

The CIHR Strategic Initiative

Rural and remote health cuts across the mandates of all CIHR Institutes, from Aboriginal Peoples' Health to Population and Public Health. The Rural and Northern Health Research (RNHR) Initiative was first established in 2001 to advance research and knowledge translation that strengthen the health and health systems of Canadians living in rural and remote areas. In 2000-01, CIHR invested \$733,054 in rural and remote health. By 2004-05, that had grown to more than \$10 million. This is a reflection of the strategic importance of health research in rural and remote communities.

CIHR works with federal agencies and departments with an interest in rural and remote health research, including the Natural Science and Engineering Council of Canada (NSERC), the Social Sciences and Humanities Research Council (SSHRC), Health Canada, Indian and Northern Affairs Canada, and Statistics Canada. In addition, CIHR, NSERC and SSHRC work together as members of a Tri-Agency Working Group on Northern Research, which focuses on building research capacity in the North.

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research is the Government of Canada's agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. Composed of 13 Institutes, CIHR provides leadership and support to close to 10,000 researchers and trainees in every province of Canada. For more information visit www.cih-irsc.gc.ca

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. Through CIHR, the Government of Canada invested approximately \$10.4 million in 2004-05 in research on rural and remote health across Canada.

The facts

- Approximately 25% of the Canadian population lives in rural or remote areas.
- About two-thirds of people in northern remote communities live more than 100 km from a physician; 7% of Canadians in rural areas and small towns live more than 25 km from a physician.
- People living in Canada's north are more likely to experience a major depressive episode or high blood pressure than the rest of the population.
- People in rural regions and small metropolitan regions have a higher-than-average prevalence of arthritis and rheumatism, even after factoring in age – 18.4% and 16.8% respectively, compared to the national average of 13.4%.
- Health risk behaviours such as smoking and excessive weight gain are significantly higher in small-town regions, rural regions and northern areas of Canada than in the rest of the country.
- Nearly one-third – 29% – of people living on the fringe of major metropolitan cities of more than one million people rate their health as excellent, compared to only 20% of those in rural regions and 21% of those in northern regions.
- Fully 33% of Canadians aged 12 and over living in northern regions smoke, as do 32% of those living in rural regions. This compares to 22% in major metropolitan cities.

Research finding solutions for rural and remote health

- Community-based rural health initiatives are both feasible and desirable, according to the CIHR-funded Alberta Strategy to Help Manage Asthma (ASTHMA), led by Dr. Ross Tsuyuki of the University of Alberta. A community-based initiative successfully addressed deficiencies, including underuse of medication, lack of patient education, and little use of an emergency asthma care plan. Based on the success of the study, the research team is now investigating the benefit of a community pharmacy-based anticoagulation service, compared to the usual model of physician management.
- Rural/northern medical education is an important strategy in overcoming the persistent shortage of physicians in rural and remote areas of Canada. In one CIHR-funded study, Dr. Ben Chan of Toronto's Institute of Clinical Evaluative Sciences found that graduates of the Rural Northern Ontario Family Practice program provide comprehensive care to their patients and are more likely to be working in a northern region five years after graduation than physicians graduating from other family medicine programs. The study, which evaluated rural medical education programs, also found that rural-raised physicians are more likely to have some interest in rural family practice at the beginning of medical school than those raised in urban settings.

- The shift from a traditional diet to a more market-based diet among the Inuit in Nunavut has led to an increased risk for diseases like diabetes and heart disease. Dr. Laurie Chan of McGill University, with CIHR support, has been studying factors associated with the availability and accessibility of both traditional and market food. He has found that cost of living and food costs are barriers to better nutrition. According to the study, support for community hunts and increased attention to providing hunting and food preparation skills to the next generation are the most effective ways of increasing food security.
- Children's mental health is a difficult issue for all families — but all the more so when the families are far from sources of help. Dr. Patrick McGrath of Dalhousie University has received support from CIHR to evaluate ways to provide mental health care to children and youth at a distance and has developed two programs — Managing our Moods, and Family Help — to help families and family physicians manage problems ranging from depression to attention deficit disorder to more serious mental illnesses.

In the pipeline ... Engaging northern communities in health research

Northern health researchers need to be closely linked with the communities where research takes place. CIHR is working to facilitate community-researcher linkages that are necessary for community-based health research in the North. The Northern Health Research Development Program is intended to help Canadian researchers develop and establish collaborations with communities and with researchers from other disciplines through one-time grants. These grants support researchers in building relationships and exploring new collaborative opportunities. The initiative will increase the quantity and quality of northern health research proposals to CIHR and other granting agencies while enhancing research expertise on health topics and issues relevant to Canada's north. A critical element of the program is the increased involvement by northern communities in research.

Five researchers have received funding through this program, including:

- Dr. Laura Arbour of the University of British Columbia, who is developing a community-based research program with First Nations people of northern British Columbia on Long QT Syndrome, a hereditary heart disorder;
- Dr. Lynn Meadows of the University of Calgary, who is developing linkages to increase capacity for Inuit women's health; and
- Dr. Rhona Hanning of the University of Waterloo, who has developed a Web-based survey of food intake and physical activity among Cree school children in the James Bay region.

The researchers ...

Dr. James Dosman: Building a rural and remote health research network

When Dr. James Dosman began his pioneering research on rural and remote health, he was a member of a very small club. Today, thanks primarily to his efforts, the club's membership has swelled.

Throughout his career, Dr. Dosman has focused on encouraging collaboration among researchers, organizing five international symposia dating back to 1977, focusing on specific issues affecting people living in rural and remote areas. He is now working on his sixth symposium, scheduled for October 2005 and focusing on linkages between rural and northern health research.

Dr. Dosman was also instrumental in the creation of the Canadian Rural Health Research Society in 1999. The Society provides a networking and capacity-building opportunity for researchers in the many different disciplines that encompass rural and remote health research in Canada, disciplines as varied as cellular biology and epidemiology.

"We need scientific depth and geographic breadth," says Dr. Dosman, who currently serves as the Society's vice-chair. To date, it is the only society that regularly brings together rural and remote health researchers in Canada to advance their field. Dr. Dosman is the Director of the Institute of Agricultural, Rural and Environmental Health, which conducts research, education, and health promotion programs aimed at enhancing the health and well-being of agricultural, rural and remote populations.

Last year, Dr. Dosman demonstrated for the first time that asthma could develop in newly employed full-time swine farm workers who experience only short-term exposure to the job — and that these respiratory problems could remain with them. Previous research indicated that respiratory problems such as asthma occurred among long-term employees — primarily due to endotoxins (toxins that deform normal cell structure).

Dr. Dosman is now concentrating his research on understanding the genetic components of endotoxins so that he may be able to develop new treatments for those who suffer from these kinds of respiratory ailments.