licensure still exist.^{27,32} Studies on how well the strategies have worked are needed to better understand what next steps are necessary. The MCC, in collaboration with other partners, will continue to facilitate the path to licensure for IMGs.

Conclusion

This paper presents the accomplishments of one national organization in fulfilling the recommendations of the Canadian Task Force on Licensure of International Medical Graduates. As many other organizations are working towards fulfilling these recommendations, the MCC efforts are just one piece of the puzzle—a puzzle which will require further efforts, funding, and collaborations to be completed.

About the Authors

Ilona Bartman, MA, is Research Program Manager, Medical Council of Canada, Ottawa, ON, Canada.

Claire Touchie, MD, MHPE, FRCPC, is Professor, Department of Medicine, University of Ottawa, Ottawa, ON, Canada.

Maureen Topps, MB ChB, FCFP, MBA, FRCPC (Hon), is Executive Director and CEO, Medical Council of Canada, Ottawa, ON, Canada.

John R. Boulet, PhD, FSSH, is Director of Assessment (interim), Medical Council of Canada, Ottawa, ON, Canada.

Correspondence should be addressed to:

Ilona Bartman, MA, Medical Council of Canada, 1021 Thomas Spratt Place, Ottawa, ON Canada K1G 5L5, ilona@mcc.ca

Author contributions: Study concept and design (IB, CT); Data acquisition, analysis, and interpretation (IB); Critical revision of the manuscript for intellectual content (JB, CT, MT)

Funding/support: None

Other disclosures: None

Keywords: International medical graduates, physician workforce, Canadian medical license

References

1. Government of Canada. *Canada Welcomes the Most Immigrants in a Single Year in its History*. Immigration, Refugees and Citizenship Canada. December 23, 2021. Accessed August 30, 2022. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2021/12/canada-welcomes-the-most-immigrants-in-a-single-year-in-its-history.html>
2. Government of Canada. *2020 Annual Report to Parliament on Immigration*. Immigration, Refugees and Citizenship Canada. Accessed August 30, 2022. <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2020.html>
3. Canadian Medical Association. *Quick Facts on Canada's Physicians*. Accessed August 30, 2022. <https://www.cma.ca/quick-facts-canadas-physicians>
4. Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources. (2004). *Report of the Canadian Task Force on the Licensure of International Medical Graduates*.
5. 150 years of immigration in Canada <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2016006-eng.htm>
6. Vodden C. (2008). *Licentiate to Heal: A History of the Medical Council of Canada*. Medical Council of Canada.
7. Moneypenny CR. *Understanding the Experiences of International Medical Graduates (IMGs) in Ontario, Canada: A Qualitative Study*. Master's Thesis. University of Toronto; 2018. Accessed August 30, 2022. https://tspace.library.utoronto.ca/bitstream/1807/89537/3/Moneypenny_Crystal_%28Christelle%29_R_201806_MSc_thesis.pdf
8. Medical Council of Canada. *Medical Council of Canada Qualifying Examination Part I Annual Technical Report 2019*. Accessed August 30, 2022. <https://h5a9c8a9.stackpathcdn.com/media/MCCQE-Part-I-Annual-Technical-Report-2019.pdf>
9. Morin M, Alves C, De Champlain A. The Show Must Go On: Lessons Learned from Using Remote Proctoring in a High-stakes Medical Licensing Exam Program in Response to Severe Disruption. *Journal of Applied Testing Technology*. 2022;23(2):15-35
10. Newcomers Canada. *Foreign Credential Recognition*. Accessed August 30, 2022. <https://www.newcomerscanada.ca/this-canadian-life/foreign-credential-recognition/>
11. Government of Canada. *Learn about Foreign Credential Recognition in Canada*. Employment and Social Development. Accessed August 30, 2022. <https://www.canada.ca/en/employment-social-development/programs/foreign-credential-recognition.html>
12. Medical Council of Canada. *National Assessment Collaboration Practice-Ready Assessment: A Pathway to Licensure for Internationally Educated Physicians*. Accessed August 30, 2022. <https://mcc.ca/assessments/practice-ready-assessment/>
13. Al-Haddad M, Jamieson S, Germeni E. International Medical Graduates' Experience Before and After Migration: A Meta-Ethnography of Qualitative Studies. *Med Educ*. December 2, 2021.doi: 10.1111/medu.14708
14. Medical Council of Canada. *Orientation Communication and Cultural Competence*. Accessed August 30, 2022. <https://physiciansapply.ca/orientation>

15. Medical Council of Canada. *NAC PRA Newsletter*. Published March 2016. Accessed August 30, 2022. <https://h5a9c8a9.stackpathcdn.com/media/NAC-PRA-Newsletter-2016.pdf>
16. Medical Council of Canada. *Examination Objectives Overview*. Accessed August 30, 2022. <https://mcc.ca/objectives>
17. Canadian Post-MD Education Registry. (2022). *Mandate and Mission*. Retrieved from the Canadian Post-MD Education Registry (CAPER) website <https://caper.ca/about-us/mission-and-mandate>
18. Thomson G, Cohl, K. *IMG Selection: Independent Review of Access to Postgraduate Programs by International Medical Graduates in Ontario*. Report to the Ontario Ministry of Health and Long-Term Care and the Council of Ontario Universities. Published September 2011. Accessed August 30, 2022. https://www.health.gov.on.ca/en/common/ministry/publications/reports/thomson/v1_thomson.pdf
19. Bartman I, Wood T J, Blackmore D, Lafortune Y. (2007). *Where do International Medical Graduates Who Enroll in the Medical Council of Canada's Evaluating Examination Study Medicine?* Poster presented at the Canadian Conference on Medical Education, Victoria, Canada.
20. Bartman I, Lafortune Y. (2010). *Do the International Medical Graduates (IMG) who Enroll in the Computer Based Testing (CBT) Version of the Medical Council of Canada Evaluating Examination (MCCEE) Differ from Those who Enrolled in the Paper and Pencil (OO) Version of the Exam?* Poster abstract presented at the Canadian Conference on Medical Education, St. John's, Canada.
21. Bartman I, Boulet J R, Qin S, Bowmer M I. (2020) Canadians Studying Medicine Abroad and Their Journey to Secure Postgraduate Training in Canada or the United States. *Can Med Educ J*. 2020;11(3):e13-e20. doi: 10.36834/cmej.68175
22. Bowmer M I, Bartman I, Wood T J, Blackmore D. (2007). *Predicting Success: Does the MCCEE Screen the Successful Internationally Educated Physician?* Oral abstract presented at the annual meeting of the Association of Medical Educators of Europe, Trondheim, Norway.
23. Wenghofer E, Klass D, Abrahamowicz M, et al. Doctor Scores on National Qualifying Examinations Predict Quality of Care in Future Practice. *Med Educ*. 2009;43(12):1166-73. doi:10.1111/j.1365-2923.2009.03534.x
24. De Champlain A, Streefkerk C, Tian F, et al. Predicting Family Medicine Specialty Certification Status Using Standardized Measures for a Sample of International Medical Graduates Engaged in a Practice-Ready Assessment Pathway to Provisional Licensure. *Journal of Medical Regulation*. 2014;100(4):8-16. doi.org/10.30770/2572-1852-100.4.8
25. Government of Canada. *Immigration Matters in Health Care. Immigration, Refugees, and Citizenship Canada*. Accessed August 30, 2022. <https://www.canada.ca/en/immigration-refugees-citizenship/campaigns/immigration-matters/growing-canada-future/health.html>
26. Canadian Medical Association. "You Cannot Be What You Cannot See": CMA Launches Equity and Diversity Policy. Published March 6, 2020. Accessed August 30, 2022. <https://www.cma.ca/news/you-cannot-be-what-you-cannot-see-cma-launches-equity-and-diversity-policy>
27. MacFarlane, MM. When a Canadian is Not a Canadian: Marginalization of IMGs in the CaRMS Match. *Can Med Educ J*. 2021;12(4):132-140. doi:10.36834/cmej.71790
28. Culbert L. Physician Mission: BC. Pressed to Recognize Qualifications of Foreign-Trained Doctors. August 20, 2021. Accessed August 30, 2022. <https://vancouver.sun.com/health/local-health/bc-has-a-doctor-shortage-and-yet-there-are-100s-of-physicians-here-who-arent-allowed-to-practise-medicine>
29. Takahashi SG, Rothman A, Nayer M, Urowitz M B, Crescenzi AM. Validation of a Large-scale Clinical Examination for International Medical Graduate. *Can Fam Physician*. 2012;58(7):e408-17.
30. Neiterman E, Bourgeault IL, Covell CL. What Do We Know and Not Know about the Professional Integration of International Medical Graduates (IMGs) in Canada? *Healthc Pol*. 2017;12(4):18-32. doi:10.12927/hcpol.2017.25101
31. Government of Canada. *Health Human Resources: Balancing Supply and Demand*. Health Canada. 2004. Accessed August 30, 2022. www.canada.ca/en/health-canada/services/science-research/reports-publications/health-policy-research/health-human-resources-balancing-supply-demand.html#page28
32. Olaizola A., and Sweetman A. (2018), *Brain Gain and Waste in Canada: Physicians and Nurses by Place of Birth and Training*. Report prepared by the Department of Economics, McMaster University. Retrieved from the OECD library website Home | OECD iLibrary (oecd-ilibrary.org)