

Social Impact of the Northern Ontario School of Medicine

The Northern Ontario School of Medicine (NOSM), jointly based at Laurentian University and Lakehead University, began operations in 2002 and saw its first class of students graduating in May 2009. Each year, 32 new students are accepted at the Laurentian campus in Sudbury and 24 at the Lakehead campus in Thunder Bay. In addition to providing undergraduate medical education, NOSM offers postgraduate residency training in several specialties and coordinates educational activities in other health disciplines.

NOSM was created with the support of northern communities, health care organizations and the two host universities, and expectations are high that NOSM will bring benefits to these stakeholders, as well as to northern Ontario as a whole. NOSM's model of "distributed medical education" has led to active involvement of more than 70 communities across northern Ontario. This issue of *Research in FOCUS on Research* looks at several aspects of the social impact of NOSM in northern Ontario. A companion issue examines the effects of NOSM on the northern Ontario economy.

The assessment of social impact was based on in-depth interviews, supplemented by two focus group sessions. Altogether, 59 individuals – comprising senior university and health care administrators, physicians, and community leaders across northern Ontario – were interviewed.

Several of them later took part in two focus groups to validate the preliminary analysis and interpretations of the information. Some of the key informants were knowledgeable in more than one area and the study benefited from their broader perspectives. The interview and focus group information was analysed to find recurring concepts, which were then grouped into principal themes.

In terms of social impact, the themes were organized around three areas: NOSM's impact on its host universities, its impact on the health care system in northern Ontario, and its impact on northern Ontario and its communities as a whole.

This issue of *Research in FOCUS on Research* is based on the study titled *Exploring the Socio-Economic Impact of the Northern Ontario School of Medicine*, conducted in 2009 by the Centre for Rural and Northern Health Research, Laurentian University and Lakehead University.

The research was commissioned by the Northern Ontario School of Medicine with support from the Ontario Ministry of Health and Long-Term Care.

The interpretations and conclusions expressed here are those of the authors and do not necessarily represent the views of the ministry, the two universities or NOSM.

Impact on the Host Universities

The impact of NOSM on Laurentian and Lakehead Universities manifests itself in several ways. First of all, the presence of a medical school is thought to have enhanced the general reputation of the two universities. Also, with the presence of a medical school, Laurentian and Lakehead are now considered comprehensive universities, not just “primarily undergraduate institutions.” Some interviewees saw the establishment of a medical school on campus as a contribution to the maturation of both universities into more research-intensive institutions. Already, there have been several successful “team grant” research collaborations between NOSM and other faculty members of the two universities. This is a start; the opportunity for increased research collaboration was identified by several of those interviewed.

- ▶ *“My impression is that having a medical school makes [a] university a little bit more prestigious ... and that has changed the profile of ... Laurentian and Lakehead.”*
- ▶ *“There is a medical school here so we can collaborate with medical school [faculty] and take advantage of their facilities.”*

Another aspect is growth in university enrolment. Senior academic officials pointed out that enrolment, which went up at both universities during the flow-through of Ontario’s “double cohort” process a few years ago, had not fallen back to former levels. Although it was difficult to pinpoint the exact causes, some interviewees attributed the enrolment increases to the national publicity and enhanced public awareness generated by the new medical school. There has been, for instance, increased interest in the biotechnology and public health programs at Lakehead and programs in biomolecular sciences and rural and northern health at Laurentian.

Impact on the Health Care System

NOSM influences the health care system in northern Ontario in several ways. The most obvious is whether there will be an increase in the number of physicians practising in the north. People in virtually every city or town visited for this study believed that NOSM graduates will help relieve the chronic physician shortage across northern Ontario.

Community leaders reported that they had invested considerable time and effort in making medical students feel welcome and valued, with the hope that they will return to their communities to set up practice after completion of residency training. One individual saw a major benefit of community-based training as “being able to recruit these doctors when they’ve finished their residency” because “they know that they are needed here.” The interviewees agreed that this will be the true measure of NOSM’s success, though it is too early to know the extent of success in this regard.

There was also a keen anticipation that NOSM will be able to produce doctors who have the linguistic capability and cultural competency to meet the medical care needs of the sizeable Aboriginal and francophone populations in the north.

But the impact is not just on the future supply of physicians in the north. Already, the presence of the new medical school has helped some communities attract physicians, including specialists, particularly those who want to be involved in teaching or research, though it is difficult to say that NOSM is solely responsible for the recruitment success. At the same time, there was awareness that NOSM cross-appointment expectations could deter some physicians who wish to focus on clinical practice.

NOSM affects health care organizations in other ways. For example, the creation of the medical school was accompanied by infrastructural and technological developments in some hospitals and family health teams. Investments were made for renovations at teaching sites across northern Ontario, mostly through capital grants from the Ministry of Health and Long-Term Care. These could range from additions of lockers and expansion of library space to major renovations or infrastructure upgrades.

One community financed a new building that contained dedicated offices and a boardroom for the students' use. As well, all teaching sites were fitted with videoconferencing equipment and wireless Internet access – essential supports for distributed learning. Such improvements benefit not just NOSM students, but also the staff at hospitals and clinics. It was reported that some physicians used the telecommunications systems for continuing medical education.

The impact can also be felt in more subtle ways, particularly in relation to the delivery of care. As one administrator commented, the presence of medical students in clinical areas could create very crowded conditions in already congested facilities. Additionally, the students may at times place burdens on the staff and physicians in hospitals and clinics. For instance, physicians could be slowed down in their hospital rounds because they are taking time to teach. But, on the plus side, it was noted that having medical students around challenged “our physicians to keep up to date as preceptors.” A hospital official summed the situation up by noting that “a teaching environment drives a culture ... of innovation and it drives a culture of questioning.”

- ▶ “Smaller communities that have had trouble attracting medical doctors may find themselves now able to attract the students who came there [for their clerkship].”
- ▶ “I would say every single physician recruit, whether they've come here or they haven't, identified [NOSM] as being key to the reason why they would consider [this community] as opposed to another community.”
- ▶ “At least three of the students from last year's class have indicated they want to come back here to practice.”
- ▶ “We are recruiting a different type [of physician]: they want to be involved in research, they want to be involved in teaching.”
- ▶ “We all know that ... if people come here and spend some time here and are educated here, they're more likely to stay here.”

Some hospitals in northern Ontario have transitioned from community hospitals to teaching hospitals as a result of their connection to NOSM. According to some interviewees, this shift has enhanced the hospitals' image with the general public. The fact that NOSM students and residents are learning from local practitioners and in local institutions boosts confidence in both. When a fundraising campaign exceeded expectations at one hospital, the success was attributed, in part, to its NOSM connections.

- ▶ “With only a few physicians in town, it is difficult to have a student for seven or eight months at a time.”
- ▶ “It's great, it's fantastic to have new learners, but physical space is a challenge.”
- ▶ “We're hoping that cultural competency remains an integral part of the curriculum.”
- ▶ “If you're teaching in an operating room, it takes longer to do [procedures] ... so you can probably do fewer surgeries ... and you'll end up using more supplies when you're teaching.”

On the other hand, teaching medical students and residents could mean additional costs to hospitals. It was pointed out, for example, that residents tend to order more tests and give longer dictations, which may create additional workload for laboratories and medical record departments. It was the view of one senior hospital administrator that such extra costs should be built into a hospital's base grant from the Ministry of Health and Long-Term Care, in recognition of its teaching role.

Impact on Northern Communities

Perhaps the most important impact is something that is intangible but palpable – civic pride across northern Ontario.

Civic leaders in northern communities held one key belief in common – the medical school exists because they fought hard for it. Pride in this perceived success was evident in communities across the north.

As well as pride, the founding of NOSM has become a point of reference when other major ventures are contemplated – succeeding against the odds with the medical school now serves as an affirmation of the potential of the communities. As one key informant remarked, “They are looking at having other opportunities because they know it can be done.”

The establishment of NOSM is also widely seen as a large step – even a leap – in the evolution of northern Ontario’s resource-dependent economy to one that includes knowledge creation. It was noted by one interviewee that with the long-term decline in traditional primary industries, the establishment of NOSM “has been very good for the morale of the community to know that we have more than just forestry or mining.” In other words, many believed that NOSM is a key step to a knowledge-based economy.

- ▶ “[NOSM’s presence is] a tremendous boost to the community. I think it’s one of the things that helps give civic pride in terms of saying, ‘We have a symphony, we have a medical school, we’re not just a northern outpost.’”
- ▶ “The benefit of NOSM isn’t how many dollars they’re putting into the community, but eventually how many doctors will end up here.”

Future Challenges

The simultaneous identification of positive effects on the one hand and potential problems and reservations on the other was quite common in many of the interviews. Also, much of the perceived positive impact is potential in nature – only time will tell if it will come to fruition. At the time when this impact assessment study was done, NOSM was still too new to have concrete results, such as whether its graduates stay and work in northern Ontario.

NOSM’s impact on its host universities and on the health care system in northern Ontario was generally considered favourable. However, optimistic assertions of benefits and hopes for a better future are typically followed by pragmatic concerns that must be dealt with to ensure that NOSM continues to be a successful medical school and an effective agent for change.

The arrival of NOSM creates challenges to the status quo and offers opportunities for change. Overall, the impact of the new medical school was considered to be positive in potentially strengthening the medical workforce and in helping to diversify the economy of northern Ontario.

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Research in **FOCUS** on Research is published by the Centre for Rural and Northern Health Research (CRaNHR), Laurentian University. Each issue is a summary of a study conducted by CRaNHR researchers. As a form of knowledge dissemination and transfer, it is intended to make research accessible to a wider audience.

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