



# Researching rural: research interns in northern Ontario

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## INTRODUCTION

Canada's newest medical school has developed an interesting way to promote community-based research and rural professional development. The Northern Ontario School of Medicine (NOSM) welcomed its charter class of 56 students in 2005. In 2006, the school initiated a community-based research internship program by partnering with government agencies.

## PROGRAM DESCRIPTION

Twelve recent university graduates have been placed in rural communities across northern Ontario through a partnership with FedNor (Industry Canada's economic development initiative for Northern Ontario)<sup>1</sup> and the Northern Ontario Heritage Fund Corporation (a provincial agency mandated to foster job creation in northern Ontario).<sup>2</sup>

The year-long internship is designed to provide the interns with valuable work experience and to help them develop relevant research skills applicable to their region. Many NOSM research interns had previously left the north to pursue a university education. This internship facilitated a return to the rural northern Ontario communities for these researchers, opening the door to a rich and diverse research experience valuable to future career development.

NOSM espouses interdisciplinary cooperation, community partnerships and an emphasis on the cultures and characteristics of northern Ontario.<sup>3</sup> A variety of projects from qualitative to clinical research involve a cross-section of health care workers and use community-driven approaches. Application of the

CIHR Guidelines for Health Research Involving Aboriginal People<sup>4</sup> and collaboration with community leaders and First Nation organizations lead to research processes that are truly community owned. The spinoff for local research initiatives can — and does — affect program development at local hospitals. Issues as focused as throat swabs and as in-depth as palliative care and obstetrical services can inform local and regional centres that face similar issues.

Cross-cultural and rural issues are often underrepresented in research funding. Rural physicians often lack the time, funding and expertise to examine questions that raise curiosity in clinical challenges. Previous summer-long research internships have had documented success in stimulating rural clinicians to increase scholarly activity.<sup>5</sup>

The presence of continuous, year-long research support in rural communities is both novel and exciting. In one community, more than 10 local physicians with limited prior research experience are working on a variety of meaningful projects. Their research intern has been able to participate in relevant workshops and report back to physicians unable to attend. Both the clinician and the local hospital have benefitted by looking at challenges in a more systematic manner: elaborate the question, perform a literature search, systematically gather the data, collaborate with the stakeholders and proceed toward solutions, including funding applications for further research.

## DISCUSSION

Other successful initiatives enabling community-based research are occurring

at the University of British Columbia, where the Department of Family Medicine recognized it was “an unrealistic expectation that family practitioners could devote themselves to research without pay while maintaining a clinical practice.”<sup>6</sup> They subsequently developed several 1- to 3-year clinical investigator programs with funding, in addition to program support for research coordination and statistical expertise. The 3-year Community-Based Clinician Investigator program has had over 20 graduates since 2000 and the R3 research clinical investigator positions support re-entry for experienced clinicians to develop research projects. Additionally, British Columbia’s newly minted Centre for Rural Health Research has focused on rural maternity care, combining research with networking with policy-makers and with patients and caregivers from 20 rural communities. With these multifaceted endeavours, a culture of primary care research is developing in rural areas.

There are research institutes in various provinces that are involved in primary care studies.<sup>7-10</sup> Their challenge is to reach out in a distributed fashion to the communities they study and to encourage healthy, supported nodes of excellence in community-based research. Some programs support family doctors by protecting 50% of their time and salary support to engage in research.

Performing literature searches is one of a rural researcher’s earliest tasks. As disparate as the definitions of “rural” that currently exist, so too are the medical subject headings (MeSH) terms and databases available for searching rural topics. Table 1 and Table 2 may be of use to others interested in rural research.

## CONCLUSION

Resourcefulness and creativity are key components of successful research and scholarly activity. These

**Table 1. Medical subject headings term searches for rural references**

MeSH terms* for rural	No. of references						
	HealthStar	MEDLINE	PubMed Central	EBMR	CINAHL	EMBASE	PsycINFO
Hospitals, rural	2928	3023	3016	13	745		
Rural area					5748	12 955	
Rural health	16 009	17 420	17 393	268	1793		
Rural health care						2898	
Rural health centres					40		
Rural health nursing					1150	5	
Rural health personnel					219		
Rural health services	4809	4900	4889	101	1893		
Rural population	23 429	25 239	25 103	364		4168	
Rural hygiene						110	
Urban rural difference						1588	
Rural environments							7062
Total distinct references (all MeSH terms combined with Boolean “OR”)	45 547	48 937	48 790	729	10 205	20 540	7062

CINAHL = Cumulative Index to Nursing and Allied Health Literature; EBMR = Evidence-Based Medicine Reviews; MeSH = medical subject headings.

\*The various databases have their own unique MeSH terms. Multiple MeSH within a database exist for a single term, yet each MeSH is distinct from others, therefore all relevant terms should be selected. For example, on MEDLINE there were 17 420 references found under the term “rural health” and 25 239 found under “rural population”; only 220 references were indexed under both MeSH terms.

**Table 2. Keyword search for rural references**

Text word*	No. of references						
	HealthStar	MEDLINE	PubMed Central	EBMR	CINAHL	EMBASE	PsycINFO
Rural	61 407	68 086	75 834	1783	13 440	34 729	16 327

CINAHL = Cumulative Index to Nursing and Allied Health Literature; EBMR = Evidence-Based Medicine Reviews.

\*A text word search retrieves articles that contain the word anywhere in the available text of the reference (title, abstract or main body).

essential ingredients can lead to quality community-driven research through sustainable networks and partnerships. Resources for rural researchers are much like the database tools: an understanding of how to access and use them to their full capacity can lead to rewarding outcomes. The much-needed infrastructure is just developing, and rural doors are being opened for meaningful research opportunities. Several key funding components for the clinician investigator and infrastructure support are needed to sustainably “research rural.”

**Competing interests:** None declared.

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