



Promoting Excellence in Health Research: Setting and Mobilizing a Research Agenda that Aims to Influence Policy and Improve Population Health

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Canada's health care system

- Constitutionally under provincial authority
- Canada Health Act - Universal health care, public system (with exception of dental care)
- Provincial variations in governance (e.g. decentralization), financing, and health human resources (e.g. status and payment for nurse practitioners, midwives, medical assistants)





Canadian Institutes of Health Research (CIHR) Objective Section 4, C-6, R.S.C. 2000

OBJECTIVE

4. The objective of the CIHR 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, by...





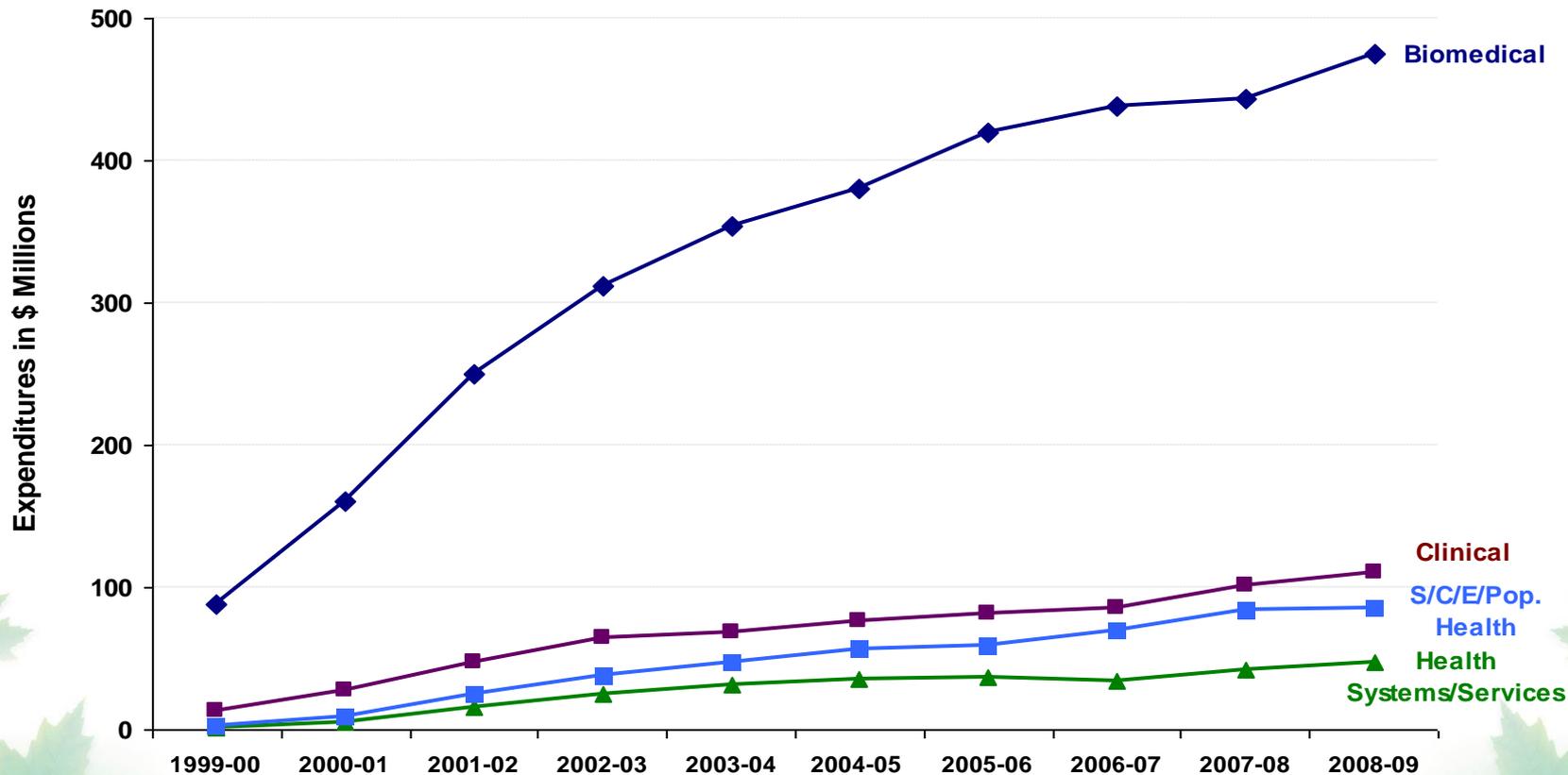
CIHRs' Pillars of Research

- Biomedical
- Clinical
- Health services and health care systems
- Social, economic and cultural determinants of population health





CIHR Funding per Research Pillar 1999-00 to 2008-09 *

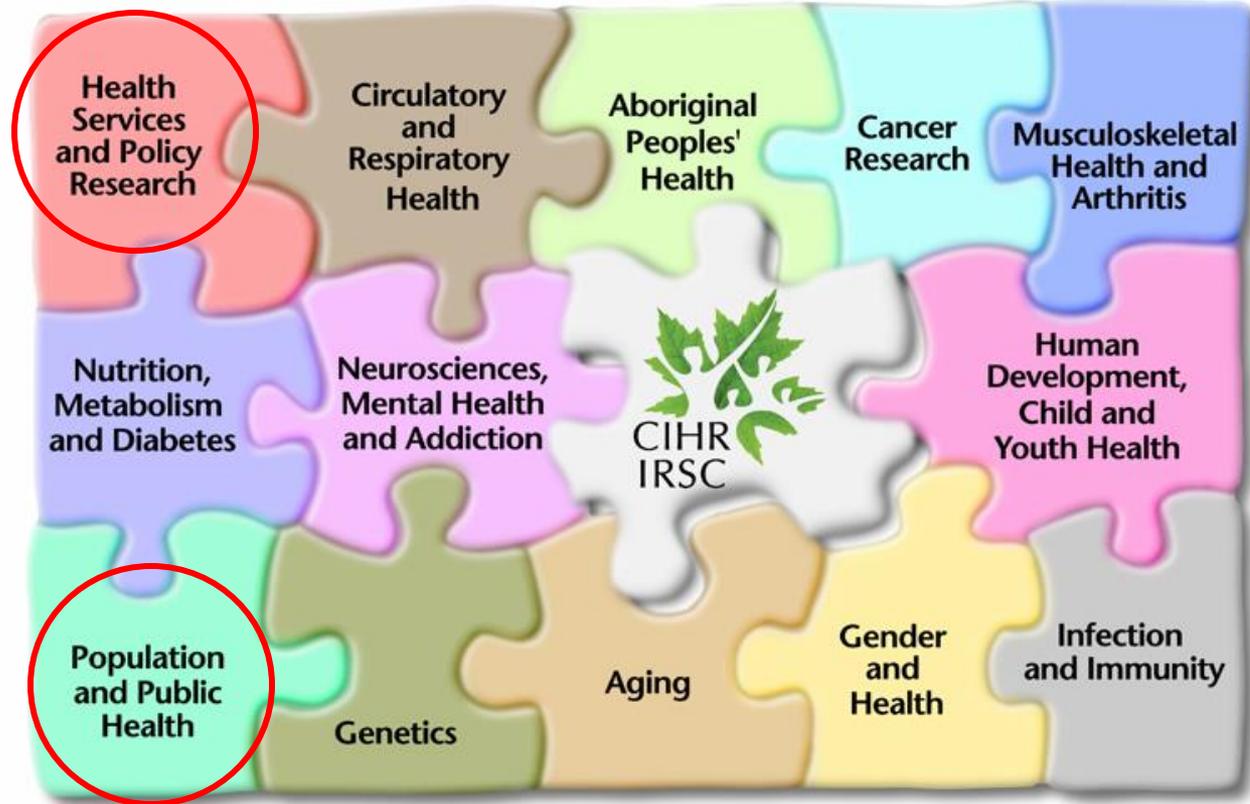


* Excludes Canada Research Chairs, Centres of Excellence for Commercialization and Research, Networks of Centres of Excellence, and portion of funding where themes are not specified (EIS)





CIHR's 13 Research Institutes



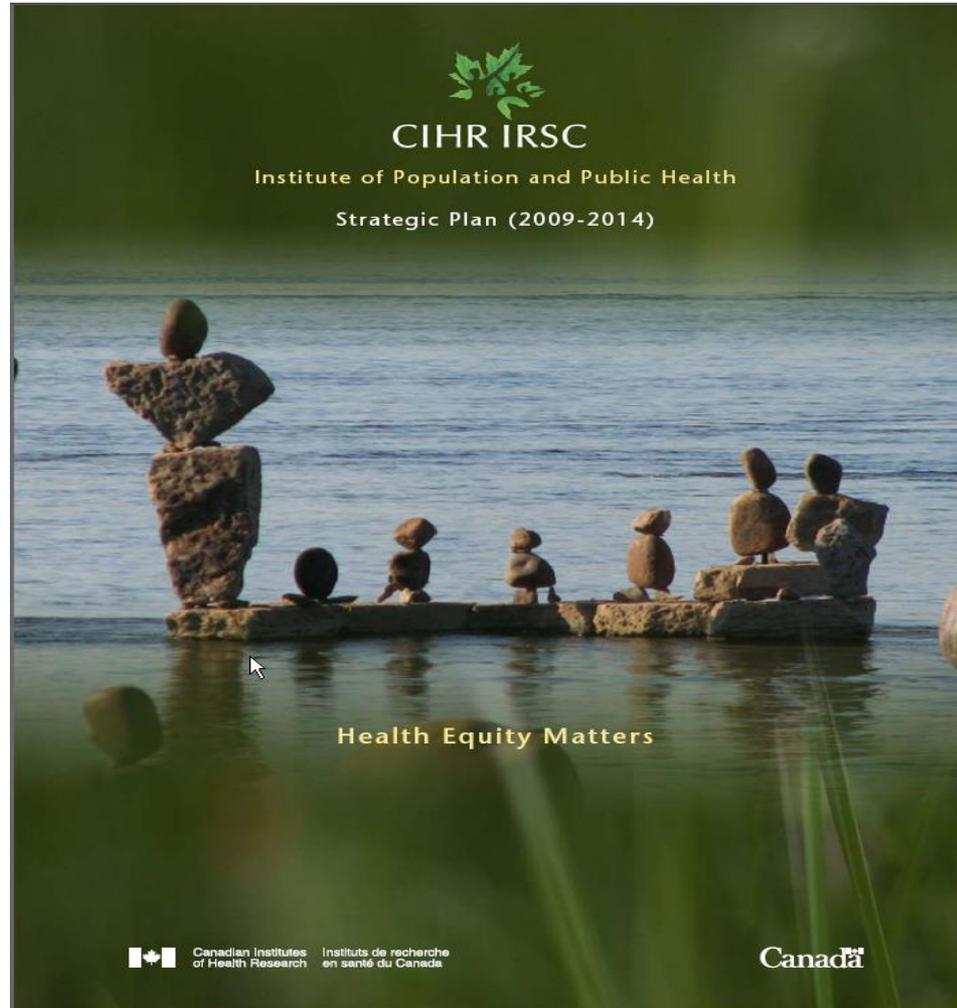
Institute of Population and Public Health





“Health Equity Matters”

CIHR’s Institute of Population and Public Health Strategic Plan 2009-2014





Criteria for Selection of Priorities

- Address tomorrow's population health issues (forward-thinking)
- Best fit for IPPH functions (i.e. catalytic, breakthrough, incubation, sustainability, scaling-up, stewardship) within larger set of partnerships
- Build on existing foundations (partnerships, capacity, state of science), and momentum (both within Canada and globally)
- Uses Canada's comparative research advantage while extending links to other global partners
- High potential for direct or indirect impact on health improvements among vulnerable populations in Canada and in lower and middle income countries





IPPH Strategic Research Priorities (2009-14)

- Pathways to health equity
- Population health interventions
- Implementation systems for population health interventions in public health and other sectors
- Theoretical and methodological innovations





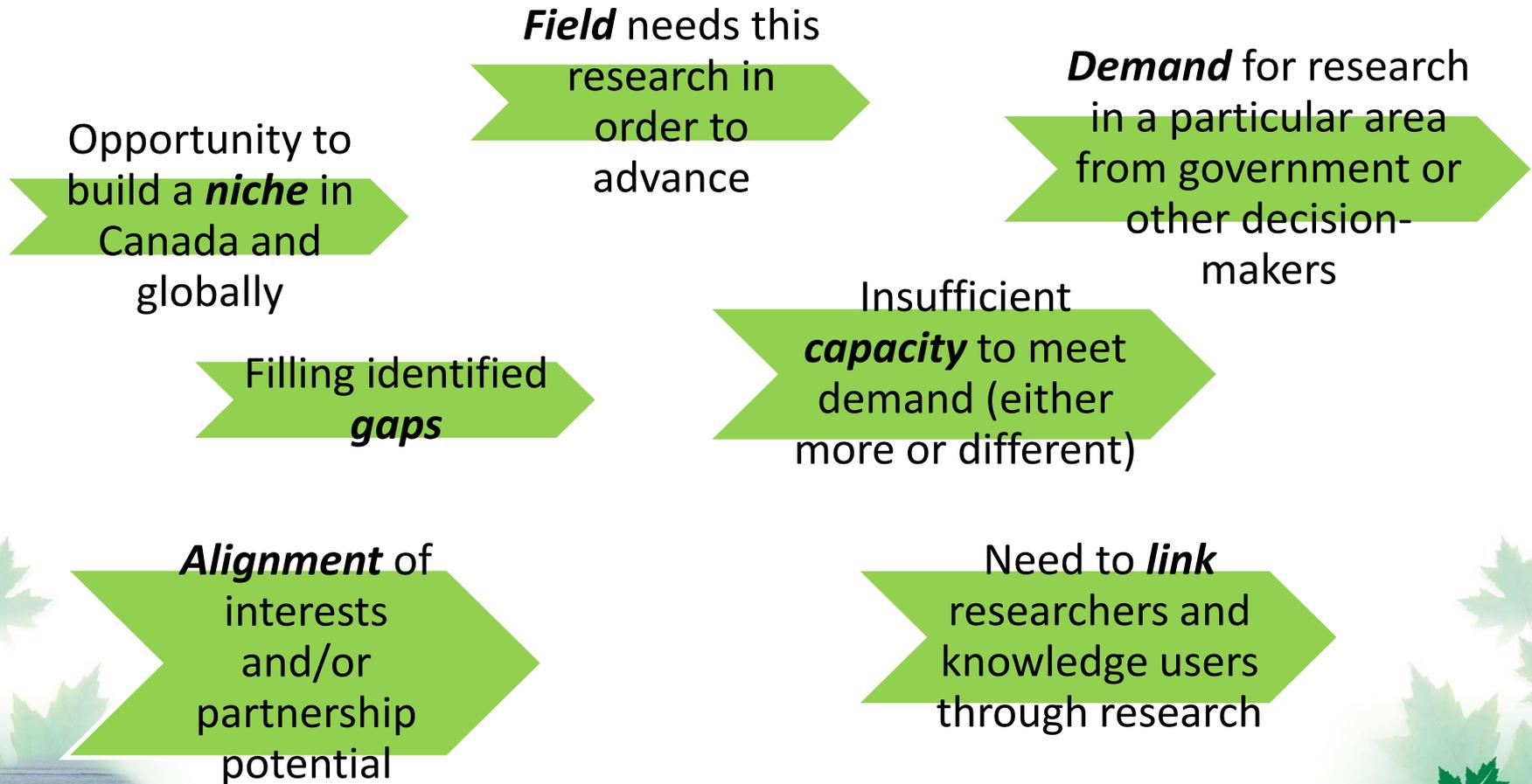
Shifting State of Science: Population and Public Health

- From understanding determinants to examining the impact of **coherent, multi-level interventions and policy**
- From describing socioeconomic gradients to **interrogating health inequities** and their mitigation
- From controlling context to understanding the influence of **context on interventions**
- From studying intervention components to examining **complex interventions within complex adaptive systems**





Challenges Faced by Research Funders re: *Whether* to Invest in an Area



Reconciling Preoccupations of Researchers and Decision-makers

Researcher Perspective	Decision-maker Perspective
<p>Abundance of descriptive research in population health. Randomized controlled trial the gold standard for evidence of effectiveness.</p>	<p>How are we going to bend the cost curve for health care?</p>
<p>It is easier to get funding for intervention research with a lifestyle focus than intervention research with a population health orientation.</p>	<p>What are the most efficient and effective ways to help older people and those living with chronic disease manage at home?</p>
<p>Individual (proximal) determinants of health (e.g. age, education, SES) can be measured more accurately than distal (socio-structural) determinants of health.</p>	<p>Many determinants of health lie outside the health sector. These are the responsibility of other Ministries and Departments.</p>



Population Health Intervention Research: A Field Building Approach



Thinking beyond research funding (?!)

...toward a **strategy** intended to improve and increase the **funding, conduct, and use** of population health intervention research (PHIR) and **build a field** of research





Field Building

- Define field, identify gaps and develop funding mechanisms
- Assess and build research capacity
- Stimulate and support knowledge translation
- Evaluate progress and impact





Defining the field, assessing gaps, developing funding mechanisms





...A Paucity of Intervention Studies & Publications

<p>Milward, Kelly & Nutbeam, 2003</p>	<p>Public health research for UK</p>	<p><0.4% of academic and research output relevant to PH interventions</p>
<p>Sanson-Fisher et al., 2008</p>	<p>Intervention research tobacco, alcohol & physical activity, 2005-6</p>	<p>78-79% descriptive 4-10% measurement 12-15% intervention</p>
<p>McNamara et al., 2011</p>	<p>Intervention Research on Type 2 Diabetes, Indigenous Populations, UK, NZ, Australia, Canada, 20 year period</p>	<p>87% descriptive 7% measurement 7% intervention</p>



...But public health descriptive and intervention research has been characterized by...

- An emphasis on biomedical individualism
- A focus on the proximate
- “Discrepancy in the complexity and diversity of the pathways of social inequalities and the relatively narrow approach (targeting downstream factors predominantly; mostly in middle-aged adults...) of interventions and policy” (*What works in tackling health inequalities? Pathways, policies and practice through the lifecourse*. Bristol: The Policy Press. 2006. 611p.)



Population health

complex interactions (biological, social, cultural, environmental), which determine the health of individuals, communities, and global populations



Population health interventions

programs, policies and resource distribution approaches that have the potential to impact health and health equity at the population level



Population health intervention research

the use of scientific methods to produce knowledge about policy and program interventions that operate within or outside of the health sector and have the potential to impact health at the population level



Population Health Interventions: Important Distinctions

- Targeted approaches
 - Appropriate adaptations for vulnerable populations
 - Community engagement
- Inclusive approaches
 - Sub-group analysis?
 - Proactive recruitment strategies for vulnerable populations?
 - Tailored interventions?
- “Universal” approaches
 - Who benefits, are they pro-poor?





Examine research application and funding patterns

Status Quo

Application renewals

- majority of renewals in biomedical research – programmatic approach
- Population health scientists – project by project approach

Application pressure and peer review

- Steady state application pressure to open competition
- Different approaches to peer review across pillars of science: a) biomedical reviewers focused on track record, b) population health reviewers focused on methods and gave lower scores

Action taken (Approach)

Develop programmatic research funds with explicit programmatic research criteria

Address myths re grant eligibility among population health scientists

Build peer review receptor capacity

- Selection and orientation of Chairs
- Discussion of peer review criteria and use of full range of scores
- Revise mandate statements of peer review committees





Examples of Population Health Intervention Research Funding Mechanisms

- Project funding, natural experiments not under control of investigator
- Health equity programmatic research
- Implementation team grants to examine scale-up of interventions
- Applied Public Health Research Chairs





Programmatic Grants in health and health equity

- Multiple research projects that are conceptually linked and implemented over five years.
- A wide range of interdisciplinary group of researchers and knowledge-users engaged in the program's development and implementation.
- Synergies amongst individual projects allow for shared resources and partnerships, economies of scale.
- Mentorship and capacity building are requirements





Building and Shaping Research Capacity





Research Capacity Investments

- Centres for Research Development (2002-9)
- Annual Summer Institutes (2002-9)
- 5-year training programs related to population and public health (2002-14)
- Doctoral and post-doctoral awards in public health and community-based primary health care
- Master's of Public Health awards – policy practicums
- Applied Public Health Chairs (2 phases)
- Population and Public Health Student Awards (with Canadian Public Health Association)

2008 Summer Institute



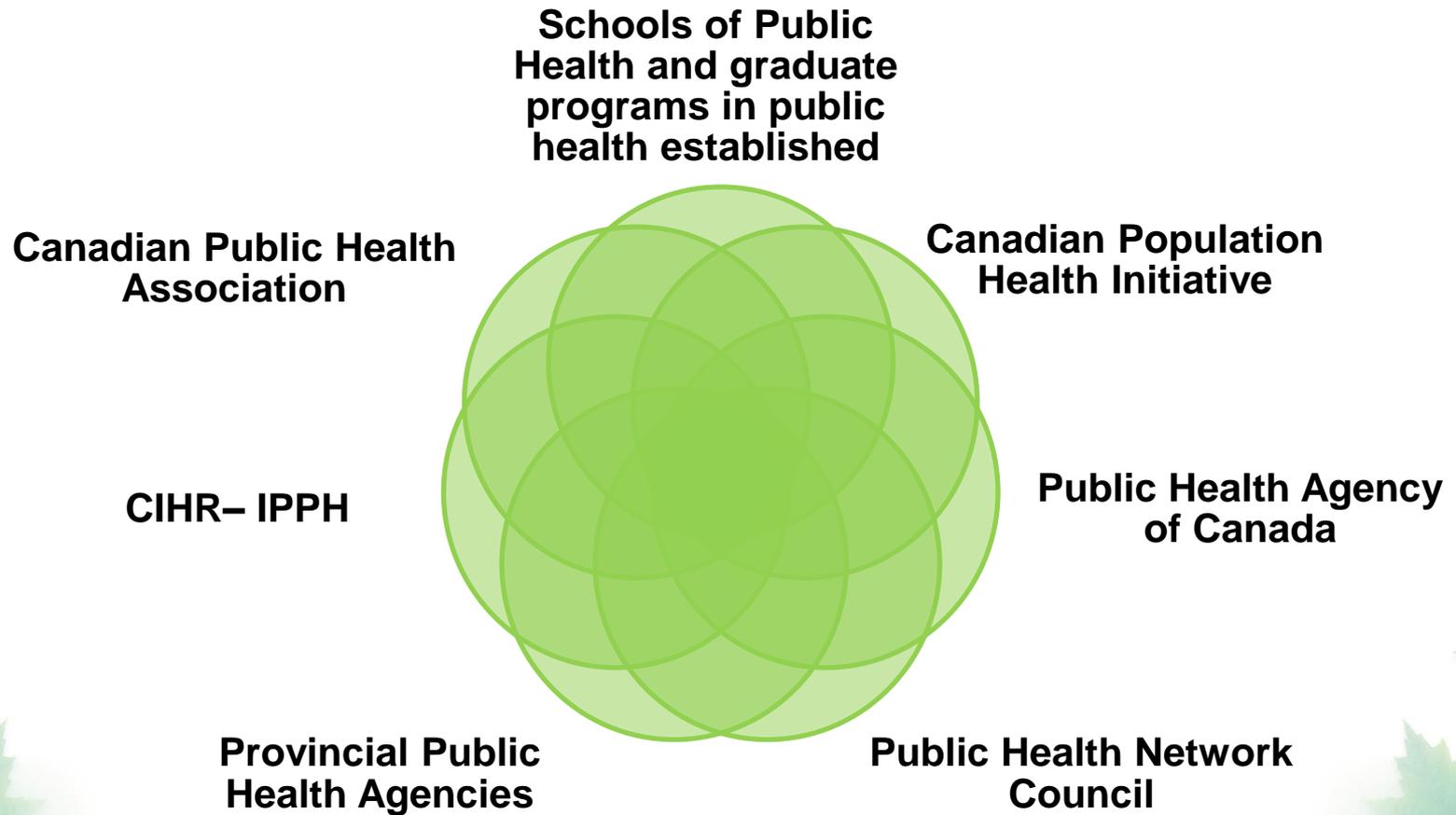


Relative Strengths of Research Capacity-building Initiatives

	Networks	Program of Research	Research Chairs	Graduate Fellowships
Individual or system orientation	System	Organizational	Variable	Individual
Mentorship	Moderate	Moderate	Strong	Weak
Field-building	Strong	Moderate	Moderate	Weak
Sustainability	Strong	Moderate	Moderate	Weak



Public Health in Canada: Expansion over the last decade





Population Health Ethics

- Focus on prevention at the collective level
- Consideration of benefits/harms at the population level
 - What is an equitable approach to distribute limited resources? (e.g. H1N1 vaccine)
 - What ethical considerations underlie land use planning?





Population Health Ethics

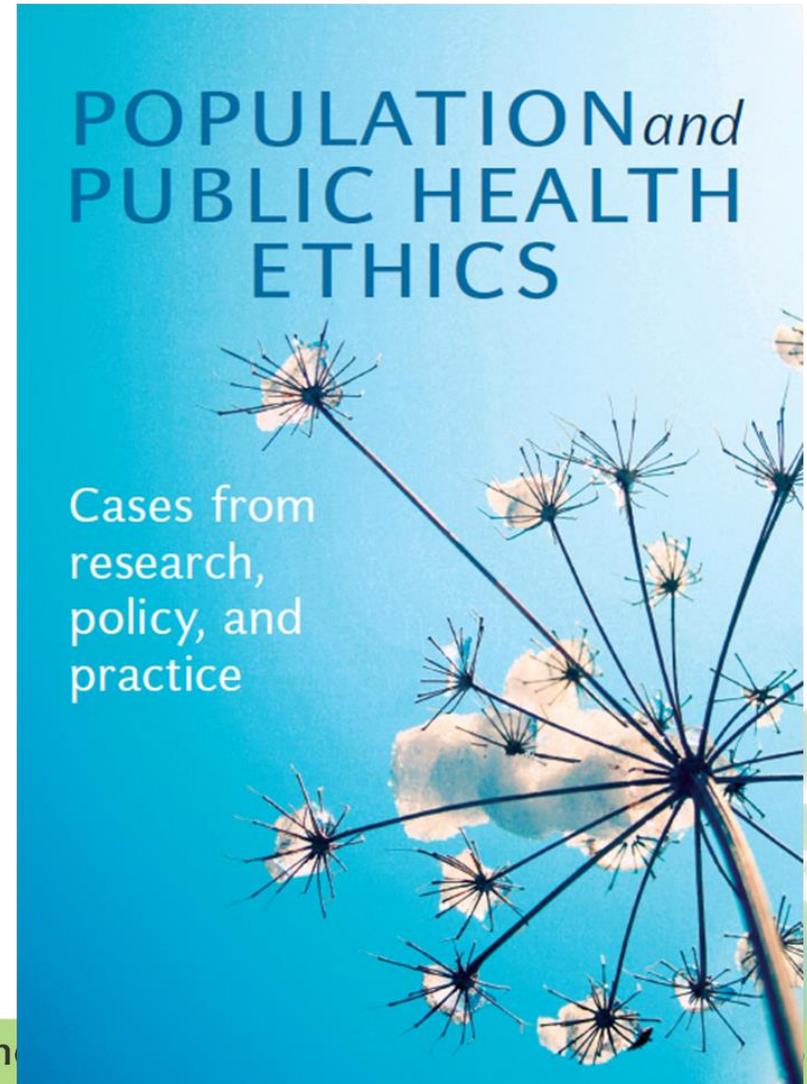
- **Annotated Bibliography** <http://www.cihr-irsc.gc.ca/e/27155.html#4>
 - Selected foundational works to describe scope, issues, and debates in the field
- **Virtual Journal Club (Phase 1)**
 - Bring together scholars interested in population health ethics for informal discussions and debates on the topic
 - Each session focused on one paper from the annotated bibliography and involved a short presentation by the author followed by discussion
- **Virtual Journal Club (Phase 2)**
 - Debates involving researchers and population health ethicist, using a case study approach
- **Invited case studies for population health ethics book**





Ethics and Intervention Decisions

- Ethics underpinning PH interventions
 - Opportunity to apply the “values” of public health
- Ethical implications of PH interventions
 - Benefits, harms – intended/unintended





Knowledge to Action



Audiences

- Researchers
- Policy makers and decision-makers
- Editors of public and population health journals
- Science writers and journalists





Knowledge Translation Approaches

- Workshops & symposia
- Explicit requirements for KT in grant applications (e.g. integrated KT)
- “Best Brains” Exchanges
- Café Scientifique
- Engage journal editors and journalists
- Experiment with new models for KT (e.g. Health Policy Research Organizations)





Evaluate progress



Assessing Research Impact: Important Trends

- Need for greater accountability
- Debates regarding where and when a researcher's role in knowledge translation begins and ends
- Demonstration of health, health system and health policy impacts and related attribution problem
- Moving toward “publications + ...”
 - Measures of impact beyond bibliometrics
 - Challenge of publications in a more nascent field of research that also requires substantial capacity development



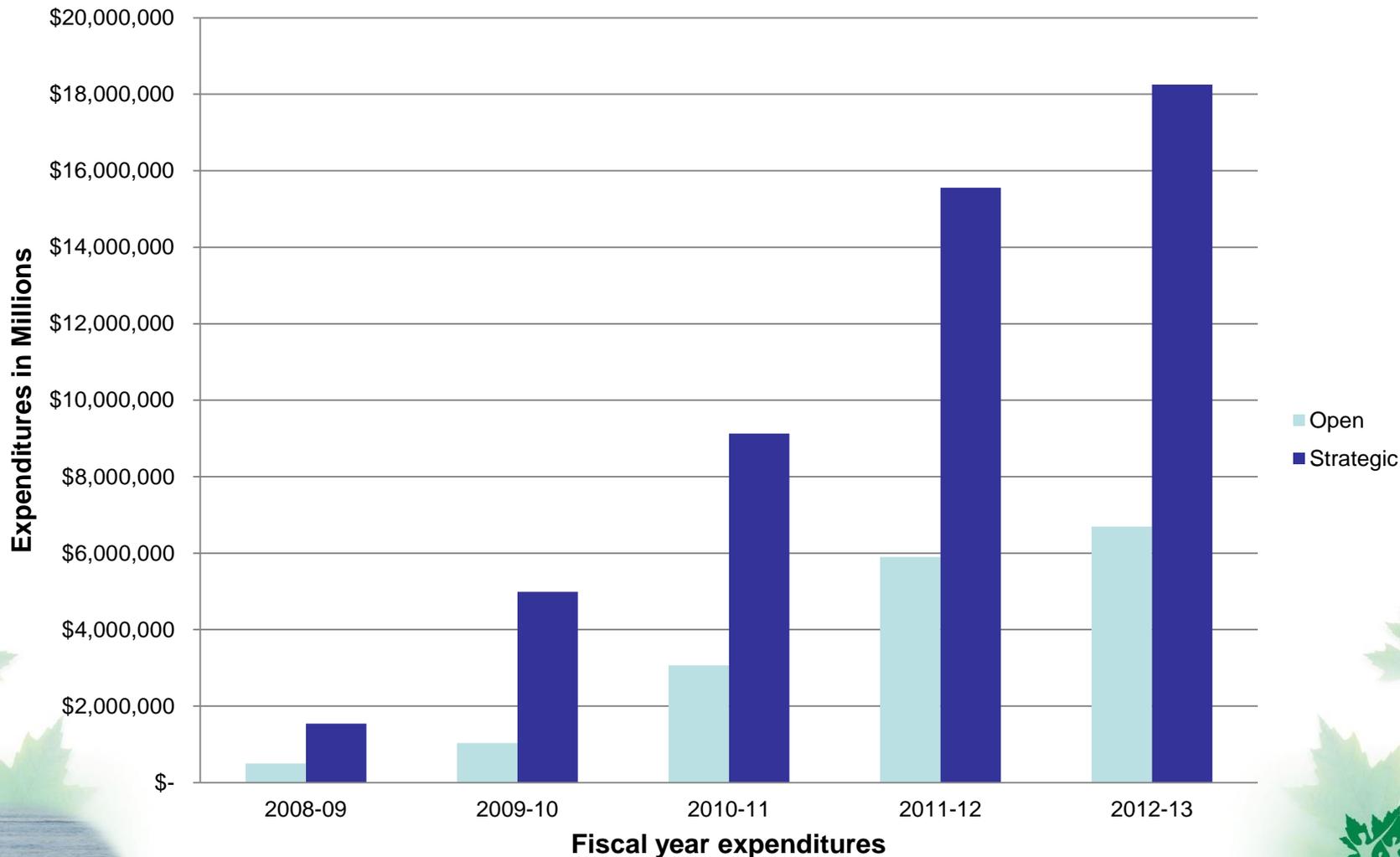
CIHR Impact Assessment Framework, 2005

Category	Description
Advancing Knowledge	<ul style="list-style-type: none">• discoveries, breakthroughs, and contributions to the scientific literature
Building Capacity	<ul style="list-style-type: none">• development and enhancement of research skills in individuals and teams
Informing Decision-Making	<ul style="list-style-type: none">• impacts in the areas of science, public, clinical, and managerial decision-making, practice and policy
Health & Health Systems Impacts	<ul style="list-style-type: none">• advances in prevention, diagnosis, treatment and palliation, functioning of the health system
Economic Impacts	<ul style="list-style-type: none">• commercialization of research discoveries and human capital gains



CIHR Investments in PHIR

2008-09 to 2012-13

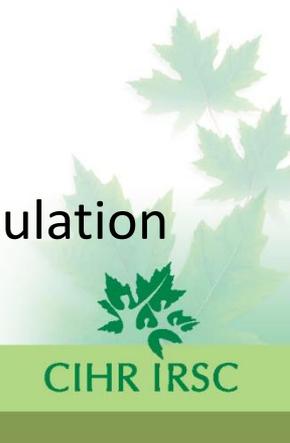


Community-Based Primary Health Care (CBPHC)

A CIHR Signature Initiative



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CIHR IRSC



Primary Care in Canada

Primary Health Care
Transition Fund

Summary of Initiatives

Final Edition

March 2007



"Canada seems to have stalled in its commitment to strengthening primary care. One reason for this lack of movement may be the poor investment in primary care research and evaluation. In this regard, Canada is probably at least 10 years behind."

Starfield, 2008





Primary Care Performance Lagging

1.00–2.66
2.67–4.33
4.34–6.00

	Australia	Canada	Germany	New Zealand	United Kingdom	United States
Overall Ranking (2007)	3.5	5	2	3.5	1	6
Quality of Care	4	6	2.5	2.5	1	5
Right Care	5	6	3	4	2	1
Safe Care	4	5	1	3	2	6
Coordinated Care	3	6	4	2	1	5
Patient-Centered Care	3	6	2	1	4	5
Access	3	5	1	2	4	6
Efficiency	4	5	3	2	1	6
Equity	2	5	4	3	1	6

Source: Calculated by the Commonwealth Fund based on the Commonwealth Fund 2004 and 2005 International Health Policy Surveys, the 2006 Commonwealth Fund International Survey of Primary Care Physicians, and the Commonwealth Fund Commission on a High Performance Health System National Scorecard.





CBPHC Overview

Aim:

To support highly innovative approaches to transforming health care for the next generation by improving the delivery of appropriate and high-quality CBPHC to Canadians.



CBPHC Objectives

1

- Develop and compare innovative models for CBPHC across jurisdictions within Canada and/or internationally.

2

- Build inter-disciplinary and inter-professional capacity for CBPHC research including new trainees, investigators and health professional scientists.

3

- Catalyze effective knowledge translation approaches to improve the delivery of CBPHC.

4

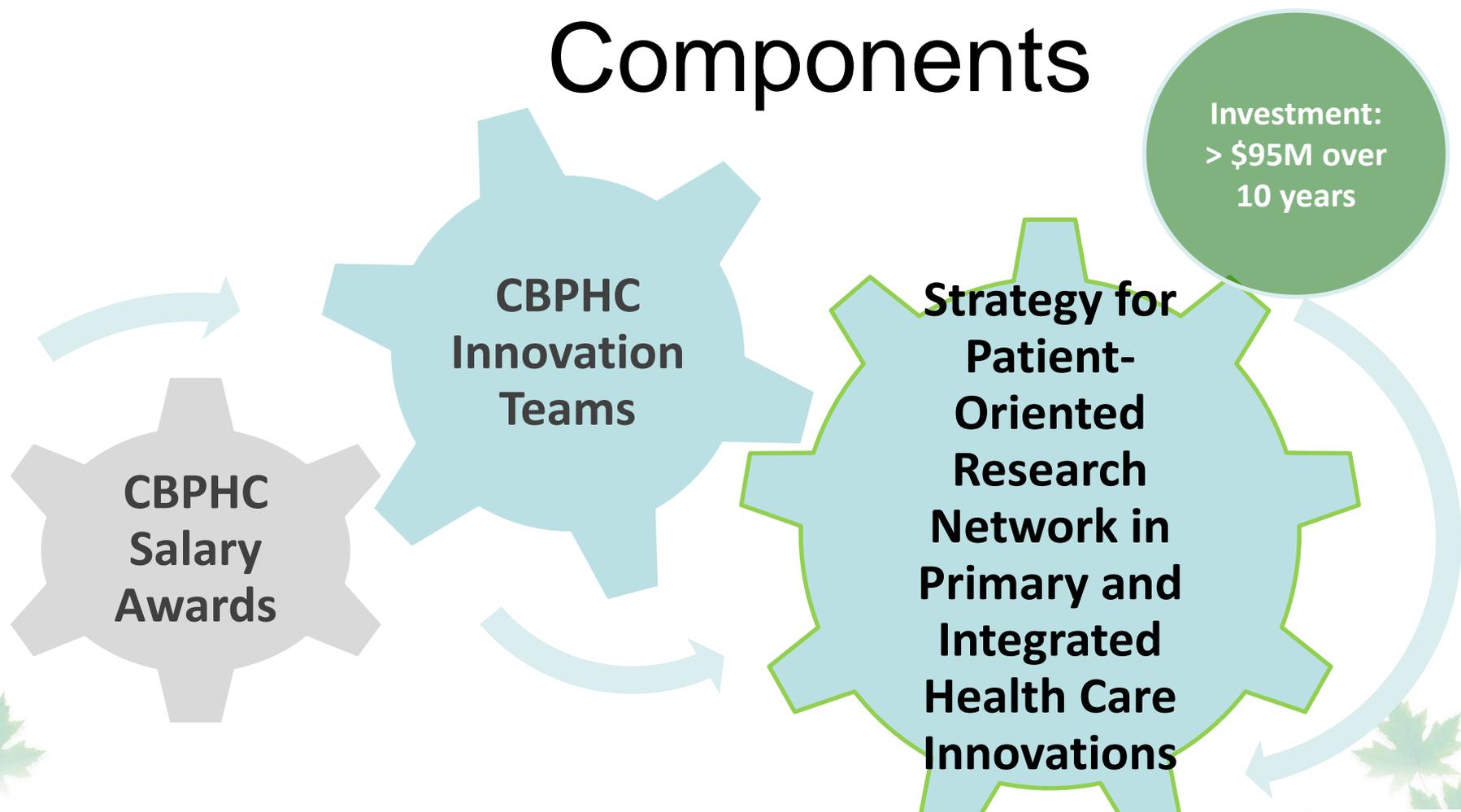
- Identify the conditions and strategies necessary for scaling-up innovative and successful models of CBPHC.

5

- Evaluate and improve the impact of CBPHC innovations by reporting on a common set of outcome measures ...



CBPHC Signature Initiative Components



Chronic Disease Prevention and Management in CBPHC

Access to Appropriate CBPHC for Vulnerable Populations



CIHR Impact Assessment Framework

Community-based Primary Health Care

Category	Description
Advance Knowledge	<ul style="list-style-type: none">• 50% increase in publications in high impact journals (Impact factor>5) and in the number of publications with international partners• 25% increase in proportion of studies including a cross-jurisdictional comparison
Build Capacity	<ul style="list-style-type: none">• Double # of CBPHC trainees in several relevant disciplines, and increase # of new CBPHC investigators
Inform Decision-Making	<ul style="list-style-type: none">• two-fold increase in international consulting related to Canada's health care system• Successful scale-up of models of CBPHC delivery
Health & Health System Impacts	<ul style="list-style-type: none">• 50% of innovative models of care will improve timely access, reduce avoidable ER visits and hospitalizations, and/or improve patient/family confidence in self-management.
Economic Impacts	<ul style="list-style-type: none">• 30% of Canadians will be involved in innovative models of care and will be active participants in assessing benefits and advising on improvements

Lessons Learned

- Communicate and build momentum and partners for a paradigm shift
- Use a systems approach for field building
- Address research capacity gaps and ambitious strategic initiatives in tandem
- Make adjustments to reflect shifts in context and science





Questions and Comments

