

Competitive Capacity Grants Funded Applicants: 2006-2007

Community Research Alliance Grants

1. Caregiving, Health and Work of Canadian Forces Members

Cyndi Brannen
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Deborah Norris
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Mount Saint Vincent University

**Team Members: Major Cheryl Baldwin, Department of National Defense;
Donna Harding, Canadian Forces; Shelley Lively, Department of National
Defence; Christine Saulnier, Dalhousie University**

The Department of National Defense (DND) is one of the largest employers in Nova Scotia. Although members of the Canadian Forces are provided with a wider range of caregiving policies and programs than many workplaces, they are also exposed to unique experiences, such as lengthy separations from family and dangerous work conditions. Because of the changing nature of the Canadian Forces, family caregiving responsibilities are of increasing importance. How do the requirements of being in the military impact Canadian Forces members' caregiving responsibilities and their health? Also, there is little research on the role of gender in the work-life balance of Canadian Forces. Do men and women have different caregiving duties that intersect with current workplace practices? Is their health impacted differently? Would a support program help military members and their families better balance the demands of their paid work and caregiving? Combining the perspectives of researchers, Canadian Forces members and the Department of National Defence, this project will address existing research gaps to understand the linkages between DND policies and programs and the work-life balance of Canadian Forces members.

2. Cancer in the Older Adult: Examining Institutional Commitments to Provide Cancer Care in Long-Term Care Facilities

Lorna Butler
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Dalhousie University

**Team Members: Cathy Rose, Shannex Corporation; Candace Allison,
Saint Vincent Guest Home; Lesley McLean, Capital District Health
Authority; Margaret Fitch, Toronto Sunnybrook Health Sciences Centre;
Debra Bakker, Laurentian University School of Nursing; Greta
Cummings, University of Alberta; Karin Olson, University of Alberta;
Esther Green, Cancer Care Ontario**

As Canada's population ages, cancer rates are increasing. How prepared are we, with current health service delivery based on a hospital-care model, to address the needs of the population? To what extent does our current systems create social inequities? How can communication between cancer clinics and long-term care facilities be increased to improve treatment and, indeed, the entire experience for patients and their families?

3. Accessibility and Use of Emergency Contraception Pills in Nova Scotia

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Dalhousie University

Donald Langille
Community Health & Epidemiology
Dalhousie University

Team Members: Charlotte Loppie, Dalhousie University; Susan Wedlake, Nova Scotia College of Pharmacists; Sandra Aylward, Sobeys Pharmacy Group; Rhonda Phillips, Halifax Metro Clinic; Brigitte Neumann, NS Advisory Council on the Status of Women; Lisa Tobin, NS Health

Although teenage pregnancies have decreased in both Canada and in Nova Scotia since 1993, the ratio of abortions per 100 live births has increased. Studies suggest lack of effective contraception is one reason for this increase. However, what does this increase mean in terms of awareness, access and use of emergency contraception? Recent federal changes have been made to make the use of emergency contraception easily and quickly accessible to women. Are these changes working? What are the factors influencing the use of emergency contraception and what is the awareness level among this population group? This study will evaluate the recent federal changes by seeking the answers to these questions.

Development/Innovative Grants

1. Identification and Characterization of Novel Drug Transporters in Human Nasal Epithelium for Drug Targeting

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Team Members: Elizabeth Cowley, Dalhousie University; Ken Renton, Dalhousie University

Different classes of drugs require different modes of delivery to reach their target and, ultimately, to ensure that they are effective. For instance, peptide transporters are expressed in a variety of tissues, including the brush-border membranes of epithelial

cells for the small intestine, kidney, bronchial and alveolar epithelial cells. However, there is no documented information on the existence of these transporters in human nasal epithelium. More studies are necessary to explore the existence of transporters in human nasal epithelium. The data gathered in this study will facilitate ongoing studies to enable the submission of a research proposal entitled *Identification and characterization of novel drug transporters in human nasal epithelium for drug targeting* to the Pharmaceutical Committee of the Canadian Institutes of Health Research.

2. A Novel Aqueous Two-Phase System for the Purification of Horseradish Peroxidase

Godwin D’Cunha
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Cape Breton University

Novel applications of the enzyme peroxidase have included the treatment of wastewater. Given the timely nature of issues surrounding wastewater including the ongoing discussions regarding the remediation of water from the Sydney Tar Ponds area, information gathered from this study has economic and environmental implications as well as health implications. Most methods of isolating this enzyme in pure form are expensive and time-consuming. This study is centered on developing a simple, rapid, cost-effective technology for the purification of horseradish peroxidase using a novel aqueous two-phase system.

3. Delirium Prevention in Postoperative Hip Fracture Patients Using Delirium-Friendly Standing Orders

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Dalhousie University

Team Members: Michael Dunbar, Dalhousie University; Christopher MacKnight, Dalhousie University; Kenneth Rockwood, Dalhousie University

Delirium after orthopaedic surgery is a common and costly problem, in particular in frail older people. Delirium is associated with adverse outcomes during hospital stay and at long term follow-up. Which patients are at the greatest risk of postoperative delirium and poor outcomes? This question can be answered using baseline information including age, cognitive and functional status, sensory impairment, psychoactive medications, and history of previous delirium. As a first step toward development and implementation of a higher standard of clinical care for this vulnerable population, this study will assess the effect of “delirium-friendly” standing orders in hip fracture patients who are at high risk for postoperative delirium throughout their hospital stay, at discharge, at four months and one year.

4. Social Network Mapping and Palliative Care: A Process Evaluation

Lars Hallstrom
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St. Francis Xavier University

Team Members: Brenda Appleby, St. Francis Xavier University; Heather Jewers, St. Francis Xavier University; Margaret Kennedy, St. Francis Xavier University; Wendy MacCaull, St. Francis Xavier University; Madonna MacDonald, Guysborough Antigonish Strait Health Authority

In 2002, a national model, initiated by the Canadian Hospice Palliative Care Association, was developed as a guide for caregiving. This model served to integrate care with administration in the delivery of service. Using this model as a framework, this project will focus on palliative care for those suffering from neurological illness such as Alzheimer's disease, ALS, stroke, and Parkinson's disease to create an assessment in response to the following questions: What is currently in place within the palliative care system in Nova Scotia; how does it function; how is it assessed by those functioning within, or moving through the system; and how do the practices of the regionally based process compare to the national principles?

5. Patient-Centered Workflow for Palliative Care in GASHA, Targeting Neurological Illnesses

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**Heather Jewers
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St. Francis Xavier University**

Team Members: Brenda Appleby, St. Francis Xavier University; Lars Hallstrom, St. Francis Xavier University; Margaret Kennedy, St. Francis Xavier University; Madonna MacDonald, Guysborough Antigonish Strait Health Authority; Allen Tien, Johns Hopkins University

Palliative care is a combination of therapies that address the physical, psychological, social, spiritual, and practical needs of individuals who are dying and their families. The goal of this research is to design an integrated workflow system to guide and inform the complex process of patient-centered palliative care, focusing on those suffering from neurological illnesses in the Guysborough Antigonish Strait Health Authority. The outcomes of this project will not only provide insight into improvements for care in the Authority but will also be easily modified for palliative care for health authorities across Canada and worldwide targeting a variety of illnesses.

6. Building Capacity for Investigation of the Geospatial Mapping of African Nova Scotian Health Disparities

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Team Members: Agnes Calliste, St. Francis Xavier University; Ozeas Costas, St. Francis Xavier University; Mark Smith, Dalhousie University; Dennis Pilkey, Government of Nova Scotia; Robert Maher, College of Geographic Sciences

In Nova Scotia, information about the health of African Nova Scotians is sporadic. The importance of geographic information systems (GIS) for medical research in identifying health disparities has been well recognized. However, GIS has not been used to inform knowledge regarding such disparities in Nova Scotia. This project will use GIS as a tool in the collection of information regarding the needs of the African Nova Scotian community. Although the project is regionally focused, the anticipated outcome of the pilot is a template for further investigations in other populations who experience health disparities.

7. Interorganizational Child and Youth Health Networks: A Collaboration Among Administrators, Practitioners, and University Health Network Researchers

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Team Members: Mary Beth LeBlanc, Network for Children & Youth, Eastern Nova Scotia; Ann Casebeer, University of Calgary; Ronald Lindstrom, BC Research Institute for Children's & Women's Health; Timothy Huerta, Texas Technical University; Janice Popp, Southern Alberta Child & Youth Health Network; Keith Provan, University of Arizona; Brint Milward, University of Arizona; Marilyn Booth, Ontario Children's Health Network; Dennise Albrecht, Child and Youth Health Network Eastern Ontario; Robert G. Peterson, University of British Columbia

In 2001, the Network for Children and Youth, Eastern Nova Scotia (the oldest of its kind in Canada) and several other child and youth health networks formed the Child and Youth Health Networks of Canada (CYHNC). Despite the proliferation of child health networks in various provinces, critical gaps continue to exist in the literature regarding models for understanding the diverse processes used to develop, sustain, and evaluate interorganizational health service delivery networks. CYHNC has worked diligently to develop a strategy to examine this largely unexplored area of research. This project will assist CYHNC in continuing its quest to develop a methodological framework to support more effective longitudinal comparative evaluations of such networks.

8. The Influence of a Province-wide Trauma System Implementation on Motor Vehicle Crash Mortality: a Ten-year Follow-up Study

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**David Petrie
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**Team Members: Stacy Ackroyd-Stolarz, IWK Health Centre; Deshayne Fell,
Capital District Health Authority**

In Nova Scotia, a province-wide trauma system was implemented between 1995 and 1998. Nova Scotia evolved from a non-trauma system province, to one with a modern, comprehensive system over a short period of two to three years. Given the effort and cost associated with this endeavour, it is important to determine its impact on the health of Nova Scotians. This project will use provincial population-based vital statistics and hospital claims to evaluate the past 10 years and determine system effectiveness from a population perspective involving the entire province of Nova Scotia.