





Perspectives of Indigenous medical students on a postgraduate Indigenous admissions pathway

Point de vue des étudiants en médecine autochtones sur une voie d'admission aux programmes postdoctoraux réservée aux candidats autochtones

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Résumé de l'article

Objectif : L'objectif de cette étude était d'avoir le point de vue des étudiants en médecine autochtones sur une éventuelle voie d'admission aux études postdoctorales réservée aux candidats autochtones et de relever les facteurs qui influenceraient leur choix de programme de résidence.

Méthodes : Nous avons fait parvenir un questionnaire aux étudiants inscrits dans les facultés de médecine canadiennes qui se définissent comme Autochtones. L'enquête portait sur l'acceptabilité par les étudiants d'un programme d'admission pour candidats autochtones (PACA) et sur les facteurs qui influenceraient leur choix de poser leur candidature dans le cadre d'un PACA. Les données ont été évaluées par des méthodes statistiques descriptives et par une analyse thématique des questions ouvertes.

Résultats : Trente-six participants ont répondu à l'enquête. Le lieu et la proximité de la famille ou du réseau de soutien ressortent comme les facteurs les plus importants dans le choix d'un programme de résidence. Les répondants attachent également de l'importance à l'existence d'un mentorat de la part de médecins autochtones et à une participation de la communauté dans le cadre d'un programme de résidence doté d'un PACA. Quatre-vingt-un pour cent des participants ont estimé que l'existence d'un PACA influencerait leur choix de programme de résidence. La crainte d'être jugé ou stigmatisé, et une inquiétude par rapport aux conditions d'admission et la logistique du programme ont été identifiées comme des obstacles à la présentation d'une demande de résidence dans le cadre d'un PACA. Les participants sont unanimes quant à l'influence positive d'un tel programme sur le système de soins de santé en général.

Conclusions : Les étudiants autochtones trouvent la formule d'une voie d'admission à la résidence réservée aux candidats autochtones acceptable, à condition qu'elle ne soit pas un élément isolé et qu'on tienne compte des besoins et de la sécurité des étudiants dans le cadre des programmes de résidence eux-mêmes.

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Perspectives of Indigenous medical students on a postgraduate Indigenous admissions pathway

Point de vue des étudiants en médecine autochtones sur une voie d'admission aux programmes postdoctoraux réservée aux candidats autochtones

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Abstract

Objective: The objective of this study is to assess the perceptions of Indigenous medical students on postgraduate admissions through an Indigenous admissions pathway (IAP), and to determine what factors may influence Indigenous medical students' choice of residency training program.

Methods: We distributed a survey to self-identified Indigenous students at settler Canadian medical schools. The survey questioned the students' acceptability of an IAP, and what factors would influence application through an IAP. Analysis included descriptive statistics and thematic analysis of open-ended questions.

Results: Thirty-six participants responded to the survey. Location and proximity to family or support system were the most important factors in choosing a residency program. Participants identified mentorship from Indigenous physicians and community involvement as being important features of a residency program that has an IAP. Eighty-one percent of participants felt the availability of an IAP would influence their choice of residency program. Fear of judgement or stigma, concern about entrance requirements, and program logistics were identified as barriers to applying to residency through an IAP. All participants believed that an IAP would have a positive influence on the healthcare system more broadly.

Conclusions: An IAP appears to be an acceptable residency application format to Indigenous students but cannot exist in isolation. It is important for programs to consider the needs and safety of Indigenous trainees within residency programs.

Résumé

Objectif : L'objectif de cette étude était d'avoir le point de vue des étudiants en médecine autochtones sur une éventuelle voie d'admission aux études postdoctorales réservée aux candidats autochtones et de relever les facteurs qui influenceraient leur choix de programme de résidence.

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Conclusions : Les étudiants autochtones trouvent la formule d'une voie d'admission à la résidence réservée aux candidats autochtones acceptable, à condition qu'elle ne soit pas un élément isolé et qu'on tienne compte des besoins et de la sécurité des étudiants dans le cadre des programmes de résidence eux-mêmes.

Introduction

Indigenous Peoples living in Canada experience poorer health outcomes than the general settler Canadian population due to the ongoing impacts of colonialism and systemic racism.¹⁻³ Increasing Indigenous representation in healthcare is integral to improving these health outcomes^{4,5} - a need highlighted in a number of national calls for change.⁶⁻⁸ Equitable access to medical training benefits entire organizations by creating systems to challenge bias and stereotypes.^{9,10} In the settler Canadian medical education landscape, many initiatives addressing these calls to action focus on undergraduate medical education,^{5,11,12} with limited attention at the postgraduate training level.

Decolonizing medical education involves understanding the medical institution's basis in colonialism and applying processes that address systemic power imbalances.^{13,14} In an effort to decolonize the admissions process and address the need for equitable access to postgraduate training, the University of Alberta Obstetrics and Gynecology (Ob/Gyn) residency program developed an Indigenous Admissions Pathway (IAP). This is a parallel admissions pathway was designed by Indigenous trainees, Indigenous and non-Indigenous faculty members, and Indigenous Elders and community members. To our knowledge, it is the first Royal College of Physicians and Surgeons of Canada specialty program to develop such an admissions process; therefore, it is critical that the IAP is responsive to the needs of Indigenous medical trainees. The objective of this study is to assess the perceptions of Indigenous medical students on postgraduate admissions through an IAP, and to determine what factors influence Indigenous medical student's choice of speciality and residency training program.

Methods

Authors BS and KB (two medical trainees) created a survey and sought reviews by two Indigenous physicians to ensure its relevance and cultural safety. We selected a survey to widen access, given geographic and pandemic barriers, and to reach a broad sample of students.¹⁵ The survey consisted of 16 questions including demographics, areas of interest for postgraduate training, factors that influence choice of residency program, and whether participants would consider applying to postgraduate residency program through an IAP, including short answer questions on their perceptions of an IAP (Appendix A). We distributed the survey to self-identified Indigenous medical students

enrolled at any Canadian medical school in July 2020 through email as well as social media, including Twitter and Facebook. After obtaining their informed consent, we collected data and stored it anonymously using REDCap electronic data collection tools hosted at the University of Alberta.

We analyzed study variables using descriptive statistics, with frequency and proportions reported for categorical variables. The development of the IAP as well as all parts of this study have been influenced by anti-colonial and Indigenous theories and research paradigms. The short answer questions were analyzed using anti-colonial reflexive thematic analysis informed by the growing body of literature in decolonizing (literal and social) geographies in research paradigms.¹⁶ Authors KB and BS used inductive coding to identify primary themes.^{17,18} We developed themes by studying the free text and assigning a label to each response, then classifying these labels into broader categories. We employed reflective social locating of the research team in order to reduce bias from the researchers' ethnogeographic location, and positionality.¹⁶

The University of Alberta ethics review board (Pro00097561) approved the study. When we shared the survey on Twitter, we received a number of nonsensical responses caused by a bot (automated software application designed to do a specific task).^{19,20} Unable to find guidance in the literature on evaluating survey responses for bots, we used the timestamp and checking for logic errors to identify and remove them from the dataset, as these responses arrived within minutes of each other. It is possible that true responses may have been submitted during this timeframe and may have inadvertently been removed, however we estimate this risk is small given the short time frame.

Results

Thirty-six students participated in the study. Due to a paucity of data on the number of self-identified Indigenous students registered in Canadian medical schools, an accurate survey response rate is difficult to report. We estimate a response rate of 30% based on the following information: in 2020-2021 there were 11,779 Canadian medical students²¹ and an estimated 1% of medical students identify as Indigenous.¹⁰ Participant demographics are displayed in Table 1. When choosing a specific residency program, the factors students were most likely to consider were location of the program (94.4%), proximity to family (72.2%), and opportunities for

community engagement (69%). Most participants planned to work with Indigenous patients, and 97.2% were interested in learning from Elders or Knowledge Keepers. The availability of an IAP would influence the choice of residency training program for 81% of participants. If the residency program they were applying to an IAP, 75% of participants would choose this option when applying to residency, while 25% were unsure. Respondents identified mentorship from Indigenous physicians and community involvement as being important additional features of their chosen residency program.

Table 1. Demographics of survey respondents

Characteristic	Responses n (%)
<i>Stage of training</i>	
Pre-Clerkship	22 (61.1)
Clerkship	14 (38/9)
<i>Indigenous Identity</i>	
Métis	21 (58.3)
First Nations (status)	9 (25.0)
First Nations (non-status)	6 (16.7)
Inuit	0
<i>Geographic Location</i>	
Western Canada	27 (75.0)
Ontario/Quebec	9 (25.0)
Eastern Canada	0
<i>Age</i>	
20-24	12 (33.3)
25-29	18 (50.0)
30-34	3 (8.3)
35 and above	3 (8.3)
<i>Gender Identity</i>	
Cis-Female	24 (66.7)
Cis-Male	11 (30.6)
Non-binary	1 (2.8)
Trans-Female	0
Trans-Male	0
<i>Specialty of Interest</i>	
Family Medicine	24 (67.6)
Internal Medicine	16 (44.4)
Emergency Medicine	14 (38.9)
Ob/Gyn	14 (38.9)
Surgical Specialty	9 (25)
Psychiatry	7 (19.4)
Pediatrics	5 (13.9)
Anesthesiology	5 (13.9)
Unsure	7 (19.4)
Other	4 (11.1)

Stage of training was considered to be either Pre-Clerkship, defined as the period of medical training occurring mostly in the classroom, or Clerkship, defined as the period of medical training occurring primarily in the hospital or clinical setting. Students were asked to self-identify their Indigenous identity, with a proviso that the categories may not reflect their unique identity or heritage. Geographical location included Western Canada (defined as British Columbia, Alberta, Saskatchewan, and Manitoba), Ontario/Quebec, and Eastern Canada (defined as Nova Scotia, Prince Edward Island, and New Brunswick). Options for gender identity included Cis- Male or Female, Trans- Male or Female, and Non-binary.

Via written short answer, we asked participants to describe factors that would influence their decision to apply through an IAP. We identified eight themes; (1) Opportunities for engagement with Indigenous communities, (2) Cultural education including learning from Elders and Knowledge Keepers, (3) Mentorship from Indigenous physicians, (4) Residency programs demonstrating a commitment to Indigenous trainees and communities, (5) Recognition of strengths of Indigenous trainees and creation of equitable learning opportunities, (6) Fear of judgement and stigma, (7) Concern about entrance requirements, and (8) Logistics of the program or specialty. Examples of each theme are listed in Table 2.

Many students commented on the type of training environment they would wish to see associated with an IAP. For example, one participant commented that they would “love to see this type of pathway offer support from elders, smudging ceremonies, and also to learn more about traditional medicines...,” while another participant described “the ability to have a culturally relevant post graduate education would be an attractive piece of a program of this nature!” We highlight that five of the participants (14%) commented on fear of judgement and stigma as factors that would influence their decision to apply through an IAP. Some students shared that they have experienced judgement and stigma in undergraduate medical education, while others identified “self-imposed stigma” or “feeling like I have earned my position” as barriers to an IAP.

All participants thought that the availability of IAPs would positively influence the healthcare system more broadly. We classified the short answer descriptions of how this would impact the healthcare system into two themes; (1) Indigenous representation in specialties as Indigenous physicians have unique perspectives and strengths, and (2) providing culturally informed care and improving health outcomes for Indigenous patients and communities. Participants described the need for more Indigenous physicians in various specialties, for example, “having more Indigenous representation in the healthcare system is beneficial for everyone. This would help combat racism and improve patient safety.” Participants discussed the impact this would have on patient care by providing culturally safe care and building trusting relationships with patients “Patients may feel more comfortable, like they can relate more to their physician.”

Table 2. Thematic analysis of what factors would influence participant's decision to apply to an IAP.

Theme	Example(s)	Responses
(1) Opportunities for engagement with Indigenous communities	"If it gave me a chance to train in a way which effectively engaged with both my Indigenous culture and obgyn that would make me more likely to do it" "If the program has a strong component of working with Indigenous communities"	6
(2) Cultural education including learning from Elders and knowledge keepers	"The potential to have connections with elders and knowledge keepers, along with the ability to have a culturally relevant post graduate education would be an attractive piece of a program of this nature!" "I would love to see this type of pathway offer support from elders, smudging ceremonies, and also to learn more about traditional medicines as part of the training program."	3
(3) Mentorship from Indigenous physicians	"Availability of Indigenous physician mentors" "If I could work with Indigenous doctors who I know"	3
(4) Residency programs demonstrating a commitment to Indigenous trainees and communities	"... program that is made for Indigenous people by Indigenous people" "If the home institution valued this sort of pathway" "The prospect of being supported as an Indigenous applicant through the process would be very affirming"	6
(5) Recognition of strengths of Indigenous trainees and creation of equitable learning opportunities	"...recognized unique challenges that first nations students face compared to others." "Desire to be on an equal playing field" "ensure Indigenous medical students are given an equal opportunity for getting accepted to the various specialties"	3
(6) Fear of judgement and stigma	"As a student who applied through the Indigenous stream for medical students I have experienced some stigma" "I would like to feel like I have earned my position, especially when picking a competitive field. This is why I am unsure"	5
(7) Concern about entrance requirements	"If there was excessive additional requirements compared to a non-Indigenous pathway or if I had to "prove myself" as an Indigenous person I might not apply" "less likely if the process is significantly more work than regular"	3
(8) Logistics of the program or specialty	"I would only want to apply if I could be considered in both streams" "The strength of the program itself"	5

Common theme is listed in the left column, with examples of each theme in the center. The number of comments that were grouped into a theme is listed in the right column.

Discussion

In this study, we have attempted to identify the perspectives of Indigenous medical students on applying to residency programs through an IAP. It is important to recognize that while there are some common responses between participants, the results from this survey will not be applicable to all Indigenous trainees, and it is imperative to consider local perspectives. Many respondents identified opportunities for mentorship, learning from Elders and Knowledge Keepers, and working with Indigenous communities as important components of postgraduate training. This demonstrates that Indigenous admissions processes cannot exist in isolation, and broader strategies to support Indigenous trainees are critical.

There was a strong emphasis on community involvement throughout the survey responses. Most students reported that program location and opportunities for community engagement would influence their residency program choices. This information provides medical educators with insight into Indigenous ontology and epistemology, which are inherently relational. Recommendations as to the nature of community involvement cannot be drawn

directly from the survey responses. The authors strongly advocate, and the literature suggests, that such opportunities are designed by and with local Indigenous stakeholders to best meet the needs of each community and residency program¹¹. Family Medicine was the most common specialty that students were considering, however only one student selected this as their sole choice. A Canadian study suggests that over 50% of students will change their career plans during medical school,²² therefore it is essential that Indigenous trainees have access to the mentorship and career planning necessary to facilitate their career pursuits.

In addition to admission processes, it is necessary for postgraduate training programs to consider the needs and safety of Indigenous trainees. In our survey, multiple students responded that they have experienced stigma about being admitted to undergraduate medical education through an IAP. Furthermore, some noted that these negative experiences would deter them from applying through an IAP for postgraduate education. Some students cite that this stigma was from peers or teachers, while others reported that it was self-imposed. This highlights

the impact of multi-level racism embedded within medical training and institutions.^{23,24}

We will use the findings from this study to improve and expand the IAP within our program, and these findings may help to inform other postgraduate training programs who wish to implement similar initiatives. There is a need for future research to evaluate the postgraduate training environment for Indigenous trainees to ensure safety and opportunities for community involvement. Limitations of this study include the small sample size and risk of selection bias. Some students may have chosen not to participate due to concerns of discrimination or racism, and it is possible that we do not have an overall representation of Indigenous student experiences.

Conclusion

The results of this survey suggest that an IAP is acceptable residency application format to Indigenous students. However, admissions processes cannot exist in isolation. Opportunities for local community engagement should be available for Indigenous medical trainees. Programs and educators should be responsive to, Indigenous medical trainees' reports of stigma and racism.

Conflicts of Interest: The authors have no conflicts of interest to disclose

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Appendix A. Survey questions that were distributed to self-identified Indigenous medical students.

1. What stage of training are you in?
 - a) Pre-clerkship
 - b) Clerkship
2. In what year will you have your R1 residency match?
 - a) 2020
 - b) 2021
 - c) 2022
 - d) 2023
3. Do you identify as Indigenous? (We understand that these labels may not describe you and that the idea of dividing Indigenous Peoples into groups is a colonial concept. We are asking this question this way to find out which Nation you most identify with, without providing personally identifiable information.)
 - a) Yes

If yes:

 1. First Nations (Status)
 2. First Nations (Non-Status)
 3. Metis
 4. Inuit
 5. Non-Indigenous Affiliate
 - b) No
 - c) Prefer not to say
4. Where are you located geographically?
 - a) Western Canada (BC, Alberta, Saskatchewan, Manitoba)
 - b) Ontario/Quebec
 - c) Eastern Canada (Nova Scotia, New Brunswick, PEI, Newfoundland & Labrador)
 - d) Northern Territories (Yukon, NWT, Nunavut)
 - e) Prefer not to say
5. What is your current age?
 - a) 20-24
 - b) 25-29
 - c) 30-34
 - d) 35 and above
 - e) Prefer not to say
6. What is your gender identity?
 - a) Cis-Female

- b) Trans-Female
- c) Cis -Male
- d) Trans-Male
- e) Gender Non-binary
- f) Two-Spirit
- g) Other - If comfortable, please describe:
- h) Prefer not to say

7. What type of medicine are you considering for practice? (Select all that apply)

- ☐ Family Medicine
- ☐ Pediatrics
- ☐ Psychiatry
- ☐ Internal Medicine
- ☐ Surgical Specialty
- ☐ Ob/Gyn
- ☐ Emergency medicine
- ☐ Anesthesiology
- ☐ Radiology
- ☐ Pathology
- ☐ Unsure
- ☐ Other: please describe

7. Do you intend to work with Indigenous patients?

- a) Exclusively
- b) Mostly
- c) Somewhat
- d) Not at all
- e) Not sure/undecided

8. Are you interested in working with Traditional Knowledge Keepers, Elders or Healers?

- a) Yes
- b) No

9. At this time in your training, what factors are most likely to influence your choice of specialty? (select all that apply)

- ☐ Work life balance
- ☐ Financial potential
- ☐ Intellectual challenge
- ☐ Societal/social status
- ☐ Role models in the field
- ☐ Technical challenge

- Needs of the community
 - Job prospects
 - Personal interest
 - Other:
10. At this time in your training, what factors are most likely to influence your choice of post graduate residency program? (select all that apply)
- Location
 - Reputation
 - Size of program
 - Availability of subspecialty training
 - Opportunities for engagement with the community
 - Elective/selective opportunities
 - Research opportunities
 - Proximity to family/support system
 - Other: (short answer)
11. At this time in your training, do you feel that the availability of an Indigenous Admissions Pathway might influence your choice of residency training program?
- a) Yes
 - b) No
- If Yes - what would it influence? (select all that apply)
- Choice of specialty
 - Choice of program within chosen specialty
12. If you were applying to a residency program that had an Indigenous Admissions Pathway, would you choose this option when applying?
- a) Yes
 - b) No
 - c) Unsure
13. Please describe any factors that might make you more or less likely to apply to a residency program through an Indigenous admissions pathway? (short answer question)
14. If you were to be admitted to a postgraduate program through this pathway, what supports or opportunities would you hope to see as part of your residency program? (select all that apply)
- a) Indigenous health electives
 - b) Mentorship from Indigenous physicians
 - c) Cultural support
 - d) Community involvement
 - e) Indigenous methodologies research training
 - f) Other: (please describe)

16. Do you think this initiative will have an impact on patient care or the health care system more broadly?

a) Yes - please describe

b) No - please describe

c) Unsure

17. Please add any questions, comments, or feedback that you would like to share with us.