OMSA AÉMO

Ontario Medical Students Association

Association des étudiant·e·s de médecine de l'Ontario

POSITION PAPER

ADDRESSING GEOGRAPHICAL HEALTH CARE DISPARITIES IN THE PROVINCE: THE NORTHERN ONTARIO RURAL MEDICINE (NORM) COMMITTEE

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Approved: May 6, 2018

Revised: May 6, 2018

INTRODUCTION

The significant shortage of physicians in rural and remote communities continues to be a challenge for health care provision in the province, particularly in Local Health Integration Networks (LHINs) 13 and 14 of Northern Ontario. The greater portion of the province's Indigenous communities are located in these underserved rural and remote areas of Northern Ontario, adding to the already overwhelming and systemic societal barriers faced by Indigenous people when accessing health care. Additionally, many rural areas of Southern Ontario face similar disparities in access to certain aspects of medical care.

One of the most effective Northern and rural physician recruitment strategies documented thus far is based on the principle that physicians *from* rural communities and *trained* in rural communities are far more likely to *practice* in rural communities (Strasser et al., 2013). This has resulted in the foundation of rural satellite campuses in some medical schools in the province along with admission policies favouring students from rural, remote and Indigenous communities and ultimately the creation of the Northern Ontario School of Medicine (NOSM).

The Ontario Medical Student Association (OMSA) has the capacity to facilitate these efforts by improving access to 1) urban-based professional development opportunities for NOSM students, and 2) Northern and rural training opportunities for urban medical students. In addition to their contribution to the medical education of future rural physicians, OMSA has the capacity to address some of the health care disparities experienced by Northern, rural, Francophone and Indigenous inhabitants directly through student-led health advocacy initiatives. This position paper cites evidence of the aforementioned Northern Ontario and rural health care disparities along with the pedagogical needs of the medical learners that will one day service these areas. Furthermore, it outlines clear recommendations as to how OMSA can

address these concerns in a socially accountable and culturally sensitive manner through the permanent implementation of the Northern Ontario & Rural Medicine (NORM) committee.

NORTHERN AND RURAL MEDICAL STUDENT ENGAGEMENT

The CanMeds Framework defines the role of physicians as being composed of multiple components. These components allow the physician to become a medical expert by being a professional, leader, collaborator, communicator and advocate, amongst others. Many of these roles cannot be developed within the setting of a didactic classroom. Instead, they are best developed through engagement with various communities. Engagement in conferences, politics and local community events are examples of ways in which community engagement is achieved by the physician. Access to opportunities that would allow the development of physician characteristics is often limited by various barriers - cost, geographical distance and time constraints. Although there has been limited literature published on the subject of medical school student engagement, the above constraints have been developed from informal student consultation.

Within the past few years, OMSA has identified a substantial lack of representation of NOSM students at provincial-level events. The lack of involvement of NOSM students in provincial and national events, seems to stem from multiple factors. One of the single largest contributing factors facing students studying in rural Northern Ontario is geography. The geographical location of NOSM campuses (Thunder Bay and Sudbury) in relation to Toronto, spans larger distances in comparison to other medical schools in Ontario. Students are faced with difficulties in arranging travel to conferences, advocacy events, and networking opportunities being held in Southern Ontario and across Canada. Students are limited in their choice of travel arrangements - time often prevents using the economic method of driving, while cost is often a barrier in using a method such as flight. Often, NOSM students must request time off from educational sessions, including lectures and clinical skills sessions, to attend these events. As a result, students are denied certain opportunities as it distracts too heavily from the core curriculum.

The NOSM curriculum poses an additional challenge for student involvement in provincial and national efforts. NOSM students are required to complete a one-month integrated community placement in first year, two one-month placements in second year, and an eight-month comprehensive community clerkship in third year, all within rural communities across Northern Ontario. These placements distance students further from airports, thus adding hours of travel to the already extensive distances students are required to travel to attend provincial and national events. These realities are highlighted in the table 1.

URBAN MEDICAL STUDENT ENGAGEMENT

Northern and rural Ontario are vastly underserved populations and have traditionally had difficulty recruiting and retaining physicians to these areas (Farmer *et al*, 2015; Wilson *et al*, 2009). Despite the fact that people in rural communities experience more health related problems, there is a skewed distribution of health professionals in urban areas (Wilson *et al*, 2009). Studies have shown, that retaining new graduates in rural areas is dependent on where these students have trained (Strasser et al., 2013). Medical students are more likely to practice in non-metropolitan areas if they have 1) had clinical exposure to a rural site or 2) trained on a rural campus (Farmer *et al*, 2015). Other strategies which have proven to aid in doctors entering rural practice, and retaining them include: rural field residencies along with local guidance and supervision, scholarships or bursaries with rural return of service agreements, and greater developmental investment and improvement in basic services like water, electricity, roads, and schools (Wilson *et al*, 2009). Immersion and preceptorship are important factors in lighting the spark for rural medicine (Wilson *et al*, 2009). Given the congregation of medical schools in Southern Ontario, it is very difficult for medical students that are interested in practicing rural medicine to find opportunities to be involved, whether this involves rural elective opportunities, rural advocacy, or forming connections in rural communities as demonstrated by an informal survey of medical students in Southern Ontario.

Given how Northern and rural Ontario are medically underserved, it is important to recruit future physicians to practice in these areas. This would be facilitated by making it easier for Southern medical students to engage with rural and Northern communities. This would include more opportunities and knowledge of rural electives located in rural and Northern communities, opportunities to learn about rural practice from rural physicians, and addressing the limitations of cost and travel in participating in rural medicine.

NORTHERN AND RURAL HEALTH ADVOCACY

Northern Ontario (as defined by the North East and North West Local Health Integration networks or LHINs) encompasses a landmass three times the size of Southern Ontario, but is home to only 7% of Ontario's population (Health Quality Ontario, 2017; Wenghofer, Timony, & Gauthier, 2014). Of the physicians practicing in Northern Ontario, 71% practice in urban settings (small to mid-sized cities), which are home to 59% of the Northern population. Furthermore, only 3.1% of Canadian specialists practice in a rural setting (Wenghofer, Timony, & Gauthier, 2014). This means that many Northern Ontario communities do not have consistent quality health care and may be 100 km or more away from a physician. Consequently, they must travel to access care, complicating health outcomes, as evidence by higher rates of chronic illnesses (Bosco & Oandasan, 2016; Northern Policy Institute, 2015; Wenghofer, Timony, & Gauthier, 2014). Overall, there is an unacceptable discrepancy in healthcare and outcomes across the province, with life expectancy being shorter in Northern Ontario than the remainder of the province. Not only are premature death rates higher, but individuals are more likely to report that they cannot consult a primary care provider (including a physician or nurse practitioner) when they are ill (Health Quality Ontario, 2017). To elaborate, the gap in mortality rate between the Northern regions and Ontario has consistently been rising, to the current value of 30%. Specifically, the estimated life expectancy of the North West LHIN is 78.6 while the North East LHIN is 79, compared to the Ontario average of 81.5 (Health Quality Ontario, 2017). In Northern Ontario, geographic, cultural, and social determinants of health contribute to a higher percentage of residents having co-morbid conditions including diabetes, anxiety, depression, and heart disease (Health Quality Ontario, 2017). The North East LHIN reports that 25.3% of the population above the age of 12 have two or more chronic conditions, while the North West LHIN reports 24.5%, comparatively to a provincial rate of 19.7% (Health Quality Ontario, 2017). Finally, Northern Ontario residents are less likely to have a primary care provider (89.2% and 83.8%) compared to the rest of Ontario (93.8%) (Health Quality Ontario, 2017). As an extension of this, Northern Ontario residents are less likely to be able to see a specialist within 30 days (30%) compared to the rest of the province (40%) (Health Quality Ontario, 2017).

Francophones are also an important part of the cultural cloth that makes up Northern Ontario. In our province, 4.8% of individuals identify as Francophone, among which 22% reside in Northern Ontario (Office of the French Language Services Commissioner of Ontario, 2014). Unfortunately, health disparities have consistently been identified in the Francophone population in comparison to their Anglophone counterparts (Gauthier et al., 2015). The burden of chronic illness is significantly greater among the Francophone population (Bouchard et al., 2012). For instance, 62% of Francophones report living with more than one chronic illness in comparison with 59% of Anglophones in the North-east (Bouchard et al., 2012). More surprising still is the disparity between north-eastern Ontario Francophones and the general Franco-Ontarian population; when compared, they have "a higher rate of heart disease (9.1% compared with 5.7%), a higher rate of hypertension (23.5% compared with 19.7%), are more likely to be overweight (38.9% compared with 36%), are more likely to have arthritis (26.7% compared with 20.7%), and are more likely to have back problems (25% compared with 21.8%)" (Gauthier et al., 2015).

Several factors contribute in creating the disparity in Francophone health. First and foremost, Francophones face language barriers in accessing health services. In Ontario, only 52% of Francophones express being able to speak French with their primary health care provider, although this proportion is higher in Northeastern Ontario at 62%(Bouchard et al., 2012). One must also consider that the patients fortunate enough to have a Francophone physician will likely often experience encounters with other health providers, such as specialists, where the language barrier will manifest itself again. Several studies highlight the significance of language barriers in health care, identifying that linguistic discordance leads to patient dissatisfaction, a lesser understanding of health conditions and treatment plans, lower rates of

treatment adherence, less health education and overall lower quality health care (Bouchard et al., 2012; Gauthier et al., 2015).

In addition to language barriers, Francophones in Northern Ontario also face the same challenges posed by rural and remote residency and associated health care resources. Francophones in this region, and in Ontario, are also older as a population than their Anglophone counterparts, with 18% aged 65 or older in comparison to 14% respectively, which may account for part of the difference in health outcomes (Bouchard et al., 2012). With a glance at other social health determinants, Francophones hold lower levels of education (29% vs 22% have less than a high school diploma) and have higher rates of unemployment (29% vs 24%) (Bouchard et al., 2012).

Higher rates of chronic and compounding illnesses requiring more health care visits and an increased use of medications directly impacts generalist physicians practicing in these settings. These physicians are confronted with complex patient needs but lack specialist care and resources, ultimately forcing them to widen their scope of practice. Bosco and Oandasan (2016) compared generalists in urban and rural centers and found that overall rural physicians work in settings outside of their own practices more often, including hospitals, nursing homes, and community health centres, compared to their urban counterparts (Health Quality Ontario, 2017). For example, 53% of rural generalists provide services in a community hospital compared to 19% of urban generalists. Overall, generalists in Northern Ontario are responsible for greater workloads and have busier schedules to meet the community's needs without assistance from a range of specialized professionals. This often leads to burnout, as supported by Wenghofer, Timony, and Gauthier (2014). They found that Northern Ontarian rural and remote generalist physicians attend to fewer patients in a week, however the patients they attend to have more complex needs, work longer hours, have a broader scope of practice, and are on call more often in comparison to their Southern Ontario colleagues (Wenghofer, Timony, & Gauthier, 2014). Physicians are often deterred from practicing rurally and remotely due to concerns about isolation, limited resources and facilities, and a lack of employment and education for their family (Bosco & Oandasan, 2016).

An area of care that is especially deficient is mental health services. For example in 2004, there were 3.3 psychiatrist per 100,000 people in Northwestern Ontario (Canadian Mental Health Association Ontario, 2009). As well, Northern Ontario has higher self-reported rates of fair or poor mental health, hospitalization, and medication use than the province (Canadian Mental Health Association Ontario, 2009; Ward, 2005). In Northern Ontario, one of the primary access points to mental health services is the emergency department (ED) (Matsumoto et al., 2017). A retrospective study completed in Sioux Lookout, Ontario highlighted mental health related visits to the ED were one of the fastest growing areas with a 73% increase over five years while volume only increased 29% (Matsumoto et al., 2017).

To address service issues there have been a number of recommendations undertaken as potential solutions including: increasing the use of telemedicine, physician assistants, and nurse practitioners, leading to a change in the composition and dynamics of health care teams (Bosco & Oandasan, 2016; Health Quality Ontario, 2017). As well, NOSM was developed, on the basis of a social accountability mandate, to serve the rural and remote populations of Northern Ontario (Strasser et al., 2013). Furthermore, the Ontario Telemedicine Network was created and services over 2600 locations in Ontario (Tollinsky, 2012). This platform has also been used to launch the Virtual Critical Care program in the North East and the Regional Critical Care Response program in the North West to connect rural communities to larger centers for support (Health Quality Ontario, 2017). There are also mobile health units that travel around different regions in Ontario to provide services including mammograms, eye exams, diabetes check ups, and chronic obstructive pulmonary disease (Health Quality Ontario, 2017).

INDIGENOUS HEALTH ADVOCACY

Ontario is home to nearly one-quarter of Canada's Indigenous population, which numbers, 309,845 as of 2011 (Statistics Canada, 2016). This includes 209,510 First Nations people, 86,020 Metis, and 3,360 Inuit. The health of Indigenous peoples in Ontario has been unambiguously damaged by colonization and colonialism. Centuries of policies, programs, and activities have aimed to assimilate Indigenous peoples and systematically rid them from Canadian society. This has resulted in the production and perpetuation of intergenerational trauma; a key determinant of Indigenous peoples' health. These colonial forces have

disproportionately burdened Indigenous peoples with major inequities in key social determinants of health - such as access to basic necessities. In Ontario, for example, boil-water advisories exist in 44 different First Nations communities. Indigenous peoples are also burdened with greater inequities in housing standards, food availability, and educational opportunity when compared to the general Canadian population (Statistics Canada, 2016).

In Ontario, self-reported health of Indigenous peoples fares more poorly than their non-Indigenous counterparts. On average, approximately 50% of Indigenous peoples rate their health as excellent or very good, compared to 60.1% of the non-Indigenous population (Statistics Canada, 2016). Across Canada, the Indigenous population suffers from higher rates of chronic conditions than the general population. The First Nations Regional Health Survey found that approximately half of First Nations adults are diagnosed with four or more chronic health conditions by age 60 (First Nations Regional Health Survey 2008). High blood pressure, diabetes, arthritis and back pain were the most commonly reported chronic conditions. The prevalence of diabetes has been estimated to be 3.6 and 5.3 times higher among First Nations men and women respectively compared to the general Canadian population, with the age at diagnosis significantly younger and the risk of severe complications higher (Young TK, Reading J, Elias B, O,Neil JD, 2000). The prevalence of smoking and alcohol consumption have also been found to be higher among Indigenous peoples in Ontario compared to the general population. Furthermore, Indigenous peoples, living both on and off reserve in Ontario, report higher rates of mental health and addictions related disability than non-Indigenous peoples (Statistics Canada, 2016). Precise characterization of health disparities between Indigenous and non-Indigenous populations in Ontario remains challenging because Ontario lacks a comprehensive health information system that accurately and routinely records the health-related outcomes of Indigenous peoples living in the province (Minore B, Katt M, Hill ME, 2009). Collecting health data is further compounded by the transience of Indigenous people in and out of urban centres; identifying and contacting Indigenous people living in urban areas is particularly challenging. As a result, the full scope of the gap in health outcomes between Indigenous and non-Indigenous peoples remains undefined.

The burden of disease in Indigenous communities is multifactorial, driven by inequities in social determinants of health, as well as systematic differences in access to health care. Almost half of the First Nations population of Ontario lives on-reserve, where health centers and public health programming are administered by Health Canada's First Nation and Inuit Health Branch. One in four of these First Nations communities are accessible only by air year round, limiting the availability of a variety of health care services (Canada I and NA, 2017). The provincial government funds Aboriginal Health Centres for First Nations, Metis and Inuit peoples across the province and many Indigenous peoples access non-specific provincial healthcare. The divide in responsibility for Indigenous health between the provincial and federal governments can create an obstacle to accessing care if neither is willing to insure a given individual. In addition to the decreased accessibility that results from geographic and bureaucratic barriers, research suggests that culturally safety represents an additional concern limiting access to healthcare. A study of the urban Indigenous population in Hamilton, Ontario found that Indigenous peoples were significantly more likely to present to the emergency department than non-Indigenous peoples, and participants cited prejudice, a lack of trust, and discrimination as barriers to accessing primary care (Firestone M, Smylie J, Maracle S, Spiller M, & Campo P, 2014).

Given the clear gaps in health care provision and health outcomes between Indigenous and non-Indigenous peoples in Ontario, there is a defined need for greater Indigenous health advocacy efforts at the provincial level. The large number of Indigenous communities situated in Northern Ontario further renders it imperative to specifically consider the unique health needs of Indigenous peoples when considering how to engage students with rural medicine. The Indigenous Health Advocacy working group within NORM could create and support Indigenous health advocacy efforts in the province, acting as an avenue for students to increase their awareness of Indigenous health topics and to be actively engaged in working alongside Indigenous organizations and communities. The Indigenous Health working group also could interface with larger political organizations to bring Indigenous health topics to the forefront of popular discourse, using the leverage of our identities as medical learners.

PRINCIPLES

1. All Ontario Medical students, regardless of the geographical location of their campus, should have equitable access to opportunities for professional development, advocacy and leadership, be it those provided by OMSA or endorsed by OMSA.

2. Given the physician shortage in Northern and rural Ontario, OMSA should facilitate opportunities for students to gain exposure to Northern and rural medicine and engage in clinical training in these areas.

3. As future physicians accountable to the CanMED roles as well as the equitable and timely provision of quality health care in the province of Ontario, Ontario medical students should contribute within their means to addressing health care disparities experienced by Northern and rural Ontario inhabitants, including but not limited to the francophone and Indigenous communities in these areas.

RECOMMENDATIONS

As an act of solidarity with their constituents' needs as well as to address the aforementioned Northern and rural health care inequities, the OMSA should:

1. formally adopt the Northern Ontario and Rural Medicine (NORM) committee as an established committee with the same rights, privileges, supports and considerations given any other OMSA committee.

2. Support the NORM committee in addressing the following recommendations outlined below.

RECOMMENDATIONS TO ENHANCE NORTHERN & RURAL MEDICAL STUDENT ENGAGEMENT

1. Reasonable efforts should be made to electronically live stream conferences and other events to allow NOSM and rural students to attend on their respective campuses and/or on placements at other rural locations across Northern and rural Ontario.

2. Explore the reallocation of OMSA funds to new travel bursaries for students attending events from rural and remote regions to offset the cost burden for northern students.

3. Create policies that ensure existing travel bursaries are awarded within an equitable fashion. Funds should be used to offset proportional costs of travel and not delivered via a single standard amount per person regardless of circumstance.

4. NORM recommends the creation and delivery of a survey to northern students to gain a sense of the true barriers that limit their engagement in provincial events and committees. This information could better inform recommendations for change to increase equity in access to events and opportunities for northern students.

RECOMMENDATIONS TO ENHANCE URBAN MEDICAL STUDENT ENGAGEMENT

1. Create opportunities for urban-based medical students to interact with a rural physician mentor (Wilson et al, 2009).

2. Create opportunities for urban-based medical students to have exposure to the scope of rural practice without having the burden of travel, accommodation, or expense by organizing a teleconferenced lecture series featuring rural physician speakers (Wilson et al, 2009).

3. Create a uniformed approach to rural medicine advocacy by engaging Rural Medicine Interest Groups at southern Ontario medical schools.

RECOMMENDATIONS TO ADDRESS NORTHERN AND RURAL HEALTH INEQUITIES IN ONTARIO

1. Develop a Rural Doc Spotlight series to highlight the work of generalist physicians in Northern and rural Ontario communities. The goal of this series would be to help students gain an understanding and appreciation for generalist family practice and hopefully contribute to Northern and rural physician recruitment.

2. Develop a single document consolidating information from recruiters and other sources to address financial and logistical questions regarding full time and locum practice in Northern and rural communities. This document could serve to help students considering Northern or rural practice career plan.

3. Assist in the development of a better network of communication and collaboration between Northern, rural and remote physicians and medical students. Building these relationships will serve as a source of mentorship and recruitment for students interested in rural practice and inform the committee's efforts in advocacy work.

4. Engage Ontario medical students and community stakeholders in advocacy work to bring attention the health disparities and challenges in Northern and rural Ontario, as well as with its Francophone population, and the important work of physicians working in these areas.

RECOMMENDATIONS TO ADDRESS INDIGENOUS HEALTH INEQUITIES IN ONTARIO

1. Create opportunities for medical students to deepen their understanding of the health of Indigenous Peoples in Canada.

2. Promote medical student involvement in advocacy initiatives to address Indigenous health inequities, including those derived from social determinants of health.

3. Foster strategies to increase the number of Indigenous students in medical school and ensure that current Indigenous medical students are adequately supported.

4. Develop meaningful, reciprocal partnerships with Indigenous communities, health organizations and relevant stakeholders to ensure that OMSA's efforts to address Indigenous health inequities are community-driven.

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Table 1. Estimated Costs, Geographic distance and, time required for NOSM students to travel from home campus or sample rural education site to attend provincial and national events in comparison to southern-based schools.

Origin	Destination	Avg Cost*	Mode of Transport	Avg Travel Time	Distance (km)
Thunder Bay	Toronto	$660.48 $300.00	Drive Flight	15 hr 30 min 2 hr flight	1376
Sudbury	Toronto	$185.76 $230.00	Drive Flight	4 hr 1 hr	387
Northern Ontario Regional Site	Toronto	highly variable Range: $64.80 - $814.56	Drive + Flight	Min: 1 hr 45 min drive Max: 4 hr drive + 2.5 hr flight	Min: 135 Max: 1849
Hamilton	Toronto	$33.74	Drive	1 hr 30 min	70.3
Kingston	Toronto	$125.28	Drive	2 hr 30 min	261
Ottawa	Toronto	$216.00 $220.00	Drive Flight	4 hr 15 min 1 hr 5 min	450
London	Toronto	$95.04	Drive	2 hr 11 min	198
Mississauga	Toronto	$15.36	Drive	40 min	32

***Cost calculated @ $0.48/km or the average cost of a flight. All travel time and distances were taken from google maps, school campus to the OMA building in Toronto.**