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PROJECT REPORT

Faculty analysis of distributed medical education in Northern Canadian Aboriginal communities

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ABSTRACT

Context: In 2005 the Northern Ontario School of Medicine (NOSM) in Canada implemented the world's first and (still) only mandatory Aboriginal community placement for all its medical students.

Issues: The Aboriginal placement was created in part to address social accountability, defined as the obligation of medical schools to direct education, research and service activities towards addressing the priority health concerns of the community they serve. Concurrently, Aboriginal health policies have increasingly emphasized the need to involve Aboriginal people in healthcare planning and design health care that involves Aboriginal concepts of health and culturally safe care. Aboriginal delegates provided recommendations for the development of an Aboriginal health curriculum, which included the need for the medical school to acknowledge and respect Aboriginal history, health priorities and develop an Aboriginal community placement for all medical students.

Lessons learned: To anticipate the challenges (eg distance, communication, technologies, student and cultural safety, pedagogical effectiveness/appropriateness) presented by a mandatory placement for first-year students in Aboriginal communities a pilot placement project was designed. The locations of the communities were carefully selected in order to assess a variety of challenges that might be encountered with rural and remote Aboriginal community placements. Pilot lessons included managing student expectations, which leaned towards a clinical rather than a community-based cultural placement focus. Areas for increased coordination and administrative support were identified, as well as the need for more extensive community level support. The students had an overall positive experience and learned about the realities of health care in the communities. Aboriginal community staff commented that the experience with the students was fulfilling and beneficial. It was also recognized that curriculum delivery methods required major adjustments and that the students required significant Aboriginal health curriculum in preparation to move forward from the pilot placement to a sustainable Aboriginal community curriculum. Two medical anthropologists, assisted and supported by an historian of medicine, identified and developed the core areas of academic knowledge required for students to begin

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their journey towards becoming culturally safe medical practitioners. Another important aspect of preparing students was a series of mandatory sessions led by the Aboriginal Affairs Office designed to complement academic sessions with practical information such as how to conduct oneself in the community, and current politics and treaties. A self-study project was developed to guide students through a process of increasing self-awareness of their own attitudes and perceptions about Aboriginal people and communities, and develop their competence to provide culturally safe medical care. New learning from several iterations of the placement was employed to fine-tune the curriculum, information technologies and supporting policies as the placement evolved into a cornerstone of the curriculum.

Conclusions: Cultural immersion in Aboriginal communities is a way for medical students to gain an understanding of the needs and strengths of Aboriginal communities and learn what physicians might do to contribute effectively to Aboriginal health and wellbeing. Research is required to improve understanding about the aspects of this education experience that are most effective.

Key words: Aboriginal, Canada, education, health, Indigenous health, medical, students, undergraduate.

Context

In 2005, the Northern Ontario School of Medicine (NOSM) in Canada implemented the world's first and only mandatory Aboriginal community placement for all its medical students. In this article the only two faculty members at the School with experience as coordinators of this seven week module examine their experiences in the development and current operation of this unique medical education endeavour. The lessons learned can help to inform the planning of Indigenous community placements.

Issues

Social accountability

The Aboriginal placement was in part created in response to the long-term trends towards social accountability in health care. In 1995 Boelen and Heck argued in a WHO publication that there was an increasing societal demand for accountability in the health sector to demonstrate that investments lead to improved health care and health status in society[1]. In medical schools, social accountability was closely linked to collaboration across sectors and with the community stakeholders they serve.

The WHO defined social accountability as 'the obligation of medical schools to direct education, research and service activities towards addressing the priority health concerns of the community … ' with the priorities '… to be identified jointly by governments, health care organizations, health professionals and the public.'[1] Boelen and Heck contend that medical education that exposes students to the needs of underserved, low income as well as ethnic minorities will increase students' sensitivity to these groups and their needs, eventually leading to improvements in health equity[1].

Health Canada adapted the WHO definition of social accountability to create a Canadian vision for social accountability in medical schools, which reaffirmed the notion of medical schools' responsibility to serve the needs of the community and to develop formal mechanisms to learn about these needs and advocate for them to be met[2]. At NOSM, social accountability includes a focus on contributing to improving the health of Aboriginal people.

Cultural safety and cultural immersion

Aboriginal people in Canada experience significant and well-documented health inequities, due in part to inequalities in the social determinants of health and exacerbated by limited access to culturally safe care[3,4]. During the 1990s, the importance of the role of culture in facilitating or impeding

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access to health care for Aboriginal people was increasingly recognized. For example, the province of Ontario developed an Aboriginal Health Policy in consultation with Aboriginal people emphasizing the need to involve Aboriginal people in healthcare planning and to acknowledge and design health care that includes Aboriginal concepts of health[5]. The concept of cultural safety, which has its origins with the Maori People of Aotearoa (New Zealand), has also gained increasing recognition. Cultural safety is based on an understanding of the power differentials that may exist between providers and clients in health service delivery. It focuses on the skills, knowledge and attitudes of practitioners, including self-reflection and the role of the patient in defining safe health services[6]. Cultural safety and cultural competency are increasingly recognized as important aspects of improving health services for Aboriginal people. Research on how to teach these concepts effectively to care providers is still developing.

Cultural immersion is an experiential approach to learning about culture and social situations. In medical education this type of approach is beginning to be recognized for its potential to raise consciousness among medical students; expose tacit inappropriate biases, including racism; help students learn about themselves and other cultures; and assist students in their preparation for work in culturally diverse settings[7].

Social accountability and Aboriginal Northern Ontario

The Northern Ontario School of Medicine was established as the faculty of medicine for Lakehead and Laurentian universities with the mission of creating a community-based learning environment for rural and remote medicine. The charter class started in September 2005 but prior to that preparations were made that included extensive community engagement reflective of the social accountability mandate of the School.

In 2003, the Medical School planned a consultation in collaboration with Aboriginal political bodies, with participants selected by Aboriginal organizations. Delegates (130) provided their recommendations for the School's development, which included recognition of the need for the Medical School (faculty, staff, programs, etc.) to:

1. acknowledge and respect Aboriginal history, traditions and cultures, by recognizing issues such as the effects of colonization and residential schools, consultation with elders, the role of spirituality in health, languages, cultural taboos and cultural practices
2. recognize expertise and resources in Aboriginal communities that could assist in the growth and development of the School. These include traditional healing, professional services and the incorporation of culturally appropriate settings
3. recognize the educational limitation of students merely reading about Aboriginal people versus experiencing life in Aboriginal communities. Thus, the curriculum should include, for all students, placements in Aboriginal communities
4. recognize the priority health issues in Aboriginal communities, including lack of access to care and high rates of diabetes, mental health issues, suicide, grief, and other outcomes of colonialism[8].

In July 2003, the Accredited MD Program Group started the process of following up on the recommendations, and decided on mandatory placements in Aboriginal communities, with a focus on cultural immersion for students in first year – a daunting but highly significant decision. This decision was supported by the School's Northern and Rural Health curriculum team. (Preparation included engagement with relevant literature, and some examples are cited[9-11]).

Aboriginal community placement pilot

In order to anticipate the challenges of a mandatory placement for first-year students in Aboriginal communities a 2-week pilot placement (with an additional 2 weeks on campus) was designed for June 2005.

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The selection of the communities commenced with a letter to the communities that had signed memorandums of agreement (as a result of a process of active engagement since 2003) to participate in the first actual placement (scheduled for April 2006). The pilot communities were selected on the basis of factors such as current levels of involvement, geographic distribution, as well as ability to meet the information and communication technology (ICT), and accommodation requirements.

One of the authors (GH), two administrators as well as staff from the Aboriginal Affairs, Undergraduate Medical Education and Student Affairs offices took part in the preparation and delivery of the pilot. Fifteen medical students and nursing students (most in their mid-20s) were selected from schools in southern Ontario, Manitoba and northern Ontario, and were assigned to seven Aboriginal communities across Northern Ontario.

Lessons learned

Lessons from the pilot

The 4-week pilot provided a multitude of lessons during its implementation. These were discussed in reports and in a post-pilot symposium. Lessons included managing student expectations, which leaned towards a clinical rather than a community-based cultural placement focus. Areas for increased coordination and administrative support were identified, as well as the need for more extensive community-level support. It was recognized that curriculum delivery methods required major adjustments and that the students required significant Aboriginal health curriculum to prepare for immersion in an Aboriginal community.

Post-pilot symposium

Students' reflections on their experience in the pilot were discussed in a symposium held in the School in the autumn of 2005. The students had an overall positive experience and acknowledged a difference between first impressions (and southern stereotypes) and the reality that they as students began to learn about in the communities. Examples of cultural learning that were cited were the nature of community life (eg resourcefulness and resilience), extent of physical activity, concept of Aboriginal community wellness and strong social ties, impact of the residential school system on current health status, value of a non-materialistic way of life, gap between governmental health services and community needs, unique nature of nursing in remote communities, importance of talking to patients respectfully and with cultural awareness, and what respect for the land means to Aboriginal people. In addition the students took time to identify community health needs and discussed how they as future physicians might play an advocacy role with regard to resources, timely emergency care, preventative programs and sports facilities, amongst other things.

In the symposium an Aboriginal Local Community Coordinator (LCC) commented that she believed the experience with the students was fulfilling and beneficial. For the community it meant investment in the recruitment of future physicians to the north, and she welcomed the medical students as role models for Aboriginal youth. She also spoke of the challenges for the community, and lessons learned in the pilot with regard to staff selection, planning of activities, preparing accommodations and ICT, the engagement of local medical staff, as well as building awareness of the project in the community[12].

Lessons learned from delivery methods

During the pilot the School tested distributed educational methods tied to new information technologies. Asynchronous web-based discussion boards for small-group learning were used, as well as the digital recording of lectures available from the internet. In addition, the students accessed the curriculum and resources such as scholarly articles and e-books from the internet. At the beginning of each week, all students gathered with the faculty coordinator using internet-based video-conferencing to discuss the week's curriculum and student questions.

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During the pilot, several pedagogical difficulties with the technology emerged. There was little if any meaningful discussion on the discussion boards as students simply posted reports, which were read and commented upon by the faculty. Students found the webcast 3-hour lectures to be boring. Furthermore, internet connectivity was unreliable in many Aboriginal communities. These problems combined to make it impossible for students to gain timely access to the curriculum and resources. The use of video-conferencing for the start-of-week sessions was problematic as the Aboriginal community video-conferencing sites were often some distance away from student lodgings, necessitating very early morning travel in some cases. It was also difficult, and in some cases impossible, to book the already oversubscribed video-conferencing services.

As a result of the pilot a more community-compatible model was developed for the initial charter class students. Instead of web-based discussion boards for small groups and the weekly video-conference meetings with the faculty coordinator, teleconferences were utilized for all large- and small-group sessions and supplemented by web-based discussion boards. This included the case-based learning sessions (1.75 hours per week) dealing with the human science curriculum, as well as the twice-weekly, 2-hour topic-orientated sessions in which the students explored the relevant medical science objectives in clinical cases. This permitted small classroom discussions and weekly coordination meetings on a much more reliable and effective basis. In addition, distributed tutorial sessions were developed which replaced the recorded 'talking head' lectures. Distributed tutorial session formats use a more interactive model combining PowerPoint slides with audio discussion, study questions and resources, followed by a teleconference take-up session. The curriculum for the 4-week placement was pre-packaged on the students' laptops (including labs), and resources were provided on paper and/or computer preloaded. Decreased reliance on internet connectivity ensured that all students had access to the curriculum while in the remote communities. In addition, to help prepare the students prior to their placement, structured clinical skills sessions were held once per week on communication and examination skills. For study purposes access to the physical lab on each campus was provided to the students during the weekend after their return to their home campuses in Thunder Bay and Sudbury (prior to their end-of-module exam).

Lessons learned for community engagement

It was determined that it was necessary to prepare for the placement in very systematic fashion:

1. Engage with the communities early in the academic year.
2. Create a site-readiness working group at the School that would begin its work months in advance.
3. Employ Aboriginal regional community coordinators.
4. Collaborate with local community coordinators on community-led curriculum in an annual 2-day LCC orientation meeting on campus. (The LCCs, chosen by their Band Councils, were in positions of related responsibility in their communities, such as Community Health Representatives or Health Directors. The LCC travel is reimbursed, and the Band Council is provided by the School with funds to pay for staff time and accommodation costs.)

Lessons learned for Aboriginal health and cultural curriculum

After a curriculum review by the relevant theme course committees it was determined by faculty that students required more preparation on Aboriginal health matters. Two medical anthropologists (Drs Marion Maar and Kristen Jacklin) assisted and supported by Dr Geoffrey Hudson (Historian of Medicine), identified and developed the core areas of academic knowledge required for students to begin their journey towards becoming culturally safe medical practitioners based on a review of the literature, their own research and discussions with regional leaders in Aboriginal health. Core knowledge identified included the root causes of ill health in Aboriginal communities and specifically the impact of colonialism, Aboriginal health services systems and

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its limitations, Aboriginal health policies, Aboriginal community health and resiliency. Formal sessions were identified to be delivered by Aboriginal resource people on Aboriginal culture, healing and community life. A self-study project for the students, developed initially for the pilot, was enhanced by Drs Hudson, Maar and Jacklin to better provide a structured opportunity for students to use reflexivity to foster self-awareness of their own tacit assumptions and perspectives, a prerequisite for culturally safe medical practice. Students are now provided with a project orientation that includes questions to guide a final presentation of their experience and understanding of the local Aboriginal community health. The students are asked to keep a private journal to assist with their inquiry and given guidance about ethical research practices. In the last week of their time in the community, presentations are conducted by pairs of students to interested staff and community members. After the completion of the placement, the students gather together on campus and give a presentation to their small study group. Students must pass this self-study project to complete their medical degree.

Implementation of the mandatory Aboriginal placement with Northern Ontario School of Medicine students

As a result of the pilot experience and the important improvements that it produced, the charter class – all 56 members – was sent in pairs in 2006 to 28 rural and remote Aboriginal communities across Northern Ontario for 4 weeks (without breaks). Students suggested three community preferences (in order), and had an opportunity to suggest a student partner (eg 'study buddy'); the School then did its utmost, for the most part successfully, to satisfy the preferences where possible. The students found the learning experience both intense and meaningful as they endeavoured to master their curriculum while living among Aboriginal people during the last month of their first year[13-15].

Based on the experience of the first full-scale iteration of the module in 2006 the module coordinator (GH) made a number of recommendations, which were accepted either for the next year or eventually (as indicated):

- Replace the School's medical science content of the musculoskeletal system in the module with the endocrine system, which is less laboratory intensive and therefore more pedagogically appropriate for a remote placement (implemented for the 2008–2009 academic year).
- Keep the orientation sessions about Aboriginal communities in northern Ontario led by the Aboriginal Affairs Office.
- Continue re-packaging the curriculum for students so they do not have to rely on the internet in placement.
- Continue to use telephones for curriculum sessions instead of internet-based communication.
- Use web-based discussion boards as a complement to the telephone.
- Encourage students to demonstrate reasonable flexibility regarding schedules and the curriculum developed by their host community.
- Place the emphasis on cultural instead of clinical learning.
- Appoint two (instead of one) faculty module coordinators, one on each main campus (Thunder Bay and Sudbury, 1000 km apart), to ensure timely follow-up on any issues that may arise (students, faculty, support staff).

Maturation phase of the placement: fine-tuning our learning

An intensive cultural and Aboriginal health curriculum is provided to students 2 weeks prior to the placement. Furthermore, additional opportunities for learning about culture and health were dispersed throughout the first year of the curriculum. Community/cultural experiences were increased to 10–12 hours each week, whereas clinical experiences were reduced to 6–8 hours, rather than vice-versa, which had been the case in the previous iterations. The community/cultural experiences are created by each Aboriginal community on the basis of what they believe future physicians need to learn in order to be effective physicians in their communities, with students learning about

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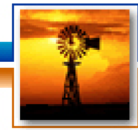

traditional healing and ceremonies, how to live off the land, amongst many other things.

Although students in nursing stations and other clinical locations are supervised by nurses and physicians, an orientation session was developed for students so that they all had exactly the same understanding of questions such as those about the scope of appropriate student clinical activities. In the light of some experiences in very early iterations of the module a decision was made not to place students in communities in which there were no nurses present during the weekends.

From 2007, where possible, the authors have both served as Module Coordinators, one on each campus.

An important aspect of preparing students continues to be a series of mandatory sessions lead by the Aboriginal Affairs Office designed to complement academic sessions with practical information such as how to conduct oneself in the Aboriginal community and current politics and treaties.

The community engagement with students in advance of the module has been enhanced. Students meet their community contact person (LCC) several months prior to the placement, during the yearly LCC workshop.

Improved teleconference guides and instructions for students and faculty have been developed, as well as a comprehensive electronic orientation binder for faculty, and the creation and implementation of detailed contingency plans. Professionalism is expected and assessed by faculty and the community. The orientation of the students was improved to include specific advice on professionalism, photography and use of the internet (in the light of some problems experienced during one of the early iterations of the module). The students provide their own evaluations about the success of the placement for program evaluation purposes.

Conclusions

Cultural immersion in Aboriginal communities is emerging as an important approach for medical students to learn to recognize health inequities and to address some of the barriers Aboriginal people and communities face to improve their health and well-being[7,16,17]. This placement has been through nine iterations to date, with many placement communities having participated since the inception. Targeted research is now urgently required to improve our understanding of what aspects of this educational experience are most effective in fostering medical students' competence to provide culturally safe care to Aboriginal patients.

Acknowledgements

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Aboriginal community partners since 2005 have included Fort William First Nation; Kitchenuhmaykoosib Inninuwug (Big Trout Lake); Deer Lake; Fort Frances Tribal Health Authority; Northwest Bay First Nation; Fort Frances Tribal Health Authority; Lac La Croix First Nation; Couchichig First Nation; Naokamegwanning First Nation (Whitefish Bay); Sandy Lake; Lac Seul First Nation; Constance Lake; Eagle Lake Wasaaygiizhik Nanandawe'iyewigamig (Kenora Area Health Access Centre); Fort Frances Gizhewaadiziwin Health Center (Couchiching First Nation); Thunder Bay (Metis Nation of Ontario); Kingfisher Lake; Muskrat Dam; Nibinamik (Summer Beaver); Eabamet Lake (Fort Hope); Fort Severn; Atikameksheng Anishnawbek (Whitefish Lake); Attawapiskat First Nation; Brunswick House First Nation; Fort Albany First Nation; Garden River First Nation; Mattagami First Nation; M'Chigeeng First Nation; Metis Nation of Ontario – Timmins; Mississauga First Nation; Mnaamodzawin Health Services; Moose Cree First Nation; Nipissing First Nation; Ojibways of Batchewana First Nation; Ojibways of Pic River First Nation; Sagamok Anishnawbek; Serpent River First Nation; Temagami First Nation; Whitefish River First Nation; Wikwemikong Unceded First Nation.

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References

1. Boelen C, Heck JE. *Defining and measuring the social accountability of medical schools.* (Online) 1995. Available: http://whqlibdoc.who.int/hq/1995/WHO_HRH_95.7.pdf (Accessed 28 April 2013).

2. Health Canada. *Social accountability. A vision for Canadian medical schools*. (Online) 2001. Available: http://www.afmc.ca/pdf/pdf_sa_vision_canadian_medical_schools_en.pdf (Accessed 28 April 2013).

3. Waldram J, Herring DA, Young TK. *Aboriginal health in Canada: Historical, cultural, and epidemiological perspectives*. 2nd edn. Toronto: University of Toronto Press, 2006.

4. Health Council of Canada. *Empathy, dignity, and respect: creating cultural safety for Aboriginal people in urban health care.* (Online) 2012. Available: http://www.healthcouncilcanada.ca/rpt_det.php?id=437 (Accessed 31 December 2013).

5. Ontario, Ministry of Health. *New Directions: Aboriginal health policy for Ontario.* Toronto, ON: Queens Printer for Ontario, 1994.

6. Indigenous Physicians Association of Canada and the Association of Faculties of Medicine of Canada. *First Nations, Inuit, Métis health core competences: a curriculum framework for undergraduate medical education.* (Online) 2009. Available: http://www.afmc.ca/pdf/CoreCompetenciesEng.pdf (Accessed 28 April 2013).

7. Crampton P, Dowell A, Parkin MA, Thompson C. Combating effects of racism through a cultural immersion medical education program. *Academic Medicine* 2003; **78(6):** 595-598.

8. Northern Ontario School of Medicine. *Report of the NOMS Aboriginal Workshop 'Follow Your Dreams'.* 10–12 June 2003, Wauzhushk Onigum First Nation, Ontario. (Online). Available: http://www.nosm.ca/uploadedFiles/About_Us/Media_Room/Publications_and_Reports/2003_06_03_FollowYourDreams_en.pdf (Accessed 28 April 2013).

9. Smith LS. Concept analysis: cultural competence. *Journal of Cultural Diversity* 1998; **5(1):** 4-10.

10. Jamrozik K. Going bush – helping medical students learn from Aboriginal people. *The Medical Journal of Australia* 1995; **163(11-12):** 591-594.

11. Crandall SJ, George G, Marion GS, Davis S. Applying theory to the design of cultural competency training for medical students: a case study. *Academic Medicine* 2003; **78(6):** 588-594.

12. Hudson G, Turner K, Newbery S, McKenzie O, Crowe C, Terry T. 'Examination of an Aboriginal pilot elective'. Northern Ontario School of Medicine Symposium, 20 October 2005, Thunder Bay, ON.

13. Hudson G. Medical education, technology and a northern Aboriginal community experience. In J Rowlandson, B Sanderson, G Hudson, M Maar (eds). Enhancing Primary Health Care in Aboriginal Communities through Wholistic Applications of Telehealth and Telemedicine. Canadian Society of Telehealth Meeting, 5 November 2007.

14. St. John's NL, Hudson G, Maar M, Cultural Immersion while studying MSK: faculty analysis of distributed medical education in Aboriginal communities. International Conference on Community Engaged Medical Education in the North, 12 June 2008, Thunder Bay, ON.

15. Hudson G, Hunt D. The Northern Ontario School of Medicine and social accountability. In G Tesson, G Hudson, R Strasser, D Hunt (eds). *The making of the Northern Ontario School of Medicine: a case study in the history of medical education*. Montreal and Kingston, QC, ON: McGill-Queen's University Press, 2009; 163-168.

16. Varty K. Leaving on a jet plane for a house call: a review of the implementation of cultural competency in medical education. In M Stapleton, J Lewis, FW Stahnisch (eds). *The Proceedings of the 17th Annual History of Medicine Days.* Calgary, AB: Faculty of Medicine, University of Calgary, 2008; 275-286.

17. Carpenter DL, Martina LK, Kaulukukui, CM. An innovative approach to developing a cultural competency curriculum: efforts at the John A. Burns School of Medicine, Department of Native Hawaiian Health. *Hawaii Medical Journal* 2011; **70(11 Suppl 2):** 15-19.

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