

# Knowledge translation research – a view from Canada

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# Tomato, tomato Zucchini, courgette

applied health research  
capacity building  
co-optation - cooperation -  
    competing  
diffusion\*  
dissemination\*  
getting knowledge into practice  
impact  
Implementation\*  
knowledge communication  
knowledge cycle  
knowledge exchange  
knowledge management  
knowledge translation

knowledge mobilization  
knowledge transfer  
linkage and exchange  
popularization of research,  
research into practice  
research mediation  
research transfer  
research translation  
science communication  
teaching  
“third mission”  
translational research  
transmission  
utilization



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# Knowledge translation

## CIHR definition

- Knowledge translation is a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the healthcare system.
- This process takes place within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement depending on the nature of the research results and on the needs of the particular knowledge user.



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# Knowledge translation research

- Knowledge translation is a human enterprise that can be studied to understand and improve knowledge translation approaches
- Knowledge translation research is the scientific study of the determinants, processes and outcomes of knowledge translation.
- Goal is to develop a generalisable empirical and theoretical basis to optimise KT activities



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# KT Canada

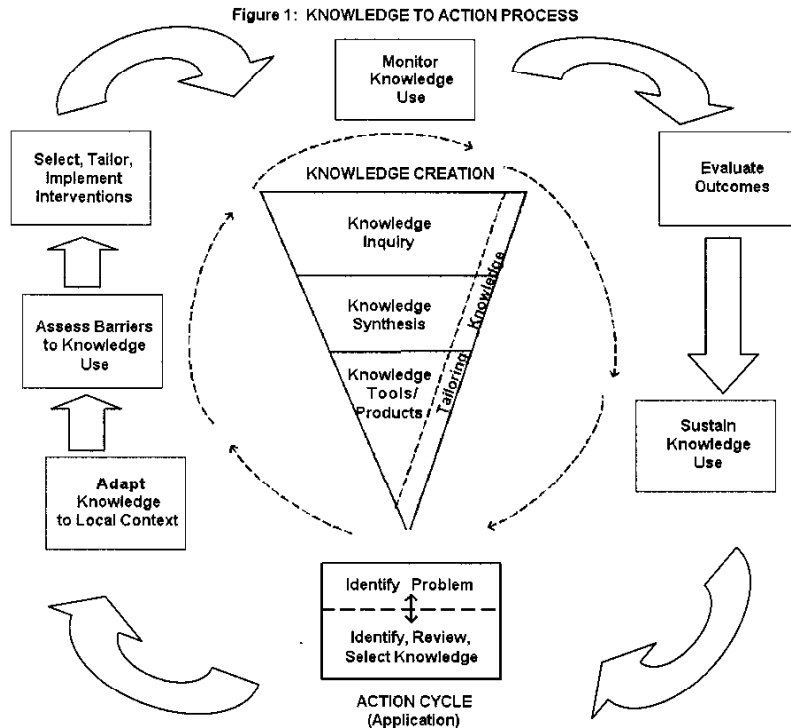
- National network of around 60 Canadian KT researchers in six centres that aims to develop a transformative research program to improve the health of Canadians and to strengthen the Canadian health care system by:
  - Creating new knowledge about how best to achieve KT across different decision maker groups;
  - Advancing the theory and methods of KT;
  - Developing, testing, and commercialising tools and services aimed at sustaining KT; and
  - Working with partners across the continuum of care to effect KT.



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# KT Canada



- **17 projects** in 4 **interlinked research programs**
  - Knowledge distillation
  - Determinants of knowledge use
  - Selecting, tailoring and evaluating effectiveness and efficiency of KT interventions, and
  - Sustaining KT
- Targeting 3 **key stakeholder groups**



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# Three challenges for KT research

**Lack of a shared language - tomato, tomato, zucchini, courgette**

- Currently at least six different international initiatives to develop taxonomies of knowledge translation interventions and techniques



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# Three challenges for KT research

## **Failure to develop a cumulative evidence base for knowledge translation**

- 118 RCTs of audit and feedback published by 2006
  - Only 28% used elements that theory would suggest would optimise intervention
- 109 RCTs of diabetes QI strategies published by 2009 (up from 50 RCTs published by 2006)
  - Most appear local solutions for diabetes management that do not use available evidence to inform design
- 35 systematic reviews of reminders published by Sept 2009



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# Three challenges for KT research

## **Failure to develop KT theory**

- Theories are ‘sets of statements that organizes, predicts and explains observations describing how phenomena relate to each other, and what you can expect under still unknown conditions’
- Manifests as lack of attention to mediating mechanisms and effect modifiers of KT interventions
- Only 6% of evaluations of KT interventions published by 1998 explicitly used theory



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# Building capacity in KT: KT Canada

- Provide outstanding, innovative training centres and laboratories for trainees from various research disciplines to develop skills in KT and KT research;
- Link trainees and mentors to collaboratively advance the science and practice of KT; and,
- Partner with other national and international research groups to promote KT research and training



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# 4 core competencies:

- Understanding models of KT and KT research;
- Developing capacity to conduct systematic reviews to address KT questions;
- Developing capacity in qualitative methods to examine factors that influence use of evidence; and,
- Developing skills to evaluate the impact, effectiveness and sustainability of KT strategies in different settings and targeting different stakeholders



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# Building capacity in KT

## Stream 1

- Seminar Series
- Summer Institute
- KT Courses
  - Trials
  - Systematic Reviews
- Student Stipends
- Community of Learners
- Mentorship



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# Mentorship is a key component

- ▶ In a systematic review of factors influencing career choice, important factors include:
  - Having a mentor
  - Being exposed to someone who enjoys what they do
- ▶ In a systematic review of mentorship, good mentorship enhances:
  - Personal development
  - Career guidance
  - Career choice
    - Discipline selected
    - Academic vs. non-academic position
  - Research productivity
  - Retention and recruitment
    - JAMA 2006;296:1103-15; JGIM 2006 Dec;21(12):1222-9



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- Impact on research productivity and success
  - 13 studies identified including medical students, residents, fellows and staff physicians
  - Associations found between having a mentor and:
    - Completing a thesis
    - Completing a research project
    - Number of publications
    - Likelihood of obtaining a grant
      - JAMA 2006;296:1103-15



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# Mentorship tools

- Mentorship toolkit
  - '1 minute mentor' (adapted from M. Feldman)
  - checklist for mentors/mentees
  - individual development plan
  - mentorship cases



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# CIHR Common CV-Research Uptake

- Provide details on extent of uptake of research from your own research program including:
  - Target stakeholder group
  - Evidence of uptake (e.g. incorporation into guidelines or policy document, inclusion in teaching materials etc)



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# Building capacity in KT

- Stream 2
  - KT Seminars
  - KT Courses
    - End of Grant KT
    - KT Basics



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# End of Grant KT

- The objectives are to:
  - Develop skills in developing a relevant, appropriate and feasible end of grant KT plan
  - Network with other researchers interested in KT as well as with mentors experienced in the science and practice of KT
  - Experience a supportive training environment that is respectful of the perspectives, tools and approaches of all disciplines.



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# End of Grant KT

- Didactic sessions focused on:
  - What are the goals – dissemination or implementation?
  - Who are the end users of the research and who will be interested in knowing the results?
  - What are the key messages for each of the end users?
  - Who are the principal target audiences for each of these messages?
  - Who is the most credible messenger for these messages and how do we engage them in communicating these messages?
  - What are the barriers and facilitators to uptake?
  - What KT strategy will we use?
  - What resources are needed?
- Interactive small group sessions focused on development of KT plans
- Post meeting: online social networking site to share end of grant KT plans



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# Building capacity in KT

## Stream 3

- KT courses
  - Introduction to KT
  - KT basics



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# KT Basics

- To enhance understanding of KT
- To develop a KT initiative in collaboration with relevant clinicians, managers and researchers
- To develop a strategy for monitoring the impact of this KT initiative
- It is expected that the assignments form the basis of a project in KT/quality of care and that interested teams could apply for seed grants to initiate project activities



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# Challenges

- Need to create interest in integrating the practice and science of KT
- Lack of salary support for scientists
- Sustainability of the training initiative
  - ?Support through consultation service
  - Link with organisations to provide opportunities to ‘embed’ trainees



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# Join us!

- KT Seminar Series
- [www.ktclearinghouse.ca](http://www.ktclearinghouse.ca)
- Knowledge Translation in Health Care. Eds Straus, Tetroe, Graham. Wiley 2009
- jgrimshaw@ohri.ca



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