

RURAL HEALTH HISTORY

The development of the Canadian Rural Health Research Society: creating capacity through connection

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A B S T R A C T

Context: The organization of rural health research in Canada has been a recent development. Over the past 8 years, rural and remote researchers from more than 15 universities and agencies across Canada have engaged in a process of research capacity building through the development of a network, the Canadian Rural Health Research Society (CRHRS) among the scientifically and geographically diverse researchers and their community partners. The purpose of this article is to discuss the development of the CRHRS as well as the challenges and lessons learned about creating networks and building capacity among rural and remote health researchers.

Issue: Key elements of network development have included identifying and developing multidisciplinary research groupings, maintaining ongoing connections among researchers, and promoting the sharing of expertise and resources for research training. The focus has been on supporting research excellence among networks of researchers in smaller centres. Activities include a national annual scientific meeting, the informal formation of several regional and national research networks in specific areas, and the development of training opportunities. Challenges have included the issues of sustaining communication, addressing a range of



networking and capacity-enhancement needs, cooperating in an environment that rewards competition, obtaining resources to support a secretariat and research activities, and balancing the demands to foster research excellence with the needs to create infrastructure and advocate for adequate research funding.

Lessons learned: The CRHRS has learned how to begin to support researchers with diverse interests and needs across sectors and wide geographical areas, specifically by: (1) focusing on research development through creating and supporting trusting connections among researchers; (2) building the science first, followed by infrastructure development; (3) making individual researchers the nodes in the network; (4) being inclusive by accommodating a wide variety of researchers and researcher strengths; (5) emphasizing social exchange, knowledge exchange, and mentoring in annual scientific meetings; (6) taking opportunities to develop separate projects while finding ways to link them; (7) finding a balance between advancing the science and advocating for adequate funding and appropriate peer review; (8) developing a network organizational structure that is both stable and flexible; and (9) maintaining sustained visionary leadership.

Key words: Canada, capacity-building, network, research.

Context

Although there is a long history of research into the health of rural Canadians, as well as a long history of international research symposia and meetings on rural health issues¹, the rural health research community remains small and dispersed across the country. Within the last decade, sparked largely by the new research funding opportunities created by the establishment of the Canadian Institutes of Health Research (CIHR), there has been a concerted effort to develop more substantial connections among rural health researchers from many different disciplines and parts of Canada. The Canadian Rural Health Research Society (CRHRS), created by researchers as a means to establish a robust and well-funded rural health research community, has developed as a network of researchers in the four principal areas of rural health research: (i) biomedical; (ii) clinical; (iii) health services and policy; (iv) population and public health.

The development of this rural health research networked community has not been without its challenges. The purpose of this article is to discuss the development of the CRHRS as well as the challenges and lessons learned about creating networks and building capacity among rural and remote health researchers.

Issue: research networks and networking

Health research networks have been described as, 'networks of investigators who are equipped with tools to facilitate collaboration and information sharing'² and whole systems that 'facilitate cultural change and grass-roots participation in research' that also enable 'individual innovation, through multidisciplinary participation'³. Approaches to research networks differ, from highly coordinated endeavours to loosely coupled connections of researchers and others who maintain 'various types of contacts, co-operation and communication'⁴. Networks fulfil various purposes, including overcoming fragmentation of research on a particular topic⁵, improving multidisciplinary approaches to pressing research problems⁶, linking researchers and decisionmakers⁷, and increasing researcher competitiveness nationally and internationally⁶⁻¹⁰.

Research networks are important in building research capacity as well as influencing the development of multidisciplinary teams to address complex research questions^{6,8}. It is not always clear what structures and processes can best enhance and sustain researcher capacity¹¹. Key elements in successful networks include: a common,



clear vision with a modest number of goals¹²; proven, charismatic leadership of an individual or individuals with a deep understanding of all aspects of research in the field⁶; a structure that suits the network's goals and purpose^{6,10,12}; clear, effective processes of communication, coupled with mechanisms to foster and sustain researcher engagement and collaboration^{11,12}; sufficient resources¹² provided in a judicious and timely manner⁸; and ways of working that reflect the intent and context of the network^{9,11}. Networks develop largely in response to contextual forces.

Rural health research

The pattern of rural health research development occurs in relation to the role of rural health in the country's health agenda, the availability of national research funding, the organization of health services, and the availability of universities and researchers to rural communities. In the USA, for instance, rural health research is largely health policy driven and focuses on access issues¹³. As Hartley notes, this is due primarily to three factors. First was the establishment of the Federal Office of Rural Health Policy in 1987 that provided funding and capacity-building support for research centres focused on rural issues. Second was the National Rural Health Alliance, which began in 1978 as a merger of two rural hospital and rural primary care organizations, serves as an umbrella organization, and advocates successfully for research dollars. Third was the creation of issue networks, made up of federal/state decisionmakers, clinicians and researchers, to lobby for specific issues such as rural hospital policy.

In Australia, a number of rural health units were established within state health departments in the late 1980s to focus on policy related issues. The increase in regional universities, the funding of university departments of rural health in each state and the Northern Territory, as well as the establishment of the rural clinical schools has resulted in an increase in rural health research. Most research is focused on public health and health services, however, and remains small in

scale¹⁴. At the same time, funding for research that is specifically rural in nature remains limited^{15,16}, and there are continuing needs for capacity development and communication among researchers dispersed over a vast geographic area¹⁶.

In Canada, the development of rural health research has been more researcher driven than policy driven, and hence is uneven across the country. Provinces are responsible for the provision of health and education, and interest in rural health varies from province to province. Although there is an increasing number and range of rural health research projects and programs across the country¹⁷, there are few long-term provincially-funded centres with a central mandate for rural health research, such as Ontario's Centre for Rural and Northern Health Research (CRaNHR).

Developing a Canadian Rural Health Research Network

By the late 1990s an increasing appreciation that specific knowledge was required to address rural and remote health needs in Canada¹⁸ led to the emergence of a network that has become the CRHRS. Developmental milestones, including policy and organizational influences, are outlined (Fig 1).

Two rural health research conferences in 1998, one at the University of Lethbridge¹⁹; the other at the University of Saskatchewan²⁰, provided opportunities for researchers from a broad range of disciplines and research interests to meet for the first time. Also in 1998, the national department of health, Health Canada, formed the Office of Rural Health for the purpose of putting a 'rural lens' on national health issues¹⁸. Rural health research was the focus of two proposals during the consultation phase of the development of the Canadian Institutes of Health Research (CIHR)^{21,22}.

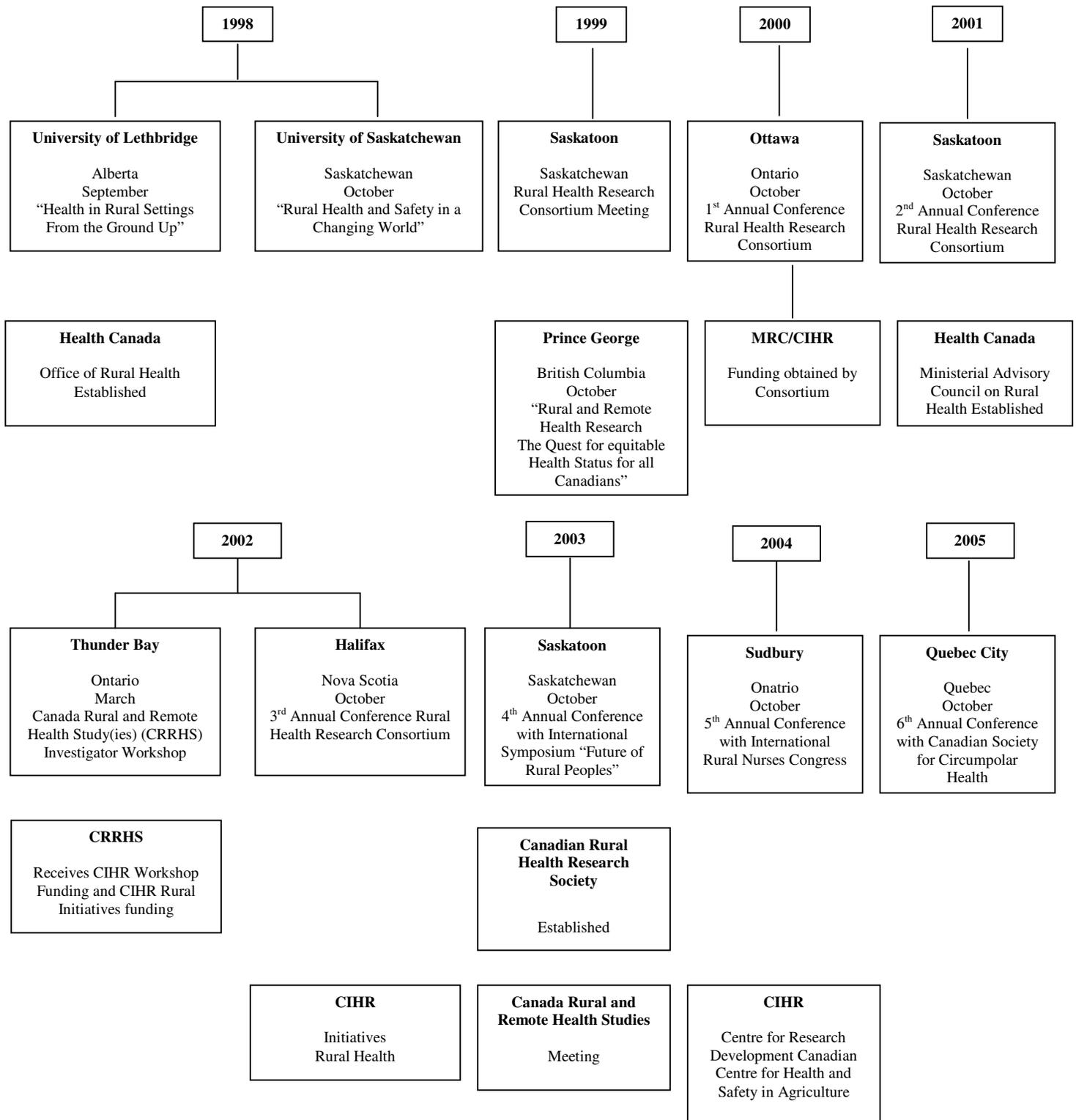


Figure 1: Milestones in Canadian Rural Health Research Society networking.



In 1999, two national meetings served to accelerate connectedness. The University of Saskatchewan hosted a meeting of 129 researchers from a wide variety of disciplines from across Canada to explore whether specific interdisciplinary cross-university research groupings might be formed to seek funding for new research projects from the emerging CIHR and other funding venues. The outcome was the Canadian Rural Health Research Consortium (Consortium) and the emergence of research groups in nursing, the physical environment, and rural children's health. A month later, Health Canada's Office of Rural Health and the University of Northern British Columbia hosted the National Rural Health Research Summit at which researchers, rural residents and government representatives further defined the area and recommended means of supporting rural and remote health research¹⁸.

With the support of a Medical Research Council/CIHR Opportunities grant, the Consortium met in April 2000 to establish its mission, goals and 5 year targets. The Consortium held its first national scientific conference in October 2000 with 75 scientific abstracts and presentations. Workshops at this meeting resulted in the identification of nine key research areas, and requests for closer scientific connections and project development, and advocacy for increased funding for rural and remote health research.

The Canadian Rural Health Research Society: a network of networks

Rather than a single network, rural and remote health researchers have developed what can be considered a virtual network of networks, which is enabling research capacity development. The Consortium has become the Canadian Rural Health Research Society (CRHRS), annual national scientific meetings have continued, an inventory of research training in rural health research has been created²³, new research groupings have emerged, and network members have worked with CIHR and other funding agencies to hold

workshops and institutes, as well as to extend funding opportunities.

The Society

Between 2001 and 2003 the Consortium evolved into the CRHRS. As a national not-for-profit incorporated society, the CRHRS aims to build interdisciplinary, multidisciplinary, mutually supportive and community-focused research networks that are responsive to the needs of people living in rural and remote communities. The Society's activities are focused on researcher capacity-building, networking, increasing the availability of funding for rural health research, as well as knowledge translation²⁴.

Connections among researchers have been fostered through annual scientific meetings. The number of abstracts and range of disciplines has increased each year. Joint conferences have identified new areas of research and expanded networks: in 2003, with the International Symposium on the Future of Rural Peoples; in 2004 with the International Rural Nurses Congress; in 2005 with the Canadian Society for Circumpolar Health (CSCH); and in 2006 with the Canadian Centre for Health and Safety in Agriculture, the National Collaborating Centre on Aboriginal Health, The National Collaborating Centre on Environmental Health, and the British Columbia Rural and Remote Health Research Network, among others. The conferences have served as the venue for research priority-setting and networking on topics such as rural women's health, definitions of rural and rurality²⁵ working with large databases, rural health professional education, research ethics and aboriginal knowledge translation.

Research groupings

From the Consortium's earliest meetings, structured opportunities have been provided for researchers with similar interests, from various universities and disciplines to get together to explore the questions: what are the major



research issues in this area? What research questions could be worked on?

One of the earliest networking results was in health services and policy research, with the nursing group's study, 'The Nature of Nursing Practice in Rural and Remote Canada'²⁶. This Canada-wide study, was conceived when the principal researchers first met at the 1999 Saskatoon meeting, and were later supported by a Medical Research Council/CIHR Opportunities grant in 2000²⁷. The physical environment group, which also met at the 1999 meeting, was successful in its 2002 application to CIHR Strategic Training Initiative in Health Research (STIHR) Program for a multicentre training grant, Public Health and the Agricultural Rural Ecosystem Training Program (PHARE)²⁸. In 2004, two CIHR Centres for Research Development were funded: the Centre on the Changing Physical and Social Landscape in Atlantic Rural Canada²⁹, and the Canadian Centre for Health and Safety in Agriculture³⁰, with its researcher network now numbering 66 scientists in 14 Canadian universities and other national and international organizations. Most research within these centres is in the areas of population and public health, and health services and policy research, although increasingly projects cross into biomedical research and genomics, on topics such as mechanisms of lung inflammation related to swine barn air³¹.

In March 2002, with the support of 8 CIHR Institutes, 37 researchers met in Thunder Bay, Ontario. Five additional research groupings, in addition to the ones on rural nursing, environmental health and rural children's health, were created. Subsequent proposals included a project on the links between health status and community resiliency³², and an evaluation of national information sources for developing a baseline data set on the health of rural Canadians²⁹. Other research groupings, including one on children's mental health and a clinical research-focused group on chronic disease management have been unable to garner a sufficient critical mass of researchers to proceed.

A grant received by the Society's co-leaders³³, which enabled the provision of small grants (\$4000 – \$5000), has

added substantial value. The grants allowed investigators of varying levels of research maturity, and often with little infrastructure available to them in their home universities, to meet and prepare proposals for funding. Small grants, and the networking they have funded, have enabled researchers to achieve a critical mass across universities, to be successful in national competition, and to compete on standards of international excellence^{34,35}.

Research training

Fostering research training has been a continuing theme. During 2001 a Canada-wide survey of training opportunities in rural and remote health research was undertaken²³. The relationships built among researchers through the CRHRS and the research grant activities, have created new research training opportunities, for example, the PHARE Program through the rural health CIHR Centres for Research Development located in Nova Scotia²⁹ and Saskatchewan³⁰. Summer institutes have been implemented in Ontario and Newfoundland. No fewer than 22 students presented their research at the 2005 conference and, with their mentors, participated in a mentorship workshop.

Making supportive networks possible

CIHR funding has been central to fostering research groupings, networking and capacity building among rural and remote researchers^{27,33}. The need for a Canada-wide scan of research priorities, first raised by CRHRS researchers, was taken up by the CIHR. In September 2001 a national meeting organized by CIHR resulted in a proposed strategy for rural and remote health in Canada within the context of the CIHR^{36,37}, and led to CIHR strategic competitions in 2002, 2003 and 2004. In 2002, the CIHR created a strategic initiative across all 13 institutes, now the Special Joint Initiative in Rural and Northern Health, to provide support for the development of this strategic priority³⁸. Funding for this initiative was discontinued in 2006.



Challenges of network development and sustainability

The challenges faced by the CRHRS are characteristic of a small research community with multiple disciplines, diverse interests, and limited capacity, dispersed over a large geographical area. Predominant among the challenges are the following:

1. Sustaining communication among a small research community with a range of disciplines and research foci, spread over a vast geography.
2. Addressing a range of networking and capacity-enhancing needs within the research community.
3. Engendering cooperation in a research environment that rewards competition.
4. Resourcing a secretariat or service centre, and other network supports.
5. Balancing the demands to foster research excellence with the needs to build infrastructure and engage in advocacy action to increase research funding for rural health.

The rural health research community in Canada remains small and widely dispersed, with few senior researchers. The networking and capacity enhancing needs vary considerably within the research community, and as excellence can be defined in terms of competitive success, cooperation is sometimes stifled.

Attempts to identify gaps and set priorities in rural health research have met with limited success^{36,37}. The list of important topics for research has been far-ranging, and researchers have been unable to reach consensus on focused research priorities because of diverse needs, interests, and disciplines. The broad range of research topics contrasts with the approach in the USA or Australia, where health services or health policy as drivers and funders of rural health research have prompted more focused research priorities^{13,14}. In Canada, it is frequently challenging to create a critical mass of researchers around a particular topic, or to offer research training, except by finding non-traditional ways to link with others across the country or internationally. A

Canadian strength however, is a multidimensional approach to understanding the determinants of rural health taken by groups of researchers examining complex issues related to the health and economic sustainability of rural communities³⁰. The breadth of interests and disciplines among the rural health research community has been central to fostering larger multidisciplinary research groups.

Most rural and remote health researchers are located in small universities where research resources are limited. Small universities, often located in more rural or remote parts of Canada, frequently have sustained, substantive linkages with their surrounding communities. These links foster community based research, alignment of research interests, and the ability for research findings to directly impact health programs and services^{18,38,39}. It is these abilities that provide groups of rural health researchers, often networking across provinces, with the potential to compete successfully nationally and internationally, particularly in the new funding era which increasingly emphasizes the need to work with the users of research for improved research uptake.

The targeted national support for rural health and rural health research has been short-lived: Health Canada's Office of Rural Health has been dismantled and CIHR has ceased strategic funding for rural health research. The decrease in targeted funding has made networking and capacity-building more challenging. Among the challenges is finding appropriate publication outlets. CRHRS members have edited special issues of other publications⁴⁰, but efforts to create a rural health research journal in Canada have not yet been successful.

Finally, it is challenging for a small research community with few resources to develop the necessary infrastructure, while maintaining a balance between advancing the science and advocating for adequate research funding. Network members have been diligent in recommending colleagues to serve on CIHR peer review committees, and institute advisory boards, as well as regularly communicating with CIHR about rural health research needs. The CRHRS, a non-profit society funded by memberships, has sustained its



leadership, and maintained its secretariat and conference planning endeavours by means of in-kind contributions by members and their universities. Without a national focus on rural health on the part of those responsible for research funding and policy development, and a more central place of rural health on provincial agendas across the country, the sustenance and growth of research excellence and funding opportunities cannot happen easily.

Lessons learned in network development

In addressing the challenges, the CRHRS has learned how to begin to support researchers with diverse interests and needs across sectors and a wide geographical area, specifically by:

1. Focusing on research development through creating and supporting trusting connections among researchers.
2. Building the science first, followed by infrastructure development.
3. Making individual researchers the nodes in the network.
4. Being inclusive by accommodating a wide variety of researchers and researcher strengths.
5. Emphasizing social exchange, knowledge exchange, and mentoring in annual scientific meetings.
6. Taking opportunities to develop separate projects while finding ways to link them.
7. Finding a balance between advancing the science and advocating for adequate funding and appropriate peer review.
8. Developing a network organizational structure that is both stable and flexible.
9. Maintaining sustained visionary leadership.

Unlike research networks, designed as infrastructures for information and services⁸, the CRHRS has developed as a fluid channel so that researchers may find best ways of achieving their own goals of excellence in rural and remote

health research. In pursuing excellence, researchers have created a variety of smaller, often overlapping knowledge networks, communities of practice and soft networks⁷. Building a network of networks has been an intertwined process of researchers reaching out, taking the risk to trust one another, building community-linked projects and programs of excellence, receiving funding, developing new knowledge, using the knowledge to train students, building capacity, learning how to translate our knowledge to each other and to our stakeholders and partners, and reaching out in new ways.

Conclusions

The CRHRS has made strides in enabling inclusive networks of researchers and communities to develop capacity collectively. Challenges that remain are to find new ways to link together population health, health promotion, and health services researchers with clinical and biomedical researchers to address the human and health ecosystem issues that are of such importance in rural and remote communities. New developments may see large, multidisciplinary research teams working in partnerships with communities to address the diverse health agenda of rural and remote Canada, while being connected and competitive nationally and internationally. The network of networks approach that has characterized the development of rural and remote health research in Canada may permit some innovative ways to move to this next stage.

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