Canadian Institutes of Health Research   Instituts de recherche en santé du Canada
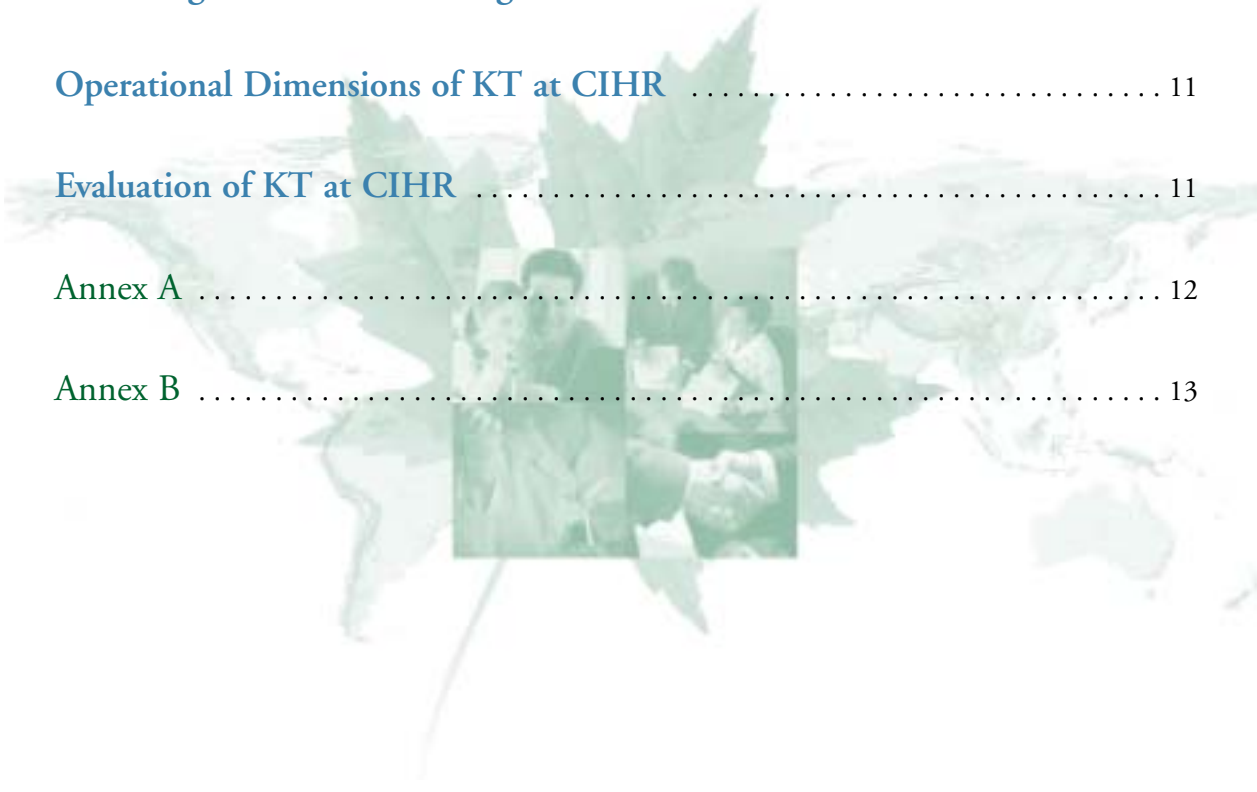
CIHR IRSC

Innovation in Action

Knowledge Translation Strategy 2004-2009

Canada

Contents

Introduction

In June 2000, the Government of Canada created the Canadian Institutes of Health Research (CIHR) with a bold, transformative mandate that included both health research *and* knowledge translation. The *Canadian Institutes of Health Research Act (2000)* states that the

> CIHR's aim is to excel in the creation of new knowledge and to translate that knowledge from the research setting to real-world applications in order to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.

Knowledge Translation (KT), a prominent and innovative feature of the CIHR mandate, has the potential to:

*   Significantly increase and accelerate the benefits flowing to Canadians from their investments in health research; and
*   Establish Canada as an innovative and authoritative contributor to health-related knowledge translation.

In its first four years, CIHR, through its 13 Institutes, launched innovative programs that signalled its commitment to KT and began to build capacity for knowledge translation of health research in Canada. Building on its first four years, as well as what we have learned from the many experiences and consultations with the research producer and user communities, the time is right to further define CIHR's unique role in knowledge translation. How can CIHR best respond to what we have heard from stakeholders and what we have learned about the gap between what we know and what we do? What should our niche be relative to other players? How should CIHR set future priorities, allocate resources and measure its progress?

This Strategic Plan outlines the rationale, strategic directions and operational dimensions for responding to CIHR's KT mandate for 2004-2009. It builds on the objectives of *Investing in Canada's Future: CIHR's Blueprint For Health Research and Innovation* (CIHR Blueprint 2007). Its development has been informed by knowledge translation research; CIHR's original *Draft Framework for Knowledge Translation at the Canadian Institutes of Health Research* (June 2002)*; discussions of the CIHR Governing Council and recommendations based on the *Draft Strategic Framework for Knowledge Translation – 2004-2008* (March, 2003)*; the work of the CIHR Governing Council Knowledge Translation Working Group in early 2004 (Annex A); and consultations with CIHR Institutes, Advisory Boards, and stakeholders.

Defining and Framing Knowledge Translation

As described in the *CIHR Act*, knowledge translation is a broad concept. It encompasses all steps between the creation of new knowledge and its application to yield beneficial outcomes for society. This includes knowledge dissemination, communication, technology transfer, ethical context, knowledge management, knowledge utilization, two-way exchange between researchers and those who apply knowledge, implementation research, technology assessment, synthesis of results within a global context, development of consensus guidelines and more. CIHR has defined *knowledge translation* as follows:

> *Knowledge translation is the exchange, synthesis and ethically-sound application of knowledge – within a complex system of interactions among researchers and users – to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system*

This definition emphasizes that, for CIHR, KT involves an active exchange of information between the researchers who create new knowledge and those who use it. It is important to recognize that knowledge translation strategies and activities vary according to the type of research to be translated (e.g., biomedical, clinical, health services and policy or population and public health) and the intended user audience (e.g., other researchers, front-line practitioners, health system managers, policy-makers or the general public). It is well documented that bringing users and creators of knowledge together during all stages of the research cycle is fundamental to successful KT. In fact, Canadian John Lavis has studied knowledge translation and believes this activity is so important that it should become a recognized integral part of research:

> Researchers (and research funders) should create more opportunities for interactions with the potential users of their research. They should consider such activities as part of the 'real' world of research, not a superfluous add-on (Lavis et al., 2001).

Seeing KT as a dialogic and interactive process has profound implications for all stages of the research process. In particular, KT strategies can help to define research questions and hypotheses, select appropriate research methods, conduct the research itself, interpret and contextualize the research findings and apply the findings to resolve practical issues and problems.

This view of KT is seen as radically different from the traditional view of 'knowledge transfer' as a uni-directional flow of knowledge from researchers to users. In this traditional model, not surprisingly, low success in knowledge uptake was attributed to the "*two communities*" problem in which researchers and policy makers inhabit different worlds with different language and culture (Caplan, 1979; Lavis et al., 2001; Lomas, 1997). Furthermore, KT relied mostly on dissemination approaches which recent studies have shown "have not proven to be effective in encouraging the adoption and implementation of new research results… The mere reception of knowledge by the potential user does not imply its 'use'" (Landry, Lamari and Amara, 2001).

With this in mind, the vision for knowledge translation at CIHR is:

> **To develop a systematic, integrated approach to accelerate optimal use of the best available research evidence in the interest of the health of Canadians.**

KT and Partners

Effective KT is underpinned by effective exchanges between researchers and users – exchanges premised on meaningful interaction with intent to appropriate use of the latest and most relevant research in decision-making.

Partnerships are at the heart of all KT activity. Effective KT is underpinned by effective exchanges between researchers and users – exchanges premised on meaningful interaction with intent to appropriate use of the latest and most relevant research in decision-making. To deliver on its KT mandate, it is essential for CIHR to build on the strengths of others active in this field, create synergies, learn from existing experience and best practice, and avoid duplication of effort. Therefore, CIHR, in considering its strategic directions, needs to carefully consider, and develop opportunities to partner with, the full range of organizations – regional, national and international – that are actively engaged in encouraging the translation of knowledge about health.

The CIHR relationships that will be important to achieving the KT objectives are as follows:
- researchers, within and across research disciplines;
- policy-makers, planners and managers, throughout the health care, public health, and healthy public policy systems;
- health care providers in formal and informal systems of care;
- general public, patient groups and those who help to shape their views and/or represent their interests including the media, educators, non-governmental organizations, and the voluntary sector; and
- the private sector, including venture capital firms, manufacturers and distributors (See note on KT and Commercialization on page 11).

It is critical for CIHR to remain knowledgeable about leading KT organizations nationally and internationally, as well as state-of-the-art KT research and practices if it is to achieve excellence in its KT initiatives. This knowledge will help CIHR identify opportunities for partnering and collaborations that will ensure that its KT investments respond to current health and health system priorities and avoid duplication of its KT niche and activities.

Knowledge Translation and CIHR's *Blueprint*

CIHR's Blueprint 2007 Strategic Directions provide overall guidance for defining the scope and focus of KT activity at CIHR, particularly through *Blueprint's* emphasis on:
- Advancing research in the use of health-related knowledge across the various levels of decision-making in the health system;

- Developing and sustaining a broad range of researchers and individuals involved in the exchange and use of health knowledge; and
- Developing and sustaining innovative environments that enable and catalyze the effective use of health knowledge.

CIHR's Knowledge Translation Strategic Directions

CIHR's KT activities will focus on areas where it can make a unique contribution on the basis of its recognized core competencies: researcher training and research funding; its close relationship with the health research community; its ability to develop integrated, strategic national research agendas; and its credibility as a forum for consideration of complex health research issues. Above all, CIHR's reputation as an independent, credible and objective source of knowledge positions it as an influential organization in the KT world.

CIHR will build on past and ongoing KT planning, programs and activities, while incorporating what we have learned, to promote KT through activities designed to:

1. **Support KT research**, i.e. research on KT concepts and processes;
2. **Contribute to building KT Networks**, i.e. Networks of researchers and research users;
3. **Strengthen and expand KT at CIHR**, i.e. improve capability to support KT research and, with partners, KT itself; and,
4. **Support and recognize KT excellence**, i.e. build and celebrate a culture of KT.

Each of these strategic directions and objectives are outlined in detail below.

Strategic Direction #1: Support KT Research

Supporting KT research is essential in order to develop the *science of KT,* and will lead to better understanding of the concepts and theories that underlie effective KT and better determination of effective strategies for knowledge translation. For example, researchers may focus on: how particular user audiences make decisions; the influence of contextual factors on decision-making; how to 'scale-up' or implement effective interventions in other/larger/national settings; better methods for evaluating interventions; the differential effect of increased KT on client, provider and/or system outcomes, and synthesis of knowledge for evidence-based KT (including what was learned from evaluated interventions and better methods for synthesizing formal and informal knowledge). In addition, CIHR will support innovative programs that recruit and train KT researchers.

CIHR will improve the KT knowledge base and capacity for KT research.

Specific objectives are to:

1.1 Fund grants, in collaboration with Institutes and through strategic and open competitions, that support KT research in:
- Basic science of KT – theoretical and conceptual research on KT;
- KT intervention development, scaling-up and sustainability research[1] – pilot studies and intervention strategies, including quantitative and economic models that predict the best return on research investment;
- Evaluation research – testing of evidence-based interventions or KT strategies for particular user communities or settings; and
- Knowledge synthesis – methods for gathering and synthesizing evidence for particular user audiences that respond to clear health or health system priorities.

1.2 Develop KT research capacity through:
- Funding open awards or supporting Institute-based or cross-Institutes strategic initiatives, e.g., training and personnel awards; and
- Supporting interaction among KT researchers through workshops and fora.

Strategic Direction #2: Contribute to Building KT Networks

CIHR will support Networks that bring stakeholders together in order to build and sustain the necessary connections and ongoing interaction among knowledge creators and knowledge users that underpins successful knowledge translation (Landry, 2001; Lomas, 1997). Networks of researchers and knowledge users will come together to assess health priorities, and understand, prepare and disseminate evidence for creating change and improving health and the health system, thereby improving the conditions that lead to effective and timely uptake and application of research knowledge.

CIHR will create and support Knowledge Translation Networks.

Specific objectives are to:

2.1 Launch a strategic initiative, with competitively awarded long-term (five-year) grants, based on the "networks for health innovation" concept, characterized by:
- Co-governance by users (e.g., practitioners, program managers, policy-makers, the public and the private sector) and researchers, including those with expertise in KT;
- Inherent flexibility with respect to precise focus (i.e. can shift focus if users' needs or science/technology changes); and
- Assessment of global scientific knowledge on the focus-question(s).

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[1] Research on the feasibility, logistics and effectiveness, including cost-effectiveness, of scaling-up interventions to provincial or national levels after successful efficacy trials.

2.2 Provide advice on and co-fund, in collaboration with Institutes and other external sponsors, existing or planned Strategic Initiatives that build or strengthen KT networks and maximize KT potential, including partnering for scaling-up initiatives.

Strategic Direction #3: Strengthen and Expand KT at CIHR

In order to effectively deliver on its KT mandate, CIHR will ensure that all processes, programs and ways of conducting business are conducive to achieving CIHR's objectives in KT. This will be accomplished through integrating KT opportunities into existing programs and tools *where appropriate* and by enhancing CIHR's organizational capacity to assess KT plans and strategies in applications and awards. CIHR will build KT expertise internally, and create learning opportunities that enable CIHR to play a lead role in the knowledge translation community.

> *CIHR will enhance the potential for KT within CIHR*

Specific objectives are to:

3.1 Ensure that KT opportunities and potential inform CIHR programs and activities, where appropriate, e.g., advise on the inclusion of effective KT component during RFA development; encourage, develop and support effective KT linkages across separate initiatives dealing with the same user communities;

3.2 Advise CIHR on the design of peer review for effective KT assessment in applications to CIHR, where appropriate;

3.3 Consult and/or collaborate, where appropriate, within CIHR on KT-related announcements, events and initiatives; and

3.4 Contribute to organizational learning and knowledge with respect to effective KT strategies.

Strategic Direction #4: Support and Recognize KT Excellence Externally

CIHR will celebrate and support the KT community in Canada, rewarding excellence and building excitement and awareness in this growing field. There is an acknowledged need to build recognition and reward, particularly within universities, for KT activity.

In addition, CIHR is uniquely placed to create synergies and to provide resources and coordination for the KT community, both in Canada and internationally. To accomplish this, CIHR needs to be well informed about the full range of organizations – national and international – that are actively engaged in encouraging the translation of knowledge about health.

> *CIHR will support the KT community and enhance recognition for KT in Canada.*
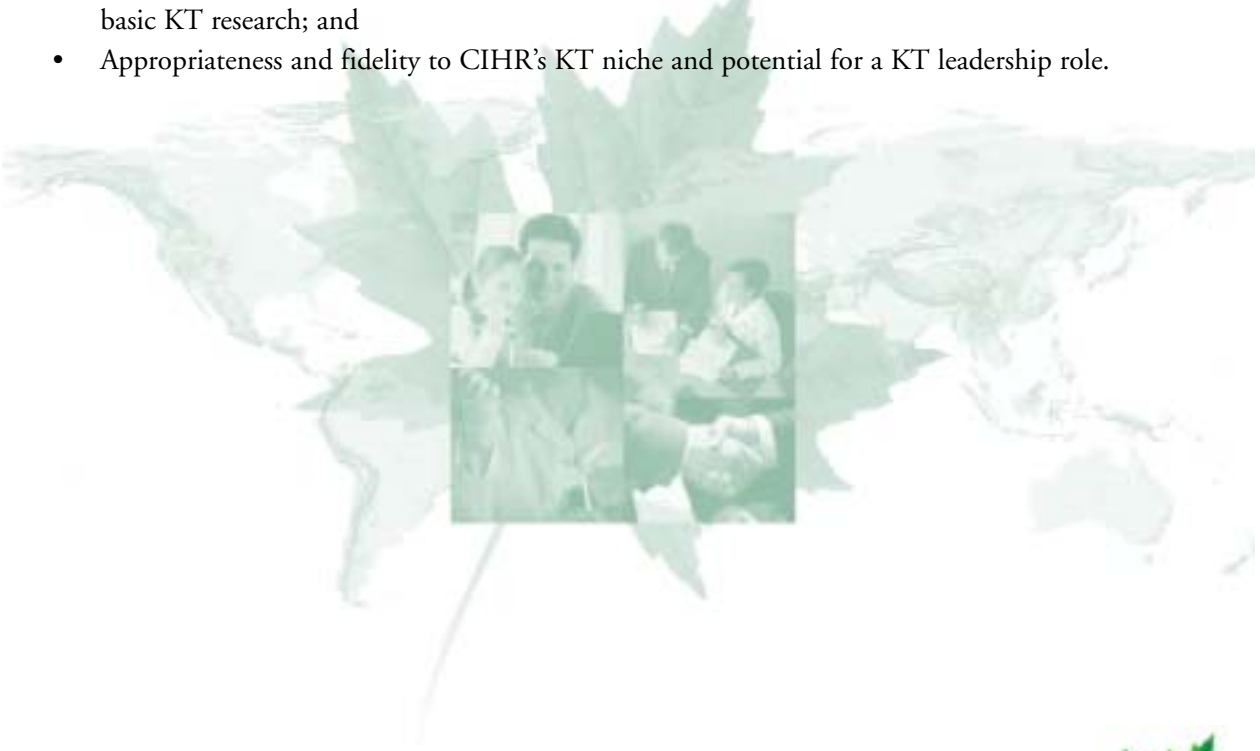
Specific objectives are to:

4.1 Develop and implement a KT recognition and reward initiative, e.g., provide an annual prestigious financial award for excellence in KT.

4.2 Act as a resource for Canada, with others, regarding expertise in KT research applied to health, e.g., develop and make available illustrative case examples of KT.

CIHR's Knowledge Translation Strategic Plan - Outcomes

The following section outlines, for each strategic direction, long and short-term outcomes and activities that CIHR (with the collaboration of the Institutes and the KT Branch) will focus on for the period 2004 – 2009.

In order to maximize potential and effectively allocate resources, the following general criteria will guide the selection of future KT strategic initiatives:

- Potential for health and/or economic outcomes from using existing knowledge;
- Potential for impact on health and/or economic outcomes in relation to the investment, including potential for early success where appropriate;
- Intention to implement efficacious interventions, both preventive and curative, that are known and under-applied;
- Potential synergy of impact across more than one user audience or KT topic;
- Extent to which the proposed initiative builds on Canadian strengths;
- Extent to which the proposed initiative enhances the capacity for, and the integration and use of, basic KT research; and
- Appropriateness and fidelity to CIHR's KT niche and potential for a KT leadership role.

STRATEGIC DIRECTION	OBJECTIVES / ACTIVITIES	SHORT TERM OUTCOME(S)	LONG TERM OUTCOME(S)
Support KT research	• Develop and launch KT research funding initiatives • Develop and support programs to build KT research capacity (e.g., career transition awards)	• Improved knowledge base for KT • Better understanding of the effect of KT on outcomes • Improved evaluations of applied research programs • Enhanced support for KT research trainees	• Improved KT knowledge • Ability to improve outcomes with increased research use • Ability to influence the health environment (e.g., organizations such as hospitals) in order to increase KT • Enhanced capacity for KT research
Contribute to building KT Networks	• Develop and implement innovative tools and programs to increase dissemination and use of research knowledge • Develop and support programs that create Networks and networking among researchers and users (e.g., training centres, workshops and fora)	• KT Networks are created and/or supported • Increased number of trainees in KT • Increased engagement among researchers and users at all stages of the research process • Expanded venues for research dissemination	• Improved capacity for generating and applying research knowledge • Increased sound and ethical use of research knowledge among CIHR user communities
Strengthen and expand KT at CIHR	• Develop sound KT criteria and procedures for assessing KT in applications • Develop and implement KT relevant learning/ training at CIHR (e.g., peer review, staff KT learning) • Participate in KT-relevant planning and implementation activities at CIHR	• Improved reach for KT component in applications across CIHR • Improved peer review capacity with respect to KT in applications • Enhanced KT learning at CIHR • Improved coordination for KT at CIHR	• Increased effectiveness of KT-related strategies within CIHR, leading to greater use of CIHR-funded research
Support and recognize KT excellence	• Develop and launch an annual KT award that creates and celebrates a culture for KT • Develop or improve CIHR's web-based KT content and publications	• Enhanced culture - reward and recognition - for KT activity in Canada (e.g., increased engagement with users by researchers, increased media attention/uptake of research knowledge) • Improved quality and availability of KT resources	• Enhanced recognition for KT within Canada and Internationally • Enhanced coordination for the Canadian KT community

Operational Dimensions of KT at CIHR

Distributed leadership will be the hallmark of implementation of KT across CIHR. Each Scientific Director and Branch Director will be responsible for creative integration of KT into relevant activities. They will be supported by a KT Branch that will provide inspiration, knowledge and coordination. The Branch will develop, oversee and evaluate cross-cutting KT programs and projects; lead and coordinate the KT dimension of the annual cycle of planning, evaluation and reporting; and establish within CIHR an authoritative source of leading-edge knowledge about KT. An expert KT advisory committee, with representation from CIHR's Research Priorities and Planning Committee and Governing Council, as well as external representation, will provide CIHR-wide guidance to the KT Branch, especially in relation to identification of novel KT approaches, opportunities for collaboration, and setting KT funding priorities.

CIHR's knowledge translation activities that pertain to commercialization (i.e., industry-partnered programs) will primarily be guided by its Commercialization Strategy.

Much Knowledge Translation activity at CIHR will continue to be led by and situated in its 13 Institutes. The KT Branch will identify and support opportunities for partnering and collaboration with and among Institutes to ensure best use of dedicated KT financial resources, maximize programmatic impact and encourage coordination. Cross-cutting CIHR KT initiatives (e.g., funding KT research) will be centrally-led with partnership from the Institutes.

Evaluation of KT at CIHR

KT has the potential to accelerate beneficial applications of research, permitting Canadians to capitalize to a greater extent on their investment in health research and to share these benefits with other nations. In order to understand the value of KT, it will be important to find rigorous ways of measuring progress in delivering on CIHR's knowledge translation mandate. The KT evaluation framework will guide the evaluation of the KT function and will be based on the strategic outcomes outlined in CIHR's Blueprint 2007 and the Program Activity Architecture. Endorsing sound management practices, ongoing and periodic measurement will permit CIHR to identify effective practices, refine the CIHR KT strategy and assess the relative importance of the CIHR investment in KT.

Annex A: CIHR's Governing Council Knowledge Translation Working Group

Members:

Dr. Nancy Edwards (Chair) *(CIHR Governing Council)*

Dr. Michel Bureau *(CIHR Governing Council)*

Dr. Sarah Prichard *(CIHR Governing Council)*

Dr. Morris Barer *(CIHR Scientific Director)*

Dr. Rod McInnes *(CIHR Scientific Director)*

Dr. John Frank *(CIHR Scientific Director)*

Dr. Carole Estabrooks *(External Advisor)*

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Annex B: Selected Bibliography

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