



POLICY BRIEF

No. 06, January 2022
Melissa Kelly, Natalya Brown,
Victoria M. Esses

Improving the Attraction and Retention of Internationally Educated Healthcare Professionals in Small and Rural Communities

EXECUTIVE SUMMARY

Smaller communities in Canada, particularly those located in rural areas, find it difficult to attract and especially retain healthcare professionals. For example, in 2016, the ratios of nurses and physicians in rural settings in Canada were 7.2 and 1.1 per 1,000 population, while these ratios were 11.7 and 2.6 per 1,000 population in urban settings (Ariste, 2018). The imbalanced distribution of Canada's healthcare professionals is especially problematic given the specific healthcare needs and challenges of small and rural centres. The COVID-19 pandemic has demonstrated what can happen in vulnerable communities when healthcare resources are inadequate. The recruitment of internationally educated healthcare professionals may be one way to fill the labour shortages in small and rural centres and to meet the changing needs of these communities. Many of the policies and programs currently in place to recruit internationally educated healthcare professionals to small and rural communities, such as provisional licenses and return of service agreements, focus on the attraction but not the retention of these individuals so that retention rates are low. In this brief we propose an integrated approach that focuses on both attraction and retention of internationally educated healthcare professionals, taking into account the research on attraction and retention of immigrants in these communities and the evidence on recruiting healthcare professionals in general.

This integrated approach would:

- Invest in small and rural community healthcare education in high-volume immigrant countries of origin and recruit internationally educated healthcare professionals from small and rural communities in these countries;
- Prioritize internationally educated healthcare professionals in provincial nominee and federal pilot programs;
- Engage receiving communities in the recruitment and retention of internationally educated healthcare professionals;

Readers can link to the [Appendix](#) for the evidence that supports the strategies and recommendations for attracting and retaining healthcare professionals in small and rural communities.

- **Increase training opportunities for internationally educated healthcare professionals in small and rural centres in Canada, with systematic strategies for connecting these individuals to the communities in which they train;**
- **Increase the content of training programs for internationally educated healthcare professionals in Canada (e.g., bridging programs) that focuses specifically on rural and small community healthcare;**
- **Establish a network for ongoing collaboration and continuing education for internationally educated healthcare professionals who are working in small and rural Canadian centres;**
- **Provide personalized support for the families of immigrant healthcare professionals during and following recruitment to small and rural centres;**
- **Develop a pan-Canadian toolkit for the recruitment and retention of internationally educated healthcare professionals to small and rural centres in Canada.**

INTRODUCTION

Smaller communities in Canada, particularly those located in rural areas, tend to be under-resourced in terms of healthcare services (Weinhold & Gurtner, 2014; Wilson et al., 2020). One of the major challenges facing these communities is their inability to successfully attract and retain healthcare professionals. For example, the ratio of physicians and nurses relative to the population tends to be substantially lower in rural areas when compared to urban areas (Ariste, 2018). About 19% of Canadians live in rural areas, whereas about 8% of physicians practice in these areas (Canadian Medical Association, 2021).

The imbalanced distribution of Canada's healthcare professionals is highly problematic, especially if one considers the specific healthcare needs of small and rural centres. Rural areas have a higher percentage of older adults when compared to urban areas (19.9% aged 65 and older in rural areas versus 15.5% in urban areas; Channer et al., 2020), making the ratio between seniors and healthcare professionals especially stark. These areas also generally have poorer health outcomes, with preventable mortality rates increasing with the increased remoteness of a region (Subedi et al., 2019).

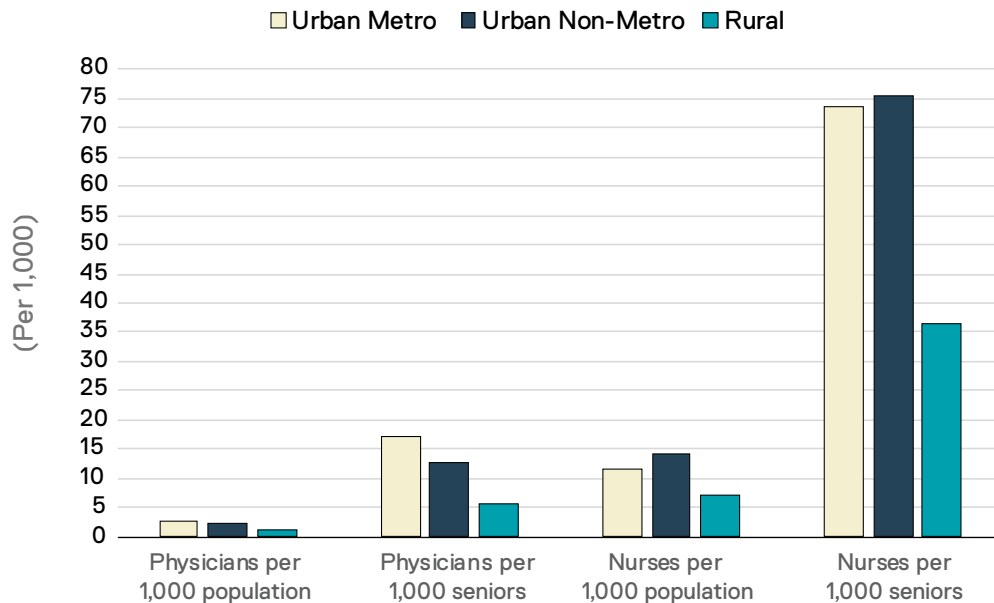
Moreover, small and rural communities in Canada are increasingly diverse, in part due to the introduction of regionalization policies aimed at attracting newcomers to non-gateway cities. This has led to a growing demand for culturally appropriate care (Mullings & Gien, 2013; Patel et al., 2019). There is, therefore, a strong need to improve healthcare services in small and rural centres, particularly when considering demographic trends.

Communities have a range of experiences with the recruitment of healthcare professionals and face unique challenges depending on their location, size and other characteristics. While acknowledging this diversity, for the purposes of this brief we will use the term 'small and rural centres' in a generalized way, to refer to communities that, on account of their non-urban status, struggle to attract and retain healthcare professionals. It is also important to note that, as will be apparent in the sections that follow, much of the research on the challenges faced by internationally educated healthcare professionals in Canada and their attraction and retention in small and rural communities focuses specifically on physicians. Despite this limitation, the issues discussed and the recommendations we propose may apply equally to the variety of professionals needed to support a robust and effective healthcare system.

The recruitment of internationally educated healthcare professionals may be one way to fill labour shortages in small and rural centres and to meet the changing needs of communities. However, when newcomers are recruited to work in these areas, retention rates tend to be low (Campbell-Page et al., 2013; Fleming & Mathews, 2012). Like Canadian educated professionals, internationally educated healthcare workers may find small and rural communities less attractive than larger urban centres for personal and professional reasons (Asghari et al., 2017). Compared to their Canadian educated counterparts they may also face additional challenges in small and rural communities such as a lack of settlement services and a lack of culturally relevant networks and services.

Figure 1 (Adapted from Ariste, 2018)

Physicians and nurses per 1,000 population and per 1,000 seniors in urban metropolitan, urban non-metropolitan, and rural areas of Canada, 2016.



While healthcare labour shortages have persistently been an issue in small and rural communities, there are many internationally educated healthcare professionals in Canada who are currently under-employed due to the challenges of obtaining a license to practice in Canada (Alam et al., 2015). Only about 55% of internationally educated medical graduates physically present in Canada eventually practice medicine in the country (New Canadian Media, 2020). Similarly, approximately 30% of internationally educated immigrants working as nurses' aides, orderlies and patient service associates have nursing degrees, with their skills underutilized (Turcotte & Savage, 2020). The licensing of individuals with foreign credentials and international experience is therefore an added barrier to the recruitment of internationally educated healthcare workers that needs to be addressed in order to successfully attract but also retain them in Canada's small and rural communities.

Despite the challenges of attracting and especially retaining internationally educated healthcare professionals to work in small and rural centres, we propose that these individuals can play an important role in reducing healthcare labour shortages across

Canada. Internationally educated healthcare professionals are represented in large numbers across the Canadian healthcare system (Canadian Institute for Health Information, 2019a,b), filling skill and labour shortages as nurses, physicians, dentists and pharmacists. Just over 20% of physicians in Canada graduated from a medical school in another country (Canadian Medical Association, 2021).

The pandemic has shown how important it is that all regions have an adequate supply of healthcare professionals, and how vulnerable communities can become when healthcare resources are insufficient. It has also illuminated the important contributions of internationally educated healthcare professionals across the skill spectrum. As we recover from the pandemic, it is the ideal time to reflect on what can be done to strengthen healthcare services across the country. It is essential that we consider the limitations of our current policies, and find ways to both ensure that the skills of internationally educated healthcare professionals are recognized, and that small and rural centres are well-equipped to attract and retain these professionals.

LIMITATIONS OF CURRENT POLICIES AND PROGRAMS

1. Many policies and programs focus on attraction but not retention of healthcare professionals

Most of the policies and programs that are currently in place to draw healthcare professionals to small and rural centres are more oriented toward attraction than retention. To attract international medical graduates, many rural areas use provisional licenses (Hewak & Luong, 2014). These licenses allow internationally educated physicians to practise before they have met the requirements for full licensure in Canada, but with a number of restrictions. Sometimes internationally educated professionals are obligated to work in a small or rural centre as part of the agreement. Similarly, seven provinces use Practice Ready Assessments to help physicians who have completed a residency in a country other than Canada access the Canadian labour market. After completing a supervised assessment, they must complete a 'return of service' contract, which involves working in an under-serviced area for two to four years. Provinces such as Saskatchewan rely heavily on these programs and, as a result, have a higher percentage of internationally educated physicians (Mann, 2021). In 2019, 52% of Saskatchewan's physicians graduated from a foreign medical school, while the equivalent figure for Canada as a whole was only 22% (Canadian Medical Association, 2021). Such approaches bring newcomers to places that struggle to attract healthcare professionals, but they do little to address the challenges of retention (Mowat et al., 2017).

2. Many policies and programs are guided by urban healthcare models that may not apply to rural settings

Current policies and programs tend to be guided by urban healthcare models (Wilson et al., 2020). This is problematic insofar as small and rural centres typically have different needs when compared to cities, and often face more challenges. For example, transportation to access health services may be an issue for some patients living in small or rural centres, especially if they have to travel to another jurisdiction

to receive care (Fleming & Sinnot, 2018; Huot et al., 2019). The unique circumstances faced by some communities may also be overlooked in healthcare education training programs. For example, healthcare workers in small and rural centres may require a different skillset given that they tend to have a broader range of responsibilities and may treat more issues than would be the case in larger cities (Thach et al., 2018). Healthcare professionals may not feel adequately prepared for the challenges of working in non-urban environments which may contribute to the challenges of retention.

3. Supports for internationally educated healthcare professionals to become licensed in Canada fall short

While internationally educated healthcare professionals have long been seen as part of the solution to resolving labour shortages in rural areas, as already noted, many internationally educated healthcare professionals struggle to become licensed in Canada (Walton-Roberts & Hennebray, 2019). The current system requires that most internationally educated healthcare professionals go through several steps in order to earn a license for their profession, regardless of how many years of international experience they may have acquired. For physicians, these steps may include the completion of exams, the completion of a period in residency, and in some cases, retraining. This may be costly and time consuming. Moreover, many internationally educated physicians struggle to find a residency position in Canada. In 2018, for example, the Canadian Residency Matching Service reported that approximately 77% of international medical graduates who participated in the full match process were unable to obtain a residency position, compared to approximately 6% of Canadian medical graduates (Esses et al., 2021). As a result of these challenges, many internationally educated medical professionals end up working outside of their profession (Zietsma, 2010), leading to what has been termed 'brain waste' (Blain et al., 2017). Barriers to foreign credential recognition and licensing have limited the supply of healthcare professionals in Canada, and make Canada a less attractive destination for internationally educated healthcare professionals who are looking for opportunities to practice their profession and develop their careers.

4. There are no policies or programs in place to ensure the pan-Canadian distribution of healthcare professionals

There is no pan-Canadian system that manages the intake and distribution of healthcare workers. This means that approaches to the recruitment and retention of internationally educated professionals may be ad hoc and vary from province to province and from community to community. In Canada, once immigrants receive permanent residency, they are free to live wherever they like. As a result, differences between jurisdictions (in terms of the approaches taken to attract and retain internationally educated healthcare workers) may lead to secondary migrations (Mowat et al., 2017). In the absence of a pan-Canadian system that ensures a more equal distribution of healthcare professionals, a focus on successful attraction and retention at the provincial and local levels is of the utmost importance.

RELEVANT RESEARCH

We base our recommendations on three areas of research. The first two are relatively well-developed, parallel literatures on (i) the attraction and retention of immigrants to small and rural communities, and (ii) the attraction and retention of healthcare professionals to small and rural communities, and provide potential strategies that may be applied to the attraction and retention of *internationally educated* healthcare professionals. In Table 1, we summarize the strategies that may contribute to attraction and retention, categorized into those that focus on addressing social and personal needs, and those that focus on addressing professional needs. The supporting research, including the available evidence base for particular strategies, can be found in the [Appendix](#).

Table 1

Strategies for the Attraction and Retention of Immigrants and of Healthcare Professionals in Small and Rural Communities

Strategy	Immigrants		Healthcare Professionals	
	Attraction	Retention	Attraction	Retention
Social and Personal				
Recruit individuals with a rural background	✓	✓	✓	✓
Facilitate information sharing pre-arrival to provide information about the community – online resources, site visits, contact with community members	✓		✓	
Build and maintain community support for immigrants and immigration by raising awareness about the importance of immigration and through community-wide conversations		✓		
Expand the capacity of mainstream services and programs to meet needs of immigrants		✓		
Leverage knowledge and experiences of existing immigrant residents	✓	✓		
Document progress and barriers that immigrants face		✓		

Strategy	Immigrants		Healthcare Professionals	
	Attraction	Retention	Attraction	Retention
Social and Personal				
Provide support for family members – assistance obtaining employment, securing desirable housing, connecting with educational institutes, social connections		✓		✓
Develop partnerships to increase the availability of affordable housing		✓		
Professional				
Develop partnerships between educational institutions and employers to facilitate retention of international students		✓		
Provide opportunities for mentorship, networking, and social and cultural adaptation		✓		
Provide on-the-job workplace culture and language training		✓		
Train more individuals with a rural background			✓	✓
Locate healthcare education programs in small and rural settings			✓	✓
Provide targeted training specifically for rural and small-town settings			✓	✓
Provide opportunities for clinical experiences in rural and small-town settings during training			✓	✓
Develop partnerships with rural healthcare professionals, communities, and regional health authorities to strengthen rural generalist pathways in education			✓	✓
Facilitate information sharing pre-arrival including contact with current healthcare professionals in the community			✓	
Provide financial incentives – e.g., loan repayment requires rural service, relocation assistance, subsidized income, housing subsidies, travel allowances			✓	✓ / ✗
Provide continuing education opportunities for those already in practice in these settings – including locus tenens relief, travel subsidies, distance education				✓
Develop a national network for continuing education and skills training for small and rural settings for those already in practice in these settings				✓

Note: ✓ = positive effects, ✓ / ✗ = mixed effects

The third relevant area of research specifically focuses on the attraction and retention of internationally educated healthcare professionals. Several strategies described as “coercive” have been used to attract internationally educated healthcare professionals to small and rural communities. A number of countries have compulsory service programs in which international medical graduates are initially restricted to practice in specific under-serviced, often rural, locations for a certain period of time in order to obtain a full license to practice (Frehywot et al., 2010). For example, Australia has a condition of service program in which most international medical graduates are restricted to practice in specific rural locations for up to 10 years (O’Sullivan et al., 2019). In Canada, physicians trained in certain countries (e.g., the U.S.) can apply for a provisional license, which often requires them to work under supervision in under-serviced communities prior to full licensure. International medical graduates trained in other countries who wish to be licensed in Canada must complete a full residency, with many of the residencies that will accept international medical graduates requiring that they sign return of service agreements with the provincial/territorial government indicating that they will practice in designated communities in need of physician services - often smaller and rural communities - for a specified period of time following their residency (Cabana, 2021).

To examine the impact of these types of programs, McGrail et al. (2012) compared the level of professional satisfaction (e.g., satisfaction with support network of other physicians, opportunities to use abilities) and non-professional satisfaction (e.g., satisfaction with life, spouse’s opportunities) of international medical graduates restricted to practice in rural areas in comparison to those not restricted to practice in rural areas, and in comparison to Australian graduates.

Results revealed that compared to the other two groups, the restricted international medical graduates had lower non-professional satisfaction across all aspects of their social lives and lower professional satisfaction for some aspects of their jobs.

It may not be surprising, then, that compulsory service programs may be successful in attracting internationally educated healthcare professionals to underserved communities, but retention rates beyond the required time frames are low. For example, Fleming and Sinnott (2018) report that provisionally licensed international medical graduates in Canada do not remain in small

and rural communities for long periods, and once they receive their full licenses or complete return of service agreements, many move to urban centres. The Canadian Health Workforce Network (2013) similarly reports that mandatory service in small and rural communities for international medical graduates is at best a temporary solution to shortages because retention rates are low and rapid turnover occurs. In addition, these programs have been described as infringing on principles of justice and on professional autonomy through restricting individuals’ right to live and work where they choose (McGrail et al., 2012).

RECOMMENDATIONS

To date strategies in Canada (and internationally) designed to benefit from the skills of internationally educated healthcare professionals in small and rural communities have focused for the most part on attraction, with little attention paid to retention. As a result, retention rates have been poor and healthcare provision in these communities has suffered. Thus, an integrated approach that focuses on both attraction and retention of internationally educated healthcare professionals in small and rural communities must be implemented. Our recommendations fit with such an integrated approach, targeting both attraction and retention of internationally educated healthcare professionals in small and rural communities.

1. Invest in small and rural community healthcare education in high-volume countries of origin and recruit internationally educated healthcare professionals from small and rural communities in these countries (federal and provincial/territorial governments)

We recommend that the federal and provincial/territorial governments invest in healthcare education that focuses on rural and small community medicine in the countries of origin from which many internationally educated healthcare professionals are arriving. Relatedly, we recommend that in considering recruitment of internationally educated healthcare professionals to serve small and rural communities, recruitment be focused on those with experience

living in these types of communities. These recommendations serve a dual function.

First, experiences with small and rural communities and the skills required to work in these communities developed pre-arrival increase not only attraction, but also more long-term retention. In addition, the investment in rural and small community medicine in countries of origin helps to address the moral issues involved in a potential brain drain by providing enhanced educational opportunities in countries of origin. Further to recruiting internationally educated healthcare professionals with experience in small and rural communities, we recommend recruiting groups of professionals and their families from the same region to address the fact that small and rural communities do not have large immigrant communities, resulting in social and professional isolation.

2. Prioritize internationally educated healthcare professionals in Provincial Nominee and federal pilot programs (federal and provincial/territorial governments)

We strongly recommend that Provincial Nominee and federal pilot programs that aim to attract immigrants to small and rural centres prioritize healthcare workers. This will help to address the shortage of healthcare professionals in these centres. To improve integration and retention outcomes, we recommend that these programs have built-in pre- and post-arrival settlement supports. Since internationally educated healthcare professionals often struggle to have their foreign credentials recognized, particular efforts should be made to provide foreign credential recognition services to these individuals, ideally starting before their arrival in Canada. If immigrant healthcare professionals are able to quickly settle and realize their career aspirations upon arrival in Canada's small and rural communities, they may be less likely to move on to larger cities in search of more promising employment and career opportunities.

3. Engage receiving communities in the recruitment and retention of internationally educated healthcare professionals (federal and provincial/territorial governments, regional and municipal governments)

We recommend that small and rural receiving community members be directly engaged in the recruitment of internationally educated healthcare professionals to promote community buy-in and a better match between communities and the healthcare professionals they recruit. Community consultations could be carried out to determine how internationally educated healthcare professionals may contribute to meeting community-specific needs. This information can then be used to guide recruitment decisions. We also recommend that small and rural communities launch information campaigns to educate local residents on the benefits of recruiting internationally educated healthcare workers. Community members who see themselves as stakeholders in the process of healthcare worker recruitment and retention will be more inclined to welcome internationally educated healthcare professionals and contribute to their successful integration. As a result, immigrant professionals may experience a higher degree of social inclusion, which may contribute to their long-term retention. In addition, we recommend that federal and provincial pre-arrival services facilitate information sharing between recruits and communities in order to establish clear expectations and increase chances of a better match between internationally educated healthcare professionals and the communities that need them.

4. Increase training opportunities for internationally educated healthcare professionals in small and rural centres in Canada, with systematic strategies for connecting these individuals to the communities in which they train (provincial/territorial governments, regional health authorities, educational institutions)

We recommend that provincial/territorial governments and regional health authorities collaborate with communities, rural healthcare workers, educational institutions, and employers (e.g., regional hospitals, clinics, care facilities) to increase the number of bridging programs, residencies, clinical placements, and practica available for internationally educated healthcare professionals in small and rural communities. Given the empirical evidence showing that training in small and rural communities is linked to higher retention, increasing training opportunities will increase the pool of potential recruits while increasing their exposure to rural and small-town medicine and lifestyles. Simultaneously, strategies should be implemented to connect students to the communities during their training and to ease their transition to employment. These could include mentorship programs and targeted social engagements.

5. Increase the content of training programs for internationally educated healthcare professionals in Canada (e.g., bridging programs) that focuses specifically on rural and small community healthcare (provincial/territorial governments, educational institutions)

We recommend that bridging programs and other training opportunities for internationally educated healthcare professionals provide targeted training specifically focusing on healthcare provision in rural and small communities. The skills developed through this training will increase the ability of internationally educated healthcare professionals to succeed in these communities, which has been shown to increase both attraction and retention rates. It is also beneficial in allowing internationally educated healthcare professionals to know what to expect if they choose to work in these communities, reducing the probability that they will leave after a short period of time.

6. Establish a network for ongoing collaboration and continuing education for internationally educated healthcare professionals who are working in small and rural Canadian centres (federal government, provincial/territorial governments, health professional associations and educational institutions)

We strongly recommend that provincial/territorial and federal healthcare bodies establish structured networks for ongoing collaboration and continuing education among internationally educated healthcare professionals working in small and rural communities. These networks will provide colleagues and establish a system of professional support, which are often lacking in small and rural communities, as well as opportunities to maintain and enhance competencies. Compensation for recruits should include adequate funds for travel to networking events and professional development opportunities. In turn, retention rates will be enhanced.

7. Provide personalized support for the families of immigrant healthcare professionals during and following recruitment to small and rural centres (regional and municipal governments, local community organizations)

We recommend the formation of community-based committees that include representation from various sectors of the community (e.g. education, social services, settlement sector, recreation, and small businesses) and more established immigrants to assist in the settlement and integration of immigrant healthcare professionals and their families. The role of these committees should be to provide personalized and targeted assistance to recruits and their families in key areas such as finding appropriate housing, job-hunting for spouses and other family members, navigating local school systems, securing childcare, and accessing social and cultural amenities. The committees would be the first point of contact

for recruits when issues arise. In communities in which Local Immigration Partnerships (LIPs) exist, LIPs may be well placed to take on this role. This style of personalized support has worked well in the integration of privately sponsored refugees. In addition, the provision of housing could be part of the recruitment strategy. Hospitals and care facilities could collaborate with towns and municipalities to provide housing or subsidized housing to address concerns about the limited availability of affordable housing.

8. Develop a pan-Canadian toolkit for the recruitment and retention of internationally educated healthcare professionals to small and rural communities in Canada (federal government, provincial/territorial governments)

We recommend that a pan-Canadian toolkit be developed and disseminated widely that provides a guide, strategies, and tips for the recruitment and retention of internationally educated healthcare professionals in small and rural communities in Canada. This toolkit should highlight promising practices in this regard, including a description of what evidence is available to support them. Retention strategies must focus not only on professional issues, but also social integration into the local community. Small and rural communities can then select from the information available those strategies and promising practices that are likely to work for their local context without having to conduct their own basic research in this area. As these strategies and promising practices are tested in new communities, information on their effectiveness can also be used to provide input for updates and revisions of the toolkit.

CONCLUSION

Attracting and retaining healthcare professionals in smaller communities continues to be an important challenge. By prioritizing internationally educated healthcare professionals in regionalization programs, investing in healthcare education in small and rural centres in Canada and in immigrants' countries of origin, and providing greater supports for internationally educated healthcare professionals before and after arrival, governments and regional health authorities can promote better healthcare outcomes for people living in small and rural centres in Canada.

About the authors

Melissa Kelly is a Research Fellow with the Canada Excellence Research Chair in Migration and Integration Program. She is currently carrying out research on immigrant attraction and retention in small and mid-sized cities in British Columbia, Saskatchewan and Ontario.

Natalya Brown is an Associate Professor in the School of Business and the Department of Political Science, Philosophy and Economics at Nipissing University. She is the Chair of Standing Committee on Northern, Rural and Remote Communities at Pathways to Prosperity.

Victoria M. Esses is Director of the [Network for Economic and Social Trends](#) and Professor of Psychology at Western University. She is also Co-chair of the [Pathways to Prosperity Partnership](#), a national alliance of university, community and government partners dedicated to fostering welcoming communities and promoting the integration of immigrants in Canada.

REFERENCES

- Alam, N., Merry, L., Mainul Islam, M., & Cortijo, C. (2015). International health professional migration and brain waste: A situation of double-jeopardy. *Open Journal of Preventive Medicine*, 5(3), 128-131. 10.4236/ojpm.2015.53015
- Ariste, R. (2018). Availability of health workforce in urban and rural areas in relation to Canadian seniors. *International Journal of Health Planning and Management*, 34(2), 510-520. <https://doi.org/10.1002/hpm.2712>
- Asghari, S., Aubrey-Bassler, K., Godwin, M., Rourke, J., Mathews, M., Barnes, P., Smallwood, E., Lesperance, S., Porter, N., O'Reilly, S., Hurley, O., Pike, A., Hurd, J., Oandasan, I., Bosco C., Nasmith G., Garcha I., & Walezak, A. (2017). Factors influencing choice to practise in rural and remote communities throughout a physician's career cycle. *Canadian Journal of Rural Medicine*, 22(3), 92-99.
- Blain, M., Fortin, S., & Alvarez, F. (2017). Professional journeys of international medical graduates in Quebec: Recognition, uphill battles, or career change. *Journal of International Migration and Integration*, 18, 223-247. <https://doi.org/10.1007/s12134-016-0475-z>
- Cabana, R. (2021, August 25). *What is a return of service (ROS) agreement?* CARMS. <https://carms.zendesk.com/hc/en-us/articles/360002892092-What-is-a-return-of-service-ROS-agreement->
- Campbell-Page, R., Tepper, J., Klei, A.G., Hodges, B., Alsuwaidan, M., Bayoumy, D.H., Page, J.A. & Cole, D.C. (2013). Foreign-trained medical professionals: Wanted or not? A case study of Canada. *Journal of Global Health*, 3(2). 10.7189/jogh.03.020304
- Canadian Health Workforce Network. (2013). *Mythbuster: IMGs are the solution to the doctor shortage in underserved areas.* https://www.hhr-rhs.ca/index.php?option=com_content&view=article&id=401:chhrn-chfi-mythbuster-imgs-are-the-solution-to-the-doctor-shortage-in-underserved-areas&catid=150&lang=en&Itemid=324
- Canadian Institute for Health Information. (2019a). *Supply, distribution and migration of physicians in Canada 2019-Data tables.* [Data set]. CIHI.
- Canadian Institute for Health Information. (2019b). *Nursing in Canada, 2019- Data tables.* [Data set]. CIHI.
- Canadian Medical Association (2021). *Quick facts on Canada's physicians.* <https://www.cma.ca/quick-facts-canadas-physicians>
- Channer, N. S., Hartt, M., & Biglieri, S. (2020). Aging-in-place and the spatial distribution of older adult vulnerability in Canada. *Applied Geography*, 125. <https://doi.org/10.1016/j.apgeog.2020.102357>
- Esses, V., McRae, J., Alboim, N., Brown, N., Friesen, C., Hamilton, L., Lacassagne, A., Macklin, A., & Walton-Roberts, M. (2021). Supporting Canada's COVID-19 resilience and recovery through robust immigration policy and programs. *FACETS*, 6, 1-74. https://rsc-src.ca/sites/default/files/Immigration%20PB_EN.pdf
- Fleming, P., & Mathews, M. (2012). Retention of specialist physicians in Newfoundland and Labrador. *Open Medicine*, 6(1).
- Fleming, P., & Sinnot, M. L. (2018). Rural physician supply and retention: factors in the Canadian context. *Canadian Journal of Rural Medicine*, 23(1), 15-20.
- Frehywt, S., Mullan, F., Payne, P.W., & Ross, H. (2010). Compulsory service programmes for recruiting health workers in remote and rural areas: do they work? *Bulletin of the World Health Organization*, 88(5), 364-370.
- Hewak, M. & Luong, K. (2014). Rural physician recruitment and retention. *University of Western Ontario Medical Journal*, 83(1), 34-35. 10.22215/sdhlab/2019.1
- Huot, S., Ho, H, Ko, A., Lam, S., Tactay, P., MacLachlan, J., & Raanaas, R.K. (2019). Identifying barriers to healthcare delivery and access in the circumpolar North: Important insights for health professionals. *International Journal of Circumpolar Health*, 78(1). 10.1080/22423982.2019.1571385
- Mann, J. (2021, May 05). *Even during a pandemic, immigrant doctors struggle to find work.* The Walrus. <https://thewalrus.ca/even-during-a-pandemic-immigrant-doctors-struggle-to-find-work/>

McGrail, M.R., Humphreys, J.S., Joyce, C.M., & Scott, A. (2012). International medical graduates mandated to practice in rural Australia are highly unsatisfied: results from a national survey of doctors. *Health Policy*, 108(2-3), 133-139. 10.1016/j.healthpol.2012.10.003

Mowat, S., Reslerova, M., & Sisler, J. (2017). Retention in a 10-year cohort of internationally trained family physicians licensed in Manitoba. *Society of Rural Physicians of Canada*, 22(1),13-19.

Mullings, D. & Gien, L. (2013). Culturally competent (appropriate) health and long-term care services for older immigrants in a small urban center of Newfoundland. *International Journal of Humanities and Social Science Invention*, 2(9), 81-89.

New Canadian Media. (2020). "Research shows Canada has overlooked immigrant doctors" Retrieved from: <http://newcanadianmedia.ca/research-shows-canada-has-overlooked-immigrant-doctors/>" <http://newcanadianmedia.ca/research-shows-canada-has-overlooked-immigrant-doctors/>

O'Sullivan, B., Russell, D.J., McGrail, M., & Scott, A. (2019). Reviewing reliance on overseas-trained doctors in rural Australia and planning for self-sufficiency: applying 10 years' MABEL evidence. *Human Resources for Health*, 17(8).

Patel, A., Dean, J., Edge, S., Wilson, K., & Ghassemi, E. (2019). Double burden of rural migration in Canada? Considering the determinants of health related to immigrant settlement outside the cosmopolis. *International Journal of Environmental Research and Public Health*, 16. 10.3390/ijerph16050678.

Subedi, R., Greenberg, T.L., & Roshanafshar, S. (2019). *Does geography matter in mortality? An analysis of potentially avoidable mortality by remoteness index in Canada*. Statistics Canada. <https://www.doi.org/10.25318/82-003-x201900500001-eng>

Thach, S., Hodge, B., Cox, M., Parlier-Ahmad, A.B., & Gavin, S. L. (2018). Cultivating country doctors: Preparing learners for rural life and community leadership. *Family Medicine* 50(9), 685-690. 10.22454/FamMed.2018.972692

Turcotte, M. & Savage, K., (2020). *The contribution of immigrants and population groups designated as visible minorities to nurse aide, orderly and patient service associate occupations* [online]. Statistics Canada: StatCan COVID-19: Data to Insights for a Better Canada. <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00036-eng.htm>

Walton-Roberts, M. & Hennebry, J. (2019). Bumpy roads: Tracing pathways into practice for international students in nursing in outward and upward mobilities: International Students in Canada, their families, and structuring institutions. In A. Kim & M-J Kwak (Eds.), *Outward and upward mobilities* (pp. 246-265). Toronto: University of Toronto Press.

Weinhold, I. & Gurtner, S. (2014). Understanding shortages of sufficient health care in rural areas. *Health Policy*, 118(2), 201-214. 10.1016/j.healthpol.2014.07.018