Distributed Medical Education as a Solution to Physician Maldistribution: The Case of the Northern Ontario School of Medicine

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Introduction

- Distributed medical education draws its students from underserved areas and locates their training in the same areas, with the goal of increasing subsequent recruitment to those areas
- The Northern Ontario School of Medicine, based in these principles, opened in September 2005
- Mandate of NOSM is to produce graduates more willing and able to serve in rural/remote areas
- This presentation will examine the experience of the early years of NOSM

Northern Ontario

- NOSM built to meet the physician recruitment needs of Northern Ontario.
- Northern Ontario – 800 km²
- Population 810,000 – about 7% of the total Ontario population
- Low population density - 1 person/km² compared with 111/km² in South Ontario
- Resource based economy – logging and mining
- Culturally diverse population – 19% francophone, 10% Aboriginal
- 2 Universities, Laurentian in Sudbury and Lakehead in Thunder Bay (1000km apart)

Overview of NOSM

- NOSM intake of 56 students in 4 yr undergraduate MD programme
- Post-graduate programmes in Family Medicine and general specialties
- Small group learning with clinical education in range of clinical setting throughout the region, including remote sites
- Case-based learning model – student-centred learning through problem-solving
- Curriculum based especially on health issues of Northern/remote/rural populations
- High level of IT connectivity

First Big Steps

- Early worries:
  - Sustainable funding
  - Attracting high calibre faculty
  - Attracting quality students
- These concerns now allayed:
  - Funding adequate and stable
  - Enthusiastic participation of Northern doctors
  - Over 2000 applicants for 56 places – ensures recruitment of the best and the brightest of Northern students (including Aboriginal and francophone)

Designing an admissions process

- Rural medical education works best when the social composition of medical students reflects that of the population to be served

- NOSM 2005
  - Admitted 56 from 2098 applicants
  - 80% from N. Ontario (10+ years)
  - 11% Aboriginal
  - 18% francophone
- NOSM 2006
  - Admitted 56 from 2050 applicants
  - 89% from N. Ontario
- NOSM 2007
  - Admitted 56 from 2274 applicants
  - 91% from N. Ontario
  - 71% female
  - 9% Aboriginal: 27% francophone
  - Average GPA 3.69 on 4 pt scale

Building a curriculum

- **Content** of all curricula must meet N.American accreditation standards, but med schools are free to shape the **context** in which learning takes place
- NOSM uses case-based curriculum built on regional health issues
- Five themes
  - Northern and rural health
  - Personal/professional aspects of medicine
  - Social and population health
  - Foundations of medicine
  - Clinical skills in health care

Clinical education

- Comprehensive community clerkship
  - Students are exposed to the core disciplines in medicine (Child health, women's health, internal medicine, mental health, family medicine and surgery) in rural, remote and underserved settings rather than urban acute care hospitals.
  - Other evidence suggests this is a very effective way to teach the different disciplines (Flinders programme). At NOSM, the jury is still out, but hopes are high

Responsiveness to Communities

- Students spend great deal of time in communities across the North – learn about health issues in social context
- Visible community presence of NOSM leads to greater community identification with its goals
- Community involvement in curriculum and admissions committees
- Special reference groups for Aboriginal and francophone communities
- Community representation on Governing Board

Some challenges related to community orientation

- Giving authority to communities means universities have less control
- Raising community expectations can give rise to regional (parochial) rivalries

Lessons

- Cannot build a new medical school overnight – have to develop capacity over time
- One model does not fit all
  - Stand alone vs satellite model
  - Importance of control over admissions and curriculum
- Politics makes a difference

Conclusion

- NOSM demonstrates that community based medical education can be made to work in rural and remote communities
- By selecting students with a predisposition to work in underserved areas, and training them in situ, it represents an effective non-coercive tool for enhancing recruitment
- Long-term success has yet to be demonstrated, but early signs are very positive
- No reason why this strategy should not be applied to other health professions