Breaking trail in the Northwest Territories: a qualitative study of Indigenous Peoples’ experiences on the pathway to becoming a physician

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ABSTRACT
Currently, there is a lack of Indigenous physicians in the Northwest Territories (NWT), Canada. The goal of this qualitative study was to explore the underlying factors that influence the journey to becoming a medical doctor and returning home to practice for Indigenous students from the NWT. Eight qualitative, semi-structured interviews were conducted by phone or in-person. Participants represented Dene, Inuvialuit and Métis from the NWT and were at varying points in their journey into careers in medicine, from undergraduate university students through to practicing physicians. The main themes included access to high-school courses, the role of guidance counsellors, access to mentors and role models, a need to prioritise clinical experience in the NWT, influences of family and friends, diversity and inclusion, and finances. Interpretations: Significant barriers, some insurmountable, remain at every stage of the journey into medicine for aspiring Indigenous medical doctors from the NWT. These findings can inform policy development for pathway programs that assist aspiring Indigenous physicians at each stage.

Introduction

Rural and remote regions of Canada experience a unique context in the delivery of healthcare services due to remote geographies, Indigenous values, health inequities and climate change [1]. Providing responsive services in this unique context in these regions requires system-wide approaches across sectors of government. One system factor that has been consistently raised is the need to address human resource challenges, specifically those related to increasing cultural competencies of the system through Indigenous participation and improving the consistency of Indigenous physician services.

The Royal Commission on Aboriginal Peoples report of 1996 [2] and the Truth & Reconciliation Commission’s (TRC) Calls to Action of 2015 have both recommended the training and hiring of more Indigenous healthcare workers in Canada (as a note for readers, the term “Aboriginal Peoples” is the old term for what is now referred to as “Indigenous Peoples”). The TRC’s Call to Action #23 specifically recommends that all levels of government strive to increase the number of Indigenous healthcare professionals working in Indigenous communities [3].

In 2016, 0.8% of the 93,985 specialists and general practitioners in Canada identified as Indigenous, with Indigenous Peoples representing 4.9% of the population [4]. In 2016, it was estimated that 2.6% of first-year medical students were Indigenous [5]. When this research project began in 2016, there were no Indigenous physicians working within the territory, where slightly over half of the 44,520 people are Indigenous. In comparable terms, that is 0% Indigenous physicians, where 50% of the population is Indigenous. Historically we know that in the past two decades there have been six individuals from the NWT who have completed medical school and residency. Of these, there have been three who returned to practice at the NWT, then left. As of 2019, there was one Indigenous physician from the NWT practicing in the territory.

The context for Indigenous physicians in the NWT is also influenced by the rural and remote context. In Canada, the proportion of rural and remote regions, including much of the NWT, experience a maldistribution and a relative shortage of physicians compared to urban areas: the 2016 Canadian census showed that 16.8% of Canadians live in rural areas [6], whereas only 8.2% of physicians work in these areas [7]. The shortage of Indigenous physicians in the NWT exists against a backdrop of a 34% shortage of general practitioner physicians in the territory, as of the most recently published data [8]. Smaller, primarily...
Indigenous communities in the NWT experience these shortages disproportionately compared to the capital city of Yellowknife. These smaller communities rely almost entirely on short-term solutions to maintain physician-provided services, including locum hiring that brings up doctors from Southern Canada. Others have described the reasons that southern doctors have practiced in the NWT [9], including a desire for adventure, the challenge of remote medicine, the desire to work with an underserved population, and competitive compensation.

The training of Indigenous physician workforce experiences has been described within the literature on Indigenous recruitment strategies. Internationally and in other Canadian provinces, physician recruitment and retention in remote and/or Indigenous communities has been studied [10,11]. One review that used a Kaupapa Māori Research (KMR) methodological approach found that elements influencing the development of an Indigenous workforce is part of a larger pathway of system supports [12], which includes high school outreach, medical school admissions support and cultural supports while in medical training. These supports target future physicians from a young age through to when they become a licensed physician and are looking for a job. These programs focus on admitting medical students from underserved regions and teaching them medicine in these regions, all with the goal of having them return to practice there. The now-defunct National Aboriginal Health Organization conducted a review of best practices to recruit mature Aboriginal students into medicine and recommended that best practices include preparatory programs, recruitment initiatives, financial support, Indigenous supports in medical school, and responsive curriculum [13]. Currently, most of these supports do not exist for in the NWT. Further, there are not any medical schools in Canada that strategically engage with Indigenous students from the NWT.

This study aims to further contextualise the literature on medical school access for Indigenous persons, and aspects related to physician recruitment specific to the NWT. The objectives are two-fold: firstly, to identify the factors that affect NWT Indigenous students on their journey pursuing medical training and secondly, to identify the factors that influence their decisions of where they choose to practice.

The implications of this research may be of further interest to other circumpolar Indigenous populations that have faced similar issues, including for such populations as the Sami and Alaska Natives, who have previously had allocated seats at medical school for them [14,15]. While we recognise that there are ongoing initiatives in the circumpolar world regarding Indigenous physician training and recruitment, such as in Greenland, Russia, Scandinavia and Alaska, it is difficult to discern the extent of current initiatives given the paucity of up-to-date literature on the topic. Further, it is not the intent of this study to conduct a full comparison of what initiatives currently exist across circumpolar jurisdictions.

Methodology

Thematic analysis was the method used for this research project. This method was chosen for its flexibility in categorising themes in wide-ranging interviews.

The initial development of the interview questions and the eventual categorisation of data were guided by a recruitment pathway framework that was developed from an Indigenous recruitment review of 70 articles by Curtis et al. [12]. The framework identified themes along the pathway from education and training to workforce experiences. As such, recruitment refers to the lengthy process of first becoming interested in medicine, through medical training, and finally into a job as a healthcare provider. We conducted semi-structured interviews by phone or in-person until data saturation was achieved. The questionnaire was developed based on five broad contexts of recruitment activities along the pathway described in the review by Curtis et al. [12]. Specifically, question style was designed to explore and describe the positive and negative factors faced by Indigenous Peoples from the NWT across these five broad recruitment categories of early exposure, transitioning, tertiary retention/completion, professional workforce development and across the pipeline [12]. A pilot interview was conducted with an Indigenous medical student who is not from the NWT. Feedback on this interview was provided by a qualitative interview expert, Dr. David Snadden, and suggestions were incorporated into the questionnaire and future interviews. Our target population from the NWT included Indigenous students at various stages of their journey in medical training, including premedical studies, medical students and residents, and Indigenous physicians already in practice. Ethics approval was from the Aurora College Research Ethics Committee under protocol number 20,160,605.

The positionality of the researcher (TD) was acknowledged as a potential source of bias and pre-conceived ideas. Specifically, his own context as a Métis person from the NWT and, at the time this study was conducted, a first-year medical student with his own experiences related to his journey into medicine. However, rather than a hindrance to this research, his experience with the study’s topic and his cultural
competence as an Indigenous researcher enhanced his suitability as an interviewer for this qualitative method. The interviews were conducted from 20 Aprilth to 26 Mayth, 2017. Eight participants were identified and recruited via snowball method via email. Further demographics of interviewees are included in the results section. Questions were provided to participants prior to the interview. Written or verbal consent was obtained from all interviewees. The interviews were audio-recorded and were done over video call, telephone or in-person at the Institute for Circumpolar Health Research in Yellowknife, NT. The interviews ranged in length from 38 to 94 minutes. No repeat interviews were conducted. No field notes were taken. Transcripts were returned to participants to comment on the interpretation of data and to confirm quotes that were identified by participant number. Requested changes were made.

Interviews were transcribed and then coded using Dedoose software (TD). The initial coding framework was guided by the five contexts that reflect the factors involved in a journey into a healthcare career for Indigenous Peoples [12]. SC reviewed the coding of the first transcript done by TD and provided suggestions regarding appropriateness of codes and suggestions for additional codes. Additional codes were added during the coding process that reflected themes not covered in the literature. SC and KS assisted TD in identifying themes from the data. Participants were not provided with a description of the coding tree at the time of interviews. Original quotes from the participants are used in the results section of the paper to improve the rigour of the study. Quotations are identified by participant letter. The coding approach enabled us to determine when data saturation was achieved within the study sample.

Results

Participants included one undergraduate university student, three medical students, three practicing physicians and one medical school applicant who has been unable to get into medical school thus far. Approximately half of the participants are from the capital city of Yellowknife, and half are from medium-sized communities in the NWT ranging in population from 1,000 to 5,000 people. Perspectives from the three broad Indigenous groups of the NWT, namely Dene, Inuvialuit and Métis, were all represented among the sample.

In the context of the population of Indigenous Peoples from the NWT who have ever been admitted to medical school, six out of eleven were interviewed during the study period. Eight of these eleven had completed medical school by the time of writing. Six of these eight were trained in the last two decades. Of these eight physicians originating from the NWT, one was deceased (and therefore not identified as a potential interviewee), two were contacted but were unavailable for interview, and two others could not be contacted for interview. The three who were interviewed are all practicing in a rural or remote location outside the NWT. Two are general practitioners and one is a specialist. These three participants completed their medical training within the last ten years and they are all under the age of forty-five. The locations where these physicians were trained is omitted to preserve confidentiality. Since the NWT has a relatively small population, and the principal investigator has kinship ties across the territory, it is believed that the study sampling snowball technique was effective in capturing an accurate representation of Indigenous population in the NWT, and identification of people who have attended medical school. TD had previously met five of the eight study participants prior to recruiting them for this study.

The data analysis identified seven themes that emerged during interviews and during the coding process. These included access to high school courses, messages from high school guidance counsellors, access to mentors and role models, a need for government to prioritise clinical experiences in the NWT for Indigenous medical trainees, influences of family and friends, diversity, and inclusion and finances. Below we expand on these themes with the data that informs the context for the NWT (see Boxes 1–7). We also purposely include narratives that capture the personal impacts of these experiences. The decision to include personal narratives was made to target audiences of this work, including the medical community at large, healthcare administrators, medical school leaders, high schools, and youth interested in pursuing medicine.

Discussion

The interview method for open-ended questions was effective for this small population context. The process allowed participants to voice either negative or positive aspects of their journey into medicine. The interviews revealed more negative themes, like barriers, than positive themes, like resilient personality traits. Some of the main themes uncovered by this project were the micro-aggressions and the assumptions of inferiority experienced by the participants, such as participant G being referred to as “some native” by a classmate. Ideas that Indigenous medical students were inferior were also voiced by the participants’ high school classmates,
guidance counsellors and medical school classmates. The access to desirable clinical rotations in the NWT was seen to most as a barrier to returning to practice there. Financial barriers included costs of travelling large geographic distances and a lack of post-secondary funding for medical students. The lack of support from family and friends was a barrier for some and, conversely, the presence of support was a strong facilitator for others. Related to this, given the long-term and intensive commitment of medical training, some family and community members, although generally supportive of the individual, did not understand the path their youth were taking when they left home to pursue medical training. Although all three physicians interviewed voiced a desire to practice in the NWT, administrative challenges with the return-for-service program and hiring processes dissuaded them, and even prevented them, from returning to practice in the territory.

There was one study participant who was notably different from the others in that they had moved to the NWT after high school and did not face some of the early challenges that other participants who grew up there had experienced. We do not provide further characteristics or unique aspects about this participant here because this would compromise their confidentiality.

The literature reflects our findings of how diversity, inclusion, equity and racism remain as challenges within the student body of Canadian medical schools where Indigenous students are still underrepresented [16–19]. The assumption that Indigenous medical students were inferior because they were admitted through an alternative admission process and the belief that this process is unfair to non-Indigenous students has been previously documented by Currie et al. (2012) and DeCoteau et al. [19,7, 20]. The feeling of abandonment experienced by family and friends of participants in this study is corroborated in the literature on nursing: Indigenous nurses in Saskatchewan had a similar experience of being viewed as “too good” for their community or as outsiders for leaving the community to pursue post-secondary studies [21]. This experience emphasises the geographic challenges of post-secondary education. The findings of this study align with a similar study on Indigenous students in Manitoba from 1992 and with a study from the US by Hollow et al. [2006, 22,23,24–26]. At the time, the University of Manitoba had a program called the “Special Premedical Studies Program” that assisted students on their pathway into medicine. Students and physicians who were a part of this program cited inadequate career advising, lack of role models in their desired field, inadequate schooling prior to university, and financial barriers as important factors in their education.

**Study limitations**

There are likely many more potential interview participants who have not yet been to medical school but who are interested in pursuing medicine. For this study, only two from this population were interviewed. One population that was not interviewed were Indigenous high school students who are interested in medicine. Additional studies on these groups are needed to describe their path to postsecondary studies. There are further limitations related to the potential participants who were unavailable for interview. They have unique characteristics that would potentially provide a different perspective. We do not define these unique characteristics here because this would identify them and would also identify those within this limited population that did participate in the study.

**Conclusions**

There are few academic papers that describe the journey into medicine for Indigenous students [23] and only one that reflects the experience of Indigenous students in Canada [22]. Furthermore, until now, there were no papers that explored this topic pertaining to the unique context of the NWT, a jurisdiction distinct from other Canadian provinces and territories. The NWT is a jurisdiction without a university, with vast geographic distances and with significant cultural diversity across the three distinct Indigenous groups, namely the Dene, Inuvialuit and the Métis. While the small population of study may be seen as a methodological weakness, it also highlights the severity of the challenges of pursuing medicine for Indigenous residents in the NWT. In addition, where the NWT persistently has no Indigenous physicians on staff, we felt an in-depth qualitative study could uncover experiences that are grounded in NWT cultures and could highlight policy levers specific to health and education systems in the NWT. Elements identified could provide a baseline and inform medical schools, health departments and education sectors in the development of pathway program strategies for the NWT. We hope this research will highlight the inequities and provide direction for action with an outcome of increased participation of Indigenous residents from the NWT in medicine. Specific recommendations that could be applied include (see Box 8):

This study provided rich data that is specific to the NWT policy environment. Policy and programming impacts include education (high school courses,
guidance counsellors), financial aid, medical services (electives, mentorship) and medical schools at universities (mentorship, career guidance, application process). Each of these sectors operates independently and would benefit from a collaborative process that develops a strategy for Indigenous physician development and a pathway model specific to the NWT. Cross-cutting this initiative, there should also be an evaluation process built in, which could allow for quantitative and qualitative data of the pathway experience to inform modification of policies as the strategy is implemented. In addition, data on the number of Indigenous physicians in the territory should be captured and monitored for improvements. Further, we hope that other Indigenous Peoples’ groups in similar contexts in the circumpolar world may find these elements helpful in addressing their own healthcare human resources challenges.

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