

# Collaborative Research In Primary Health Care



## The Problem

A long history of economic stagnation and youth outmigration has left Nova Scotia and the Maritimes with an aging population, high rates of poverty and rising rates of chronic disease. At the same time, there is a growing shortage of physicians in primary health care, limiting access to a consistent provider of proactive care. Many people, especially the socially vulnerable, are developing multiple chronic conditions that require a great deal of care. These people are struggling to manage their conditions, while an already-overloaded health care system is striving to meet their needs.

## The Solution

Research around the world has shown that ready access to a consistent primary care provider is one of the most important determinants of health. In 2013, researchers at Dalhousie University formed a multi-faculty research effort, known as Collaborative Research in Primary Health Care (CoR PHC), informing the transformation of our health care system so that it can provide this consistent, accessible care. Dalhousie University helped launch CoR PHC with a grant from its Strategic Research Initiative Fund (SRIF).

## The Opportunity

CoR PHC has grown into a vibrant collaborative with researchers all across the province, a close working partnership with the Nova Scotia Health Authority and Department of Health and Wellness, and a million-dollar offshoot initiative, BRIC NS (Building Research for Integrated Primary Healthcare). Meanwhile, the Government of Canada is offering tens of millions of dollars for research and knowledge translation efforts with potential to significantly improve the delivery of primary health care services and, by extension, population health.

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**New federal funding offers an unprecedented opportunity for CoR PHC, BRIC NS, Nova Scotia and the Maritimes to lead transformational change in primary health care, so long as the collaborative is able to secure the required matching funds.**

## Why this research matters

In Nova Scotia, we face a number of converging trends that threaten to overwhelm our health care system.



“My family doctor retired and I can’t find a new one.”



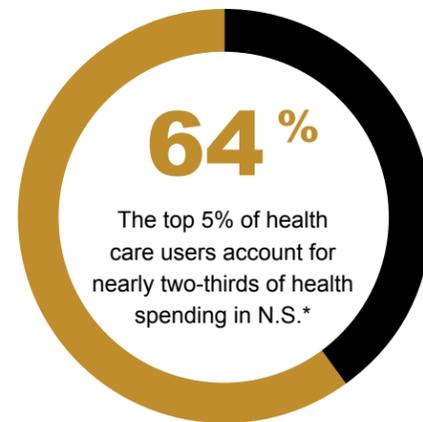
“I don’t know what to do about my teenage daughter...I’m afraid she might hurt herself.”



“My father wants to die at home but we just don’t have the support to manage.”

Spending on health care services already consumes 40 per cent of Nova Scotia’s annual budget. Most of this goes to hospital-based care and physician services, delivered to a relatively small number of people. In fact, a recent study found that 64 per cent\* of Nova Scotia’s health care spending goes to just 5 per cent of the population—the sickest, most vulnerable members of our communities. Their needs might be served better by community-based services and a variety of providers, integrated more seamlessly with the health care system.

\*Source: Small Area Variation in Rates of High-Cost Healthcare Use Across Nova Scotia (SARV) report



### TRENDS PUTTING PRESSURE ON THE HEALTH CARE SYSTEM

#### AGING POPULATION

According to Statistics Canada, 20 per cent of the population of Nova Scotia was aged 65 or older in 2016—the highest proportion in Canada and rising.

#### HEAVY BURDEN OF DISEASE

Nova Scotia has some of the country’s highest rates of cancer, heart disease, diabetes and other chronic diseases.

#### RISING RATES OF FRAILITY

Nova Scotia has higher rates of frailty—the accumulation of health deficits to the point of extreme vulnerability—than any other province in Canada.

## Mission

In its initial proposal, CoR PHC set six objectives:

1. bring together researchers from different faculties at Dalhousie University who are already conducting their own primary health care research into a new “primary health care research collaborative”
2. focus researchers’ activities on health system decision makers’ needs for information to guide them in the positive transformation of primary health care
3. gather new evidence and synthesize existing information, to create useful knowledge about the effectiveness of new approaches to primary health care
4. build capacity at Dalhousie University and its affiliated academic health sciences centres to conduct collaborative research in primary health care
5. capture national funding designed to foster primary health care research and health system improvement
6. foster new collaborations to leverage existing skills and potential for primary health care research into new opportunities and results

CoR PHC has successfully accomplished every one of its original six objectives, as you will see in the pages that follow. CoR PHC research projects are already helping us learn how to better:

- promote wellness and minimize risk factors
- prevent and manage chronic disease
- create better access to routine and urgent care
- collaborate across disciplines to provide comprehensive primary health care
- deliver the right high-quality services at the right time, place and cost
- coordinate and integrate services seamlessly across sectors (community, primary health care, tertiary care)
- translate evidence to practice
- scale up demonstration projects for broad-based use

#### POOR MENTAL HEALTH

One in five people in Nova Scotia has some form of mental illness, affecting their ability to work, care for their family, attend school or otherwise function in daily life.

#### SOCIAL VULNERABILITY

Nova Scotia has the highest poverty rate in Atlantic Canada and the highest rate of food insecurity in Canada—two factors with major impact on health outcomes.

#### UNATTACHED PATIENTS

More than 10 per cent of Nova Scotians over the age of 12 lacked a regular health care provider in 2014—a percentage researchers believe is rising; meanwhile, the number of providers accepting new patients is declining.



## 1. Bring researchers together



Dr. Fred Burge and Dr. Ruth Martin-Misener

**CoR PHC originally began with just two researchers—Dr. Fred Burge, director of research in Dalhousie’s Department of Family Medicine, and Dr. Ruth Martin-Misener, professor in Dalhousie’s School of Nursing.** Certain that primary health care research was on the brink of becoming a major new focus, they recruited 11 likeminded colleagues and launched the proposal to Dalhousie’s Strategic Research Initiative that created CoR PHC in 2013.

Since that time, CoR PHC has expanded to involve more than 40 investigators, from the faculties of Medicine, Dentistry, Health, Science, Computer Science and Arts. Researchers from other universities have also joined in the collaborative, which continues to expand as more new projects take

shape. Health system and government leaders, health care professionals who’ve never been involved in research before, students, patients and interested members of the general public have also joined in.

The fact that so many disciplines, professions and organizations are involved is a core strength of CoR PHC. It allows complex problems to be addressed from all angles—including the perspective of patients who, until CoR PHC, had little opportunity to contribute to health care improvement efforts. As a result, research questions are focused on the most relevant issues, with an eye to creating the most practical and effective solutions.



## Growth and diversity of CoR PHC

CoR PHC launched in 2013 with just 13 individuals. All of them were academic researchers, representing 3 faculties and 8 disciplines.

Since then, CoR PHC has expanded to involve 40 researchers, representing 6 faculties and 20 disciplines. The researchers now include not only academics, but clinicians, learners, health system managers, government decision-makers, patients and members of the public. This diversity ensures that the research addresses the relevant issues and puts the findings into practice.

**2013:**



**Founded by Dr. Fred Burge and Dr. Ruth Martin-Misener with 11 colleagues**



**Present day (2018):**

**More than 40 researchers across a variety of disciplines and organizations (below)**



### DISCIPLINES:

bioinformatics  
dentistry  
computer science  
community health & epidemiology  
emergency medicine  
family medicine  
geography  
geriatric medicine  
health economics  
health promotion  
knowledge translation

medicine  
nursing  
occupational therapy  
pharmacy  
physiotherapy  
psychology  
social work  
statistics  
surgery

### ORGANIZATIONS:

Dalhousie University  
Emergency Health Services  
IWK Health Centre  
Nova Scotia Department of Health and Wellness  
Nova Scotia Health Authority  
Other universities, including Acadia, Mount Saint Vincent, Saint Mary’s, St. Francis Xavier

## 2. Focus research on decision makers' needs

NSHA's senior director of Primary Health Care and Chronic Disease Management, Lynn Edwards, says integrated primary health care research efforts are providing the health authority and provincial government with essential data. "We need solid evidence to guide our decision-making as we address the extraordinary health care challenges we face in this province," she says. "Involving our directors and managers as research team members allows us to shape the research agenda to provide the answers we need to address priority issues."

*Lynn Edwards, left, with Dr. Tara Sampalli, NSHA's director of research and innovation, Primary Health Care, and a faculty member at Dalhousie*



**"There used to be a chasm between policy and research, but not anymore."**

—Lynn Edwards

**From the beginning, CoR PHC aimed to ensure that its members' research activities were focused on serving the information needs of decision makers in the health care system.**

This strategic decision coincided with other moves to make primary health care research a priority in Nova Scotia. The amalgamation of the province's nine health authorities into a single Nova Scotia Health Authority (NSHA)—with a priority mandate to improve primary health care—created the ideal opening for what has become a highly productive partnership between the university-based research community and the provincial health care system.

**Leadership connections**—Leading members of CoR PHC meet with senior leaders of NSHA's Primary Health Care and Chronic Disease Management portfolio every two weeks to discuss common goals, priorities, projects, results and new research directions—with an eye to aligning the research to address NSHA's most important needs for information.

CoR PHC and NSHA primary health care research leads meet regularly with senior Department of Health and Wellness (DHW) leaders to discuss how research efforts can be mobilized to inform provincial policy.

**Team players**—Increasingly, NSHA and DHW staff are playing active roles as CoR PHC research team members. Their involvement ensures the research is designed and conducted to answer the real questions clearly, so the evidence can be applied to achieve the desired results.

**Collaborative Care Framework**—In 2015, DHW commissioned Dr. Fred Burge and Dr. Ruth Martin-Misener to conduct focus groups across Nova Scotia to assess the feasibility of a shift from the family physician model to an interprofessional collaborative care model of primary health care. This and other CoR PHC research is providing ongoing guidance to DHW and NSHA as the collaborative care model of primary health care is rolled out across Nova Scotia.

## 3. Build research capacity



*Primary Health Care Research Day, 2018*

**CoR PHC is gradually building research capacity, by making primary health care research more visible and by offering education and mentorship opportunities for learners and new researchers.**

**Primary Health Care Research Day**—CoR PHC's signature event is its annual Primary Health Care Research Day. This research showcase and learning event attracts a larger and more diverse crowd every year, including many more learners, citizens and researchers from other universities. International keynote speakers, panel discussions and poster sessions make this a dynamic, high-profile, high-impact event.

**Creating new research teams**—Regular "incubator meetings" bring people together to form new collaborations focused on key issues of common concern.

**Learning and sharing ideas**—Monthly "Brewing Ideas" sessions bring CoR PHC members and learners together to share ideas, solve problems and learn from each other over coffee. The collaborative also hosts events where learners can present a project or thesis, network with mentors and peers, and broaden their knowledge of primary health care research.

**Mentorship**—Members provide ongoing mentorship to learners, including graduate and undergraduate students, whom they supervise in a large number and variety of projects. Several CoR PHC researchers are mentors in a CIHR strategic training initiative that mentored more than 120 new primary health care researchers in Canada, New Zealand and the United Kingdom.

## 4. Create useful knowledge

Since the inception of CoR PHC, 24 lead investigators have acquired funding to launch 28 collaborative research projects. These projects span a wide range of high-impact themes, including:

### ACCESS TO PRIMARY HEALTH CARE

Mapping access to primary health care across Nova Scotia; understanding the experience of unattached patients; creating a framework for collaborative interprofessional practice

### COMPLEX PATIENTS

Assessing case management as a means of improving outcomes among heavy system users with chronic conditions; exploring the meaning of “patient-centred” care for people with multiple chronic conditions

### END-OF-LIFE CARE

Educating physicians to initiate advance care planning with seriously ill patients; integrating hospice, respite care, spiritual care and other community-based services with primary health care services provided by family physicians and nurse practitioners; improving the quality of palliative care in the community

### EXPANDED ROLE OF PARAMEDICS

Evaluating new role of paramedics in assessing and treating palliative patients at home in a crisis, to reduce unnecessary transports to hospital

### FRAILITY

Identifying frailty in primary care, to open the discussion and make appropriate care plans; creating a frailty portal to improve coordination and appropriateness of care; exploring health and social care needs of older adults with multiple chronic conditions (and their caregivers)

### OBESITY AND LIFESTYLE

Addressing the role of excess pregnancy weight gain on offspring's BMI and future risk of obesity; integrating behavior change interventions; evaluating key aspects of the built environment and their impact on physical activity and overall health

### ORAL HEALTH

Providing culturally appropriate population health interventions to improve oral health in First Nations communities

### MEDICATION MANAGEMENT

Launching an interprofessional research effort to find ways of reducing unnecessary and potentially risky use of medications (polypharmacy, opioids)

### MENTAL HEALTH

Increasing capacity of community pharmacists to provide information, advice and referrals to people with mental illness and addictions; exploring rates of child and youth mental health presentations to emergency as a proxy for access to helpful community mental health and primary health care services

### PATIENT EMPOWERMENT AND SELF-MANAGEMENT

Tools to help patients better manage their chronic condition; involving patients in quality teams and research teams

### SYSTEM ISSUES

Characterizing high system use; understanding regional variations in system use; discussing fairness issues related to primary health care in Nova Scotia

## Taking men's mental health head on

“Headstrong—taking things head-on” takes advantage of pharmacists' knowledge of medications and their street-level location to connect with men about mental health.

“Research shows men are less likely to seek help for mental health problems, but more likely to commit suicide, than women,” says CoR PHC member Dr. Andrea Murphy, associate professor in Dalhousie's College of Pharmacy. As Headstrong's lead investigator, she's working with community pharmacists across Nova Scotia to see if men will be willing to talk to their pharmacist about depression, anxiety, insomnia, problems with alcohol and drugs, or suicidal thoughts and feelings.

Funded by the Movember Foundation, Headstrong uses displays in pharmacies to encourage men to talk to their pharmacist. It's also educating pharmacists to provide the best-possible information, guidance and support to the men who seek help.

## Intelligent approaches to frailty

CoR PHC members are developing and testing assessment tools, practice guidelines and IT solutions to help health professionals identify when patients are frail and determine what kinds of interventions and approaches will be the most help.

“As people become frail, they're more vulnerable to sudden declines in their health,” says one of the researchers, Melissa Buckler, Central Zone's project manager for Nova Scotia Health Authority's frailty strategy. “In advanced stages of frailty, interventions such as surgery can do more harm than good.”

The researchers aim to make frailty screening part of routine primary care, and to integrate information about a patient's frailty status and health care decisions into a central electronic record where professionals in every part of the health care system can see it.

“We want to avoid potentially harmful interventions and empower patients and professionals to have open discussions about frailty,” Buckler says. “Proactive approaches will keep people healthier longer.”

## Empowering self-management

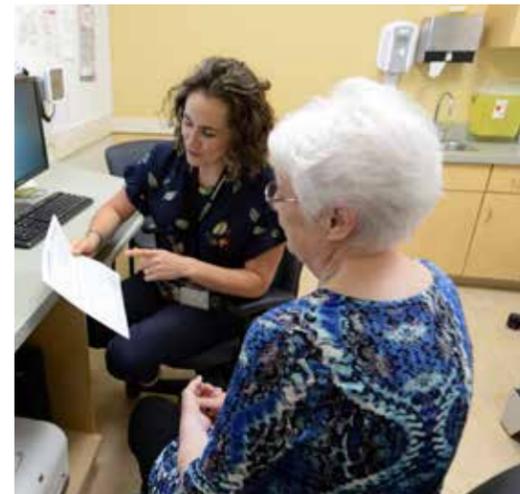
Half of all Canadians now live with one or more chronic conditions. “It requires skill, knowledge and confidence to manage everyday life with a chronic disease,” says CoR PHC member Dr. Tanya Packer, a professor in Dalhousie's Faculty of Health. “Without them, people end up at the walk-in clinic or emergency department.”

Dr. Packer and her team are exploring how best to empower patients: “We've been interviewing Canadians, asking, ‘what are you doing to manage your symptoms and control your disease, to be healthy and manage your day? What will help you manage better?’”

They're using the input to develop computerized tools to provide patients with customized information, connect them to resources, and help them assess their state and course—correct—or know when it's time to get to their provider. “We want people to feel that they are in the driver's seat,” Dr. Packer says, “so they can make the healthiest decisions day-to-day.”



Jamie Flynn, pharmacist/owner at The Medicine Shoppe in Halifax and participant in Headstrong, talks to a customer about the benefits and side effects of antidepressants.

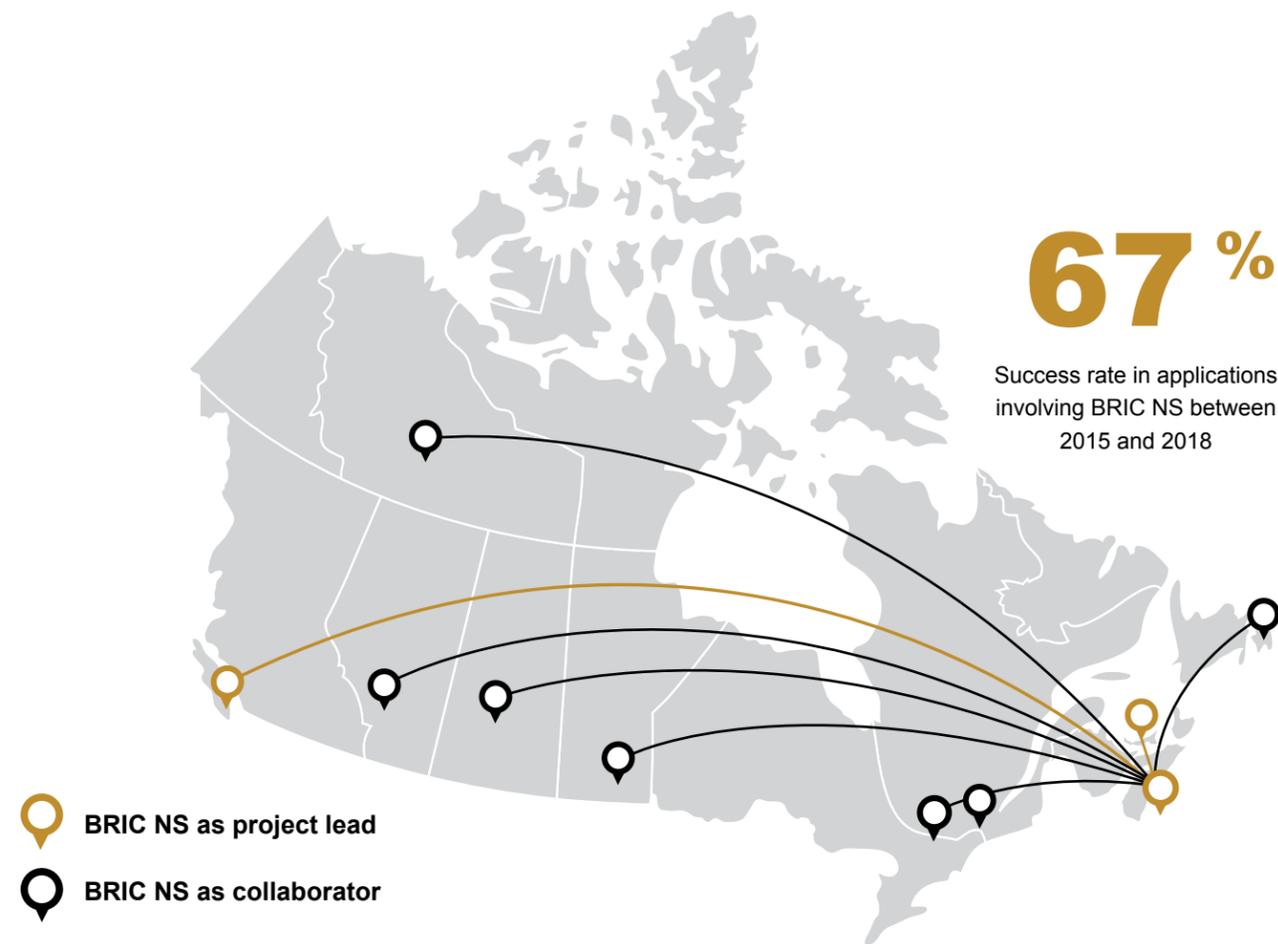


Family physician and CoR PHC researcher Dr. Alethea Lacas explains the frailty assessment to a patient.



Dr. Tanya Packer and research coordinator Kylie Peacock, a patient advocate who has since become a researcher herself, discuss results of a patient survey.

## \$ 5. Capture national funding



CoR PHC was instrumental in developing a province-wide interdisciplinary research network that successfully captured \$1 million from the Canadian Institutes of Health Research's Strategy for Patient-Oriented Research (CIHR SPOR). Known as BRIC NS (Building Research for Integrated Primary Healthcare in Nova Scotia), this network is part of the national CIHR SPOR Network for Primary and Integrated Health Care Innovations (PIHCI).

The BRIC NS network itself is supported by matching funds from the Nova Scotia Health Research Foundation, in-kind support from Dalhousie University, and operating funds from CIHR.

BRIC NS is part of projects that have received a combined total of nearly \$4 million from CIHR. These funds were secured thanks to matching funds provided by non-federal sources. To date, 67 per cent of BRIC NS-led projects have successfully secured the requested funding from CIHR.

CIHR continues to offer tens of millions of dollars in funding to the SPOR PIHCI networks—but with stringent requirements for matching funds from local sources. Like CoR PHC, BRIC NS projects must secure matching commitments from other funding agencies and philanthropic organizations in order to receive CIHR SPOR PIHCI funding. BRIC NS welcomes such collaboration and support in its efforts to advance primary health care in Nova Scotia.

## 6. Foster new collaborations



*Dr. Emily Marshall and Dr. George Kephart share findings about unattached patients and heavy health system use in Nova Scotia with members of the Wave 2 Health Priorities Cluster.*

**In 2017, CoR PHC responded to Dalhousie Medical School's "Wave" process, a competition to identify its leading research teams and strategic research priorities.** Recognizing the critical importance of primary health care to the health and wellbeing of Maritimers, the medical school identified this research area as high priority. In the process, CoR PHC became part of a larger Wave research group known as the Health Priorities Cluster.

The Wave adjudicators named the Health Priorities Cluster a "Wave 2" team, which means it has the potential to become internationally competitive within three to five years.

The Health Priorities Cluster brings together a diverse array of research groups in collaborative primary health care, frailty and aging, pain and back pain, emergency medical services, musculoskeletal health, and child and youth health. Although these groups address a great variety of very different health issues, there are strong common interests and themes that can be aligned to address pressing issues in population health and health services delivery.

# Why support us?

Supporting Collaborative Research in Primary Health Care (CoR PHC) with matching funds is a wise investment of research dollars for many reasons:



## Leading researchers

Dalhousie University researchers have been on the forefront of primary health care research in Canada for more than 20 years. We are recognized internationally for the quality and impact of our work.



## Strong odds for success in funding competitions

Funding requirements for many of the large-scale collaborative grant programs are very stringent, resulting in a small pool of competitors and high chance of success. Almost all BRIC NS projects supported with local matching funds have succeeded in national funding competitions, for example. In the current research environment, CoR-PHC and BRIC NS researchers are well-positioned to continue their successful grant capture—provided they have local matching funds to support their applications.



## Meaningful real-world impact

CoR PHC involves researchers, clinicians, policymakers, health system administrators and patients. This ensures the research is relevant to patients' and clinicians' concerns, while also being scientifically sound and practically feasible. This approach ensures that research results, when applied, will produce tangible improvements in practices, systems, outcomes and health.



## Aimed at top priorities

CoR PHC researchers work hand-in-hand with the Nova Scotia Health Authority and Nova Scotia Department of Health and Wellness to shape a research agenda that addresses the most pressing patient and health system priorities—in particular, the need to improve access to high-quality care for people with (or at risk of developing) complex chronic health conditions.



## Double your donation

Depending on the project and program, there is a good chance that your contribution to the research will be doubled. In the case of the Canadian Institutes of Health Research (CIHR) Strategy for Patient-Oriented Research Primary and Integrated Health Care Innovations network, CIHR matches every dollar provided by local sources to successful funding applications.

## Contact

**Collaborative Research  
in Primary Health Care**

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