Mental Health Commission of Canada

Commission de la santé mentale du Canada

Innovation to Implementation

A Practical Guide to Knowledge Translation in Healthcare

mentalhealthcommission.ca

INNOVATION TO IMPLEMENTATION (I2I)

A Practical Guide to Knowledge Translation in Health Care
created by the Knowledge Exchange Centre of the Mental Health Commission of Canada, in collaboration with Dan Bilsker and Elliot M. Goldner.

First published in 2012 by and revised in 2014 by

Mental Health Commission of Canada

Suite 1210, 350 Albert Street
Ottawa, ON K1R 1A4

www.mentalhealthcommission.ca

The views represented herein solely represent the views of the Mental Health Commission of Canada. Production of this document is made possible through a financial contribution from Health Canada.

ISBN: 978-1-988005-01-0

Legal deposit National Library of Canada

CONTENTS

INTRODUCTION

What is Knowledge Translation?

Research has established that there is a substantial gap from the time new knowledge is created to when it is put into practice.[1] The field of Knowledge Translation (KT) has emerged as a response to this gap. KT involves interaction between knowledge users and knowledge producers and results in mutual learning through the process of planning, producing, disseminating, and applying existing or new knowledge to enhance the health of Canadians.[2] It is sometimes described as closing the gap between what we know and what we do.[3]

What is the I2I?

The *Innovation to Implementation* (I2I) guide is a how-to resource for driving change using KT activities. It is built around the concept of innovation: products, actions, services, or relationships that have the potential to enhance health outcomes. The guide illustrates how to move from innovation to implementation in a thoughtful manner to achieve the desired outcomes of a project or initiative. The I2I guide was developed on the basis of research findings and practical experience, through which it became apparent that a wider range of practices, participants, and types of knowledge need to be incorporated into KT activities.[4 5]

The I2I guide is not meant to replace KT frameworks such as the PARIHS framework, the Knowledge Exchange Model or the Knowledge-to-Action process, but rather to facilitate an increase in their application through the development of a practical, action-oriented guide.[6 7 8]

1 *Lang ES, Wyer PC, Haynes RB (2007). Knowledge Translation: Closing the Evidence-to-Practice Gap Ann Emerg Med.49:355-363.*

2 *Canadian Institutes of Health Research (2012). About knowledge translation. Retrieved from http://www.cihr-irsc.gc/e/29418.htm*

3 *Graham, I.D., Tetroe, J.M. (2009). Getting evidence into policy and practice: perspective of a health research funder. J Can Acad Child Adolesc Psychiatry. 218(1):46-50.*

4 *Goldner EM, Jeffries V, Bilsker D, Jenkins E., Menear M, and Petermann, L. (2011). Knowledge translation in mental health: A scoping review. Healthcare Policy 7: 83-98.*

5 *Goldner EM (2014). Knowledge translation. In KL Bassil and DM Zabkiewicz (eds.) Health research methods: a Canadian perspective. Oxford University Press.*

6 *Lavis, J. N., Robertson, D., Woodside, J. M., et al. (2003). How can research organizations more effectively transfer research knowledge to decision makers? The Milbank Quarterly, 81(2), 221-248.*

7 *Graham, I. D., Logan, J., Harrison, M., et al. (2006). Lost in translation: Time for a map? Journal of Continuing Education in the Health Professions, 26, 13-24.*

8 *Stetler, C.B., Damschroder, L.J., Helfrich, C.D. et al. (2011). A Guide for applying a revised version of the PARIHS framework for implementation Implement Sci. 2011; 6: 99. doi: 10.1186/1748-5908-6-99.*

FOUR TYPES OF KNOWLEDGE:

- **Scientific (learning through research)**
- **Experiential (learning through experience)**
- **Pragmatic (learning through action)**
- **Cultural (learning through being)**

WHAT DO WE MEAN BY INNOVATION?

Products, actions, services or relationships that have the potential to enhance health outcomes.

WHAT IS IMPLEMENTATION?

"Implementation" refers to the act of bringing a practice or policy into effect.

What's different about the I2I guide?

The I2I guide is a practical, step-by-step resource for achieving successful KT. It highlights the importance of bringing a wide range of participants to the table, respecting both diversity and uniqueness, where knowledge is jointly identified, created or applied. It also stresses the importance of incorporating various knowledge perspectives.

HOW IS THE GUIDE STRUCTURED?

The I2I guide is quite simple in its structure. The steps of the I2I guide are:

1. State the purpose of your KT plan.
2. Select the innovation around which your KT plan will be built.
3. Specify the actors and actions: who needs to do what differently?
4. Identify the best agents of change: who should be delivering knowledge about this Innovation?
5. Design your KT plan.
6. Implement the plan.
7. Evaluate.

The I2I guide will explain the purpose of each step, walk you through a series of guided questions to help you complete the step, and provide helpful tips on things to avoid. By the time you complete the last step, you will not only have implemented and evaluated a sophisticated KT plan, but you will also have created new knowledge!

1 – STATE THE PURPOSE OF YOUR KT PLAN

It's important to begin the KT process by describing what you would like to accomplish. What is your reason for doing KT? Answering these questions will better prepare you to build a KT plan.

KEY QUESTIONS

Consider the kinds of changes you would like to accomplish by asking:

- What problem are you trying to address?
- What practice are you trying to improve?
- What would be different if this knowledge were translated successfully?
- How will you measure the success of your knowledge translation?
  Read Step 7 – Evaluation before you begin your KT process, which will help you to identify KT outcome measures right from the start.

EXAMPLES:

- A particular disorder will be treated more effectively.
- Certain health care practices will be more aligned with research findings.
- Family members can better support loved ones with health conditions.
- Patients will increase their capability for self-care.
- The perspectives of persons with health conditions will be better incorporated into research design.

HELPFUL TIPS

It's best to avoid leaping to a particular KT method at this time (selection of KT methods occurs at a later step in this guide).
Here are some examples of not-so-helpful purposes:

- A website will be created describing certain research findings.
- A practice guideline will be distributed to clinicians.
- A public education campaign will be conducted.

2 – SELECT AN INNOVATION

The next step in the I2I guide is selecting an Innovation. What is an Innovation? An Innovation is a product, action, service or relationship that has the potential to enhance health outcomes (see examples on page 6).

KEY QUESTIONS

Consider what might be an appropriate Innovation by asking:

» Is the Innovation specific enough? By clearly stating the knowledge and actions that make up the Innovation, you're more likely to create an effective KT plan. It would be very difficult to achieve wide uptake of a vaguely-explained practice change.

» Is the Innovation feasible? The Innovation should be one that can be realistically implemented, given available financial, human, and organizational resources. There is little advantage in focusing KT efforts on the promotion of an Innovation so demanding of resources or so incompatible with current practice that few would actually implement it.

» What is the knowledge base for this Innovation? Innovations can be linked to several knowledge perspectives: scientific, experiential, pragmatic, and cultural. For example:

- Scientific (learning through research): Perhaps a systematic review points to a new clinical practice as better than current practices or a series of qualitative studies highlights the benefits of a policy change.
- Experiential (learning through experience): A therapeutic practice may be endorsed by patients or families based on their own positive experiences.
- Pragmatic (learning through action): Health care providers may identify a specific practice that stems from their own day-to-day clinical problem solving. For example, a group of clinicians may identify a specific approach to increasing adherence that has worked well with their patients.
- Cultural (learning through being): In certain cultural contexts, KT takes the shape of stories or teachings that transmit traditional knowledge: case studies, personal accounts or organizational histories.[9] Notably, compelling stories are often used by policy makers to convey critical knowledge.

EXAMPLES

An Innovation might involve a diagnostic procedure, new medication or regime, behavioural treatment, way of delivering care, method for shared decision making, system for electronic record keeping, approach to health care policy or transfer of policy between jurisdictions, new line of research, or health-promoting behaviour. Note that an Innovation might also involve reducing certain practices, such as a diagnostic test found to be inaccurate or a treatment found to be overly risky. For example, the practice of routine screening for depression in primary care has been questioned, on the basis that it has not been shown to have benefits outweighing its risks, such as a high rate of false-positive findings.[10]

HELPFUL TIPS

Examine the Innovation from several knowledge perspectives. If the Innovation arose from scientific research, consider also how it maps onto the lived experience of individuals with relevant health issues. If the Innovation arose from the understanding of practicing clinicians, ask whether it is consistent with available research evidence. For useful resources to assess research evidence see: Bracken Library Resources Guide for Health Sciences Research (http://guides.library.queensu.ca/content.php?pid=440226&sid=3607027). Describing an Innovation from these different perspectives can make it meaningful to a wider range of audiences.

9 "the long-standing traditions and practices of certain regional, indigenous, or local communities…In many cases, traditional knowledge has been orally passed for generations from person to person." http://en.wikipedia.org/wiki/Traditional_knowledge

10 Thombs BD, Coyne JC, Cuijpers P, et al. (2012). Rethinking recommendations for screening for depression in primary care. Canadian Medical Association Journal 184:413-418.

3 – SPECIFY ACTORS AND ACTIONS

If the Innovation is to be taken up by your organization or community, certain stakeholders (actors) will need to adopt new behaviours (actions). This step helps you recognize the actors who need to change and the actions they need to adopt, after which you will be in a much stronger position to plan your KT activities: you will know to whom you are presenting the Innovation and what you want each person to do.

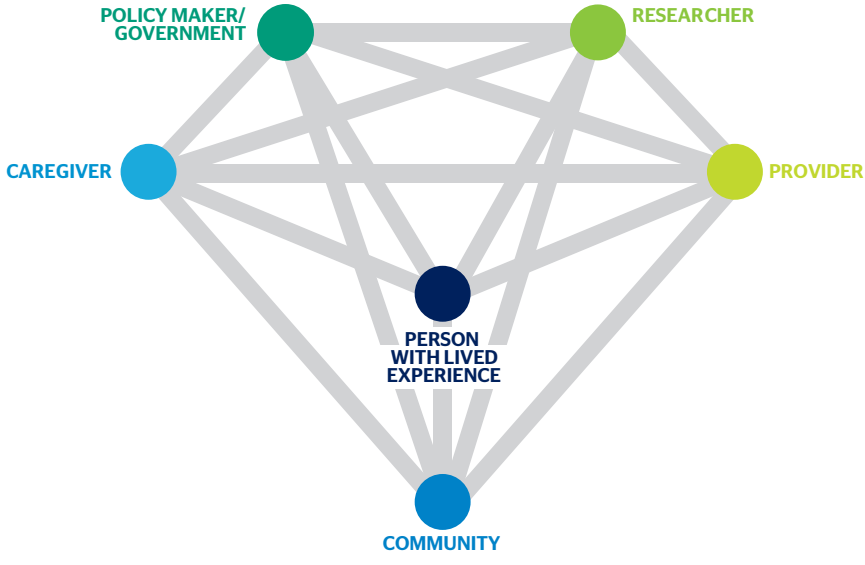
KEY QUESTIONS

» Who are the key actors?

» What are the actions they must adopt?

Possible Key Actors

The figure below shows actors who are often involved in health care KT.



EXAMPLES

Innovation	Actors	Actions
New medication	Family physicians	Prescribe the new medication. Monitor side effects.
	Persons with relevant health conditions	Adhere to medication regime.
	Policy makers	Ensure adequate funding. Distribute relevant guidelines.
Method of shared/ participatory decision making	Researchers	Include range of stakeholders in research planning.
	Health care providers	Consult with patients in decision making about care.
	Persons with health conditions	Express preferences and values in clinical or research contexts.
	Family caregivers	Express preferences and values in clinical or research contexts.
Reorganization of care delivery to be more collaborative	Specialists	Work more closely with primary care. Provide more consultation to other providers.
	Persons with health conditions	Actively participate in recovery.
	Policy makers	Endorse and fund new organizations of care delivery.

NB: The examples in this table are not necessarily inclusive of all the actors who could be engaged or action that could be taken in relation to the respective Innovation. It is meant as an informative sample to showcase how you might approach this step.

HELPFUL TIPS

It is critical to include and consider the full range of actors. Also consider that actors are involved in conversations through which knowledge is exchanged. These conversations may involve only two actors and thus imply a bidirectional flow of knowledge between them, or may involve a group of actors with multidirectional flows of knowledge among the group members.

4 – IDENTIFY AGENTS OF CHANGE

An agent of change is someone who motivates actors to adopt new actions. Agents of change include individuals or organizations who can effectively deliver knowledge and foster action. The effectiveness of an agent in creating change often depends upon the actors who need to change.

KEY QUESTIONS

- Which agents have the most credibility overall in relation to your Innovation?
- Which agents have the most credibility for particular actors?
- Which agents are most likely to persuade actors to adopt new actions?

EXAMPLES

In a previous example, the Innovation involved a new and more effective medication. If the key actor is the family physician, and the action is to begin prescribing this medication for appropriate patients, then effective agents of change might include a specialist in the area, a family physician considered as an opinion leader by his or her peers, or a researcher who has reviewed the evidence supporting the new treatment. In fact, it may be most effective to ensure that all three agents of change are involved in the KT process.In another example, the Innovation involved a restructuring of care to be more collaborative. If the key actor is the policy maker, and the action is to reallocate funding and planning priorities to support collaborative care practices, then effective agents of change might include a researcher who has reviewed evidence on care models, a policy maker from another jurisdiction who has led a successful implementation of this care approach, or a patient who has experienced the benefits of collaborative care practices.

HELPFUL TIPS

KT agents will often include:

- Peer champions. It is powerful when a peer with high credibility models and supports the Innovation and associated action. The implicit message is that if someone in a role like yours is able to embrace this Innovation, you could do so as well. It will be more effective if this early-adopting peer is able to serve as a champion for ongoing uptake of the Innovation in the relevant community. Supporting this person to champion the Innovation will be important.
- Organizational champions. Innovations are more likely to be acted upon when they are endorsed by an organization of high credibility to a particular group of participants.

Where possible, effective agents of change will establish a relationship of respect, engagement, and support with the actors they seek to influence. The best KT occurs in good conversations and the best conversations occur in the best relationships.

5 – DESIGN YOUR KT PLAN

You're here! Many people, when they first approach KT, want to start at this phase. KT will be most effective when it is carefully planned and has an active rather than passive quality, which is why the first four steps of the I2I guide are in place.

KEY QUESTIONS

- Which KT methods are available to me?
- Which methods are appropriate for the particular actors who are meant to adopt this Innovation?
- Which methods have been shown to be most effective with these kinds of actors?

EXAMPLES

First, it is important to choose specific methods of KT. The table below gives some examples of KT methods that may be used to deliver knowledge to a range of actors.

KT Methods	Description
Audit and Feedback	A summary of performance over a period of time, provided to an individual or organization to inspire change.
Meetings/Webinars	Workshops, in-person, or web-based to build capacity.
Reminders and Prompts	Print, electronic, telephone, or web-based messages to trigger action.
Educational Outreach	Brief engagement (knowledge brokers/academic detailing) intended to change behaviour; designed for simple behaviours, e.g., prescribing practices.
Peer-reviewed Journals	Variety of print, electronic, and web-based materials geared to address knowledge and skill gaps.
Educational Materials	Paper or web-based documents to convey key messages.
Social Marketing Campaign/ Social Media	Use of marketing techniques to create behaviour change.

In the example where KT is applied to shared decision making in clinical care, and the key actor is the individual patient expected to actively participate in the decision-making process, KT methods might include a social marketing campaign to introduce the general public to this model of decision making, and a website providing "decision tools" and medical information to help patients collaborate in critical decisions.

HELPFUL TIPS

Organizations, systems, or communities may not be ready to implement certain Innovations, even where these Innovations are effective and feasible. Readiness to adopt Innovations in health care has received a great deal of attention in recent years.[11] [12] Organizational characteristics that contribute to readiness include clear vision and strong leadership, workforce and skills development, ability to access research (library services), fiscal investments, acquisition and development of technological resources, a knowledge management strategy, effective communication, a receptive organizational culture, and a focus on change management.[13] Understanding whether the actors in your KT plan are ready for change is key to success.

KT methods are most likely to be successful if they are:

Interactive

The participant is involved in activities with others in order to share relevant knowledge and develop a degree of comfort with the new behaviours.

Targeted and Tailored

The knowledge content is specifically directed to the participant's needs and there is an openness to specific kinds of new knowledge and behaviour.

Engaging

The knowledge content is delivered in a manner that is concise, entertaining, and persuasive.

Endorsed

The Innovation is endorsed by a highly credible individual or organization, as well as by one's peer group.

Championed

The Innovation is embraced by a respected early-adopting peer.

Action Oriented

The content is directly and practically translated into action, given real-life constraints of the participant's situation.

Persuasive

KT includes convincing messages regarding the importance and feasibility of implementing the Innovation.

---

11 Weiner BJ, Amick H, Shoou-Yih DL. Conceptualization and Measurement of Organizational Readiness for Change : A Review of the Literature in Health Services Research and Other Fields. Med Care Res Rev. 2008;65: 379.

12 Gilbert M, Bilsker D (2012). Development of the MORPH (Measure of Organization Readiness for Psychological Health). Coast Mental Health and CARMHA, Simon Fraser University.

13 Peirson, L., Ciliska, D., Dobbins, M., et al. (2012). Building capacity for evidence informed decision making in public health: a case study of organizational change BMC Public Health, 12:137 doi:10.1186/1471-2458-12-137

6 – IMPLEMENT YOUR KT PLAN

You might choose to implement your KT plan all at once or in a gradual manner. Where there is low readiness to adopt the Innovation, it may prove best to use a phased approach to implementation, in which the Innovation is gradually introduced to different parts of the organization, system, or community.[14] Also, as you implement your plan, it is useful to get feedback about its perceived relevance, acceptability, and feasibility.

This is most easily done through the use of actor consultations (e.g., interviews, survey, and focus groups) to get feedback about the KT process. These consultations should be done with representatives of each kind of actor in the KT activity (see Step 3). Each actor will have a unique perspective on appropriate methods and will provide valuable feedback to revise the implementation of the KT plan. When choosing the types of actors to involve in this consultation process, consider:

> *"who can bring forward knowledge about the expected effects of the policy under study or about issues related to its potential implementation: for example, which experts possess technical knowledge about the subject, which decision makers can shed light on the issues related to the feasibility or acceptability of the policy, etc. The actors invited may come from the health sector, but they mayalso come from other sectors concerned by the issue; and they may represent public, private or community perspectives."* [15]

KEY QUESTIONS

- Is the KT plan perceived as appropriate and acceptable by the relevant actors?
- Are there particular elements of the plan which are not seen as acceptable or appropriate?
- Is the Innovation perceived by actors as effective and important?
- Is the Innovation perceived by actors as feasible in their organization, system, or community?

EXAMPLES

Consider a self-management program in which a cohort of patients is telephoned at home with information about self-care. If these individuals perceive the phone call to be intrusive, the KT method may backfire. If acceptability and appropriateness of the KT were being measured as it was rolled out, there could be rapid correction of flaws in the plan.

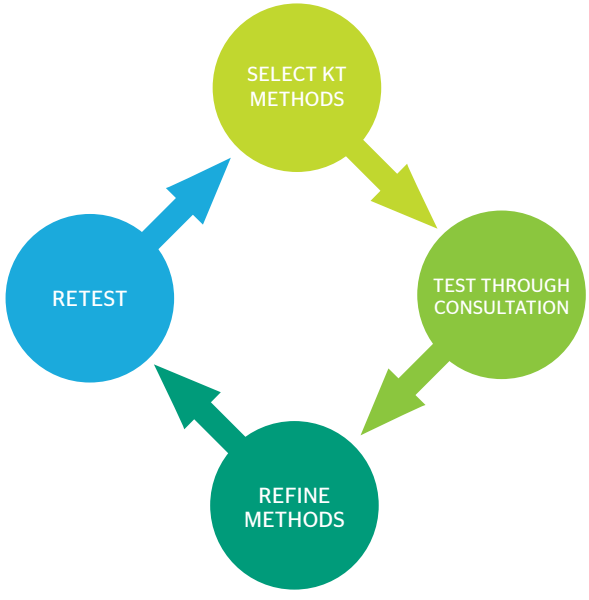
Or consider an initiative in which family physicians are asked to adopt a brief intervention for hazardous alcohol use. If the primary KT method is a half-day workshop that teaches the intervention, feedback from participants might indicate that the proposed training is seen as overly time demanding. KT implementation might then be modified to substantially reduce training time.

14 *Rogers, E. M. (1995). Diffusion of innovations. New York: Free Press.*

15 *Morestin F, Gauvin F-P, Hogue, M-C, Benoit F. (2010). Method for synthesizing knowledge about public policies. Institut National de Sante Publique.*

HELPFUL TIPS

Based on the feedback from these actor consultations, the KT methods can be modified to increase the likelihood of success. You might allow for a few rounds of testing and refinement of the methods, then retesting. This process of refinement can be done fairly quickly and easily if you have existing relationships with actors who are willing to provide input.



7 – EVALUATE YOUR SUCCESS

A number of evaluation frameworks have been proposed, but we have chosen to apply the **RE-AIM** framework developed by Glasgow and colleagues, primarily due to its emphasis upon sustainable system-level changes.[16] The **RE-AIM** framework examines:

REACH:	Did the target population receive the intervention?
EFFECTIVENESS:	Did the intervention have its intended effect?
ADOPTION:	Was the intervention adopted by its intended users?
IMPLEMENTATION:	Was the intervention implemented with high fidelity to its essential features?
MAINTENANCE:	Was the intervention maintained in practice over long-term follow-up?

We will discuss these components, noting key questions, examples, and helpful tips for each.

REACH:

To what extent has the KT activity engaged the key actors? Examples of reach measures are the number of providers attending training events, the number of individuals accessing a website, or the number of persons receiving materials from their provider.

TIP: *Establishing partnerships with organizational champions will greatly enhance your reach.*

EFFECTIVENESS:

What has been the impact on the knowledge and skills of KT participants? Examples of effectiveness measures are tests of knowledge or skill given before and after a KT workshop, or surveys of the general public's understanding of targeted health issues before and after a public education campaign.

TIP: *It is more informative to objectively measure increased knowledge or skill than to ask KT participants to self-evaluate perceived increase in knowledge or skill. Often, you don't know what you don't know.*

ADOPTION:

To what extent have the identified actors adopted actions associated with the Innovation? Examples of adoption measures are patient adherence to a treatment, specific health care practices better aligned with research findings, family members behaving more supportively to loved ones with health conditions, or patients demonstrating increased capability for self-care.

TIP: *It is easiest to gather data on knowledge acquisition and attitude change, but these are poor substitutes for measurement of actual behaviour change.*

16 *Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. American Journal of Public Health. 1999 Sep;89(9):1322-7.*

IMPLEMENTATION:

Two aspects of Implementation can be distinguished. First, how well was KT carried out, including achieving specified targets and timelines? Second, how well was the Innovation put into practice by actors, that is, was the innovation implemented faithfully and with high quality? Examples of implementation measures are participant surveys with regard to perceived acceptability and quality of KT activities, interviews with relevant actors to determine how an Innovative practice has been implemented, or review of clinical charts to ascertain how well an Innovative practice was delivered.

TIP: *Provision of cues, such as handouts that briefly summarize the Innovation, may improve implementation by relevant actors.*

MAINTENANCE:

Was this Innovation maintained over time, whether following a single KT intervention or in the context of ongoing support for the Innovation? Examples of maintenance measures are interviews with providers and patients to determine ongoing delivery of the Innovative practice; and review of clinical charts to ascertain whether an Innovative practice continues to be provided.

TIP: *Reminders about an Innovation, long after an initial KT intervention, are likely to enhance maintenance.*

Mental Health Commission of Canada
Commission de la santé mentale du Canada

Mental Health Commission of Canada

Suite 1210, 350 Albert Street
Ottawa, ON K1R 1A4

Tel: 613.683.3755
Fax: 613.798.2989

info@mentalhealthcommission.ca
www.mentalhealthcommission.ca

@MHCC_ /theMHCC /1MHCC @theMHCC
/Mental Health Commission of Canada