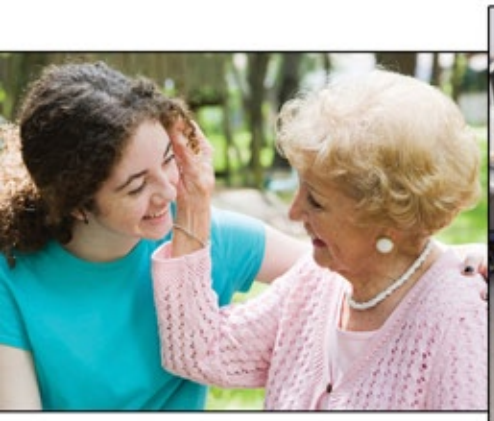
KNOWLEDGE TRANSLATION: AN INTRODUCTION



A GUIDE TO KNOWLEDGE TRANSLATION PRINCIPLES, FRAMEWORKS, AND PRACTICALITIES.

THE CANADIAN DEMENTIA KNOWLEDGE TRANSLATION NETWORK

The Canadian Dementia Knowledge Translation Network (CDKTN) is a national network for knowledge translation (KT) and exchange (KE) of research in Alzheimer's disease and dementia. CDKTN was funded as part of a five year grant form the Canadian Institutes for Health Research (CIHR). Its National Office is centered at Geriatric Medicine Research (Dalhousie University/Capital Health) in Halifax Nova Scotia.

To learn more about the CDKTN, visit our website www.lifeandminds.ca

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SECTION 1: Defining Knowledge Translation (KT)

What do we mean by "knowledge"?

The results from rigorous research.

In fact, preference is given to the results from a body of rigorous research, such as a systematic review, meta-analysis, or meta-ethnography. This is the synthesis of available knowledge.

Why do we prefer synthesized knowledge? If we use research evidence to make decisions, and we base these decisions on one study, the decisions are only as good as that one study. Looking at all the evidence available on a topic is preferable.

How many terms have been used to describe Knowledge Translation?

Dozens of terms have been used to describe KT. Here is a sample:

- Know-Do Gap
- Knowledge Cycle
- Knowledge Exchange
- Dissemination
- Knowledge Mobilization
- Knowledge to Action
- Diffusion
- Knowledge Transfer

THE WHAT AND WHY OF KT

One way of understanding KT is by breaking down the Canadian Institutes of Health Research's definition of KT:

WHAT: "…a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge…"

WHY: "…to improve the health of Canadians, provide more effective health services and products and strengthen the health care system."

There are a lot of definitions in use, but they have a common theme of moving beyond the idea of simply disseminating knowledge to the idea of understanding how to actively put knowledge to use and evaluate this use.

Six things to know about KT

- KT focuses on the translation and use of research-generated knowledge, **but may incorporate other types of knowledge with this.**
- KT is a loop that involves every step from the creation of new knowledge to producing beneficial products, services and tools for the public.
- KT is interdisciplinary and is a collaboration between all involved parties.
- KT can involve a variety of end-users and participants who help inform your processes including health care providers, the general public, the government, NGOs, the voluntary sector, and the private sector.
- KT is user and context specific.
- KT is impact-oriented.

adapted from Sudsawad 2007

What KT is not.

KT is not synonymous with dissemination, and shouldn't be confused with commercialization, technology transfer, or even continuing medical education (CME).

KT has a broader view which focuses additionally on the quality of the evidence being used, the involvement of end-users, the transfer, and the evaluation of the implementation and its impact.

Types of KT - CIHR

The Canadian Institutes of Health Research distinguish two types of KT:

- End of grant KT
- Integrated KT

End-of-grant KT:

This is KT as it applies to research that is already completed. The researcher develops and implements a plan for making knowledge users aware of the findings from a research project once available.

Examples of this can include conference presentations and journal publications aimed at other researchers.

If the target audience is outside the academic world it may also include a variety of dissemination tactics including workshops, public talks, print or digital materials in plain language, websites, and more.

Integrated KT (IKT) :

This KT as it applies to the entire research cycle, from start to finish.

In this case, researchers and knowledge users work together to identify research questions, decide on methodology, and interpret disseminate findings.

IKT aims to produce research results that are highly relevant and likely to be used by knowledge users.

SECTION 2: Knowledge Translation frameworks

Why use a theoretical framework?

Among other reasons, frameworks provide:

- checks of barriers and facilitators to your KT activities;
- a structured way to organize your planning; and
- a way to allow testable and useful interventions to be developed in a measured and considered manner.

There are a variety of frameworks that you can choose from. Here we provide a brief overview of two:

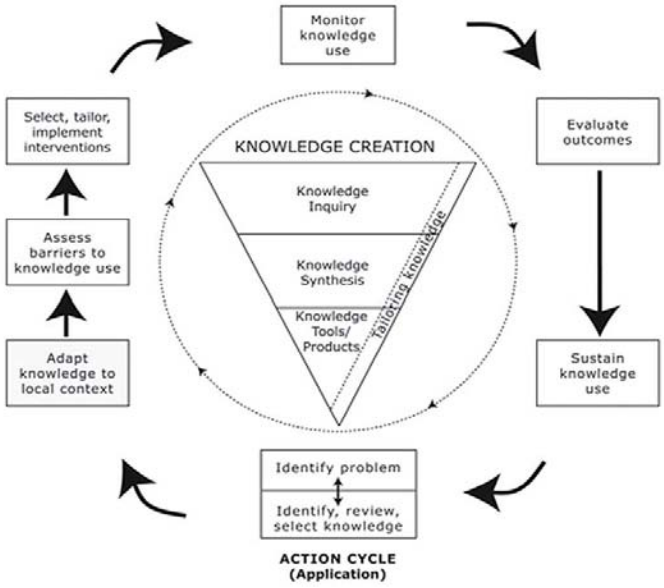
- CIHR Knowledge to Action Cycle (KTA)
- Promoting Action on Research Implementation in Health Services (PARIHS)

The CIHR Knowledge to Action Framework

The KTA framework is employed by the CIHR for the transfer of research findings into practice

It can be broken down into two concepts: knowledge creation and the action cycle.

In practice, the two concepts are fluid and do not always occur exclusive of each other.



Graham et al 2006

Knowledge Creation

The circle in the centre represents Knowledge Creation starting with **inquiry**, narrowing through **synthesis** of the available literature on the question/topic, and finally leading to the **tools and products** that can come from this knowledge.

The Action Cycle:

The Action Cycle is the implementation of the knowledge. There are seven steps, all of which may inform each other. Partnering with knowledge users (end-users) is encouraged at every step.

1. **Identify the problem** as well as the knowledge needed to address this. You should also address the usefulness and validity of the knowledge you intend to use.

2. **Adapt the knowledge** to the local context by assessing its worth and utility to the setting for which you intend it.

3. **Assess barriers and facilitators** related to the knowledge to be adopted, the potential adopters, and the context in which the knowledge will be used.

4. **Develop and execute your KT plan** and any strategies to promote awareness and use of the knowledge.

5. **Monitor knowledge use** to determine whether your plan was effective, and implement any changes that this monitoring may indicate is necessary.

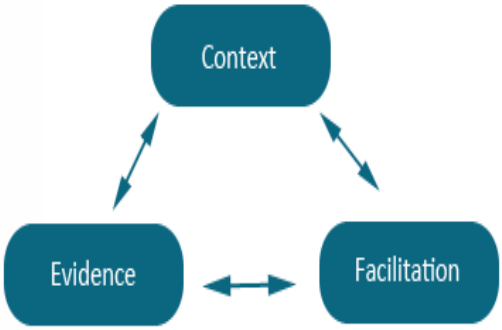
6. **Evaluate the impact of the knowledge** use to determine you have achieved the desired outcomes, as well as the success of the KT plan itself.

7. **Sustain the use of the knowledge** over time. Challenges to ongoing use of the knowledge may be very different than the challenges at implementation.

The PARIHS Framework

The PARIHS framework focuses on four main areas:

1. The level and type of **evidence** being translated.
2. The **context** or environment in which a change is implemented.
3. The method of **facilitation** for the translation
4. The relationship between **1, 2**, and **3.**



This framework also considers:

1. Overall "high to low" attributes of the **context**, **evidence**, and **facilitation**
2. That implementation works best when there is strong scientific evidence, a welcoming environment for the evidence, and skilled facilitation

SECTION 3: Knowledge Translation Planning

Having reviewed the principles of KT and some theoretical frameworks on which you can build your project, here are five guiding questions (Lavis et al. 2003) that can work as a practical checklist for you and your team as you move through the process of planning an executing your KT strategy.

(These questions are expanded on in the **KT Planning Guide**, available from the CDKTN.)

1.What is the message or knowledge to be transferred?

2. To whom should it be transferred?

3. By whom should it be transferred?

4. How should it be transferred?

5. What is the desired effect or impact?

These questions are numbered, but the process may not be entirely linear as the answers to the questions inform each other.

1.What is the message or knowledge to be transferred?

Consider the type and quality of evidence that you wish to translate:

- Results from rigorous, peer-reviewed work should form the foundation of your KT.
- Translating knowledge from a body of work rather than a single study is preferable.

Your research evidence can be supplemented with other knowledge from a wide variety of sources including

- Other types of literature: technical reports, professional publications, white papers
- Clinical knowledge: knowledge gained via professional practice
- Knowledge from patients, families and carers
- Knowledge from the local context: social/professional networks, audit/performance data, policy data

The need to work with a variety of knowledge users throughout your KT process becomes obvious when you consider how to access many of these types of knowledge.

2. To whom should it be transferred?

Determining the target audience(s) for your translation will inform a range of others areas in KT planning.

Including members of the target audience in the KT processes gives you an understanding of:

- potential barriers, facilitators to your KT;
- the needs of those who will use your translated knowledge; and
- the context into which you want to bring your knowledge.

Some considerations about your target audience

The appropriateness of the audience based on your message and desired outcomes.

- For example, if you are translating evidence into practice recommendations, is your target group able to act on these?

Readiness for change.

- The culture and values of the target audience's organization may impact the their readiness to accept new information or recommendations.

Cultivation of relationships with your target audience.

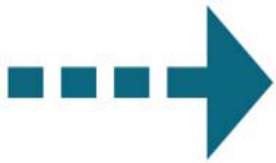
- This not a skill researchers might typically consider, but it is identified as a key element in effective dissemination.

3. By whom should it be transferred?

Consider how the target audience will view the credibility of your messenger. This may be judged on the evidence being translated and especially on the individual or organization providing this.

The inclusion of members from your target audience in your KT planning will assist you in understanding which messengers may be most suitable for your intended audience.

4. How should it be transferred?



There are a wide variety of methods to choose from when considering dissemination, all of which will be influenced by your message, your intended impact and, very importantly, the audience(s) you wish to influence.

Methods of transfer can range from:

- Passive - conference presentation, journal publication
- Somewhat active – brochures, policy briefs or even workshops
- Active – engaging in activities specifically designed to assist in overcoming barriers to uptake to encourage adoption.

5. What is the desired effect or impact?

Consider what effect or change you seek from your audience, and in what realm you wish to see an impact. Do you wish to crate a change in policy, practice or behaviour? Is your intended impact in patient outcomes, policies or further research?

How will you know if you have had the desired impact?

Evaluation allows you to consider not only the success or failure of a given intervention, but of the KT process itself. Evaluation should be tailored to match the audience and tailored to match the desired outcomes

Indicators to be considered can include assessments of reach, usefulness, uptake, partnerships, practice change, program/services and policy

Evaluation methods can be both qualitative, quantitative or mixed, and should be realistic and appropriate for the given target audience, setting and desired outcomes.

Further information and references

For more information on planning your KT, or for assistance with this, contact us at info@CDKTN.ca to discuss our services.

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